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ENVIRONMENTAL PROTECTION

State Water Resources Control Board

AUG 2 4 2017

Mr. Michael Carrier, President
Klamath River Renewal Corporation
423 Washington Street, 3rd Floor
San Francisco, CA 94111

Dear Mr. Carrier:

REQUEST FOR ADDITIONAL INFORMATION TO PROCESS WATER QUALITY CERTIFICATION FOR LOWER KLAMATH PROJECT, FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 14803, SISKIYOU COUNTY

On September 23, 2016, the State Water Resources Control Board (State Water Board) received from the Klamath River Renewal Corporation's (KRRC) water quality certification (certification) application for the Lower Klamath Project (LKP). On October 21, 2016, the State Water Board determined the KRRC's certification application with attachments[1] met the filing requirements specified in California Code of Regulations, title 23, section 3856. As noted in the October 2016 letter, though the certification application is considered complete, the State Water Board maintains the ability to request additional information to clarify, amplify, correct, or otherwise supplement the contents of the certification application.

Following acceptance of the KRRC's certification application, the State Water Board has proceeded with processing the certification application, including conducting public and agency scoping under the California Environmental Quality Act (CEQA). State Water Board staff has reviewed information submitted by the KRRC in support of its certification application and has developed an initial list of information that is needed to process the certification application and inform the associated CEQA process.

On March 20, 2017, State Water Board staff met with KRRC technical representatives to discuss preliminary information needs identified by State Water Board staff based on review of the certification application, specifically the Detailed Plan that currently serves as the KRRC's LKP description. Information needs were also discussed at a subsequent meeting which occurred on April 10, 2017. On May 4, 2017, State Water Board staff attended a portion of the KRRC Board meeting and provided the KRRC Board with a draft information request.

[1] This includes the KRRC's Federal Energy Regulatory Commission license surrender application, and supplemental submittals.

Attachment A of this letter details the specific information State Water Board staff has identified as needed, at this time, to process the certification application. Information requested in Attachment A is consistent with the information needs discussed at previous meetings, with minor additions or clarifications.

The State Water Board appreciates the KRRC's willingness to collaboratively work with State Water Board staff and other interested parties to address the identified information needs. We encourage the KRRC to continue collaboration with interested parties in development of the requested information. It is State Water Board staff's understanding from previous conversations that the KRRC intends to provide all requested information by September 30, 2017, and that some information may be submitted earlier. Please note, late or inadequate responses may result in associated delays in the certification process.

State Water Board staff looks forward to working with KRRC representatives and other interested parties on the LKP. If you have questions regarding this letter or Attachment A, please contact me by email at parker.thaler@waterboards.ca.gov or by phone at (916) 341-5321. Written correspondence should be addressed as follows:

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

Sincerely,

Parker Thaler, Senior Environmental Scientist – Specialist
Water Quality Certification Program
Division of Water Rights

Enclosure: Attachment A: Information Request for Lower Klamath Project

cc (on next page)

AUG 2 4 2017

cc: Mr. Chris Stine
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ATTACHMENT A:
INFORMATION REQUEST FOR LOWER KLAMATH PROJECT
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 14803

Below is a list of information needs identified by State Water Resources Control Board (State Water Board) staff for the Lower Klamath Project (LKP), Federal Energy Regulatory Commission (FERC) Project No. 14803. The information is needed for the State Water Board's water quality certification process, which includes compliance with the California Environmental Quality Act (CEQA).

General Comments:

1. State Water Board staff understands the Klamath River Renewal Corporation (KRRC) is collecting additional data to inform aspects of the LKP. Studies are planned for summer 2017, which include but are not limited to: verification of reservoir drawdown rates; selection of disposal sites for inert waste materials; and environmental resource surveys. Within 10 days of the date of this letter, please provide a list of all studies being conducted by the KRRC and its affiliates. In addition, include a schedule for completion of all studies.

2. KRRC technical representatives have confirmed that the KRRC intends to apply to the United States Army Corps of Engineers (ACOE) for a Clean Water Act (CWA) section 404 permit for the LKP. Please confirm whether the project description the KRRC will submit to ACOE is the same project description submitted to FERC and inform the State Water Board which agency will be the National Environmental Policy Act lead agency. In addition, please provide an estimated timeline for when the ACOE CWA section 404 permit application and associated State Water Board CWA section 401 water quality certification application will be submitted.

3. During CEQA scoping, several commenters expressed concern with a hot spring located on Shovel Creek above Copco reservoir being too hot to allow for fish passage. In July 2017, State Water Board staff visited the hot spring area and gained a better understanding of its location. State Water Board staff requests the KRRC collect preliminary water temperature data above and below the hot spring's confluence with Shovel Creek to determine whether further inquiry into the hot spring's influence on water temperature is required. State Water Board staff further requests the KRRC measure flow of Shovel Creek and the hot springs during temperature data collection.

Comments related to 2012 Detailed Plan:

State Water Board staff understands that the 2012 Detailed Plan submitted by the KRRC, as part of its September 23, 2017 certification application, currently serves as the LKP description. The 2012 Detailed Plan will be superseded by the Definite Plan, which the KRRC plans to submit to the Federal Energy Regulatory Commission (FERC) by December 2017. The Definite Plan will have additional information related to proposed LKP.

On June 1, 2017, State Water Board staff received additional clarification regarding the LKP description. Specifically, that the KRRC's proposed project is the full removal alternative listed in Chapters 4, 6, 7, and 8 of the Detailed Plan.

ATTACHMENT A:
INFORMATION REQUEST FOR LOWER KLAMATH PROJECT
FEDERAL ENERGY REGULATORY COMMISSION PROJECT NO. 14803

In reviewing the 2012 Detailed Plan, State Water Board staff requests the following information:

1. **Iron Gate Hatchery:** Please confirm whether the Iron Gate Hatchery is part of the LKP, and if so, please provide:

    - A description of Iron Gate Hatchery's current operations.
    - A description of the proposed operations for Iron Gate Hatchery both during and following LKP dam removal activities.

    Regardless of whether the hatchery is part of the LKP, please provide:

    - Measures to locate/supply an alternative water source of sufficient quality and quantity to the Iron Gate Hatchery for any continued operations.
    - Measures that will be implemented to address the large sediment releases associated with the LKP dam removal's impact on the Iron Gate Hatchery operations during and following removal of the dams.

2. **Copco No. 1 Dam Removal Elevation:** Page 47 of the Detailed Plan states: "*Copco No.1 Dam is located within a narrow canyon on the Klamath River at RM [River Mile] 198.6. Minimum requirements for a free-flowing condition and for volitional fish passage on the Klamath River through the Copco No. 1 dam site would require the complete removal of the concrete gravity arch dam between the left abutment rock contact and the concrete intake structure on the right abutment, to approximate elevation 2467, or up to five feet below the existing streambed level at the dam, to prevent the development of a potential fish barrier at the site in the future.*"

    Please clarify the depth to which Copco No. 1 dam extends below the existing streambed elevation. In addition, please describe monitoring being proposed to ensure no fish barrier forms at the Copco No. 1 dam site following dam removal and any adaptive management practices being proposed to resolve potential fish barrier formations.

3. **Reservoir Slope Stability and Drawdown Rates:** Page 49 of the Detailed Plan states, "*The drawdown of Copco Reservoir should be controlled to the extent necessary to prevent problems with slope stability around the reservoir rim that could result in property damage, including the loss or damage of residential homes. Although there do not appear to be any potential significant stability issues around the reservoir rim that would be caused by a rapid drawdown, based on a preliminary assessment by PanGEO (2008), the fact that the reservoir is surrounded by residences and there are numerous exposed bluffs that show evidence of slumping should warrant further study.*"

    In addition to slope stability issues potentially impacting residential homes within the vicinity of Copco reservoir, slope stability issues could negatively impact tribal cultural resources located within Copco and Iron Gate reservoirs. As suggested above, please indicate what further studies, if any, are or will be conducted to assess and ensure slope stability at Copco and Iron Gate reservoirs during and following dam removal.

Should an area of potential slope instability be identified at any of the LKP reservoirs, maps indicating these areas should be presented in the Reservoir Drawdown and Streamflow Diversion Plan (detailed below). Measures and monitoring to address slope instability should also be included in this plan.

4. **Copco No. 2 Dam Development:** In relation to Table 4-5 of the Detailed Plan, please describe how remaining facilities located at Copco No. 2 dam development will be managed or disposed (e.g., cookhouse, bunkhouse, storage buildings, etc.).

5. **Mitigation Measures:** Detailed Plan Section 9.7 includes mitigation measures along with estimated implementation costs. KRRC representatives have indicated that the KRRC is analyzing which of these measures to propose, and whether to identify different measures. Please identify which mitigation measures are included in the KRRC's proposed project to reduce impacts to environmental resources.

    - For identified mitigation measures that require additional studies, surveys, or plan development, please provide a timeline for completing the additional work items.

    - For mitigation measures not selected, please provide rationale for not including them along with any new mitigation measures that the KRRC proposes to address impacts.

6. **Project Plans:** The plans listed below represent the plans and related information State Water Board staff has identified, at this point, as necessary to continue processing the water quality certification application. The plans listed below are not a comprehensive list of all plans that may be needed to evaluate LKP dam removal impacts to environmental resources. The KRRC may provide the requested information in a different plan, if appropriate.

    a. Reservoir Drawdown and Streamflow Diversion Plan for all LKP reservoirs that includes:

        - For each reservoir, the total anticipated discharge in cubic feet per second (cfs) associated with reservoir drawdown operations.
        - Description of structures (i.e., gates, diversion tunnels, etc.) used for reservoir drawdown operations including the flow (cfs) releases anticipated for each structure during drawdown operations.
        - For notching, a description of where notches would be located and the dimensions of each notch.
        - Proposed duration and timing of reservoir drawdown operations.
        - For each reservoir, proposed reservoir elevation change per day.
        - Description of any measures or actions that would be implemented if dam or tunnel failure occurs (may require an Emergency Action Plan).
        - Additional information on the diversion tunnels including: tunnel safety; measures/actions needed to retrofit the diversion tunnels; operation constraints of the remote gates (i.e., full open/close or allow for varying degrees of water releases); and post-reservoir drawdown actions to ensure tunnels are adequately sealed and do not pose an environmental or public safety hazard.

- Slope-stability monitoring during and after reservoir drawdown.
- Measures to implement if slope stability issues are identified.
- Measures to implement in and downstream of LKP reservoirs if tribal cultural resources and/or human remains are found during draw down activities (may include reference to a Tribal Resources Management Plan or similar plan).
- Measures to implement in and downstream of LKP reservoirs to reduce impacts on aquatic species listed under the federal Endangered Species Act (ESA) and California ESA, including candidate-listed species.
- References to studies conducted to verify reservoir drawdown rates are protective of slope stability and potential flooding downstream of LKP reservoirs.

b. Reservoir Area Restoration Plan for all portions of the Lower Klamath River and surrounding areas impacted by the LKP that includes:

- Measures to manage remaining sediment following reservoir drawdown in a manner that is protective of water quality, slope stability, aesthetics, air quality, and tribal cultural resources.
- Monitoring of remaining sediments and adaptive management measures to ensure identified measures are effective at reducing impacts associated with the LKP.
- Measures to restore the Klamath River within LKP reservoirs following dam removal and drawdown activities.
- Quantification of the number of wetlands (in acres) impacted by the LKP along with a description of wetlands created during reservoir restoration activities.

c. Water Quality Monitoring Plan for all portions of the LKP and downstream, as appropriate, that monitors water quality before, during, and after dam removal. The Water Quality Monitoring Plan should adequately monitor for impacts associated with LKP dam removal activities and should contain adaptive management measures to appropriately mitigate LKP dam removal impacts.

As appropriate, prior to LKP dam removal activities, the Water Quality Monitoring Plan should include:

- General water quality parameters (dissolved oxygen, temperature, turbidity, suspended sediment, nutrients, etc.)

During and following LKP dam removal activities, the Water Quality Monitoring Plan should include:

- General water quality parameters (dissolved oxygen, temperature, turbidity, suspended sediment, nutrients, etc.)
- Blue-green algae (microcystis cell count and associated toxins)
- Sediment toxicity samples of remaining sediments in LKP reservoirs, downstream of LKP reservoirs, and the Klamath estuary

Where possible, use of Interim Measure 15 water quality monitoring stations should be used in the Water Quality Monitoring Plan.

d. Waste Disposal Plan for all portions of the LKP that includes:
   - Location and size of disposal sites.
   - Description and results of resource assessment surveys conducted for proposed disposal sites. Such assessments should include federal and state ESAs, tribal cultural resources, special status plants, migratory bird nesting and foraging areas, and bat roosts.
   - Description of materials (quantity and type) being buried at each disposal site.
   - Measures and monitoring to ensure disposal sites do not contribute to erosion following dam removal.
   - Description of material (quantity and type) that will be disposed of at local landfills including an estimated number of truck trips (including distance traveled) and associated greenhouse gas emissions.
   - Description of material (quantity and type) that will be recycled.
   - Description of hazardous material (quantity and type) that may be encountered during LKP dam removal, and plans for safe handling and disposal thereof (may reference a Hazardous Materials Plan).

e. Groundwater Well Management Plan for groundwater use potentially impacted by LKP that includes:
   - Identification of known groundwater wells that may be impacted by the LKP.
   - Identification of a potential zone of impact to groundwater wells surrounding LKP reservoirs.
   - Description of surveys and assessments conducted to assess potential impacts to groundwater wells surrounding LKP reservoirs.
   - Monitoring and measures to address water quality and supply impacts during LKP dam removal activities.
   - Measures to mitigate water supply impacts to groundwater well users following LKP dam removal activities.

f. City of Yreka Water Supply Plan that describes measures to ensure the City of Yreka maintains an adequate water supply during and following LKP dam removal activities.

g. Habitat Restoration Plan Outside of Reservoir Areas that describes measures to restore LKP affected areas outside of the LKP reservoir footprints.

h. Road Management Plan for all portions of the LKP area that includes:

   - Maps of temporary staging roads, disposal sites, access roads, etc.
   - Description of upgrades needed to bridge crossings and access roads prior to LKP dam removal activities.
   - Measures following LKP dam removal activities to restore any degraded road conditions to pre-LKP conditions.

i. Fire Management Plan that includes:

- Fire prevention and management measures during LKP dam removal activities.
- Water supply assessment for fire management post-dam removal, with identification of additional water sources or other measures as appropriate.

j. Recreation Facilities Removal and Management Plan

k. Eagle and Other Migratory Bird Conservation Plan

l. Traffic Management Plan

m. Hazardous Materials Management Plan

n. Emergency Response Plan

o. Noise and Vibration Control Plan