



TECHNICAL MEMORANDUM 5-2

Supplemental Botanical and Valley-Elderberry Longhorn Beetle Surveys for Construction of the Proposed New Flood Control Outlet at New Bullards Bar Dam

**Yuba River Development Project
FERC Project No. 2246**

October 2015

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1.0 Introduction

In its April 2014 Application for New License for the Yuba River Development Project, the Federal Energy Regulatory Commission (FERC) Project Number 2246 (Project), Yuba County Water Agency (YCWA) proposed to add to the Project a flood control outlet at New Bullards Bar Dam. The Application included a figure showing 86 acres (ac) of land that could potentially be disturbed during construction of the outlet due to activities such as staging, road construction, borrow, laydown and disposal. Figure 1.0-1, which is a duplicate of Figure 2.2-5 in Exhibit E of YCWA's Application for New License, shows the potential construction area. Refer to Section 2.2.1.2.1 in Exhibit E for a description of proposed construction.

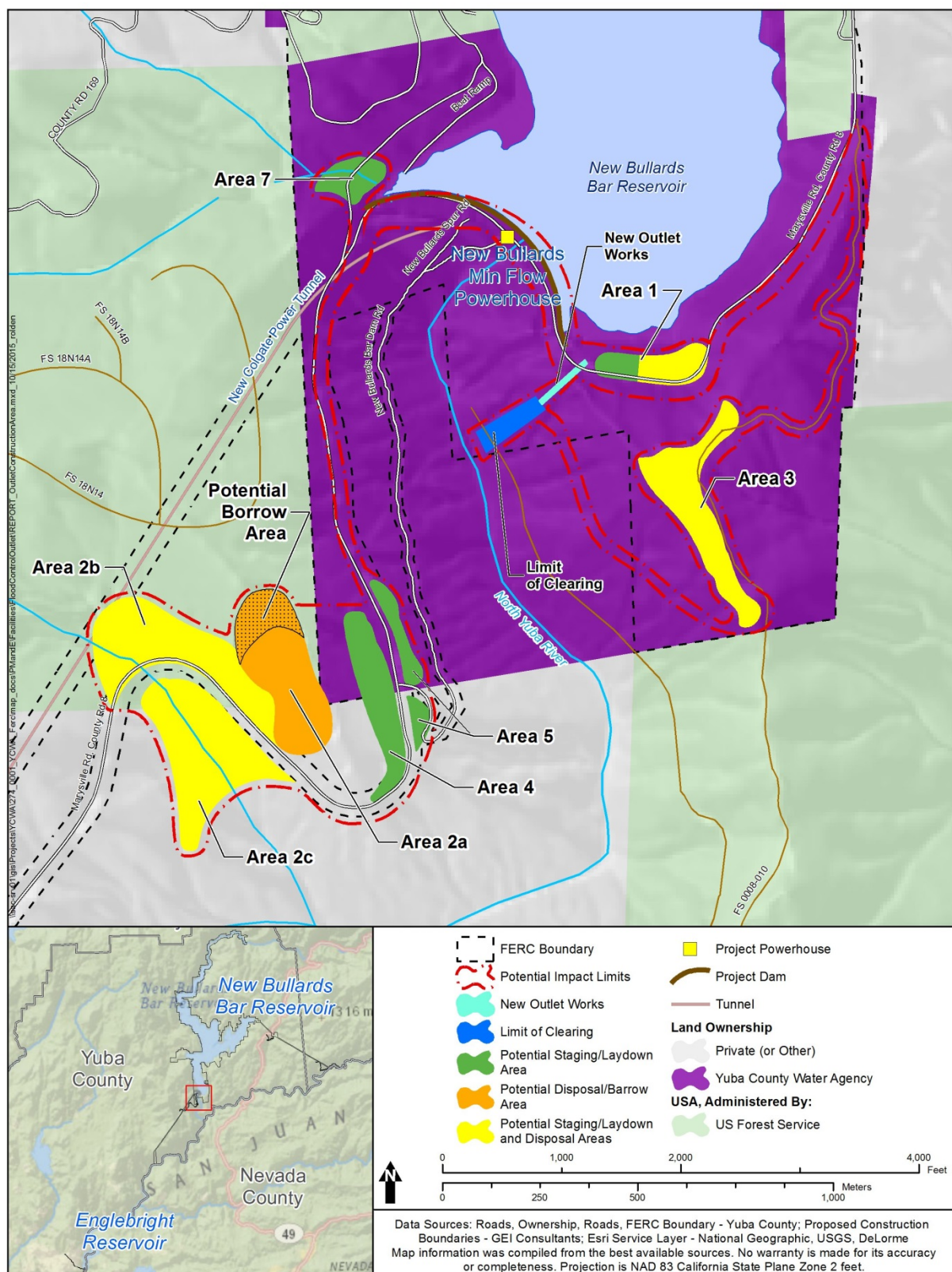


Figure 1.0-1. Potential construction area for proposed New Bullards Bar Flood Control Outlet.

On November 13, 2014, FERC issued the *Determination on Requests for Modifications to the Yuba River Hydroelectric Project Study Plan* (Determination). In its Determination, FERC ordered YCWA to conduct surveys for special-status, federal Endangered Species Act (ESA) - listed and California Endangered Species Act (CESA)-listed plants and ESA-listed wildlife, valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*), which is listed as threatened under the ESA, on lands that may be disturbed by construction of the proposed flood control outlet where YCWA's relicensing studies had not previously surveyed for plants and VELB.¹ FERC directed YCWA to consult with agencies regarding study methods, and to complete the surveys and file the results with FERC by October 31, 2015.

YCWA determined that 33.95 ac of land in the potential construction area had not been surveyed for special-status plants and VELB. Of this, 31.4 ac were National Forest System (NFS) lands managed by the Plumas National Forest (PNF) and 2.55 acres were YCWA-owned lands. Figure 1.0-2 shows the areas that had not been surveyed. YCWA consulted with resource agencies on location and timing of surveys prior to beginning fieldwork.

This technical memorandum provides the results of YCWA's surveys in conformance with FERC's Determination.

¹ As part of FERC-approved Studies in 2012 5.1, *Special-status Plants*, 7.1 *Endangered Species Act-listed Plants*, and 7.4, *ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle*, 7.5, *California Endangered Species Act-Listed Plants*, YCWA surveyed 31.4 acres of the proposed flood control outlet construction area for plants, including non-native invasive plants (NNIP), and VELB. The results of the surveys are provided in Technical Memoranda 5-1, *Special-status Plants*, 7-1 *ESA-listed Plants*, 7-4, *ESA-Listed Wildlife – Valley Elderberry Longhorn Beetle*, and 7-5, *California Endangered Species Act-Listed Plants*, which are included in Appendix 6 to Exhibit E of YCWA's Application for New License.

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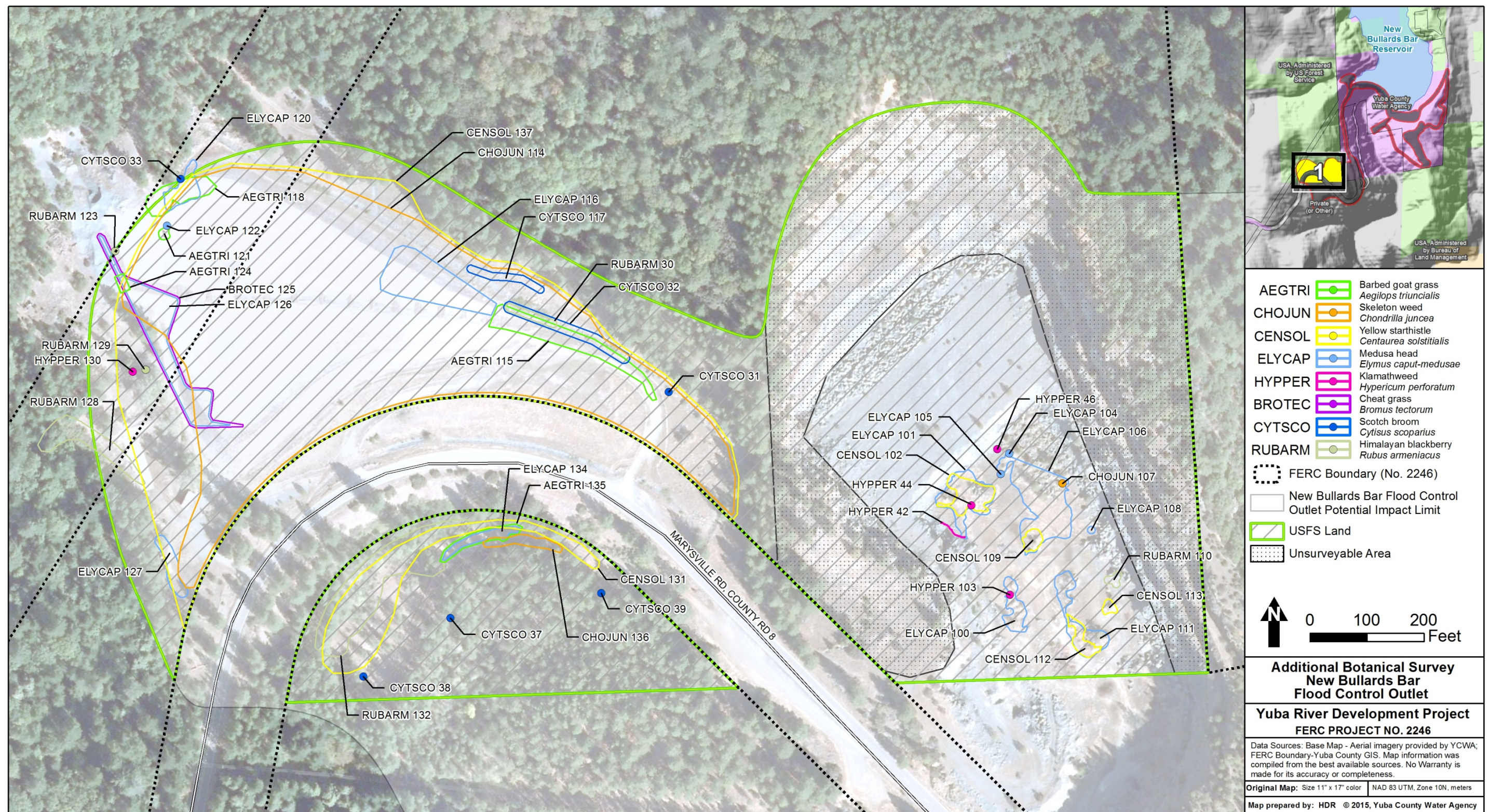


Figure 1.0-2. Survey area for New Bullards Bar Flood Control Outlet and special-status plants and NNIP located in the Yuba River Development Project.

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2.0 Methods

YCWA surveyed the additional 22.4 ac (9.0 ac were unsurveyable due to unsafe conditions) following the methods described in FERC-approved Studies 5.1, *Special-Status Plants*, 7.1, *Endangered Species Act -Listed Plants*, 7.4, *ESA-Listed Wildlife- VELB* and 7.5, *California Endangered Species Act-Listed Plants* (YCWA 2011). In addition, YCWA documented occurrences of non-native invasive plants (NNIP) and wetlands.

YCWA performed botanical surveys from March 31 through April 1, 2015 and on June 30, 2015. Surveys were performed by a team of qualified botanists. Surveys were comprehensive over all safely accessible portions of the study area, using systematic field techniques to ensure thorough coverage. Surveys were floristic in nature and followed California Fish and Wildlife's *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFG 2009). Plants were identified using:

- Field Guide to the Sedges of the Pacific Northwest (Wilson et al. 2008)
- Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012)
- Wildflowers of the Sierra Nevada and the Central Valley (Blackwell 1999)
- Selected Plants of Northern California and Adjacent Nevada (Oswald 2002)

3.0 Results

A total of 22.4 ac was surveyed. In compliance with FERC-approved studies, all occurrences of ESA-listed plants, CESA-listed plants, special-status plants, NNIP and VELB habitat located within the additional study area were identified and recorded.

3.1 ESA-Listed Plants

YCWA did not identify any ESA-listed plants.

3.2 CESA-Listed Plants

YCWA did not identify any CESA-listed plants.

3.3 Valley Elderberry Longhorn Beetle

YCWA did not identify any occurrences of elderberry (*Sambucus nigra ssp.caerulea*), the host plant for VELB.

3.4 Special-Status Plants

YCWA did not identify any occurrences of special-status plants.

3.5 Non-Native Invasive Plants

YCWA identified 46 occurrences and 19.84 ac of eight NNIP species in the study area during 2015 surveys. All eight species were previously located on the Project during 2012 studies. NNIP species descriptions are provided in Technical Memorandum 5-1 *Special-status plants*, which is provided as Appendix 6 of Exhibit E in YCWA's Application for a new license.

All occurrences were found on NFS lands managed by the PNF. Number of occurrences, acres, and status for each NNIP species is detailed in Table 3.5-1. Figure 1.0-2 shows the location and extent of each occurrence.

Table 3.5-1. Non-native invasive plant occurrences identified on NFS lands in the Yuba River Development Project.

Common Name Scientific Name	Status ¹	Number of Occurrences	Acres
Barbed goat grass <i>Aegilops triuncialis</i>	CDFA B PNF B	5	0.39
Cheat grass <i>Bromus tectorum</i>	PNF Species of Interest	1	0.34
Yellow star-thistle <i>Centaurea solstitialis</i>	CDFA C PNF C	6	9.57
Skeleton weed <i>Chondrilla juncea</i>	CDFA A PNF A	3	7.34
Scotch broom <i>Cytisus scoparius</i>	CDFA C PNF C	7	0.15
Medusa head <i>Elymus caput-medusae</i>	CDFA C PNF C	13	1.37
Klamath weed <i>Hypericum perforatum</i>	CDFA C	5	0.01
Himalayan blackberry <i>Rubus armeniacus</i>	Not rated	6	0.67
Total		46	19.84

¹ CDFA Status (CDFA 2015):

A = Are subject to state (or commissioner when acting as a state agent) enforced action involving eradication, quarantine regulation, containment, rejection, or other holding action.

B = At the discretion of the individual county agricultural commissioner they are subject to eradication, containment, suppression, control, or other holding action.

C = There is no state enforced action other than providing for pest cleanliness.

PNF Status (Forest Service 2013)

A = Eradication, containment, rejection, or other holding action at the state-county level. Quarantine interceptions to be rejected or treated at any point in the state.

B = Eradication, containment, control or other holding action at the discretion of the commissioner.

C = State endorsed holding action and eradication only when found in a nursery; action to retard spread outside of nurseries at the discretion of the commissioner; reject only when found in cropseed for planting or at the discretion of the commissioner.

3.6 Wetlands

YCWA did not identify any wetlands during surveys.

4.0 Discussion

The proposed flood control outlet areas surveyed were highly disturbed with very few native species and multiple NNIPs. Construction of YCWA's proposed flood control outlet has the potential to spread the NNIP species. Occurrences may be transported to new areas on

equipment, vehicles or the clothes and shoes of maintenance personnel. Adherence to the methods provided in YCWA's relicensing Integrated Vegetation Management Plan will prevent the spread of NNIP from these areas during construction.

There were no variances to the study as prescribed in FERC's November 13, 2014 Determination.

5.0 References

- Baldwin, B. G., D. H. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, second edition. University of California Press, Berkeley, CA.
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