



Application for a New License
Major Project – Existing Dam

Erosion and Sediment Control Plan

Security Level: Public

Yuba River Development Project
FERC Project No. 2246

December 2016

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GLOSSARY - DEFINITION OF TERMS, ACRONYMS AND ABBREVIATIONS

Term	Definition
BMP	Best Management Practices, as they relate to the erosion and sediment control
Cal Fish and Wildlife	California Department of Fish and Wildlife
CDFG	California Department of Fish and Game, now called California Department of Fish and Wildlife
CFGC	California Fish and Game Code
CVRWQCB	Central Valley Regional Water Quality Control Board
FERC	Federal Energy Regulatory Commission
Forest Service	United States Department of Agriculture, Forest Service
NFS	National Forest System
NMFS	National Marine Fisheries Service
Plan	Erosion and Sediment Control (on National Forest System Land) Plan
PNF	Plumas National Forest
Project	Yuba River Development Project, FERC Project No. 2246
SWPPP	Stormwater Pollution Prevention Plan
TNF	Tahoe National Forest
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
YCWA	Yuba County Water Agency

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SECTION 1.0

INTRODUCTION

In April 2014, the Yuba County Water Agency (YCWA), pursuant to Section (§) 5.18 of Title 18 of the Code of Federal Regulations (C.F.R.), filed with the Federal Energy Regulatory Commission (FERC) an Application for a New License for Major Project – Existing Dam - for YCWA’s 361.9 megawatt Yuba River Development Project, FERC No. 2246 (Project). In December 2016, YCWA amended its April 2014 Application for a New License. The initial license for the Project was issued by the Federal Power Commission (FERC’s predecessor) to YCWA on May 16, 1963, effective on May 1, 1963. The Federal Power Commission’s May 6, 1966, Order Amending License changed the license’s effective date to May 1, 1966, for a term ending on April 30, 2016.

YCWA included this Erosion and Sediment Control Plan (Plan) in its December 2016 Amended Application for a New License.

The United States Department of Agriculture, Forest Service’s (Forest Service) Federal Power Act (FPA) Section 4(e) authority only applies in this Plan to Project facilities on National Forest System (NFS) land, and the United States Army Corps of Engineers’ (USACE) FPA § 4(e) authority only applies in this Plan to Project facilities on federal land administered by the USACE. The Forest Service administers the Plumas National Forest (PNF) in conformance with the PNF Land and Resource Management Plan (USDA Forest Service 1988), as subsequently amended, and administers the Tahoe National Forest (TNF) in conformance with TNF Land and Resource Management Plan (USDA Forest Service 1990), as subsequently amended. When the TNF or PNF Forest Plan revisions occur, those revised plans will supersede the 1990 TNF and 1988 PNF plans.

1.1 Background

1.1.1 Yuba River Development Project

The Project is located in Yuba, Sierra and Nevada counties, California, on the main stems of the Yuba River, the North Yuba River and the Middle Yuba River, and on Oregon Creek, a tributary to the Middle Yuba River. Major Project facilities, which range in elevation from 280 feet to 2,049 feet, include: 1) New Bullards Bar Dam and Reservoir; 2) Our House and Log Cabin diversion dams; 3) Lohman Ridge and Camptonville diversion tunnels; 4) New Colgate and Narrows 2 power tunnels and penstocks; 5) New Colgate, New Bullards Minimum Flow and Narrows 2 powerhouses; and 6) appurtenant facilities and features (e.g., administrative buildings, switchyards, roads, trails and gages). The existing Project does not include any aboveground open water conduits (e.g., canals or flumes) or any transmission lines.

In addition, The Project includes 16 developed recreation facilities. These include: 1) Hornswoggle Group Campground; 2) Schoolhouse Campground; 3) Dark Day Campground; 4)

Cottage Creek Campground;¹ 5) Garden Point Boat-in Campground; 6) Madrone Cove Boat-in Campground; 7) Frenchy Point Boat-in Campground; 8) Dark Day Picnic Area; 9) Sunset Vista Point; 10) Dam Overlook; 11) Moran Road Day Use Area; 12) Cottage Creek Boat Launch;² 13) Dark Day Boat Launch, including the Overflow Parking Area; 14) Schoolhouse Trail; 15) Bullards Bar Trail; and 16) floating comfort stations.³ All of the recreation facilities are located on NFS land, with the exception of the Dam Overlook, Cottage Creek Boat Launch and small portions of the Bullards Bar Trail, which are located on land owned by YCWA. All of the developed recreation facilities are located within the existing FERC Project Boundary, except for a few short segments of the Bullards Bar Trail to the east of the Dark Day Boat Launch. In addition, the Project includes two undeveloped recreation sites at Our House and Log Cabin diversion dams, both located on NFS land and within the existing FERC Project Boundary.

Figure 1.1-1 shows the Project Vicinity,⁴ proposed Project, and proposed FERC Project Boundary.⁵

¹ Cottage Creek Campground was burned in 2010 and has not been rebuilt. YCWA is in discussions with the Forest Service regarding rebuilding the burned campground.

² Emerald Cove Marina provides visitor services at Cottage Creek Boat Launch, including houseboat and boat rentals, boat slips and moorings, fuel and a general store. The marina is operated under a lease from YCWA by a private company.

³ The Project recreation facilities included one campground that is no longer part of the Project. Burnt Bridge Campground was closed initially by the Forest Service in 1979 due to low use levels. FERC, in an August 19, 1993 Order, which approved YCWA's Revised Recreation Plan, directed YCWA to remove all improvements and restore the Burnt Bridge Campground to the condition it was in prior to development of the facility. YCWA consulted with the Forest Service and all that remains of Burnt Bridge Campground today is the circulation road and vehicle spurs; all other facilities were removed.

⁴ For the purpose of this Plan, "Project Vicinity" refers to the area surrounding the proposed Project on the order of United States Geological Survey (USGS) 1:24,000 quadrangles.

⁵ The FERC Project Boundary is the area that YCWA uses for normal Project operations and maintenance. The Boundary is shown in Exhibit G of YCWA's Application for New License, and may be changed by FERC with cause from time to time during the term of the new license.

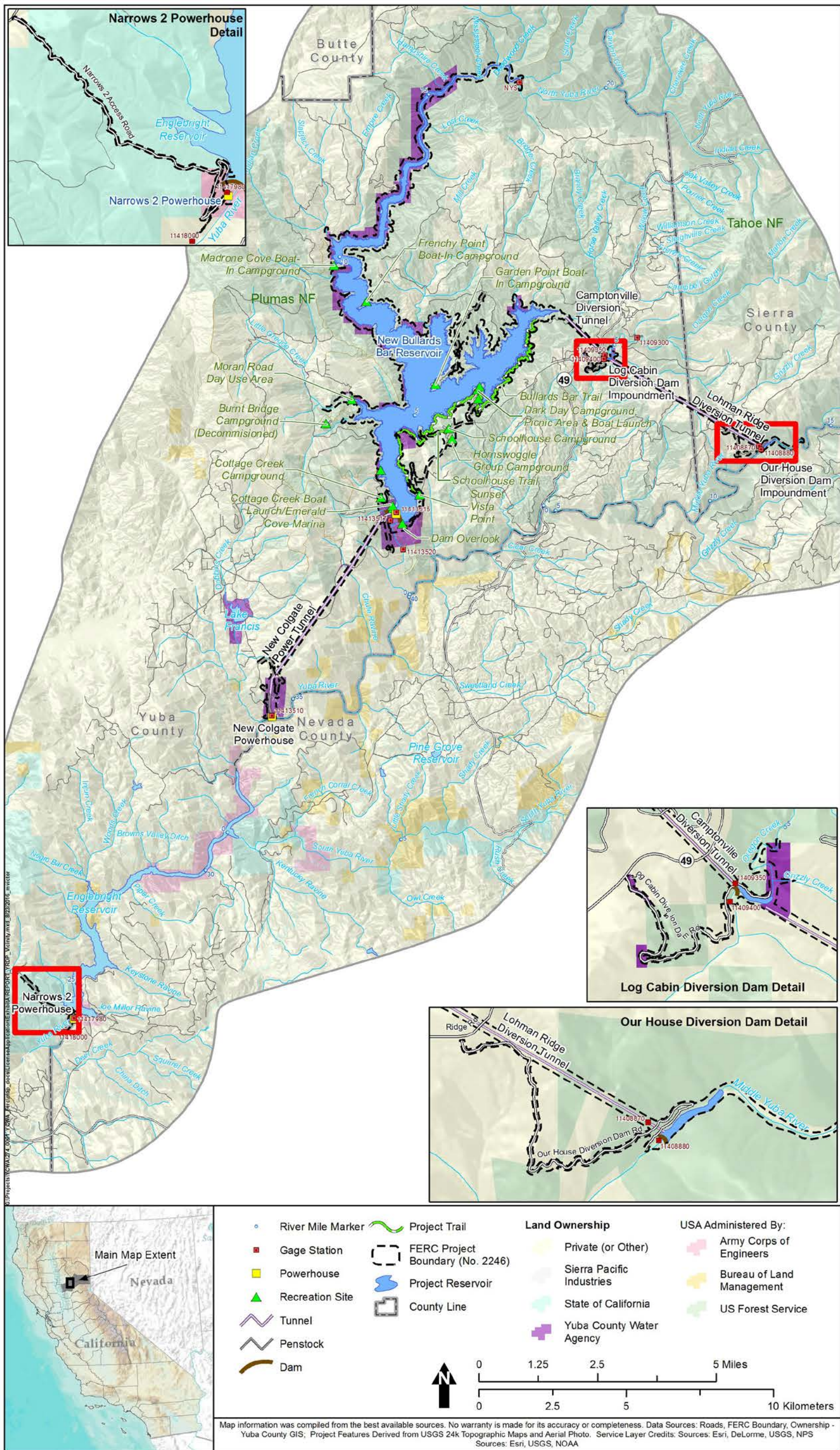


Figure 1.1-1. Yuba County Water Agency's Yuba River Development Project and Project Vicinity.

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1.2 Purpose of the Erosion and Sediment Control Plan

The purpose of this Plan is to minimize future erosion and sedimentation related to the Project, with special emphasis on NFS land. This plan covers ground-disturbing activities from routine operations, maintenance and new construction that could produce undesirable erosion or sedimentation conditions near streams or reservoirs. Appropriate sediment management and movement within streams (e.g., for aquatic habitat) is covered by the *Log Cabin and Our House Diversion Dams Sediment Management Plan* in the new license.

YCWA will coordinate, to the extent appropriate, the efforts required under this Plan with other Project resource efforts, including implementation of other resource management plans and measures included in the new license. The following plans in the new license have additional erosion control measures associated with specific activities: *Historic Properties Management, Transportation Management, Integrated Vegetation Management, and Recreation Facilities.*

1.3 Objectives of the Erosion and Sediment Control Plan

The objectives of the Plan are to describe existing YCWA⁶ and Forest Service Best Management Practices (BMP) (USDA Forest Service 2011) to control site specific erosion and sedimentation impacts during routine operations, maintenance, new construction, and reconstruction of Project facilities, including emergency erosion control measures and protocols to control sedimentation during or after severe storm events.

The objective of the Plan is to provide necessary current guidelines to meet Plan goals and to meet applicable county, state and federal regulations.

1.4 Contents of the Erosion and Sediment Control on National Forest System Land Plan

This Plan includes the following:

- Section 1.0. Introduction. This section includes introductory information, including the purpose and goals of the Plan.
- Section 2.0. Methods for Minimization of Erosion and Sedimentation during Continued Project Operation and Maintenance. This section describes the methods for minimization of site-specific erosion and sedimentation impacts during continued operation and maintenance of the Project, including potential slope failures, new construction and/or reconstruction of Project facilities.

⁶ YCWA's erosion control BMPs include sediment control measures, such as silt fences, sandbag and straw barriers, revegetation of areas after ground-disturbing activities, re-grading slopes to prevent concentrated runoff into water bodies, scheduling activities outside of the rainy season (when possible), and installation of rock revetment structures.

- Section 3.0. Reporting, Consultation and Plan Revisions. This section describes reporting, consultation and Plan revisions.
- Section 4.0. References Cited. This section lists references cited in this Plan.

SECTION 2.0

METHODS FOR MINIMIZATION OF EROSION AND SEDIMENTATION DURING CONTINUED PROJECT OPERATION AND MAINTENANCE

2.1 Overall Erosion and Sediment Control Planning Process for the Yuba River Development Project

Figure 2.1-1 is a flowchart that describes the overall erosion and sediment control planning, consultation, permitting, treatment, and monitoring pathways for the Project. Erosion treatment projects are either planned in advance (Box 1 in Figure 2.1-1) or arise as, and are initially implemented as, emergency actions (Box 2 in Figure 2.1-1). All permanent erosion control/stabilization activities may require consultation with the Central Valley Regional Water Quality Control Board (CVRWQCB), and Forest Service when on or affecting NFS land (Box 10 in Figure 2.1-1) prior to implementation. Permanent erosion control features are defined as constructed features such as road drainage features, rip-rap, and retaining walls.

If erosion control takes place on an emergency basis, then notification to the CVRWQCB, California Department of Fish and Wildlife (Cal Fish and Wildlife), Forest Service when on or affecting NFS land, and FERC may be necessary (Box 4 in Figure 2.1-1). If after the emergency erosion control actions are completed, more permanent stabilization measures are needed, then YCWA will prepare a site plan with appropriate remediation and monitoring measures (Box 6 in Figure 2.1-1). If the emergency action does not require more permanent stabilization activities, then no other erosion control measures are implemented (Box 5 in Figure 2.1-1).

Planned (non-emergency) erosion control activities fall into one of two categories: 1) those associated with an erosion control element in a specific resource plan included in the new license (e.g., Historic Properties Management Plan and Transportation Management Plan) (Box 7 in Figure 2.1-1); and 2) any Project-related erosion control not addressed by specific resource plans included in the new license (Box 8 in Figure 2.1-1). All non-emergency erosion treatment plans and designs will require consultation with Forest Service when on or affecting NFS land and potentially the CVRWQCB (Box 10 in Figure 2.1-1) prior to implementation.

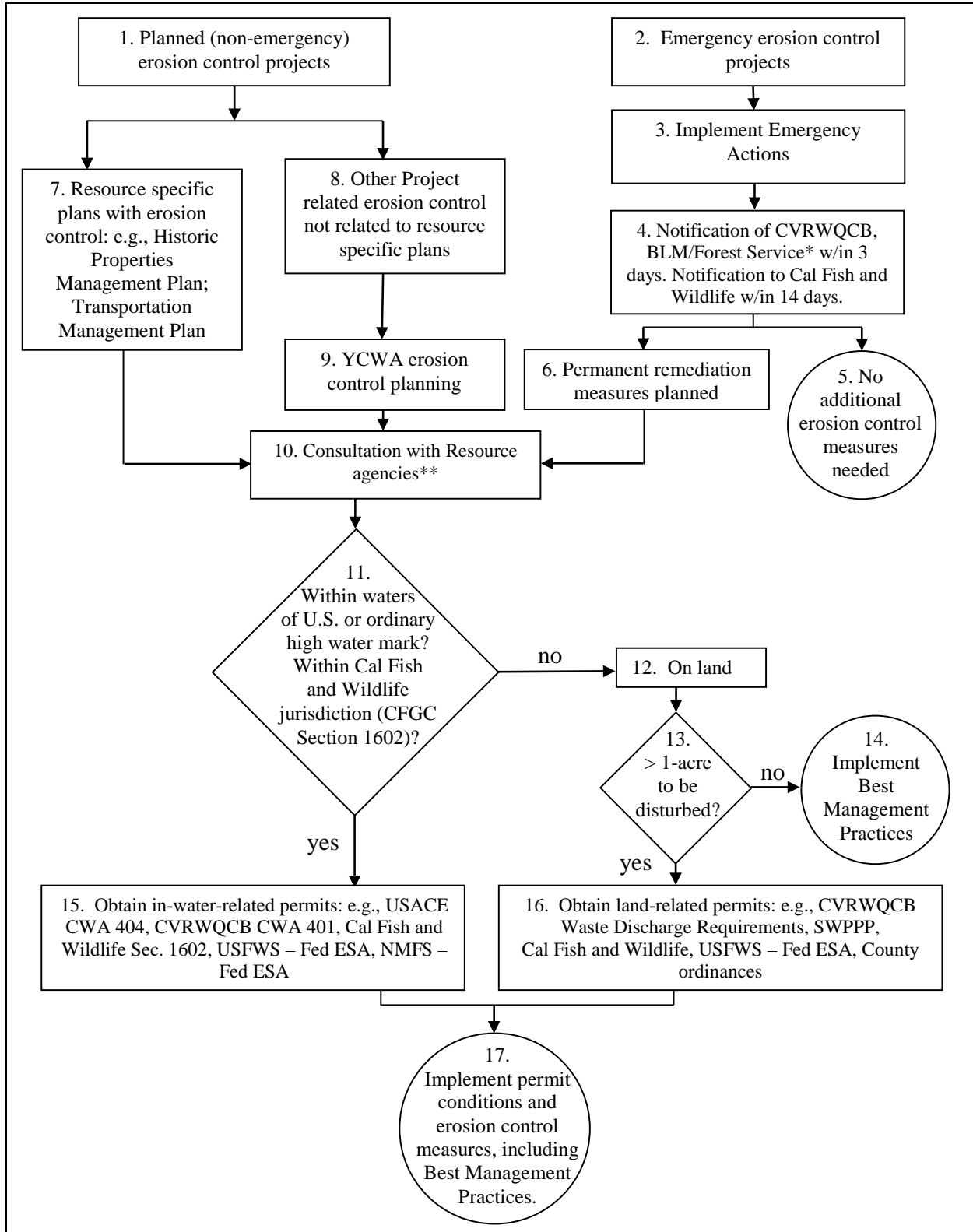
Erosion treatment projects that fall within designated “waters of the U.S.” may be subject to a United States Army Corps of Engineers (USACE) permit (Box 11 in Figure 2.1-1). This may be a Nationwide or an Individual permit, depending upon the specific circumstances.

Erosion treatment projects may also be subject to California Fish and Game Code (CFG) Section 1602 which requires an entity to notify Cal Fish and Wildlife and obtain an agreement (i.e., Section 1602 Agreement) for projects that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste or other material containing crumbled,

flaked, or ground pavement where it may pass into any river, stream, or lake. This notification requirement includes projects that occur in rivers, streams, and lakes with perennial, intermittent, or ephemeral flow; project activities that occur in the riparian vegetation associated with the bed, channel, and bank of any river, stream, or lake; and may also apply to projects undertaken in the floodplain of a body of water. YCWA will submit notification to Cal Fish and Wildlife for any non-emergency erosion control activities that may be subject to CFGC Section 1602 prior to initiating said activities.

Construction work that disturbs a land area greater than 1 acre may be subject to a Statewide General Permit for stormwater discharge associated with construction activity, which may require a Stormwater Pollution Prevention Plan (SWPPP) (Box 16 in Figure 2.1-1). If the Project is smaller than 1 acre of land disturbance, then the Statewide General Permit is not required (Box 14 in Figure 2.1-1).

After the appropriate permits are obtained, and in compliance with the requirements of such permits, YCWA would implement the erosion treatment (Box 17 in Figure 2.1-1).



* Forest Service consultation applies when on or affecting NFS land.

**Resource agencies may include CVRWQCB, Cal Fish and Wildlife, USFWS, NMFS, USACE, the County Planning Department and others, as appropriate.

Figure 2.1-1. Erosion and sediment control plan process flow chart.

2.2 Measures Related to New Construction

Temporary erosion prevention and control measures will be implemented during construction or reconstruction of Project facilities and infrastructure. This includes, but is not limited to, reconstruction at dam sites, road reconstruction, and recreation site development, where ground disturbance and/or vegetation removal is expected. These measures will be based on local, state and federal permit requirements and BMP's for NFS land, YCWA BMP's, including the development of a SWPPP and measures included in a 1602 Agreement, if the work requires such an agreement.. YCWA, or its contractor(s), shall prepare and implement a SWPPP during development of detailed construction plans and drawings, and prior to initiating erosion control measures for each site larger than 1 acre. YCWA shall obtain a 1602 Agreement, if the work requires such an agreement. A copy of the SWPPP and 1602 Agreement, if one is required for the work, shall remain on the site while the site is under construction, commencing with the initial mobilization and ending with the termination of coverage under a USACE permit, if applicable.

Non-storm water BMPs shall be implemented by YCWA year-round for any construction or maintenance activity within the FERC Project Boundary. Measures shall be site-specific for each planned construction project and could extend past the final construction inspection by up to 2 years, if re-vegetation is included for more permanent site stabilization and erosion control.

2.3 Measures Related to Routine Maintenance on NFS Land

Forest Service Pacific Southwest Region BMPs will be adhered to for any routine maintenance activities on NFS land (R5 FSH 2509.22, USDA Forest Service 2011). These BMPs are designed to minimize soil disturbance and reduce delivery of sediment to water bodies.

2.4 Measures Related to Other Emergency Erosion Control Events

YCWA shall be prepared to monitor for unexpected, emergency erosion control events within the FERC Project Boundary that develop in response to significant events (e.g., storms and wildfires). Erosion control measures will include the protocols for documentation of specific erosion threats, appropriate agency notifications, and short/long-term actions that can be taken to stabilize each site and address public safety.

For emergency erosion control work, YCWA will provide notification to Cal Fish and Wildlife pursuant to CFGC Section 1610, which requires notification to be submitted within 14 days of beginning the emergency work. "Emergency work" as defined in CFGC Section 1610 includes: 1) immediate emergency work necessary to protect life or property and 2) immediate emergency repairs to public service facilities necessary to maintain service as a result of a disaster in an area in which a state of emergency has been proclaimed by the governor of California.

2.5 Monitoring of Erosion and Sediment Control Activities

Monitoring of erosion and sediment control plans generally includes both implementation monitoring (i.e., was the BMP installed correctly) and effectiveness monitoring (e.g., did the site revegetate to required standards). Monitoring of erosion and sediment control activities for the Project will follow the parameters of the applicable permits (e.g., Section 1602 Agreement, 404 permit and 401 permit), and/or license implementation plan.⁷ If the work is on or affects NFS land, the monitoring will adhere to the Forest Service Handbook (USDA Forest Service 2011). If a discrepancy occurs between the specific permits and license implementation plans, the monitoring required in the permit will take priority over the monitoring required in the implementation plan. The implementation plans incorporate the Forest Service Handbook requirements so there is no conflict between the implementation plans and the Forest Service Handbook requirements. The Forest Service is required to annually audit BMP implementation and effectiveness on NFS land to meet State of California requirements and National Forest Service policy. These audit sites are chosen at random and may include sites related to this license. These audits would be conducted by the Forest Service in cooperation with YCWA.

2.5.1 Monitoring of New Bullards Bar Reservoir Shoreline Stability

New Bullards Bar Reservoir shoreline stability will be monitored periodically to determine if corrective actions are needed. In the first year of the license and then every five years thereafter, YCWA will conduct a reservoir shoreline survey from a boat and invite the Forest Service and Cal Fish and Wildlife to participate in their own boats. It is anticipated the survey will take two days. The purpose of the survey will be to identify active unstable areas that have a potential to affect resources on NFS land. If such areas are identified, YCWA will document the area including GPS locations, estimated dimensions and photographs. YCWA will discuss with the Forest Service the results of the survey at the annual meeting with the Forest Service and identify any additional actions necessary.

⁷ Various implementation plans in the license (e.g., Integrated Vegetation Management Plan and Transportation System Management Plan) include specific erosion control-related provisions.

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SECTION 3.0

REPORTING, CONSULTATION AND PLAN REVISIONS

3.1 Reporting and Consultation

Each year during the term of the license, YCWA shall arrange to meet with the Forest Service, for an annual meeting to discuss erosion and sediment control on or affecting NFS land within the FERC Project Boundary. YCWA shall provide information on any significant slope instability, landslides or failures that occurred in association with Project facilities and features. Potential remedies for any landslides/failures will be discussed at the meeting. The information will also be provided to Cal Fish and Wildlife.

The date of the meeting will be mutually agreed to by YCWA and the Forest Service, but in general, will be held in spring of each calendar year. It is the intent that this meeting will occur as part of the Annual Agency and Tribes Meeting, described in YCWA's proposed Condition GEN1. YCWA will maintain a record of the meeting for inspection by the FERC.

3.2 Plan Revisions

YCWA, in consultation with the Forest Service and Cal Fish and Wildlife, will review, update, and/or revise the Plan, as needed, when significant changes in existing conditions occur. Any updates to the Plan will be prepared in coordination and consultation with the Forest Service. Sixty days will be allowed for the Forest Service to provide written comments and recommendations before YCWA files the updated plan with FERC, including relevant documentation of coordination and consultation with the Forest Service, for FERC's approval. If YCWA does not adopt a particular recommendation by the Forest Service, the filing will include the reasons for not doing so, based on Project-specific information. YCWA will implement the Plan as approved by FERC.⁸

⁸ The Plan will not be considered revised until FERC issues its approval.

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SECTION 4.0

REFERENCES CITED

United States Department of Agriculture (USDA), Forest Service (Forest Service). 2011. R5 FSH 2509.22 – Soil and Water Conservation Handbook. Chapter 10 – Water Quality Management Handbook. Available online: http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5399662.pdf. USDA Forest Service. Pacific Southwest Region.

_____. Tahoe National Forest (TNF). 1990. Tahoe National Forest Land and Resource Management Plan. Department of Agriculture. Nevada City, California. 687 pp. and appendices.

_____. 1988. Plumas National Forest Land and Resource Management Plan. Department of Agriculture. Quincy, California. Available online: http://www.fs.usda.gov/detail/plumas/landmanagement/?cid=fsm9_034925.

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