

Marcus H. Bole
and Associates

An Environmental Consulting Firm

**DELINEATION OF WATERS OF THE UNITED STATES AND
BIOLOGICAL INVENTORY, 7.5± ACRE WELLAND STUDY
AREA, BROWNS VALLEY IRRIGATION DISTRICT
TAILWATER RECAPTURE PROJECT, LOCATED WITHIN
PORTIONS OF SECTIONS 21, 22, 28, AND 29, TOWNSHIP 16
NORTH, RANGE 5 EAST MDM. BROWNS VALLEY USGS
QUADRANGLE, YUBA COUNTY, CALIFORNIA 95918**

Update: March 8, 2013

Prepared for:

**Browns Valley Irrigation District
Attn: Walter Cotter, General Manager
9370 Browns Valley School Road
Browns Valley, CA 95918**

Prepared by:

**Marcus H. Bole & Associates
104 Brock Drive
Wheatland, CA 95692**

<u>INTRODUCTION AND EXISTING CONDITIONS</u>	4
Wetland Study Area Description	4
Topography	4
Seasonal Wetlands	5
Upland Vegetation	5
Hydrology	5
Watershed	5
Soils	6
Interstate or Foreign Commerce Connection	6
<u>METHODOLOGY</u>	6
Special Status Species	7
<u>FIELD STUDIES</u>	8
Vegetation	8
Soils	9
<u>RESULTS</u>	9
Wetland Vegetation	9
Seasonal Wetland Vegetation with Creeks and Drainages	9
Upland Vegetation	9
Soils	9
Hydrology	9
<u>JURISDICTIONAL DETERMINATION SUMMARY</u>	10
<u>BIOLOGICAL INVENTORY FOR SPECIAL STATUS SPECIES</u>	11
Pre-field Survey Investigation	11
Biological Field Survey	11
<u>SPECIAL STATUS SPECIES SURVEY RESULTS - PLANTS</u>	11
<u>SPECIAL STATUS SPECIES SURVEY RESULTS - WILDLIFE</u>	15
<u>DISCUSSION OF IMPACTS AND MITIGATION</u>	22
<u>SUPPLEMENTAL INFORMATION</u>	25
Driving Directions	25
Contact Information	26

LIST OF FIGURES

Figure 1: Vicinity Site Map

LIST OF TABLES

Table 1: Potential Jurisdictional Habitats within 7.5 Acre Wetland Study Area

LIST OF ENCLOSURES

Enclosure A – Site Photos and Data Point Photos

Enclosure B – Soil Data

Enclosure C – Field Data Sheets

Enclosure D – Special Status Species & California Natural Diversity Data Base

Enclosure E – Delineation Map(s)

Enclosure F – Nationwide 12 Permit Summary and Regional Conditions

INTRODUCTION AND DESCRIPTION OF EXISTING CONDITIONS

This report represents the findings of an updated delineation of “Waters of the United States” and Biological Inventory for the Browns Valley Irrigation District Tail Water Recapture Project. Original surveys were conducted during the spring of 2008 and have been updated continuously through March, 2013. The wetland study area (WSA) is defined as 7.5± acres of undeveloped land located along a 30-foot wide corridor (project footprint) that runs approximately 11,000 feet within Browns Valley, Yuba County, California (see Figure 1). Field surveys were conducted by Marcus Bole, M.S. Principal Wetland Scientist, Charlene Bole, M.S. Wetland Scientist/Botanist, Tina Costella, M.S. Botanist, and David H. Bole. B.S. Wildlife Biologist. The delineation methodologies employed were developed in conjunction with the Corps and are based on the *1987 Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987), as supplemented by the *Regional Supplement - Arid West Region* (ACOE Research & Development Center, 2008). The report is hereby submitted to the US Army Corps of Engineers (ACOE) for verification of the findings. For purposes of this document, it is assumed that all delineated features could be wetlands or “other waters of the United States” pursuant to 33 CFR 328.3 (a); 40 CFR 230.3 (s).

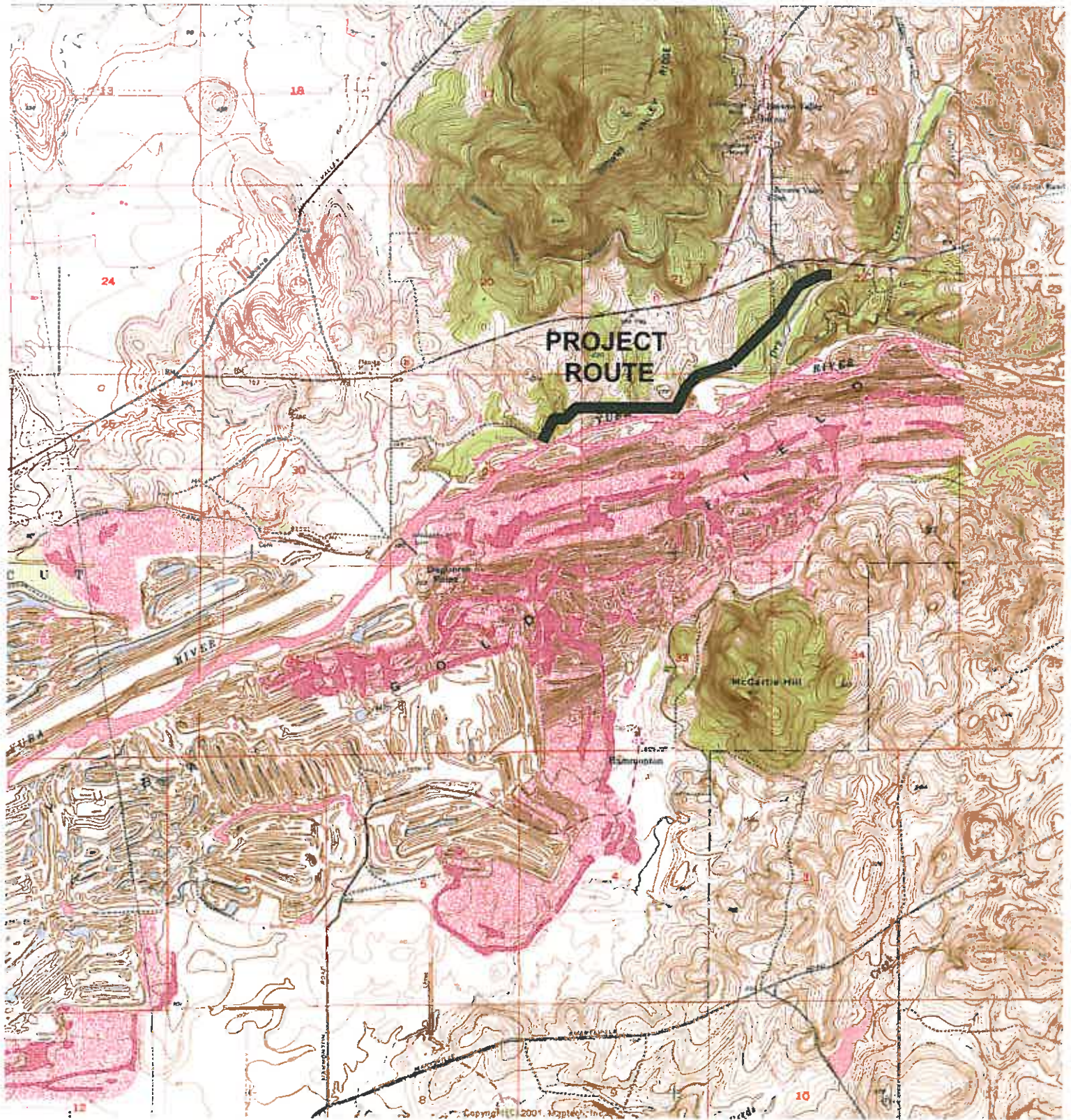
The study concluded that there are currently 0.25± acres of wetlands within the subject 7.5± acre WSA (see Table 1 on page 10). These features are potential “waters of the United States” (WOUS) and include a seasonal drainage with emergent wetland vegetation, two seasonal creeks, and a perennial stream (French Dry Creek [hereafter Dry Creek]). Current project design is for the construction of a pipeline, approximately 11,000 linear feet, to recapture tail water from Dry Creek (near Highway 20) and deposit the water in a man-made canal along the southwest boundary of the WSA. Within the WSA, approximately 1,135 square feet (0.02 acres) of WOUS will be temporarily impacted, and approximately 144 square feet (0.003 acres) will be permanently impacted during the excavation required for the installation of the pipeline and the construction of the concrete pad for the detachable cone screen. In accordance with United States Army Corps of Engineers (ACOE) *Nationwide Permit Number 14, Utility Line Activities*, these impacts are authorized under the “pre-notification required” conditions set forth in 33 CFR Part 322, March 19, 2007, and *Final Sacramento District Nationwide Permit Regional Conditions for California, excluding the Lake Tahoe Basin*. (see Enclosure F)

Wetland Study Area (WSA) Description

The WSA occurs within the Sierra Nevada foothills situated in open grasslands, hardwood woodlands with associated seasonal drainages and creeks within a sycamore grove associated with a trailer park/campground. The majority of the site is used for cattle grazing with a portion of the site bordering dredge-pilings associated past gold mining along the Yuba River.

Topography

The 7.5 acre WSA (30 foot corridor that runs 11,000 linear feet) is in relatively flat terrain with elevations averaging 145± feet above mean sea level (MSL) throughout. The



Site Location Map: Dry Creek Recapture Project, Browns Valley Irrigation District, 7.5 Acre Study Area located within Sections 21, 22, 28 & 29, T. 16 North, R. 5 East, Browns Valley USGS Quadrangle.

Figure 1

nearest major river, the Yuba River, is located south of the proposed project footprint, approximately 115 to 650 feet from the intended route of the proposed pipeline

Seasonal Wetlands

Seasonal wetland habitats and “other waters of the United States” are located within the WSA and are considered federal jurisdictional in accordance with ACOE guidelines and federal regulations.

1) Emergent wetlands within seasonal creeks and drainages are located at Data Points 1, 3, 5, 7, 12, 13, and 14. These drainages will be temporarily impacted by the excavation of a three foot wide trench to house the twenty-four inch pipeline. In accordance with conditions set forth in the *Final Sacramento District Nationwide Permit Regional Conditions for California, excluding the Lake Tahoe Basin*, trenching within seasonal wetland drainages will be sealed with bentonite or other suitable material approved by the Corps.

2) French Dry Creek (Dry Creek): Dry Creek is a perennial stream that flows directly into the Yuba River. A removable cone screen will be used to capture tailwater. A twelve foot square (144 square feet) concrete pad will be installed flush with the streambed to hold the cone screen during the temporary time that it is required to capture irrigation tailwater. Water from Dry Creek will be pumped/piped approximately 11,000 feet to the man-made irrigation canal in the far western edge of the WSA.

Upland Vegetation

The dominant understory vegetation is annual non-native grasslands within hardwood foothill woodlands and open grassland areas, within a small portion of a sycamore grove located within the Sycamore Ranch trailer park/campground.

Hydrology

Dry Creek and the Yuba River are the major hydrological features within or near the WSA. Precipitation at this elevation is in the form of rain-fall averaging 34.25 inches annually (*Western Regional Climate Center, 24cc@dri.edu*). Typically, most rainfall occurs between the months of October to April.

Watershed

The Yuba River is located on the west side of the Sierra Nevada Mountains of northern California. The South, Middle, and North Forks of the Yuba make up the Yuba River Watershed. The watershed is bordered by the basins of the Feather River to the north, the Truckee River to the east, and the Bear River and American River to the south.

The North Fork of the Yuba flows into New Bullards Bar Reservoir and is joined by the Middle Fork about 5 miles downstream from the 645-foot New Bullards Bar Dam. The South Yuba begins with runoff near Donner Pass high in the Sierra Nevada. Its source is

Lake Angela at 7,190 feet. The South Yuba runs for 64 miles before joining the other two forks at Englebright Reservoir to form the main stem of the Yuba. The watershed area is 1,339 square miles or 1.4 million acre feet.

Soils

Onsite soils, as described in the *Soil Survey of Yuba County, California* (published by the USDA Natural Resources Conservation Service) are predominately Redding-Corning complex 3-8 percent slopes. This soil unit is on high fan terraces. Native vegetation is mainly annual grasses and forbs. This unit is about 35 percent Redding gravelly loam and 35 percent Corning gravelly loam with small “inclusions” of Corning, Redding and unnamed soil units. The “unnamed” inclusions have been identified as “hydric” soils within seasonal wetlands (vernal pools) due to ponding for long durations. Several of these inclusions were observed near the WSA; however, the pipeline route has been designed to avoid these seasonally ponded areas. Except for the “inclusions” the Redding-Corning soils are not identified as “hydric” in the *Hydric Soil Listing for Yuba County* (see Appendix)

Interstate or Foreign Commerce Connection

The Yuba River is located south (115 to 650 feet) of the WSA. On-site drainages enter into Dry Creek or the Yuba River. The Yuba River empties into the Feather River at 11± miles southwest of the WSA. At this juncture the Feather River is considered navigable waters of the U.S. Thus, the on-site drainages would be considered connected with and/or adjacent to “Waters of the United States” and would therefore be connected with interstate and/or foreign commerce in accordance with the directives of the United States Army Corps of Engineers.

METHODOLGY

The intent of this delineation is to identify wetlands that are present within the WSA that could fall under the regulatory jurisdiction of the U. S. Army Corps of Engineers (Corps) pursuant to Section 404 of the Clean Water Act. The *1987 Corps of Engineers Wetlands Delineation Manual*, as supplemented by the *Regional Supplement - Arid West Region* (ACOE Research & Development Center, 2008), identifies several methodologies and combinations of methodologies that can be utilized in making jurisdictional determinations. Marcus H. Bole & Associates has employed the Routine On-Site Determination methodology for this study. The Routine On-Site Determination method uses a three-parameter approach (vegetation, soils and hydrology) to identify and delineate the boundaries of jurisdictional wetlands. To be considered a wetland, all three positive wetland parameters must be present. These parameters include (1) a dominance of wetland vegetation, (2) a presence of hydric soils, and (3) hydrologic conditions that result in periods of inundation or saturation on the surface from flooding or ponding. Further description of these parameters is provided below:

1) Vegetation. Wetland vegetation includes those plants that possess physiological traits that allow them to grow and persist in soils subject to inundation and anaerobic soil

conditions. Plant species are classified according to their probability of being associated with wetlands. Obligate (OBL) wetland plant species almost always occur in wetlands (more than 99 percent of the time), facultative wetland (FACW) plant species occur in wetlands most of the time (67 to 99 percent), and facultative (FAC) plant species have about an equal chance (33 to 66 percent) of occurring in wetlands as in uplands. For this study, vegetation was considered to meet the vegetation criteria if more than 50% of the vegetative cover was FAC or wetter.

2) Hydric Soils. Hydric soils are saturated, flooded, or ponded in the upper stratum long enough during the growing season to develop anaerobic conditions and favor the growth of wetland plants. Hydric soils include gleyed soils (soils with gray colors), or those that usually display indicators such as low chroma values, redoximorphic features, iron, or manganese concretions, or a combination of these indicators. Low chroma values are generally defined as having a value of 2 or less using the *Munsell Soil Color Charts* (Munsell, 2000 revised). For this study, a soil was considered to meet the hydric soil criteria for color if it had a chroma value of one or a chroma of two with redoximorphic features, or if the soil exhibited iron or manganese concretions. Redoximorphic features (commonly referred to as mottles) are areas in the soils that have brighter (higher chroma) or grayer (lower chroma) colors than the soil matrix. Redoximorphic features are the result of the oxidation and reduction process that occurs under anaerobic conditions. Iron and manganese concretions form during the oxidation-reduction process, when iron and manganese in suspension are sometimes segregated as oxides into concretions or soft masses. These accumulations are usually black or dark brown. Concretions 2 mm in diameter occurring within 7.5 cm of the surface are evidence that the soil is saturated for long periods near the surface.

3) Hydrology. Wetlands by definition are seasonally inundated or saturated at or near the surface. In order for an area to have wetland hydrology, it has to be inundated or saturated for 5% of the growing season (approximately 12 days) (USDA, 1967). Indicators include visual soil saturation, flooding, watermarks, drainage patterns, encrusted sediment and plant deposits, cryptogammic lichens, and algal mats.

Special Status Species

The following discussion describes the plant and animal species that have been afforded special recognition by federal, state, or local resource agencies or organizations. Listed and special-status species are of relatively limited distribution and may require specialized habitat conditions. Listed and special-status species are defined as one of the following:

- Listed or proposed for listing under the state or federal Endangered Species Acts.
- Protected under other regulations (e.g., Migratory Bird Treaty Act).
- California Department of Fish and Game (CDFG) Species of Special Concern.
- Listed as species of concern by the California Native Plant Society (CNPS) or the U. S. Fish and Wildlife Service (USFWS).

Special-status species were considered for this analysis based on a special status species list generated by Kleinshmidt Consultants, field survey results, a review of the California Natural Diversity Database (CNDDDB), CNPS literature, and database information provided by the U. S. Fish and Wildlife Service (Browns Valley and adjacent quads of Camp Far West, Honcut, Loma Rica, Olivehurst, Oregon House, Smartville, Wheatland, and Yuba City. 7 ½ Minute Quad database last updated 11/07). Sensitive habitats within the WSA include the seasonal swales, seasonal creeks, and Dry Creek. The project area is within the range of a number of special-status species that are of concern to the CDFG (CNDDDB 2012-2013) and U.S. Fish and Wildlife Service (USFWS 2012). A complete list with a narrative is included in Enclosure D.

FIELD STUDIES

Wetland delineation data was collected in accordance with the 1987 Corps methodology as supplemented by the *Regional Supplement - Arid West Region* (ACOE Research & Development Center, 2008). Representative data point sampling was conducted to evaluate the extent and type of potential jurisdictional wetlands and other “waters of the United States.” Wetland boundaries were located by GPS and tape measurements. Wetland features and data points were transferred to an aerial map. Paired point samples were taken within the suspected wetland and corresponding upland habitats and were recorded on the Wetland Determination Data Form – Arid West Region (Enclosure C).

Vegetation

Habitat at data point locations was examined for the presence or absence of hydrophytic vegetation and wetland indicator species. Plant species were identified using *The Jepson Manual: Higher Plants of California* (Hickman 1993). Vegetation was described both in terms of coverage and species to determine whether the hydrophytic vegetation criterion was met. Wetland indicator species include those listed as Obligate (OBL), Facultative Wetland (FACW), or Facultative (FAC) in the *National List of Plant Species that Occur in Wetlands: Region 0* (Reed, 1988). Vegetation was examined in spring and summer when plant species were identifiable to species level. It was determined that the hydrophytic vegetation criterion was met if more than 50% of the vegetative cover consisted of wetland indicator species. The wetland vegetation occurring within the WSA was composed of Italian rye (*Lolium perenne*), parrot weed (*Myriophyllum aquaticum*), nutsedge (*Cyperus eragrostis*), Himalayan blackberry (*Rubus discolor*), Baltic rush (*Juncus balticus*), field mint (*Mentha arvensis*), common plantain (*Plantago major*), Fremont’s cottonwood (*Populus fremontii* ssp. *fremontii*), and curly dock (*Rumex crispus*).

Soils

Soil maps from the *Soil Survey of Yuba County* (published by the USDA Natural Resources Conservation Service) were studied to identify potential soils (map units) present in the vicinity of the WSA. Soil test pits were dug to a depth of 4 to 20 inches to determine if the WSA soils exhibited hydric characteristics and/or matched the soil types identified by the Soil Conservation Service. Soil was evaluated using the *Munsell Soil*

Color Charts (Munsell, 2000 revised) by hand texturing and diagnostic soil features such as redox depletions and redox concentrations. Hydric soil determination was based on soil texture, matrix color, and /or the presence of redoximorphic features.

RESULTS

Using the methodologies described in the Methods heading, Marcus H. Bole & Associates delineated 0.25± acres of potentially jurisdictional wetland habitats within the WSA (Enclosure E, Wetland Delineation Maps). Information on currently existing vegetation, soils and hydrologic characteristics of each jurisdictional and non-jurisdictional (upland) habitat type is presented below.

Wetland Vegetation

Seasonal Wetland Vegetation within Creeks and Drainages

Creeks and drainages contains a sparse amount of emergent wetland vegetation. The boundaries were delineated by the shift from wetland vegetation to upland vegetation consisting primarily of upland grasses and forbs. Vegetation within these areas is mostly Himalayan blackberry, common plantain and Parrot's-Feather (*Myriophyllum aquaticum*).

Upland Vegetation

The dominant understory vegetation is annual non-native grasslands and hardwood foothill woodlands, with a small portion of a sycamore grove located within the trailer park/campground.

Soils

Onsite soils, as described in the *Soil Survey of Yuba County, California* (published by the USDA Natural Resources Conservation Service) are predominately Redding-Corning complex 3-8 percent slopes. This unit is about 35 percent Redding gravelly loam and 35 percent Corning gravelly loam with small "inclusions" of Corning, Redding and unnamed soil units. The "unnamed" inclusions have been identified as "hydric" soils within seasonal wetlands (vernal pools) due to ponding for long durations. Several of these inclusions were observed near the WSA; however, the pipeline route has been designed to avoid these seasonally ponded areas by at least 500 feet.

Hydrology

The determination of wetland hydrology was based on observed inundation and saturation in the upper 4 to 20 inches of soil and recorded on *Routine Wetland Determination Data Sheets* (See Enclosure C).

JURISDICTIONAL DETERMINATION SUMMARY

The boundaries of potential jurisdictional habitats were field-verified by collecting data from both inside and outside the suspected boundary. Table 1 presents the acreage of wetland features.

Table 1. Potential Jurisdictional Habitats within 7.5 Acre Wetland Study Area

Waters of the United States	Size in Square Feet (sf.)	Impacts to Waters of the U.S. in Square Feet (sf.)	Impacts (Linear Feet) to Waters of the U.S.
Concrete Lined Irrigation Canal at Data Point 15	25 sf.	Temporary Impacts to 25 sf.	Temporary Impacts to 5 Linear Feet
Seasonal Drainage at Data Point 1/2	840 sf.	Temporary Impacts to 84 sf.	Temporary Impacts to 28 Linear Feet
Seasonal Drainage at Data Point 3/4	1,500 sf.	Temporary Impacts to 150 sf.	Temporary Impacts to 50 Linear Feet
Seasonal Drainage at Data Point 5/6	540 sf.	Temporary Impacts to 54 sf.	Temporary Impacts to 18 Linear Feet
Culvert replacement at Data Point 14	150 sf.	Temporary Impacts to 25 sf.	Temporary Impacts to 5 Linear Feet
Seasonal Drainage at Data Point 13	180 sf.	Temporary Impacts to 18 sf.	Temporary Impacts to 6 Linear Feet
Seasonal Drainage at Data Point 7/8	750 sf.	Temporary Impacts to 75 sf.	Temporary Impacts to 25 Linear Feet
Seasonal Swale at Data Point 12	225 sf.	Temporary Impacts to 45 sf.	Temporary Impacts to 15 Linear Feet
Seasonal Creek (DP 9)	1,500 sf.	Temporary Impacts to 150 sf.	Temporary Impacts to 50 Linear Feet
Culvert replacement at Data Point 10	600 sf.	Temporary Impacts to 45 sf.	Temporary Impacts to 15 Linear Feet
Dry Creek (DP 11)	4,752 sf.	Temporary Impacts to 474 sf.	Temporary Impacts to 158 Linear Feet
Dry Creek Bed - Concrete Pad for Cone Screen		Permanent Impacts to 144 sf.	Permanent Impacts to 12 Linear Feet
TOTAL	11,062 sf. / 0.25 acres	Temporary Impacts: 1,135 sf. / 0.02 acres Permanent Impacts: 144 sf. / 0.003 acres	Temporary Impacts to 387 Linear Feet

BIOLOGICAL INVENTORY FOR SPECIAL STATUS SPECIES

Pre-field Survey

The purpose of the pre-field investigation was to review the Kleinschmidt Consultants query for Special Status Plants and Wildlife species and to determine if these special status species have the potential to occur in the planned project area. Other sources of information used to make this determination are included as follows:

- *California Natural Diversity Data Base* (CNDDDB) for Browns Valley quad and adjacent quads of Camp Far West, Honcut, Loma Rica, Olivehurst, Oregon House, Smartville, Wheatland, and Yuba City.
- *California Native Plant Society Inventory of Rare and Endangered Plants of California* (Skinner and Pavik 1994).
- *Jepson Manual: Higher Plants of California* (Hickman 1995).
- California Department of Fish and Game. 2002. *California Wildlife Habitat Resources*. CWHR, version 8.0.

Biological Field Survey

The special-status species surveys were performed in the spring of 2008 and updated continuously through February, 2013. These surveys were conducted in a manner to identify any rare or endangered species that may be present during the spring blooming period (CDFG, 2000; USFWS, 1996). Survey protocols that were followed include *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities*, Department of Fish and Game, December 9, 1983 (Revised May 8, 2000) and *Guidelines for Conduction and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants*, USFWS, January 2000. Wildlife surveys were conducted in accordance with standard survey protocols.

Surveys were conducted when most rare or endangered species that could occur in habitats at the site would be evident and identifiable. The botanical surveys were floristic in nature and not based on the occurrence of habitat or other physical features. The botanical survey was conducted using systematic field techniques in all habitats of the site to ensure a reasonably thorough coverage of potential impact areas. A meandering pattern was walked through each habitat to ensure that all areas were viewed. All plants at the site were identified to the level necessary to ascertain whether they were special status species.

SPECIAL STATUS SPECIES SURVEY RESULTS - PLANTS

Blooming times are recorded according to *California Native Plant Society Inventory of Rare and Endangered Plants of California* (Skinner and Pavik 1994). The habitat is provided from the California Natural Diversity Data Base (CNDDDB). Distinctive characteristics are according to *The Jepson Manual, Higher Plants of California* (Hickman 1993) and from prior surveys for these plants. Assessment information is from the CNDDDB as well as the onsite rare plant field surveys.

During these surveys none of the special status plant species were observed within the 7.5 acre WSA or within a buffer zone 500 feet either side of the WSA. Most of the described species have a very low potential to occur on site because of the following conditions, which have had a major impact on these species, at this site and elsewhere:

- Intensive cattle grazing over a prolonged period of time, presumably over a long duration.
- Introduction of pasture grasses and forbs and other non-native invasive species. The non-native grasses' phenology is such that they are able to out-compete most native annual grasses and forbs throughout the valley and foothill regions.

Ferris' Milk-vetch (*Astragalus tener* var. *ferrisiae*)

Status: CNPS 1B.1

Blooming time: April-May; annual

Habitat: Meadows, valley and foothill grasslands. Micro: sub-alkaline flats on overflow land in the central valley; usually seen in dry, adobe soil.

Distinctive Characteristics: Grows in colonies, 35 to 100 plants usually observed; showy flowers; fruit differs from the other two *Astragalus tener* with having incurved fruit, round at the base and not stalked-like.

Assessment to occur within impact area: No sightings within the Browns Valley quad or the adjacent quads (CNDDDB). Known only to grow on alkaline soils which are not found within the project area. Low potential to occur within the project area due to soil profiles. None observed during onsite surveys.

Brandege's Clarkia (*Clarkia biloba* ssp. *brandegeae*)

Status: CNPS 1B.2

Blooming time: May-July; annual

Habitat: Chaparral, cismontane woodlands. Micro: often in roadcuts.

Distinctive Characteristics: Showy and abundant flowers; flowers purplish-pink; flower lobes usually 1/5-1/2 the petal length.

Assessment to occur within impact area: Five-occurrences within the Oregon House quad; there is a potential to occur within the project area since it is a species usually found in the foothills of the Sierra Nevada. None observed during onsite surveys.

Dwarf Downingia (*Downingia pusilla*)

Status: CNPS 2.2

Blooming time: March-May; annual

Habitat: Valley and foothill grasslands (mesic sites), vernal pools. Micro: vernal lakes and pool margins with a variety of associate plants and in several types of vernal pools.

Distinctive Characteristics: corolla 2.5-4 mm; white or blue with two minute yellow dots near throat; anthers exerted.

Assessment to occur within impact area: Two occurrences within the Browns Valley quad; no potential to occur within the project area since no vernal pools are present within the project footprint. None observed during onsite surveys.

Ahart's Dwarf Rush (*Juncus leiospermus* var. *ahartii*)

Status: CNPS 1B.2

Blooming time: March-May; annual

Habitat: Vernal pools. Micro: restricted to the edges of vernal pools.

Distinctive Characteristics: Small, inconspicuous plant; 1.9-11.6 cm in height.

Assessment to occur within impact area: Ten occurrences in all with one sighting in the Browns Valley quad in a hardpan vernal pool; low potential to occur within the project area due to lack of vernal pools or vernal swales within or near the WSA. None observed during onsite surveys.

Red Bluff Dwarf Rush (*Juncus leiospermus* var. *leiospermus*)

Status: CNPS 1B.1

Blooming time: March-May; annual

Habitat: Chaparral, valley and foothill grasslands, cismontane woodlands, vernal pools.

Micro: vernal mesic sites, sometimes within the edges of vernal pools.

Distinctive Characteristics: Small, inconspicuous plant; 1.9-11.6 cm in height.

Assessment to occur within impact area: Only occurrences in the Butte, Shasta, Tehama, and Placer Counties; low potential to occur within the project area due to lack of vernal pools or vernal swales within or near the WSA. None observed during onsite surveys.

Legenere (*Legenere limosa*)

Status: CNPS 1B.1

Blooming time: March-April; annual

Habitat: Vernal pools; many historical sites have been extirpated. Micro: within the beds of vernal pools.

Distinctive Characteristics: corolla white and inconspicuous; usually found in colonies up to 300 plants; only species within the *Legenere* genus.

Assessment to occur within impact area: Three occurrences within the Browns Valley quad; low potential to occur within the project area due to lack of vernal pools or vernal swales within or near the WSA. None observed during onsite surveys.

Veiny Monardella (*Monardella douglasii* ssp. *venosa*)

Status: CNPS 1B.1

Blooming time: May-July; annual

Habitat: Valley and foothill grasslands, cismontane woodlands. Micro: located on heavy clay soils, mostly with grassland associates, rediscovered in 1992.

Distinctive Characteristics: the areas between the bracts silvery translucent with stout flower head and bracts are widely ovate compared to the other sub-species.

Assessment to occur within impact area: Four occurrences within CNDDDB; one sighting in the Yuba City quad originally dated 1854 and presumed extirpated. Due to the rarity of this species and lack of heavy clay soils, extremely low potential to occur within or near the WSA. None observed during onsite surveys.

Ahart's Paronychia (*Paronychia ahartii*)

Status: CNPS 1B.1

Blooming time: March-June; annual

Habitat: Valley and foothill grasslands, vernal pools, cismontane woodlands. Micro: stony, nearly barren clay soils within swales and higher ground around vernal pools. Distinctive Characteristics: inconspicuous plant, 0.5-2 cm; usually found in large colonies forming dense matt easily observed.

Assessment to occur within impact area: Only occurrences are within Butte, Shasta and Tehama counties and found within volcanic uplands. Low potential to occur within the project area due to soil profiles and lack of vernal pools or vernal swales within or near the WSA. None observed during onsite surveys.

Cedar Crest Popcornflower (*Plagiobothrys glyptocarpus* var. *modestus*)

Status: CNPS 3

Blooming time: April-May; annual

Habitat: Cismontane woodland. Micro: one historical occurrence with no additional information given.

Distinctive Characteristics: apparently not collected since 1937 and may be a minor variant or hybrid. Flower differs from the other variant by having a smaller corolla, 2-3 mm wide.

Assessment to occur within impact area: No known occurrences within the Browns Valley or adjacent quads. Low potential to occur within the project footprint. None observed during onsite surveys.

Hartweg's Golden Sunburst (*Pseudobahia bahiifolia*)

Status: CNPS 1B.1

Blooming time: April-May; annual

Habitat: Valley and foothill grasslands, cismontane woodlands.

Distinctive Characteristics: largest leaves are entire or three lobed.

Assessment to occur within impact area: One occurrence given for the Yuba City quad dated 1848; in 1994 site reportedly extirpated. Low potential to occur within the project footprint. None observed during onsite surveys.

Northern Hardpan Vernal Pools

This system includes shallow ephemeral water bodies found in depressions (up to several hectares in size) among grasslands and open woodlands throughout intermountain valleys of California, Oregon and the Gulf and San Juan islands of Washington and British Columbia. Northern hardpan vernal pools include an indurated clay or cemented hardpan that retains water inputs throughout some portion of the spring, but typically the depression dries down entirely into early summer months. Due to draw-down characteristics, vernal pools typically form concentric rings of similar vegetation. Given their relative isolation in upland-dominated landscapes, many endemic plant and invertebrate species are common in California vernal pools. Most of these species have a federally or state listing as endangered or threatened.

SPECIAL STATUS SPECIES SURVEY RESULTS - WILDLIFE

Vernal Pool Fairy Shrimp (*Branchinecta lynchii*) – Federal Threatened
Conservancy Fairy Shrimp (*Branchinecta conservatio*) – Federal Endangered
Vernal Pool Tadpole Shrimp (*Lepidurus packardii*) – Federal Endangered
California Linderiella (*Linderiella occidentalis*) – State Species of Concern

The above listed fairy shrimp, tadpole shrimp and linderiella inhabit vernal pools and vernal mesic sites where water is pooled/ponded sufficiently during the growing season. Vernal pool fairy shrimp, vernal pool tadpole shrimp, and California linderiella all occur within the Browns Valley or adjacent quads; only conservancy fairy shrimp are not listed within these quads. Based on current construction plans, there are no expected impacts to seasonal wetlands that could provide habitat for fairy shrimp. Onsite biological monitoring during trenching near wetland habitats, and mandatory worker awareness training will emphasize identification and avoidance of wetland habitats.

Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*) – Federal Threatened.

Valley elderberry longhorn beetle (VELB) is completely dependent on its host plant, blue elderberry (*Sambucus mexicana*) (USFWS 1999) which is a common component of riparian habitat throughout the Central Valley. The beetle's range extends throughout California's Central Valley and associated foothills from about the 3,000-foot elevation contour on the east and the watershed of the Central Valley on the west. This animal spends most of its life in the larval stage, living within the stems of an elderberry. The adult stage is short-lived; adults emerge from late March through June when the elderberry is starting to flower. The only exterior evidence of their presence is an exit hole created by the VELB larva just prior to the pupal stage.

Several blue elderberry shrubs were observed near the project area, however none of the shrubs are within 100 feet of the proposed trenching. Based on current construction plans, there are no expected impacts to these shrubs. Surveys of the shrubs revealed no exterior evidence of the beetle, i.e. exit holes, frass and/or shredded wood. Although outside of the project footprint, these shrubs will be further protected by placing distinctive orange construction fencing and signage to prevent inadvertent impacts. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

California Red-legged Frog (*Rana aurora draytonii*) – Federal Threatened; State Species of Concern.

The current range of the California red-legged frog (CRLF) has been greatly reduced, with most populations occurring along the coast from Marin County to Ventura County, and in several isolated locations in the foothill region of the west slopes of the Sierra Nevada. Current information suggests that CRLF has been extirpated from most of its range within the Sierra Nevada Mountains. Also, there are no known occurrences of CRLF within the Browns Valley quad and the adjacent quads.

Adult CRLF prefer dense, shrubby or emergent riparian vegetation near deep (more than 2.3 feet), still or slow moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail occur. This subspecies breeds from November through April (Jennings and Hayes 1994). Upland areas provide important sheltering habitat during winter when CRLF are known to aestivate in burrows and leaf litter.

Habitat assessments for CRLF were based on habitat requirements as described in the USFS, February 18, 1997 document on *California red-legged frog ecology and distribution* (USFWS 1997). Aquatic habitats or potential aquatic habitats and adjacent uplands were evaluated by assessing their potential to support breeding, foraging activities, provide refuge and/or aestivation habitat; and, by querying the CNDDDB for the Browns Valley quad and the adjacent quads, for sightings of CRLF.

Within the project area there is only one marginally suitable aquatic feature, a small pond, which occurs outside of the project footprint, and over 100 feet from trenching activity. This pond has minimal vegetation around the periphery of the pond and is fed by seasonal runoff from a swale above the pond and to the east. The swale is gently sloping and serves to funnel runoff into the pond during seasonal rainfall. Because this wetland feature (swale) is dry during the spring through the fall, and heavily vegetated with non-native annual grasses and forbs, utilization by CRLF would be limited to the winter and early spring as a dispersal corridor.

Since breeding habitat and associated summer refugia is not present on-site, overall habitat quality for CRLF is marginal, and potential to occur on site is very low. Given there is no hydrologic link between the pond and other aquatic features (e.g. perennial or intermittent streams) in the near vicinity, it is unlikely that this species would utilize this pond, even as a dispersal corridor during the winter and early spring. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Western Spadefoot (*Spea hammondi*) – Federal Species of Concern; State Species of Concern.

The western spadefoot (WS) ranges throughout the Central Valley and adjacent foothills, and is usually quite common where it occurs. The species occurs primarily in grasslands, but occasional populations also occur in valley-foothill hardwood woodlands (*California Wildlife Habitat Relationships System* database version 8.0). Vernal pools are essential for breeding and egg-laying for this species (CNDDDB 2008). However, there are no known occurrences of the WS within the Browns Valley and the adjacent quads.

Most of the year is spent in underground burrows up to 36 inches deep, which they construct themselves; some will use mammal burrows. Breeding and egg-laying occur almost exclusively in shallow, temporary vernal pools formed by heavy winter rains. The adults remain in underground burrows during most of the year, but the first rains of fall usually initiate surface movements. Breeding activities normally conclude by the end of March.

Within the project footprint, there are no vernal pools that occur, and since this specialized aquatic feature is essential for the breeding and egg laying of the WS, there is no potential for this species to occur within the project footprint. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

California Tiger Salamander (*Ambystoma californiense*) – Federal Threatened; State Species of Concern.

The California tiger salamander (CTS) is most commonly found in annual grassland habitat, but also occurs in the grassy understory of valley-foothill hardwood habitats. Its range includes the Central Valley from Yolo County south to Kern County, and from coastal areas near San Francisco Bay south to Santa Barbara. CNDDDB was queried for CTS occurrences within the Browns Valley and adjacent quads; there are no sightings within these quads.

Tiger salamanders spend most of their time underground, often in ground squirrel or pocket gopher burrows, under rotting logs, and occasionally in man-made structures. The first rains of November usually trigger adult migrations to breeding ponds. Breeding ponds are typically vernal pools or other small, temporary water sites that fill during winter rains and dry out by mid-summer. The breeding season generally lasts from December through February. The larvae transform during the late spring/early summer, and usually disperse from breeding ponds by early July.

All wetland features and other aquatic habitats within the project footprint were evaluated relative to their potential to provide temporary or permanent suitable habitat for the CTS. The project is not located within Critical Habitat for CTS. Since the swales convey water and do not have sufficient ponding/pooling for this species to breed, there is no potential for CTS to occur within the project footprint. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Northwestern Pond Turtle (*Actinemys marmorata marmorata*) – State Species of Concern.

The northwestern pond turtle (NPT) is uncommon to common in suitable aquatic habitat throughout California, west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. The NPT is associated with permanent or nearly permanent water in a wide variety of habitat types. Within the Browns Valley and adjacent quads, this species occurs within the Browns Valley quad and adjacent quad of Oregon House. During the field surveys one mature carapace was observed near the project footprint.

The NPT is typically found along streams with deep pools, rocks, and logs that provide basking sites and safe underwater retreats, and it is considered a thoroughly aquatic turtle. It usually stays near water, but females travel over land, up to 325 feet, to lay eggs. Egg laying usually occurs between April and August when the females will climb onto land to

dig a nest, along stream or pond margins, where they lay a clutch of 2 to 11 eggs. Some females will lay two clutches in a year, while others lay eggs every other year.

Within the general area there is a perennial pond that would provide suitable habitat for the NPT. It is a medium sized pond, which occurs adjacent to the project footprint, approximately 100 feet away from the trenching activity. Since suitable habitat occurs on-site there is a potential for the NPT to occur on or near the project footprint. The pond will be protected by distinctive orange construction fencing and signage to prevent inadvertent impacts. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

American White Pelican (*Pelcanus erythrorhynchos*) – No listings

The American white pelican (AWP) only nests in two locations in California, in the large lakes in the Lower Klamath National Wildlife Refuge (Siskiyou County) and the Clear Lake Reservoir (Modoc County). As a result, the AWP would not use the proposed site for breeding grounds. However, during migration the Yuba River could be used for foraging or roosting along the edge of the water, or on the sandbars. The proposed project footprint is well set-back from the river and should not disrupt possible foraging or roosting activities along the waters' edge. Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Great Blue Heron (*Ardea herodias*), Great Egret (*Ardea alba*), Snowy Egret (*Egretta thula*), and Black-crowned Night-Heron (*Nycticorax nycticorax*) - Rookeries

All above-mentioned species are colonial nesters. CNDDDB revealed no occurrences within the Browns Valley quad and the adjacent quads. All wetland features and other aquatic habitats within the proposed project footprint were evaluated relative to their potential to provide suitable nesting habitat for these species. Within the grasslands/hardwood woodlands there is no suitable habitat and therefore there is no potential for rookeries to occur. The Sycamore Ranch (trailer park and campground) the trees could provide nesting and roosting sites, however, since this is a high-use area the potential would be very low for rookeries to occur. Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Bald Eagle (*Haliaeetus leucocephalus*) – Federal Delisted; State Endangered

The bald eagle (BE) is a permanent resident and uncommon winter migrant, breeding mostly in the northern counties of California. There is only one occurrence (#139) within Oregon House quad, an adjacent quad, located at Virginia House Reservoir.

The bald eagle requires large bodies of water, or free flowing rivers with abundant fish, and adjacent snags or other perches. It swoops from hunting perches, or soaring flight, to

pluck fish from water. Occasionally it pounces on displaced voles, or other small mammals in flooded fields.

It nests in large, old-growth, or dominant live trees with open branch work, especially ponderosa pine. The BE nests most frequently in stands with less than 40% cover (*California Wildlife Habitat Relationships System* version 8.0). In California 87% of the bald eagles nest sites were within 1 mile of water (*California Wildlife Habitat Relationships System* version 8.0). Although the potential to nest within the proposed project footprint is extremely low, the BE could possibly be found foraging along the Yuba River and/or the open grasslands adjacent to the project footprint. Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Swainson's Hawk (*Buteo swainsoni*) – State Threatened

The Swainson's Hawk (SH) occurs as a breeding species in open habitats throughout much of the western United States and Canada, and in northern Mexico. In California, breeding populations of SH occur in desert, shrub steppe, grassland and agricultural habitats. However, the overwhelming majority of the state's breeding sites are in two disjunct populations in the Great Basin and Central Valley (*California Partners in Flight Riparian Bird Conservation Plan 1998*). Migrating individuals move south through the southern and central interior of California in September and October, and north March through May. Grasslands on the site provide potential foraging habitat if sufficient prey is available during the spring and summer months.

This hawk forages by soaring at low and high levels in search of prey; they also may walk on the ground to catch invertebrates and other prey, and they catch insects and bats in flight. Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves.

In Central California, about 85% of Swainson's hawk nests are within riparian forest or remnant riparian trees (Woodbridge 1998). However, the vast majority of home ranges consist of treeless agricultural lands used for foraging. The abundance and spatial distribution of riparian forest as well as high-quality foraging habitat such as fallow fields and alfalfa fields are both critical determinants of territory suitability.

The CNDDDB search revealed one nesting site location (occurrence #1490), approximately 5.5 miles south west from the west end of the proposed project footprint. Although there is suitable foraging habitat within the project footprint there is only marginal nesting habitat, including the Yuba River corridor. Riparian habitat along this portion of the Yuba River mostly consists of open stretches of sandbars with only an understory composed of grasses and forbs. Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

California Black Rail (*Laterallus jamaicensis coturniculus*) – State Threatened

The California Black Rail (CBR) is a rarely seen, scarce, yearlong resident of saline brackish and fresh emergent wetlands in the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay, and a few other locations. Within the adjacent quads of Camp Far West, Oregon House and Smartville, there are 42 occurrences listed with CNDDDB.

When the CBR occurs in freshwater, it is usually found in bulrushes, cattails and saltgrass and within wetlands without annual and/or daily fluctuations in water levels. Notably, in the quads adjacent to the proposed project footprint, where many sightings have occurred (CNDDDB 2008), vegetation is usually composed of cattails in dense thickets, averaging in depth of 10 to 40 meters (30 to 120 feet) (*Probable Breeding Population of the Black Rail in Yuba County, California* Aigner et al. 1995).

The California population of CBR is apparently resident, however they are occasionally found away from wetlands in late summer and autumn, suggesting some post-breeding movement (*California Wildlife Habitat Relationships System* version 8.0). They may winter in locations where they do not breed.

All wetland features and other aquatic habitats within the project footprint were evaluated relative to their potential to provide temporary or permanent suitable habitat for the CBR. The potential to occur within the proposed project footprint is very low since the pond and the wetland do not have dense thickets of cattails. However, since three-adjacent quads have numerous sightings of the CBR and are in close proximity to the proposed project footprint, it is recommended that prior to ground disturbances a survey of the pond and wetland be completed, using recorded vocalization since this species responds to these recordings (CNDDDB). Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Burrowing Owl (*Athene cunicularia*) – State Species of Concern

The burrowing owl is a yearlong resident of open, dry grassland and desert habitats, and in grass, forbs and open shrub states of pinyon-juniper and ponderosa pine habitats. This species is common to uncommon in appropriate habitats throughout California, excluding the humid northwest coastal forests and high mountains. Within the Browns Valley quad there is one occurrence (#570); the only given information is “Hammonton, vicinity of the Yuba Gold Fields and southwest of McCartie Hill.” This area is within one to two miles of the proposed project footprint.

The burrowing owl uses rodent or other burrows for roosting and nesting cover, usually using nests in old burrows of ground squirrels, or other small mammals. This owl can dig its own burrow in soft soil. It frequents open grasslands and shrub lands with perches and burrows. It usually hunts from a perch or from the burrow site. Home range is 0.1 to 4.0 acres with a mean of 2 acres (*California Wildlife Habitat Relationships System*

version 8.0). Territory is an average distance between burrows of 436 feet (*California Wildlife Habitat Relationships System* version 8.0).

Although there is suitable foraging and nesting habitat near the project footprint within the open grasslands, there were no burrows observed or burrowing mammals (i.e. ground squirrels) within the project footprint. Potential to occur is minimal without these requirements. Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Long-eared Owl (*Asia outs*) – State Species of Concern

The long-eared owl (LEO) is an uncommon resident or visitant throughout most of the northern part of California, excluding the humid North Coast Range, Cascade Range, and higher elevations of the Sierra Nevada. There is one occurrence (#47) in the Smartville Quad, located within the Spenceville Wildlife Area, and the nest sighting was at the edge of a grassland clearing.

The LEO, a nocturnal owl, uses old crow, magpie, hawk, heron, and squirrel nests in a variety of trees with dense canopy cover. Typically this species eats voles and other rodents, occasionally birds, including smaller owls, and other vertebrates. It searches for prey in low, gliding flight, pounces on prey on the ground, and usually hunts in open areas, sometimes in woodland and forested habitats.

The LEO only makes local movements in California, although some migration may occur (*California Wildlife Habitat Relationships System* version 8.0). Often the LEO congregates in winter flocks, perhaps including family groups, and there may be some seasonal movement westward from the Sierra Nevada foothills in the fall (*California Wildlife Habitat Relationships System* version 8.0).

Thirty day prior and seven day prior Pre-Construction nighttime surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

Yellow Warbler (*Dendroica petechia brewsteri*) – State Species of Concern

The yellow warbler (YW) is an uncommon to common summer resident in northern California. It breeds in riparian woodland from coastal and desert lowland up to 2,500 meters (8,000 feet) in the Sierra Nevada. There is one occurrence (#47) located in the Camp Far West quad, within the Spenceville Wildlife Area.

The YW is usually found in riparian deciduous habitats in summer with vegetation composed of cottonwoods, willows, alders, and other small trees and shrubs typical of low, open-canopy riparian woodlands. This species usually arrives in California in April, and mostly migrates out of Northern California by October. Often there is a post breeding, upslope movement mostly to middle elevations in the Sierra Nevada (*California Wildlife Habitat Relationships System* version 8.0).

Although YW could use the hardwood woodlands for migration and foraging, there is no potential for this species to nest within the proposed project area, since there is no suitable nesting habitat of riparian vegetation/corridor. The sycamore grove (trailer park and campground) the dense understory vegetation could provide suitable nesting habitat however, since this is a high-use area the potential would be very low for YW to successfully nest within these areas. Thirty day prior and seven day prior Pre-Construction nesting surveys will be accomplished. Onsite biological monitoring during construction and mandatory worker awareness training will emphasize species identification and avoidance measures.

DISCUSSION OF IMPACTS AND MITIGATION

Significance Criteria

The determination of significance of impacts to biological resources involves an evaluation of the context in which the impact may occur and the intensity and extent of the impact's effect.

Potential direct and indirect impacts to the biological resources were evaluated with respect to mandatory findings of significance of Section 15065 of CEQA and Appendix G of the State CEQA Guidelines. In accordance with these Guidelines a project's effect on biological resources would be considered significant if the project results in:

- Alteration of unique characteristics of the area, such as sensitive plant communities and habitats (i.e. wetlands, riparian habitats).
- Adverse impacts to special-status species, including species identified as candidate and/or sensitive species.
- Adverse impacts to important or vulnerable resources as determined by scientific opinion or resource agency concerns (i.e. special status habitats, e.g. wetlands).
- Interference with migratory routes.

Impacts to Potential Waters of the US

The construction of the pump station and pipeline as proposed will have result in minor permanent and temporary impacts to potential waters of the U.S. In the 7.58 acre project area, features that would come under jurisdiction of Section 404 of the Clean Water Act include seasonal swales, season creeks and Dry Creek. Proposed pipeline alignments are designed to avoid all potential waters of the United States to the maximum extent practical. Adherence to the special, general and regional conditions in the Nationwide 12 permit will result in wetland impacts that are less than significant.

Mitigation for Potential Waters of the U.S.

Prior to construction, the project site will provide a secure development barrier around the seasonal wetlands that will not be impacted. There are no anticipated changes to surface hydrology from the installation of the pipeline that would adversely affect these protected features. During construction activities, the seasonal wetlands will be protected with the installation of storm wattles, silt fencing or other sediment catching materials, along with orange construction fencing to prevent disturbance of these areas. Adequate erosion and sediment controls (i.e. storm wattles) will be installed around the periphery of all tributaries and wetlands, and will be routinely managed to prevent disturbances to said areas.

To avoid sediment or other materials from entering these habitats if there is a build-up of soils or other materials along the storm wattles, these materials will be graded away from the protected areas routinely and/or prior to a storm event. A staging area, upland and outside to the project footprint, will be established for all construction equipment and refueling operations to avoid pollutants from entering any sensitive habitats.

In accordance with *Final Sacramento District Nationwide Permit Regional Conditions for California, excluding the Lake Tahoe Basin*, trenching under the seasonal swales, seasonal creeks and Dry Creek will be sealed with suitable material as approved by the Corps of Engineers.

Potential Impacts to the Water Quality

Trenching within the designated seasonal wetlands (swales and creeks) could have temporary impacts to the water quality. Increased sedimentation could adversely affect downstream aquatic resources, as well as the accidental introduction of wash water, solvents, oil, chemical wastes, or other pollutants. Erosion of disturbed soils could also impair water quality after construction is complete. Establishing these areas as Environmentally Sensitive areas during construction, limiting construction near these features to the dry season, and implementing the Best Management Practices and other mitigation measures discussed below can minimize these potential effects.

Mitigation for Water Quality Impacts

Mitigation measures include assurances that best management practices are adopted in order to minimize the amount of sediment leaving the site during construction activities. Prior to initial construction activities all barriers, storm wattles, silt fencing or other sediment catching materials should be installed around all seasonal wetlands. A staging area, upland and outside of the project footprint will be established for all construction equipment and refueling operations to avoid pollutants from entering any sensitive habitats. A general permit for storm water discharges from construction activities will be obtained through the RWQCB and a Storm Water Pollution Prevention Plan for Construction Activities will be prepared and implemented. In accordance with *Final Sacramento District Nationwide Permit Regional Conditions for California, excluding the Lake Tahoe Basin*, trenching under the seasonal swales, seasonal creeks

and Dry Creek will be sealed with suitable material as approved by the Corps of Engineers.

Impacts to Nesting Raptors, Migratory Birds and Bats

The potential exists for impacts to raptors and other migratory birds and bats which are protected under the Migratory Bird Treaty Act to occur on or near the site through the construction activities and tree/vegetation removal, ground disturbances, heavy equipment use, and various other noises that could impact nesting migratory birds and roosting bats.

Mitigation for Nesting Raptors, Migratory Birds, and Bats

If the initial construction activities occur between the times of March 1 to July 31, which is the breeding season for raptors and most migratory bird species, pre-construction nesting surveys will be conducted.

Implementation of these mitigation efforts should minimize impacts to nesting raptors and migratory birds. Any proposed tree removal will be scheduled to avoid the nesting season. If trenching and construction cannot be scheduled to avoid nesting season, pre-construction surveys for nesting raptors shall be conducted by a qualified wildlife biologist to ensure that raptor nests are not being disturbed during construction operations.

A pre-construction survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (March – April) and no more than 30 days prior to the initiation of these activities during the late breeding season (May – July). During this survey, the qualified wildlife biologist shall inspect all trees in and immediately adjacent to the impact areas for raptor and migratory bird nests.

If the above survey does not identify any nesting raptor species on or near the project footprint, further mitigation is not required. However, should any raptor species be found nesting on or near the project footprint (within 500 feet of trenching activities), the following mitigation measures shall be implemented.

Prior to the issuance of grading permits, the project applicant, in consultation with the California Department of Fish and Wildlife (CDFW) shall avoid all birds of prey or migratory bird nest sites located within or near the project footprint during the breeding season while the nest is occupied with adults and/or eggs or young. The occupied nest shall be monitored by a qualified wildlife biologist to determine when the nest is no longer used. Avoidance shall include the establishment of a no disturbance buffer zone around the nest site. The size of the buffer zone shall be determined in consultation with the CDFW. Highly visible temporary construction fencing shall delineate the buffer zone.

If a legally-protected species nest is located in a tree designated for removal, the removal shall be deferred until after July 31 or until the adults and young are no longer dependent on the nest site, as determined by a qualified biologist.

Impacts to Trees

Pipeline construction may require the removal of a small number of native and non-native trees along the pipeline route. Additionally, construction activities within close proximity of the trees could have an adverse affect on this resource. The following mitigation measures shall be incorporated into the project design/construction to avoid and/or mitigate effects to these resources.

Mitigation for Impacts to Trees

Trees to be preserved within the project footprint and immediately adjacent to the project footprint will be protected with high-visibility fencing placed at least one foot outside the dripline. Excavating or trenching within the dripline of a protected tree should be avoided whenever practical. However, if unavoidable, any authorized cut or fill occurring within the dripline of any preserved tree should be supervised by an experienced botanist, Registered Professional Forester (RPF), or by an International Society of Arboriculture (ISA) Certified Arborist. All roots severed should be pruned back to undamaged tissue to increase root recovery and reduce the risk of pathogen infection. If pruning, cabling, and other corrective measures for preserved trees should be specified by an experienced botanist or by an RPF or arborist, and should conform to the pruning standards of the Western Chapter of ISA.

Provide Permit Conditions/Mitigation Measures to Contractors/Biological Monitoring

To ensure the proper and timely implementation of all mitigation measures contained in this report, as well as the terms and conditions of any other required permits, the applicant shall distribute copies of these mitigation measures and any other permit requirements to the contractors prior to grading and construction. Construction workers and supervisor will receive CDFW approved worker awareness training. A qualified biologist will and be on site any time trenching occurs within or near the seasonal, and perennial wetland habitats. This person shall be completely familiar with the special status species issues and the mitigation measures contained above.

SUPPLEMENTAL INFORMATION

Driving Directions

Take Interstate 80 to Roseville, take Hwy 65 to the north (towards Lincoln) to Marysville, follow Highway 20 east from Marysville (towards Grass Valley), take the Marysville Road exit north (towards Browns Valley), turn right on Browns Valley School Road and proceed to the Browns Valley Irrigation District office (9370 Browns Valley School Road)

Contact Information

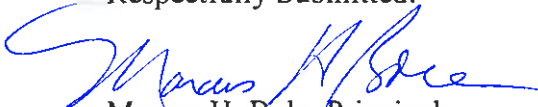
Browns Valley Irrigation District Office, Attn: Walter Cotter, General Manager, 9370 Browns Valley School Road, Browns Valley, CA. Phone: (530) 742-6044
Email: walter@bvid.org

Wetland Delineator, Botanist & Biologist Contact Information

Marcus H. Bole, Principal Wetland Scientist, M.S., North Dakota State University, Marcus H. Bole & Associates, 104 Brock Drive, Wheatland, CA 95692, Phone: 530-633-0117, fax 530-633-0119, Email: mbole@aol.com.

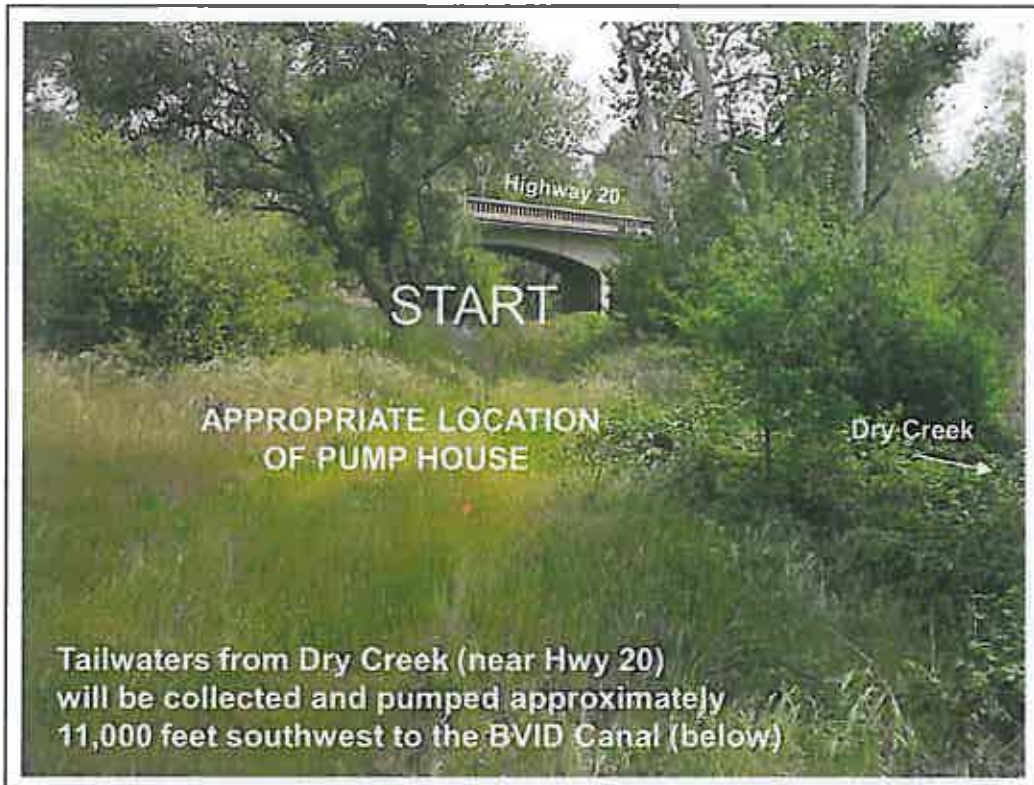
This concludes our biological inventory and wetland determination of the 7.58 acre study area identified as the Browns Valley Irrigation District Tailwater Recapture Project, Yuba County, California. If you have any questions concerning our findings please feel free to contact me directly at: Marcus H. Bole & Associates, Attn: Marcus Bole, 104 Brock Drive, Wheatland, CA 95692, phone 530-633-0117, fax 530-633-0119, email: mbole@aol.com.

Respectfully Submitted:



Marcus H. Bole, Principal
Marcus H. Bole & Associates

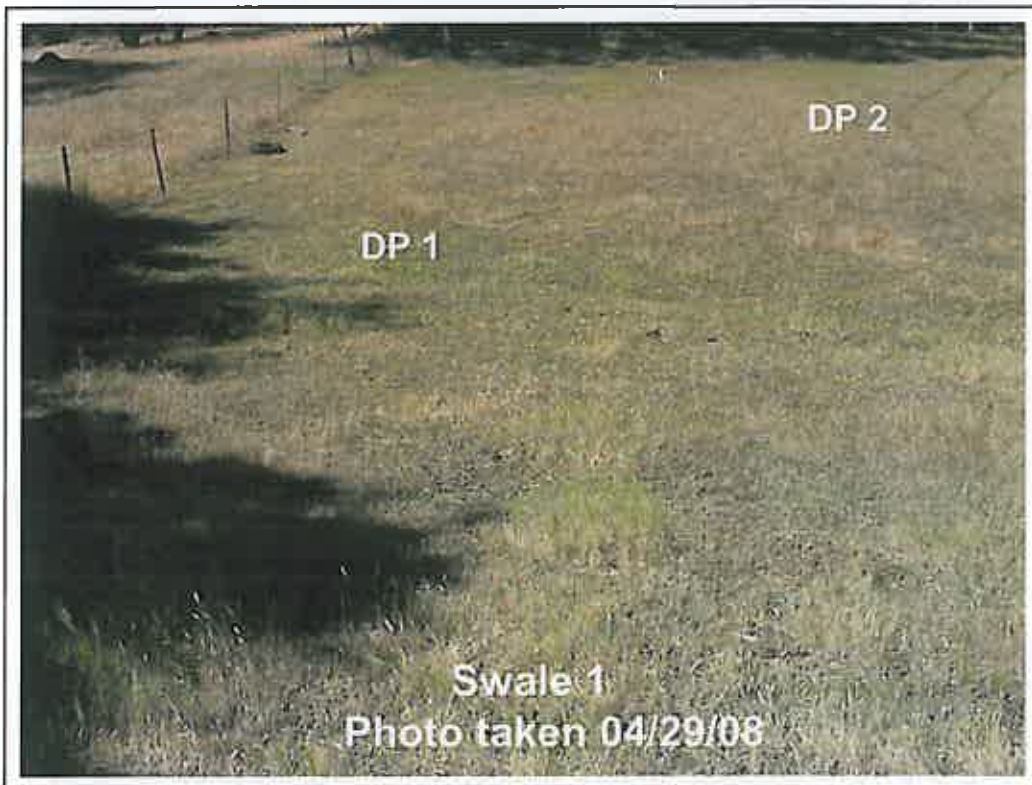
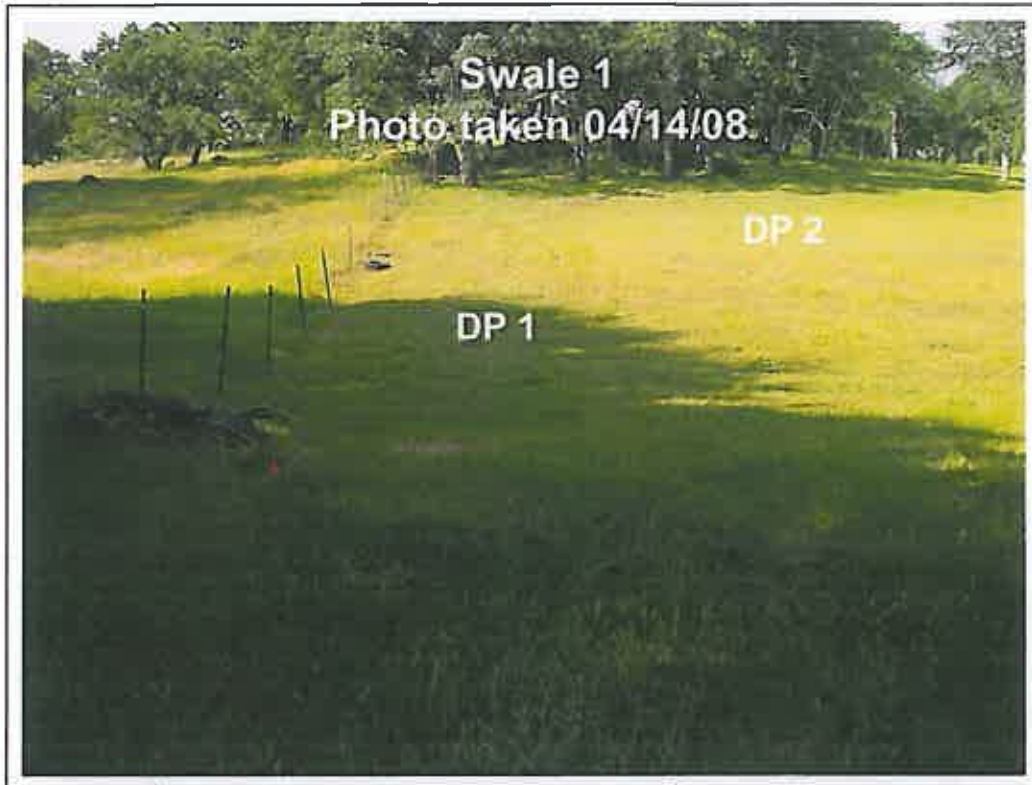
**ENCLOSURE A – SITE PHOTOS AND DATA
POINT PHOTOS**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

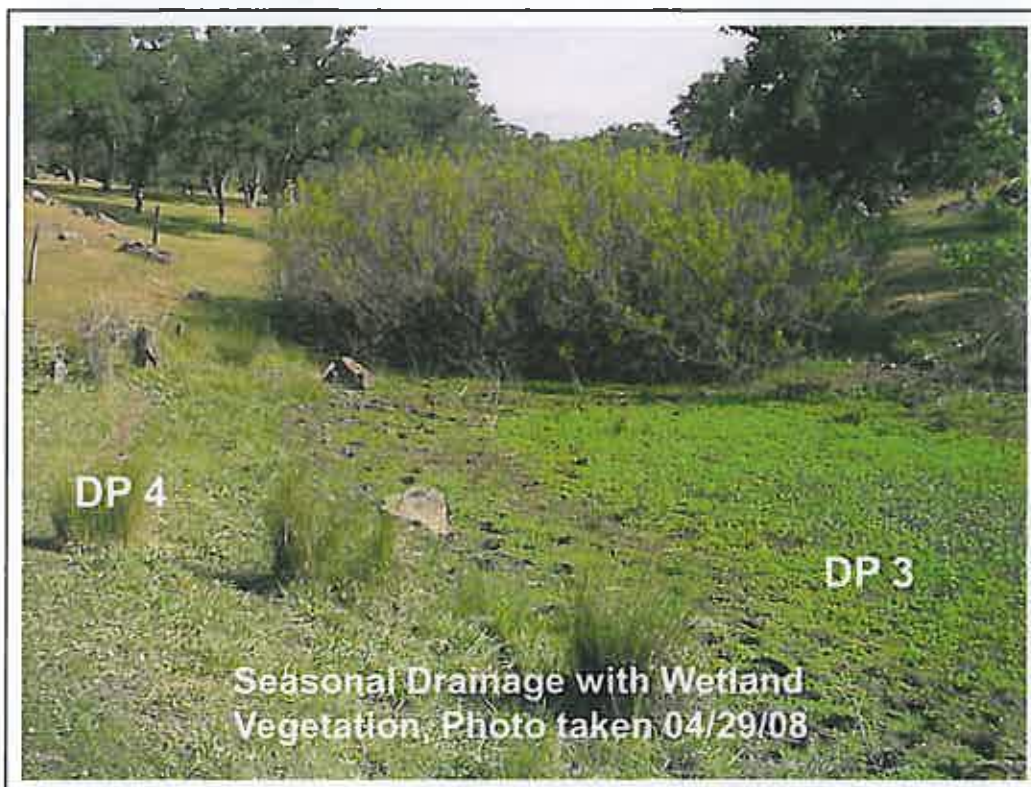
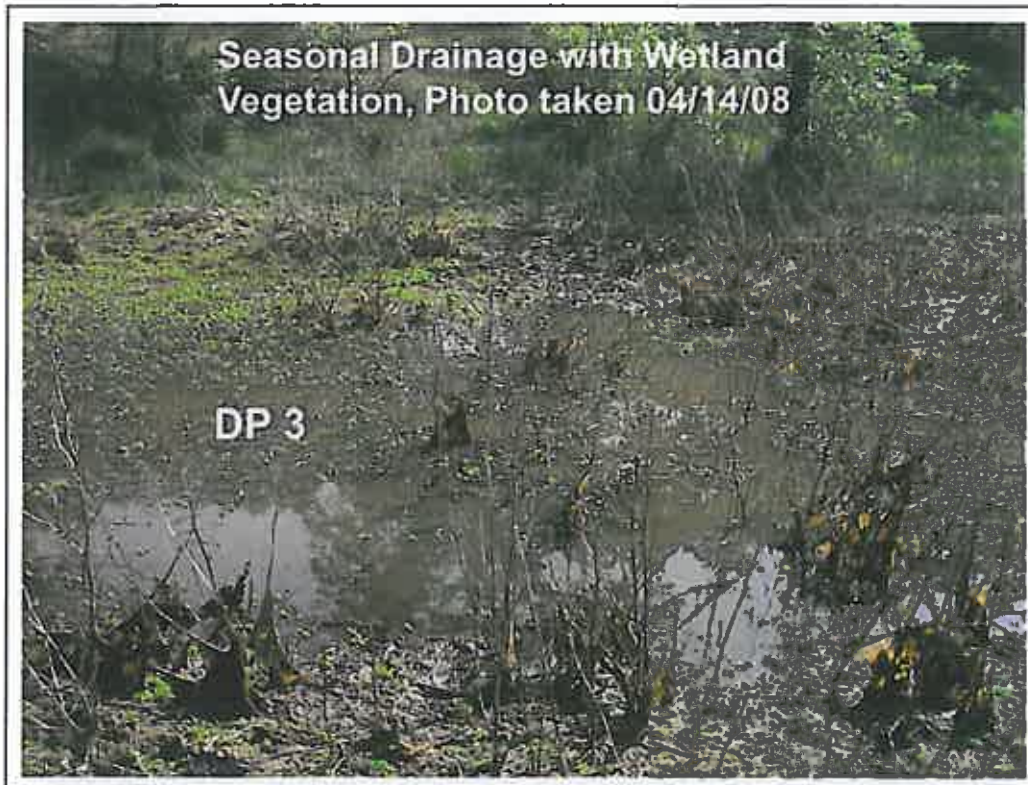
SITE: Dry Creek Tailwater Recapture Project
ITEM: Start & End Points
DATE: April 29, 2008

PLATE: 1



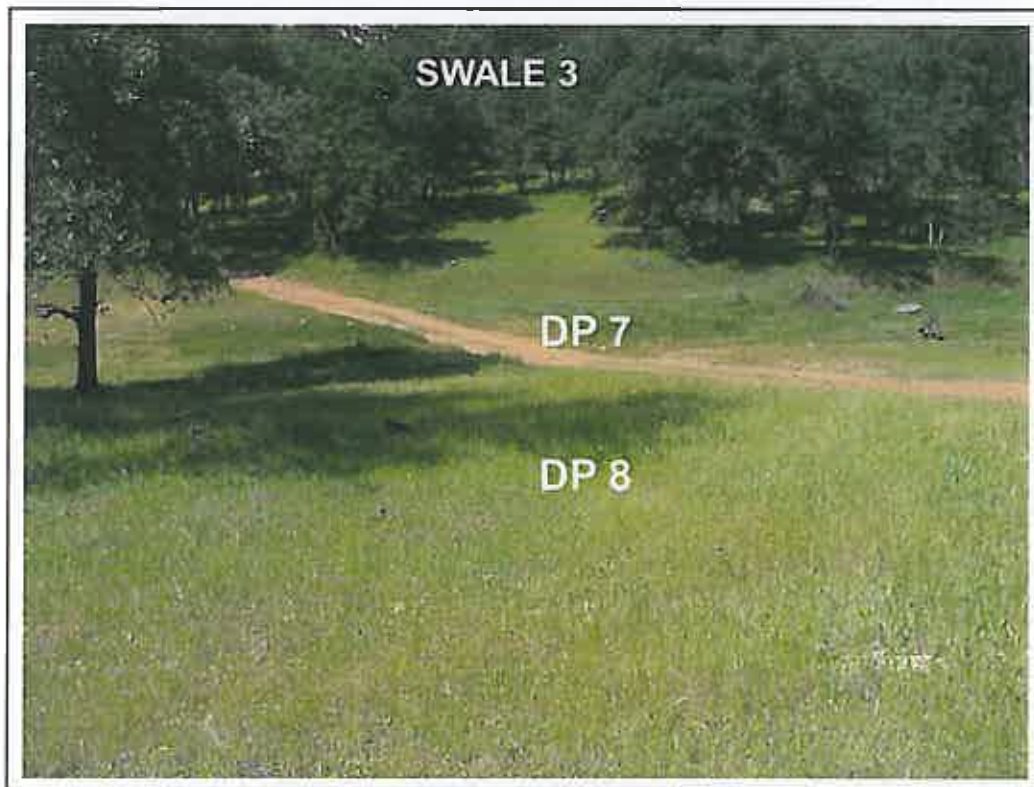
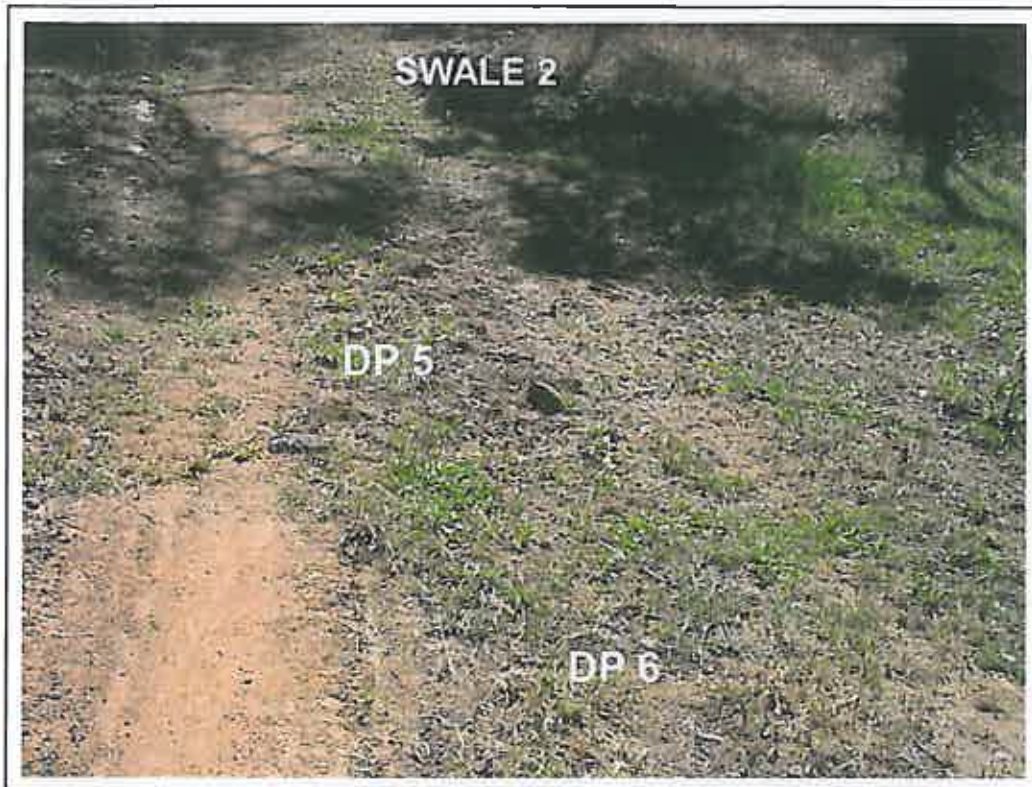
MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: DATA POINTS 1 & 2, Swale 1
DATE: April 29, 2008 PLATE: 2



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: DATA POINTS 3 & 4, Drainage
DATE: April 29, 2008 **PLATE: 3**



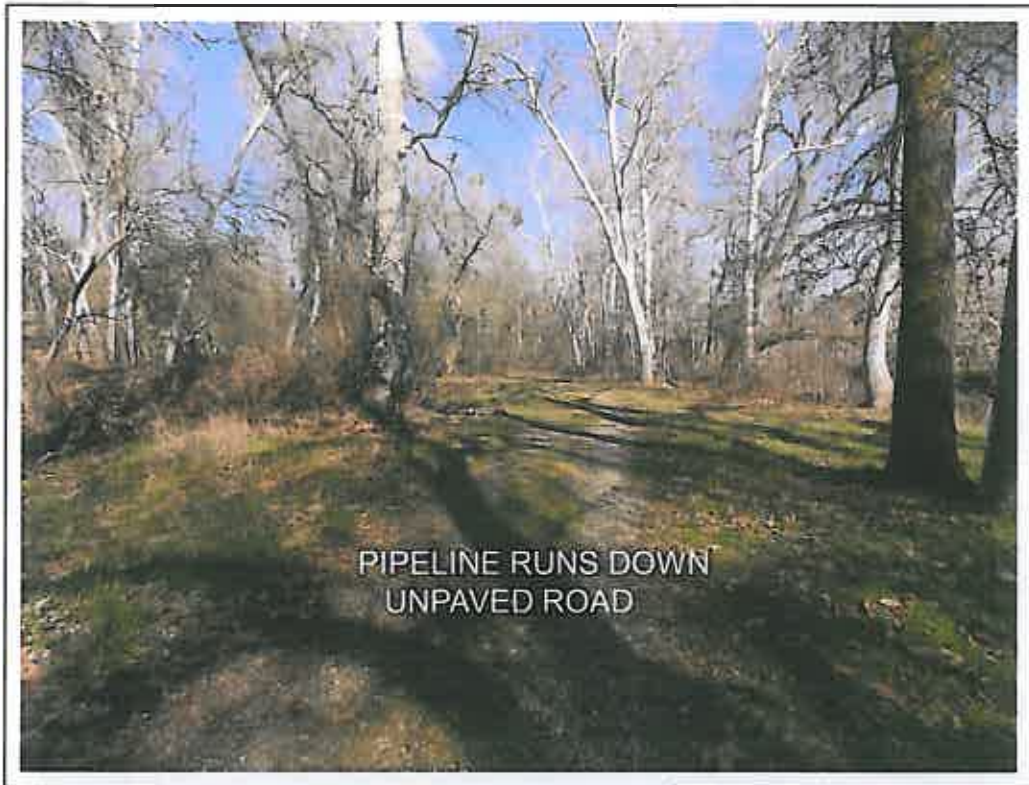
MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: DATA POINTS 5/6 & 7/8, Swales
DATE: April 29, 2008 **PLATE: 4**



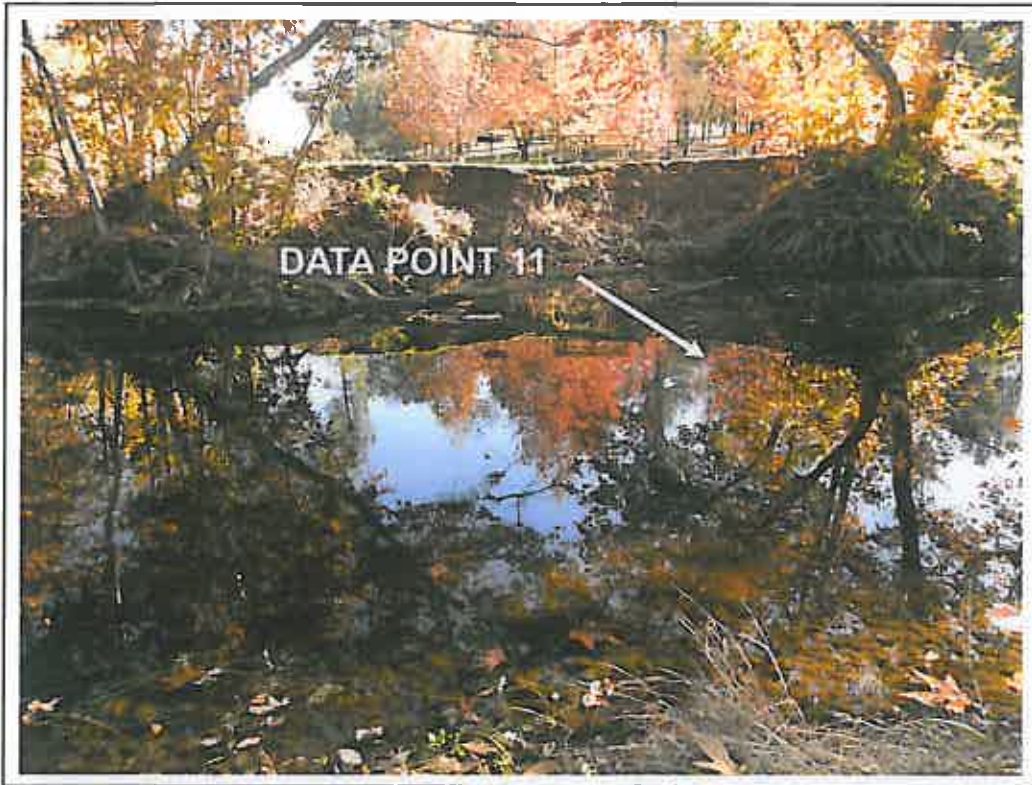
MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: Data Point 9, Seasonal Creek
DATE: February 27, 2013 **PLATE: 5**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: Data Point 10, Culvert Replacement
DATE: February 27, 2013 **PLATE: 6**



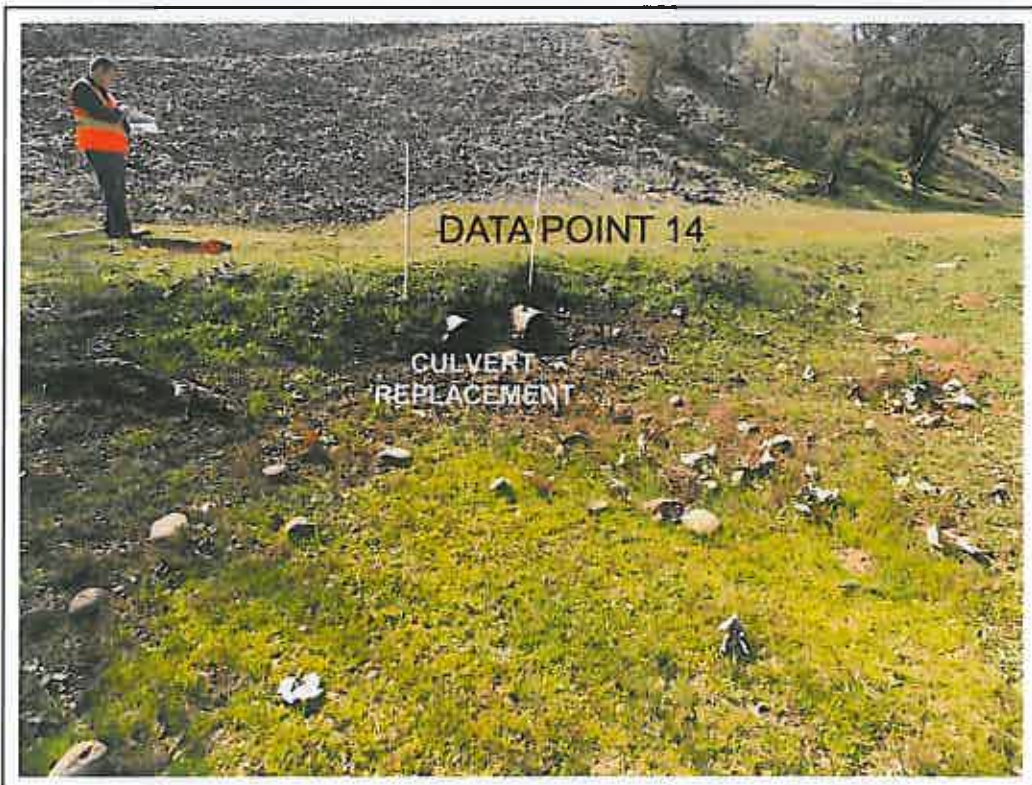
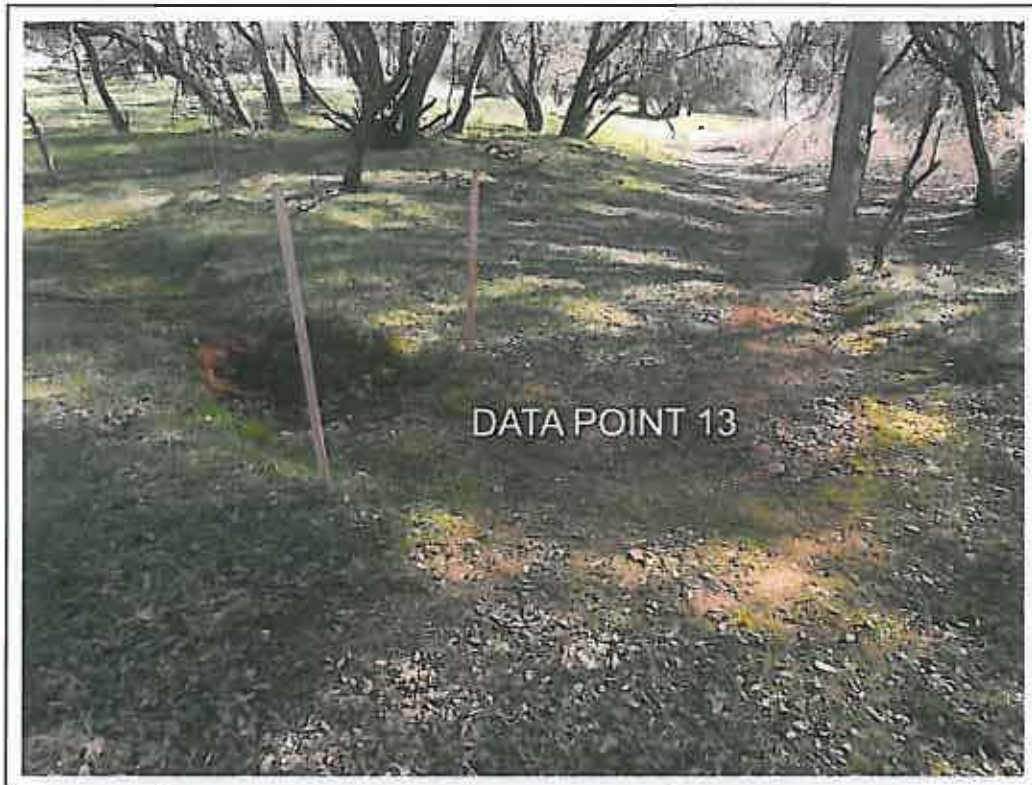
MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: Data Point 11, Dry Creek
DATE: November 21, 2012 **PLATE: 7**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

SITE: Dry Creek Tailwater Recapture Project
ITEM: Data Point 12, Seasonal Swale
DATE: February 27, 2013 **PLATE: 8**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

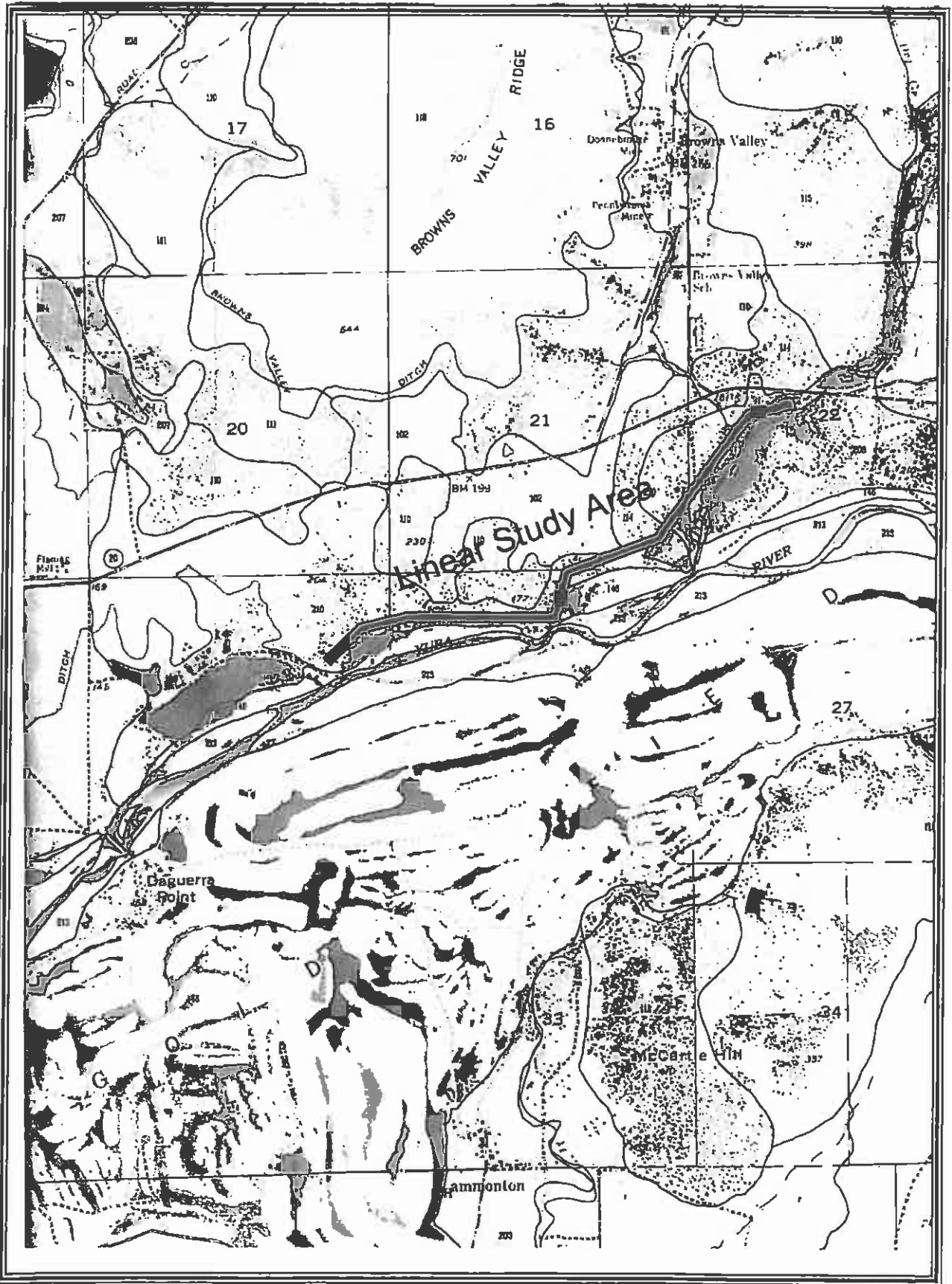
SITE: Dry Creek Tailwater Recapture Project
ITEM: Data Points 13 & 14
DATE: February 27, 2013 **PLATE: 9**



MARCUS H. BOLE & ASSOCIATES
104 Brock Drive, Wheatland, CA 95692
(530) 633-0117, email: mbole@aol.com

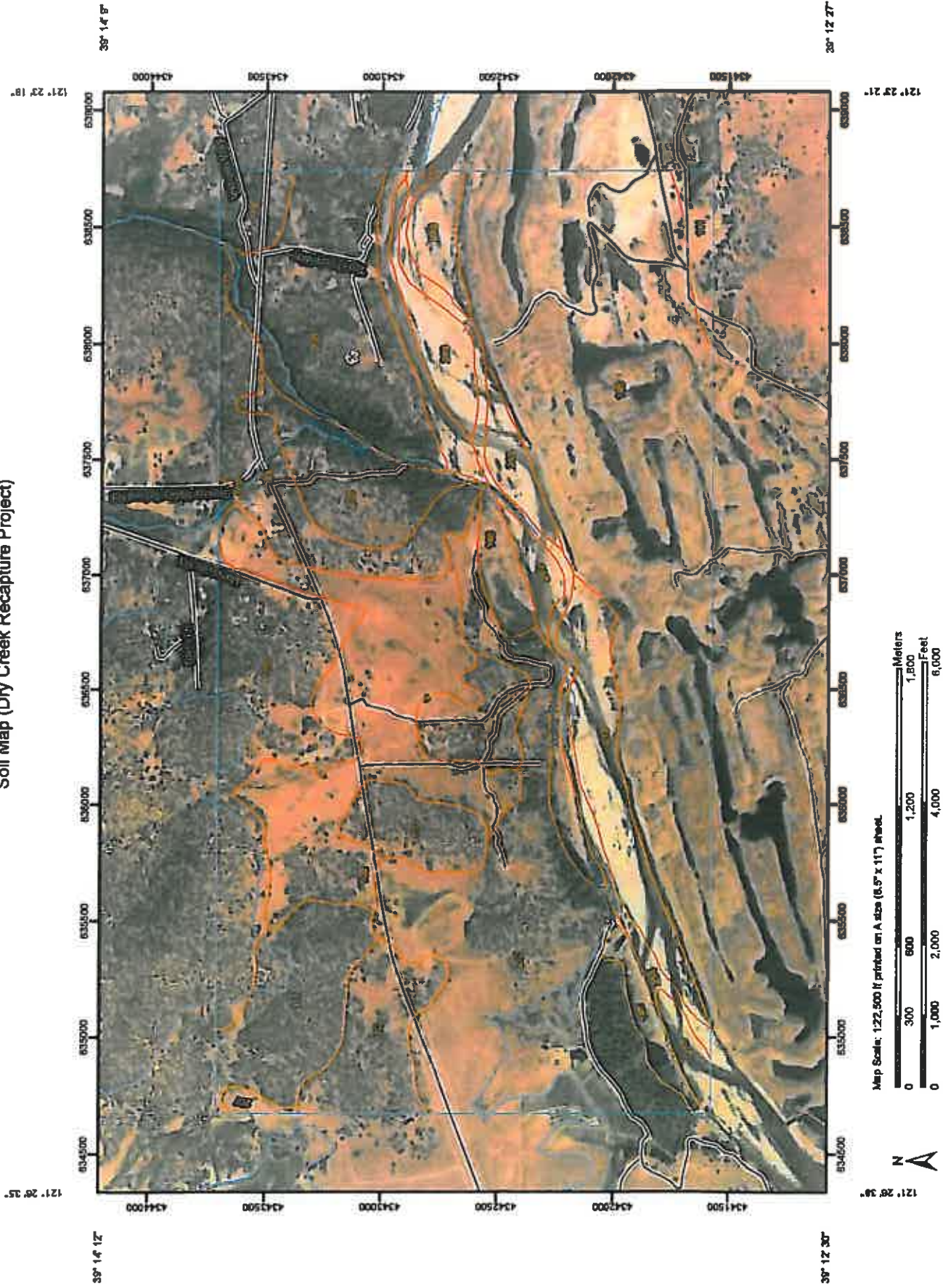
SITE: Dry Creek Tailwater Recapture Project
ITEM: Data Point 15
DATE: February 27, 2013 **PLATE: 10**

ENCLOSURE B – SOIL DATA



Soils Map: Dry Creek Recapture Project, Browns Valley Irrigation District, 7.58 Acre Study Area. Soils are shown as predominately Redding-Corning complex 3-8% slopes (210).

Custom Soil Resource Report
Soil Map (Dry Creek Recapture Project)



210—Redding-Corning complex, 3 to 8 percent slopes

Map Unit Setting

Elevation: 70 to 250 feet

Mean annual precipitation: 18 to 22 inches

Mean annual air temperature: 61 to 63 degrees F

Frost-free period: 270 to 290 days

Map Unit Composition

Corning, gravelly loam, and similar soils: 35 percent

Redding, gravelly loam, and similar soils: 35 percent

Minor components: 30 percent

Description of Redding, Gravelly Loam

Setting

Landform: Fan terraces

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Mixed alluvium

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches; 20 to 40 inches to duripan

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability classification (irrigated): 4e

Land capability (nonirrigated): 4e

Hydrologic Soil Group: D

Ecological site: CLAYPAN TERRACE (R017XD079CA)

Typical profile

0 to 6 inches: Gravelly loam

6 to 19 inches: Gravelly loam

19 to 33 inches: Clay

33 to 43 inches: Duripan

Custom Soil Resource Report

Description of Corning, Gravelly Loam

Setting

Landform: Fan terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.8 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: CLAYPAN TERRACE (R017XD079CA)

Typical profile

0 to 24 inches: Gravelly loam
24 to 35 inches: Gravelly clay
35 to 67 inches: Stratified sandy loam to very gravelly clay loam

Minor Components

Unnamed

Percent of map unit: 10 percent
Landform: Depressions

San joaquin

Percent of map unit: 10 percent

Unnamed

Percent of map unit: 10 percent

208—Redding gravelly loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 70 to 250 feet
Mean annual precipitation: 18 to 22 inches

Custom Soil Resource Report

Mean annual air temperature: 61 to 63 degrees F
Frost-free period: 270 to 290 days

Map Unit Composition

Redding, gravelly loam, and similar soils: 70 percent
Minor components: 30 percent

Description of Redding, Gravelly Loam

Setting

Landform: Fan terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches; 20 to 40 inches to duripan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Very low (about 2.4 inches)

Interpretive groups

Farmland classification: Not prime farmland
Land capability classification (irrigated): 4e
Land capability (nonirrigated): 4e
Hydrologic Soil Group: D
Ecological site: CLAYPAN TERRACE (R017XD079CA)

Typical profile

0 to 6 inches: Gravelly loam
6 to 19 inches: Gravelly loam
19 to 33 inches: Clay
33 to 43 inches: Duripan

Minor Components

Unnamed

Percent of map unit: 10 percent
Landform: Depressions

Corning

Percent of map unit: 10 percent

San Joaquin

Percent of map unit: 10 percent

Custom Soil Resource Report

Mean annual air temperature: 50 to 57 degrees F

Frost-free period: 90 to 180 days

Map Unit Composition

Riverwash: 80 percent

Water, perennial: 20 percent

Description of Riverwash

Setting

Landform: Flood plains

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Properties and qualities

Slope: 0 to 2 percent

Capacity of the most limiting layer to transmit water (Ksat): High to very high (1.98 to 19.98 in/hr)

Depth to water table: About 0 to 24 inches

Frequency of flooding: Frequent

Available water capacity: Very low (about 3.0 inches)

Interpretive groups

Farmland classification: Not prime farmland

Land capability (nonirrigated): 7s

Hydrologic Soil Group: D

Typical profile

0 to 5 inches: Gravelly coarse sand

5 to 60 inches: Stratified extremely gravelly coarse sand to gravelly sand

254—WATER

Map Unit Composition

Water: 100 percent

ENCLOSURE C – FIELD DATA SHEETS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 1
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 29, T 16 N R 5 E BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 2%
 Subregion (LRR): LRR-C Lat: 39.21752 N Long: -121.43002 W Datum: NAD 83
 Soil Map Unit Name: REDDING-CORNING COMPLEX 3-8% SLOPES NWM classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: 	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. <u> </u>				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
4. <u> </u>				
= Total Cover				
Sapling/Shrub Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: <u> </u> Multiply by: <u> </u>
2. <u> </u>				OBL species <u> </u> x 1 = <u> </u>
3. <u> </u>				FACW species <u> </u> x 2 = <u> </u>
4. <u> </u>				FAC species <u> </u> x 3 = <u> </u>
5. <u> </u>				FACU species <u> </u> x 4 = <u> </u>
= Total Cover				UPL species <u> </u> x 5 = <u> </u>
				Column Totals: <u> </u> (A) <u> </u> (B)
				Prevalence Index = B/A = <u> </u>
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>LOLIUM PERENNE</u>	<u>40%</u>	<u>YES</u>	<u>FAC</u>	<u> </u> Dominance Test is >50%
2. <u>TRIFOLIUM COMPOSTIC</u>	<u>10%</u>	<u>YES</u>	<u>UPL</u>	<u> </u> Prevalence Index is ≤3.0 ¹
3. <u>BROMUS HORDEACEUS</u>	<u>10%</u>	<u>YES</u>	<u>FACU</u>	<u> </u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u> </u>				<u> </u> Problematic Hydrophytic Vegetation ¹ (Explain)
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
<u>60</u> = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. <u>NONE</u>				Yes <u> </u> No <u>X</u>
2. <u> </u>				
= Total Cover				
% Bare Ground in Herb Stratum <u>40</u> % Cover of Biotic Crust <u> </u>				

Remarks:

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/4	95	5YR 4/6	5	C	M	Sandy loam	Bright/Small

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

Indicators for Problematic Hydric Soils³:

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No _____ Depth (inches): _____

Water Table Present? Yes _____ No _____ Depth (inches): _____

Saturation Present? Yes _____ No _____ Depth (inches): _____ (includes capillary fringe)

Wetland Hydrology Present? Yes No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 SAMPLE TAKEN IN VEGETATED SWALE, 2% SLOPE, RAPID RUN-OFF.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 2
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 29, T16N R5E Browns Valley
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 2%
 Subregion (LRR): LRR-C Lat: 39.21747° N Long: -121.43026 Datum: NAD 83
 Soil Map Unit Name: Redding-Corning complex 3-8% slopes NMI classification: NONE

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? No Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? No (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NONE</u>				
2. _____				
3. _____				
4. _____				
				_____ = Total Cover
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NONE</u>				
2. _____				
3. _____				
4. _____				
5. _____				
				_____ = Total Cover
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>BRUMUS hordeaceus</u>	<u>45</u>	<u>YES</u>	<u>FACU</u>	
2. <u>BRUMUS MADRITENSIS ssp. rubens</u>	<u>25</u>	<u>YES</u>	<u>UPL</u>	
3. <u>HORDEUM MURINUM ssp. leporinum</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
				<u>90</u> = Total Cover
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
				_____ = Total Cover
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust _____		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0¹

___ Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes No

Remarks:

SOIL

Sampling Point 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10YR 3/4	98	5YR 4/6	2	C	M	Sandy loam	Bright/few/Small

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required, check all that apply)

Secondary Indicators (2 or more required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____
 Water Table Present? Yes _____ No X Depth (inches): _____
 Saturation Present? Yes _____ No X Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 3
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 29, 716N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 1-2 %
 Subregion (LRR): LRR-C Lat: 39.21850° N Long: -121.42928° W Datum: NAD 83
 Soil Map Unit Name: Redding CORNING, 3-8 percent slopes NWM classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>MYRIOPHYLLUM AQUATICUM</u>	<u>75%</u>	<u>YES</u>	<u>OBL</u>	<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>NONE</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust _____				
Remarks:				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-20	2.5 YR	2.25/1	100				CLAY LOAM	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input checked="" type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Vernal Pools (F9)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
---	--	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input checked="" type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): 1"

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 4
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 29, T16N, R5E, BROWN VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.21851°N Long: -121.42939°W Datum: NAD 83
 Soil Map Unit Name: Redding-Corning complex, 3-8% slopes NWI classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes X No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u> </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

<u>Tree Stratum</u> (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u> </u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u> </u> (A/B)
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
<u> </u> = Total Cover				Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u> </u> FACW species <u> </u> x 2 = <u> </u> FAC species <u> </u> x 3 = <u> </u> FACU species <u> </u> x 4 = <u> </u> UPL species <u> </u> x 5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
<u>Sapling/Shrub Stratum</u> (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NONE</u>				
2. <u> </u>				
3. <u> </u>				
4. <u> </u>				
5. <u> </u>				
<u> </u> = Total Cover				
<u>Herb Stratum</u> (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>BROMUS HORDEACEUS</u>	<u>50</u>	<u>YES</u>	<u>FACU</u>	
2. <u>BROMUS MADRITENSIS ssp RUBENS</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>	
3. <u>TRIFOLIUM CAMPESTRIS</u>	<u>5</u>	<u>NO</u>	<u>UPL</u>	
4. <u>PLANTAGO LANCEOLATA</u>	<u>5</u>	<u>NO</u>	<u>FACU</u>	
5. <u> </u>				
6. <u> </u>				
7. <u> </u>				
8. <u> </u>				
<u>80</u> = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>NONE</u>				
2. <u> </u>				
<u> </u> = Total Cover				
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust <u> </u>				
Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>				
Remarks:				

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/4	100					Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 5
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 28, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.21903° N Long: -121.42631° W Datum: NAD 83
 Soil Map Unit Name: Redding - CORNING complex, 3-8% slopes NWM classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>BRAMUS HORDEACEUS</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>BRAMUS MADRITENSIS ssp RUBENS</u>	<u>10</u>	<u>YES</u>	<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>CYPERUS ERAGROSTIS</u>	<u>5</u>	<u>YES</u>	<u>FACW</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>RUBUS ARMENIACUS</u>	<u>2</u>	<u>NO</u>	<u>FACU</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>NONE</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>40</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks:

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/6	95	5YR 4/6	5	C	M	Sandy loam	Few/Light/Small

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p>Sandy Redox (S5)</p> <p>Stripped Matrix (S6)</p> <p>Loamy Mucky Mineral (F1)</p> <p>Loamy Gleyed Matrix (F2)</p> <p>Depleted Matrix (F3)</p> <p>Redox Dark Surface (F6)</p> <p>Depleted Dark Surface (F7)</p> <p>Redox Depressions (F8)</p> <p>Vernal Pools (F9)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>			<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Biotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input checked="" type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>			<p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>		
--	--	--	---	--	--	--	--	--

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available.

Remarks:

Sample taken in vegetated SWALE, rapid run-off

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 6
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 28, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.21909°N Long: -121.42637°W Datum: NAD 83
 Soil Map Unit Name: Redding - CORNING complex, 3-8% slopes NWI classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: _____ _____ _____	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>BRAMUS HORDEACEUS</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	___ Dominance Test is >50%
2. <u>BRAMUS MADRITENSIS ssp RUBENS</u>	<u>25</u>	<u>YES</u>	<u>UPL</u>	___ Prevalence Index is ≤3.0 ¹
3. <u>HORDEUM MURINUM ssp. LEPORINUM</u>	<u>25</u>	<u>YES</u>	<u>UPL</u>	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
<u>90</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>NONE</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: _____ _____ _____				

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10 YR 3/6	100						

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

Indicators for Problematic Hydric Soils³:

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 7
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 28, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): concave Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.22056° N Long: -121.41699° W Datum: NA83
 Soil Map Unit Name: Redding-Corning complex, 3-8% slopes NWM classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of _____ Multiply by _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
_____ = Total Cover				Column Totals: _____ (A) _____ (B)
_____ = Total Cover				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Juncus balticus</u>	<u>20</u>	<u>YES</u>	<u>OBL</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Mentha arvensis</u>	<u>20</u>	<u>YES</u>	<u>FACW</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>Bromus horreagucus</u>	<u>20</u>	<u>YES</u>	<u>FACU</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>Bromus diandus</u>	<u>20</u>	<u>YES</u>	<u>UPL</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>NONE</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6	10YR 3/3	90	5YR 4/4	10	C	M	SANDY LOAM	feeb/bright/SMALL

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Vernal Pools (F9)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	--	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input checked="" type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No Depth (inches): _____

Wetland Hydrology Present? Yes No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: DATA TAKEN IN VEGETATED SWALE, RAPID RUN-OFF

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK CAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 8
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 28, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): NONE Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.226940 N Long: -121.41679 Datum: NAD 83
 Soil Map Unit Name: Redding-Corning complex 3-8% slopes NWI classification: NONE
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? NO Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes _____ No <u>X</u> Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes _____ No <u>X</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: _____ (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>BRASSICA HORDEACEUS</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	___ Dominance Test is >50%
2. <u>BRASSICA DIANDEUS</u>	<u>30</u>	<u>YES</u>	<u>UPL</u>	___ Prevalence Index is ≤3.0 ¹
3. <u>HORDEUM BRACHYANTHERUM</u>				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <u>SP. BRACHYANTHERUM</u>	<u>15</u>	<u>YES</u>	<u>UPL</u>	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>NONE</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks:				

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-6"	10YR	4/5	100					

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6) <input type="checkbox"/> Thin Muck Surface (C7) <input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine) <input type="checkbox"/> Sediment Deposits (B2) (Riverine) <input type="checkbox"/> Drift Deposits (B3) (Riverine) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____

Water Table Present? Yes _____ No Depth (inches): _____

Saturation Present? Yes _____ No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 9
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 22, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 16.2%
 Subregion (LRR): LRR-C Lat: 39.22726°N Long: -121.40635°W Datum: NAD 83
 Soil Map Unit Name: Redding-Corning complex 3-8% slopes NWI classification: PFOY
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: <u>DATA POINT TAKEN WITHIN SEASONAL CREEK (UNNAMED).</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)																
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																
4. _____				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Total % Cover of:</td> <td style="width:50%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>x 5 = _____</td> </tr> <tr> <td>Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = _____</td> </tr> </table>	Total % Cover of:	Multiply by:	OBL species _____	x 1 = _____	FACW species _____	x 2 = _____	FAC species _____	x 3 = _____	FACU species _____	x 4 = _____	UPL species _____	x 5 = _____	Column Totals: _____ (A)	_____ (B)	Prevalence Index = B/A = _____	
Total % Cover of:	Multiply by:																			
OBL species _____	x 1 = _____																			
FACW species _____	x 2 = _____																			
FAC species _____	x 3 = _____																			
FACU species _____	x 4 = _____																			
UPL species _____	x 5 = _____																			
Column Totals: _____ (A)	_____ (B)																			
Prevalence Index = B/A = _____																				
_____ = Total Cover																				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>NONE</u>				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)																
2. _____																				
3. _____																				
4. _____																				
5. _____																				
_____ = Total Cover																				
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>RUBUS ARMENIACUS</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.																
2. <u>PLANTAGO MAJOR</u>	<u>40</u>	<u>YES</u>	<u>FAC</u>																	
3. _____																				
4. _____																				
5. _____																				
<u>100</u> = Total Cover																				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>NONE</u>				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																
2. _____																				
_____ = Total Cover																				
% Bare Ground in Herb Stratum <u>20</u>		% Cover of Biotic Crust _____																		
Remarks:																				

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
No data point taken in unwatered season creek, water present								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Loamy Mucky Mineral (F1)</p> <p><input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Redox Depressions (F8)</p> <p><input type="checkbox"/> Vernal Pools (F8)</p>	<p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	--	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>			<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Biotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>			<p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>		
--	--	--	--	--	--	--	--	--

Field Observations:

Surface Water Present? Yes No Depth (inches): 5"

Water Table Present? Yes No Depth (inches): _____

Saturation Present? Yes No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 10
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 22, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.22919° N Long: 121.40417° W Datum: NAD 83
 Soil Map Unit Name: Redding GRAYALLY loam, 3-8% NWI classification: PFOY

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>NONE</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>RUBUS ARMENIACUS</u>	<u>40</u>	<u>YES</u>	<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>RUMEX CRISPUS</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
<u>60</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>NONE</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>40</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Remarks:

SOIL

Sampling Point: 10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>NO DATA TAKEN, UNNAMED SEASONAL CREEK, WATER ABSENT</u>								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

<p>Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)</p> <p><input type="checkbox"/> Histosol (A1)</p> <p><input type="checkbox"/> Histic Epipedon (A2)</p> <p><input type="checkbox"/> Black Histic (A3)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)</p> <p><input type="checkbox"/> Stratified Layers (A5) (LRR C)</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR D)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)</p>	<p>Sandy Redox (S5)</p> <p>Stripped Matrix (S6)</p> <p>Loamy Mucky Mineral (F1)</p> <p>Loamy Gleyed Matrix (F2)</p> <p>Depleted Matrix (F3)</p> <p>Redox Dark Surface (F6)</p> <p>Depleted Dark Surface (F7)</p> <p>Redox Depressions (F8)</p> <p>Vernal Pools (F9)</p>	<p>Indicators for Problematic Hydric Soils³:</p> <p><input type="checkbox"/> 1 cm Muck (A9) (LRR C)</p> <p><input type="checkbox"/> 2 cm Muck (A10) (LRR B)</p> <p><input type="checkbox"/> Reduced Vertic (F18)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>
--	---	--

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators (minimum of one required; check all that apply)</p> <p><input type="checkbox"/> Surface Water (A1)</p> <p><input type="checkbox"/> High Water Table (A2)</p> <p><input type="checkbox"/> Saturation (A3)</p> <p><input type="checkbox"/> Water Marks (B1) (Nonriverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Nonriverine)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Water-Stained Leaves (B9)</p>			<p>Secondary Indicators (2 or more required)</p> <p><input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Blotic Crust (B12)</p> <p><input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Thin Muck Surface (C7)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p>			<p><input type="checkbox"/> Water Marks (B1) (Riverine)</p> <p><input type="checkbox"/> Sediment Deposits (B2) (Riverine)</p> <p><input type="checkbox"/> Drift Deposits (B3) (Riverine)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Crayfish Burrows (C8)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p>		
--	--	--	--	--	--	--	--	--

Field Observations:

Surface Water Present? Yes No Depth (inches): 5"

Water Table Present? Yes No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: DRY CREEK RECAPTURE City/County: BROWNS VALLEY/YUBA Sampling Date: NOV 26, 2012
 Applicant/Owner: BROWNS VALLEY IRRIGATION DISTRICT State: CA Sampling Point: 11
 Investigator(s): M. BOLE, C. BOLE Section, Township, Range: 22, T16N, R5E, BROWNS VALLEY
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): 1-2%
 Subregion (LRR): LRR-C Lat: 39.22995°N Long: -121.40050°W Datum: NAD 83
 Soil Map Unit Name: Redding gravelly loam, 7 to 8% slopes NMI classification: PFOY
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? NO Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology naturally problematic? NO (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>5</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>POPULUS FREMONTI</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u>ssp. FREMONTI</u>	<u>40%</u>	<u>YES</u>	<u>FAC+</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
4. _____				
<u>40</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:
1. <u>NONE</u>				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: <u>5</u>)				Hydrophytic Vegetation Indicators:
1. <u>RUBUS ARMENIACUS</u>	<u>30</u>	<u>YES</u>	<u>FACU</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>RUMEX CRISPUS</u>	<u>20</u>	<u>YES</u>	<u>FAC</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
<u>50</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. <u>NONE</u>				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:				

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>NO DATA TAKEN, DRY CREEK WITH WATER FLOWING</u>								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (If present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>2'</u> Water Table Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	--

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

**ENCLOSURE D – SPECIAL STATUS SPECIES
& CNDDDB DATA BASE**



United States Department of the Interior
FISH AND WILDLIFE SERVICE

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



January 30, 2013

Document Number: 130130083249

Marcus H. Bole
Marcus H. Bole & Associates
104 Brock Drive
Wheatland, CA 95692

Subject: Species List for BVID Dry Creek Tailwater Recapture Project

Dear: Mr. Marcus H. Bole

We are sending this official species list in response to your January 30, 2013 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 April 30, 2013.

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 [here](#).

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: 130130083249

Database Last Updated: September 18, 2011

Quad Lists

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)

vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

valley elderberry longhorn beetle (T)

Lepidurus packardii

Critical habitat, vernal pool tadpole shrimp (X)

vernal pool tadpole shrimp (E)

Fish

Hypomesus transpacificus

delta smelt (T)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)

Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)

Critical Habitat, Central Valley spring-run chinook (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)

Candidate Species

Birds

Coccyzus americanus occidentalis

Western yellow-billed cuckoo (C)

Quads Containing Listed, Proposed or Candidate Species:

BROWNS VALLEY (543B)

County Lists

No county species lists requested.

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.

Agelaius tricolor

Incorporated blackbird
 Federal: None
 State: None
 Element Code: AFB000020
 Other Lists: Other Lists
 Global: G2G3
 State: SC
 CDFG Status: SC

Habitat Associations
 General: HIGHLY COLONIAL SPECIES MOST NUMEROUS IN CENTRAL VALLEY & VICINITY LARGELY ENDEMIC TO CALIFORNIA
 Micro: REQUIRES OPEN WATER PROTECTED NESTING SUBSTRATE & FORAGING AREA WITH INSECT PREY WITHIN A FEW MI OF THE COLONY

Occurrence No: 54
 Map Index: 11709
 EO Index: 24781
 Date Last Seen: 1831-06-17
 Element: 1831-06-17
 Site: 1831-06-17
 Record Last Updated: 1991-07-25

County Summary: Yuba
 Location Detail: COLONY OF APPROX 4500 OBS BY NEFF NESTING IN CATTAILS IN A SLOUGH ALSO A COLONY OF APPROX 3000 OBS BY NEFF IN MAY 1931 NESTING IN CATTAIL FALLOW IN A CANAL
 General: PRESUMED EXTIRPATED ACC TO BEEDY 1991
 Owner/Manager: PVT

Occurrence No: 56
 Map Index: 11342
 EO Index: 24758
 Date Last Seen: 1931-04-24
 Element: 1931-04-24
 Site: 1931-04-24
 Record Last Updated: 1998-05-10

County Summary: Yuba
 Location Detail: SLOUGH 10 MILES NORTHEAST OF MARYSVILLE
 General: COLONY OF APPROX 15 000 OBSERVED BY NEFF NESTING IN CATTAIL STILE HABITAT
 General: PRESUMED EXTIRPATED BY BEEDY 1991
 Owner/Manager: PVT

Occurrence No: 87
 Map Index: 11793
 EO Index: 24780
 Date Last Seen: 1934-05-15
 Element: 1934-05-15
 Site: 1934-05-15
 Record Last Updated: 1991-07-25

County Summary: Yuba
 Location Detail: COLONY OF APPROX 22 500 OBS BY NEFF IN 1934 COLONY OF APPROX 15 000 OBS BY NEFF 4/1937 BOTH COLONIES NESTING IN CATTAILS
 General: PRESUMED EXTIRPATED ACC TO BEEDY 1991
 Owner/Manager: PVT

County Summary: Yuba
 Location Detail: COLONY OF APPROX 4500 OBS BY NEFF NESTING IN CATTAILS IN A SLOUGH ALSO A COLONY OF APPROX 3000 OBS BY NEFF IN MAY 1931 NESTING IN CATTAIL FALLOW IN A CANAL
 General: PRESUMED EXTIRPATED ACC TO BEEDY 1991
 Owner/Manager: PVT

Agelaius tricolor

Incorporated blackbird
 Federal: None
 State: None
 Element Code: AFB000020
 Other Lists: Other Lists
 Global: G2G3
 State: SC
 CDFG Status: SC

Habitat Associations
 General: HIGHLY COLONIAL SPECIES MOST NUMEROUS IN CENTRAL VALLEY & VICINITY LARGELY ENDEMIC TO CALIFORNIA
 Micro: REQUIRES OPEN WATER PROTECTED NESTING SUBSTRATE & FORAGING AREA WITH INSECT PREY WITHIN A FEW MI OF THE COLONY

Occurrence No: 315
 Map Index: 30749
 EO Index: 4387
 Date Last Seen: 1995-01-25
 Element: 1995-01-25
 Site: 1995-01-25
 Record Last Updated: 1995-01-25

County Summary: Yuba
 Location Detail: STYCAMORE RANCH RIVARIAN SITE AT THE CONFLUENCE OF DRY CREEK AND YUBA RIVER SOUTH OF HWY 20 14 MI NE OF MARYSVILLE
 Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS TULEES AND BLACKBERRIES
 General: HISTORICAL COLONY SITE REDWINGED BLACKBIRDS OBSERVED NESTING AT THIS SITE ON 22 APRIL 1994
 Owner/Manager: UNKNOWN

Occurrence No: 315
 Map Index: 30749
 EO Index: 4387
 Date Last Seen: 1995-01-25
 Element: 1995-01-25
 Site: 1995-01-25
 Record Last Updated: 1995-01-25

County Summary: Yuba
 Location Detail: STYCAMORE RANCH RIVARIAN SITE AT THE CONFLUENCE OF DRY CREEK AND YUBA RIVER SOUTH OF HWY 20 14 MI NE OF MARYSVILLE
 Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS TULEES AND BLACKBERRIES
 General: HISTORICAL COLONY SITE REDWINGED BLACKBIRDS OBSERVED NESTING AT THIS SITE ON 22 APRIL 1994
 Owner/Manager: UNKNOWN

Occurrence No: 315
 Map Index: 30749
 EO Index: 4387
 Date Last Seen: 1995-01-25
 Element: 1995-01-25
 Site: 1995-01-25
 Record Last Updated: 1995-01-25

County Summary: Yuba
 Location Detail: STYCAMORE RANCH RIVARIAN SITE AT THE CONFLUENCE OF DRY CREEK AND YUBA RIVER SOUTH OF HWY 20 14 MI NE OF MARYSVILLE
 Ecological: NESTING SUBSTRATE CONSISTS OF CATTAILS TULEES AND BLACKBERRIES
 General: HISTORICAL COLONY SITE REDWINGED BLACKBIRDS OBSERVED NESTING AT THIS SITE ON 22 APRIL 1994
 Owner/Manager: UNKNOWN

Occurrence No: 315
 Map Index: 30749
 EO Index: 4387
 Date Last Seen: 1995-01-25
 Element: 1995-01-25
 Site: 1995-01-25
 Record Last Updated: 1995-01-25

Branchipectis lyachii

Element Code: KCR040300
 Other Lists: CDFG Status

1908 Element Ranks
 Global: G3
 State: S253

Habitat Associations: None

General: ENDemic TO THE GRASSLANDS OF THE CENTRAL VALLEY, CENTRAL COAST MTS, AND SOUTH COAST MTS. IN ASTATIC RAINFELLED POOLS
 Micro: SHADY SMALL CLEAR WATER SANDSTONE DEPRESSION POOLS AND GRASSED SPRALE BATHIN SLUMP OR BASIN FLOW DEPRESSION POOLS

Occurrences No: 178
 Map Index: 37403
 ED Index: 30678
 Date Last Seen: 1992-03-08
 Element: 1992-03-08
 Record Last Updated: 1997-03-20

Occurrence No: 178
 Map Index: 37403
 ED Index: 30678
 Date Last Seen: 1992-03-08
 Element: 1992-03-08
 Record Last Updated: 1997-03-20

County Summary: Butte Valley (39121245438)

Latitude: 39.141727 / -121.468274
 UTM: Zone 10 MARS38U 1632982
 Area: 1.078 0 Acres
 Elevation: 90 ft

Location: BETWEEN MARYSVILLE, SMARTVILLE ROAD & CAMP BEALE ROAD IN THE VICINITY OF REEDS CREEK, BEALE AFB
 Location Detail: VERNAL POOLS LOCATED SOMEWHERE IN SECTIONS 18 AND 24. THIS OCCURRENCE WAS SWAPPED TO THE COMMUNITY OCCURRENCE FOR NORTHERN HARBEN VERNAL POOLS
 Ecological: NATURAL VERNAL POOLS
 General: B. LYNCH OBSERVED IN THE ONE FEATURE INSPECTED IN SEC. 18 AND THE ONE FEATURE INSPECTED IN SEC. 24. SUGGEST RECORD #5 99 & 100. LEPIDOPTERUS PACKARDI ALSO FOUND IN POOL IN SEC. 24
 Owner/Manager: DDD-BEALE AFB

Aithya curricularia

Element Code: ABNS810010
 Other Lists: CDFG Status: SC

1908 Element Ranks
 Global: G4
 State: S3

Habitat Associations: None

General: OPEN DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION
 Micro: SUBTROPICAN WETTER DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL

Occurrences No: 570
 Map Index: 51257
 ED Index: 51237
 Date Last Seen: 1908-05-18
 Element: 1908-05-18
 Record Last Updated: 2003-05-08

Occurrence No: 570
 Map Index: 51257
 ED Index: 51237
 Date Last Seen: 1908-05-18
 Element: 1908-05-18
 Record Last Updated: 2003-05-08

County Summary: Butte Valley (39121245438)

Latitude: 39.139274 / -121.470754
 UTM: Zone 10 MARS38U 1632982
 Area: 1 mile
 Elevation: 150 ft

Location: HAMMINGTON VICINITY OF THE YUBA GOLD FIELDS AND SOUTHWEST OF MC CARTHE HILL
 Location Detail: COLLECTION SITE GIVEN ONLY AS "SHEEP DAM" MAPPED AT THE 1877 LAT/LONG COORDINATES GIVEN (MAXIMUM ERROR DISTANCE GIVEN AS 0-41 MILES)
 General: JAYZ EGG SET #1400 COLLECTED 18 MAY 1908 BY L. P. BOLLANDER
 Owner/Manager: UNKNOWN

Buteo swainsoni
 Swainson's Hawk
 Federal Status: None
 State Designation: Threatened
 Other Lists: CDFG Status: S2
 Element Code: ASBNCI0070
 NDBS Element Rank: Global G2
 Other Lists: CDFG Status: S2
 Habitat Associations: None
 General: BREEDS IN GRASSLANDS WITH SCATTERED TREES, SHADDER SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCHLANDS
 Micro: REQUIRES ADVANCE W/ SUITABLE FORAGING AREAS SUCH AS GRASSLANDS OR ALFALFA ON GRAIN FIELDS SUPPORTING ROBERT POPULATIONS

Occurrences No: 1480 Map Index: 82546 EO Index: 62683 Date Last Seen: Element: 2003-05-24
 Occ Blank: Unknown Origin: Natural/Native occurrence
 Presence: Presumed Extant Trend: Unknown
 Record Last Updated: 2005-09-21

County Summary: Browns Valley (3912145438)
 Last Long: 39.147277 -121.48589
 UTM: Zone-10 HQ332052 E330782
 Area: 85.81
 Elevation: 85.81
 Mapping Precision: SPECIFIC
 Symbol Type: POINT
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Qtr: SE

Location: WEST SIDE OF BIRCHY ROAD 0.3 MILE SOUTH OF HAMBURGTON-SMARTVILLE ROAD, BEALE AFB, EAST OF YUBA CITY
 Ecological: NEST TREE WAS A EUCALYPTUS IN A THicket OF EUCALYPTUS SURROUNDED BY AGRICULTURE (ROW CROPS) IN ALL DIRECTIONS
 General: NEST OBSERVED ON 4 MAY 2003 ON 37.4km 2003. 1 DOWNY CHICK WAS OBSERVED FLAPPING IN THE NEST. 1 FLOODED AND BOTH ADULTS OBSERVED NEAR THE NEST TREE ON 10-JUL-2003
 Owner/Manager: DOD-BEALE AFB

Desmocerus californicus dimorphus
 velvety antlered longhorn beetle
 Federal Status: None
 State Designation: None
 Other Lists: CDFG Status: S1
 Element Code: EDCI-4811
 NDBS Element Rank: Global G2
 Other Lists: CDFG Status: S1
 Habitat Associations: None
 General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA IN ASSOCIATION WITH BLUEBERRY (SAMBUCUS MEXICANA).
 Micro: PREFERRED TO LAY EGGS IN FLEDBERGES 2-3 INCHES IN DIAMETER. SOME PREFERENCE SHOWN FOR "STRESSES OF FLEDBERGES"

Occurrences No: 194 Map Index: 49274 EO Index: 49274 Date Last Seen: Element: 1998-07-22
 Occ Blank: Unknown Origin: Natural/Native occurrence
 Presence: Presumed Extant Trend: Unknown
 Record Last Updated: 2002-11-07

County Summary: Browns Valley (3912145438)
 Last Long: 39.200217 -121.47819
 UTM: Zone-10 HQ341044 E831586
 Area: 100.8
 Elevation: 100.8
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Qtr: SW

Location: APPROXIMATELY 0.15 TO 0.2 MILE SOUTH OF THE CORDOVA CANAL & ABOUT 1 MILE NORTH OF THE YUBA RIVER ALONG TRANSMISSION LINE
 Location Detail: TRANSMISSION TOWER W/358 - 1 FOOT BALL, 108 FEET SE 1 CLUMP 258 FEET NORTH
 Ecological: HABITAT CONSISTS OF A MESICRIPARIAN AREA
 General: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE & OTHER ACTIVITIES NOT RELATED TO PROJECT
 CLUMP = 4 ROOT BALL = 1
 Owner/Manager: UNKNOWN

Desmocerus californicus dimorphus
 velvety antlered longhorn beetle
 Federal Status: None
 State Designation: None
 Other Lists: CDFG Status: S1
 Element Code: EDCI-4811
 NDBS Element Rank: Global G2
 Other Lists: CDFG Status: S1
 Habitat Associations: None
 General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA IN ASSOCIATION WITH BLUEBERRY (SAMBUCUS MEXICANA).
 Micro: PREFERRED TO LAY EGGS IN FLEDBERGES 2-3 INCHES IN DIAMETER. SOME PREFERENCE SHOWN FOR "STRESSES OF FLEDBERGES"

Occurrences No: 200 Map Index: 49276 EO Index: 49276 Date Last Seen: Element: 1998-07-22
 Occ Blank: Unknown Origin: Natural/Native occurrence
 Presence: Presumed Extant Trend: Unknown
 Record Last Updated: 2002-11-07

County Summary: Browns Valley (3912145438)
 Last Long: 39.200217 -121.47819
 UTM: Zone-10 HQ337883 E833097
 Area: 100.8
 Elevation: 100.8
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Qtr: SE

Location: 1.4 MILES NW OF HAMBURGTON RD X SMARTVILLE RD ABOUT 1 MILE S OF YUBA RIVER ALONG TRANSMISSION LINE
 Location Detail: TRANSMISSION TOWER W/358 - 1 CLUMP 97 FEET SE
 Ecological: HABITAT CONSISTS OF MESICRIPARIAN AREA
 Threat: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE AND OTHER ACTIVITIES NOT RELATED TO PROJECT
 General: EXIT HOLES IN DEAD WOOD OBSERVED DURING JULY OF 1998 GROWTH FORM = 1 CLUMP WITH 12 STEMS > 1 INCH = 5
 Owner/Manager: UNKNOWN

Buteo swainsoni
 Swainson's Hawk
 Federal Status: None
 State Designation: Threatened
 Other Lists: CDFG Status: S2
 Element Code: ASBNCI0070
 NDBS Element Rank: Global G2
 Other Lists: CDFG Status: S2
 Habitat Associations: None
 General: BREEDS IN GRASSLANDS WITH SCATTERED TREES, SHADDER SAGE FLATS, RIPARIAN AREAS, SAVANNAHS, & AGRICULTURAL OR RANCHLANDS
 Micro: REQUIRES ADVANCE W/ SUITABLE FORAGING AREAS SUCH AS GRASSLANDS OR ALFALFA ON GRAIN FIELDS SUPPORTING ROBERT POPULATIONS

Occurrences No: 1480 Map Index: 82546 EO Index: 62683 Date Last Seen: Element: 2003-05-24
 Occ Blank: Unknown Origin: Natural/Native occurrence
 Presence: Presumed Extant Trend: Unknown
 Record Last Updated: 2005-09-21

County Summary: Browns Valley (3912145438)
 Last Long: 39.147277 -121.48589
 UTM: Zone-10 HQ332052 E330782
 Area: 85.81
 Elevation: 85.81
 Mapping Precision: SPECIFIC
 Symbol Type: POINT
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Qtr: SE

Location: WEST SIDE OF BIRCHY ROAD 0.3 MILE SOUTH OF HAMBURGTON-SMARTVILLE ROAD, BEALE AFB, EAST OF YUBA CITY
 Ecological: NEST TREE WAS A EUCALYPTUS IN A THicket OF EUCALYPTUS SURROUNDED BY AGRICULTURE (ROW CROPS) IN ALL DIRECTIONS
 General: NEST OBSERVED ON 4 MAY 2003 ON 37.4km 2003. 1 DOWNY CHICK WAS OBSERVED FLAPPING IN THE NEST. 1 FLOODED AND BOTH ADULTS OBSERVED NEAR THE NEST TREE ON 10-JUL-2003
 Owner/Manager: DOD-BEALE AFB

Desmocerus californicus dimorphus
 velvety antlered longhorn beetle
 Federal Status: None
 State Designation: None
 Other Lists: CDFG Status: S1
 Element Code: EDCI-4811
 NDBS Element Rank: Global G2
 Other Lists: CDFG Status: S1
 Habitat Associations: None
 General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA IN ASSOCIATION WITH BLUEBERRY (SAMBUCUS MEXICANA).
 Micro: PREFERRED TO LAY EGGS IN FLEDBERGES 2-3 INCHES IN DIAMETER. SOME PREFERENCE SHOWN FOR "STRESSES OF FLEDBERGES"

Occurrences No: 194 Map Index: 49274 EO Index: 49274 Date Last Seen: Element: 1998-07-22
 Occ Blank: Unknown Origin: Natural/Native occurrence
 Presence: Presumed Extant Trend: Unknown
 Record Last Updated: 2002-11-07

County Summary: Browns Valley (3912145438)
 Last Long: 39.200217 -121.47819
 UTM: Zone-10 HQ341044 E831586
 Area: 100.8
 Elevation: 100.8
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Qtr: SW

Location: APPROXIMATELY 0.15 TO 0.2 MILE SOUTH OF THE CORDOVA CANAL & ABOUT 1 MILE NORTH OF THE YUBA RIVER ALONG TRANSMISSION LINE
 Location Detail: TRANSMISSION TOWER W/358 - 1 FOOT BALL, 108 FEET SE 1 CLUMP 258 FEET NORTH
 Ecological: HABITAT CONSISTS OF A MESICRIPARIAN AREA
 General: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE & OTHER ACTIVITIES NOT RELATED TO PROJECT
 CLUMP = 4 ROOT BALL = 1
 Owner/Manager: UNKNOWN

Desmocerus californicus dimorphus
 velvety antlered longhorn beetle
 Federal Status: None
 State Designation: None
 Other Lists: CDFG Status: S1
 Element Code: EDCI-4811
 NDBS Element Rank: Global G2
 Other Lists: CDFG Status: S1
 Habitat Associations: None
 General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA IN ASSOCIATION WITH BLUEBERRY (SAMBUCUS MEXICANA).
 Micro: PREFERRED TO LAY EGGS IN FLEDBERGES 2-3 INCHES IN DIAMETER. SOME PREFERENCE SHOWN FOR "STRESSES OF FLEDBERGES"

Occurrences No: 200 Map Index: 49276 EO Index: 49276 Date Last Seen: Element: 1998-07-22
 Occ Blank: Unknown Origin: Natural/Native occurrence
 Presence: Presumed Extant Trend: Unknown
 Record Last Updated: 2002-11-07

County Summary: Browns Valley (3912145438)
 Last Long: 39.200217 -121.47819
 UTM: Zone-10 HQ337883 E833097
 Area: 100.8
 Elevation: 100.8
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Qtr: SE

Location: 1.4 MILES NW OF HAMBURGTON RD X SMARTVILLE RD ABOUT 1 MILE S OF YUBA RIVER ALONG TRANSMISSION LINE
 Location Detail: TRANSMISSION TOWER W/358 - 1 CLUMP 1010 FEET SOUTH OF TOWER
 Ecological: HABITAT CONSISTS OF A MESICRIPARIAN AREA
 Threat: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE & OTHER ACTIVITIES NOT RELATED TO PROJECT
 General: EXIT HOLES IN DEAD WOOD OBSERVED DURING JULY OF 1998 1 CLUMP WITH 12 STEMS > 1 INCH
 Owner/Manager: UNKNOWN

Desmoceris californicus dimorphus
 valley elderberry longhorn beetle
 Status: Unknown
 Federal: Threatened
 State: None
 Global: G3? State: S2
 Element Code: HCOL4011
 Other Lists: Other Lists
 CDFG Status: CDFG Status

Habitat Associations: None
 General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA)
 Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER. SOME PREFERENCE SHOWN FOR STRESSED ELDERBERRIES

Occurrence No: 204 Map Index: 49302 EO Index: 49302 Data Last Item: 1998-07-28
 Date: 1998-07-28
 Origin: Natural/Native occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Record Last Updated: 2002-11-07

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 17597 -121 48877
 UTM: Zone 10 M433898 E83181
 Elevation: 100 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

Location: ALONG TRANSMISSION LINE 1/2 MILES SOUTH OF YUBA RIVER & 1/2 MILES NW OF HAMMONTON RD K MARYSVILLE SMARTVILLE RD
 Location Detail: VICINITY OF TRANSMISSION TOWER #72677
 Threats: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE & OTHER ACTIVITIES NOT RELATED TO PROJECT
 General: TYPE OF VEGETATION DETECTION NOT GIVEN
 Owner/Manager: UNKNOWN

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 17597 -121 48877
 UTM: Zone 10 M433898 E83181
 Elevation: 100 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 17597 -121 48877
 UTM: Zone 10 M433898 E83181
 Elevation: 100 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

Desmoceris californicus dimorphus
 valley elderberry longhorn beetle
 Status: Unknown
 Federal: Threatened
 State: None
 Global: G3? State: S2
 Element Code: HCOL4011
 Other Lists: Other Lists
 CDFG Status: CDFG Status

Habitat Associations: None
 General: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA)
 Micro: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER. SOME PREFERENCE SHOWN FOR STRESSED ELDERBERRIES

Occurrence No: 201 Map Index: 49299 EO Index: 49299 Data Last Item: 1998-07-28
 Date: 1998-07-28
 Origin: Natural/Native occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Record Last Updated: 2002-11-07

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 20087 -121 47439
 UTM: Zone 10 M4340189 E831734
 Area: 94 ft
 Elevation: 94 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT
 Township: 15N
 Range: 04E
 Section: 36
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

Location: ALONG TRANSMISSION LINE 0.5 MILE NORTH OF YUBA RIVER 2 MILES NW OF HALLWOOD BLVD X WALNUT AVE
 Location Detail: TRANSMISSION TOWER 50559 1 FOOT BALL 111 FEET NE OF TOWER
 Ecological: HABITAT CONSISTS OF A MESIC RIPARIAN AREA
 Threats: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE & OTHER ACTIVITIES NOT RELATED TO PROJECT
 General: EXIT HOLES IN OBSERVED IN LIVE STEMS AND DEAD WOOD DURING JULY OF 1998 GROWTH FORM = 1 ROOT BALL NUMBER OF STEMS = 1 INCH = 1

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 16427 -121 47987
 UTM: Zone 10 M433839 E830656
 Elevation: 100 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: NE
 Record Last Updated: 2002-11-07

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 16427 -121 47987
 UTM: Zone 10 M433839 E830656
 Elevation: 100 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: NE
 Record Last Updated: 2002-11-07

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 16427 -121 47987
 UTM: Zone 10 M433839 E830656
 Elevation: 100 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: NE
 Record Last Updated: 2002-11-07

Location: 1/6 MILE SW OF HAMMONTON RD X MARYSVILLE SMARTVILLE RD ALONG TRANSMISSION LINE 0.7 MILE SOUTH OF YUBA RIVER
 Location Detail: TRANSMISSION TOWER 50605 1 CLUMP 90 FEET WEST AND 1 CLUMP 208 FEET WEST
 Ecological: HABITAT CONSISTS OF A MESIC RIPARIAN AREA
 Threats: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE AND OTHER ACTIVITIES NOT RELATED TO PROJECT
 General: EXIT HOLES OBSERVED IN DEAD WOOD DURING JULY 1998 GROWTH FORM = 2 CLUMPS NUMBER OF STEMS > 1 INCH 4 FOR 1 CLUMP AND 10 FOR OTHER CLUMP PLANTS IMPACTED BY UNKNOWN ACTIVITY

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 18737 -121 47177
 UTM: Zone 10 M4338655 E831845
 Elevation: 110 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 18737 -121 47177
 UTM: Zone 10 M4338655 E831845
 Elevation: 103 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

Location: ALONG TRANSMISSION LINE 0.5 MILE SOUTH OF YUBA RIVER & 1.6 MILES NW OF HAMMONTON RD X MARYSVILLE SMARTVILLE RD
 Location Detail: TRANSMISSION TOWER 49264 1 FOOT BALL 118 FEET SE ACCESS ROAD
 Ecological: HABITAT CONSISTS OF A MESIC RIPARIAN AREA
 Threats: THREATS INCLUDE DISTURBANCE DUE TO ROAD TRANSMISSION LINE MAINTENANCE AND OTHER ACTIVITIES NOT RELATED TO PROJECT
 General: EXIT HOLES IN DEAD WOOD OBSERVED DURING JULY 1998 GROWTH FORM = ROOT BALL NUMBER STEMS = 1 INCH = 1

County Summary: Yuba
 Location: Browns Valley (36121245438)
 Lat/Long: 39 18737 -121 47177
 UTM: Zone 10 M4338655 E831845
 Elevation: 103 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT
 Township: 15N
 Range: 04E
 Section: 01
 Meridian: M
 Date: 1998-07-28
 Element: 1998-07-28
 Status: Other: XX
 Record Last Updated: 2002-11-07

Downingia pustilla
 dead coverings
 Status: Other Lists
 Federal Name: CHPS List 2 2
 State Name: CHPS List 2 2
 Other Lists: Other Lists
 Element Code: POCAMA000
 HQDB Element Rank: Other Lists
 Global: C2
 State: S2
 Habitat Associations: Other Lists
 General: VALLEY AND FOOTHILL GRASSLAND (MISC SITES); VERNAL POOLS
 Macro: VERNAL LAKE AND POOL MARGINS WITH A VARIETY OF ASSOCIATES IN SEVERAL TYPES OF VERNAL POOLS 1-45M

Occurrences No: 95 Map Index: 43393 EO Index: 43393 Dates Last Seen: 1999-06-16
 Occurrence No: 95 Map Index: 43393 EO Index: 43393 Element: 1999-06-16
 Date Rank: Unknown Origin: Natural/Native occurrence Presence: Presumed Extant Record Last Updated: 2000-08-09

County Summary: Yuba
 Detail Summary: Carrizo Fair Way (3912145430), Woodland (3912145430), Snyville (3912145430)

Lat/Long: 39 126477 / -121 918877 Township: 16N
 UTM Zone: 10 MH33263 E630199 Range: 05E
 Radius: 5 mile Section: 26 Meridian: M
 Elevation: 250 ft Symbol Type: POINT

Location: BEALE AIR FORCE BASE, EAST OF MARYSVILLE
 Location Detail: EXACT LOCATION NOT KNOWN, ENTIRE BASE MARKED TO REFLECT UNCERTAINTY
 General: ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS SITE NAME NOTED BY M. GAUSE
 Owner/Manager: OOD BEALE AFB

Occurrences No: 114 Map Index: 54722 EO Index: 54722 Dates Last Seen: 1985-05-11
 Occurrence No: 114 Map Index: 54722 EO Index: 54722 Element: 1985-05-11
 Date Rank: Unknown Origin: Natural/Native occurrence Presence: Presumed Extant Record Last Updated: 2004-03-17

County Summary: Yuba
 Detail Summary: Brown Valley (3912145430)

Lat/Long: 39 223447 / -121 430137 Township: 16N
 UTM Zone: 10 MH34272 E634716 Range: 05E
 Radius: 1 mile Section: 27 Meridian: M
 Elevation: 1 mile Symbol Type: POINT

Location: 2.5 MILES SOUTHWEST OF BROWNS VALLEY
 Location Detail: EXACT LOCATION UNKNOWN, MAPPED IN THE VICINITY OF 2.5 MILES SOUTH OF BROWNS VALLEY VIA BROWNS VALLEY ROAD AND WEST ALONG HIGHWAY 20
 Ecological: OPEN LOW ROLLING FOOTHILL PLAINS, VERNAL POOL BED
 General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS THIS COLLECTION BY CRAMPTON, NEEDS FIELDWORK
 Owner/Manager: UNKNOWN

Enya marmorata
 wetland pond turtle
 Status: Other Lists
 Federal Name: Other Lists
 State Name: Other Lists
 Other Lists: Other Lists
 Element Code: ASDA00010
 HQDB Element Rank: Other Lists
 Global: C2C
 State: S2
 Habitat Associations: Other Lists
 General: A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS & IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION BE MIRE. NEEDS BASKING SITES AND SUITABLE, SANDY BANKS ON GRASSY OPEN FIELDS; UPLAND HABITAT UP TO 3 KM FROM WATER FOR EGG LAYING

Occurrences No: 333 Map Index: 48362 EO Index: 70159 Dates Last Seen: 1988-06-16
 Occurrence No: 333 Map Index: 48362 EO Index: 70159 Element: 1988-06-16
 Date Rank: Unknown Origin: Natural/Native occurrence Presence: Presumed Extant Record Last Updated: 2007-05-24

County Summary: Yuba
 Detail Summary: Brown Valley (3912145430)

Lat/Long: 39 181999 / -121 474229 Township: 15N
 UTM Zone: 10 MH33632 E632086 Range: 05E
 Radius: 5 mile Section: 17 Meridian: M
 Elevation: 87 ft Symbol Type: POINT

Location: YUBA MINE TAILINGS, ABOUT 5 MILES NE OF LINDA, 1 MILE WNW OF INTERSECTION OF HAMMINGTON RD AND MARYSVILLE/SMARTVILLE RD
 Location Detail: ISOLATED PERENNIAL PONDS IN MINE TAILINGS SITE # B5 & B7
 Ecological: ABUNDANT SUBMERGED VEGETATION BUT LITTLE EMERGENT VEGETATION, SURROUNDED BY MALLOW/PATCHY RIPARIAN VEGETATION OF WILLOW & CORFELEBERRY, COBBLE BANKS FAIRLY STEEP, ABUNDANT STUMPS FOR BASKING, POND COVERED BY DUCK WEED
 General: TURTLES OBSERVED DURING SURVEY ON 16 JUN 1988
 Owner/Manager: UNKNOWN

Occurrences No: 465 Map Index: 32842 EO Index: 679 Dates Last Seen: 1988-06-13
 Occurrence No: 465 Map Index: 32842 EO Index: 679 Element: 1988-06-13
 Date Rank: Unknown Origin: Natural/Native occurrence Presence: Presumed Extant Record Last Updated: 1998-03-24

County Summary: Yuba
 Detail Summary: Brown Valley (3912145430)

Lat/Long: 39 230227 / -121 399884 Township: 16N
 UTM Zone: 10 MH33345 E638112 Range: 05E
 Radius: 15 mile Section: 22 Meridian: M
 Elevation: 150 ft Symbol Type: POINT

Location: DRY CREEK AT HIGHWAY 20, NORTH OF BEALE AIR FORCE BASE
 Location Detail: SITE DESCRIBED AS DRY CREEK AT HAMMOND GROVE ON HWY 20
 General: 3 CAPTURED AND RE-RELEASED BY D.C. HOLLAND ON 18 AUGUST 1988
 Owner/Manager: UNKNOWN

Laterallus jamaicensis coturniculus

California Inland sp. Status: None Threatened Element Code: ADWAE03041 Other Lists: None
 Federal Status: None Threatened Global Cat 1: State S1 CDFG Status: None
 Habitat Associations: None
 General: INLAND FRESHWATER MARSHES. WET MEADOWS & SHALLOW MARGINS OF SALT WATER MARSHES BORDERING LARGER BAYS. MUD- NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DOES NOT FLUCTUATE DURING THE YEAR & DENSE VEGETATION FOR NESTING HABITAT

Occurrences No: 247 Map Index: 76656 EO Index: 71827 Dates Last Seen: 2008-09-22
 Occurrence No: 247 Map Index: 76656 EO Index: 71827 Dates Last Seen: 2008-09-22
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: WEST SLOPE BROWNS VALLEY RD 2 TO 3 MI SE OF IOWA CITY
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 4 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 251 Map Index: 76662 EO Index: 71808 Dates Last Seen: 2008-09-23
 Occurrence No: 251 Map Index: 76662 EO Index: 71808 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: VICINITY OF MARYSVILLE RD & SPRING VALLEY RD ABOUT 2 MI ABOUT 11.7 TO 13.3 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 2 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 253 Map Index: 76664 EO Index: 71810 Dates Last Seen: 2008-09-23
 Occurrence No: 253 Map Index: 76664 EO Index: 71810 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: VICINITY OF SPRING VALLEY RD ABOUT 1.3 MI WEST OF MARYSVILLE RD ABOUT 10.5 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 2 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 255 Map Index: 76668 EO Index: 71812 Dates Last Seen: 2008-09-23
 Occurrence No: 255 Map Index: 76668 EO Index: 71812 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: VICINITY OF MARYSVILLE RD BETWEEN HWY 20 & BROWNS VALLEY ABOUT 11.5 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 257 Map Index: 76670 EO Index: 71814 Dates Last Seen: 2008-09-23
 Occurrence No: 257 Map Index: 76670 EO Index: 71814 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: SOUTH OF SPRING VALLEY RD ABOUT 1.3 MI NE OF INTERSECTION WITH HWY 20 ABOUT 9.9 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 4 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Laterallus jamaicensis coturniculus

California Inland sp. Status: None Threatened Element Code: ADWAE03041 Other Lists: None
 Federal Status: None Threatened Global Cat 1: State S1 CDFG Status: None
 Habitat Associations: None
 General: INLAND FRESHWATER MARSHES. WET MEADOWS & SHALLOW MARGINS OF SALT WATER MARSHES BORDERING LARGER BAYS. MUD- NEEDS WATER DEPTHS OF ABOUT 1 INCH THAT DOES NOT FLUCTUATE DURING THE YEAR & DENSE VEGETATION FOR NESTING HABITAT

Occurrences No: 247 Map Index: 76656 EO Index: 71807 Dates Last Seen: 2008-09-22
 Occurrence No: 247 Map Index: 76656 EO Index: 71807 Dates Last Seen: 2008-09-22
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: WEST SLOPE BROWNS VALLEY RD 2 TO 3 MI SE OF IOWA CITY
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 4 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 251 Map Index: 76662 EO Index: 71808 Dates Last Seen: 2008-09-23
 Occurrence No: 251 Map Index: 76662 EO Index: 71808 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: VICINITY OF MARYSVILLE RD & SPRING VALLEY RD ABOUT 2 MI ABOUT 11.7 TO 13.3 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 2 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 253 Map Index: 76664 EO Index: 71810 Dates Last Seen: 2008-09-23
 Occurrence No: 253 Map Index: 76664 EO Index: 71810 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: VICINITY OF SPRING VALLEY RD BETWEEN HWY 20 & BROWNS VALLEY ABOUT 11.5 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 255 Map Index: 76668 EO Index: 71812 Dates Last Seen: 2008-09-23
 Occurrence No: 255 Map Index: 76668 EO Index: 71812 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: SOUTH OF SPRING VALLEY RD ABOUT 1.3 MI NE OF INTERSECTION WITH HWY 20 ABOUT 9.9 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 4 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Occurrences No: 257 Map Index: 76670 EO Index: 71814 Dates Last Seen: 2008-09-23
 Occurrence No: 257 Map Index: 76670 EO Index: 71814 Dates Last Seen: 2008-09-23
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX
 County Summary: Yuba Element: XXXXXX

Location: SOUTH OF SPRING VALLEY RD ABOUT 1.3 MI NE OF INTERSECTION WITH HWY 20 ABOUT 9.9 MI NE OF MARYSVILLE (PO)
 Location Detail: MAPPED BY GEOREFERENCING FIGURE 2 IN RICHMOND 2008 WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FoothILLS

General: CALL BLACK RAILS DETECTED BY RICHMOND ET AL AT 4 SITES DURING AT LEAST 1 PHASE OF CALL-PLAYBACK SURVEYS IN 1994-2008. PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FoothILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION
 Overall Manager: UNBNDWHS

Legnere limosa
 Element Code: PDCAR0010
 Other Lists: CWS List 18.1
 Status: None
 Global G2
 State S2
 Habitat Associations: Vernal Pools
 General: Vernal Pools - Many Historical Occurrences are Extirpated
 Macro: In Beds of Vernal Pools - 1.68M

Occurrences No: 51
 Map Index: 4662
 ED Index: 4662
 Direct List Status: Element 2010.05.13
 Element 2010.05.13
 Occ Rank: Excellent
 Origin: Natural/None occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Record Last Updated: 2011.07.14

County Summary: Brown Valley (39121245438)
 Latt/Long: 38 13 16.97 - 121 48 27.29
 UTM: Zone 10 M433248 E531972
 Radius: 275 m
 Elevation: 80 ft
 Township: 09N
 Range: 09E
 Section: 24
 Meridian: M
 Mapping Precision: SPECIFIC
 Symbol Type: POINT
 Symbol: POLYGON

Location: WEST OF REEDS CREEK 2 AIRMENS SW OF JUNCTION OF MARYSVILLE SMARTVILLE ROAD & HAMMONTON ROAD BEALE AIR FORCE BASE
 Location Detail: 2 COLONIES, BOTH JUST EAST OF DIRT ROAD POOL APPEARS TO BE SHALLOW OVERFLOW CHANNEL OF REEDS CREEK MAPPED WITHIN THE N. 1/2 OF THE NE 1/4 OF SECTION 24
 Ecological: PLANTS GENERALLY FOUND WHERE BASE GROUND COVER WAS 5-10%. VERNAL POOL DOMINATED BY ELOCHARIS MACROSTACHYA ASSOC. WITH ERYNGIUM CASTREUSE, LATHRAEA GLABERRIMA, RANUNCULUS BONGARENSIS AND DOWNINGIA BICORNUTA
 General: 100% PLANTS OBSERVED IN NORTHERN POOL AND 12 PLANTS OBSERVED IN SOUTHERN POOL. 4000 PLANTS OBSERVED IN 2010. SURVEY STOPPED WHERE STANDING WATER REMAINED. SO POPULATION IS LIKELY LARGER THAN ESTIMATED

County Summary: Brown Valley (39121245438)
 Latt/Long: 38 13 16.97 - 121 48 27.29
 UTM: Zone 10 M433248 E531972
 Radius: 275 m
 Elevation: 80 ft
 Township: 09N
 Range: 09E
 Section: 24
 Meridian: M
 Mapping Precision: SPECIFIC
 Symbol Type: POINT
 Symbol: POLYGON

Location: EAST OF REEDS CREEK 0.15 MILE NORTH OF CAMP BEALE ROAD 0.5 MILE EAST OF REEDS CREEK CROSSING BEALE AIR FORCE BASE
 Location Detail: MAPPED WITHIN THE SE 1/4 OF THE SW 1/4 OF SECTION 18 ACCORDING TO 1894 UTM COORDINATES. ASSOCIATED HAND-DRAWN MAP PLACES THIS OCCURRENCE IN THE SW 1/4 SW 1/4 SEC 19. IT'S POSSIBLE THAT THE PLANTS WERE ACTUALLY FOUND THERE IN VERNAL POOL
 Ecological: ABOUT 300 PLANTS OBSERVED IN 1996. NO LEGUMINE SEEN IN VICINITY OF RECORDED OCCURRENCE IN 2010. THOUGH NEARBY OCCURRENCES VISITED AT THE SAME TIME WERE ROBUST

County Summary: Brown Valley (39121245438)
 Latt/Long: 38 13 16.97 - 121 48 27.29
 UTM: Zone 10 M433248 E531972
 Radius: 275 m
 Elevation: 80 ft
 Township: 09N
 Range: 09E
 Section: 20
 Meridian: M
 Mapping Precision: SPECIFIC
 Symbol Type: POINT

Location: BEALE AIR FORCE BASE, APPROX. 1.6 MILES EAST OF REEDS CREEK CROSSING WITH CAMP BEALE RD. 0.4 MILE NORTH OF THE ROAD
 Location Detail: MAPPED WITHIN THE NW 1/4 OF THE SE 1/4 OF SECTION 20
 Ecological: PLANTS FOUND THROUGHOUT VERNAL POOL GROWING CLUMBED IN THE CENTER. SPARSE ON THE EDGES. WITH ELOCHARIS MACROSTACHYA, LATHRAEA CASTREUSE, L. GLABERRIMA, RANUNCULUS BONGARENSIS, VAR. TRIPETALUS, CRASSULA AQUATICA, DOWNINGIA BICORNUTA, ETC.
 General: ABOUT 300 PLANTS OBSERVED IN 1996. 1000S OF PLANTS OBSERVED IN 2010

Lateralis jameicensis columbatus
 Element Code: ABNME0304
 Other Lists: CDFG Status
 Status: None
 Global G4
 State S1
 Habitat Associations: Wet Meadows & Shallow Margins of Saltwater Marshes Bordering Larger Bays
 General: Wet Meadows & Shallow Margins of Saltwater Marshes Bordering Larger Bays
 Macro: Needs Water Depths of About 1 Inch that Does Not Fluctuate During the Year & Dense Vegetation for Nesting Habitat

Occurrences No: 258
 Map Index: 7669
 ED Index: 7716
 Direct List Status: Element 2009.08.23
 Element 2009.08.23
 Occ Rank: Unknown
 Origin: Natural/None occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Record Last Updated: 2009-08-23

County Summary: Brown Valley (39121245438)
 Latt/Long: 38 13 16.97 - 121 48 27.29
 UTM: Zone 10 M433248 E531972
 Radius: 275 m
 Elevation: 130 ft
 Township: 09N
 Range: 09E
 Section: 22
 Meridian: M
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT

Location: VICINITY OF REEDS CREEK ABOUT 1/2 MI SW OF HAMMONTON SMARTVILLE RD AT LAUGHLIN RD. BEALE AIR FORCE BASE
 Location Detail: MAPPED BY GEORGE RICHMOND FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FOOTHILLS
 General: CA BLACK BILLS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-BACK SURVEYS IN 1994. 2008 PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION

County Summary: Brown Valley (39121245438)
 Latt/Long: 38 13 16.97 - 121 48 27.29
 UTM: Zone 10 M433248 E531972
 Radius: 275 m
 Elevation: 130 ft
 Township: 09N
 Range: 09E
 Section: 22
 Meridian: M
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT

Location: JUST WEST OF LAUGHLIN RD. ABOUT 2.6 MI SOUTH OF INTERSECTION WITH HAMMONTON RD. BEALE AIR FORCE BASE
 Location Detail: MAPPED BY GEORGE RICHMOND FIGURE 2 IN RICHMOND 2008. WITHIN THE CORE SURVEY AREA
 Ecological: SURVEY MARSHES GENERALLY SMALL, GENTLY SLOPED, DENSELY VEGETATED & HIGHLY FRAGMENTED (SURROUNDED BY UNSUITABLE HABITAT). WATER SOURCES PRIMARILY FROM IRRIGATION DITCHES. OCCURRENCE REPRESENTS PART OF A METAPOPULATION IN THE SIERRA FOOTHILLS
 General: CA BLACK BILLS DETECTED BY RICHMOND ET AL AT 1 SITE DURING AT LEAST 1 PHASE OF CALL-BACK SURVEYS IN 1994. 2008 PART OF A YEAR-ROUND RESIDENT BREEDING POPULATION IN THE SIERRA FOOTHILLS. DISCONTINUOUS WITH THE SF BAY-DELTA POPULATION

County Summary: Brown Valley (39121245438)
 Latt/Long: 38 13 16.97 - 121 48 27.29
 UTM: Zone 10 M433248 E531972
 Radius: 275 m
 Elevation: 130 ft
 Township: 09N
 Range: 09E
 Section: 22
 Meridian: M
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POINT

Lepidurus packardii
 Element Code: CRR1A0010
 Other Lists: Other Lists
 Federal: Endangered
 State: None
 Status: None
 Global: G3
 State: S2S3
 Element Code: CRR1A0010
 Other Lists: Other Lists
 Federal: Endangered
 State: None
 Status: None
 Global: G3
 State: S2S3

Habitat Associations: None
 General: HABITATS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER
 Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNMOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID

Occurrences No: 35
 Map Index: 32535
 EO Index: 14815
 Date Last Beers: 1991-04-13
 Element: 1991-04-13
 Site: 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba

Latitude: 39 15'09" N
 Longitude: 121 46'57" W
 UTM Zone: 10 M
 UTM Easting: 632721
 UTM Northing: 4632721
 Radius: 80 meters
 Elevation: 90 ft

Mapping Precision: SPECIFIC
 Section: 18
 Township: 15N
 Range: 04E
 Meridian: M

Location: BEALE AFB W OF RUNWAY 21 1/2 MI SW OF SMARTVILLE SMARTVILLE ROAD X HAMBURTON ROAD
 General: MIDDLE SECTION OF SUBURBIT E1 OF SURVEY
 Ecological: NORTHERN HARPAN VERNAL POOL
 Threat: GRAZING, DRAINAGE CHANNELS, FUTURE RAIL ROAD CONSTRUCTION
 General: POOL #E31 L. PACKARD OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF G. ALEXANDER UNDERBELLA OCCIDENTALS ALSO OBSERVED 2 OF 18 POOLS SAMPLED HAD L. PACKARD PRESENT

Owner/Manager: DDD-BEALE AFB

Occurrences No: 35
 Map Index: 32535
 EO Index: 14815
 Date Last Beers: 1991-04-13
 Element: 1991-04-13
 Site: 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba

Latitude: 39 15'09" N
 Longitude: 121 46'57" W
 UTM Zone: 10 M
 UTM Easting: 632721
 UTM Northing: 4632721
 Radius: 80 meters
 Elevation: 90 ft

Mapping Precision: SPECIFIC
 Section: 18
 Township: 15N
 Range: 04E
 Meridian: M

Location: BEALE AFB W OF RUNWAY 21 1/2 MI SW OF SMARTVILLE SMARTVILLE ROAD X HAMBURTON ROAD
 General: MIDDLE SECTION OF SUBURBIT E1 OF SURVEY
 Ecological: NORTHERN HARPAN VERNAL POOL
 Threat: GRAZING, DRAINAGE CHANNELS, FUTURE RAIL ROAD CONSTRUCTION
 General: POOL #E31 L. PACKARD OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF G. ALEXANDER UNDERBELLA OCCIDENTALS ALSO OBSERVED 2 OF 18 POOLS SAMPLED HAD L. PACKARD PRESENT

Owner/Manager: DDD-BEALE AFB

Occurrences No: 36
 Map Index: 32536
 EO Index: 14817
 Date Last Beers: 1991-04-13
 Element: 1991-04-13
 Site: 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba

Latitude: 39 14'58" N
 Longitude: 121 47'12" W
 UTM Zone: 10 M
 UTM Easting: 6327118
 UTM Northing: 46327118
 Radius: 80 meters
 Elevation: 85 ft

Mapping Precision: SPECIFIC
 Section: 24
 Township: 15N
 Range: 04E
 Meridian: M

Location: BEALE AFB W OF RUNWAY 18 MI SE OF BROPHY ROAD X SMARTVILLE SMARTVILLE ROAD
 General: NORTHERN SECTION OF SUBURBIT E2 OF SURVEY
 Ecological: NORTHERN HARPAN VERNAL POOL
 Threat: GRAZING, DRAINAGE CHANNELS, FUTURE RAIL ROAD CONSTRUCTION
 General: POOL #E22 L. PACKARD OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF G. ALEXANDER UNDERBELLA OCCIDENTALS ALSO OBSERVED MISSOURI LARVAE PRESENT 2 OF 19 POOLS HAD L. PACKARD

Owner/Manager: DDD-BEALE AFB

Occurrences No: 106
 Map Index: 31403
 EO Index: 30827
 Date Last Beers: 1992-03-09
 Element: 1992-03-09
 Site: 1992-03-09
 Record Last Updated: 1997-03-20

County Summary: Yuba

Latitude: 39 14'72" N
 Longitude: 121 48'12" W
 UTM Zone: 10 M
 UTM Easting: 632962
 UTM Northing: 4632962
 Radius: 80 ft
 Elevation: 80 ft

Mapping Precision: SPECIFIC
 Section: 19
 Township: 15N
 Range: 05E
 Meridian: M

Location: BETWEEN SMARTVILLE SMARTVILLE ROAD AND CAMP BEALE ROAD IN THE VICINITY OF REEDS CREEK BEALE AFB
 General: VERNAL POOLS LOCATED SOMEWHERE IN SECTION 24 THIS OCCURRENCE WAS SHIPPED TO THE COMMUNITY OCCURRENCE FOR NORTHERN HARPAN VERNAL POOLS
 Ecological: NATURAL VERNAL POOLS
 General: LEPIDURUS PACKARD OBSERVED IN THE ONE FEATURE INSPECTED IN SECTION 24. SHIGNEY RECORD #191 B. LYNCH ALSO OBSERVED

Owner/Manager: DDD-BEALE AFB

Occurrences No: 216
 Map Index: 59021
 EO Index: 59238
 Date Last Beers: 1996-01-07
 Element: 1996-01-07
 Site: 1996-01-07
 Record Last Updated: 2005-01-10

County Summary: Yuba

Latitude: 39 17'38" N
 Longitude: 121 45'18" W
 UTM Zone: 10 M
 UTM Easting: 633726
 UTM Northing: 4633726
 Radius: 110 m
 Elevation: 110 ft

Mapping Precision: NON-SPECIFIC
 Section: 08
 Township: 15N
 Range: 05E
 Meridian: M

Location: WESTERN AGRI-GATES GRAVEL MINE HAMBURTON ROAD
 General: 7 INDIVIDUALS COLLECTED
 Owner/Manager: PVT

Occurrences No: 216
 Map Index: 59021
 EO Index: 59238
 Date Last Beers: 1996-01-07
 Element: 1996-01-07
 Site: 1996-01-07
 Record Last Updated: 2005-01-10

County Summary: Yuba

Latitude: 39 17'38" N
 Longitude: 121 45'18" W
 UTM Zone: 10 M
 UTM Easting: 633726
 UTM Northing: 4633726
 Radius: 110 m
 Elevation: 110 ft

Mapping Precision: NON-SPECIFIC
 Section: 08
 Township: 15N
 Range: 05E
 Meridian: M

Location: WESTERN AGRI-GATES GRAVEL MINE HAMBURTON ROAD
 General: 7 INDIVIDUALS COLLECTED
 Owner/Manager: PVT

Lepidurus packardii
 Element Code: CRR1A0010
 Other Lists: Other Lists
 Federal: Endangered
 State: None
 Status: None
 Global: G3
 State: S2S3
 Element Code: CRR1A0010
 Other Lists: Other Lists
 Federal: Endangered
 State: None
 Status: None
 Global: G3
 State: S2S3

Habitat Associations: None
 General: HABITATS VERNAL POOLS AND SWALES IN THE SACRAMENTO VALLEY CONTAINING CLEAR TO HIGHLY TURBID WATER
 Micro: POOLS COMMONLY FOUND IN GRASS BOTTOMED SWALES OF UNMOWED GRASSLANDS. SOME POOLS ARE MUD-BOTTOMED & HIGHLY TURBID

Occurrences No: 35
 Map Index: 32535
 EO Index: 14815
 Date Last Beers: 1991-04-13
 Element: 1991-04-13
 Site: 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba

Latitude: 39 15'09" N
 Longitude: 121 46'57" W
 UTM Zone: 10 M
 UTM Easting: 632721
 UTM Northing: 4632721
 Radius: 80 meters
 Elevation: 90 ft

Mapping Precision: SPECIFIC
 Section: 18
 Township: 15N
 Range: 04E
 Meridian: M

Location: BEALE AFB W OF RUNWAY 21 1/2 MI SW OF SMARTVILLE SMARTVILLE ROAD X HAMBURTON ROAD
 General: MIDDLE SECTION OF SUBURBIT E1 OF SURVEY
 Ecological: NORTHERN HARPAN VERNAL POOL
 Threat: GRAZING, DRAINAGE CHANNELS, FUTURE RAIL ROAD CONSTRUCTION
 General: POOL #E31 L. PACKARD OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF G. ALEXANDER UNDERBELLA OCCIDENTALS ALSO OBSERVED 2 OF 18 POOLS SAMPLED HAD L. PACKARD PRESENT

Owner/Manager: DDD-BEALE AFB

Occurrences No: 35
 Map Index: 32535
 EO Index: 14815
 Date Last Beers: 1991-04-13
 Element: 1991-04-13
 Site: 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba

Latitude: 39 15'09" N
 Longitude: 121 46'57" W
 UTM Zone: 10 M
 UTM Easting: 632721
 UTM Northing: 4632721
 Radius: 80 meters
 Elevation: 90 ft

Mapping Precision: SPECIFIC
 Section: 18
 Township: 15N
 Range: 04E
 Meridian: M

Location: BEALE AFB W OF RUNWAY 21 1/2 MI SW OF SMARTVILLE SMARTVILLE ROAD X HAMBURTON ROAD
 General: MIDDLE SECTION OF SUBURBIT E1 OF SURVEY
 Ecological: NORTHERN HARPAN VERNAL POOL
 Threat: GRAZING, DRAINAGE CHANNELS, FUTURE RAIL ROAD CONSTRUCTION
 General: POOL #E31 L. PACKARD OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF G. ALEXANDER UNDERBELLA OCCIDENTALS ALSO OBSERVED 2 OF 18 POOLS SAMPLED HAD L. PACKARD PRESENT

Owner/Manager: DDD-BEALE AFB

Occurrences No: 36
 Map Index: 32536
 EO Index: 14817
 Date Last Beers: 1991-04-13
 Element: 1991-04-13
 Site: 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba

Latitude: 39 14'58" N
 Longitude: 121 47'12" W
 UTM Zone: 10 M
 UTM Easting: 6327118
 UTM Northing: 46327118
 Radius: 80 meters
 Elevation: 85 ft

Mapping Precision: SPECIFIC
 Section: 24
 Township: 15N
 Range: 04E
 Meridian: M

Location: BEALE AFB W OF RUNWAY 18 MI SE OF BROPHY ROAD X SMARTVILLE SMARTVILLE ROAD
 General: NORTHERN SECTION OF SUBURBIT E2 OF SURVEY
 Ecological: NORTHERN HARPAN VERNAL POOL
 Threat: GRAZING, DRAINAGE CHANNELS, FUTURE RAIL ROAD CONSTRUCTION
 General: POOL #E22 L. PACKARD OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF G. ALEXANDER UNDERBELLA OCCIDENTALS ALSO OBSERVED MISSOURI LARVAE PRESENT 2 OF 19 POOLS HAD L. PACKARD

Owner/Manager: DDD-BEALE AFB

Occurrences No: 106
 Map Index: 31403
 EO Index: 30827
 Date Last Beers: 1992-03-09
 Element: 1992-03-09
 Site: 1992-03-09
 Record Last Updated: 1997-03-20

County Summary: Yuba

Latitude: 39 14'72" N
 Longitude: 121 48'12" W
 UTM Zone: 10 M
 UTM Easting: 632962
 UTM Northing: 4632962
 Radius: 80 ft
 Elevation: 80 ft

Mapping Precision: SPECIFIC
 Section: 19
 Township: 15N
 Range: 05E
 Meridian: M

Location: BETWEEN SMARTVILLE SMARTVILLE ROAD AND CAMP BEALE ROAD IN THE VICINITY OF REEDS CREEK BEALE AFB
 General: VERNAL POOLS LOCATED SOMEWHERE IN SECTION 24 THIS OCCURRENCE WAS SHIPPED TO THE COMMUNITY OCCURRENCE FOR NORTHERN HARPAN VERNAL POOLS
 Ecological: NATURAL VERNAL POOLS
 General: LEPIDURUS PACKARD OBSERVED IN THE ONE FEATURE INSPECTED IN SECTION 24. SHIGNEY RECORD #191 B. LYNCH ALSO OBSERVED

Owner/Manager: DDD-BEALE AFB

Occurrences No: 216
 Map Index: 59021
 EO Index: 59238
 Date Last Beers: 1996-01-07
 Element: 1996-01-07
 Site: 1996-01-07
 Record Last Updated: 2005-01-10

County Summary: Yuba

Latitude: 39 17'38" N
 Longitude: 121 45'18" W
 UTM Zone: 10 M
 UTM Easting: 633726
 UTM Northing: 4633726
 Radius: 110 m
 Elevation: 110 ft

Mapping Precision: NON-SPECIFIC
 Section: 08
 Township: 15N
 Range: 05E
 Meridian: M

Location: WESTERN AGRI-GATES GRAVEL MINE HAMBURTON ROAD
 General: 7 INDIVIDUALS COLLECTED
 Owner/Manager: PVT

Occurrences No: 216
 Map Index: 59021
 EO Index: 59238
 Date Last Beers: 1996-01-07
 Element: 1996-01-07
 Site: 1996-01-07
 Record Last Updated: 2005-01-10

County Summary: Yuba

Latitude: 39 17'38" N
 Longitude: 121 45'18" W
 UTM Zone: 10 M
 UTM Easting: 633726
 UTM Northing: 4633726
 Radius: 110 m
 Elevation: 110 ft

Mapping Precision: NON-SPECIFIC
 Section: 08
 Township: 15N
 Range: 05E
 Meridian: M

Location: WESTERN AGRI-GATES GRAVEL MINE HAMBURTON ROAD
 General: 7 INDIVIDUALS COLLECTED
 Owner/Manager: PVT

Linderilla occidentalis

California Invertebrates Status: _____
 Federal Name: _____
 State Name: _____
 Other Lists: _____
 Global: G3
 State: S2S3
 CDFG Status: _____

Habitat Associations: _____
 General: SEASONAL POOLS IN UNPLANTED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS
 Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY AND TDS

Occurrence No: 82
 Occ Rank: Unknown
 Origin: Natural/Naive occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 32535
 EO Index: 4419
 Dates Last Seen: Element 1991-04-13, Site 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba
 Browns Valley (39 12145438)

Lat/Long: 39 150397 / 121 46637
 UTM: Zone 10 M433485 E83321
 Radius: 80 meters
 Elevation: 80 ft
 Mapping Precision: SPECIFIC
 Symbol Type: POINT

Location: BEALE AFB W OF RUNWAY 2 1 KM OF SSW MARYSVILLE SMARTSVILLE ROAD X HAMMONTON ROAD
 Location Detail: INTERSECTION OF SUBMIT E1 OF SURVEY
 Ecological: NORTHERN HARDPAN VERNAL POOL

Threat: GRAZING DRAINAGE CHANNELS, FUTURE RAILROAD CONSTRUCTION
 General: POOL #E33 L OCCIDENTALIS OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF D G ALEXANDER LEIPOURIS PACKARD ALSD
 Observed in this Pool: 13 OF 19 POOLS SAMPLED HAD L OCCIDENTALIS PRESENT

Owner/Manager: DOD-BEALE AFB

Occurrence No: 83
 Occ Rank: Unknown
 Origin: Natural/Naive occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 32536
 EO Index: 26493
 Dates Last Seen: Element 1991-04-13, Site 1991-04-13
 Record Last Updated: 1995-11-02

County Summary: Yuba
 Browns Valley (39 12145438)

Lat/Long: 39 143507 / 121 47209
 UTM: Zone 10 M433820 E83218
 Radius: 80 meters
 Elevation: 85 ft
 Mapping Precision: SPECIFIC
 Symbol Type: POINT

Location: BEALE AFB WEST OF RUNWAY 1 6 KM SE OF BISHOP ROAD Y MARYSVILLE SMARTSVILLE ROAD
 Location Detail: NORTHERN SECTION OF SUBMIT E2 OF SURVEY
 Ecological: NORTHERN HARDPAN VERNAL POOL

Threat: GRAZING DRAINAGE CHANNELS, FUTURE RAILROAD CONSTRUCTION
 General: POOL #E21 L OCCIDENTALIS OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF D G ALEXANDER LEIPOURIS PACKARD ALSD
 Observed in this Pool: 13 OF 19 POOLS SAMPLED HAD L OCCIDENTALIS PRESENT

Owner/Manager: DOD-BEALE AFB

Occurrence No: 85
 Occ Rank: Unknown
 Origin: Natural/Naive occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 32567
 EO Index: 1508
 Dates Last Seen: Element 1991-04-13, Site 1991-04-13
 Record Last Updated: 1995-12-11

County Summary: Yuba
 Browns Valley (39 12145438)

Lat/Long: 39 150357 / 121 45708
 UTM: Zone 10 M4335483 E83310
 Radius: 80 ft
 Elevation: 95 ft
 Mapping Precision: NON-SPECIFIC
 Symbol Type: POLYGON

Location: NW PORTION OF BEALE AIR FORCE BASE 0.9 KM SW OF HAMMONTON ROAD X MARYSVILLE SMARTSVILLE ROAD
 Location Detail: NW AREA OF SUBMIT A
 Ecological: NORTHERN HARDPAN VERNAL POOL

Threat: GRAZING DRAINAGE CHANNELS, FUTURE RAILROAD CONSTRUCTION
 General: POOL #A141 L OCCIDENTALIS OBSERVED 2 COLLECTED ON 7/3/95 & 1 ON 4/13/96 AND ALL 3 DEPOSITED IN PERSONAL COLLECTION OF D G ALEXANDER 13 OF 19 POOLS SAMPLED HAD L OCCIDENTALIS PRESENT. SUBMIT A REFERS TO AREA MAPPED IN 1990 SURVEY

Owner/Manager: DOD-BEALE AFB

Linderilla occidentalis

California Invertebrates Status: _____
 Federal Name: _____
 State Name: _____
 Other Lists: _____
 Global: G3
 State: S2S3
 CDFG Status: _____

Habitat Associations: _____
 General: SEASONAL POOLS IN UNPLANTED GRASSLANDS WITH OLD ALLUVIAL SOILS UNDERLAIN BY HARDPAN OR IN SANDSTONE DEPRESSIONS
 Micro: WATER IN THE POOLS HAS VERY LOW ALKALINITY, CONDUCTIVITY AND TDS

Occurrence No: 78
 Occ Rank: Unknown
 Origin: Natural/Naive occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 32531
 EO Index: 4813
 Dates Last Seen: Element 1991-03-16, Site 1991-03-16
 Record Last Updated: 1899-12-16

County Summary: Yuba
 Browns Valley (39 12145438)

Lat/Long: 39 143507 / 121 45227
 UTM: Zone 10 M4334075 E83146
 Radius: 80 meters
 Elevation: 80 ft
 Mapping Precision: SPECIFIC
 Symbol Type: POINT

Location: BEALE AIR FORCE BASE W OF THE RUNWAY 2.3 KMS OF MARYSVILLE SMARTSVILLE ROAD X HAMMONTON ROAD
 Location Detail: NORTH END OF SUBMIT B OF SURVEY
 Ecological: NORTHERN HARDPAN VERNAL POOL

Threat: GRAZING DRAINAGE CHANNELS, FUTURE RAILROAD CONSTRUCTION
 General: POOL #B22 L OCCIDENTALIS OBSERVED 1 COLLECTED AND DEPOSITED IN PERSONAL COLLECTION OF D G ALEXANDER 13 OF 19 POOLS SAMPLED HAD L OCCIDENTALIS PRESENT

Owner/Manager: DOD-BEALE AFB

Occurrence No: 79
 Occ Rank: Unknown
 Origin: Natural/Naive occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 32532
 EO Index: 14812
 Dates Last Seen: Element 1991-03-16, Site 1991-03-16
 Record Last Updated: 1995-11-03

County Summary: Yuba
 Browns Valley (39 12145438)

Lat/Long: 39 143457 / 121 45381
 UTM: Zone 10 M433854 E83156
 Radius: 80 meters
 Elevation: 80 ft
 Mapping Precision: SPECIFIC
 Symbol Type: POINT

Location: BEALE AFB W OF RUNWAY 2.5 KM S OF MARYSVILLE SMARTSVILLE ROAD X HAMMONTON ROAD
 Location Detail: NORTH END OF SUBMIT B OF SURVEY
 Ecological: NORTHERN HARDPAN VERNAL POOL

Threat: GRAZING DRAINAGE CHANNELS, FUTURE RAILROAD CONSTRUCTION
 General: POOL #B88 L OCCIDENTALIS OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF D G ALEXANDER 13 OF 19 POOLS SAMPLED HAD L OCCIDENTALIS PRESENT

Owner/Manager: DOD-BEALE AFB

Occurrence No: 80
 Occ Rank: Unknown
 Origin: Natural/Naive occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 32533
 EO Index: 4764
 Dates Last Seen: Element 1991-03-16, Site 1991-03-16
 Record Last Updated: 1995-11-03

County Summary: Yuba
 Browns Valley (39 12145438)

Lat/Long: 39 139607 / 121 44189
 UTM: Zone 10 M4332432 E83417
 Radius: 80 meters
 Elevation: 80 ft
 Mapping Precision: SPECIFIC
 Symbol Type: POINT

Location: BEALE AFB W OF RUNWAY 4.0 KM SE OF MARYSVILLE SMARTSVILLE ROAD X HAMMONTON ROAD
 Location Detail: SOUTHERN END OF SUBMIT C OF SURVEY
 Ecological: NORTHERN HARDPAN VERNAL POOL

Threat: GRAZING DRAINAGE CHANNELS, FUTURE RAILROAD CONSTRUCTION
 General: POOL #C51 L OCCIDENTALIS OBSERVED 1 COLLECTED FOR PERSONAL COLLECTION OF D G ALEXANDER 13 OF 19 POOLS SAMPLED HAD L OCCIDENTALIS PRESENT

Owner/Manager: DOD-BEALE AFB

Lindberghia occidentalis

California Invertebrates Status: NDBB Element Rank: Other Lists: Element Code: ICR04001C
 Federal Status: Globish G3 State: S2S3 CDFG Status: CDFG Status

Habitat Associations: NDBB Element Rank: Other Lists: Element Code: ICR04001C
 Globish G3 State: S2S3 CDFG Status: CDFG Status

General: Seasonal Pools in Impoverished Grasslands with Cold Alluvial Soils Underlain by Hardpan or in Sandstone Depressions
 Micro: Water in the Pools has Very Low Alkalinity, Conductivity, and TDS

Occurrence No: 97 Map Index: 1523 ED Index: 1523 Dates Last Seen: 1991-04-13
 Dec Rank: Unknown Origin: Natural/Naive occurrence Element: 1981-04-13
 Presence: Presumed Extant Trend: Unknown Site: 1991-04-13
 Record Last Updated: 1995-12-11

County Summary: Browns Valley (38121245438)
 County Summary: Yuba

Land Comp: 38 148277 121 45334* Township: 15N
 UTM: Zone 10 M433345 E63345 Range: 05E
 Radius: 80 meters Section: 17
 Elevation: 92 ft Meridian: M Dtd: SW

Location: NW PORTION OF BEALE AIR FORCE BASE 2.0 KM SSE OF HAMMONTON ROAD X MARYSVILLE SMARTSVILLE ROAD
 Location Detail: SE PORTION OF SUBURBIT A
 Ecological: NORTHERN HARDPAN VERNAL POOL
 Threat: GRAZING DRAINAGE CHANNELS FUTURE RAILROAD CONSTRUCTION
 General: POOL #429 SURVEY OBSERVED - COLLECTED ON 2/20/95 AND 1/3/95 AND DEPOSITED IN PERSONAL COLLECTION OF D.G. ALEXANDER. 13 OF 19 POOLS SAMPLED ON BASE HAD 1 OCCIDENTALIS SUBURBIT A REFERS TO AREA MAPPED IN 1980 SURVEY
 Owner/Manager: DOD-BEALE AFB

Occurrence No: 98 Map Index: 1524 ED Index: 1524 Dates Last Seen: 1981-03-16
 Dec Rank: Unknown Origin: Natural/Naive occurrence Element: 1981-03-16
 Presence: Presumed Extant Trend: Unknown Site: 1991-03-16
 Record Last Updated: 1995-12-11

County Summary: Browns Valley (38121245438)
 County Summary: Yuba

Land Comp: 38 148597 121 45235* Township: 15N
 UTM: Zone 10 M433415 E63345 Range: 05E
 Radius: 80 meters Section: 17
 Elevation: 92 ft Meridian: M Dtd: SE

Location: NW PORTION OF BEALE AIR FORCE BASE 2.1 KMS OF HAMMONTON ROAD X MARYSVILLE SMARTSVILLE ROAD
 Location Detail: SE PORTION OF SUBURBIT A
 Ecological: NORTHERN HARDPAN VERNAL POOL
 Threat: GRAZING DRAINAGE CHANNELS FUTURE RAILROAD CONSTRUCTION
 General: POOL #427 L OCCIDENTALIS OBSERVED 1 COLLECTED AND DEPOSITED IN PERSONAL COLLECTION OF D.G. ALEXANDER. 13 OF 19 POOLS SAMPLED ON BASE HAD 1 OCCIDENTALIS SUBURBIT A REFERS TO AREA MAPPED IN 1980 SURVEY
 Owner/Manager: DOD-BEALE AFB

Occurrence No: 99 Map Index: 1526 ED Index: 1526 Dates Last Seen: 1981-04-13
 Dec Rank: Unknown Origin: Natural/Naive occurrence Element: 1981-04-13
 Presence: Presumed Extant Trend: Unknown Site: 1991-04-13
 Record Last Updated: 1995-12-11

County Summary: Browns Valley (38121245438)
 County Summary: Yuba

Land Comp: 38 14987 121 45941* Township: 15N
 UTM: Zone 10 M434217 E63328 Range: 05E
 Radius: 80 meters Section: 19
 Elevation: 82 ft Meridian: M Dtd: SE

Location: NW PORTION OF BEALE AIR FORCE BASE 2.2 KM SSW OF HAMMONTON ROAD X MARYSVILLE SMARTSVILLE ROAD
 Location Detail: SW REGION OF SUBURBIT A
 Ecological: NORTHERN HARDPAN VERNAL POOL
 Threat: GRAZING DRAINAGE CHANNELS FUTURE RAILROAD CONSTRUCTION
 General: POOL #428 L OCCIDENTALIS OBSERVED 1 EACH COLLECTED ON 3/16/95 & 4/1/95 AND DEPOSITED IN PERSONAL COLLECTION OF D.G. ALEXANDER. 13 OF 19 POOLS SAMPLED ON BASE HAD 1 OCCIDENTALIS SUBURBIT A REFERS TO AREA MAPPED IN 1980 SURVEY
 Owner/Manager: DOD-BEALE AFB

Lindberghia occidentalis

California Invertebrates Status: NDBB Element Rank: Other Lists: Element Code: ICR04001C
 Federal Status: Globish G3 State: S196 S2S3 CDFG Status: CDFG Status

Habitat Associations: NDBB Element Rank: Other Lists: Element Code: ICR04001C
 Globish G3 State: S196 S2S3 CDFG Status: CDFG Status

General: Seasonal Pools in Impoverished Grasslands with Cold Alluvial Soils Underlain by Hardpan or in Sandstone Depressions
 Micro: Water in the Pools has Very Low Alkalinity, Conductivity, and TDS

Occurrence No: 94 Map Index: 1529 ED Index: 1529 Dates Last Seen: 1991-04-13
 Dec Rank: Unknown Origin: Natural/Naive occurrence Element: 1991-04-13
 Presence: Presumed Extant Trend: Unknown Site: 1991-04-13
 Record Last Updated: 2000-01-10

County Summary: Browns Valley (38121245438)
 County Summary: Yuba

Land Comp: 38 152977 121 45146* Township: 15N
 UTM: Zone 10 M433571 E63370 Range: 05E
 Radius: 80 meters Section: 08
 Elevation: 92 ft Meridian: M Dtd: SW

Location: NORTHWEST PORTION OF BEALE AIR FORCE BASE, 0.3 KMS S OF HAMMONTON ROAD AT MARYSVILLE SMARTSVILLE ROAD
 Location Detail: N PORTION OF SUBURBIT A ALSO REPORTED SIMPLY FROM "BEALE AIR FORCE BASE" BY D.C. ROGERS
 Ecological: NORTHERN HARDPAN VERNAL POOL
 Threat: GRAZING DRAINAGE CHANNELS FUTURE RAILROAD CONSTRUCTION
 General: POOL #423 L OCCIDENTALIS OBSERVED 7 COLLECTED ON 2/28/95, 3/28/95 & 4/1/95 AND DEPOSITED IN PERSONAL COLLECTION OF D.G. ALEXANDER. 13 OF 19 POOLS SAMPLED ON BASE HAD 1 OCCIDENTALIS SUBURBIT A REFERS TO AREA MAPPED IN 1980 SURVEY
 Owner/Manager: DOD-BEALE AFB

Occurrence No: 95 Map Index: 1528 ED Index: 1528 Dates Last Seen: 1991-02-23
 Dec Rank: Unknown Origin: Natural/Naive occurrence Element: 1991-02-23
 Presence: Presumed Extant Trend: Unknown Site: 1991-02-23
 Record Last Updated: 1995-12-11

County Summary: Browns Valley (38121245438)
 County Summary: Yuba

Land Comp: 38 150339 121 45146* Township: 15N
 UTM: Zone 10 M433571 E63370 Range: 05E
 Radius: 80 meters Section: 08
 Elevation: 92 ft Meridian: M Dtd: SW

Location: NORTHWEST PORTION OF BEALE AIR FORCE BASE, 0.6 KMS S OF HAMMONTON ROAD AT MARYSVILLE SMARTSVILLE ROAD
 Location Detail: NORTHERN AREA OF SUBURBIT A
 Ecological: NORTHERN HARDPAN VERNAL POOL
 Threat: GRAZING DRAINAGE CHANNELS FUTURE RAILROAD CONSTRUCTION
 General: POOL #425 L OCCIDENTALIS OBSERVED 1 COLLECTED AND DEPOSITED IN PERSONAL COLLECTION OF D.G. ALEXANDER. 13 OF 19 POOLS SAMPLED ON BASE HAD 1 OCCIDENTALIS SUBURBIT A REFERS TO AREA MAPPED IN 1980 SURVEY
 Owner/Manager: DOD-BEALE AFB

Occurrence No: 96 Map Index: 1527 ED Index: 1527 Dates Last Seen: 1991-02-23
 Dec Rank: Unknown Origin: Natural/Naive occurrence Element: 1991-02-23
 Presence: Presumed Extant Trend: Unknown Site: 1991-02-23
 Record Last Updated: 1995-12-11

County Summary: Browns Valley (38121245438)
 County Summary: Yuba

Land Comp: 38 152977 121 45146* Township: 15N
 UTM: Zone 10 M433571 E63370 Range: 05E
 Radius: 80 meters Section: 08
 Elevation: 92 ft Meridian: M Dtd: NE

Location: NW PORTION OF BEALE AIR FORCE BASE - 1.0 KMS OF HAMMONTON ROAD AT MARYSVILLE SMARTSVILLE ROAD
 Location Detail: NORTH CENTRAL REGION OF SUBURBIT A
 Ecological: NORTHERN HARDPAN VERNAL POOL
 Threat: GRAZING DRAINAGE CHANNELS FUTURE RAILROAD CONSTRUCTION
 General: POOL #425 L OCCIDENTALIS OBSERVED 1 COLLECTED AND DEPOSITED IN PERSONAL COLLECTION OF D.G. ALEXANDER. 13 OF 19 POOLS SAMPLED ON BASE HAD 1 OCCIDENTALIS SUBURBIT A REFERS TO AREA MAPPED IN 1980 SURVEY
 Owner/Manager: DOD-BEALE AFB

Northern Hardpan Vernal Pool

Status: Unknown
 Federal Name: None
 State Name: None
 Habitat Associations: None
 Element Code: CTT44110CA
 Other Lists: None

Occurrence No: 137
 Occ Rank: Unknown
 Origin: Natural/habitat occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 31403
 ED Index: 30629
 Dates Last Seen: 1991 XX XX
 Element: 1991 XX XX
 Site: 1991 XX XX
 Record Last Updated: 2009-05-15

County Summary: Browns Valley (3912124543B)
 Yuba

Latitude: 39.14177, -121.48127
 UTM Zone: 10M433861 E634782
 Area: 1.0780 Acres
 Elevation: 90 ft

Mapping Precision: SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 18
 Meridian: 1W
 Date: 01 XX

Location: BEALE AIR FORCE BASE, BETWEEN MARYSVILLE SMARTVILLE AND CAMP BEALE ROADS IN THE VICINITY OF REEDS GREEN VERNAL POOLS FOUND THROUGHOUT SECTION 18 AND IN S 1/2 OF SECTION 17 W 1/2 OF SECTION 18 NW 1/4 OF SECTION 20 AND E 1/2 OF SECTION 24

Ecological: DOMINANT SPECIES INCLUDE NAVARRETTIA LEUCOCEPHALA, RANUNCULUS BOMARENIS SSP. TRISEPALUS, ERYNGIUM VASEYI, PLAGIOBOTRYDIS STERTIATA, LASTHENIA FREMONTII, LAMNARHIS DOUGLASSI VAR. ROSEA, ELEOCHARIS MACROSTACHYA, AND PLAGIOBOTRYDIS GREENEII

Threat: GRAZING AND MOSQUITO ABATEMENT MEASURES INTRODUCTION OF GAMBUSIA UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION

General: THE AREA CONTAINS AT LEAST 1400 POOLS AND 272 SWALES MORE INFO IN GREGGS REPORT SEE WWW.DFG.CA.GOV/BGEO/DATA/VEGCOMP/NATURAL_COMAI_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES

OverManager: DDD-BEALE AFB

Northern Hardpan Vernal Pool

Status: Unknown
 Federal Name: None
 State Name: None
 Habitat Associations: None
 Element Code: CTT44110CA
 Other Lists: None

Occurrence No: 138
 Occ Rank: Unknown
 Origin: Natural/habitat occurrence
 Presence: Presumed Extant
 Trend: Unknown
 Map Index: 31404
 ED Index: 1542
 Dates Last Seen: 1991 XX XX
 Element: 1991 XX XX
 Site: 1991 XX XX
 Record Last Updated: 1998-07-15

County Summary: Browns Valley (3912124543B)
 Yuba

Latitude: 39.13197, -121.44102
 UTM Zone: 10M433258 E634748
 Area: 1.1 Acres
 Elevation: 90 ft

Mapping Precision: SPECIFIC
 Symbol Type: POLYGON
 Township: 15N
 Range: 04E
 Section: 07
 Meridian: 1W
 Date: 01 SE

Location: BEALE AIR FORCE BASE, APPROX. 1.6 MILES EAST OF REEDS CREEK CROSSING WITH CAMP BEALE RD. 0.1-0.3 MI NORTH OF THE ROAD

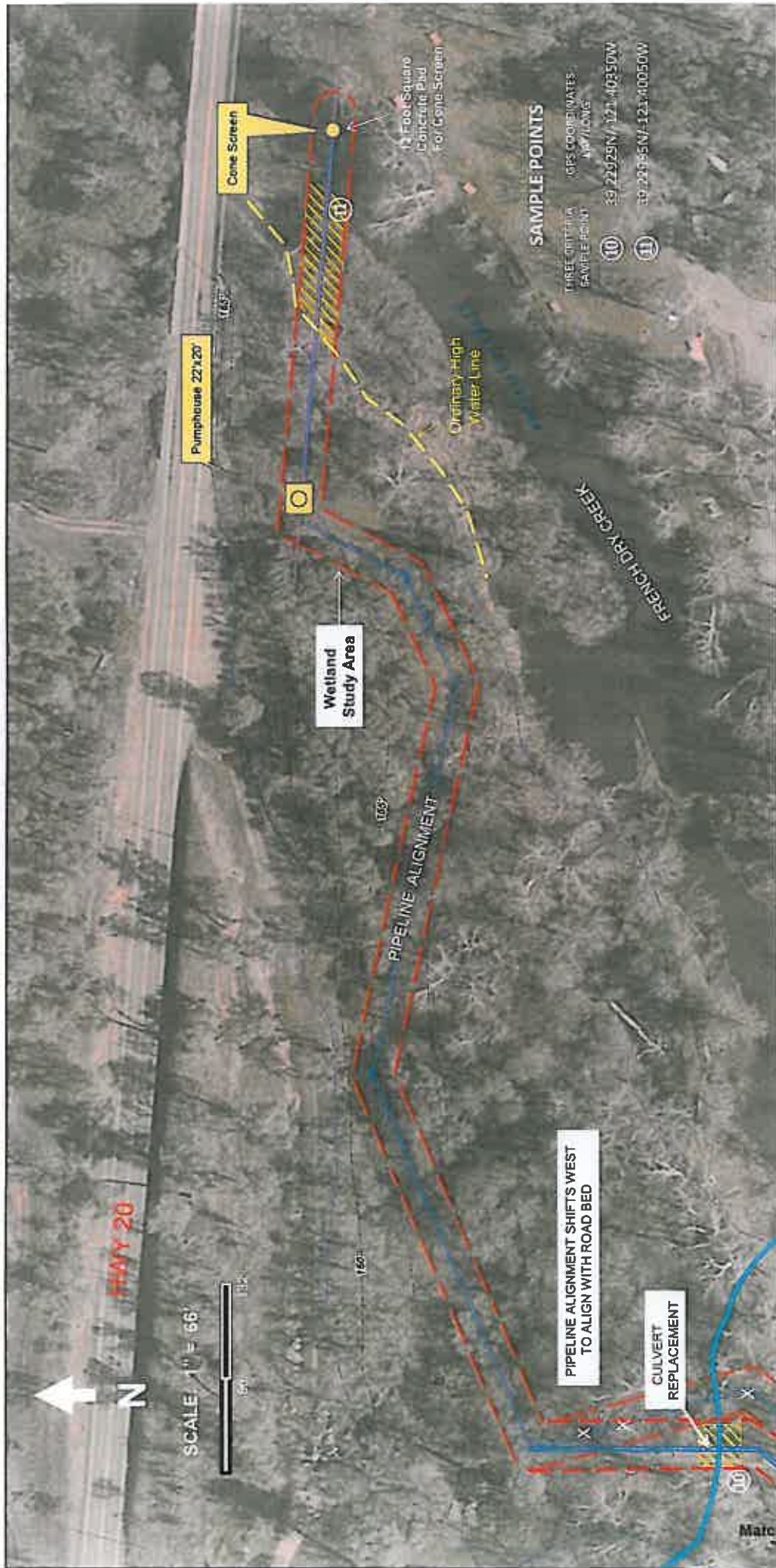
Ecological: DOMINANT POOL SPECIES INCLUDE NAVARRETTIA LEUCOCEPHALA, RANUNCULUS BOMARENIS SSP. TRISEPALUS, PLAGIOBOTRYDIS STERTIATA, LASTHENIA SP. DESCHAMPSIA DANTHORHODES, ERYNGIUM VASEYI, HORDCIUM GEMICULATUM AND LOLUM MULTIFLORUM

Threat: GRAZING UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION LACKS SPP. INFO

General: THE AREA CONTAINS APPROXIMATELY 97 VERNAL POOLS COVERING 2.13 ACRES MORE INFO IN GREGGS REPORT SEE WWW.DFG.CA.GOV/BGEO/DATA/VEGCOMP/NATURAL_COMAI_BACKGROUND.ASP TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES

OverManager: DDD-BEALE AFB

**ENCLOSURE E – WETLAND
DETERMINATION MAP**



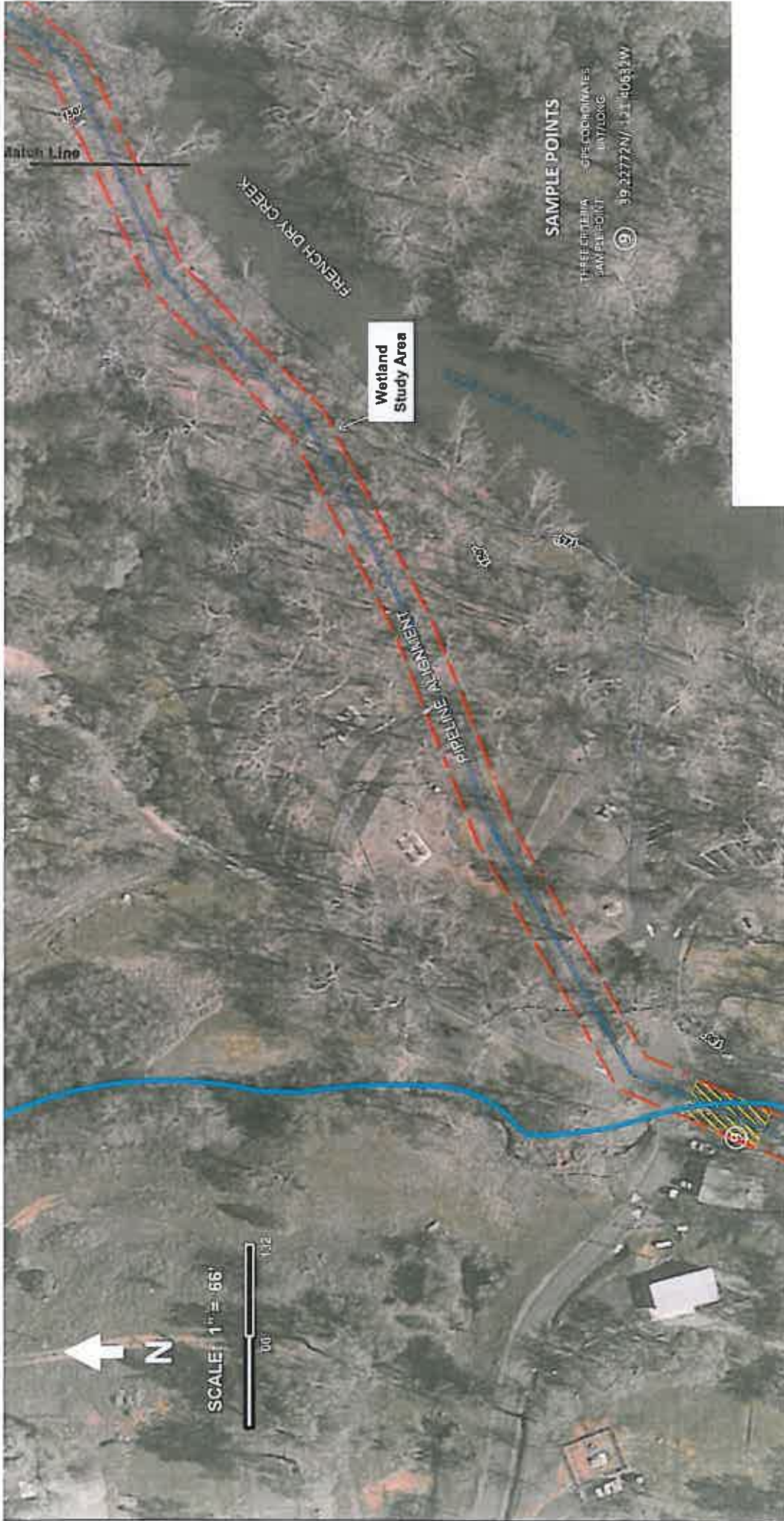
WATERS OF U.S. / TEMPORARY IMPACTS
 Data Point 10: 600 sf. / 45 sf.
 Data Point 11: 4,752 sf. / 474 sf.

WATERS OF U.S. / PERMANENT IMPACTS
 Data Point 11: 3,752 sf. / 144 sf.
 Concrete Pad for Cone Screen

Legend

- CONSTRUCTION CORRIDOR 30 FEET IN WIDTH
- DELINEATED AREAS
- SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project
 Conducted By: **MARCUS H. BOLE & ASSOCIATES**, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS
 Data Point 9: 1,500 sf. / 150 sf.

Legend

- CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
- DELINEATED AREAS
- SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: **MARCUS H. BOLE & ASSOCIATES**, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS

None on this display

Legend

-  CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
-  DELINEATED AREAS
-  SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: MARCUS H. BOLE & ASSOCIATES, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS

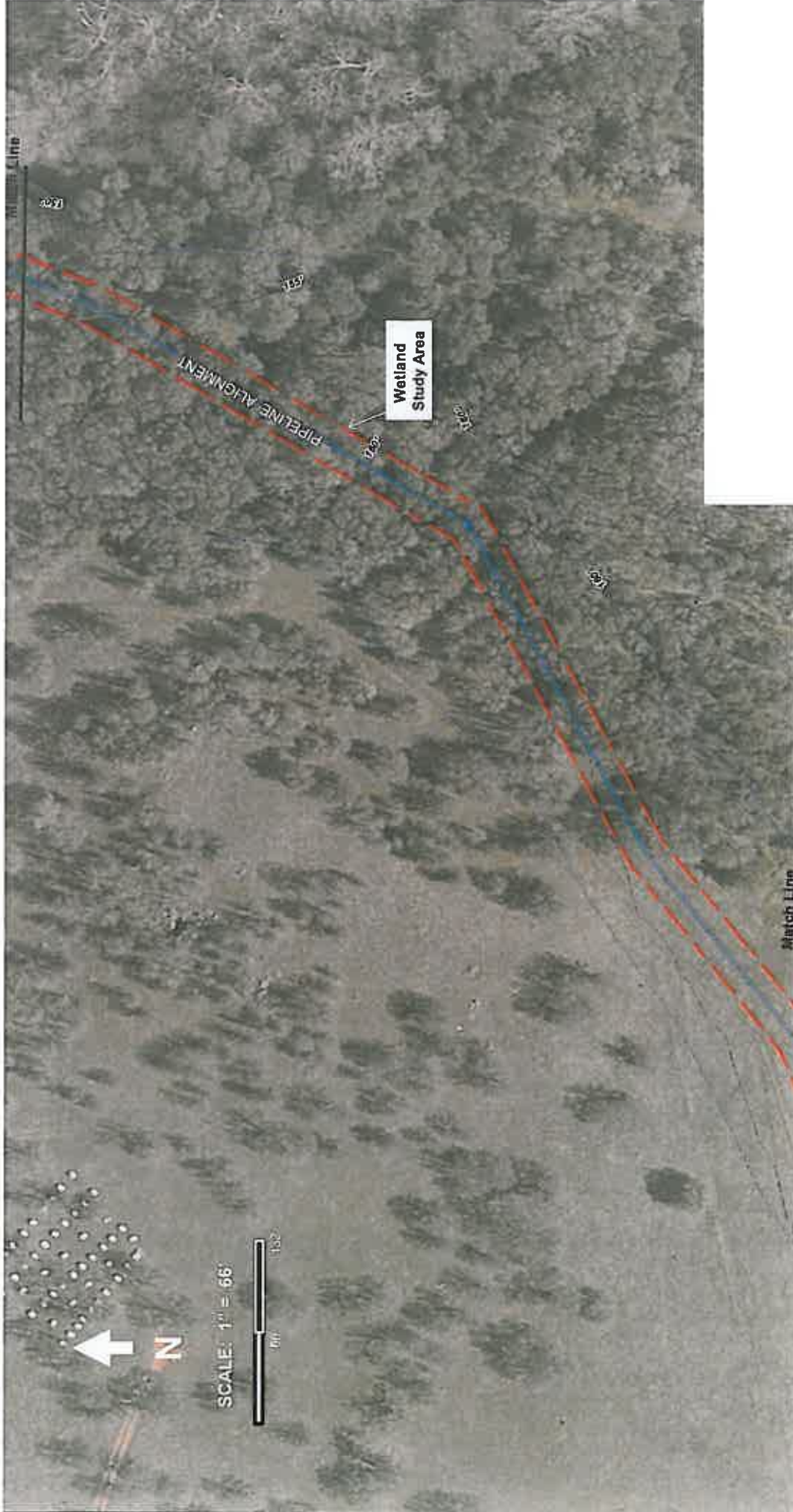
None on this display

Legend

- CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
- DELINEATED AREAS
- SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: MARCUS H. BOLE & ASSOCIATES, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS

None on this display

Legend

-  CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
-  DELINEATED AREAS
-  SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: MARCUS H. BOLE & ASSOCIATES, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, M1 Diablo BM.
 March 8, 2013



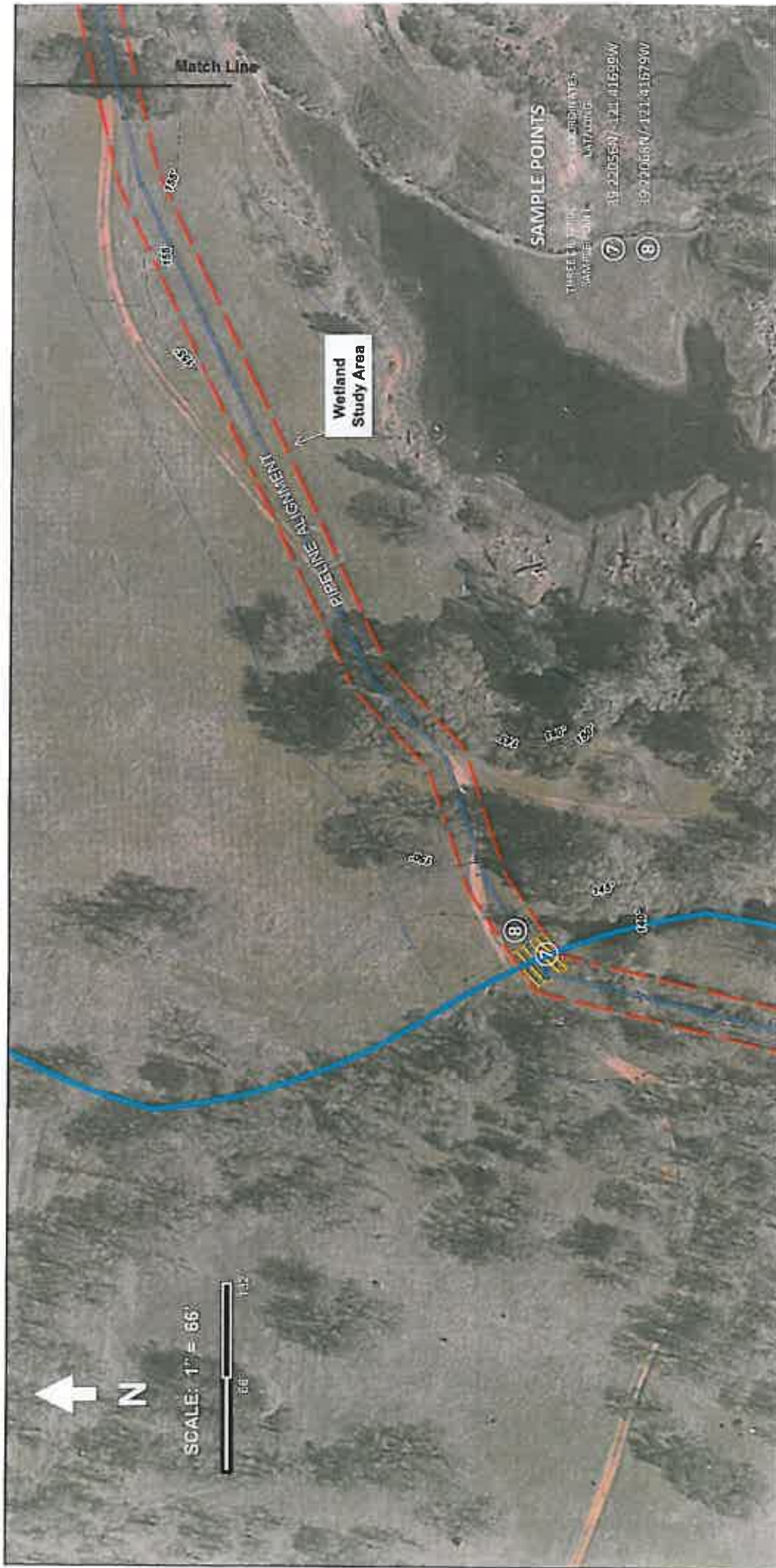
WATERS OF U.S. / TEMPORARY IMPACTS
 Data Point 12: 840 sf. / 84 sf.

Legend

- CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
- DELINEATED AREAS
- SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: **MARCUS H. BOLE & ASSOCIATES**, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



Match Line

Wetland Study Area

PIPELINE ALIGNMENT

SAMPLE POINTS

THREE TUBES
SAMPLED
COORDINATES
LAT/LONG

⑦ 19°22'05.56"N / 121°41'16.90"W

⑧ 19°22'06.68"N / 121°41'16.79"W



SCALE: 1" = 66'



WATERS OF U.S. / TEMPORARY IMPACTS
Data Point 7: 750 sf. / 75 sf.

Legend

- CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
- DELINEATED AREAS
- SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: MARCUS H. BOLE & ASSOCIATES, PHONE: 530-633-0117
Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS

None on this display

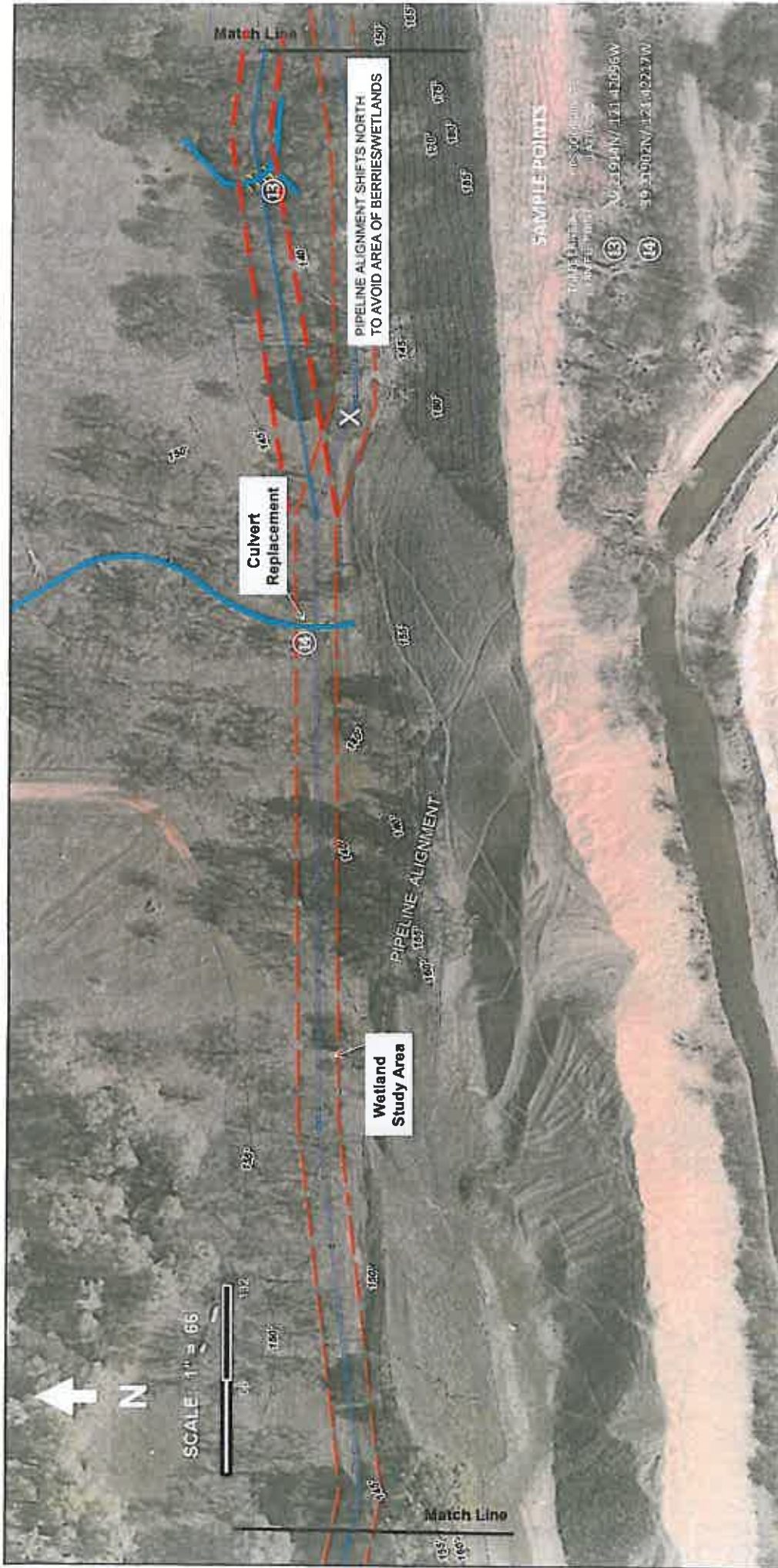
Legend

- CONSTRUCTION CORRIDOR 30 FEET IN WIDTH 
- DELINEATED AREAS 
- SWALE/DRAINAGE 

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: MARCUS H. BOLE & ASSOCIATES, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.

March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS
 Data Point 13: 180 sf. / 18 sf.
 Data Point 14: 150 sf. / 25 sf.

Legend

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: **MARCUS H. BOLE & ASSOCIATES**, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



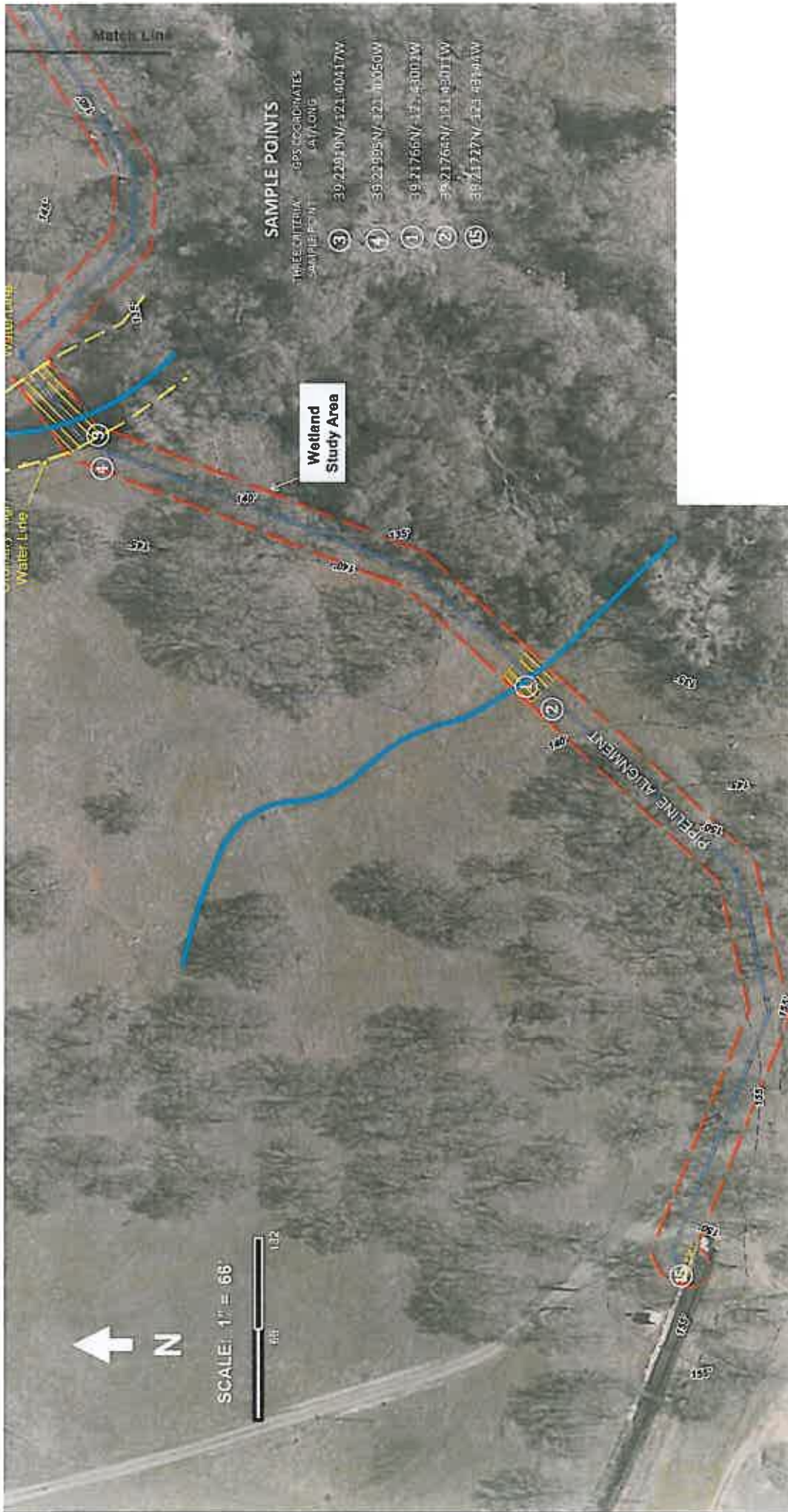
WATERS OF U.S. / TEMPORARY IMPACTS
 Data Point 5: 540 sf. / 54 sf.

Legend

- CONSTRUCTION CORRIDOR
30 FEET IN WIDTH
- DELINEATED AREAS
- SWALE/DRAINAGE

USACE Jurisdictional Delineation: Dry Creek Recapture Project

Conducted By: **MARCUS H. BOILE & ASSOCIATES**, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013



WATERS OF U.S. / TEMPORARY IMPACTS
 Data Point 3: 1,500 sf. / 150 sf.
 Data Point 1: 840 sf. / 84 sf.
 Data Point 15: 25 sf. / 25 sf.

Legend

USACE Jurisdictional Delineation: Dry Creek Recapture Project
 Conducted By: MARCUS H. BOLE & ASSOCIATES, PHONE: 530-633-0117
 Property located within Sections 21, 22, 28, and 29; T 16N, R 5E, Mt Diablo BM.
 March 8, 2013

**ENCLOSURE F – NATIONWIDE 12 PERMIT
SUMMARY INFORMATION and REGIONAL
CONDITIONS FOR CALIFORNIA**



U S Army Corps of
Engineers
Sacramento District

Nationwide Permit Summary

33 CFR Part 330; Issuance of Nationwide Permits - March 19, 2007 includes corrections of May 8, 2007 and addition of regional conditions December 2007

12. Utility Line Activities. Activities required for the construction, maintenance, repair, and removal of utility lines and associated facilities in waters of the United States, provided the activity does not result in the loss of greater than 1/2 acre of waters of the United States.

Utility lines: This NWP authorizes the construction, maintenance, or repair of utility lines, including outfall and intake structures, and the associated excavation, backfill, or bedding for the utility lines, in all waters of the United States, provided there is no change in pre-construction contours. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liqescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.

Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.

Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2 acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.

Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.

Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in

non-tidal waters of the United States, provided the total discharge from a single and complete project does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.

This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR Part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.

This NWP also authorizes temporary structures, fills, and work necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet; or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 27.) (Sections 10 and 404)

Note 1: Where the proposed utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters), copies of the pre-construction notification and NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.

Note 2: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, accordance with the requirements for temporary fills.

Note 3: Pipes or pipelines used to transport gaseous, liquid, lyescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to Section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15)

A. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation.

- (a) No activity may cause more than a minimal adverse effect on navigation.
- (b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.
- (c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. **Aquatic Life Movements.** No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions.

3 **Spawning Areas.** Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. **Migratory Bird Breeding Areas.** Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. **Shellfish Beds.** No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48.

6. **Suitable Material.** No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. **Water Supply Intakes.** No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. **Adverse Effects From Impoundments.** If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. **Management of Water Flows.** To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. **Fills Within 100-Year Floodplains.** The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. **Equipment.** Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. **Soil Erosion and Sediment Controls.** Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. **Removal of Temporary Fills.** Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. **Proper Maintenance.** Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety.

15. **Wild and Scenic Rivers.** No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in

writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

17. Endangered Species.

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of

separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at <http://www.fws.gov/> and <http://www.noaa.gov/fisheries.html> respectively.

18. Historic Properties.

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause

effects on historic properties (see 36 CFR §800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA-designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWP 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

20 Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States

to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

“When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the

property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.”

(Transferee)

(Date)

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

27. Pre-Construction Notification.

(a) **Timing.** Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) Forty-five calendar days have passed from the district engineer’s receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is “no effect” on listed species or “no potential to cause effects” on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see

33 CFR 330.4(f) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWP's 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

- (1) Name, address and telephone numbers of the prospective permittee;
- (2) Location of the proposed project;
- (3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);
- (4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;
- (5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
- (6) If any listed species or designated critical habitat might be affected or is in the vicinity

of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination:

(1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWP's and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies'

concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.

(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.

(a) **28. Single and Complete Project.** The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

B. Regional Conditions:

1. Sacramento District (All States, except Colorado)

1. When pre-construction notification (PCN) is required, the prospective permittee shall notify the Sacramento District in accordance with General Condition 27 using either the South Pacific Division Preconstruction Notification (PCN) Checklist or a completed application form (ENG Form 4345). In addition, the PCN shall include:

a. A written statement explaining how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;

b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and size (in acreage) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the high tide line should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation; and

c. Pre-project color photographs of the project site taken from designated locations documented on the plan drawing.

2. The permittee shall complete compensatory mitigation required by special conditions of the NWP verification before or concurrent with construction of the authorized activity, except when specifically determined to be impracticable by the Sacramento District. When project mitigation involves use of a mitigation bank or in-lieu fee program, payment shall be made before commencing construction.

3. The permittee shall record the NWP verification with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property against areas (1) designated to be preserved as part of mitigation for authorized impacts, including any associated covenants or restrictions, or (2) where structures such as boat ramps or docks, marinas, piers, and permanently moored vessels will be constructed in or adjacent to navigable waters (Section 10 and Section 404). The recordation shall also include a map showing the surveyed location of the authorized structure and any associated areas preserved to minimize or compensate for project impacts.
 4. The permittee shall place wetlands, other aquatic areas, and any vegetative buffers preserved as part of mitigation for impacts into a separate "preserve" parcel prior to discharging dredged or fill material into waters of the United States, except where specifically determined to be impracticable by the Sacramento District. Permanent legal protection shall be established for all preserve parcels, following Sacramento District approval of the legal instrument.
 5. The permittee shall allow Corps representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the NWP verification. The permittee will be notified in advance of an inspection.
 6. For NWPs 29, 39, 40, 42, 43, 44, and 46, requests to waive the 300 linear foot limitation for intermittent or ephemeral waters of the U.S. shall include an evaluation of functions and services provided by the waterbody taking into account the watershed, measures to be implemented to avoid and minimize impacts, other measures to avoid and minimize that were found to be impracticable, and a mitigation plan for offsetting impacts.
 7. Road crossings shall be designed to ensure fish passage, especially for anadromous fisheries. Permittees shall employ bridge designs that span the stream or river, utilize pier or pile supported structures, or involve large bottomless culverts with a natural streambed, where the substrate and streamflow conditions approximate existing channel conditions. Approach fills in waters of the United States below the ordinary high water mark are not authorized under the NWPs, except where avoidance has specifically been determined to be impracticable by the Sacramento District.
 8. For NWP 12, clay blocks, bentonite, or other suitable material shall be used to seal the trench to prevent the utility line from draining waters of the United States, including wetlands.
 9. For NWP 13, bank stabilization shall include the use of vegetation or other biotechnical design to the maximum extent practicable. Activities involving hard-armoring of the bank toe or slope requires submission of a PCN per General Condition 27.
 10. For NWP 23, the PCN shall include a copy of the signed Categorical Exclusion document and final agency determinations regarding compliance with Section 7 of the Endangered Species Act, Essential Fish Habitat under the Magnusson-Stevens Act, and Section 106 of the National Historic Preservation Act.
 11. For NWP 44, the discharge shall not cause the loss of more than 300 linear feet of streambed. For intermittent and ephemeral streams, the 300 linear foot limit may be waived in writing by the Sacramento District. This NWP does not authorize discharges in waters of the United States supporting anadromous fisheries.
 12. For NWPs 29 and 39, channelization or relocation of intermittent or perennial drainage, is not authorized, except when, as determined by the Sacramento District, the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.
 13. For NWP 33, temporary fills for construction access in waters of the United States supporting fisheries shall be accomplished with clean, washed spawning quality gravels where practicable as determined by the Sacramento District, in consultation with appropriate federal and state wildlife agencies.
 14. For NWP 46, the discharge shall not cause the loss of greater than 0.5 acres of waters of the United States or the loss of more than 300 linear feet of ditch, unless this 300 foot linear foot limit is waived in writing by the Sacramento District.
 15. For NWPs 29, 39, 40, 42, and 43, upland vegetated buffers shall be established and maintained in perpetuity, to the maximum extent practicable, next to all preserved open waters, streams and wetlands including created, restored, enhanced or preserved waters of the U.S., consistent with General Condition 20. Except in unusual circumstances, vegetated buffers shall be at least 50 feet in width.
 16. All NWPs except 3, 6, 20, 27, 32, 38, and 47, are revoked for activities in histosols and fens and in wetlands contiguous with fens. Fens are defined as slope wetlands with a histicepipedon that are hydrologically supported by groundwater. Fens are normally saturated throughout the growing season, although they may not be during drought conditions. For NWPs 3, 6, 20, 27, 32, and 38, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27.
 17. For all NWPs, when activities are proposed within 100 feet of the point of groundwater discharge of a natural spring, prospective permittees shall submit a PCN to the Sacramento District in accordance with General Condition 27. A spring source is defined as any location where ground water emanates from a point in the ground. For purposes of this condition, springs do not include seeps or other discharges which lack a defined channel.
- ## II. California Only
1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.
 2. In the Primary and Secondary Zones of the Legal Delta, NWPs 29 and 39 are revoked. New development activities in the Legal Delta will be reviewed through the Corps' standard permit process.
- ## III. Nevada Only
1. In the Lake Tahoe Basin, all NWPs are revoked. Activities in this area shall be authorized under Regional General Permit 16 or through an individual permit.

IV. Utah Only

1. For all NWP, except NWP 47, prospective permittees shall submit a PCN in accordance with General Condition 27 for any activity, in waters of the United States, below 4217 feet mean sea level (msl) adjacent to the Great Salt Lake and below 4500 feet msl adjacent to Utah Lake.
2. A PCN is required for all bank stabilization activities in a perennial stream that would affect more than 100 linear feet of stream
3. For NWP 27, facilities for controlling stormwater runoff, construction of water parks such as kayak courses, and use of grout or concrete to construct in-stream structures are not authorized. A PCN is required for all projects exceeding 1500 linear feet as measured on the stream thalweg, using in stream structures exceeding 50 cubic yards per structure and/or incorporating grade control structures exceeding 1 foot vertical drop. For any stream restoration project, the post project stream sinuosity shall be appropriate to the geomorphology of the surrounding area and shall be equal to, or greater than, pre project sinuosity. Sinuosity is defined as the ratio of stream length to project reach length. Structures shall allow the passage of aquatic organisms, recreational water craft or other navigational activities unless specifically waived in writing by the District Engineer.

V. Colorado Only

1. Final Regional Conditions Applicable to Specific Nationwide Permits within Colorado.

- a. Nationwide Permit Nos. 12 and 14, Utility Line Activities and Linear Transportation Projects. In the Colorado River Basin, utility line and road activities crossing perennial water or special aquatic sites require notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification).
- b. Nationwide Permit No. 13 Bank Stabilization. In Colorado, bank stabilization activities necessary for erosion prevention in streams that average less than 20 feet in width (measured between the ordinary high water marks) are limited to the placement of no more than 1/4 cubic yard of suitable fill* material per running foot below the plane of the ordinary high water mark. Activities greater than 1/4 cubic yard may be authorized if the permittee notifies the District Engineer in accordance with General Condition 27 (Pre-Construction Notification) and the Corps determines the adverse environmental effects are minimal. [* See (g) for definition of Suitable Fill]
- c. Nationwide Permit No. 27 Aquatic Habitat Restoration, Establishment, and Enhancement Activities.

(1) For activities that include a fishery enhancement component, the Corps will send the Pre-Construction Notification to the Colorado Division of Wildlife (CDOW) for review. In accordance with General Condition 27 (Pre-Construction Notification), CDOW will have 10 days from the receipt of Corps notification to indicate that they will be commenting on the proposed project. CDOW will then have an additional 15 days after the initial 10-day period to

provide those comments. If CDOW raises concerns, the applicant may either modify their plan, in coordination with CDOW, or apply for a standard individual permit.

- (2) For activities involving the length of a stream, the post-project stream sinuosity will not be significantly reduced, unless it is demonstrated that the reduction in sinuosity is consistent with the natural morphological evolution of the stream (sinuosity is the ratio of stream length to project reach length).
- (3) Structures will allow the upstream and downstream passage of aquatic organisms, including fish native to the reach, as well as recreational water craft or other navigational activities, unless specifically waived in writing by the District Engineer. The use of grout and/or concrete in building structures is not authorized by this nationwide permit.
- (4) The construction of water parks (i.e., kayak courses) and flood control projects are not authorized by this nationwide permit.

d. Nationwide Permits Nos. 29 and 39; Residential Developments and Commercial and Institutional Developments. A copy of the existing FEMA/locally-approved floodplain map must be submitted with the Pre-Construction Notification. When reviewing proposed developments, the Corps will utilize the most accurate and reliable FEMA/locally-approved pre-project floodplain mapping, not post-project floodplain mapping based on a CLOMR or LOMR. However, the Corps will accept revisions to existing floodplain mapping if the revisions resolve inaccuracies in the original floodplain mapping and if the revisions accurately reflect pre-project conditions.

2. Final Regional Conditions Applicable to All Nationwide Permits within Colorado

- e. Removal of Temporary Fills. General Condition 13 (Removal of Temporary Fills) is amended by adding the following: When temporary fills are placed in wetlands in Colorado, a horizontal marker (i.e. fabric, certified weed-free straw, etc.) must be used to delineate the existing ground elevation of wetlands that will be temporarily filled during construction.
- f. Spawning Areas. General Condition 3 (Spawning Areas) is amended by adding the following: In Colorado, all Designated Critical Resource Waters (see enclosure 1) are considered important spawning areas. Therefore, In accordance with General Condition 19 (Designated Critical Resource Waters), the discharge of dredged or fill material is not authorized by the following nationwide permits in these waters: NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50. In addition, in accordance with General Condition 27 (Pre-Construction Notification), notification to the District Engineer is required for use of the following nationwide permits in these waters: NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37 and 38".

g. **Suitable Fill.** In Colorado, use of broken concrete as fill material requires notification to the District Engineer in accordance with General Condition 27 (Pre-Construction Notification). Permittees must demonstrate that soft engineering methods utilizing native or non-manmade materials are not practicable (with respect to cost, existing technology, and logistics), before broken concrete is allowed as suitable fill. Use of broken concrete with exposed rebar is prohibited in perennial waters and special aquatic sites.

h. **Invasive Aquatic Species.** General Condition 11 is amended by adding the following condition for work in perennial or intermittent waters of the United States: If heavy equipment is used for the subject project that was previously working in another stream, river, lake, pond, or wetland within 10 days of initiating work, one the following procedures is necessary to prevent the spread of New Zealand Mud Snails and other aquatic hitchhikers:

- (1) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and keep the equipment dry for 10 days. OR
- (2) Remove all mud and debris from Equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with either a 1:1 solution of Formula 409 Household Cleaner and water, or a solution of Sparquat 256 (5 ounces Sparquat per gallon of water). Treated equipment must be kept moist for at least 10 minutes. OR
- (3) Remove all mud and debris from equipment (tracks, turrets, buckets, drags, teeth, etc.) and spray/soak equipment with water greater than 120 degrees F for at least 10 minutes.

3. Final Regional Conditions for Revocation/Special Notification Specific to Certain Geographic Areas

i. **Fens:** All Nationwide permits, except permit Nos. 3, 6, 20, 27, 32, 38 and 47, are revoked in fens and wetlands adjacent to fens. Use of nationwide permit Nos. 3, 20, 27 and 38, requires notification to the District Engineer, in accordance with General Condition 27 (Pre-Construction Notification), and the permittee may not begin the activity until the Corps determines the adverse environmental effects are minimal. The following defines a fen:

Fen soils (histosols) are normally saturated throughout the growing season, although they may not be during drought conditions. The primary source of hydrology for fens is groundwater. Histosols are defined in accordance with the U.S. Department of Agriculture, Natural Resources Conservation Service publications on Keys to Soil Taxonomy and Field Indicators of Hydric Soils in the United States (<http://soils.usda.gov/technical/classification/taxonomy>).

j. **Springs:** Within the state of Colorado, all NWP, except permit 47 (original 'C'), require preconstruction notification pursuant to General Condition 27 for discharges of dredged or fill material within 100 feet of the point of groundwater discharge of natural springs. A

spring source is defined as any location where groundwater emanates from a point in the ground. For purposes of this regional condition, springs do not include seeps or other discharges which do not have a defined channel.

4. Additional Information

The following provides additional information regarding minimization of impacts and compliance with existing general Conditions:

a. Permittees are reminded of the existing General Condition No. 6 which prohibits the use of unsuitable material. Organic debris, building waste, asphalt, car bodies, and trash are not suitable material. Also, General Condition 12 requires appropriate erosion and sediment controls (i.e. all fills must be permanently stabilized to prevent erosion and siltation into waters and wetlands at the earliest practicable date). Streambed material or other small aggregate material placed along a bank as stabilization will not meet General Condition 12. Also, use of erosion control mats that contain plastic netting may not meet General Condition 12 if deemed harmful to wildlife.

b. **Designated Critical Resource Waters in Colorado.** In Colorado, a list of designated Critical Resource Waters has been published in accordance with General Condition 19 (Designated Critical Resource Waters). This list will be published on the Albuquerque District Regulatory home page (<http://www.spa.usace.army.mil/reg/>)

c. **Federally-Listed Threatened and Endangered Species.** General condition 17 requires that non-federal permittees notify the District Engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project. Information on such species, to include occurrence by county in Colorado, may be found at the following U.S. Fish and Wildlife Service website: http://www.fws.gov/mountain%2Dprairie/endspp/name_county_search.htm

C. Further Information

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

D. Definitions

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration, establishment (creation), enhancement, or preservation of aquatic resources for the purpose of compensating for unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Discharge: The term “discharge” means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to

jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of “open waters” include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning

natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a coarse substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through which surface and subsurface hydrology connects waterbodies with their adjacent uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 20.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete project: The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete project must have independent utility (see definition). For linear projects, a "single and complete project" is all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to,

stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWP, a waterbody is a jurisdictional water of the United States that, during a year with normal patterns of precipitation, has water flowing or standing above ground to the extent that an ordinary high water mark (OHWM) or other indicators of jurisdiction can be determined, as well as any wetland area (see 33 CFR 328.3(b)). If a jurisdictional wetland is adjacent--meaning bordering, contiguous, or neighboring--to a jurisdictional waterbody displaying an OHWM or other indicators of jurisdiction, that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

Final Sacramento District Nationwide Permit
Regional Conditions for California, excluding the Lake Tahoe Basin
(Effective March 19, 2012 until March 18, 2017)

1.* When pre-construction notification (PCN) is required, the permittee shall notify the U.S. Army Corps of Engineers, Sacramento District (Corps) in accordance with General Condition 31 using either the South Pacific Division Preconstruction Notification (PCN) Checklist or a signed application form (ENG Form 4345) with an attachment providing information on compliance with all of the General and Regional Conditions. In addition, the PCN shall include:

- a. A written statement describing how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States;
- b. Drawings, including plan and cross-section views, clearly depicting the location, size and dimensions of the proposed activity, as well as the location of delineated waters of the U.S. on the site. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and area (in acres) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark or, if tidal waters, the mean high water mark and high tide line, should be shown (in feet), based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation. All drawings for activities located within the boundaries of the Los Angeles District shall comply with the September 15, 2010 Special Public Notice: *Map and Drawing Standards for the Los Angeles District Regulatory Division*, (available on the Los Angeles District Regulatory Division website at: www.spl.usace.army.mil/regulatory/); and
- c. Numbered and dated pre-project color photographs showing a representative sample of waters proposed to be impacted on the site, and all waters of the U.S. proposed to be avoided on and immediately adjacent to the project site. The compass angle and position of each photograph shall be identified on the plan-view drawing(s) required in subpart b of this Regional Condition.

2. For all Nationwide Permits (NWP), the permittee shall submit a PCN in accordance with General Condition 31 and Regional Condition 1, in the following circumstances:

- a. For all activities that would result in the discharge of fill material into any vernal pool;
- b. For any activity in the Primary and Secondary Zones of the Legal Delta, the Sacramento River, the San Joaquin River, and the immediate tributaries of these waters;
- c. For all crossings of perennial waters and intermittent waters;
- d. For all activities proposed within 100 feet of the point of discharge of a known natural spring source, which is any location where ground water emanates from a point in the ground excluding seeps or other discharges which lack a defined channel; and

e.* For all activities located in areas designated as Essential Fish Habitat (EFH) by the Pacific Fishery Management Council (i.e., all tidally influenced areas - Federal Register dated March 12, 2007 (72 FR 11092)), in which case the PCN shall include an EFH assessment and extent of proposed impacts to EFH. Examples of EFH habitat assessments can be found at: <http://www.swr.noaa.gov/efh.htm>.

3. The permittee shall record the NWP verification with the Registrar of Deeds or other appropriate official charged with the responsibility for maintaining records of title to or interest in real property for areas (1) designated to be preserved as part of compensatory mitigation for authorized impacts, including any associated covenants or restrictions, or (2) where boat ramps or docks, marinas, piers, and permanently moored vessels will be constructed or placed in or adjacent to navigable waters. The recordation shall also include a map showing the surveyed location of the preserved area or authorized structure.

* Regional Condition developed jointly between Sacramento District, Los Angeles District, and San Francisco District.

4. For all waters of the U.S. proposed to be avoided on a site, unless determined to be impracticable by the Corps, the permittee shall:

- a. Establish and maintain, in perpetuity, a preserve containing all avoided waters of the U.S. to ensure that the functions of the aquatic environment are protected;
- b. Place all avoided waters of the U.S. and any upland buffers into a separate parcel prior to discharging dredge or fill material into waters of the U.S., and
- c. Establish permanent legal protection for all preserve parcels, following Corps approval of the legal instrument;

If the Corps determines that it is impracticable to require permanent preservation of the avoided waters, additional mitigation may be required in order to compensate for indirect impacts to the waters of the U.S.

5. For all temporary fills, the PCN shall include a description of the proposed temporary fill, including the type and amount of material to be placed, the area proposed to be impacted, and the proposed plan for restoration of the temporary fill area to pre-project contours and conditions, including a plan for the re-vegetation of the temporary fill area, if necessary. In addition, the PCN shall include the reason(s) why avoidance of temporary impacts is not practicable.

In addition, for all activities resulting in temporary fill within waters of the U.S., the permittee shall:

- a. Utilize material consisting of clean and washed gravel. For temporary fills within waters of the U.S. supporting anadromous fisheries, spawning quality gravel shall be used, where practicable, as determined by the Corps, after consultation with appropriate Federal and state fish and wildlife agencies;
- b. Place a horizontal marker (e.g. fabric, certified weed free straw, etc.) to delineate the existing ground elevation of the waters temporarily filled during construction; and
- c. Remove all temporary fill within 30 days following completion of construction activities.

6. In addition to the requirements of General Condition 2, unless determined to be impracticable by the Corps, the following criteria shall apply to all road crossings:

- a.* For all activities in waters of the U.S. that are suitable habitat for Federally-listed fish species, the permittee shall design all road crossings to ensure that the passage and/or spawning of fish is not hindered. In these areas, the permittee shall employ bridge designs that span the stream or river, including pier- or pile-supported spans, or designs that use a bottomless arch culvert with a natural stream bed;
- b. Road crossings shall be designed to ensure that no more than minor impacts would occur to fish and wildlife passage or expected high flows, following the criteria listed in Regional Condition 6(a). Culverted crossings that do not utilize a bottomless arch culvert with a natural stream bed may be authorized for waters that do not contain suitable habitat for Federally listed fish species, if it can be demonstrated and is specifically determined by the Corps, that such crossing will result in no more than minor impacts to fish and wildlife passage or expected high flows;
- c. No construction activities shall occur within standing or flowing waters. For ephemeral or intermittent streams, this may be accomplished through construction during the dry season. In perennial streams, this may be accomplished through dewatering of the work area. Any proposed dewatering plans must be approved, in writing, by the Corps prior to commencement of construction activities; and

* Regional Condition developed jointly between Sacramento District, Los Angeles District, and San Francisco District.

d. All bank stabilization activities associated with a road crossing shall comply with Regional Condition 19.

In no case shall stream crossings result in a reduction in the pre-construction bankfull width or depth of perennial streams or negatively alter the flood control capacity of perennial streams.

7.* For activities in which the Corps designates another Federal agency as the lead for compliance with Section 7 of the Endangered Species Act (ESA) of 1973 as amended, pursuant to 50 CFR Part 402.07, Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act (EFH), pursuant to 50 CFR 600.920(b) and/or Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, pursuant to 36 CFR 800.2(a)(2), the lead Federal agency shall provide all relevant documentation to the Corps demonstrating any previous consultation efforts, as it pertains to the Corps Regulatory permit area (for Section 7 and EFH compliance) and the Corps Regulatory area of potential effect (APE) (for Section 106 compliance). For activities requiring a PCN, this information shall be submitted with the PCN. If the Corps does not designate another Federal agency as the lead for ESA, EFH and/or NHPA, the Corps will initiate consultation for compliance, as appropriate.

8. For all NWP's which require a PCN, the permittee shall submit the following additional information with the compliance certificate required under General Condition 30:

a. As-built drawings of the work conducted on the project site and any on-site and/or off-site compensatory mitigation, preservation, and/or avoidance area(s). The as-builts shall include a plan-view drawing of the location of the authorized work footprint (as shown on the permit drawings), with an overlay of the work as constructed in the same scale as the permit drawings. The drawing shall show all areas of ground disturbance, wetland impacts, structures, and the boundaries of any on-site and/or off-site mitigation or avoidance areas. Please note that any deviations from the work as authorized, which result in additional impacts to waters of the U.S., must be coordinated with the appropriate Corps office prior to impacts; and

b. Numbered and dated post-construction color photographs of the work conducted within a representative sample of the impacted waters of the U.S., and within all avoided waters of the U.S. on and immediately adjacent to the proposed project area. The compass angle and position of all photographs shall be similar to the pre-construction color photographs required in Regional Condition 1(c) and shall be identified on the plan-view drawing(s) required in subpart a of this Regional Condition.

9. For all activities requiring permittee responsible mitigation, the permittee shall develop and submit to the Corps for review and approval, a final comprehensive mitigation and monitoring plan for all permittee responsible mitigation prior to commencement of construction activities within waters of the U.S. The plan shall include the mitigation location and design drawings, vegetation plans, including target species to be planted, and final success criteria, presented in the format of the *Sacramento District's Habitat Mitigation and Monitoring Proposal Guidelines*, dated December 30, 2004, and in compliance with the requirements of 33 CFR 332.

10.* The permittee shall complete the construction of any compensatory mitigation required by special condition(s) of the NWP verification before or concurrent with commencement of construction of the authorized activity, except when specifically determined to be impracticable by the Corps. When mitigation involves use of a mitigation bank or in-lieu fee program, the permittee shall submit proof of payment to the Corps prior to commencement of construction of the authorized activity.

11. The permittee is responsible for all authorized work and ensuring that all contractors and workers are made aware and adhere to the terms and conditions of the permit authorization. The permittee shall ensure

that a copy of the permit authorization and associated drawings are available and visible for quick reference at the site until all construction activities are completed.

12. The permittee shall clearly identify the limits of disturbance in the field with highly visible markers (e.g. construction fencing, flagging, silt barriers, etc.) prior to commencement of construction activities within waters of the U.S. The permittee shall maintain such identification properly until construction is completed and the soils have been stabilized. The permittee is prohibited from any activity (e.g. equipment usage or materials storage) that impacts waters of the U.S. outside of the permit limits (as shown on the permit drawings).

13. For all activities in which a PCN is required, the permittee shall notify the appropriate district office of the start date for the authorized work within 10 days prior to initiation of construction activities.

14. The permittee shall allow Corps representatives to inspect the authorized activity and any mitigation areas at any time deemed necessary to determine compliance with the terms and conditions of the NWP verification. The permittee will be notified in advance of an inspection.

15. For all activities located in the Mather Core Recovery Area in Sacramento County, as identified in the U.S. Fish and Wildlife Service's *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* dated December 15, 2005, NWPs 14, 18, 23, 29, 39, 40, 42, 43 and 44 are revoked from use in vernal pools that may contain habitat for Federally-listed threatened and/or endangered vernal pool species.

16. For activities located in the Primary or Secondary Zone of the Legal Delta, NWPs 29 and 39 are revoked.

17. For all activities within the Secondary Zone of the Legal Delta, the permittee shall conduct compensatory mitigation for unavoidable impacts within the Secondary Zone of the Legal Delta.

18. For NWP 12: Permittees shall ensure the construction of utility lines does not result in the draining of any water of the U.S., including wetlands. This may be accomplished through the use of clay blocks, bentonite, or other suitable material (as approved by the Corps) to seal the trench. For utility line trenches, during construction, the permittee shall remove and stockpile, separately, the top 6 – 12 inches of topsoil. Following installation of the utility line(s), the permittee shall replace the stockpiled topsoil on top and seed the area with native vegetation. The permittee shall submit a PCN for utility line activities in the following circumstances:

a. The utility line crossing would result in a discharge of dredged and/or fill material into perennial waters, intermittent waters, wetlands, mudflats, vegetated shallows, riffle and pool complexes, sanctuaries and refuges or coral reefs;

b. The utility line activity would result in a discharge of dredged and/or fill material into greater than 100 linear feet of ephemeral waters of the U.S.;

c. The utility line installation would include the construction of a temporary or permanent access road, substation or foundation within waters of the U.S.; or

d. The proposed activity would not involve the restoration of all utility line trenches to pre-project contours and conditions within 30 days following completion of construction activities.

19. For NWP 13 and 14: All bank stabilization activities shall involve either the sole use of native vegetation or other bioengineered design techniques (e.g. willow plantings, root wads, large woody debris, etc.), or a combination of hard-armoring (e.g. rip-rap) and native vegetation or bioengineered design

techniques, unless specifically determined to be impracticable by the Corps. The permittee shall submit a PCN for any bank stabilization activity that involves hard-armoring or the placement of any non-vegetated or non-bioengineered technique below the ordinary high water mark or, if tidal waters, the high tide line of waters of the U.S. The request to utilize non-vegetated techniques must include information on why the sole use of vegetated techniques is not practicable.

20. For NWP 23: The permittee shall submit a PCN for all activities proposed for this NWP, in accordance with General Condition 31 and Regional Condition 1. The PCN shall include a copy of the signed Categorical Exclusion document and final agency determinations regarding compliance with ESA, EFH and NHPA, in accordance with General Conditions 18 and 20 and Regional Condition 7.

21. For NWP 27: The permittee shall submit a PCN for aquatic habitat restoration, establishment, and enhancement activities in the following circumstances:

a. The restoration, establishment or enhancement activity would result in a discharge of dredged and/or fill material into perennial waters, intermittent waters, wetlands, mudflats, vegetated shallows, riffle and pool complexes, sanctuaries and refuges or coral reefs; or

b. The restoration, establishment or enhancement activity would result in a discharge of dredged and/or fill material into greater than 100 linear feet of ephemeral waters of the U.S.

22. For NWPs 29 and 39: The channelization or relocation of intermittent or perennial drainages is not authorized, except when, as determined by the Corps, the relocation would result in a net increase in functions of the aquatic ecosystem within the watershed.

23.* Any requests to waive the 300 linear foot limitation for intermittent and ephemeral streams for NWPs 21, 29, 39, 40, 42, 43, 44, 50, 51 and 52, or to waive the 500 linear foot limitation along the bank for NWP 13, must include the following:

a. A narrative description of the stream. This should include known information on: volume and duration of flow; the approximate length, width, and depth of the waterbody and characteristics observed associated with an Ordinary High Water Mark (e.g. bed and bank, wrack line or scour marks); a description of the adjacent vegetation community and a statement regarding the wetland status of the adjacent areas (i.e. wetland, non-wetland); surrounding land use; water quality; issues related to cumulative impacts in the watershed, and; any other relevant information;

b. An analysis of the proposed impacts to the waterbody, in accordance with General Condition 31 and Regional Condition 1;

c. Measures taken to avoid and minimize losses to waters of the U.S., including other methods of constructing the proposed activity(s); and

d. A compensatory mitigation plan describing how the unavoidable losses are proposed to be offset, in accordance with 33 CFR 332.

24. For NWPs 29, 39, 40, 42, and 43: The permittee shall establish and maintain upland vegetated buffers in perpetuity, unless specifically determined to be impracticable by the Corps, next to all preserved open waters, streams and wetlands including created, restored, enhanced or preserved waters of the U.S., consistent with General Condition 23(f). Except in unusual circumstances, as determined by the Corps, vegetated buffers shall be at least 50 feet in width.

25. For NWP 46: The discharge shall not cause the loss of greater than 0.5 acres of waters of the United States or the loss of more than 300 linear feet of ditch, unless specifically waived in writing by the Corps.

26. All NWPs except 3, 6, 20, 27, 32, and 38 are revoked for activities in histosols, fens, bogs and peatlands and in wetlands contiguous with fens. Fens are defined as slope wetlands with a histic epipedon that are hydrologically supported by groundwater. Fens are normally saturated throughout the growing season, although they may not be during drought conditions. For NWPs 3, 6, 20, 27, 32, and 38, the permittee shall submit a PCN to the Corps in accordance with General Condition 31 and Regional Condition 1. This condition does not apply to NWPs 1, 2, 8, 9, 10, 11, 24, 28, 35 or 36, as these NWPs either apply to Section 10 only activities or do not authorize impacts to special aquatic sites.