September 4, 2015

Mr. Steve Burton
California Department of Fish and Wildlife
1724 Ball Mtn. Road
Montague, CA, 96064

Dear Mr. Burton:

Subject: Notice of Applicability for Coverage under the State Water Resources Control Board General 401 Water Quality Certification Order for Small Habitat Restoration Projects SB12006GN

File: Little Shasta Diversion Enhancement Project; ECM PIN CW-817744; WDID No. 1A15116WNSI

This letter is to certify coverage of the California Department of Fish and Wildlife's *Little Shasta Diversion Enhancement Project* (Project) under the General 401 Water Quality Certification Order for Small Habitat Restoration Projects; Order No. SB12006GN (General 401 Order). The proposed Project includes the removal of an existing concrete fish barrier within the active channel of the Little Shasta River; the installation of an updated, on-channel intake fish screen; and the installation of a bioengineered grade-control structure.

Background

On August 27, 2015, the California Department of Fish and Wildlife (Applicant/CDFW) filed an application for water quality certification (Certification) under section 401 of the Clean Water Act (33 U.S.C. § 1341) with the North Coast Regional Water Quality Control Board (Regional Water Board) for activities associated with the Project. Upon review by Regional Water Board staff, it was determined that the Project qualifies for coverage under the General 401 Order. On September 2, 2015, the Regional Water Board received a Notice of Intent (NOI) from the Applicant to comply with the terms of, and obtain Project coverage under, the General 401 Order for the Project.

Project Location

The Project is located on the Little Shasta River, within the Shasta Valley Hydrologic Unit 105.5. Coordinates of the center of the project are 41.7066° N, 122.4381° W.

Project Description

The objective of the Project is to improve the infrastructure at the Shasta Valley Wildlife Area point of diversion. Specifically, the Project proposes to remove the existing infrastructure that does not meet fish passage and fish protection criteria. Currently, a concrete flashboard structure exists across the channel of the Little Shasta River and a flat plate fish screen exists in the diversion ditch. The Project will replace the existing structures with an on-channel fish screen and a bio-engineered grade control structure that allows for fish passage and meets fish passage and screening criteria.

Three existing structures are proposed for removal because they do not meet fish passage criteria or fish screening criteria. An existing concrete wall is located on the southern bank of the Little Shasta River within the project area. The concrete wall is 12 inches thick, 41 feet long, and 4 to 7 feet tall. There is a 36 inch adjustable head gate in the headwall that acts as the diversion point for the Shasta Valley Wildlife Area. The head gate leads to a 35-foot long and 36-inch diameter pipe that discharges into the open diversion ditch where the current fish screen is located. Including the subsurface footing, the volume of concrete from the headwall removal is expected to be 11 cubic yards.

Currently, water is diverted from the Little Shasta River by installing flashboards into the existing concrete structure that spans the active channel. However, elevating the water surface through use of flashboards impedes fish passage. The flashboard diversion structure also impedes sediment transport. The Project will remove the existing concrete structure and replace it with a beaver dam analog grade control structure that allows for year round fish passage. The concrete flashboard structure is composed of three piers and a contiguous footing which is approximately 30-feet long, 4-feet wide, and 4-feet tall. Including the subsurface footing, the volume of concrete from the flashboard diversion structure removal is approximately 10 cubic yards.

An existing in-canal flat plate screen will be partially removed and replaced with an improved fish screen located on the edge of the Little Shasta River. The existing by-pass pipe will be removed and backfilled using native soil. The site will then be re-planted using perennial grass and riparian willow cuttings. The concrete housing of the existing fish screen is 22-feet wide and 43-feet long. The Project will remove the walls on the inlet and outlet ends, but will leave the rest of the structure in place to reduce unnecessary disturbance. The volume of concrete to be removed from the fish screen upgrade is approximately 4 cubic yards.

The existing fish screen will be replaced with an updated on-channel fish screen that meets current CDFW/NOAA Fish Screening Criteria and will be placed on the southern stream bank near the channel bottom. A 14-foot diameter cone screen was selected based on

diversion volume and sound operation of cone screens at similar diversion points in the watershed. The intake structure that will receive the fish screen will be a concrete alcove installed along the edge of the southern stream bank. The concrete intake structure will be 38-feet long (linear with the stream bank) and 20-feet wide (at the widest cross section), and will have 7-foot tall walls along its southern edge. The footprint will replace the existing headwall. Approximately 24 cubic yards of concrete will be used to construct the new intake structure. Prior to installation of the concrete intake structure it will be necessary to temporarily excavate an estimated 24 cubic yards of material. An estimated 4 cubic yards of that material is estimated to originate from below the ordinary high water mark and within the active channel which will be replaced when the intake pipe in buried.

Proper operation of the upgraded intake structure and fish screen is dependent on assured channel grade in the Little Shasta River. The intent of this project component is to maintain existing channel stability using a bio-engineered beaver dam analog grade-control structure composed of keyed in rock structures; rock ballast; interlocked large and medium diameter woody debris; and live willow cuttings and mattresses. The bankfull width at the proposed beaver dam analog site is 28 feet wide. Work will include excavation of a trench 4-feet wide and 3-feet deep. Selected wood structures will be driven into the active channel and backfilled with 3 to 24-inch diameter rock armoring. The disturbance area will be 28-feet long and 4-feet wide, and will key into both banks. An estimated 14 yards of native material is expected to be temporarily removed and replaced. Duration of work is expected to be four to six days. All riparian or wetland species will be excavated, watered and replanted. All soils will be mulched and seeded immediately.

Project Size

The total area of ground disturbance associated with the Project is estimated to be 0.74 acres and 162 linear feet. The proposed project size does not exceed what is allowed for coverage under the General 401 Water Quality Certification Order for Small Habitat Restoration Projects and associated Categorical Exemption (15333) from the California Environmental Quality Act.

Project Associated Discharge

The discharge of material into waters of the State resulting from the Project include those associated with the concrete required to construct the upgraded fish screen (17 cubic yards), and approximately 4 cubic yards of rock and woody material required for the beaver dam analog construction.

Project Time Frame

Proposed project start date: Early September, 2015
Expected date of completion: October 15, 2015

Monitoring Plan

On September 2, 2015, the Regional Water Board received a monitoring plan for the Project. To measure the success of the Project at meeting its goal of improved fish passage,

the Applicant has proposed measurable performance standards. Those fish passage performance standards include 1) vertical jumps no greater than 1 foot, and 2) a stream gradient no greater than 5 percent. The Applicant shall conduct daily fish passage monitoring at the diversion site throughout the diversion operation season. Additionally, the condition and functionality of the beaver dam analog structure shall be monitored.

Two years of post-project monitoring will be provided. Following the completion of each diversion operation season, an annual report will be submitted to the Regional Water Board. This annual report will include the findings that result from pre- and post-project monitoring. These findings should indicate the achievement of performance standards that are relative to the project goals. Each report will include the following information:

a. summary of findings;
b. identification and discussion of problems with achieving performance standards;
c. proposed corrective measures as needed (requires Regional Water Board approval); and
d. photographs showing the current condition of the project.

Agency Permits

The Applicant has also submitted applications for permitting and/or coverage including:

a. Army Corp of Engineers Section 404 Permit – Nationwide Permit 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities pursuant to Section 404 of the Clean Water Act
b. NOAA/NMFS Consistency Determination with Biological Opinion No. 151422SWR2009AR00566

Notice of Applicability and Project Determination

Regional Water Board staff has determined that the proposed activities as described in the NOI are categorically exempt from CEQA review and may proceed under the General 401 Water Quality Certification Order for Small Habitat Restoration Projects.

Receiving Water:	Little Shasta River Shasta Valley Hydrologic Unit 105.5
Filled / Excavated Area:	None
Total Impacts:	Acreage Temporarily Impacted: 0.74 Length Temporarily Impacted: 162 feet
Dredge Volume:	None
Discharge Volume:	17 cubic yards of concrete 4 cubic yards of native rock and woody debris
Latitude/Longitude:	Project Center : 41.7066° N, 122.4381° W

Reporting

As required in Section B, Item 4, of the *General 401 Water Quality Certification Order for Small Habitat Restoration Projects*, Monitoring Reports shall be submitted at least annually documenting the achievement of performance standards and project goals. In addition, a Notice of Completion (NOC) shall be submitted by the applicant no later than 30 days after the project has been completed. A complete NOC includes at a minimum: photographs with a descriptive title, the date each photograph was taken, the name of the photographic site, the WDID number indicated above, and success criteria for the Project. The NOC shall demonstrate that the Project has been carried out in accordance with the Project description as provided in the applicant's NOI. Please include the project name and WDID number with all future inquiries and document submittals. Document submittals shall be made electronically to: NorthCoast@waterboards.ca.gov

The State Water Resources Control Board General 401 Water Quality Certification Order for Small Habitat Restoration Projects SB09016GN can be found here: http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/generalorders/shrpcert032713.pdf

Please call contact Jake Shannon at Jacob.Shannon@Waterboards.ca.gov or (707) 576-2673 if you have any questions.

Sincerely,

Matthias St.John 2015.09.04 14:20:51 -07'00'

Water Boards

Matthias St. John
Executive Officer

150904_JJS_dp_CDFW_LittleShastaDiversion_NOA

cc: Steve Burton, California Department of Fish and Wildlife
Steve.Burton@wildlife.ca.gov
R. Robert Smith, California Department of Fish and Wildlife
Ray-Bob.Smith@wildlife.ca.gov
Jim Mazza, Army Corps of Engineers
James.C.Mazza@usace.army.mil