California Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
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***GAVIN NEWSOM**, Governor*
CHARLTON H. BONHAM, Director

September 10, 2021

Tim Kasper
Weaverville Community Services District
Trinity County Planning Department
Post Office Box 1510
Weaverville, CA 96093

SUBJECT: Review of the Initial Study/Negative Declaration for the East Weaver Creek Dam Removal and Intake Relocation Project, State Clearinghouse Number 2021080288, Trinity County

Dear Tim Kasper:

The California Department of Fish and Wildlife (Department) has reviewed the Initial Study/Negative Declaration (IS/ND) received by the State Clearinghouse on August 16, 2021 for the East Weaver Creek Dam Removal and Intake Relocation Project (Project). The Department offers the following comments on the Project in our role as both a Trustee and Responsible Agency pursuant to the California Environmental Quality Act (CEQA; California Public Resource Code section 21000 et seq.).

Project Description

The Project will remove the East Weaver Creek Dam, a low head, non-regulatory dam that serves as a point of diversion for the Weaverville Community Services District. Diversion related infrastructure will be relocated upstream approximately 270 feet from its current location and will include the addition of a fish screen at the intake structure. Work will occur in a phased approach over the course of several years. This phased approach will allow the water system to continue to operate while assessing restoration performance. Phase I will install the intake structure and new fish screen, diverting 1.73 cubic feet per second (cfs) to the water treatment plant and bypassing all other flow. Several grade control weirs will be installed in the vicinity of the intake. Phase II(A) will remove the upper 6-feet of the concrete apron on the dam, install additional grade control structures upstream or downstream of the dam to stabilize channel gradient, and reposition bedload within the scour reach below the dam. This phase will require dewatering and fish relocation above and below the dam. If necessary, Phase II(B) will mechanically reposition the remaining dam fill boulders and upstream bedload sediments to achieve a consistent gradient through the Project reach. Up to twenty (20) riparian trees would be "chopped and dropped" along the streambank to further encourage bedload entrainment and reduce incision in the upstream reach.

Currently, the dam is a complete barrier to aquatic species, including state and federally threatened coho salmon (*Oncorhynchus kisutch*) and steelhead (*O. mykiss)* creating a

compliance issue with Fish and Game Code (FGC) section 5901 which states that it is unlawful to construct or maintain in any stream… any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish up and down stream. This Project seeks to remedy the fish passage barrier created by the dam which may bring the site into compliance with FGC section 5901. The Department is fully supportive of voluntary restoration projects which reduce fish mortality from unscreened diversions, removes barriers, and improves access to quality habitat. This Project will restore approximately 2.5 miles of high-quality rearing and spawning habitat in the East Weaver Creek watershed to anadromous species. Furthermore, the existing inlet to the water treatment plant is unscreened. The IS/ND states that the new design incorporates a National Marine Fisheries Service (NMFS) approved cone fish exclusion screen and will have a minimum 1 cfs bypass flow.

In order to streamline the permitting process, the Department strongly encourages early consultation on all screening and fish passage improvement projects. Department engineering staff will review project designs during the Lake and Streambed Alteration (LSA) permitting process. The items identified below should be prepared and submitted during permitting in order to streamline the engineering review process and ensure that the project provides sustainable fish protection and passage.

Fish Screens (*See current Department and NMFS screening criteria*):

- Target species and life stages to be protected at proposed screening site (e.g. will steelhead fry be present?)
- Fish screen structure placement (e.g., on-stream, in-canal, in-reservoir, or pumped)
- Evidence of infeasibility of on-stream screen if an in-canal screen is selected. Types of evidence would include, but not be limited to: coarse bed load, severely eroding banks, excessive channel velocities, etc.
- Records of diversion flows and stream flows, including maximums and minimums, during irrigation season.
- Stream flow vs. depth rating curve at diversion intake.
- Description of fish screen openings, including porosity and dimensions of round, square, or slotted openings.
- Applicable approach velocity and sweeping velocity criteria.
- Fish screen area calculation performed in accordance with CDFW [Department] Fish Screening
  Criteria (6/19/00).
- Water depth and approach velocity calculations in front of the fish screen throughout range of diversion flows.
- Evidence that flow uniformity criterion will be met.
- Sweeping velocity calculations at several locations along the length of the screen throughout range of diversion and bypass flows.
- Screen exposure time calculation.
- Velocity calculations between end of screen and bypass entrance.
- Flow depth calculations within bypass conduit and in stream at bypass outlet at

minimum bypass flow.
- Estimated bypass flow needed to meet fish screen criteria (cfs).
- Velocity calculations in stream at bypass outlet.
- Drop height and impact velocity calculation at bypass outlet over the operating range of tailwater surfaces, if applicable.
- For paddle wheel driven cleaning systems, fish screen area calculations showing passive screening criteria are met when paddle wheel driven wipers no longer operate.
- Description of fish screen cleaning mechanism, including proposed frequency of cleaning.
- Assessment of sediment transport/scour conditions at fish screen for on channel Installations.
- Specific information describing the type of corrosion-resistant screening material, bypass control/pipe and other materials that will directly affect fish.
- Design drawings showing site topography, control points, and dimensions of fish screen structure in plan, elevation, longitudinal profile, and cross-sectional views along with important component details.
- Drawings should show smooth joints at bypass pipe bends and screen faces flush with adjacent walls and/or piers.
- Any additional information which may be required to show that screen will meet current CDFW [Department]/NMFS screening criteria.
- Operation and maintenance plan which includes preventive and corrective maintenance procedures, inspection and reporting requirements, maintenance logs, etc.
- Post construction evaluation and monitoring plan with allocated money in the construction budget.

Boulder Weirs (*See Parts IX and XII, California Salmonid Stream Habitat Restoration Manual, 3rd edition, California Department of Fish and Wildlife):*

- Target species, life stages and migration timing at project site.
- Calculation of lower and upper fish passage stream flows for each life stage and species and 100-year flow.
- Water surface profiles at existing conditions for upper and lower fish passage stream flows and 100-year flow.
- Water surface profiles with proposed boulder weirs for upper and lower fish passage stream flows and 100-year flow.
- Spacing of, drops over, cross-sections shape of, and pool depths above and below boulder weirs.
- If specific low flow notches are planned, calculations of depths and velocities within notches at fish passage flows.
- Rock sizing calculations
- Ditch/pump hydraulic calculations showing boulder weirs provide sufficient head to divert maximum diversion flow and bypass flow at minimum stream flow considering

head losses at flow measurement devices, fish screens, pipes, open ditches, headgates, etc.
- Geotechnical information may be necessary to ensure project design is structurally appropriate.
- Design drawings showing site topography, control points, structural dimensions in plan, elevation, longitudinal profile, and cross-sectional views, and important component details, including construction notes on placement of bed material and boulders.
- Post construction evaluation and monitoring plan with allocated money in the construction budget.

Lake or Streambed Alteration (LSA) Agreement

The Project, as described in the IS/ND will require work within and adjacent to the bank of East Weaver Creek. Because the activity will divert or obstruct the natural flow, or change the bed, channel, or bank (which includes associated riparian resources) of a river or stream, the Department will require a LSA Notification from the applicant, pursuant to FGC section 1600 et seq. Issuance of an LSA Agreement is subject to CEQA. The Department, as a responsible agency under CEQA, will consider the CEQA document for the project. To obtain information about the LSA notification process, please access our website at https://www.wildlife.ca.gov/Conservation/LSA. As of September 1, 2020, all notifications for Standard Agreements must be submitted through the Department's (EPIMS) Permitting Portal, found at https://wildlife.ca.gov/Conservation/Environmental-Review/EPIMS.

California Endangered Species Act (CESA)

Take of species of plants or animals listed as endangered or threatened under CESA is unlawful unless authorized by the Department. However, the Department may authorize take through a number of mechanisms, such as a CESA 2081(b) Incidental Take Permit (ITP) or a Consistency Determination (CD). Issuance of a CESA permit such as an ITP is subject to CEQA documentation; the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program.

The IS/ND mentions that NMFS must be consulted for impacts to coho salmon but is silent on the issue of permitting take of listed species under CESA. The discussion in the IS/ND goes on to state that "coho salmon may be programmatically covered under the National Marine Fisheries Service's (NMFS) *Final Biological Opinion and Essential Fish Habitat Consultation for Restoration Projects within the NMFS Northern California Office Jurisdictional Area (2014)*". The IS/ND should clearly state whether the Project could result in any amount of take[1] of any CESA-listed species, such as coho salmon (CESA-listed as Endangered). Early consultation for take permitting is strongly encouraged as

[1] Even a single individual.

significant modification to the Project's description and/or mitigation measures may be required in order to obtain a CESA coverage. The Department may also be able to streamline CESA take authorization for fish passage and other restoration project types if early consultation in initiated by a project applicant.

The Department appreciates the opportunity to comment on this Project. If you have any questions, please contact Senior Environmental Scientist Kate Blanchard at (530) 225-2239 or by e-mail at katherine.blanchard@wildlife.ca.gov.

Sincerely,

DocuSigned by:
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Curt Babcock
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