Lake County HPB Bridge Projects:
Clover Creek Bridge at First Street

Natural Environmental Study for
the Clover Creek Bridge Replacement at First Street
(Federal Project No. BRLO-5914 (079), 14C-0015)
District 1-Lake County

February 2015

Caltrans
CALIFORNIA DEPARTMENT OF TRANSPORTATION

Natural Environment Study

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(Federal Project No. BRLO-5914 (079), 14C-0015)

District 1-Lake County

STATE OF CALIFORNIA
Department of Transportation

Prepared By: _____ Date: 02/06/15

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Summary

Project Description: The Lake County Department of Public Works, in cooperation with the California Department of Transportation and Federal Highway Administration, is proposing to replace an existing single span reinforced concrete haunched T-girder bridge (Bridge No. 14C-0015) over Clover Creek. The existing bridge is located on First Street approximately 0.1 miles east of Main Street, in the community of Upper Lake. The project need is to provide a safe permanent crossing over Clover Creek on First Street since the existing structure is considered Functionally Obsolete. The primary objective is to replace a Functionally Obsolete structure to improve public safety and to provide for a structure that has long term value for the County.

The concrete structure is too narrow for the roadway's Functional Classification and the bridge has been determined to be Functionally Obsolete. The existing bridge has concrete bridge railings with no approach railings. The existing structure is approximately 39 feet long. Replacement structures are typically slightly longer than the existing bridge. A reinforced concrete bridge or a bottomless arch culvert will be considered for this project. Since the bridge and culvert options are significantly different in hydraulic capacity, a detailed hydraulic study is required to verify the viability of the options being considered. Due to weak soil and high ground water, either a box culvert, arch culvert with mat foundation, or 70'~80' deep piles are anticipated.

The existing bridge crosses Clover Creek upstream of its confluence with Middle Creek and the flow is primarily controlled by the upstream Clover Creek Diversion structure and seasonal runoff. The flows were reduced by the diversion structure from 8500 cfs to 500 cfs (200 year). The structure and associated levees were built by the US Army Corps of Engineers. The responsibility for operation and maintenance was transferred to the Central Valley Flood Protection Board. These services were contracted to the Lake County Watershed Protection District. The channel appears to have a good alignment with the current bridge configuration.

This project may involve permanent modification or alteration of the streambed. Access to the creek will be required to provide temporary support for new bridge structure falsework. Depending on flows during construction, temporary stream diversion may be required. The superstructure of the new bridge will be positioned to allow flood flows to pass without overtopping the new bridge.

Impacted Habitat: The biological study area (BSA) encompasses 5.82 acres including existing roadways, residential structures, and other disturbed areas as well as undisturbed natural habitat such as riparian woodland. The area of actual ground disturbing activities (ESA) is limited to 0.53 acres within the bridge replacement area; however these impacts will consist of vegetation removal or trimming. Some potential impacts will be permanent, such as the modification of vegetation at the location of the permanent structure, approaches and piers.

Special Status Species Impacted: Three blue elderberry shrubs occur within the ESA. The closest is in contact with the upstream edge of the bridge with the trunk 7 feet upstream. This shrub will be removed. The other two are 36 and 51 feet from the bridge and will not be directly impacted. A Biological Assessment (BA) was completed for Valley Elderberry Longhorn Beetle (VELB; *Desmocerus californicus dimorphus*), which has been submitted to Caltrans. Based on the findings in the BA and fact that the elderberry shrubs are located outside of the known range of the species, and within the context of FESA, this project is not likely to adversely affect federally listed species. Clear Lake hitch, a California Threatened Species, are seasonally present but can be avoided if construction occurs when the stream channel is dry.

Required Permits: Permits will be required for this project from the following agencies:

- California Department of Fish and Wildlife: 1601 Stream Alteration Agreement
- U.S. Army Corps of Engineers: Nationwide Permit
- Regional Water Quality Control Board: 401 Water Quality Certification
- Central Valley Flood Plain Protection Board Encroachment Permit

Invasive Species: Himalayan blackberry and English ivy occur throughout the ESA. California wild grape, a native species, has covered much of the tree and shrub canopy including the blue elderberry shrubs.

Beneficial Effects: The new bridge will provide safe access for vehicles crossing First Street in Upper Lake at this location.

Mitigation Agreements: The requirement for a mitigation agreement for VELB will be dependent on the USFWS determination regarding the potential for adverse impact to this species following their review of the Biological Assessment conducted for this project. Clear Lake hitch are seasonally present and are a California Threatened Species. Mitigation for this species is provided and follows CDFW recommendations.

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List of Figures and Tables

List of Abbreviated Terms

BA	Biological Assessment
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
EPA	Environmental Protection Agency
ESA	Environmentally Sensitive Area
FESA	Federal Endangered Species Act
FWS	U.S. Fish and Wildlife Service
NEPA	National Environmental Policy Act
NES	Natural Environment Study
NMFS	National Marine Fisheries Service
NRCS	Natural Resource Conservation Service
RWQCB	Regional Water Quality Control Board
SWPPP	Stormwater Pollution Prevention Program
USFWS	U.S. Fish and Wildlife Service
WHR	California Wildlife Habitat Relations System
VELB	Valley Elderberry Longhorn Beetle
WPCP	Water Pollution Control Program

Chapter 1. Introduction

1.1. Project History

The Lake County Department of Public Works (County) is proposing to replace the Clover Creek Bridge (Bridge No. 14C-0015) at First Street. This existing bridge is located on First Street between Washington Street and Rice Street in Upper Lake. First Street serves a residential area between Clover Valley Road and Main Street. First Street lies on an east - west alignment parallel to State Highway 20.

The existing bridge is a single span haunched reinforced concrete bridge with T girders, built in 1930. The most recent Caltrans Bridge Inspection Reports from 2011 designated a Sufficiency Rating of 45.7 for the existing bridge and deemed it "Functionally Obsolete" due to the narrow width of the bridge. All of the girders have vertical cracks ranging from 1/64" to 1/32" wide, spaced as close as 3' on center due to tension stresses from bending moments. These vertical cracks were first reported in 1999. There were no structural defects noted on the abutments.

1.2. Project Description

General Description

The project consists of the replacement of an existing single span reinforced concrete haunched T-girder bridge (Bridge No. 14C-0015) over Clover Creek. The existing bridge is located on First Street approximately 0.1 miles east of Main Street, near the community of Upper Lake. The concrete structure is too narrow for the roadway's Functional Classification and is considered Functionally Obsolete. The existing bridge has concrete bridge railing with no approach railings.

The project need is to provide a safe permanent crossing over Clover Creek on First Street since the existing structure is considered Functionally Obsolete. The primary objective is to replace a Functionally Obsolete structure to improve public safety and to provide for a structure that has long term value for the County.

The entire existing roadway is within County right-of-way which has a minimum width of 50'. It is anticipated that any additional need for right-of-way acquisition, rights of entry, or temporary construction easements will be minimized by maintaining the existing roadway alignment.

It is assumed that the roadway for one block will be closed during construction and traffic will be redirected onto other local streets.

The existing structure is approximately 39 feet long. Replacement structures are typically slightly longer than the existing. A reinforced concrete bridge or a bottomless arch culvert will be considered for this project. Since the bridge and culvert options are significantly different in hydraulic capacity, a detailed hydraulic study is required to verify the viability of the options being considered.

The existing bridge crosses Clover Creek upstream of its confluence with Middle Creek and the flow is primarily controlled by the upstream Clover Creek diversion structure and seasonal runoff. The flows were reduced by the diversion structure from 8500 cfs to 500 cfs (200 year). The structure and associated levees were built by the US Army Corps of Engineers. The responsibility for operation and maintenance was transferred to the Central Valley Flood Protection Board. These services were contracted to the Lake County Watershed Protection District. The channel appears to have a good alignment with the current bridge configuration.

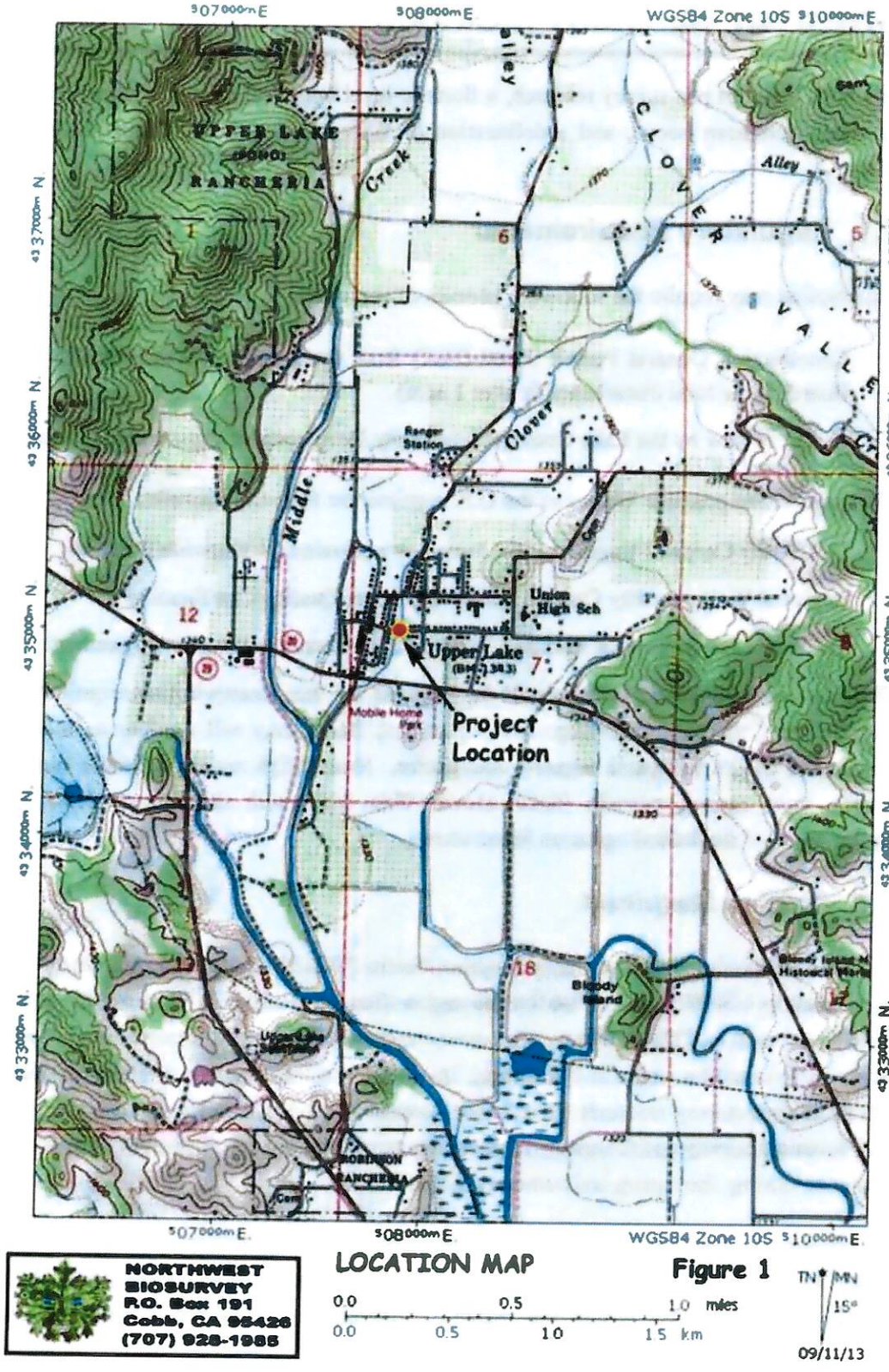
This project may involve permanent modification or alteration of the streambed. Access to the creek will be required to provide temporary support for new bridge structure falsework. Depending on flows during construction, temporary stream diversion may be required. The superstructure of the new bridge will be positioned to allow flood flows to pass without overtopping the new bridge.

Due to weak soil and high ground water, either a box culvert, arch culvert with mat foundation, or 70'~80' deep piles are anticipated.

It is anticipated that excavators, dozers, cranes, dump trucks, concrete trucks, concrete pumps, and pile driving or drilling equipment may be required to construct the new bridge. Construction is anticipated to be completed within one construction season.

The project is not within an EPA designated or proposed sole-source aquifer. This project is not in an area regulated by the State Coastal Zone Management Agency. The project is not in the general vicinity of a Wild and Scenic River System. No agricultural or wetland resources will be affected. The project is consistent with the plans and goals of the community.

Figure 1. Location Map



Chapter 2. Study Methods

This NES includes pre-survey research, a floristic-level botanical survey, a survey for valley elderberry longhorn beetle, and a delineation of Waters of the U.S. These are described below.

2.1. Regulatory Requirements

Construction may require the following permits or approvals:

- Construction General Permit 99-08-DWQ from the Regional Water Quality Control Board (if the total disturbance is over 1 acre)
- CEQA review by the Lake County Community Development Department (see below)

Any work within possible Waters of the U.S. requires the following permits:

- U.S. Army Corps of Engineers 404 Permit or equivalent Nationwide Permit
- Regional Water Quality Control Board 401 Water Quality Certification
- California Department of Fish and Wildlife 1601 Stream Alteration Agreement

While no county-initiated permits will be required for this county-initiated project by the Lake County Community Development Department, that agency will conduct an initial study and adopt a CEQA mitigated negative declaration. This CEQA review will also be required for the state agency permits listed above. This NES will also meet NEPA review requirements of the federal agencies listed above.

2.2. Studies Required

A NEPA initiated valley elderberry longhorn beetle (VELB) study was conducted based on the mandatory USFWS species list for this region (See **Appendix G**). Because this document will also be used in CEQA review, pre-survey research and field studies were conducted for species with sensitive status in California. In addition to the database reviews conducted as part of the pre-survey research (listed and discussed below), a full protocol-level floristic level botanical survey and Corps of Engineers protocol delineation of waters of the U.S. were conducted during the spring and summer of 2013.

The pre-survey research consists of a comparison of existing habitat conditions within the project boundaries to the geographic range and habitat requirements of sensitive plants and wildlife known to occur within the region. It includes all sensitive species that occupy

habitats similar to those found in the project area and whose known geographic ranges encompass it. The analysis includes the following site characteristics:

- Location of the project area with regard to the geographic range of sensitive plant and wildlife species
- Location(s) of known populations of sensitive plant and wildlife species as mapped in the California Natural Diversity Database (CNDDB) and RareFind 4
- Soils of the project area
- Elevation
- Presence or absence of special habitat features such as vernal pools and serpentine soils
- Plant communities existing within the project area
- An analysis of wildlife presence using the Department of Fish and Game Wildlife Habitat Relations Software (WHR)

A full, in-season floristic-level survey was conducted for the project site. The survey area encompassed the project area and extended for a radius of 250 feet around the project corridor. The CNDDB reports and maps for the Upper Lake quadrangle were referenced prior to the survey. Vegetation communities were identified based on the nomenclature of *A Manual of California Vegetation* (Sawyer, et al. 2009) as modified by the California Native Plant Society (CNPS), and mapped on a 1"=100' aerial photo. Vegetation type names are based on an assessment of dominant cover species. Plants occurring on the site were identified using *The Jepson Manual of Higher Plants of California*. Where necessary, species names were updated based on the 6th edition, CNPS *Inventory of Rare and Endangered Plants of California.*

A protocol-level delineation of Waters of the U.S. as outlined in the 1987 Corps of Engineers delineation manual and the 2007 Arid West Supplement is included in this assessment. The delineation and findings are provided below.

A survey for passerines had previously been conducted at the site by Northwest Biosurvey on August 15, 2012. The results of that survey were negative.

2.3. Personnel and Survey Dates

Personnel: The botanical field and wildlife surveys, plant taxonomy, and the delineation were conducted by Steve Zalusky, Northwest Biosurvey principal biologist. Mr. Zalusky has

a Master of Science Degree in Biology from the California State University at Northridge and a Bachelor of Science Degree in Zoology from the University of California at Santa Barbara. Mr. Zalusky has over 30 years of experience as a biologist in the government and private sectors. He completed his wetland delineation training under Terry Huffman of Huffman & Associates, Inc.

Field surveys, database review, and report preparation were conducted with the assistance of Danielle Zalusky, Northwest Biosurvey principal planner. Ms. Zalusky has a Bachelor of Arts Degree and has completed all course work toward an M.A. Degree in Rural and Town Planning from Chico State University. Ms. Zalusky served more than 20 years as a planner in local government and, prior to joining Northwest Biosurvey in 2002, was a senior planner for the Lake County Community Development Department.

Survey Dates: Site visits were made for botanical surveys, wildlife habitat assessments, and mapping for vegetation types and waterways on March 10, April 10, July 19, and July 15, 2013. A site visit for the elderberry survey was made on September 10, 2013.

2.4. Agency Coordination and Professional Contacts

Throughout preparation of this NES, direct contact with USFWS staff was conducted by Brandon Larsen, Caltrans Senior Environmental Planner. The initial agency contact between Caltrans and staff from the Lake County Department of Public Works was during the Caltrans site review in August, 2012. Potential impacts, avoidance, and mitigation for Clear Lake hitch have been discussed by Northwest Biosurvey staff with Sandra Jacks and Rick Macedo of the California Department of Fish and Wildlife in May 2012, February 2013, and February 2015.

Contributors include the following individuals:

Brandon Larsen	Caltrans, Senior Environmental Planner Caltrans Project Local Assistance
Ken Brown	Lake County Dept. of Public Works, Principal Engineer
Hamid R. Heidary	Lake County Dept. of Public Works, Assoc. Civil Engineer Lake County Project Management
Steve Zalusky	Northwest Biosurvey, Principal Biologist Document preparation – biological resources
Danielle Zalusky	Northwest Biosurvey, Principal Planner Document preparation – planning and regulatory

Sandra Jacks	California Dept. of Fish and Wildlife, Staff Environmental Scientist Fisheries consultation (Clear Lake hitch)
Rick Macedo	California Dept. of Fish and Wildlife, Fisheries Biologist Fisheries consultation (Clear Lake hitch)

2.5. Limitations That May Influence Results

All surveys were conducted following agency protocols and within the appropriate survey window. The following surveys were conducted:

- Floristic-level botanical survey pursuant to California Department of Fish and Wildlife protocol
- Delineation of waters of the U.S. pursuant to the 1987 COE Delineation Manual and 2006 Arid West Supplement
- VELB protocol survey pursuant to the FWS Conservation Guidelines 1999

Northwest Biosurvey staff is not aware of any limitations that may influence the results of surveys conducted for this NES.

Chapter 3. Results: Environmental Setting

Regional Setting

The project is located within the Interior North Coast Range of California in the Clear Lake Basin. This is a region of steep, generally north-to-south-trending ridges and small interior valleys which eventually drain east to the Sacramento Valley and Sacramento River. The Clear Lake Basin is an exceptionally large depression within the region and contains Clear Lake surrounded by relatively level valley terrain occupying former lake deposits. The valley floor is cut by numerous streams which originate on the steep slopes of the surrounding ridges and then meander through level farmland to Clear Lake. The valley floor has historically been converted to agricultural uses and associated residences. The First Street Bridge crosses Clover Creek within the Clover Valley, a site typical of those described above within the Clear Lake Basin.

3.1. Description of the Existing Biological and Physical Conditions

3.1.1. Study Area

The Biological Study Area (BSA) includes the 2.12-acre Environmentally Sensitive Area (ESA) plus a 250-foot radius survey buffer for a total of 23.29 acres. The BSA and ESA are shown in the aerial photo basemap provided in **Figure 2**.

3.1.2. Physical Conditions

Topography and Drainage

The headwaters of Clover Creek drain the southwest slopes of a continuous northwest-to-southeast trending ridge which includes Pitney Ridge and Bartlett Mountain. The slopes are cut by a series of steep canyons containing named tributaries. These include Page Creek, Smith Creek, Alley Creek, Gilbert Creek, and the main channel of Clover Creek.

Within as little as a mile-and-a-half (Page Creek) and up to four miles (Gilbert Creek), these channels drop from the ridgetop at up to 3,600 feet msl to the floor of Clover Valley at 1,400 feet. The numerous tributaries meander west as low-gradient channels across the valley floor through orchards and scattered rural residential development before reaching Clover Creek. Clover Creek continues south an additional one-half mile to the location of the First Street Bridge within the town of Upper Lake. Throughout the town, the channel is closely bordered by fencing associated with residences. The creek continues south-southeast for 0.45 miles to its confluence with Middle Creek, which flows through the Rodman Slough before entering Clear Lake.

Soils: Soils within and around the BSA are of a single type, described as follows:

- **Lupoyoma silt loam, protected (soil unit 158):** This very deep, moderately well drained soil is on flood plains. It formed in alluvium derived from mixed rock sources. Slope is 0 to 2 percent. Typical vegetation is mostly annual grasses and scattered oaks. Permeability is moderately slow. Surface runoff is very slow and hazard of erosion is slight. The soil is subject to rare periods of flooding in winter and spring.

3.1.3. Biological Conditions in the Biological Study AreaVEGETATION TYPES

The site contains three plant communities based on the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation.* **Table 1** lists the plant communities and other cover types present within the study area. They are described below the table and shown in the vegetation types map provided in **Figure 2.**

Table 1. Total Area of Vegetation Types and Other Land Cover

Vegetation Type	Acres	Percent of Total
Red Willow Thicket	0.30	5.20
Valley Oak Riparian Woodland	0.27	4.72
Blackberry Bramble	0.07	1.20
Orchard	0.09	1.59
Ruderal	5.09	87.29
Total	**5.82**	**100**

- Red Willow Thicket: Red willow (*Salix laevigata*), is heavily dominant within this community but the canopy includes Oregon ash (*Fraxinus latifolia*), and box elder (*Acer negundo var. californicum*). Together these trees provide 100-percent canopy cover over the channel and immediate banks of Clover Creek. The shrub layer ranges from a continuous cover of Himalayan blackberry (*Rubus discolor*) to scattered blue elderberry (*Sambucus mexicana*). The lower branches of the trees and often entire shrubs are covered by a dense growth of California wild grape (*Vitis californica*). Where the shrub layer is sufficiently thin to allow it, the ground cover includes western sweet cicely (*Osmorhiza occidentalis*), poison hemlock (*Conium maculatum*), and tall fescue (*Festuca arundinacea*).

- California Valley Oak Riparian Woodland: This mature woodland cover occupies adjacent terraces and overtops the creek banks and channel to provide 100-percent canopy cover. In addition to the dominant California valley oak (*Quercus lobata*), the canopy includes California bay (*Umbellularia californica*), Oregon ash, and red willow. The shrub layer consists of scattered poison oak (*Toxicodendron diversilobum*) and Himalayan blackberry. The ground cover includes western sweet cicely, tall fescue, bulbous bluegrass (*Poa bulbosa*), and common butterweed (*Senecio vulgaris*).

- Blackberry Bramble: Himalayan blackberry provides a dense and impenetrable shrub layer along all segments of the creek channel not overtopped by tree canopy. Within the survey area, it provides a homogenous cover along both sides of the First Street bridge. Included within this dense bramble are two elderberry shrubs heavily covered by blackberry at their bases and overgrown with California wild grape on their crowns. The shrub layer is too dense to allow for development of ground cover; however, the narrow exposed creek channel supports a number of hydrophytes (water loving plants). These include tall flat sedge (*Cyperus eragrostis*), Persian speedwell (*Veronica persica*), fuller's teasel (*Dipsacus fullonum*), and curly dock (*Rumex crispus*).

- Orchard: The southwestern edge of the BSA includes a portion of a walnut orchard which appears to still be in use.

- Ruderal: The ESA is located within the town of Upper Lake and consequently, the BSA consists primarily of developed area including roads, structures, parking areas, and landscaping.

3.1.3.2. BOTANICAL FIELD SURVEY RESULTS

Appendix A presents the results of the floristic-level botanical survey for the project site. Surveys were conducted on March 10, April 10, July 19, and July 15, 2013. Each of the sensitive plant taxa potentially occurring at the site was specifically searched for during the surveys. The survey identified a total of 27 plant taxa within the survey area (BSA). The last column in each row of Appendix A identifies the taxa as native or introduced. This low number of taxa is related to the dense tree canopy and particularly dense and nearly homogenous shrub cover of Himalayan blackberry along the creek channel which suppressed the development of a diverse ground cover of forbs and grasses. Landscape plants from adjacent residences were not included in the survey list.

The red willow thicket and Himalayan blackberry bramble communities along the creek contain blue elderberry, a shrub that is known to provide potential habitat for the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), a species with threatened status under the federal Endangered Species Act. The U.S. Fish and Wildlife Service has jurisdiction over this species and has regulatory authority under the Endangered Species Act for determining whether surveys should be conducted for the species at any location.

3.1.3.3. Wildlife Common to the Habitats Within the Biological Study Area

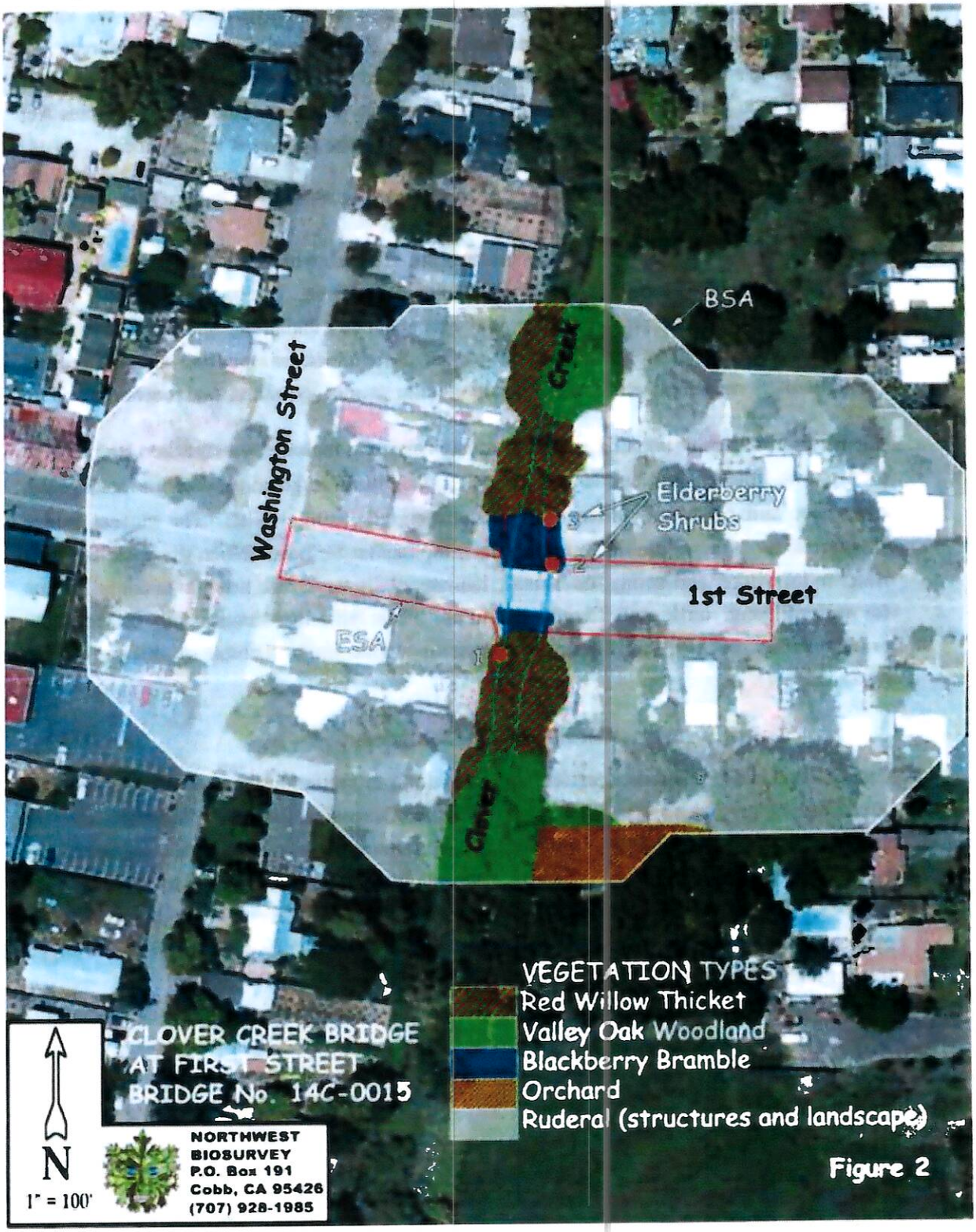
The list of native wildlife common to the riparian and oak woodland habitats of the larger geographic region is extensive and will not be reproduced here. Due to the residential nature of the area in which the project is located, larger mammals including black bear, mountain lion, and blacktail deer are unlikely to be present. Medium sized mammals that are present are common to residential and rural areas and include skunks, possums, and raccoons.

The list of bird species potentially present is extensive and includes woodpeckers and a range of sparrows, finches, and similar passerines. Anna's hummingbird, northern mockingbird, scrub jays, and mourning doves were also observed during visits. The current bridge structure is too open to provide protected roosting habitat for bats. When the creek contains water in the winter and spring, the aquatic habitats of Clover Creek provide potential habitat for western pond turtle and Clear Lake hitch. This NES has focused on the potential presence of species with sensitive regulatory status within similar habitats of this geographic region.

3.1.3.4. Migration and Travel Corridors

Clover Creek and its riparian corridor form a natural migration and travel corridor for fish, aquatic herptiles, and riparian birds. A wide range of common fish and wildlife use riverine and riparian habitat as migration routes and daily movement corridors either seasonally, or throughout the year depending on species. Among these are species with sensitive regulatory status including western pond turtle and Clear Lake hitch. The turtles use the slower sections of the creek as spring and early summer habitat while the hitch may seasonally pass through this segment of Clover Creek to upstream spawning areas.

Figure 2. Biological Study Area and Vegetation Types



3.1.3.5. AQUATIC RESOURCES - POSSIBLE WATERS OF THE U.S.

Purpose: A delineation of possible Waters of the U.S. was conducted as prescribed in the *Corps of Engineers Wetlands Delineation Manual,* January 1987 and the *Arid West 2006 Supplement*. Staff training was obtained under Huffman & Associates, Inc.

Results: The results of the delineation are shown on the aerial photo base map provided in **Figure 3**. Based on the delineation, there is a total of 0.75 acre of possible waters of the U.S. present as "other waters of the U.S." within the BSA and 0.33 acres of "other waters of the U.S." in the ESA. See **Table 2** below for the results of the delineation.

Finding: No wetlands will be impacted by this project.

Table 2. Possible Waters of the U.S.

Project Name: Replacement of First Street Bridge over Clover Creek (Bridge No. 14C-0015)		
Contact:	Lake County Dept. of Public Works 255 N. Forbes Street Lakeport, CA 95453	
Delineator:	Steve Zalusky Northwest Biosurvey P.O. Box 191 Cobb, CA 95426 (707) 928-1985	
Date of Map:	September 11, 2013	
POSSIBLE WATERS OF THE U.S.		
Site Designation		**Acres**
A	Stream Segment in BSA	0.188
A	Stream Segment in ESA	0.083

3.1.3.6. INVASIVE SPECIES

The banks and upper terraces of Clover Creek within the red willow thicket support a dense growth of Himalayan blackberry and English ivy, which have crowded out many of the local native species. The floristic-level survey identified 27 species within the BSA, of which only 10 are native (See **Appendix A**).

Figure 3. Possible Waters of the U.S.

3.2. Regional Species and Habitats of Concern

While this NES is intended primarily as a NEPA document focusing on species with federal sensitive status, it will also serve as a basis for the local agency CEQA review. Consequently, the list of species with sensitive status addressed in this NES will include those with sensitive status in California. As discussed below, extensive pre-survey research was conducted for both plants and wildlife prior to conducting field surveys. Due to the fact that a floristic-level botanical survey was conducted within the BSA, a definitive answer can be provided regarding the presence or absence of sensitive plant taxa. The "discussion" of presence or absence of sensitive plants is therefore limited to the tabular summary provided in **Table 3**.

With the exception of the VELB survey, wildlife surveys were beyond the scope of the assessment. The potential for sensitive wildlife species to be present is summarized in **Table 3**; wildlife species for which habitat is potentially present are discussed in Section 4.3. The species list produced by the U.S. Fish and Wildlife Service website (**Appendix G**) was consulted; any species in that list with a potential to occur within the BSA are included in **Table 3**.

Table 3. Taxa with Sensitive State and/or Federal Status Within the Surrounding Region

Scientific Name	Common Name	Status Calif. (CNPS/ CDFW)	Status Fed.	General Habitat Description	Habitat Present/ Absent	Rationale
PLANTS:						
Brasenia schreberi	watershield	2.3	None	Marshes & swamps/freshwater	A	Necessary habitats not present and not found during botanical survey.
Calycadenia micrantha	small-flowered calycadenia	1B.2	None	Chaparral, meadows & seeps (volcanic), valley & foothill grassland; roadsides, rocky, talus, scree	A	Necessary habitats not present, not found during botanical survey.
Carex comosa	bristly sedge	2.1	None	Coastal prairie, marshes & swamps (lake margins), valley & foothill grassland	A	Necessary habitats not present and not found during botanical survey.
Didymodon norrisii	Norris's beard-moss	2.2	None	Cismontane woodland, lower montane conif. forest/intermit. mesic, rock	HP	Poor habitat present; species not found during botanical survey.
Hesperolinon adenophyllum	glandular western flax	1B.2	None	Chaparral, cismontane woodland, valley & foothill grassland/ serpentinite	A	Necessary habitats not present, not found during botanical survey.
ANIMALS:						
Andrena blennospermatis	Blennosperma vernal pool andrenid bee	CNDDB list - no status	None	Ground nests in uplands near vernal pools	A	There are no vernal pools present within the survey area.
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	CNDDB list - no status	FT	Riparian woodland and shrub habitat of the Central Valley; riparian habitat, woodland etc., adjacent to streams and rivers	HP	Blue elderberry shrubs occur within the BSA. No beetles were identified during the VELB survey.

Scientific Name	Common Name	Status Calif. (CNPS/ CDFW)	Status Fed.	General Habitat Description	Habitat Present/ Absent	Rationale
Lavinia exilicauda chi	Clear Lake hitch	ST	None	Clear Lake, Lake County: only spawns in streams flowing to Clear Lake.	HP	Hitch have been observed in Clover Creek by Chi Council and should be assumed to be present.
Emys marmorata	western pond turtle	SSC	None	Aquatic turtle found in ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; In woodland, forest, & grasslands	HP	The stream habitat of Clover Creek provides good seasonal habitat for this species. Surveys were not conducted for this species.
Rana boylii	foothill yellow-legged frog	SSC	None	Partly-shaded, shallow streams & riffles with a rocky substrate usually in the cold upper reaches of streams	A	The shallow, seasonal stream conditions on this portion of Clover Creek provide poor habitat for this species.
Phalacrocorax auritus	double-crested cormorant	WL	None	Along coast, inland lakes; in fresh, salt & estuarine waters	A	The oak woodland along Clover Creek is too far from Clear Lake to provide appropriate rookery habitat for this species.
Ardea herodias	great blue heron	CNDDB list - no status	None	Shallow ponds and estuaries, & salt and fresh emergent wetlands	A	The oak woodland along Clover Creek is too far from Clear Lake to provide appropriate rookery habitat for this species.
Agelaius tricolor	tricolored blackbird	SSC	None	Fresh emergent wetland	A	There is no suitable cattail or tule marsh habitat in the BSA.

Scientific Name	Common Name	Status Calif. (CNPS/ CDFW)	Status Fed.	General Habitat Description	Habitat Present/ Absent	Rationale
Dendroica petechia brewsteri	yellow warbler	SSC	None	Riparian plant associations; prefers willows, cottonwoods, aspens, sycamores & alders for nesting & foraging; SSC	HP	While there is a willow riparian community in the BSA, this part of Clover Creek is dry too early in the breeding season to provide habitat for this species. A survey for this species in 2012 had negative results.
Icteria virens	yellow-breasted chat	SSC	None	Summer resident; inhabits riparian thickets of willow & other brushy tangles near watercourses	HP	While there is a willow riparian community in the BSA, this part of Clover Creek is dry too early in the breeding season to provide habitat for this species. A survey for this species in 2012 had negative results.
Taxidea taxus	American badger	SSC	None	Dryer open stages of shrub, forest & herbaceous habitats with friable soils	A	The site lacks suitable habitat within the BSA.
HABITATS:						
Coastal and valley freshwater marsh					A	This habitat type does not occur within the BSA.

KEY FOR TABLE 3:

Absent [A] - no habitat present and no further work needed.
Habitat Present [HP] - habitat is, or may be present. The species may be present.
Present [P] - the species is present.

Status:

Federal Endangered (FE), Federal Threatened (FT), Federal Proposed (FP, FPE, FPT); Federal Candidate (FC), Federal Species of Concern (FSC);
State Endangered (SE), State Threatened (ST), California Fully Protected (SFP), State Rare (SR), State Cand. End. (SCE), State Species of Special Concern (SSC); California Watch List (WL); California Native Plant Society (CNPS).

3.2.1. Regional Plant Species of Special Concern:

Prior to conducting a floristic-level botanical survey of the Biological Study Area in 2013, extensive pre-survey research was conducted in order to identify plants with sensitive regulatory status with a potential to occur within the survey area. This included a review of the *California Native Plant Society (CNPS) Electronic Inventory*, and a review of the *California Natural Diversity Database (CNDDB)* for the Upper Lake U.S.G.S. 7½ minute topographic map as well as a CNDDB database review of the nine surrounding quadrangles. The results of the floristic-level botanical survey are provided in **Appendix A**. No sensitive plant taxa were identified during the survey.

CNPS: A California Native Plant Society (CNPS) analysis was conducted for all plants with federal and state regulatory status, and all non-status plants on the CNPS Rare Plant Ranks 1B through 4. The query included all plants within this area of Lake County occurring within the plant communities identified on the project site. The inventory lists numerous species as potentially occurring at the site which were included in the list of potentially sensitive species specifically searched for during field surveys. No species were identified within the limited plant communities within the BSA.

CNDDB: The California Natural Diversity Database (CNDDB) maps and information for the Upper Lake 7½' quadrangle were reviewed for this project. **Appendix B** presents a list of sensitive plant and wildlife species, including one sensitive habitat type, known to occur within these quadrangles, including all federal, state, and CNPS listed sensitive species. In addition to listing the species present within the quadrangles, the table provides a brief descriptor of the habitat requirements and blooming season, along with an assessment of whether the project area contains the necessary habitat requirements for each species. **Appendix C** lists the species within the nine quadrangles in the vicinity of this project.

3.2.2. Regional Wildlife of Special Concern:

In addition to the review of the CNDDB database summarized in **Appendix B**, an analysis was conducted using the California Department of Fish and Wildlife's Wildlife Habitat Relations database (WHR). The WHR results are provided in **Appendix D**.

A total of 12 animal species are assessed. These are listed below. These consist of the species selected by the WHR analysis, and the species identified as present within the Upper Lake quadrangle by the CNDDB.

Valley elderberry longhorn beetle, a species with Federal Endangered status, is added as required by the USFWS based on the presence of elderberry shrubs within the BSA. However, this site is outside of the known range of this species.

Blennosperma vernal pool bee, foothill yellow-legged frog, double-crested cormorant, great blue heron, tricolored blackbird, American badger, and pallid bat are all listed below based on standard protocol due to their presence in the region even though potential habitat is not present.

- Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- Blennosperma vernal pool andrenid bee (*Andrena blennospermatis*)
- Clear Lake hitch (*Lavinia exilicauda chi*)
- Western pond turtle (*Emys marmorata*)
- Foothill yellow-legged frog (*Rana boylii*)
- Double-crested cormorant (*Phalacrocorax auritus*)
- Great blue heron (*Ardea herodias*)
- Tricolored blackbird (*Agelaius tricolor*)
- Yellow warbler (*Dendroica petechia brewsteri*)
- Yellow-breasted chat (*Icteria virens*)
- American badger (*Taxidea taxus*)
- Pallid bat (*Antrozous pallidus*)

Chapter 4. Results: Biological Resources, Discussion of Impacts and Mitigation

4.1. Natural Communities of Special Concern

One natural community of special concern is present within the Upper Lake quadrangle: *Coastal and valley freshwater marsh*. This community occurs along the shoreline of Clear Lake and along Rodman Slough near Upper Lake, but does not occur within the BSA.

4.2. Special Status Plant Species

No plant species with special status occur within the BSA.

4.3. Special Status Animal Species Occurrences

There is one animal species with federal status for which there is potential habitat within the BSA which is included even though the project site may be outside of the species range: Valley longhorn elderberry beetle (*Desmocerus californicus dimorphus* [VELB]). A Biological Assessment (BA) has been conducted for this species at this site. This report is titled: "*Biological Assessment for Impacts to Valley Elderberry Longhorn Beetles, Lake County: Federal Project No. BRLO-5914 (079), Clover Creek Bridge at First Street (Bridge Number 14C-0015)*".

This NES will also be used by local regulatory agencies in the CEQA review process. For this reason, species with sensitive status in California are also analyzed here. Consequently, four species are included due to their California Species of Concern or threatened status and the presence of potential habitat within the BSA:

Clear Lake hitch	Western pond turtle
Yellow warbler	Yellow-breasted chat

A table summarizing the permitted and restricted construction dates listed as mitigation for each species in the following accounts is provided in **Appendix E.** A chart showing restriction periods if mitigation is not implemented is provided in **Appendix F.**

Additionally, the U.S. Fish and Wildlife Service Species List for the Upper Lake 7½' quadrangle was reviewed (the list includes other species within Lake County, which are not included in the table). The USFWS website, however, states that the purpose of these lists is

to *"include all of the sensitive species that have been found in a certain area and ones that may be affected by projects in the area... A list may include fishes hundreds of miles downstream from the project."* A copy of the USFWS response letter, list of species within the quadrangle, and a tabular discussion of the individual species included in this Species List are attached as **Appendix G.**

4.3.1. Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)

These beetles exclusively use elderberry shrubs as habitat and are largely confined to the central valley of California. However, the U.S. Fish and Wildlife Service includes all Sacramento River drainages to be within the species range. Typical habitat occurs along riparian corridors. Larvae develop within the woody tissue of the shrub and emerge from bore holes as adults. This species is not listed in the CNDDB for this quadrangle but is included here because of the presence of blue elderberry shrubs within the riparian woodland community. This beetle species has Federal Threatened Species status under the FESA.

A USFWS protocol survey for this species was conducted in September, 2013. Three elderberry shrubs within the BSA were surveyed for exit holes and the number of stems exceeding 1- inch in diameter were inventoried on survey forms. The results of the survey are discussed in the Biological Assessment prepared for this project. The Biological Assessment is being submitted to Caltrans and Fish and Wildlife service staff for review. The BA is summarized below.

4.3.1.1. SURVEY RESULTS

Northwest Biosurvey conducted a U.S. Fish and Wildlife Service (FWS) protocol survey for Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*; VELB) due to the presence of elderberry shrubs within the 100-foot radius biological study area. The species habitat consists of elderberry shrubs typically within a riparian setting.

Three elderberry shrubs occur within the BSA. The closest shrub is in contact with the existing bridge and will require removal. The remaining two are 36 feet and 51 feet from the bridge. Neither shrub will be directly impacted or removed as a result of construction but the closest may be indirectly impacted by noise and dust.

Critical Habitat defined for this species by the FWS is limited to two locations in Sacramento County in the California Central Valley. Based on the FWS 5-year review of the listing completed in September of 2006, the historic range of the species has been expanded to include southern Shasta County to Fresno County and from the east side of the Coast Range (to an elevation of 500 feet) to the foothills of the Sierra Nevada in the Central Valley. This

area includes the Putah Creek zone of Solano County which lies within the Central Valley, 65 miles southeast of Clover Creek. There are no known accounts of VELB in Lake County, which is well outside of the species' known historic range and significantly higher in elevation (at 1,330 feet msl) than the locations of accounts on the eastern edge of the Coast Range (up to 500 feet msl). No VELB (Valley elderberry longhorn beetles of subspecies *D. c. dimorphus*) exit holes were found during the survey and the shrubs will not be removed.

4.3.1.2. AVOIDANCE AND MINIMIZATION EFFORTS

The County will implement all protective and restoration and maintenance measures outlined in the FWS 1999 VELB Conservation Guidelines. The required avoidance and minimization efforts are listed below:

- Dust, erosion, and sedimentation control will follow the 2010 Caltrans Standard Specifications (http://www.dot.ca.gov/hq/esc/standards.php). These are augmented by conditions of the mandatory Storm Water Pollution Prevention Plan (SWPPP) and WPCP conditions placed on this project by the RWQCB.

- Seasonal construction restrictions will be imposed between March 1st and June 30th when adults, eggs and larvae would potentially be present on elderberry vegetation.

- A qualified biologist will be on site during all clearing activities upstream of the existing bridge in order to verify that appropriate buffers are maintained between construction equipment and the elderberry shrubs.

- Minimization measures will include all protective and restoration and maintenance measures outlined in the FWS 1999 VELB Conservation Guidelines. These include the measures listed in Section 4.3.1.4.

4.3.1.3. PROJECT IMPACTS

- Elderberry shrubs within the survey area and within an additional 370 feet of the project site occur in a widely scattered pattern and are located on the upper riparian terrace of Clover Creek. Based on research presented by Talley (2005), both characteristics reduce the potential of this site as VELB habitat due to the limited dispersal ability of this beetle and to its preference for shrubs closer to the mesic habitat of the active channel (Talley 2005, pp. 18 & 19).

- More importantly with regard to habitat quality, the upper terrace is densely covered in Himalayan blackberry which appears to have crowded out other riparian species. This

invasive species is a significant threat to elderberry shrub regeneration (Talley 2005, pp. 45).

Due to the distance of this project from the known range of VELB (65 miles north-northwest), the difference in climate and elevation between the project site and the known range of VELB (California Central Valley vs. Interior Coast Range), and the poor quality of VELB habitat at the project site (widely scattered shrubs, location on upper terrace, and presence of dense blackberry thicket and California wild grape), this project is unlikely to adversely impact VELB. If regardless of these conditions, USFWS determines that the potential for impact exists, the following mitigation is provided.

4.3.1.4. COMPENSATORY MITIGATION

The following mitigation measures will be implemented:

Protective Measures:

- Purchase mitigation credits at a Fish and Wildlife Service approved VELB mitigation bank and transplant the shrub that will require removal to the approved mitigation bank. The replacement ratios and protocol are specifically described in the VELB Biological Assessment submitted for this project. Fish and Wildlife Service protocol requires that transplant of on-site shrubs occur between November 1 and February 15.

- Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the FWS, provide a minimum setback from the dripline of the elderberry plant.

- Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.

- Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet, and must be maintained for the duration of construction.

- Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance:

- Restore any damage done to the buffer area (area within 100 feet of elderberry plant) during construction. Provide erosion control and re-vegetate with appropriate native plants. Revegetation will include a 20-foot buffer between the elderberry shrub and the bridge abutments.

- Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.

- No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.

- The applicant must provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed.

- Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five (5) feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

4.3.1.5. CUMULATIVE EFFECTS

It is the opinion of the authors of this NES that the project will have no effect on VELB. However, The USFWS must make a determination regarding the potential of this project to have an adverse effect on VELB.

4.3.2. Clear Lake hitch (*Lavinia exilicauda chi*)

4.3.2.1. SURVEY RESULTS

Surveys for this species were beyond the scope of work conducted for this project. However, the Chi Council, a local nonprofit environmental group focusing on Clear Lake hitch, conducts annual surveys of these fish in Clear Lake tributary streams and has found hitch downstream of this site at the confluence of Clover Creek and Middle Creek (lakelive.info/chicouncil). This species has California Threatened Species status.

Hitch are fish of lakes and slow moving streams. In Clear Lake, spawning takes place in March through July during which time the fish migrate up tributary streams from Clear Lake to lay their eggs in sandy to gravelly bottomed channels. The eggs hatch and the fish mature

sufficiently within 20 days to migrate downstream to the lake. Although hitch have not been recorded in this part of Clover Creek, they have been seen downstream and may migrate to this stream segment to spawn. The species would have returned to Clear Lake by the end of June when the creek channel is dry within the project area. Clover Creek is an ephemeral stream that provides good seasonal habitat for this species.

4.3.2.2. AVOIDANCE AND MINIMIZATION EFFORTS

To avoid potential impacts to Clear Lake hitch, work within the creek channel shall be restricted to between June 15 and October 15 and only when the stream channel is dry.

4.3.2.3. PROJECT IMPACTS

If vegetation removal or other disturbance takes place within Clover Creek during the normal breeding season (March 1 through June 15 – or earlier, depending on drying of channel) project activities have a potential to disrupt breeding and would be considered by the California Department of Fish and Wildlife to result in an incidental take of individuals of this California Threatened Species.

4.3.2.4. COMPENSATORY MITIGATION

Work within the creek channel shall be restricted to between June 15 and October 15 and only when the stream channel is dry. Work within the bed or banks of Clover Creek outside of this period would be considered an incidental take by the California Department of Fish and Wildlife and would require approval of an Incidental Take Permit (Fish and Game Code Section 2081). Approval of such a permit would require that the applicant demonstrate that the project could not be constructed during the required construction season and would require Take Minimization through compensatory habitat improvement within the Clover Creek Drainage System.

The project manager shall be responsible for assuring that the terms and conditions of the California Department of Fish and Wildlife stream alteration agreement for this project are consistent with this mitigation measure.

4.3.2.5. CUMULATIVE EFFECTS

If avoidance and minimization efforts and/or compensatory mitigation measures are implemented, no cumulative effects are anticipated.

4.3.3. Western pond turtle (*Emys marmorata*)

4.3.3.1. SURVEY RESULTS

Surveys for this species were beyond the scope of work conducted for this project. These turtles prefer slow or ponded water with sheltering vegetation but will range widely through less suitable habitat in search of these sites. Eggs are laid on land in sheltered nests. In Northern California, young overwinter in the nest and emerge the following spring. Food includes aquatic insects, crustaceans, fish, and riparian vegetation. When present, pond turtles are readily observed basking along shorelines or on logs in shallow water. Clover Creek provides potentially suitable habitat for this species until mid-to-late June, when the creek channel is dry, although it is more likely that this section of creek would be used as a movement corridor.

4.3.3.2. AVOIDANCE AND MINIMIZATION EFFORTS

In order to avoid potential impacts to western pond turtles, work within the channel shall occur either prior to April 1 or after August 15, or when the channel is dry. Downed trees, stumps and other basking sites and refuges within these aquatic habitats should remain undisturbed.

4.3.3.3. PROJECT IMPACTS

If vegetation removal or other disturbance takes place within Clover Creek while it contains water during the early spring through Summer (April 1 through August 15), project activities have a potential to disrupt breeding and/or result in an incidental take of individuals of this species.

4.3.3.4. COMPENSATORY MITIGATION

Any work within the banks or riparian habitat of segments of the creek at times when the affected segment contains water should be immediately preceded by a site inspection of the channel by a qualified biologist with a valid California Department of Fish and Wildlife collecting permit. Any turtles within the work area should be captured and transferred to another suitable portion of Clover Creek.

In the event that work must be conducted within the stream channel during times of active flow, the following measures should be taken in conjunction with the measures described above:

- The flowing portion of the stream shall be diverted through culverts with sandbag and visqueen coffer dams at the upstream and downstream ends of the proposed construction area.

- The culverts shall be no less than two feet in diameter and inset into the channel to a depth of half their diameter in order to allow downstream passage of fish. The dams shall

be constructed of clean, river-run gravel. These structures shall be removed at the end of the project and prior to winter stream flows. Gravel should be removed or leveled and left in place for removal by high winter flows.

- The proposed diversion shall be reviewed and approved by a qualified biologist with a valid California Department of Fish and Wildlife collecting permit prior to installation. That individual shall be present during its construction. During construction of this diversion, the qualified biologist shall inspect the diverted channel segment for sensitive herptiles and nests as described in Section 4.3.2.4 and shall capture and release any sensitive herptiles or fish within the diversion area to a suitable segment of Clover Creek.

- The project manager shall be responsible for assuring that the terms and conditions of the California Department of Fish and Wildlife stream alteration agreement for this project are consistent with this mitigation measure.

4.3.3.5. CUMULATIVE EFFECTS

If avoidance and minimization efforts and/or compensatory mitigation measures are implemented, no cumulative effects are anticipated.

4.3.4. Yellow warbler (*Dendroica petechia brewsteri*); Yellow-breasted chat (*Icteria virens*)

4.3.4.1. SURVEY RESULTS

These species are discussed together because their habitat requirements are nearly identical. Both warblers require riparian woodland with a dense shrubby understory or dense willow thickets near water for nesting and cover. They arrive in these areas in April and are typically gone by late September or October. The nesting season typically ranges from May to August; fledging is usually completed by August. Nests are constructed in shrubs and small trees in the lower canopy of the woodland. They forage for insects in the upper canopy. The red willow thicket along the creek within the work area provides only moderate potential habitat for these species due to this ephemeral nature of the creek.

Surveys for both species were conducted in 2012. The results of those surveys were negative. However, preconstruction surveys should be conducted again within two weeks prior to construction or disturbance pursuant to CDFW policy.

4.3.4.2. AVOIDANCE AND MINIMIZATION EFFORTS

Work within 100 feet of the red willow riparian habitat along Clover Creek should be avoided from February 15 through August 31 in order to avoid the potential for disrupting

nesting and breeding, unless the work is preceded by the survey described below under compensatory mitigation.

4.3.4.3. PROJECT IMPACTS

If construction activities occur within 100 feet of the red willow thicket during the breeding season (February 15 through August 31) and compensatory mitigation is not implemented, project activities have a potential to cause nest abandonment and disrupt breeding.

4.3.4.4. COMPENSATORY MITIGATION

Any work requiring construction or vegetation clearing within 100 feet of the bridge crossing area between February 15 and August 31 of any year should be preceded by pre-construction surveys pursuant to CDFW policy. In the event that this species is determined to be nesting within 100 feet of the proposed construction activities, construction should be delayed within 100 feet of the nest until after August 31, or until fledging is completed as determined by a qualified biologist. The construction buffer may be reduced depending on presence of screening vegetation or topography based on the recommendation of a qualified biologist.

4.3.4.5. CUMULATIVE EFFECTS

If avoidance and minimization efforts and/or compensatory mitigation measures are implemented, no cumulative effects are anticipated.

Chapter 5. Results: Permits and Technical Studies for Special Laws or Conditions

5.1. Federal Endangered Species Act Consultation Summary

Based on this natural environmental study, there are no species with federal threatened or endangered status within the project area. Blue elderberry shrubs are present and exit holes are present on an elderberry shrub 51 feet downstream of the project area; however, the holes are due either to California elderberry longhorn beetle or Pacific flathead borer. Regardless, this shrub will not be disturbed. No VELB exit holes are present and the project is well outside the known range of this species. The proposed project will therefore have no effect on any federally listed or proposed species.

5.2. Federal Fisheries and Essential Fish Habitat Consultation Summary

There are currently no fish species present within the Clear Lake Basin with federal threatened or endangered status.

5.3. California Endangered Species Act Consultation Summary

The biological study area contains Clear Lake hitch, a California Threatened Species. As discussed in Section 4.3 there are several other wildlife species potentially present that also require CEQA review and mitigation under Section 15380(d) of the CEQA Guidelines. This NES will serve as the principal biological resource assessment for local and state agency CEQA review. The NES will therefore undergo review and comment from the California Department of Fish and Wildlife through that process.

5.4. Wetlands and Other Waters Coordination Summary

Waters of the U.S. are present within the biological study area. This NES contains a protocol delineation of Waters of the U.S. pursuant to the 1987 delineation manual and 2006 Arid West Guidelines. The delineation will be submitted to the Corps of Engineers for a Jurisdictional Determination and Nationwide Permit by the Lake County Department of Public Works. No wetlands will be impacted by this project.

5.5. Invasive Species

Himalayan blackberry and English ivy occur throughout the upper stream terraces of the BSA near the bridge.

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Appendix A Plant Taxa within the Biological Study Area

Habit	Species	Common Name	Family	Origin
forb	*Conium maculatum*	poison hemlock	Apiaceae	A
forb	*Osmorhiza occidentalis*	western sweet cicely	Apiaceae	N
forb	*Cynara cardunculus*	artichoke thistle	Asteraceae	A
forb	*Lactuca seriola*	prickly lettuce	Asteraceae	A
forb	*Senecio vulgaris*	common butterweed	Asteraceae	A
forb	*Cyperus eragrostis*	tall flat sedge	Cyperaceae	N
forb	*Dipsacus fullonum*	fuller's teasel	Dipsacaceae	A
forb	*Lotus humistratus*	hill lotus	Fabaceae	N
forb	*Malva parviflora*	cheeseweed	Malvaceae	A
forb	*Rumex crispus*	curly dock	Polygonaceae	A
forb	*Veronica persica*	Persian speedwell	Scrophulariaceae	A
grass	*Avena barbata*	slender wild oat	Poaceae	A
grass	*Bromus diandrus*	ripgut brome, ripgut grass	Poaceae	A
grass	*Bromus hordeaceus*	soft chess	Poaceae	A
grass	*Festuca arundinacea*	tall fescue	Poaceae	A
grass	*Poa bulbosa*	bulbous bluegrass	Poaceae	A
grass	*Polypogon monspeliensis*	rabbits-foot grass	Poaceae	A
shrub	*Toxicodendron diversilobum*	poison oak	Anacardiaceae	N

Habit	Species	Common Name	Family	Origin
shrub	*Sambucus mexicana*	blue elderberry	Caprifoliaceae	N
shrub	*Rubus discolor*	Himalayan blackberry	Rosaceae	A
tree	*Acer negundo var. californicum*	box elder	Aceraceae	N
tree	*Quercus lobata*	California valley oak	Fagaceae	N
tree	*Umbellularia californica*	California bay	Lauraceae	N
tree	*Fraxinus latifolia*	Oregon ash	Oleaceae	N
tree	*Salix laevigata*	red willow	Salicaceae	N
vine	*Hedera helix*	English ivy	Ariaceae	A
vine	*Vitis californica*	California wild grape	Vitaceae	N

Origin: N=Native, A=Alien

Appendix B CNDDB Database Review: Upper Lake Quadrangle

Habitat Type	Habitat Present
Coastal and valley freshwater marsh	no

Plant Species	Common Name	Habitat Requirements/ CNPS, Fed., State Status	Blooming Season	Habitat Present
Brasenia schreberi	watershield	Marshes & swamps/freshwater; --/--/2.3	June-Sept. rhiz. herb, aquatic	none
Calycadenia micrantha	small-flowered calycadenia	Chaparral, meadows & seeps (volcanic), valley & foothill grassland; roadsides, rocky, talus, scree, sometimes serpentine, sparsely vegetated areas; --/--/1B.2	June-Sept. ann. herb	none
Carex comosa	bristly sedge	Coastal prairie, marshes & swamps (lake margins), valley & foothill grassland; --/--/2.1	May-Sept. per. herb	none
Didymodon norrisii	Norris's beard-moss	Cismontane woodland, lower montane conif. forest/intermit. mesic, rock; --/--/2.2	NA moss	poor
Hesperolinon adenophyllum	glandular western flax	Chaparral, cismontane woodland, valley & foothill grassland/serpentinite; --/--/1B.2	May-Aug. ann. herb	none

Wildlife Species	Common Name	Habitat Requirements/Status	Season Present	Habitat Present
Andrena blennospermatis	Blennosperma vernal pool andrenid bee	Ground nests in uplands near vernal pools	year-round	no
Lavinia exilicauda chi	Clear Lake hitch	Clear Lake, Lake County, only spawns in streams flowing to Clearlake; ST	year-round	yes

Wildlife Species	Common Name	Habitat Requirements/Status	Season Present	Habitat Present
Emys marmorata	western pond turtle	Ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms/in woodland, forest, & grassland; SSC	year-round	yes
Rana boylii	foothill yellow-legged frog	Riparian/aquatic: partly-shaded, shallow streams & riffles with a rocky substrate in variety of habitats; SSC	year-round	no
Phalacrocorax auritus	double-crested cormorant	Along coast, inland lakes/fresh, salt & estuarine waters; WL	year-round	no
Ardea herodias	great blue heron	Shallow ponds and estuaries, & salt and fresh emergent wetlands	year-round	no
Agelaius tricolor	tricolored blackbird	Fresh emergent wetland; SSC	year-round	no
Taxidea taxus	American badger	Dryer open stages of shrub, forest, & herbaceous habitats with friable soils; SSC	year-round	no

KEY:	
SSC=Department of Fish and Wildlife Species of Special Concern	*1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly threatened in California*
WL=Watch List	*2.1 = Rare, threatened, or endangered in Calif., but more common elsewhere; seriously threatened in Calif.*
ST=State Threatened	*2.2 = Rare, threatened, or endangered in Calif., but more common elsewhere; fairly threatened in Calif.*
	2.3 = Rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California

Appendix C CNDDB 9-Quad Species List

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CALIF	CDFG	CNPS
Bartlett Mtn.	*Rana boylii*	foothill yellow-legged frog	None	None	SSC	
Bartlett Mtn.	*Pandion haliaetus*	osprey	None	None	WL	
Bartlett Mtn.	*Agelaius tricolor*	tricolored blackbird	None	None	SSC	
Bartlett Mtn.	*Lasionycteris noctivagans*	silver-haired bat	None	None		
Bartlett Mtn.	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	
Bartlett Mtn.	*Martes americana humboldtensis*	Humboldt marten	None	None	SSC	
Bartlett Mtn.	*Martes pennanti (pacifica) DPS*	Pacific fisher	Cand.	None	SSC	
Bartlett Mtn.	*Didymodon norrisii*	Norris' beard moss	None	None		2.2
Bartlett Mtn.	*Calycadenia micrantha*	small-flowered calycadenia	None	None		1B.2
Bartlett Mtn.	*Arctostaphylos canescens ssp. sonomensis*	Sonoma canescent manzanita	None	None		1B.2
Bartlett Mtn.	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None		1B.3
Bartlett Mtn.	*Lupinus antoninus*	Anthony Peak lupine	None	None		1B.3
Bartlett Mtn.	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Bartlett Mtn.	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None		1B.2
Bartlett Mtn.	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None		1B.1
Cow Mountain	*Antrozous pallidus*	pallid bat	None	None	SSC	
Cow Mountain	*Emys marmorata*	western pond turtle	None	None	SSC	
Cow Mountain	*Didymodon norrisii*	Norris' beard moss	None	None		2.2
Cow Mountain	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Cow Mountain	*Carex comosa*	bristly sedge	None	None		2.1
Elk Mountain	*Rana boylii*	foothill yellow-legged frog	None	None	SSC	
Elk Mountain	*Accipiter gentilis*	northern goshawk	None	None	SSC	
Elk Mountain	*Progne subis*	purple martin	None	None	SSC	
Elk Mountain	*Emys marmorata*	western pond turtle	None	None	SSC	
Elk Mountain	*Calycadenia micrantha*	small-flowered calycadenia	None	None		1B.2
Elk Mountain	*Cuscuta jepsonii*	Jepson's dodder	None	None		1B.2
Elk Mountain	*Arctostaphylos canescens ssp. sonomensis*	Sonoma canescent manzanita	None	None		1B.2
Elk Mountain	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Elk Mountain	*Hesperolinon drymarioides*	drymaria-like western flax	None	None		1B.2
Elk Mountain	*Sidalcea oregana ssp. hydrophila*	marsh checkerbloom	None	None		1B.2
Lakeport	*Phalacrocorax auritus*	double-crested cormorant	None	None	WL	
Lakeport	*Ardea herodias*	great blue heron	None	None		
Lakeport	*Pandion haliaetus*	osprey	None	None	WL	
Lakeport	*Agelaius tricolor*	tricolored blackbird	None	None	SSC	
Lakeport	*Lavinia exilicauda chi*	Clear Lake hitch	None	None	SSC	
Lakeport	*Archoplites interruptus*	Sacramento perch	None	None	SSC	

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CALIF	CDFG	CNPS
Lakeport	*Martes pennanti (pacifica) DPS*	Pacific fisher	Cand.	None	SSC	
Lakeport	*Taxidea taxus*	American badger	None	None	SSC	
Lakeport	*Coastal and Valley Freshwater Marsh*	Coastal and Valley Freshwater Marsh	None	None		
Lakeport	*Andrena blennospermatis*	Blennosperma vernal pool andrenid bee	None	None		
Lakeport	*Layia septentrionalis*	Colusa layia	None	None		1B.2
Lakeport	*Tracyina rostrata*	beaked tracyina	None	None		1B.2
Lakeport	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None		1B.2
Lakeport	*Cryptantha dissita*	serpentine cryptantha	None	None		1B.2
Lakeport	*Plagiobothrys lithocaryus*	Mayacamas popcorn-flower	None	None		1A
Lakeport	*Brasenia schreberi*	watershield	None	None		2.3
Lakeport	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Lucerne	*Pandion haliaetus*	osprey	None	None	WL	
Lucerne	*Lavinia exilicauda chi*	Clear Lake hitch	None	None	SSC	
Lucerne	*Archoplites interruptus*	Sacramento perch	None	None	SSC	
Lucerne	*Lasionycteris noctivagans*	silver-haired bat	None	None		
Lucerne	*Clear Lake Drainage Cyprinid/Catostomid Stream*	Clear Lake Drainage Cyprinid/Catostomid Str	None	None		
Lucerne	*Clear Lake Drainage Seasonal Lakefish Spawning Str*	Clear Lake Drainage Seasonal Lakefish Spawning Stream	None	None		
Lucerne	*Coastal and Valley Freshwater Marsh*	Coastal and Valley Freshwater Marsh	None	None		
Lucerne	*Didymodon norrisii*	Norris' beard moss	None	None		2.2
Lucerne	*Layia septentrionalis*	Colusa layia	None	None		1B.2
Lucerne	*Amsinckia lunaris*	bent-flowered fiddleneck	None	None		1B.2
Lucerne	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None		1B.3
Lucerne	*Lupinus antoninus*	Anthony Peak lupine	None	None		1B.3
Lucerne	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Lucerne	*Hesperolinon bicarpellatum*	two-carpellate western flax	None	None		1B.2
Lucerne	*Potamogeton zosteriformis*	eel-grass pondweed	None	None		2.2
Potato Hill	*Rana boylii*	foothill yellow-legged frog	None	None	SSC	
Potato Hill	*Accipiter gentilis*	northern goshawk	None	None	SSC	
Potato Hill	*Martes americana humboldtensis*	Humboldt marten	None	None	SSC	
Potato Hill	*Martes pennanti (pacifica) DPS*	Pacific fisher	Cand.	None	SSC	
Potato Hill	*Emys marmorata*	western pond turtle	None	None	SSC	
Potato Hill	*Calycadenia micrantha*	small-flowered calycadenia	None	None		1B.2
Potato Hill	*Anisocarpus scabridus*	scabrid alpine tarplant	None	None		1B.3
Potato Hill	*Boechera ultraalsa*	Snow Mountain rockcress	None	None		1B.1
Potato Hill	*Arctostaphylos canescens ssp. sonomensis*	Sonoma canescent manzanita	None	None		1B.2
Potato Hill	*Arctostaphylos manzanita ssp. elegans*	Konocti manzanita	None	None		1B.3
Potato Hill	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Potato Hill	*Hesperolinon drymarioides*	drymaria-like western flax	None	None		1B.2
Potato Hill	*Sidalcea oregana ssp. hydrophila*	marsh checkerbloom	None	None		1B.2

QUAD NAME	SCIENTIFIC NAME	COMMON NAME	FED.	CALIF	CDFG	CNPS
Potato Hill	*Epilobium nivium*	Snow Mountain willowherb	None	None		1B.2
Potato Hill	*Horkelia bolanderi*	Bolander's horkelia	None	None		1B.2
Potter Valley	*Rana boylii*	foothill yellow-legged frog	None	None	SSC	
Potter Valley	*Accipiter gentilis*	northern goshawk	None	None	SSC	
Potter Valley	*Agelaius tricolor*	tricolored blackbird	None	None	SSC	
Potter Valley	*Emys marmorata*	western pond turtle	None	None	SSC	
Potter Valley	*Plagiobothrys lithocaryus*	Mayacamas popcorn-flower	None	None		1A
Potter Valley	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Purdys Gardens	*Rana boylii*	foothill yellow-legged frog	None	None	SSC	
Purdys Gardens	*Pandion haliaetus*	osprey	None	None	WL	
Purdys Gardens	*Ammodramus savannarum*	grasshopper sparrow	None	None	SSC	
Purdys Gardens	*Corynorhinus townsendii*	Townsend's big-eared bat	None	None	SSC	
Purdys Gardens	*Martes pennanti (pacifica) DPS*	Pacific fisher	Cand.	None	SSC	
Purdys Gardens	*Emys marmorata*	western pond turtle	None	None	SSC	
Purdys Gardens	*Serpentine Bunchgrass*	Serpentine Bunchgrass	None	None		
Purdys Gardens	*Northern Interior Cypress Forest*	Northern Interior Cypress Forest	None	None		
Purdys Gardens	*Entosthodon kochii*	Koch's cord moss	None	None		1B.3
Purdys Gardens	*Layia septentrionalis*	Colusa layia	None	None		1B.2
Purdys Gardens	*Tracyina rostrata*	beaked tracyina	None	None		1B.2
Purdys Gardens	*Viburnum ellipticum*	oval-leaved viburnum	None	None		2.3
Purdys Gardens	*Arctostaphylos canescens ssp. sonomensis*	Sonoma canescent manzanita	None	None		1B.2
Purdys Gardens	*Arctostaphylos stanfordiana ssp. raichei*	Raiche's manzanita	None	None		1B.1
Purdys Gardens	*Kopsiopsis hookeri*	small groundcone	None	None		2.3
Purdys Gardens	*Ceanothus confusus*	Rincon Ridge ceanothus	None	None		1B.1
Purdys Gardens	*Horkelia bolanderi*	Bolander's horkelia	None	None		1B.2
Upper Lake	*Rana boylii*	foothill yellow-legged frog	None	None	SSC	
Upper Lake	*Phalacrocorax auritus*	double-crested cormorant	None	None	WL	
Upper Lake	*Ardea herodias*	great blue heron	None	None		
Upper Lake	*Agelaius tricolor*	tricolored blackbird	None	None	SSC	
Upper Lake	*Lavinia exilicauda chi*	Clear Lake hitch	None	Cand.	SSC	
Upper Lake	*Taxidea taxus*	American badger	None	None	SSC	
Upper Lake	*Emys marmorata*	western pond turtle	None	None	SSC	
Upper Lake	*Coastal and Valley Freshwater Marsh*	Coastal and Valley Freshwater Marsh	None	None		
Upper Lake	*Andrena blennospermatis*	Blennosperma vernal pool andrenid bee	None	None		
Upper Lake	*Didymodon norrisii*	Norris' beard moss	None	None		2.2
Upper Lake	*Calycadenia micrantha*	small-flowered calycadenia	None	None		1B.2
Upper Lake	*Brasenia schreberi*	watershield	None	None		2.3
Upper Lake	*Hesperolinon adenophyllum*	glandular western flax	None	None		1B.2
Upper Lake	*Carex comosa*	bristly sedge	None	None		2.1

Key for Appendix C:

KEY:	
SSC = State Species of Special Concern	1A = Presumed extinct in California
WL = State Watch List	1B.1 = Rare, threatened, or endangered in California and elsewhere; seriously endangered in California
Cand.=Candidate	1B.2 = Rare, threatened, or endangered in California and elsewhere; fairly endangered in California
	1B.3 = Rare, threatened, or endangered in California and elsewhere; not very endangered in California
	2.1 = Rare, threatened, or endangered in California, but more common elsewhere; seriously endangered in California
	2.2 = Rare, threatened, or endangered in California, but more common elsewhere; fairly endangered in California
	2.3 = Rare, threatened, or endangered in California, but more common elsewhere; not very threatened in California
	4.3 = Limited distribution (watch list); not very endangered in California

Appendix D Wildlife Habitat Relations Review List

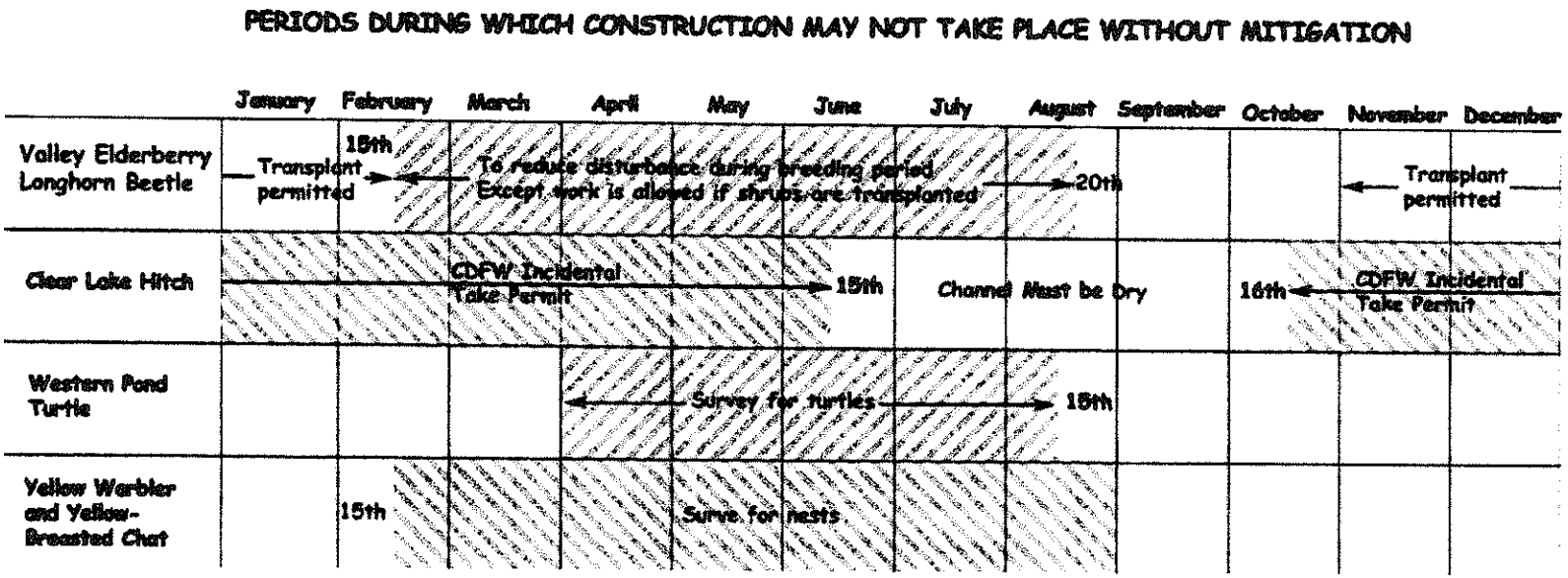
Species	Common Name	Habitat	Status
Emys marmorata	western pond turtle	Ponds, lakes, rivers, creeks, marshes & irrigation ditches with abundant vegetation and rocky or muddy bottoms; in woodland, forest, & grassland	SSC
Dendroica petechia brewsteri	yellow warbler	Riparian plant associations; prefers willows, cottonwoods, aspens, sycamores & alders for nesting & foraging	SSC (nesting)
Icteria virens	yellow-breasted chat	Summer resident; inhabits riparian thickets of willow & other brushy tangles near watercourses	SSC (nesting)
Antrozous pallidus	pallid bat	Open, dry habitats, in caves, tunnels, buildings, bridges	SSC

SSC=State Species of Concern

Appendix E Permitted Construction Dates for Mitigating Impacts to Sensitive Wildlife

Species	Project Activity	Restricted Dates	Permitted Dates
Valley elderberry longhorn beetle	Work at the bridge crossing of Clover Creek. **Exception:** Work between August 21 and February 28 is allowed once mitigation credits have been purchased and elderberry shrubs have been transplanted. Transplant must occur between November 1 and February 15.	March 1- August 20	None without mitigation (see exception)
Clear Lake hitch	Work at the bridge crossing of Clover Creek **Exception:** None unless a 2081 incidental take permit is obtained from CDFW.	October 16 - June 14	June 15 - October 15
Western pond turtle	Work at the bridge crossing of Clover Creek. **Exception:** Work between August 16 and March 31 is permitted if mitigation has been carried out as described in Sections 4.3.2.4	April 1 – August 15	None without mitigation (see exception)
Yellow warbler	Construction or clearing work within 100 feet of the red willow thicket community along Clover Creek. Exception: Restriction dates do not apply if mitigation described in the mitigation Section 4.3.4.4 provided for this species is implemented.	February 15 – August 31	September 1- February 14
Yellow-breasted chat	Construction or clearing work within 100 feet of the red willow thicket community along Clover Creek. **Exception:** Restriction dates do not apply if mitigation described in the mitigation Section 4.3.5.4 provided for this species is implemented and survey results are negative.	February 15 – August 31	September 1- February 14

Appendix F Periods During Which Construction May Not Take Place Without Mitigation



Appendix G USFWS Species List – Upper Lake Quadrangle

Animal Scientific Name	Common Name	USFWS Status	General Habitat Description	Habitat Present/ Absent	Rationale
Hypomesus transpacificus	Delta smelt	T	Estuarine, dead-end sloughs, larger rivers, lagoons, and larger open channels surrounding San Francisco Bay.	A	Species is limited to mixed fresh and saline waters of the San Francisco delta region.
Rana draytonii	California red-legged frog	T	Generally ponded water or slow moving streams with dense bank vegetation and three or more feet of depth.	A	This portion of the creek is shallow and lacks suitable habitat for this species.
Strix occidentalis caurina	northern spotted owl	T	Old-growth forests or mixed stands of old-growth & mature trees; occasionally in younger forests with patches of big trees.	A	This site does not contain forest habitat required by this species.
Martes pennanti	fisher	C	Mixed conifer, Douglas-fir and ponderosa pine forest types: old-growth conifer or riparian forests.	A	This site does not contain forest habitat required by this species.

See following pages for key.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

February 6, 2015

Document Number: 150206034419

Steve Zalusky
Northwest Biosurvey
P.O. Box 191
Cobb, CA 95426

Subject: Species List for Lake County HPB Bridge Replacement Project: Clover Creek Bridge

Dear: Mr. Zalusky

We are sending this official species list in response to your February 6, 2015 request for information about endangered and threatened species. The list covers the California counties and/or U.S. Geological Survey 7½ minute quad or quads you requested.

Our database was developed primarily to assist Federal agencies that are consulting with us. Therefore, our lists include all of the sensitive species that have been found in a certain area *and also ones that may be affected by projects in the area*. For example, a fish may be on the list for a quad if it lives somewhere downstream from that quad. Birds are included even if they only migrate through an area. In other words, we include all of the species we want people to consider when they do something that affects the environment.

Please read Important Information About Your Species List (below). It explains how we made the list and describes your responsibilities under the Endangered Species Act.

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 07, 2015.

Please contact us if your project may affect endangered or threatened species or if you have any questions about the attached list or your responsibilities under the Endangered Species Act. A list of Endangered Species Program contacts can be found http://www.fws.gov/sacramento/es/Branch-Contacts/es_branch-contacts.htm.

Endangered Species Division

U.S. Fish & Wildlife Service

Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 150206034419

Current as of: February 6, 2015

Quad Lists

Listed Species

Fish

- Hypomesus transpacificus
  - delta smelt (T)

Amphibians

- Rana draytonii
  - California red-legged frog (T)

Birds

- Strix occidentalis caurina
  - northern spotted owl (T)

Candidate Species

Mammals

- Martes pennanti
  - fisher (C)

Quads Containing Listed, Proposed or Candidate Species:

UPPER LAKE (549B)

County Lists

Listed Species

Invertebrates

- Branchinecta conservatio
  - Conservancy fairy shrimp (E)
- Branchinecta lynchi
  - vernal pool fairy shrimp (T)
- Desmocerus californicus dimorphus
  - valley elderberry longhorn beetle (T)
- Lepidurus packardi
  - vernal pool tadpole shrimp (E)
- Syncaris pacifica
  - California freshwater shrimp (E)

Fish

- Hypomesus transpacificus
  - delta smelt (T)
- Oncorhynchus (=Salmo) clarki henshawi
  - Lahontan cutthroat trout (T)
- Oncorhynchus kisutch
  - coho salmon - central CA coast (E) (NMFS)
  - coho salmon, So OR/No CA (T) (NMFS)
  - Critical habitat, coho salmon - central CA coast (X) (NMFS)
- Oncorhynchus mykiss
  - Central California Coastal steelhead (T) (NMFS)
  - Central Valley steelhead (T) (NMFS)
  - Critical habitat, Central California coastal steelhead (X) (NMFS)
  - Critical habitat, Northern California steelhead (X) (NMFS)
  - Northern California steelhead (T) (NMFS)
- Oncorhynchus tshawytscha
  - California coastal chinook salmon (T) (NMFS)
  - Central Valley spring-run chinook salmon (T) (NMFS)
  - Critical habitat, California coastal chinook salmon (X) (NMFS)

- winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

- Rana draytonii
  - California red-legged frog (T)

Reptiles

- Thamnophis gigas
  - giant garter snake (T)

Birds

- Coccyzus americanus occidentalis
  - Western yellow-billed cuckoo (T)
- Strix occidentalis caurina
  - Critical habitat, northern spotted owl (X)
  - northern spotted owl (T)

Plants

- Eryngium constancei
  - Loch Lomond coyote-thistle (=button-celery) (E)
- Lasthenia burkei
  - Burke's goldfields (E)
- Limnanthes vinculans
  - Sebastopol meadowfoam (E)
- Navarretia leucocephala ssp. pauciflora
  - few-flowered navarretia (E)
- Navarretia leucocephala ssp. plieantha
  - many-flowered navarretia (E)
- Orcuttia tenuis
  - Critical habitat, slender Orcutt grass (X)
  - slender Orcutt grass (T)
- Parvisedum leiocarpum
  - Lake County stonecrop (E)

- Sidalcea keckii
    - Keck's checker-mallow (=checkerbloom) (E)

- Sidalcea oregana ssp. valida
    - Kenwood Marsh checkermallow (=checkerbloom) (E)

Candidate Species

Mammals

- Martes pennanti
    - fisher (C)

Key:

- (E) Endangered - Listed as being in danger of extinction.
- (T) Threatened - Listed as likely to become endangered within the foreseeable future.
- (P) Proposed - Officially proposed in the Federal Register for listing as endangered or threatened.
- (NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
- Critical Habitat - Area essential to the conservation of a species.
- (PX) Proposed Critical Habitat - The species is already listed. Critical habitat is being proposed for it.
- (C) Candidate - Candidate to become a proposed species.
- (V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
- (X) Critical Habitat designated for this species

Important Information About Your Species List

How We Make Species Lists

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, or may be affected by projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online Inventory of Rare and Endangered Plants.

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list.
See our Protocol and Recovery Permits pages.

For plant surveys, we recommend using the Guidelines for Conducting and Reporting Botanical Inventories. The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal consultation with the Service.
- During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed and proposed species. The opinion may authorize a limited level of incidental take.
- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.
- Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our Map Room page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. More info

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6520.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 07, 2015.