

**ATTORNEYS AT LAW**

18101 Von Karman Avenue  
Suite 1800  
Irvine, CA 92612  
T 949.833.7800  
F 949.833.7878

Paul S. Weiland  
D 949.477.7644  
pweiland@nossaman.com

Refer To File # 290380-0004

**VIA FERC ONLINE**

June 3, 2021

Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Re: Comment on Final Design and Management Plans, Lower Klamath Project,  
FERC Nos. 14803-001 and 2082-063

Dear Secretary Bose:

We are writing on behalf of Siskiyou County ("County") to express our significant concerns regarding the Supplemental Amended License Surrender Application Submittal ("Submittal") for the Lower Klamath Project ("Project"), which the Klamath River Renewable Corporation ("KRRC") submitted to the Federal Energy Regulatory Commission ("FERC") on February 26, 2021. The Submittal includes 16 new management plans as part of the Project's Definite Plan outlining the Project's design specifications. Critically, a number of these plans are incomplete or, in some cases, simply non-existent at this time. Examples include the Erosion and Sediment Control Plan and Bald and Golden Eagle Management Plan. The Project will doubtless have major impacts in these and other areas in light of the amount of contaminant-laden sediment built up behind the dams that will be released downstream or disposed of at sites within the County and the local eagle populations that use the reservoirs and will be harmed by dam removal activities. Detailed concerns regarding a number of the plans are included in SWCA's "Review of and Comment on the Supplemental Surrender Application for the Lower Klamath Project," attached hereto as Attachment I.

As FERC is aware, KRRC and PacifiCorp have submitted applications to FERC for hydropower license transfer and surrender to decommission and remove four lower Klamath River dams—three of which are located within Siskiyou County. On multiple occasions, the County has expressed its concerns regarding the potential impacts of dam removal on imperiled species, water quality, and the overall health of the Klamath River ecosystem, as well as other environmental and societal impacts, including air quality, climate change, cultural resources, hazardous materials, and traffic impacts, in addition to socioeconomic impacts on the local community. See, e.g., *PacifiCorp*, 162 FERC ¶ 61,236 at ¶ 28 (Mar. 15, 2018). The County has a strong vested interest in ensuring that the Definite Plan considers the Project's entire range of consequences on the County and its residents. Unfortunately, the Submittal fails to adequately address the County's concerns.

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While the County acknowledges KRRC's efforts to address the Project's environmental and socioeconomic impacts, the management plans included in the Submittal remain inadequate. As set forth in SWCA's technical comments (Attachment I), the Project's Definite Plan, including the management plans in the Submittal, warrant additional revisions in order to sufficiently address the full range of impacts. Below is a brief summary of the many respects in which the Submittal is deficient:

- **Exhibit A: Aquatic Resources Management Plan**
  - The plan substantially overestimates the ability of salmon to recolonize spawning habitat in the Klamath River.
  - The plan includes a vague definition of "the presence of anadromous fish" that will greatly impact the duration of monitoring.
- **Exhibit B: Erosion and Sediment Control Plan**
  - The plan does not contain sufficient detail regarding best management practices.
- **Exhibit D: Hatcheries Management and Operations**
  - The plan to discontinue the Fall Creek Hatchery after eight years assumes recolonization of sites above the removed dams will have been completed and will replace or exceed the number of fish supplied by the Hatchery.
- **Exhibit F: Historic Properties Management Plan**
  - The plan fails to explain when license transfer would occur or how resources would be managed post-transfer.
  - The scope of the National Register of Historical Places evaluation, and the level of detail provided in the plan, is inadequate.
  - The plan lacks appropriate alternative mitigation options that do not conflict with current guidance and regulations.
  - The reporting techniques and standards should be outlined more specifically and consistently throughout the plan.
  - The plan's reporting timelines are unrealistic and place an unreasonable amount of authority with KRRC.
  - The details regarding an endowment to protect and enhance tribal cultural resources are insufficient.
  - The plan provides a loophole allowing planned future actions to evade archaeological resources review.
  - Clarification is needed regarding how impacts to the built environment will be mitigated.
  - The plan includes inconsistencies regarding which activities are exempt from cultural resources review.
- **Exhibit H: Recreation Facilities Plan**
  - The plan fails to justify the planned removal of two additional recreation areas.
- **Exhibit J: Reservoir Area Management Plan**
  - It is unclear what potential techniques could be used to remove sediment post-drawdown.
  - The plan does not take into account the anticipated additional sediment from fluvial bank erosion, bank failure, or erosion from tributaries, springs, or concentrated surface runoff from hillslopes.
  - The plan does not include mitigation strategies for the irrigation and weather constraints caused by sediment deposits.

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- KRRC did not coordinate with the County's Agricultural Department regarding re-vegetation concerns with respect to the spread of noxious weeds as a result of dam removal.
- The monitoring plans for sediment stabilization/evolution and volitional fish passage lack performance criteria to measure success or failure.
- **Exhibit K: Reservoir Drawdown and Diversion Plan**
  - The plan is based on unrealistic, false assumptions regarding suspended sediment concentrations. The actual amounts of suspended sediment concentrations have significant environmental implications that KRRC is unlikely to analyze under the false assumptions.
  - The plan does not identify the level of risk to residential properties with respect to terrain stability, and also does not identify proposed mitigation measures.
  - The drawdown rate should be lowered to mitigate impacts.
  - The graphs illustrating water surface levels are unclear.
- **Exhibit L: Sediment Deposit Remediation Plan**
  - The plan contains language that drastically limits the scope of the remediation plan such that it is inadequate to properly address arsenic-contaminated sediment remediation in comparison with federal and state standards.
  - The plan does not address the deposition of reservoir sediments that have the potential to negatively impact the aquatic habitat of the river below the Iron Gate Dam.
- **Exhibit M: Terrestrial and Wildlife Management Plan**
  - The plan lacks the detail and specific protocol or guidance necessary to protect known or suspected special-status species present (state or federally protected).
  - The survey area must be expanded in order to adequately evaluate impacts of the Project.
  - The plan ignores certain state-protected species listed as potentially occurring or known to occur within the survey area or in downstream areas of the Klamath River. KRRC, claiming preemption of California and Oregon law, intends to harm these species without undertaking a jeopardy determination and fully mitigating the harm or violation of survival guidelines, in violation of state law.
  - Given that VES surveys cannot easily detect Western Pond Turtles within the project area during the winter, the plan should consider how construction work taking place during the winter might affect Western Pond Turtles that may be present but were not observed during the winter surveys.
  - The plan lacks a discussion of the federal and state regulatory requirements for nesting migratory birds, as well as specific protocol procedures regarding survey methodology, discovery, notification, spatial buffers, removal, and monitoring of active nests.
  - The plan includes insufficient detail with respect to the Project's impacts on species such as the Great Blue Heron and cliff swallows.
  - The plan lacks specific protocol procedures related to survey methodology, exclusion strategy, and monitoring of bats.
  - The plan does not include considerations for special-status species or special-status plant species.
- **Exhibit N: Waste Disposal and Hazardous Materials Management Plan**
  - The plan does not address whether much-needed asbestos sampling and analysis of the concrete dams at the Copco No. 1, Copco No. 2, and J. C. Boyle Developments was conducted.

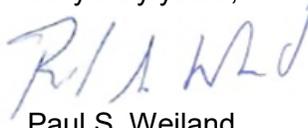
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- **Exhibit O: Water Quality Monitoring and Management Plan**
  - The Klamath River Total Maximum Daily Load (“TMDL”) Model includes the false assumption that all waters that enter the state of California are fully compliant with applicable TMDLs.

In addition to the comments presented by SWCA regarding the management plans included in the Submittal, the County adds that its ongoing concern regarding the issue of the Project’s compliance with local requirements remains unaddressed. The County is concerned by KRRC’s failure to coordinate with the County regarding what additional local requirements may apply to the Project. Project proponents are obliged to determine the County authorizations that are required for their activities and apply for such authorizations. Where they are unsure, Project proponents may seek technical assistance from the County. We are aware that components of the proposed action, such as creation of waste disposal sites and construction of structures on sites, are subject to regulation by the County. We are also aware that KRRC has not shared the details of its plans with respect to such components or initiated efforts to secure County authorization of such components. The County plans to formally address its concerns regarding the County authorizations for the proposed action in a subsequent comment letter. In the meantime, we request that FERC instruct KRRC that it must comply with all local requirements, unless it can make a showing that it is impossible to do so.

For the foregoing reasons, and as further discussed in detail in Attachment I, the County requests that FERC instruct KRRC to file comprehensive management plans to inform its own assessment of the extent to which the Project meets legal requirements and to address the County’s unresolved concerns. Please do not hesitate to contact us with questions.

Very truly yours,



Paul S. Weiland  
Nossaman LLP

Attachment

# **ATTACHMENT I**



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51 West Dayton Street  
Pasadena, California 91105  
Tel 626.240.0587 Fax 626.240.0607  
www.swca.com

## TECHNICAL MEMORANDUM

June 3, 2021

Natalie Reed  
County of Siskiyou  
P.O. Box 659  
Yreka, California 96097

**Re: Review of and Comment on the Supplemental Surrender Application for the Lower Klamath Project**

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The following comments are related to the exhibits that are included as part of the Klamath River Renewal Corporation's (KRRRC) Supplemental Amended License Surrender Application Submittal dated February 26, 2021.

## EXHIBIT A: AQUATIC RESOURCES MANAGEMENT PLAN

### APPENDIX A. SPAWNING HABITAT AVAILABILITY REPORT

Sediment deposited downstream as a consequence of the proposed action will have multiple harmful effects on fish and other aquatic species. Sediment will cover areas where fish feed, hide from predators, and lay eggs. It will also smother and kill fish eggs if they are present. Sediment suspended in the water will clog fish gills and also obscure vision, making it difficult for fish to find food and see predators. Sediment will also change the geomorphology of the channel, reducing or eliminating scour holes and blocking tributary inlets. Fish adaptively avoid areas impacted by sediment deposits. Evidence from the Elwha River dam removal indicates that after dam removal, few fish will move above the impacted areas for spawning and recolonization. Spawner survey data for the Elwha River in Washington indicate fish moved above the dam immediately after dam removal for spawning in large numbers in the middle section of the river (above the first dam). However, seven years after the upper dam was removed, spawning is still very limited in the upper section (above the second dam) and almost non-existent in tributaries (according to Lower Elwha Klallam tribal spawner survey data). Also of note, the Elwha River system has significantly better water quality than the Upper Klamath (due to extensive agricultural impacts in the Klamath Lake) and likely significantly less degraded habitat, adding more doubt regarding the amount and extent of recolonization in the Upper Klamath. Therefore, the assertion that access to 44,100 square yards of habitat would offset the loss of 2,100 redds is unsupported by available data. The actual amount of time required to recolonize the entire 44,100 square yards of mainstem habitat (as well as suitable tributary reaches) is unknown.

The assumption of the report is that all measured spawning habitat will be quickly colonized. However, full colonization of tributary spawning reaches is very unlikely outside of hatchery reintroduction or without large unknown time scales. The discontinuation of the Fall Creek Hatchery after eight years is also of concern, as it assumes recolonization of sites above the removed dams will be complete and will replace or exceed the number of fish supplied by the Hatchery. Siskiyou County and the Siskiyou County Water Users Association



have both commented that, because there is already a trap and haul infrastructure at Iron Gate Dam, it would make most sense to test the model and “scientific analysis” regarding the ability of salmon to survive the conditions in the Klamath River and to find and succeed in spawning.

## APPENDIX C. ANADROMOUS FISH PRESENCE MONITORING

Clarification is needed regarding the definition of “the presence of anadromous fish.” The current wording is vague and can be interpreted in many ways (i.e., two fish, a single reproducing pair, etc.) and will greatly impact the duration of monitoring. Given the survival rate of eggs to fry and fry to smolt, a single sighting of an anadromous fish or spawning pair cannot constitute recolonization. A larger cutoff is recommended, scaled to tributary size (e.g., five redds for a smaller tributary, etc.). This would be a more realistic documentation of recolonization. A common protocol is to continue upstream 1 to 2 km after the last redd sighting until no new redds are observed.

The number of smolts using tributaries as thermal refugia on the Klamath River is extremely high due to high mainstream temperatures in the Klamath; at least 100,000 fish congregate at some of the major tributaries. It is unlikely that electroshocking and returning these fish upstream would result in a decrease in mortality. The combination of electroshocking, packing, and moving the fish will produce significant mortality. It seems more logical and effective to remove sediment manually from the drawdown sites (as per the Elwha River dam removal) to reduce instream sediment inputs to safe levels for juvenile fish.

## EXHIBIT B: EROSION AND SEDIMENT CONTROL

The Erosion and Sediment Control Plan does not contain sufficient detail regarding best management practices (BMPs) to make a determination of adequacy. The plan does not identify areas of anticipated erosion or sediment deposition or specify plans for addressing such concerns. Instead, the plan describes erosion and sediment control measures in general terms that could apply to a variety of land-disturbing activities.

## EXHIBIT D: HATCHERIES MANAGEMENT AND OPERATIONS PLAN

### APPENDIX D. PRELIMINARY BIOLOGICAL PROGRAM – FALL CREEK

The primary concern regarding the Hatchery Plan is the discontinuation of the Fall Creek Hatchery after eight years, as it assumes recolonization of sites above the removed dams will have been completed and will replace or exceed the number of fish supplied by the Hatchery. Without intentional stocking in specific tributaries, it is unlikely these sites will be recolonized outside of the normal stray rate of each species. The exception would be in cases of extreme spawning densities (i.e., redd site competition) as seen in high fish density areas (such as rivers in Alaska) where fish risk redd superimposition or must move upstream to find open spawning areas. This occurs to some extent below Iron Gate Dam and any other natural or unnatural fish migration barrier. Some immediate upstream fish movement is to be expected, but the extent will be unknown unless modelling has been done to evaluate the amount of redd superimposition below Iron Gate Dam and the number of adults needing to move upstream to find open spawning areas. Although the velocities of average species-specific spawning habitat can be estimated, the amount of suitable spawning substrates will be unknown until actual dam removal occurs.



Although considered controversial, the ability for introduced or re-introduced salmon stocks to populate or repopulate stream systems has been demonstrated in many Great Lakes tributaries, New Zealand, Chile, and even in severely compromised habitat such as Panther Creek (and upper Columbia/Snake River Tributaries that lost all stocks due to mining operations). The Hatchery program should consider aggressively seeding tributaries and upper reaches with as close to genetically indigenous stocks as possible or continuing the Hatchery beyond eight years, at least until fish production is replicated naturally, or both. The continuation of hatchery stocks as needed will mitigate for losses to local communities in terms of tourism and sportfishing incomes as well as re-seeding the Upper Klamath and its tributaries to their current carrying capacities (which is likely to be well below historical numbers in habitat compromised reaches). Because of habitat degradation in the Upper Klamath due to water quality and disease issues, it is conceivable that the Hatchery should be maintained in order to achieve current fish levels.

## EXHIBIT F: HISTORIC PROPERTIES MANAGEMENT PLAN

Exhibit F: Historic Properties Management Plan (HPMP), dated February 2021, replaces the previous Appendix L: Cultural Resources Plan prepared in June 2018. The 2018 plan lacked sufficient detail and analysis of the area of potential effects (APE); methods for resource inventory, recording, and evaluation; and future management and agreement documents, among other deficiencies. The 2021 HPMP remedies most of those deficiencies and includes updated goals and objectives, findings from additional cultural resources studies, and project-related details and information not available in 2018.

Concerns regarding the HPMP include the following:

### CHAPTER 2. BACKGROUND INFORMATION

The HPMP fails to explain when license transfer would occur or how resources would be managed post-transfer. The HPMP states that “project lands subject to transfer by the Renewal Corporation to the States or to a designated third-party designee once the Renewal Corporation has met all license surrender conditions are referred to as ‘Parcel B lands’” and that “once the Renewal Corporation has completed facilities removal and all surrender conditions have been satisfied, the Renewal Corporation will transfer ownership of these lands to the respective States or to a designated third-party transferee.” The HPMP should include information regarding the management of resources after the transfer and provide a timeline for when the transfer would occur.

### CHAPTER 3. IDENTIFICATION OF HISTORIC PROPERTIES

#### *Section 3.1 Area of Potential Effects and Area of Direct Impacts*

The HPMP does not provide any justification as to why only a portion of the APE was studied to identify and assess direct impacts on historical properties. The HPMP defines an APE and an area of direct impacts (ADI). The APE is drawn broadly to include a 0.5-mile-wide area on each side of the Klamath River from the upper reach of the J.C. Boyle Reservoir to the river mouth at the Pacific Ocean, and a 1-mile-wide area on each side of the reservoirs to address the potential for visual effects related to viewshed alterations. The ADI is a smaller area within the APE that delineates the locations of anticipated direct physical impacts and that generally corresponds with the limits of work (LOW) (Sections 3.1.1 and 3.1.2). The content of the HPMP focuses identification and evaluation efforts solely on resources within the ADI. Further, the HPMP presents no evidence that consulting parties approved of this approach. The HPMP should clearly state why the entire APE was not inventoried and demonstrate agreement for that approach among the consulting parties.



### ***Section 3.2.1 Archaeology, Ethnography, Traditional Cultural Properties, and Klamath Cultural Landscape***

This section references Appendix L of the Project Definite Plan (2018) for detailed records search information. Because the 2018 Definite Plan is being replaced by the current plan, this does not appear to be a valid reference. The records search information should be described in this HPMP.

The scope of the National Register of Historical Places (NRHP) evaluation is inadequate. The HPMP states that the “cultural resources inventory of the Project ADI is complete.” Additionally, the HPMP states that “[t]o date, none of the 92 archaeological sites has been formally evaluated for NRHP eligibility” and that “execution of the Phase II study is pending.” However, the HPMP also states that “[p]reviously recorded archaeological sites located in the ADI, but not PacifiCorp Parcel B land (e.g., Iron Gate Dam to Humbug Creek and other select areas), have not been monitored or updated. Additional survey areas located outside the LOW were identified for pedestrian survey as part of [the] definition of the Project APE, as well as based on recommendations derived during informal consultation with tribes and consulting parties.” The HPMP also proposes NRHP evaluation (Phase II testing) of sites on Parcel B lands within the ADI. It therefore appears that only resources on Parcel B lands within the ADI will be evaluated for the NRHP. In addition, the HPMP does not provide a description of resource inventory methods for archaeological properties and does not address comments made on the previous plan that suggested a subsurface testing program in select areas.

The HPMP should detail inventory methods, state the reasoning for limiting evaluations to the properties on Parcel B lands, and provide a plan for completing updates and inventories for the areas not covered by the inventory effort. All studies should be completed and integrated into the HPMP prior to executing the HPMP and commencement of project activities unless allowed under other provisions of the HPMP (e.g., post-reservoir drawdown survey of currently inundated areas).

**Table 3-4 Recorded Archaeological Sites in the ADI.** The data in this table can be easily misinterpreted and lacks necessary detail. The HPMP defines the ADI as the same as the LOW; however, multiple cells within the “In LOW” column are marked “No,” which suggests the resources are not within the ADI. The landowner status is also “No” in multiple cases, which is not descriptive. The table should be revised to represent the actual resources and associated details of resources in the ADI. Explanation should also be provided for why resources within the broader APE are not included, and/or a table outlining all of the resources in the APE should be provided.

### ***Section 3.2.2 Built Environment Resources***

This section mischaracterizes private lands as potentially ineligible for NRHP evaluation. The HPMP states that KRRRC conducted architectural inventories in the project ADI using a combination of pedestrian and windshield surveys. The pedestrian surveys were conducted for Parcel B lands, and the windshield surveys were conducted for private lands. KRRRC completed three Historic Resources Studies that included NRHP evaluations for three categories of built environment properties within the ADI: hydroelectric, transportation, and private property. Five NRHP-eligible historic hydroelectric districts, four individually eligible resources, and one NRHP-eligible bridge that may be subject to project effects were identified.

The HPMP proposes additional field surveys and research to fully evaluate NRHP eligibility for resources found on private property within the ADI along the Klamath River near Hornbrook, California (four properties), the Klamath River Community (24 properties), and along the shore of Copco Lake (~50 properties). These commercial, residential, and recreational properties may have local significance under NRHP Criterion A in the areas of Entertainment/Recreation and Community Development and Planning, as well as local significance under NRHP Criterion C in the area of Architecture (83, 86). The HPMP states, “however, as these investigations would need to occur on private property, the information may not be able to be collected.”



Location on private property does not preclude NRHP evaluation. KRRC should provide a plan for complete inventory and evaluation of properties outside Parcel B lands within the ADI prior to implementation of the HPMP and commencement of project activities.

## **CHAPTER 7. MITIGATION AND MANAGEMENT DECISIONS**

The HPMP states that KRRC will consider additional options in lieu of emergency data recovery, such as an archaeological “data banking” program. In 2020, the Secretary of the Interior issued Order No. 3389 that “disfavors” off-site compensatory mitigation (Section 3(b)). KRRC and consulting parties should consider this order and agree to appropriate alternative mitigation options that do not conflict with current guidance and regulations.

## **CHAPTER 8. PROVISIONS FOR ADDITIONAL SURVEY, ARCHAEOLOGICAL MONITORING, INADVERTENT DISCOVERIES, TREATMENT OF HUMAN REMAINS**

### ***Section 8.1 Additional Survey – Post-Drawdown***

The HPMP states that KRRC will complete archaeological field surveys of previously inundated areas post-drawdown and that the studies will be carried out using “standard field survey techniques” and “accepted professional standards for documentation and reporting.” The techniques and reporting standards should be outlined more specifically and/or explicitly reflect and be consistent with other parts of the document that describe these standards.

### ***Section 8.6.1 Research Design***

The HPMP states that the Research Design and Testing Plan prepared for the pre-decommissioning Phase II NRHP evaluation of known project sites serves as the framework for development of a research program for resources identified during or after decommissioning (140). This Research Design and Testing Plan should be included as an appendix to the HPMP or otherwise be readily available for reference during implementation.

### ***Section 8.6.2 Subsurface Excavations***

This section provides adequately detailed descriptions of methods for subsurface investigation; however, it appears to apply only to post-review archaeological discoveries. These methods should apply to all inventory and evaluation efforts (including pre-activity surveys and evaluations). See previous comments regarding methods.

### ***Section 8.7.2 Schedule and Reporting and 8.8 Response to Looting and Vandalism***

The HPMP states that consulting parties will have up to two working days upon receipt to review and provide comments and/or objections to FERC regarding a treatment plan and that State Historic Preservation Officers have two working days to review any revisions. These timelines are unrealistic and place an unreasonable amount of authority with KRRC. The authors should justify these timelines and explain how they will be meaningfully met.

## **CHAPTER 9. OTHER PROGRAMS**

The HPMP states that KRRC will provide funding for an endowment for an appropriate organization (e.g., a non-profit mutual benefit organization) to protect and enhance tribal cultural resources that are exposed due to the project implementation on state and private lands in California, on a long-term basis following license surrender. There is a significant lack of detail regarding this activity. The HPMP should outline how much the endowment will be, how long it will last, provisions for replenishing the endowment (if any), and other processes and procedures for managing the endowment.



## CHAPTER 10. IMPLEMENTATION PROCEDURES.

### ***Section 10.3.1 Archaeological Resources***

The HPMP provides a loophole allowing planned future actions to evade archaeological resources review. This section states that KRRC will conduct a thorough review of all new actions responsive to unforeseen circumstances to ensure that unanticipated future actions do not harm historic properties. This implies that reviews will only occur for unanticipated future actions; however, to protect historic properties, the Cultural Resource Specialist should review all planned and unanticipated project-related ground disturbing activities (with the exception of any exemptions identified in the HPMP) to ensure no impacts will occur. Review procedures should be clarified to address both planned and unanticipated project activities.

### ***Section 10.3.2 Built Environment***

This section states that impacts to the built environment (buildings and structures) will be mitigated under the memorandum of agreement (MOA) and that review procedures are not anticipated or applicable to this HPMP. It is unlikely the MOA provides a sufficient level of detail regarding the mitigation of historic built environment properties; in general, MOAs defer to an HPMP to describe these processes. This needs to be clarified. As written it also appears to apply to all built environment properties, regardless of NRHP eligibility. This should also be clarified.

### ***Section 10.3.3 Exempt from Review***

This section includes modifications to ineligible/noncontributing buildings or structures as an activity that is exempt from cultural resources review. This contradicts the previous section that states no review for buildings is needed at all (even those that are eligible or contributing). These sections should be revised for consistency with each other and with other provisions of the plan.

## EXHIBIT H: RECREATION FACILITIES PLAN

This Recreation Facilities Plan expands upon the plans previously presented in the 2011 Detailed Plan and the 2018 Definite Plan, though this Plan proposes removing two recreation areas in addition to those presented in the Detailed Plan and Definite Plan and those analyzed in the 2018 Draft Environmental Impact Report (EIR). Appendix A describes the process of new recreation site identification in detail, including selection criteria and stakeholder coordination efforts. Only those sites within the Federal Energy Regulatory Commission (FERC) project boundary (Parcel B lands) that would provide two types of amenities—whitewater boating and/or fishing access—were considered. The selection criteria and list of proposed projects are very similar to those already presented in previous reports and during stakeholder engagement meetings.

The 2020 Whitewater Boating Study is included as Appendix B. This study identifies conditions of whitewater boating runs, both newly created and modified, that would result from the deconstruction of the dam and drawdown. Particularly, Ward's Canyon, a run that would be located within the Copco No.2 Bypass Roach within Siskiyou County, is anticipated to be one of the most popular runs due to technical challenges and scenic setting provided by the currently non-navigable section of the river.

## CHAPTER 2. EXISTING CONDITIONS.

This chapter summarizes recreation use surveys conducted in 2014, which is an improvement from the data used in the 2011 Definite Plan and in the 2018 Draft EIR, which was collected in the 2000s. This deficiency in data was described in a comment by the County on the 2018 Draft EIR, and this Recreation Facilities plan incorporates updated information.



## CHAPTER 4. APPROACH TO EXISTING RECREATION FACILITIES AND SITE.

The plan fails to justify the planned removal of two additional recreation areas. The plan identifies the Iron Gate Reservoir-associated recreation areas, the Fall Creek Day Use Area, and the Jenny Creek Day Use Area and Campground for removal. The 2011 Detailed Plan, the 2018 Definite Plan, and the 2018 Draft EIR identified these facilities for retention/modification. This plan describes the Fall Creek Day Use Area as adjacent to proposed new development (including the Fall Creek Hatchery and the Yreka water line modification) and states it therefore may not be suitable for retention/modification. The plan does not provide information regarding the change with respect to the Jenny Creek Day Use Area and Campground. These changes result in two additional recreation areas that would be removed as a result of the project, in addition to those analyzed in the Draft EIR. The reduction in recreation areas results in a loss of recreational resources and should be mitigated.

## EXHIBIT J: RESERVOIR AREA MANAGEMENT PLAN

The Reservoir Area Management Plan (RAMP) is intended to support the overall goals of restoring volitional fish passage, stabilizing exposed sediment with native vegetation, and enhancing habitat. Planning phases including vegetation test plot studies have already taken place. The RAMP includes preconstruction period restoration measures that are complete or in process, and a proposed restoration timeline that includes one to two years for preparation (seed collecting and propagation, invasive plant control, etc.) and five years for plant establishment and monitoring after dam removal. Restoration actions detailed in the RAMP include manual sediment removal and grading, enhancement of longitudinal connectivity and habitat quality of tributaries (including removal of fish passage barriers), development of floodplain features (wetlands, floodplain swales, and side channels), channel complexity/floodplain roughness with the addition of large wood habitat features, and revegetation. Sediment jetting with a barge-mounted water jet is proposed during reservoir drawdown to maximize sediment erosion at Copco No. 1 and Iron Gate Reservoirs, and to reconnect tributaries with the river channel, as needed.

Concerns regarding the plan include the following:

### CHAPTER 3. RESTORATION GOALS AND OBJECTIVES

KRRC will use various listed techniques to promote erosion of reservoir deposits during drawdown and implement post-drawdown supplemental sediment evacuation activities. The table in this chapter should include a list of potential techniques that could be used to remove sediment post-drawdown.

### CHAPTER 4. ANTICIPATED RESERVOIR CONDITIONS AFTER DRAWDOWN

Morphodynamic modeling of Copco No. 1 Reservoir does not consider fluvial bank erosion, bank failure, erosion from tributaries, springs, or concentrated surface runoff from hillslopes. The anticipated additional sediment needs to be taken into account in the restoration plans.

Following drawdown of Copco No. 1 Reservoir, sediments will drain and dry during warmer daytime temperatures and likely freeze overnight, presenting challenges for young plants. Irrigation may not be possible in upland portions of Copco Valley. The RAMP should outline mitigation strategies for the irrigation and weather constraints.

### CHAPTER 5. RESTORATION MEASURES

KRRC should coordinate with the County's Agricultural Department regarding re-vegetation concerns with respect to the spread of noxious weeds as a result of dam removal. The County's Agricultural Department is



responsible for noxious weed control and has concerns over spreading of seeds and plants through sediment release, and moving seeds outside of normal river banks during flood events.

Likewise, KRRC should include the County in discussions with other stakeholders regarding:

- the use of sterile wheat, which may affect native seedbed (Section 5.3.2.1.3); and
- potential grazing of cattle in upland habitats for invasive species control and methods for protecting riparian zones from grazing (Sections 5.3.2.2.1 and 5.3.3.2).

KRRC plans to install temporary and permanent irrigation in newly established riparian areas (Section 5.3.2.1.4). The RAMP should address how long the irrigation will remain in place or the criteria that would be used to evaluate removal.

## CHAPTER 6. MONITORING AND ADAPTIVE MANAGEMENT

Monitoring will be performed using visual inspections, physical measurements, ground photo points, aerial photography, and LiDAR (sediment monitoring). The monitoring plans for sediment stabilization/evolution and volitional fish passage include protocols and indicators but lack performance criteria by which success or failure can be adequately measured. The RAMP should include such performance criteria. It is not possible to implement adaptive management without identifying performance criteria in advance then designing and implementing a monitoring program to gather data necessary to allow for evaluation of conservation measures using those performance criteria.

## EXHIBIT K: RESERVOIR DRAWDOWN AND DIVERSION PLAN

The 2021 Reservoir Drawdown and Diversion Plan describes the proposed drawdown methods, procedures, schedules, and monitoring efforts the KRRC will implement as part of the restoration activities associated with the deconstruction of four hydroelectric developments on the Klamath River and comprises the following subplans:

- California Reservoir Drawdown and Diversion Plan;
- California Slope Stability Monitoring Plan; and
- Oregon Reservoir Drawdown and Diversion Plan.

The following are previously expressed concerns that do not seem to be addressed in the Reservoir Drawdown and Diversion Plan or associated subplans:

- J.C. Boyle Dam: Instead of stating the amounts anticipated, KRRC states that the suspended sediment concentrations under the new proposed drawdown are not expected to be greater than the amounts identified in the U.S. Bureau of Reclamation's 2012 Detailed Plan (approximately 0–8 mg/L). This assumption is almost certain to be violated given observations of the Condit Dam Decommissioning and Removal Project where suspended sediment concentrations exceeded 10,000 mg/L.
- Copco No. 1 Dam: Similar to the JC Boyle Dam, KRRC states that the sediment concentrations under the new proposed drawdown are not expected to be greater than the amounts identified in U.S. Bureau of Reclamation's 2012 Detailed Plan (approximately 0–200 mg/L). It is more likely that suspended sediment concentrations will exceed 10,000 mg/L (PacifiCorp Energy 2012), since over 100 years of sediment has accumulated in the bottom of the reservoir. As another example, the Marmot Dam Removal Project in Oregon, which was a much smaller project than the proposed Lower Klamath Project, also produced suspended sediment concentrations exceeding 10,000 mg/L (Major et al. 2012).



- Iron Gate Dam: Similar to the JC Boyle and Copco No. 1 Dams, KRRC states that the sediment concentrations under the new proposed drawdown are not expected to be greater than the amounts identified in U.S. Bureau of Reclamation's 2012 Detailed Plan (approximately 0–1,000 mg/L). It is more realistic to expect that concentrations will exceed 10,000 mg/L (Major et al. 2012; PacifiCorp Energy 2012) because the dams are being removed simultaneously and the Iron Gate Dam monitoring site will be measuring the sum total of suspended sediments from all four dam sites.

The difference in the above sediment concentrations, of one or more orders of magnitude, has significant environmental implications that KRRC is unlikely to analyze based on the false assumptions described above. The failure to analyze significant impacts is a major shortcoming that could trigger the obligation to conduct supplemental environmental analysis.

In addition to the previous comments that have not been addressed, additional concerns regarding the plan include the following:

## **APPENDIX A. CALIFORNIA RESERVOIR DRAWDOWN AND DIVERSION PLAN**

### **CHAPTER 2. DRAWDOWN AND DIVERSION PROCEDURES**

#### ***Section 2.1.2 Slope Stability Analysis***

KRRC describes steep, weak shoreline slopes, undercutting erosion, two debris slides, a natural terrain landslide, and rock falls in the vicinity of Copco No. 1 Reservoir. Residential properties occur around the southwest and east sectors of the Copco No. 1 Reservoir. Stability analysis results for this locale are shown on Figure 2-1 Appendix C of this subplan. However, Appendix C – Terrain stability maps, are redacted from this report.

- KRRC should provide the terrain stability maps for the County's review.
- The level of risk to the properties and proposed mitigation measures should be identified.
- Detailed plans for any demolition of residences should be analyzed and included in the plan.

#### ***Section 2.2 Drawdown and Diversion Procedures***

The reservoir drawdown analysis should be revisited to either lower or justify the specified rate of five feet per day for the drawdown. A slower drawdown would likely decrease the episodic nature of the reservoir sediment erosion and may decrease slope stability issues.

#### ***Section 2.4 Flood Frequency and Hydrological Evaluation***

The drawdown analysis evaluates flood frequency at each project to illustrate the range of possible peak water levels that could occur. Graphs are presented illustrating water surface levels, but it is not clear whether the graphs illustrate water levels after dam removal, during dam removal, or both.

- Daily average inflows, total outflows, and outflows for each outlet structure are mentioned but not plotted or discussed.
- KRRC should explain in greater detail the model output and what might be expected under the best and worst water year scenarios.



## APPENDIX C. OREGON RESERVOIR DRAWDOWN AND DIVERSION PLAN

### SECTION 3.3 FLOOD FREQUENCY AND HYDROLOGICAL EVALUATION

The drawdown analysis evaluates flood frequency at each project to illustrate the range of possible peak water levels that could occur. Graphs are presented illustrating water surface levels, but it is not clear whether the graphs illustrate water levels after dam removal, during dam removal, or both.

- Daily average inflows, total outflows, and outflows for each outlet structure are mentioned but not plotted or discussed.
- KRRC should explain in greater detail the model output and what might be expected under the best and worst water year scenarios.

## EXHIBIT L: SEDIMENT DEPOSIT REMEDIATION PLAN

The 2021 Sediment Deposit Remediation Plan is a new management plan that was not included in previous submittals by KRRC.

## APPENDIX A. CALIFORNIA SEDIMENT DEPOSIT REMEDIATION PLAN

The purpose of the California Sediment Deposit Remediation Plan is to state the measures that KRRC will implement to assess and remediate sediment deposits along the Klamath River from below Iron Gate Dam to the mouth of the Klamath Estuary that are due to reservoir drawdown activities.

Concerns regarding the plan include the following:

The plan states that “the Renewal Corporation will only assess sediment deposits on parcels with a current or potential residential or agricultural land use, for which the property owner has notified the Renewal Corporation of a potential sediment deposit that may be associated with reservoir drawdown activities.” The plan as written drastically limits the scope of the remediation plan by scope, location, and process, such that it is inadequate to properly address arsenic-contaminated sediment remediation in comparison with federal and state standards. The plan should include an establishment of baseline arsenic along the entire river reach from the Iron Gate Dam to the outfall to the Pacific Ocean prior to drawdown and then conduct a post-drawdown analysis of the entire reach to identify and remediate arsenic-contaminated sediment deposits with the pre- and post-drawdown sampling locations developed in quantity and location to provide a scientifically defensible study of the overall reach. Remediation of specific private landowners’ sites, as described in Section 2.0, should then be implemented as a secondary remediation exercise for targeted deposits of arsenic-contaminated sediment deposits.

The plan does not address the deposition of reservoir sediments that have the potential to negatively impact the aquatic habitat of the river below the Iron Gate Dam. In the Del Norte Sediment Monitoring Plan Section 2.3.1, it is stated that “[t]he sediment found within the existing reservoirs at J.C. Boyle, Copco No. 1, and Iron Gate is fine-grained with a high organic material content. The sediment has little sand content and has a high water content and more than 84 percent of the total reservoir sediment volume is silt or finer.” Further, in the Del Norte Sediment Monitoring Plan Section 2.3.1, it is stated that “[t]he total maximum volume of sediment expected to be released during the dam removal is a fraction of the total sediment load that currently discharges at the Klamath River mouth, and the Trinity River watershed is and will continue to be the largest sediment source within the Klamath River Basin.” However, the Del Norte Sediment Monitoring Plan Section 2.3.1.2 states that “[t]he existing sediment discharging into the Pacific Ocean has a larger grain-size distribution with limited fine-



grained silts and clays compared to the expected drawdown period sediment profile to be released to the River below Iron Gate Dam.” Therefore, although the sediment loading from the drawdown period is only a fraction of the total sediment load entering the river and, ultimately, the Pacific Ocean, the sediments from the drawdown (silts and clays) will be much finer than those typically processed through the river under current conditions. As such, the sediment transport and deposition processes in the river during and following the drawdown will likely be modified in response to the dramatic change in grain-size distribution. The California Sediment Remediation Plan should address this issue through predictive sediment transport modeling and/or post-drawdown sediment aggradation testing to ensure that these excess fine sediments do not negatively affect the river substrate related to the necessary sediment substrates, riverine hydraulics, and associated habitat to support passage, egg laying, hatching, and rearing of native fish and other aquatic species.

## EXHIBIT M: TERRESTRIAL AND WILDLIFE MANAGEMENT PLAN

The Terrestrial and Wildlife Management Plan consists of three subplans:

- California Terrestrial and Wildlife Management Plan;
- Oregon Terrestrial and Wildlife Management Plan; and
- Bald and Golden Eagle Management Plan (not drafted).

The Terrestrial and Wildlife Management Plan identifies the measures KRRC will implement to protect known or suspected special-status species present (state or federally protected). Additional measures are outlined for bats, nesting birds, and other species as BMPs. The lack of applicable information and a management plan for bald and golden eagles in this plan is concerning and does not allow for a determination of adequacy in meeting regulatory requirements for protection of these species. Overall, the plan lacks the detail and specific protocol or guidance needed to meet this stated purpose.

KRRC’s obligations with respect to implementation of the terrestrial wildlife measures are also subject to a determination of “if practicable.” The plan does not provide sufficient details to illustrate how KRRC will make such a determination.

Further, KRRC’s 2018 and 2019 survey areas, which are generally limited to within 0.25 mile of the dams and structures to be removed, should be expanded, particularly for amphibian surveys. This survey area does not include downstream impacts, especially for species that utilize emergent wetlands and riparian areas. There are wetland and riparian habitats that will be altered by changing water flows and sedimentation. These areas are not currently evaluated in the survey area and therefore cannot be adequately evaluated for impacts. These areas need baseline data on the species that currently occupy, or could occupy, this habitat in order to adequately evaluate impacts of the project.

The plan does not include adequate protections for wildlife species that are protected by the California Endangered Species Act (CESA) and Oregon state law (Oregon Revised Statutes 496.171-496.192). Additionally, some species listed as potentially occurring or known to occur within the survey area or in downstream areas of the Klamath River are not addressed in this plan. The tricolored blackbird (*Agelaius tricolor*) and foothill yellow-legged frog are listed under CESA, and the Oregon spotted frog (*Rana pretiosa*) and foothill yellow-legged frog (*Rana boylei*) are candidates for listing under Oregon state law.



## APPENDIX A. CALIFORNIA TERRESTRIAL AND WILDLIFE MANAGEMENT PLAN

### SECTION 3.1.1 WESTERN POND TURTLE VES SURVEYS AND RESCUE AND RELOCATION – CONSTRUCTION

KRRC states that “[d]epending upon the timing of the survey, individuals may or may not be easily located. It is unlikely that nest sites and/or hibernating/aestivating individuals will be observed during VES Surveys in the winter months; however, dens, burrows or [Western Pond Turtles (WPTs)] may be observed outside of winter months.” There should be considerations for construction work that may take place during the winter, when VES surveys may not detect WPTs within the disturbance footprint.

### SECTION 3.3.2 NESTING BIRD DISTURBANCE AVOIDANCE

The plan lacks a discussion of the regulatory requirements for nesting migratory birds under the Migratory Bird Treaty Act (MBTA) and California state law (California Fish and Game Code Section 3503). After a regulatory rollback, it should be noted that the U.S. Fish and Wildlife Service has proposed to change the definition of “take” under the MBTA to be more encompassing. The plan also lacks specific protocol procedures related to survey methodology, discovery, and notification for active nests; procedures for changes to buffer distances or removal of active nests; and monitoring. Protecting active nests involves establishing disturbance-free buffers within which construction activities are restricted. Establishing and maintaining buffers is designed to prevent take of active nests, eggs, nestlings, or nesting birds as a result of construction activities. The plan should describe proposed measures to avoid take or adverse effects to nests, such as buffer distances from active nests. Spatial buffers for active migratory bird nests are not discussed in the plan, though they are included as an important step in the U.S. Fish and Wildlife Service Nationwide Standard Conservation Measures for Stressor Management of nesting birds. These measures should be based on the specific nature of the bird species, conservation status, and other pertinent factors.

#### SECTION 3.3.2.1 GREAT BLUE HERON

The plan should disclose how far the Great Blue Heron rookery is from the project area and any resulting impacts.

#### SECTION 3.3.2.2 CLIFF SWALLOW

The plan states that “[c]liff swallows are also known to use bridges for nesting habitat; however, the proposed bridge improvement activities are not anticipated to significantly impact nesting behavior and nests will not be removed.” The plan should describe how it was concluded that bridge improvement activities would not impact swallow nesting behavior.

### SECTION 3.6 BATS

The plan lacks specific protocol procedures related to survey methodology, exclusion strategy, and monitoring. Survey reports included in Appendix A note that a management plan for bats would be developed in 2019, but it is not included in the plan.

### SECTION 3.9 HERBICIDE APPLICATION

The plan states that Exhibit J Reservoir Area Management Plan identifies KRRC’s management measures to avoid impacts to special-status species. The RAMP does not include considerations for special-status species,



and special-status plant species are not discussed in the plan. These considerations should be included in the plan.

The comments above also apply to Appendix B Oregon Terrestrial and Wildlife Management Plan.

## EXHIBIT N: WASTE DISPOSAL AND HAZARDOUS MATERIALS MANAGEMENT PLAN

This review focuses on potential issues related to asbestos-containing concrete. Asbestos-containing concrete does not appear to have been used for residence and small building foundations at the Copco No. 1, Copco No. 2, and J. C. Boyle Developments and for the fish holding, fish ladder, and powerhouse structures at the Iron Gate Development and the fish ladder at the J. C. Boyle Development. However, there is no indication that asbestos sampling and analysis of the concrete dams at the Copco No. 1, Copco No. 2, and J. C. Boyle Developments was conducted. Asbestos sampling should be conducted because asbestos-reinforced concrete was used extensively throughout the United States from the early to late 1900s, and concrete mixes had asbestos contents that ranged from 2% to 10% by weight. Construction of these dams was completed in 1921 (Copco No. 1), 1925 (Copco No. 2), and 1958 (J. C. Boyle); all of these dates were in the time frame of nationwide usage of asbestos-reinforced concrete. An asbestos concentration range of 2% to 10% by weight in the concrete of the three dams indicates that a total of approximately 826 to 4,126 tons of asbestos are present in the dams themselves. If 1% of the asbestos in those structures was released during explosive demolition of those dams, approximately 8 to 41 tons of asbestos could be released to the environment. To properly assess the potential consequences of explosive demolition releases from the dams, analysis of the asbestos content of the concrete of the dams is required.

## EXHIBIT O: WATER QUALITY MONITORING AND MANAGEMENT PLAN

The plan describes the methodology and procedures for evaluating water quality conditions associated with the decommissioning of the four lower dams on the Klamath River. There are two separate plans: one for the state of Oregon and one for the state of California. The two plans appear to be complete, detailing personnel, equipment, analytical labs, and schedules. However, one comment provided earlier on the 2018 Definite Plan by Siskiyou County has not been adequately addressed:

- The Klamath River Total Maximum Daily Load (TMDL) Model includes the false assumption that all waters that enter the state of California are fully compliant with applicable TMDLs. The response to this comment was to withdraw the Oregon TMDL Model. In addition, the North Coast Regional Board (NCRB) found uncertainty associated with the Klamath TMDL models to be minimal relative to source load reductions. As a follow-up, the NCRB stated that, if updates to the California Model demonstrate that TMDL target allocations should be adjusted, the NCRB staff would propose changes to the TMDL, and that no changes were proposed. This is a circular argument and needs further explanation.

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