



North County Corridor New State Route 108

Preliminary Jurisdictional Delineation

Cities of Modesto, Riverbank, and Oakdale

Stanislaus County, California

10-STA-108

SR-108 [PM 27.5/44.5], SR-219 [PM 3.7/4.8], SR-120 [PM 6.9-11.6]

Project ID. 1000000263

EA 10-0S800

March 2015



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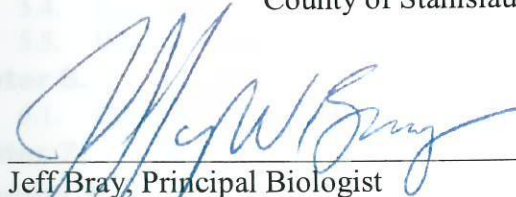
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EA 10-0S800

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STATE OF CALIFORNIA
Department of Transportation
County of Stanislaus

Prepared By:

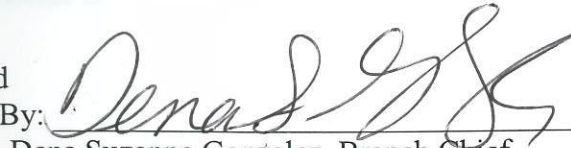


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Table of Contents

Chapter 1.	Introduction	1
1.1.	Project Location	1
1.2.	Project Description	5
Chapter 2.	Environmental Setting.....	7
2.1.	Topography	7
2.2.	Climate	7
2.3.	Hydrology.....	7
2.4.	Soils	8
2.5.	Vegetation Communities and Land Uses	14
Chapter 3.	Regulatory Background.....	24
3.1.	Wetlands.....	24
3.2.	Non-wetland Waters.....	27
Chapter 4.	Methodology	28
4.1.	Field Investigation.....	28
4.2.	Previous Studies/Coordination	29
4.3.	Access.....	29
4.4.	Irrigated Pasture Wetlands	29
Chapter 5.	Results	30
5.1.	Perennial Marsh.....	32
5.2.	Ditches.....	32
5.3.	Ponds	33
5.4.	Canals	33
5.5.	Irrigated Wetlands	33
Chapter 6.	Conclusion.....	34
6.1.	Conclusion.....	34
Chapter 7.	References	35
Appendix A	Delineation Maps / Potential Jurisdictional Waters Table	36
Appendix B	Wetland Data Forms.....	37
Appendix C	Representative Photos	38
Appendix D	Summary of Waters of the U.S. by Build Alternative.....	39

List of Figures

Figure 1: Regional Location	2
Figure 2: Study Area on Topographic Base	3
Figure 3: Study Area and Project Alternatives	4
Figure 4a and 4b: Soil Units	12
Figure 5a and 5b: Vegetation Communities and Land Uses	16
Figure 6: Preliminary Jurisdictional Delineation Overview	31

List of Tables

Table 1: Summary of Soil Units that Occur within the Study Area	8
Table 2: Vegetation Communities and Land Uses	15
Table 3: Hydrophytic Vegetation	25
Table 4: Summary of Potential Waters of the U.S. in the Study Area (acres)	30

List of Abbreviated Terms

BSA	Biological Study Area
CTS	California tiger salamander
Caltrans	California Department of Transportation
EPA	United States Environmental Protection Agency
ft	foot/feet
GIS	Geographic Information System
ICF	ICF International
mi	miles
MID	Modesto Irrigation District
NCC	North County Corridor New State Route 108
NES	Natural Environment Study
OID	Oakdale Irrigation District
OHWM	Ordinary high water mark
SR	State Route
U.S.	United States
USACE	United States Army Corps of Engineers

Chapter 1. Introduction

The California Department of Transportation (Caltrans), in cooperation with the North County Corridor Transportation Expressway Authority, proposes to construct the North County Corridor New State Route 108 (NCC) in northern Stanislaus County, California.

This report presents the results of a delineation of the extent of waters of the United States, including wetlands, within the study area developed for the NCC. Waters of the United States are subject to United States Army Corps of Engineers (USACE) regulation under Section 404 of the Clean Water Act.

1.1. Project Location

The NCC is located in northern Stanislaus County in the San Joaquin Valley. The western end of the NCC begins approximately 4 miles (mi) east of State Route (SR) 99 and approximately 0.75 mi north of Modesto. The NCC extends approximately 18 mi to the east/northeast and ends at SR-108 east of Oakdale.

The NCC is located within portions of Township 2 South Ranges 9, 10, and 11E and Township 3 South Ranges 9, 10, and 11E Mount Diablo Baseline and Meridian, on the Salida, California; Riverbank, California; Waterford, California; Oakdale, California; and Knights Ferry, California 7.5-minute series United States Geological Survey topographic maps.

The regional vicinity is shown in Figure 1. The project location is shown in Figures 2 and 3.

1.1.1. Driving Directions

To reach the western end of the study area: from SR-99, exit at Broadway Avenue/Kiernan Avenue/CA-219 and proceed east on Broadway Avenue/Kiernan Avenue/CA-219 about 4 mi until reaching the Claribel Road/Tully Road intersection (western limit of the study area). To reach the eastern end of the study area: continue east from the Claribel Road/Tully Road intersection approximately 4 mi until reaching Albers Road. Proceed north on Albers until it reaches SR-108, then proceed east. The eastern limit of the study area is approximately 6 mi east, near the intersection of Lancaster Road and SR-108.

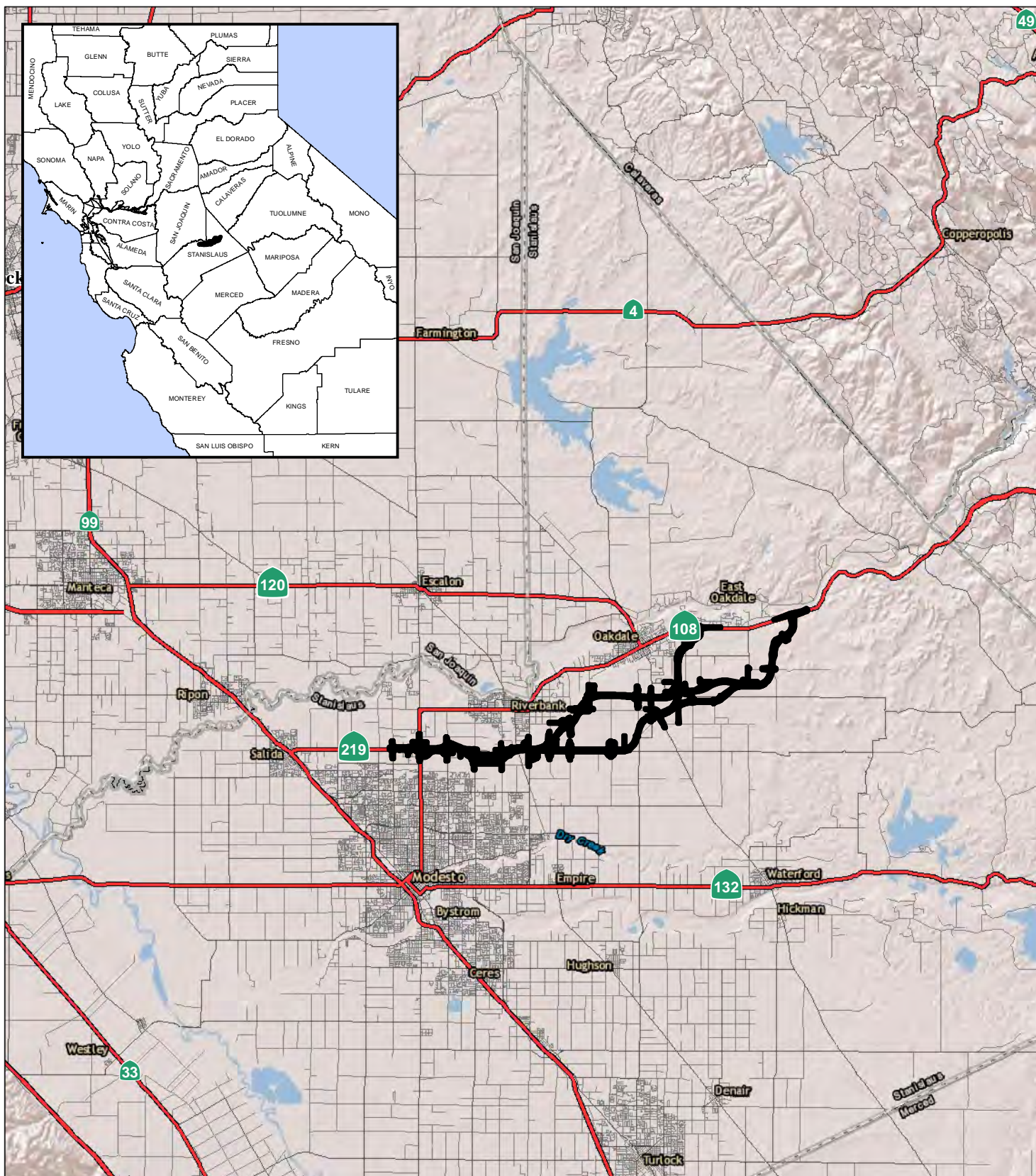

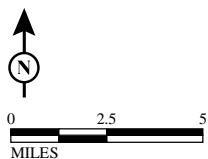


FIGURE 1



LEGEND

 Study Area



SOURCE: ESRI Imagery (4/2008)

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Regional Location

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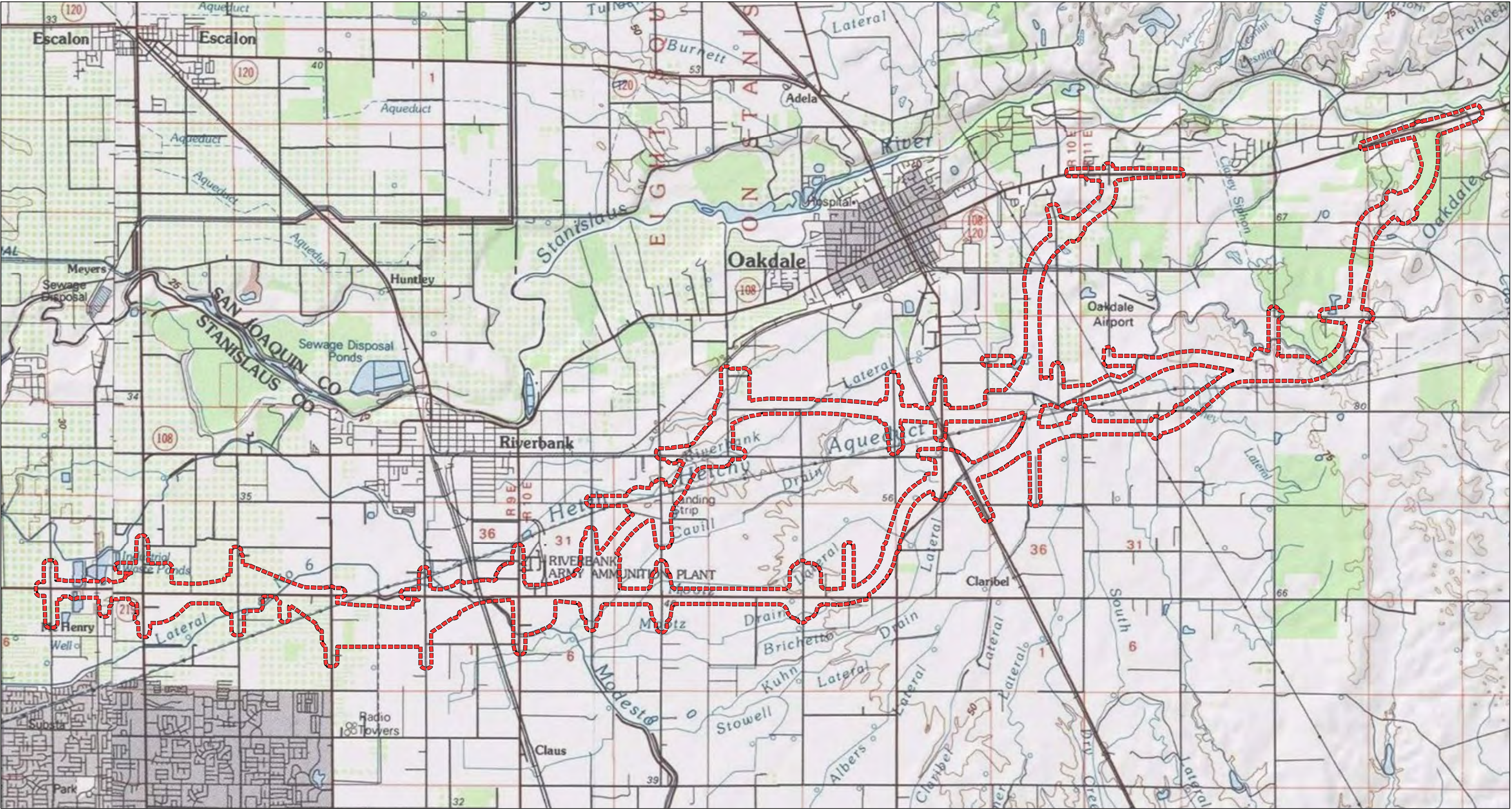

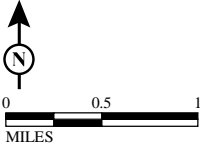


FIGURE 2



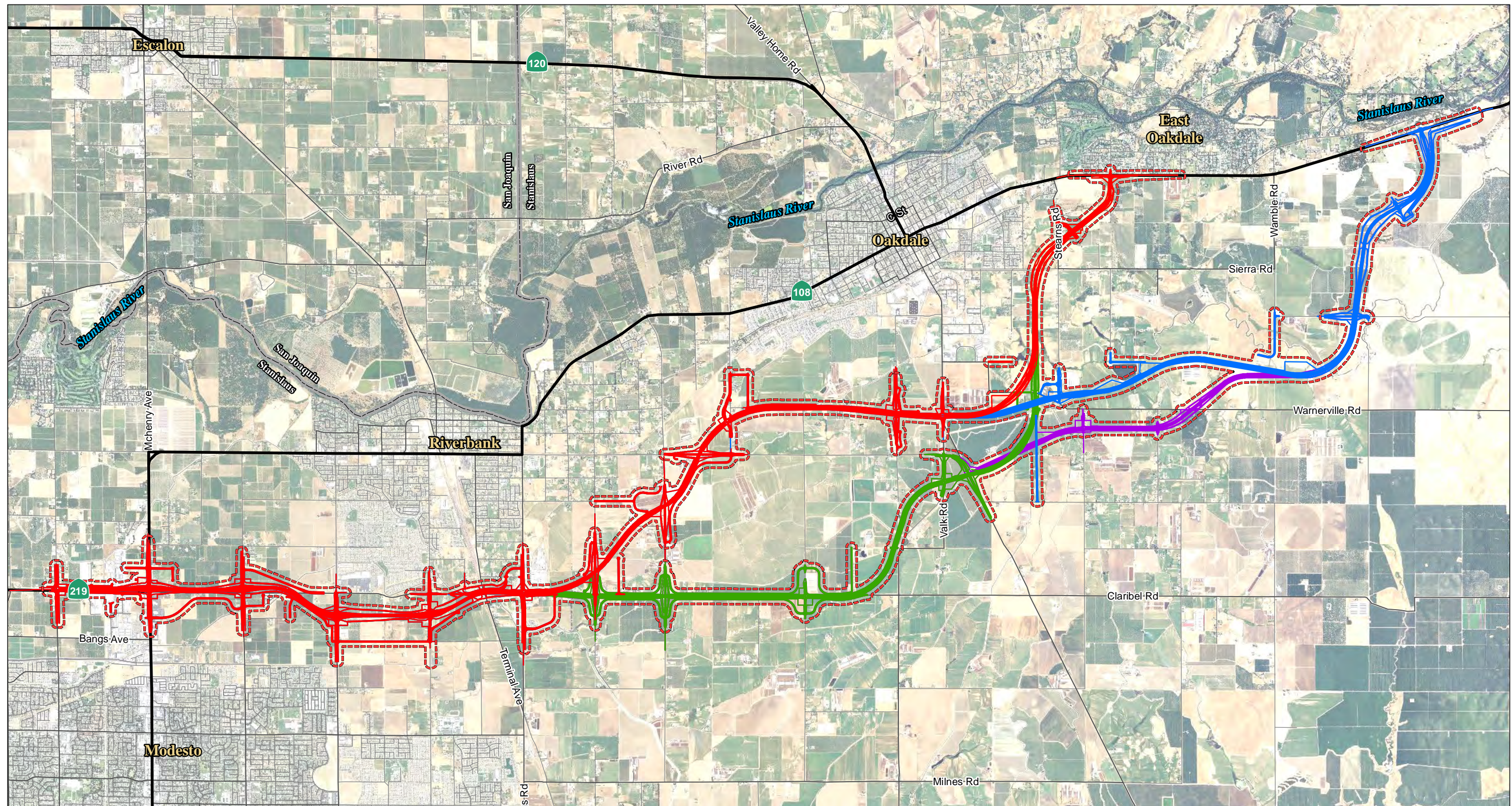
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 Study Area



SOURCE: USGS Topo Map (San Joaquin and Stanislaus Counties)
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Study Area on Topographic Base
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0 0.5 1
MILES

SOURCE: NAIP (2012)

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LEGEND

- Study Area
- Alternative 1A
- Alternative 1B
- Alternative 2A
- Alternative 2B

FIGURE 3

Study Area and Project Alternatives
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Stanislaus County, California

1.2. Project Description

The proposed project is located in Caltrans District 10 within portions of the Oakdale, Riverbank, and Modesto communities, Stanislaus County, California (see Figures 1 and 2). The NCC will connect SR-219 near Modesto, CA to SR-120 near Oakdale, CA. The proposed project consists of four Build Alternatives (1A, 1B, 2A, and 2B) and the No-Build Alternative (see Figure 3).

The western terminus of all alternatives is at the SR-219 (Kiernan Avenue)/Tully Road intersection. The alternatives proceed to the vicinity of the Claus Road/Claribel Road intersection, where Segment 2 begins and the alternatives separate into two different alignments (A and B). In Segment 2, Alternatives 1A and 1B veer northeast near the Claus Road/Claribel Road intersection and pass through the southern boundary of Oakdale, and Alternatives 2A and 2B continue easterly along Claribel Road and turn northeastward past the intersection of Claribel Road/Bentley Road. Each of the alternatives then breaks into two possible alignments to their eastern terminus in Segment 3, just past the Oakdale-Waterford Highway. The eastern terminus of Alternatives 1A and 2A end along SR-108/120 just east of the City of Oakdale boundary. Alternatives 1B and 2B end farther east of the Alternatives 1A and 2A terminus, along SR-108/120 in the vicinity of Lancaster Road. The purpose of the project is to reduce existing and future traffic congestion in northern Stanislaus County, enhance traffic safety on existing SR-108, support the efficient movement of goods, and improve interregional travel.

The proposed project improvements include:

- At grade intersections;
- Grade separation structures at major roadway and railway crossings;
- Structures at various waterway crossings, such Modesto Irrigation District (MID) and Oakdale Irrigation District (OID) canals;
- County and City roadway improvements at various locations; and,
- New freeway/expressway controlled access travel lanes.

The four alternatives would consist of two to three 12-foot (ft)-wide through lanes with 5-ft to 10-ft-wide left and right shoulders in each direction. The east-bound and west-bound alignments would be separated by a 46 to 70-ft-wide median, including

the 5-ft to 19-ft-wide shoulders and 26-ft to 60-ft-wide graded, unpaved median area. Drainage swales would be located along either side of the new roadway.

As the proposed roadway would function as a freeway/expressway with controlled access, new and realigned local access roads are needed to provide continued access to existing properties. This would involve construction of a discontinuous local roadway system, which would provide a 12-ft-wide through lane and an 8-ft-wide shoulder, in each direction. Up to a 12-ft-wide area would be provided between the right-of-way limit and the edge of pavement to allow for drainage ditches. Where required, turn lanes would provide connections to cross roads. Each of the four build alternatives includes these proposed local access roads, which are delineated on Figure 3.

Elevated roadways, separated grade crossings, single point urban interchanges, signalized intersections, and roundabouts would be needed for each of the four alternatives. A Class 2 bike lane would also be constructed within the road shoulder from Claus Road to the eastern terminus at SR-108/120.

Various utilities exist throughout the project area that would need to be relocated. These include electric, telephone, water, sewer, and irrigation lines. At the time of this report, the exact locations to which the impacted utilities would be relocated is unknown, but relocation would take place within the currently defined project area.

Permanent right-of-way and temporary construction easements would also be required for the proposed project.

Chapter 2. Environmental Setting

The study area is located in northern Stanislaus County in the San Joaquin Valley, the western limits begin northeast of the City of Modesto continuing south of the City of Riverbank and ending east of the City of Oakdale, on the existing SR-108/120.

The study area, as discussed herein, consists of the proposed NCC and local access road right of way limits plus an additional 250 ft. On continuous sections of the NCC (i.e., with no interchanges, intersections, etc.), the study area is approximately 740 ft wide; the average width of the study area along local access roads is 560 ft; the total acreage of the project area is approximately 5,434 acres.

2.1. Topography

The western and central portions of the study area are generally flat; the topography begins trending upward in the eastern portion of the study area. The elevation within the study area ranges from approximately 100 ft above sea level at the western end to approximately 250 ft above sea level at the eastern end.

2.2. Climate

The climate in the study area is Mediterranean with cool, wet winters and hot, dry summers. The average total annual precipitation is approximately 12.21 inches (Western Regional Climate Center, 2014), most of which falls between November and April. There is normally less than 0.5 inch of rain between June and September. The average winter temperature is 47.5 °F and the average winter low temperature is 39.6 °F. The average summer temperature is 75.1 °F and the average summer high temperature 91.6 °F.

2.3. Hydrology

The study area is located within the Middle San Joaquin-Lower Merced-Lower Stanislaus Watershed (Hydrologic Unit Code # 18040002) (U.S. Environmental Protection Agency 2014).

There are no substantial waterways in the study area but several small waterways are present. Many of these waterways are very small and unnamed, with only seasonal

water conveyance. The eastern portion of the study area, generally north of Warnerville Road, drains to the north towards the Stanislaus River. The remainder of the study area generally drains south or southwest towards Dry Creek, which is a tributary to the Tuolumne River.

Several irrigation canals also occur within the study area. These canals are part of either the MID (western part of the study area) or the OID (eastern part of the study area). The irrigation canals are generally concrete-lined and controlled with earthen levees.

2.4. Soils

According to the *Soil Survey of the Eastern Stanislaus County Area* (Arkley 1964), a total of 54 soil mapping units occur within the study area. These units are summarized below in Table 1 and are shown on Figures 4a and 4b.

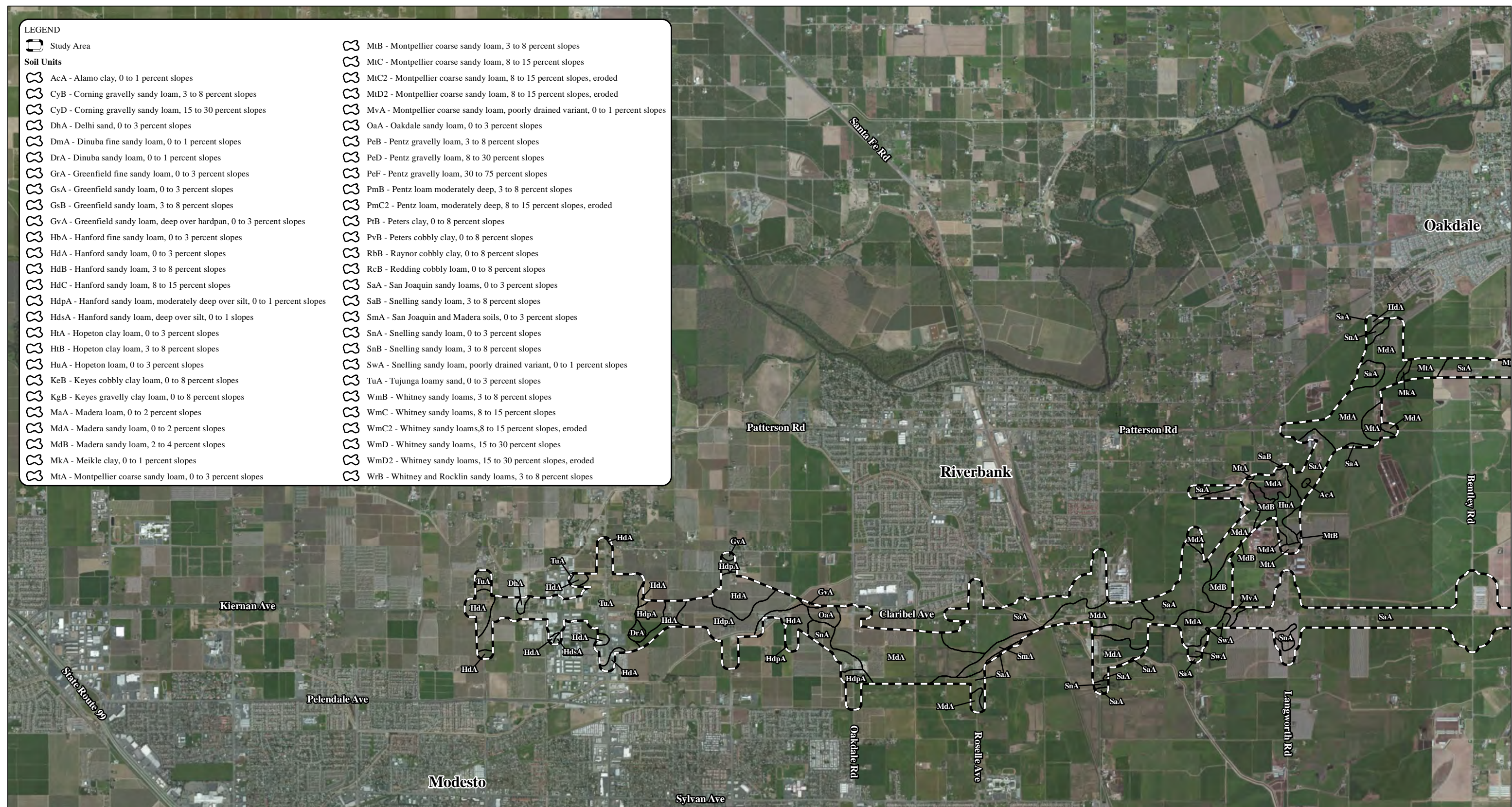
Table 1: Summary of Soil Units that Occur within the Study Area

Map Unit	Soil Series	Location	Drainage Class	Permeability	Texture
AcA	Alamo clay, 0 to 1 percent slopes	Fan remnants	Poorly drained	Very slow, non through hardpan	Clay
CyB	Corning gravelly sandy loam, 3 to 8 percent slopes	Stream terraces	Moderately well drained	Slow	Sandy loam
CyD	Corning gravelly sandy loam, 15 to 30 percent slopes	Stream terraces	Moderately well drained	Slow	Sandy loam
DhA	Delhi sand, 0 to 3 percent slopes	Sand sheets	Somewhat excessively drained	Very rapid	Sand
DmA	Dinuba fine sandy loam, 0 to 1 percent slopes	Alluvial fans	Moderately well drained	Moderate	Fine sandy loam
DrA	Dinuba sandy loam, 0 to 1 percent slopes	Alluvial fans	Moderately well drained	Moderate	Sandy loam
GrA	Greenfield fine sandy loam, 0 to 3 percent slopes	Alluvial fans	Well drained	Moderate	Fine sandy loam
GsA	Greenfield sandy loam, 0 to 3 percent slopes	Alluvial fans	Well drained	Moderately rapid	Sandy loam

Map Unit	Soil Series	Location	Drainage Class	Permeability	Texture
GsB	Greenfield sandy loam, 3 to 8 percent slopes	Alluvial fans	Well drained	Moderately rapid	Sandy loam
GvA	Greenfield sandy loam, deep over hardpan, 0 to 3 percent slopes	Alluvial fans	Well drained	Moderately rapid	Sandy loam
HbA	Hanford fine sandy loam, 0 to 3 percent slopes	Alluvial fans	Well drained	Moderately rapid	Fine sandy loam
HdA	Hanford sandy loam, 0 to 3 percent slopes	Alluvial fans	Well drained	Rapid	Sandy loam
HdB	Hanford sandy loam, 3 to 8 percent slopes	Alluvial fans	Well drained	Rapid	Sandy loam
HdC	Hanford sandy loam, 8 to 15 percent slopes	Alluvial fans	Well drained	Rapid	Sandy loam
HdpA	Hanford sandy loam, moderately deep over silt, 0 to 1 percent slopes	Alluvial fans	Well drained	Rapid	Sandy loam
HdsA	Hanford sandy loam, deep over silt, 0 to 1 slopes	Alluvial fans	Well drained	Rapid	Sandy loam
HtA	Hopeton clay loam, 0 to 3 percent slopes	---	Moderately well drained	Slow	Clay loam
HtB	Hopeton clay loam, 3 to 8 percent slopes	---	Moderately well drained	Slow	Clay loam
HuA	Hopeton loam, 0 to 3 percent slopes	---	Moderately well drained	Slow	Clay loam
KeB	Keyes cobbly clay loam, 0 to 8 percent slopes	Fan remnants	Moderately well drained	Very slow	Clay loam
KgB	Keyes gravelly clay loam, 0 to 8 percent slopes	Fan remnants	Moderately well drained	Very slow	Clay loam
MaA	Madera loam, 0 to 2 percent slopes	Fan remnants	Moderately well drained	Very slow	Loam
MdA	Madera sandy loam, 0 to 2 percent slopes	Fan remnants	Moderately well drained	Very slow	Sandy loam
MdB	Madera sandy loam, 2 to 4 percent slopes	Fan remnants	Moderately well drained	Very slow	Sandy loam

Map Unit	Soil Series	Location	Drainage Class	Permeability	Texture
MkA	Meikle clay, 0 to 1 percent slopes	Basin floor	Somewhat poorly drained	Very slow	Clay
MtA	Montpellier coarse sandy loam, 0 to 3 percent slopes	Fan remnants	Well drained	Slow	Coarse sandy loam
MtB	Montpellier coarse sandy loam, 3 to 8 percent slopes	Fan remnants	Well drained	Slow	Coarse sandy loam
MtC	Montpellier coarse sandy loam, 8 to 15 percent slopes	Fan remnants	Well drained	Slow	Coarse sandy loam
MtC2	Montpellier coarse sandy loam, 8 to 15 percent slopes, eroded	Fan remnants	Well drained	Slow	Coarse sandy loam
MtD2	Montpellier coarse sandy loam, 15 to 30 percent slopes, eroded	Fan remnants	Well drained	Slow	Coarse sandy loam
MvA	Montpellier coarse sandy loam, poorly drained variant, 0 to 1 percent slopes	Drainageways	Poorly drained	Slow	Coarse sandy loam
OaA	Oakdale sandy loam, 0 to 3 percent slopes	Fan remnants	Well drained	Moderate	Sandy loam
PeB	Pentz gravelly loam, 3 to 8 percent slopes	Hillslopes	Well drained	Moderate	Gravelly loam
PeD	Pentz gravelly loam, 8 to 30 percent slopes	Hillslopes	Well drained	Moderate	Gravelly loam
PeF	Pentz gravelly loam, 30 to 75 percent slopes	Hillslopes	Well drained	Moderate	Gravelly loam
PmB	Pentz loam moderately deep, 3 to 8 percent slopes	Hillslopes	Well drained	Moderate	Loam
PmC2	Pentz loam, moderately deep, 8 to 15 percent slopes, eroded	Hillslopes	Well drained	Moderate	Loam
PtB	Peters clay, 0 to 8 percent slopes	Hillslopes	Well drained	Slow	Clay
PvB	Peters cobbly clay, 0 to 8 percent slopes	Hillslopes	Well drained	Slow	Cobbly clay
RbB	Raynor cobbly clay, 0 to 8 percent slopes	Terraces	Well drained	Slow	Cobbly clay

Map Unit	Soil Series	Location	Drainage Class	Permeability	Texture
RcB	Redding cobbly loam, 0 to 8 percent slopes	Fan remnants	Moderately well drained	Very slow	Cobbly loam
SaA	San Joaquin sandy loams, 0 to 3 percent slopes	Fan remnants	Moderately well drained	Very slow	Sandy loam
SaB	Snelling sandy loam, 3 to 8 percent slopes	Fan remnants	Moderately well drained	Very slow	Sandy loam
SmA	San Joaquin and Madera soils, 0 to 3 percent slopes	Fan remnants	Moderately well drained	Very slow	Sandy loam
SnA	Snelling sandy loam, 0 to 3 percent slopes	Fan remnants	Well drained	Moderately slow	Sandy loam
SnB	Snelling sandy loam, 3 to 8 percent slopes	Fan remnants	Well drained	Moderately slow	Sandy loam
SwA	Snelling sandy loam, poorly drained variant, 0 to 1 percent slopes	Depressions	Poorly drained	Moderately slow	Sandy loam
TuA	Tujunga loamy sand, 0 to 3 percent slopes	Alluvial fans	Somewhat excessively drained	Very rapid	Loamy sand
WmB	Whitney sandy loams, 3 to 8 percent slopes	Fan remnants	Well drained	Moderate	Sandy loam
WmC	Whitney sandy loams, 8 to 15 percent slopes	Fan remnants	Well drained	Moderate	Sandy loam
WmC2	Whitney sandy loams, 8 to 15 percent slopes, eroded	Fan remnants	Well drained	Moderate	Sandy loam
WmD	Whitney sandy loams, 15 to 30 percent slopes	Fan remnants	Well drained	Moderate	Sandy loam
WmD 2	Whitney sandy loams, 15 to 30 percent slopes, eroded	Fan remnants	Well drained	Moderate	Sandy loam
WrB	Whitney and Rocklin sandy loams, 3 to 8 percent slopes	Backslope	Well drained	Moderate (Whitney); moderately slow (Rocklin)	Sandy loam



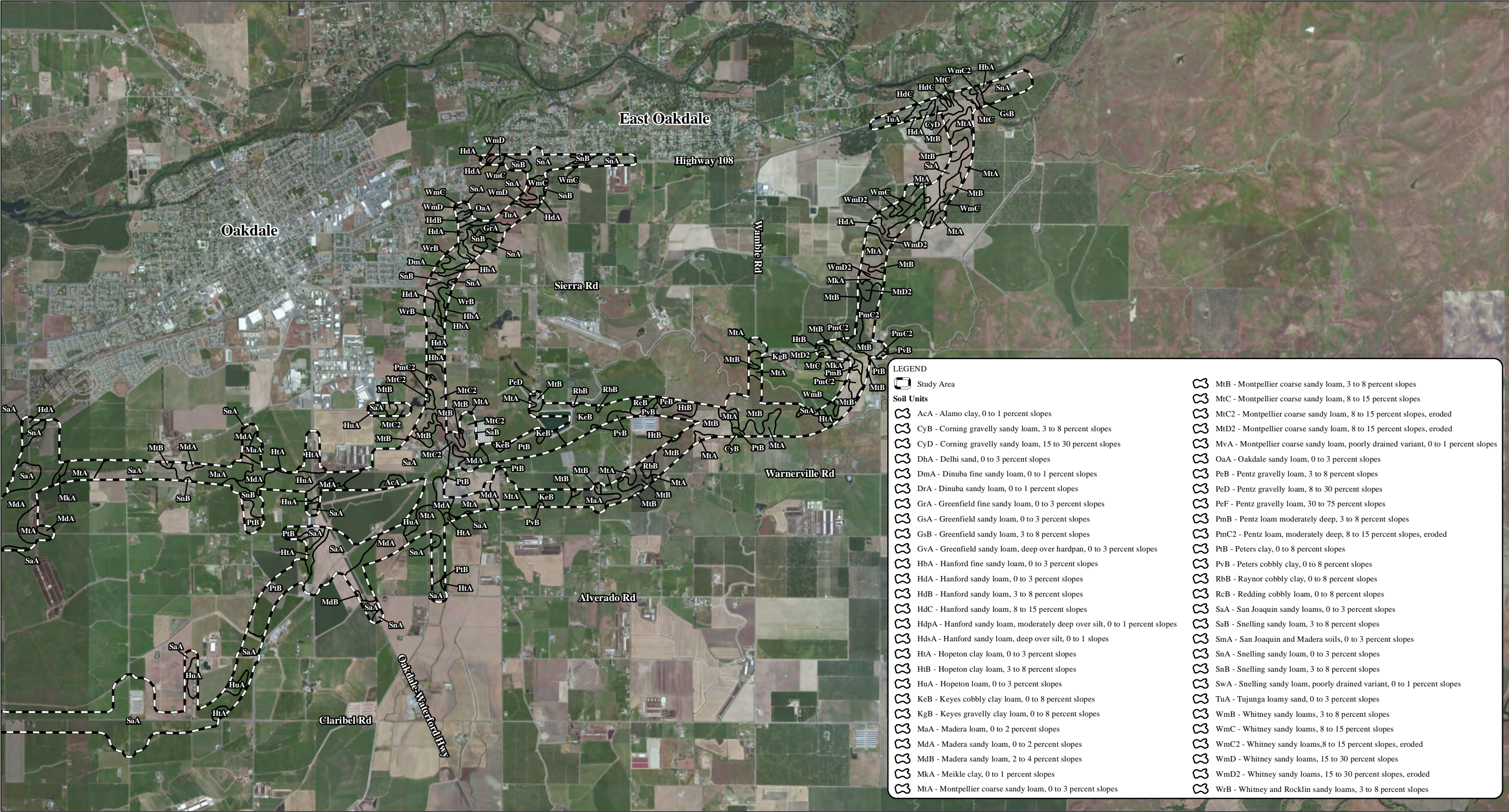


FIGURE 4b

Soil Units

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SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - NRCS Eastern Stanislaus County Soil Survey (1964)

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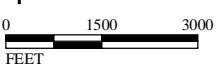
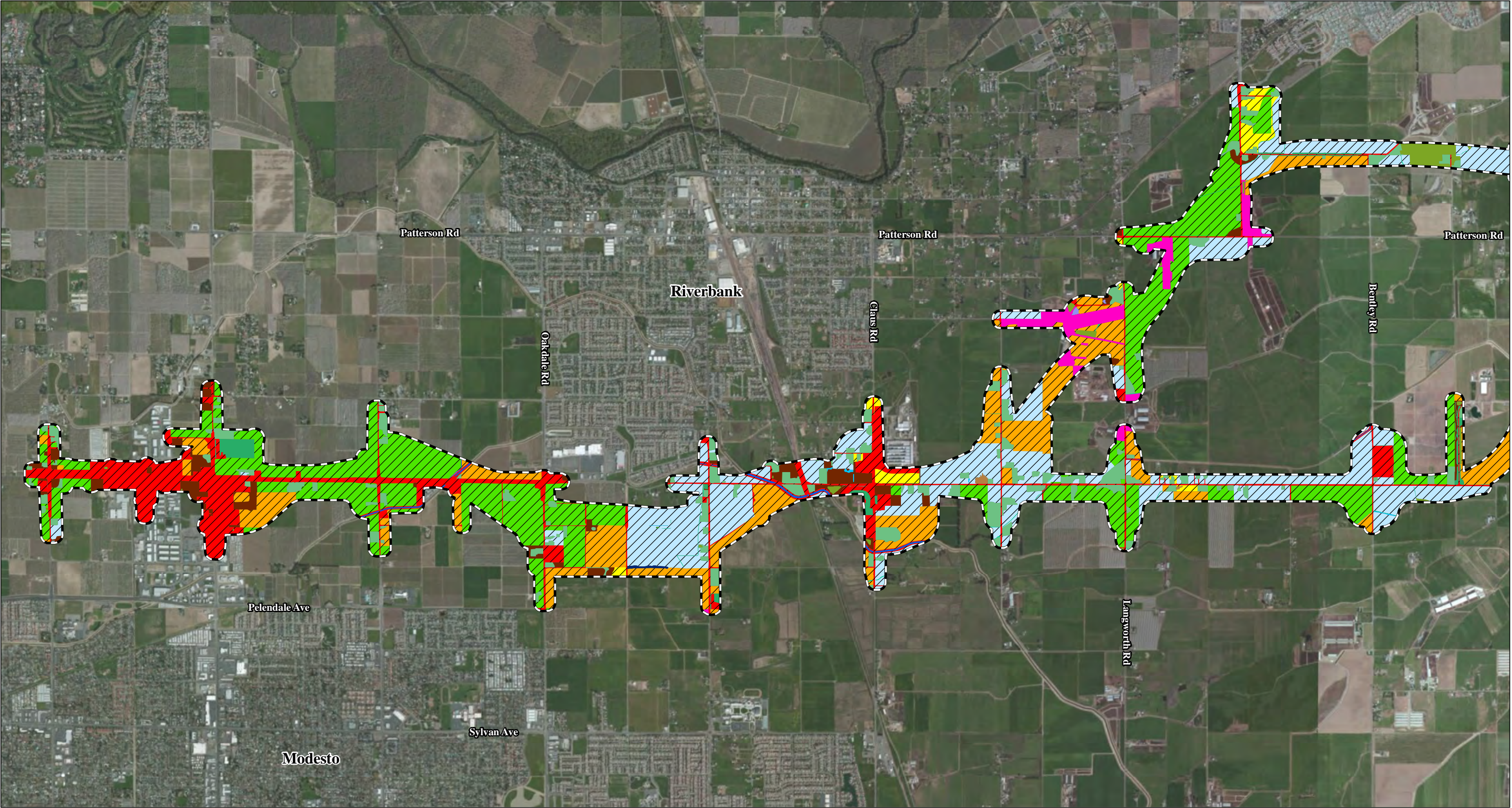
2.5. Vegetation Communities and Land Uses

Vegetation communities and land uses in the study area include eight natural communities: interior live oak woodland, blue oak savannah, annual grassland, Himalayan blackberry bramble, perennial marsh, seasonal marsh, riparian scrub, and seasonal wetlands. Eleven other vegetation communities and land uses not considered natural are also present: ponds/basin, ruderal, agricultural, orchard, irrigated pasture, canal, ditch, dairy and poultry farms, landscaped, rural residential and urban. Vegetation communities/land uses are summarized in Table 2 and shown in Figures 5a and 5b.

These classifications were identified and described by ICF International (ICF) (2012) during a previous mapping effort for the NCC. The classifications were updated by LSA Associates, Inc. during the 2014 field effort to reflect current conditions in the study area and account for changes to the project design (which resulted in changes to the study area).

Table 2: Vegetation Communities and Land Uses

Natural Communities	Acres
Interior live oak woodland	12.01
Blue oak savannah	5.08
Annual grassland	188.66
Himalayan blackberry bramble	7.06
Perennial marsh	14.14
Seasonal marsh	6.35
Riparian scrub	0.36
Seasonal wetland	7.63
<i>Subtotal</i>	<i>241.29</i>
Other Vegetation Communities/Land Uses	
Ruderal	184.73
Agricultural	894.98
Orchard	1,657.10
Irrigated pasture	1,301.81
Pond/basin	68.22
Canal	26.71
Ditch	12.07
Dairy and poultry farms	112.58
Landscaped	39.02
Rural residential	320.45
Urban	575.73
<i>Subtotal</i>	<i>5193.40</i>
Total	5,434.69



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - ICF (2011); LSA Associates, Inc. (2014)
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LEGEND

- | | | | |
|---|---|---------------------------------|------------------------------|
| Study Area | Canal - (26.99 ac) | Perennial Marsh - (14.07 ac) | Seasonal Marsh - (6.35 ac) |
| Vegetation Communities / Land Uses - (5,434.69 ac) | Dairy and Poultry Farms - (112.58 ac) | Orchard - (1,657.10 ac) | Seasonal Wetland - (7.63 ac) |
| Agricultural - (894.98 ac) | Ditch - (12.01 ac) | Pond/Basin - (68.22 ac) | Urban - (575.59 ac) |
| Annual Grassland - (188.66 ac) | Interior Live Oak Woodland - (12.01 ac) | Riparian Scrub - (0.36 ac) | |
| Himalayan Blackberry Bramble - (7.06 ac) | Irrigated Pasture - (1,301.81 ac) | Ruderal - (184.73 ac) | |
| Blue Oak Savannah - (5.08 ac) | Landscaped - (39.02 ac) | Rural Residential - (320.45 ac) | |

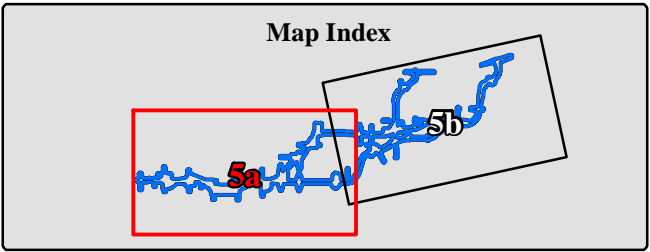
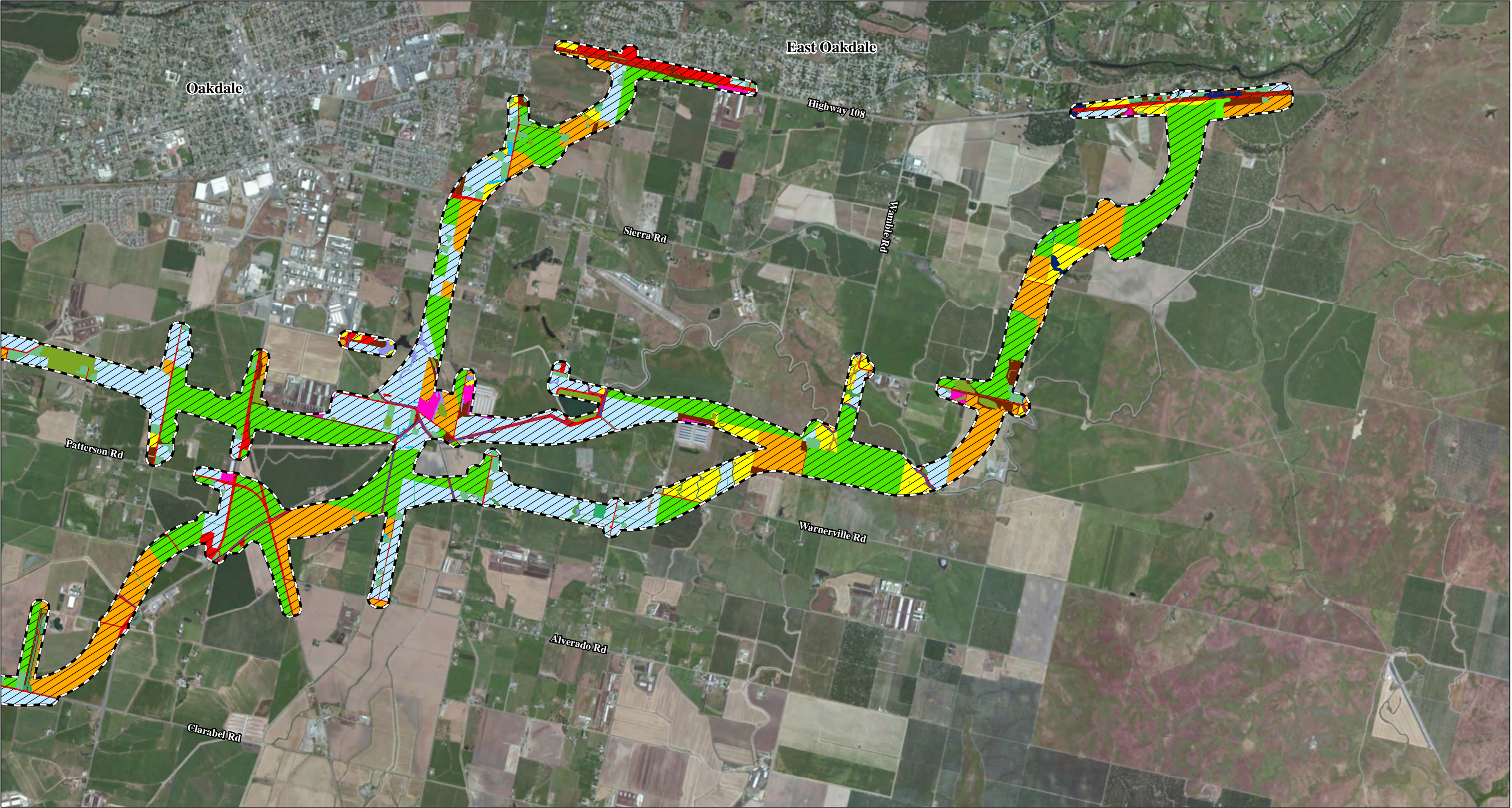


FIGURE 5a

Vegetation Communities and Land Use
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Stanislaus County, California



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SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - ICF (2011); LSA Associates, Inc. (2014)
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LEGEND

- | | | | |
|---|---|---------------------------------|------------------------------|
| Study Area | Canal - (26.99 ac) | Perennial Marsh - (14.07 ac) | Seasonal Marsh - (6.35 ac) |
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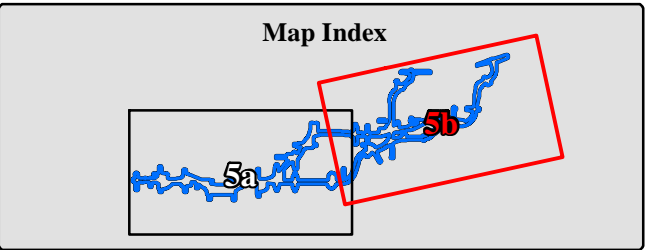


FIGURE 5b

Vegetation Communities and Land Use
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California

2.5.1. Natural Communities

Interior Live Oak Woodland

The interior live oak woodland occurs in two locations at the east end of the biological study area (BSA). This community is dominated by interior live oak (*Quercus wislizeni*) but Valley oaks (*Quercus lobata*) are found in a ditch that occurs where the woodland adjoins with the current SR-108. The understory is dominated by invasive grasses. Interior live oak woodland occurs on the east end of the BSA, where Alternatives 1B and 2B abut Highway 120. Interior live oak woodland also occurs approximately 1 mi south of where Alternatives 1B and 2B meet with Highway 120.

Interior live oak woodland provides suitable nesting habitat for the white tailed kite (*Elanus leucurus*), Swainson's hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamaicensis*), and other nesting birds. Oak trees may be used by the pallid bat (*Antrozous pallidus*), silver haired bat (*Lasionycteris noctivagans*), western red bat (*Lasiurus blossevillei*), hoary bat (*Lasiurus cinereus*) and the western mastiff bat (*Eumops perotis*). Mammals such as coyote (*Canis latrans*) and the red fox (*Vulpes vulpes*) may also be observed in this community.

Annual Grassland

Annual grasslands occur throughout the study area, but are found in larger areas in the eastern half of the study area. This community includes annual brome grassland, wild oat grassland and perennial rye grass fields. Dominant species include wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), Italian rye grass (*Festuca perenne*), foxtail barley (*Hordeum murinum*) and rattail sixweeks grass (*Festuca myuros*). common fiddleneck (*Amsinckia menziesii*), Italian thistle (*Carduus pycnocephalus*), field chickweed (*Cerastium arvense*), cutleaf geranium (*Geranium dissectum*) and milk thistle (*Silybum marianum*) also occur in this community.

Annual grasslands can provide suitable habitat for western burrowing owl (*Athene cunicularia*), if suitable burrows are present. Several bird species may forage in the annual grasslands including Swainson's hawk. If suitable aquatic habitat is nearby, Pacific pond turtles (*Emys marmorata*) may use annual grasslands as upland habitat.

Blue Oak Savannah

Blue oak savannah occurs at one location at the east end of the study area, where Alternatives 1B and 2B abut Highway 120. The dominant overstory species is blue

oak (*Quercus douglasii*). The understory is dominated by native saxifrage (*Lithophragma affine*), elegant clarkia (*Clarkia unguiculata*), and other annual forbs and grasses.

Blue oak savannah habitat value is similar to the interior live oak woodland community in the study area.

Himalayan Blackberry Bramble

Himalayan blackberry bramble occurs in large patches adjacent to the riparian woodland and annual grassland west of Stearns Road and north of Sierra Road. Himalayan blackberry (*Rubus armeniensis*) is the dominant species in this community.

Large areas of blackberry bramble provide suitable nesting habitat for tricolored blackbirds (*Agelaius tricolor*).

Perennial Marsh

Perennial marshes occur primarily in the central and eastern half of the study area. Dominant species include low manna grass (*Glyceria declinata*), soft rush (*Juncus effusus*), knotweed (*Polygonum* sp.), Himalayan blackberry, curly dock (*Rumex crispus*), common tule (*Schoenoplectus acutus occidentalis*), narrow-leaved cattail (*Typha angustifolia*) and broad-leaved cattail (*Typha latifolia*).

Perennial marsh habitat, with sufficient open water, may provide suitable habitat for California tiger salamander (*Ambystoma californiense*) (CTS), western spadefoot toad (*Spea hammondi*), and Pacific pond turtle. Western yellow billed cuckoo (*Coccyzus americanus*) and other bird species may forage in the perennial marsh habitat.

Seasonal Marsh

Seasonal marshes occur in the western and central section of the study area, adjacent to the irrigated pastures and annual grasslands. Dominant species include amaranth (*Amaranthus* sp.), nutsedge (*Cyperus eragrostis*), soft rush, sprangletop (*Leptochloa* sp.), water primrose (*Ludwigia peploides*), dallis grass (*Paspalum dilatatum*), knotweed, Himalayan blackberry and broad-leaved cattail.

Seasonal marshes provide cover and foraging habitat for many small birds and mammals. They may also provide suitable habitat for vernal pool invertebrates, including vernal pool tadpole shrimp (*Lepidurus packardii*) and vernal pool fairy shrimp (*Branchinecta lynchi*).

Riparian Scrub

Riparian scrub occurs in three small areas in the central part of the BSA, west of South Stearns Road and north of Sierra Road, and in one location along a concrete canal, adjacent to orchards, near the west end of the BSA. This community consists entirely of narrow-leaved willow (*Salix exigua*).

The small amount of riparian scrub provides suitable upland habitat for Pacific pond turtle. It also provides suitable nesting habitat for white tailed kite and other nesting birds. Cavities and foliage may also provide suitable roosting habitat for multiple bat species.

Seasonal Wetland

Seasonal wetlands typically occur in topographically low-lying areas within annual grasslands and ditches and occur throughout the study area. Dominant species observed were water starwort (*Callitriche* sp.), nutsedge, three-spiked goose grass (*Eleusine tristachya*), creeping spikerush (*Eleocharis macrostachya*), coyote thistle (*Eryngium* sp.), low manna grass, and velvet grass (*Holcus lanatus*). Additional species include Italian rye grass, water primrose, hyssop loosestrife (*Lythrum hyssopifolia*), annual blue grass (*Poa annua*), rabbitsfoot grass (*Polypogon monspeliensis*), buttercup (*Ranunculus* sp.), Himalayan blackberry, and fiddle dock (*Rumex pulcher*). Seasonal wetlands do not remain inundated for long periods of time during the growing season.

Some seasonal wetlands may provide suitable habitat for vernal pool invertebrates. Larger features may provide suitable habitat for CTS and western spadefoot toad, depending on the length of inundation.

2.5.2. Other Vegetation Communities / Land Uses

Ruderal

Ruderal vegetation occurs throughout the study area, typically areas along roadsides, buildings, and dirt roads. Ruderal plants are those that colonize and quickly establish in poor soils and disturbed or waste areas. They generally have fast growing roots, low nutritional needs, and produce massive amounts of seeds. Dominant species include invasive annual grasses and weedy forbs.

If suitable burrows are present, ruderal sites may provide suitable habitat for western burrowing owl. Many species of birds may use ruderal vegetation for foraging,

including Swainson's hawk, red-tailed hawk, red-winged blackbirds (*Agelaius phoeniceus*), and tricolored black birds.

Agricultural

Agricultural fields occur throughout the study area and include row crops, alfalfa, rice fields and grains. Agricultural fields may be disked or left fallow for part of the year. Ruderal and invasive species occur along the edges and in open areas that have not been plowed.

Agricultural fields provide suitable foraging habitat for Swainson's hawks, white tailed kites and other bird species.

Orchard

Orchards occur throughout the study area and are comprised of monotypic and tree dominated habitats, although some areas contain vineyards. Generally this community is sprinkler irrigated and intensively managed. The understory is either bare ground or annual grasses and forbs.

Orchards may provide suitable foraging habitat for Swainson's hawks and other raptors. Western red bats and hoary bats may also utilize orchards as roosting sites.

Irrigated Pasture

Irrigated pastures occur throughout the study area and are grassland areas that receive irrigated water to support pastures for livestock. Dominant plants include Bermuda grass (*Cynodon dactylon*), tall fescue (*Festuca arundinacea*), English plantain (*Plantago lanceolata*), annual blue grass, knotroot bristle grass (*Setaria parviflora*) and subterranean clover (*Trifolium subterraneum*).

This community is not considered suitable for fossorial mammals or other species that utilize burrows due to the flooded that occurs from early spring through fall. However, several bird species may forage in irrigated pasture, including Swainson's hawks, red-tailed hawks, and great horned owls (*Bubo virginianus*).

Pond and Basin

This community consists of natural and created ponds or basins that occur throughout the study area. Most of the ponds are utilized as detention basins, however some are dairy, catfish or other fish-rearing ponds. Dominant vegetation consists of Bermuda grass, Italian rye grass and knotweed.

Some ponds within the study area may provide suitable habitat for CTS and Pacific pond turtles. If fish are present, osprey (*Pandion haliaetus*) may be observed foraging in this community.

Canal

Canals consist of all manmade linear water conveyance features that are contained within levees. Canals are generally much larger than features identified as ditches. Canals are located throughout the study area and generally provide little value as wildlife habitat; however, Pacific pond turtles and other aquatic species could utilize the canals.

Ditch

Ditches consist of all non-leveed water conveyance channels and include roadside, agricultural, and natural drainage features. Several of these ditches support wetland vegetation that may vary from perennial to seasonal. These ditches occur throughout the study area, but are more heavily concentrated in the central portion. Similar to canals, ditches generally provide little value as wildlife habitat but could be used by Pacific pond turtles and other aquatic species.

Dairy and Poultry Farms

This land use includes structures and disturbed areas associated with dairy and poultry farms. This area supports little to no vegetation, however some ruderal species were observed.

Landscaped

Landscaped areas contain ornamental trees, shrubs and forbs. This community occurs throughout the study area and is interspersed with residential and commercial areas. Eucalyptus (*Eucalyptus* sp.) and cottonwood (*Populus* sp.) rows are included in this community.

Landscaped vegetation provides suitable nesting habitat for various bird species, including yellow warbler (*Setophaga petechia*) and Swainson's hawk. Some ornamental trees may also provide roosting habitat for the western red bat and hoary bat.

Rural Residential

This land use includes ranches or houses that are surrounded by large natural areas. Rural residences occur throughout the study area and contain primarily landscaped and ruderal vegetation.

Blue elderberry (*Sambucus nigra* ssp. *caerulea*) shrubs, habitat for the valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), were observed around rural residences.

Urban

This community is comprised of dense housing, industrial and commercial buildings. Paved roadways and dirt roads occur throughout urban areas. Any vegetation in this land use is ruderal or landscaped.

Urban development is not considered to be suitable habitat for wildlife species.

Chapter 3. Regulatory Background

The USACE regulates discharges of dredged or fill material into waters of the U.S. These waters include wetlands and non-wetland waters, as described below. The USACE typically regulates as waters of the U.S. any body of water displaying an ordinary high water mark (OHWM). USACE jurisdiction over nontidal waters of the U.S. extends laterally to the OHWM or beyond the OHWM to the limit of any adjacent wetlands, if present (33 CFR 328.4). The OHWM is defined as "...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3). USACE jurisdiction typically extends upstream to the point where the OHWM is no longer perceptible.

3.1. Wetlands

Wetland delineations for Section 404 purposes must be conducted according to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Arid West Supplement) (USACE 2008) and the Army Corps of Engineers 1987 Wetland Delineation Manual (Environmental Laboratory 1987). Where there are differences between the two documents, the Regional Supplement takes precedence over the 1987 Manual.

The USACE and United States Environmental Protection Agency (EPA) define wetlands as follows:

"Those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions."

To be considered a jurisdictional wetland under Section 404, an area must possess three wetland characteristics: hydrophytic vegetation, hydric soils, and wetland hydrology. Each characteristic has a specific set of mandatory wetland criteria that must be satisfied for that particular wetland characteristic to be met. Several indicators may be analyzed to determine whether the criteria are satisfied.

3.1.1. Hydrophytic Vegetation

Hydrophytic vegetation is plant life that grows and is typically adapted for life in permanently or periodically saturated soils. The hydrophytic vegetation criterion is met if more than 50 percent of the dominant plant species from all strata (tree, shrub, herb, and woody vine layers) are considered hydrophytic. Hydrophytic species are those included on the Arid West 2014 Final Regional Wetland Plant List (Lichvar 2014), published by the USACE. Each species on that list is rated according to a wetland indicator category, as shown in Table 3. To be considered hydrophytic, the species must have a wetland indicator status (i.e., be rated as OBL, FACW, or FAC).

Table 3: Hydrophytic Vegetation

Category	Rating	Probability
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability >99%)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability 67%-99%)
Facultative	FAC	Equally likely to occur in wetlands and nonwetlands (estimated probability 34%-66%)
Facultative Upland	FACU	Usually occur in nonwetlands (estimated probability 67%-99%)
Obligate Upland	UPL	Almost always occur in nonwetlands (estimated probability >99%)

To be considered hydrophytic, the species must have wetland indicator status, i.e., be rated as OBL, FACW, or FAC.

The delineation of hydrophytic vegetation is typically based on the most dominant species from each vegetative stratum (strata are considered separately). When more than 50 percent of these dominant species are hydrophytic (i.e., FAC, FACW, or OBL), the vegetation is considered hydrophytic. In particular, the USACE recommends the use of the “50/20” rule (also known as the dominance test) from the Regional Supplement for determining dominant species. Under this method, dominant species are the most abundant species that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species composing 20 percent or more of the total dominance measure for the stratum. In cases where indicators of hydric soil and wetland hydrology are present but the vegetation initially fails the dominance test, the prevalence index must be used. The prevalence index is a weighted average of all plant species within a sampling plot. The prevalence index is particularly useful when communities only have one or two

dominants, where species are present at roughly equal coverage, or when strata differ greatly in total plant cover. In addition, USACE guidance provides that morphological adaptations may be considered when determining hydrophytic vegetation when indicators of hydric soil and wetland hydrology are present (USACE 2008). If the plant community passes either the dominance test or prevalence index after reconsideration of the indicator status of any plant species that exhibit morphological adaptations for life in wetlands, then the vegetation is considered hydrophytic.

3.1.2. Hydric Soil

Hydric soils¹ are defined as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part.² Soils are considered likely to meet the definition of a hydric soil when one or more of the following criteria are met:

1. All Histels except Folistels and Histosols except Folists;
2. Soils that are frequently ponded for a long duration or very long duration³ during the growing season; or
3. Soils that are frequently flooded for a long duration or very long duration during the growing season.

Hydric soils develop under conditions of saturation and inundation combined with microbial activity in the soil that causes a depletion of oxygen. While saturation may occur at any time of year, microbial activity is limited to the growing season, when soil temperature is above biologic zero (the soil temperature at a depth of 20 inches, below which the growth and function of locally adapted plants are negligible).

Biogeochemical processes that occur under anaerobic conditions during the growing season result in the distinctive morphologic characteristics of hydric soils. Based on these criteria, a National List of Hydric Soils was created from the National Soil Information System database and is updated annually.

¹ The hydric soil definition and criteria included in the 1987 Manual are obsolete. Users of the Manual are directed to the United States Department of Agriculture Natural Resources Conservation Service website for the most current information on hydric soils.

² Current definition as of 1994 (Federal Register [FR] July 13, 1994).

³ A long duration is defined as a single event ranging from 7 to 30 days. A very long duration is defined as a single event that lasts longer than 30 days.

3.1.3. Hydrology

Under natural conditions, development of hydrophytic vegetation and hydric soils is dependent on a third characteristic: wetland hydrology. Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively (Environmental Laboratory 1987). The wetland hydrology parameter is satisfied if the area is seasonally inundated or saturated to the surface for a minimum of 14 consecutive days during the growing season in most years (USACE 2008).

Hydrology is often the most difficult criterion to measure in the field due to seasonal and annual variations in water availability. Indicators commonly used to identify wetland hydrology include visual observation of inundation or saturation, watermarks, recent sediment deposits, surface scour, and oxidized root channels (rhizospheres) resulting from prolonged anaerobic conditions.

3.2. Non-wetland Waters

Non-wetland waters essentially include any body of water, not otherwise exempted, that displays an OHWM.

Chapter 4. Methodology

The approach to this jurisdictional delineation was developed with the intent to request a Preliminary Jurisdictional Delineation from the USACE pursuant to Regulatory Guidance Letter 08-02 (June 2008).

4.1. Field Investigation

Field investigation was conducted during site visits on March 12-14, 2014, April 15, 16, and 22, 2014, and June 6, 2014, by LSA biologists Mike Trueblood and Dayna Winchell. Where right of entry was granted (see Section 4.2 below), the study area was surveyed on foot referencing a March 2011 color aerial photo.

A routine approach, as described in the 1987 Manual, was employed for the delineation, supplemented by the procedures and wetland indicators described in the Arid West Supplement. The method for large areas (i.e., greater than 5 ac), consisting of establishment of a baseline and uniform transects, was initially considered for the study area. However, based on review of the aerial photos and reconnaissance field data, it was clear that the majority of potential waters of the U.S. in the study area were located in the drainages and swales, or were randomly spread throughout the study area. Consequently, use of the routine approach for large areas was not appropriate.

A total of 49 formal observation points were described in the field. Most data points were paired, with an upland point directly adjacent to a wetland point. At each point, a pit was dug (if necessary), and soils and hydrology examined. Soils were not examined in detail at every location, as sites dominated by wetland vegetation were occasionally inundated or saturated at the surface, supporting a conclusion of an aquatic moisture regime. Copies of the wetland data forms are included in Appendix B. Representative photos were taken at most data points, and are included in Appendix C.

Potential waters of the U.S. were mapped in the field using a Geographic Positioning System unit with submeter accuracy. All data was entered into a Geographic Information System (GIS) database to calculate the extent of potential waters of the U.S. in the study area and to produce the final mapping. Final mapping was completed using the aforementioned aerial photo at a scale of 1 inch = 500 feet.

4.2. Previous Studies/Coordination

A portion of the study area was previously delineated by ICF in 2011. Material available for review from this effort included GIS shapefiles of preliminary delineation mapping and associated data forms. Documentation of coordination with staff from the USACE, the EPA, and Caltrans was also available.

4.3. Access

Right of entry was granted for the majority of the properties within the study area that supported potential jurisdictional waters (as determined by aerial photo review and reconnaissance surveys). Assessment of properties where right of entry was not granted, and that supported potential jurisdictional waters, consisted of a combination of field level review from the public right of way (i.e., “looking over the fence”) and current and historic aerial photo review.

4.4. Irrigated Pasture Wetlands

Potential wetlands in irrigated pasture were assessed in accordance with the USACE Sacramento District’s Regulatory Branch Memorandum 2007-01 (USACE 2007) on irrigated wetlands. Methods included aerial photo review followed by ground-truthing, as necessary. This approach is consistent with recommendations provided during an April 10, 2012 field meeting (attendees included Leah Fisher, USACE Sacramento District; Clifton Meek, EPA, Region 9, Frank Meraz, Caltrans Central Region; and ICF botanists, Lisa Webber and John Holson) and additional information from Ms. Fisher and Mike Finan, USACE, Sacramento District (Fisher, pers. comm.).

Chapter 5. Results

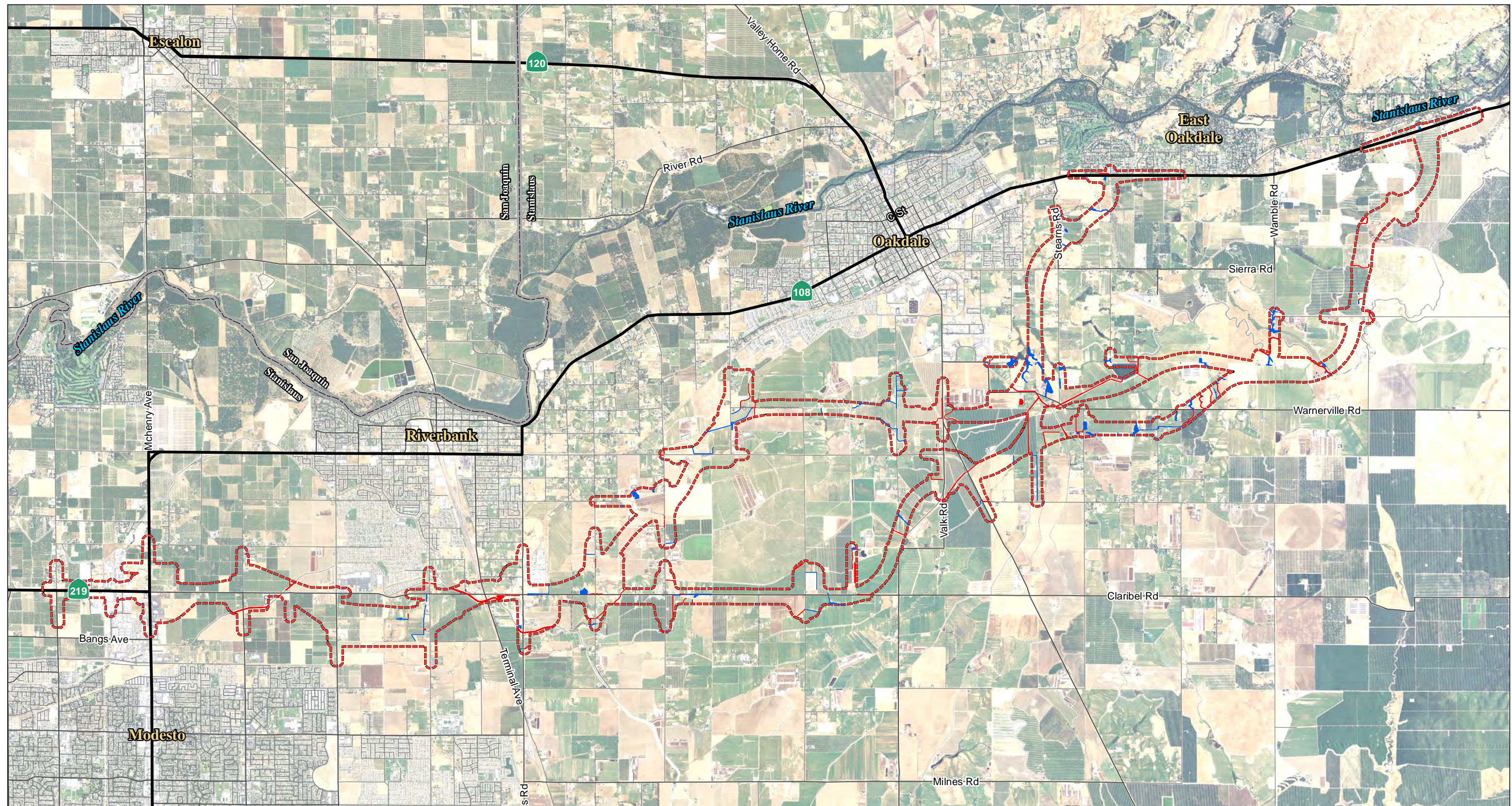
Features potentially meeting USACE criteria for wetlands or other waters of the U.S. in the study area include seasonal wetlands, perennial marsh, ditches, ponds, canals, and irrigated wetlands. These feature classes are described below and summarized in Table 4. An overview of the delineation is shown in Figure 6 and detailed delineation maps are included in Appendix A (as noted in Chapter 4, wetland data forms and representative photos are included in Appendices B and C, respectively). Appendix A also includes a listing of each feature, the feature class, wetlands status, and acreage. A summary table by build alternative is included in Appendix D.

Table 4: Summary of Potential Waters of the U.S. in the Study Area (acres)

Feature Class	Wetlands	Non-Wetland Waters	Total
Seasonal Wetland	10.23	----	10.23
Perennial Marsh	14.14	----	14.14
Ditches	7.31	4.76	12.07
Ponds	10.12	5.83	15.95
Canals	----	26.71	26.71
Irrigated Wetlands	3.75	----	3.75
Total	45.55	37.30	82.85

Two current Caltrans projects, the SR-219 Widening Project and the Claribel Widening Project, overlap a portion of the western limits of the BSA. The limits of these projects are labeled as “Not a Part of Study Area” and are shown in Appendix A, Figures A-1 and A-2 (SR-219 Widening) and A-2, A-3, and A-4 (Claribel Widening). Potential waters of the U.S. within these areas were previously evaluated in a Natural Environment Study (NES) prepared for each project.

The NES for the SR-219 Widening Project (dated October 2001) identified a retention basin and Chapel Ditch, a concrete lined canal. Per discussions with Kathy Norton of the Army Corps of Engineers on March 9, 2000, the retention basin was determined not to be a water of the U.S., but Chapel Ditch was determined to be a water of the U.S. because it connects with Lateral No. 6 canal, which ultimately connects to the Tuolumne River.



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MILES

LEGEND

 Study Area

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

■ Wetlands - (45.55 ac)

■ Non-Wetland Waters - (37.30 ac)

FIGURE 6

Preliminary Jurisdictional Delineation Overview
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California

SOURCE: Basemap - NAIP (2012); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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The NES for the Claribel Widening Project (dated August 2011) determined that there were no waters of the U.S. within the project area. The jurisdictional delineation and field survey were conducted by Chuck Hughes, M.S., Botanist/ Biologist/ Professional Wetland Scientist #2029 and Jessica Easley, Biologist.

Seasonal Wetlands

This feature class occurs throughout the study area but is more prevalent in the eastern portion. In general, common hydrophytes identified in the seasonal wetlands include low mana grass (*Glyceria declinata*) – FACW, knotweed –OBL, buttercup – OBL, needle spikerush (*Eleocharis acicularis*) – OBL, smooth goldfields (*Lasthenia glaberrima*) – OBL, curly dock – FAC, and hyssop loosestrife – OBL, which are all known to occur in seasonal wetland conditions. Soils in these features contained noticeably reduced chroma and consistently supported redoxomorphic concentrations in the matrix. Hydrology indicators were generally identified by either inundation/saturation on aerial imagery or by matted vegetation and drainage patterns. For purposes of the preliminary jurisdictional delineation, areas of the seasonal marsh community described in Section 2.5.1. that meet USACE criteria for wetlands were included in the seasonal wetlands feature class. A total of 10.23 ac of seasonal wetlands occur in the study area.

5.1. Perennial Marsh

The majority of this feature class occurs along Stearns Road north of Warnerville Road in wide marshy areas dominated by broad-leaved cattail – OBL and common tule – OBL. The fringes of this community are often dominated by narrow-leaved willow (*Salix exigua*) – FACW. Perennial marsh also occurs in a few other isolated locations to the east and west of Stearns Road. Perennial marsh was typically inundated or saturated to the surface. A total of 14.14 ac of perennial marsh occur in the study area.

5.2. Ditches

Ditches consist of all non-leveed water conveyance channels and include roadside, agricultural, and natural drainage features. Several of these ditches support wetland vegetation that may vary from perennial (i.e., cattail marsh) to seasonal (i.e., rushes, nutsedges, knotweed, and a mix of annual grasses). These ditches occur throughout the study area, but are more heavily concentrated in the central portions. Soils in these

ditches tend to be consistent with seasonally wet soils (i.e., redoximorphic concentrations in the matrix). However, a few were deeply inundated at the time of the surveys and soils were too wet to identify any color variations in the soil. A total of 12.07 ac of ditches occur in the study area.

5.3. Ponds

The pond feature class consists of manmade ponds, most of which support wetlands. Several large ponds associated with dairy and poultry farms, and ponds associated with the irrigation districts, are not included in the mapping. The ponds that support wetlands tend to be perennial in nature and are generally associated with irrigation and/or stock ponds for cattle. Similar to the ditch feature class, ponds can be found throughout the study area but are more concentrated in the central portions. A total of 15.95 ac of ponds occur in the study area.

5.4. Canals

Canals consist of all manmade linear water conveyance features that are contained within levees. Canals are generally much larger than features identified as ditches. None of the canal features in the study area support wetlands. Canals are located throughout the study area. A total of 26.71 ac of canals occur in the study area.

5.5. Irrigated Wetlands

Irrigated wetlands consist of features located within irrigated pasture that meet USACE wetlands criteria. A total of 3.75 acres of irrigated wetlands occur in the study area.

Chapter 6. Conclusion

6.1. Conclusion

The study area encompasses a total of 82.85 acres of potential jurisdictional waters. These potentially jurisdictional features consist of approximately 45.55 acres of potential wetlands and approximately 37.30 acres of potential non-wetland waters.

Chapter 7. References

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Appendix A Delineation Maps / Potential Jurisdictional Waters Table



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FEET

LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

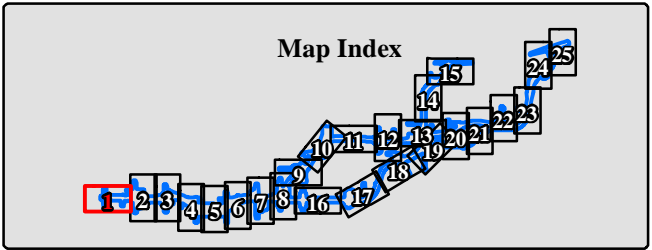
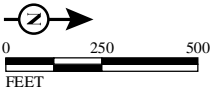
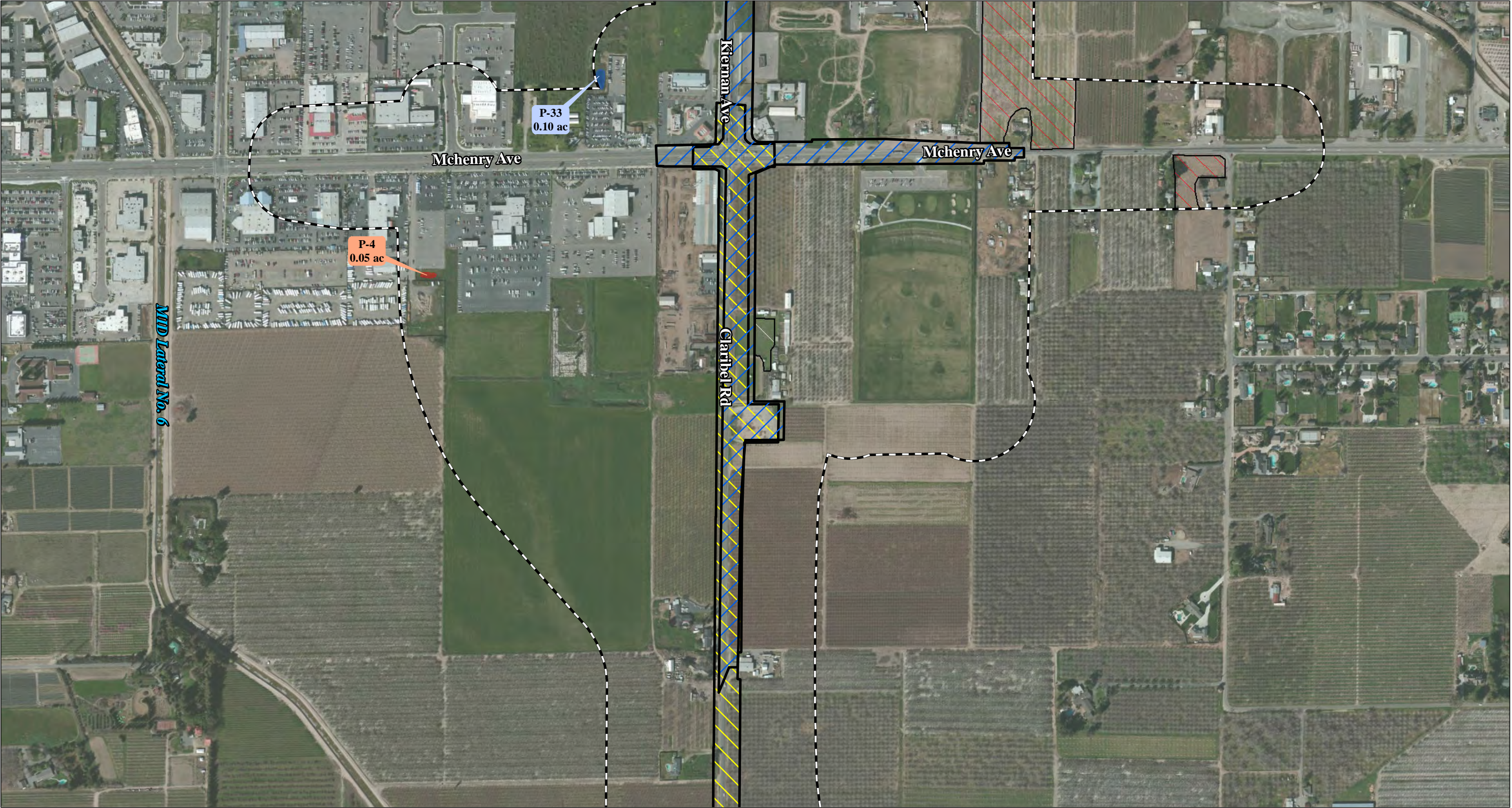


FIGURE A-1

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
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- SW - Seasonal Wetland
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- IW - Irrigated Wetland

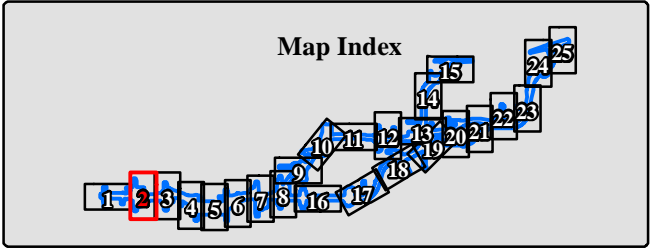
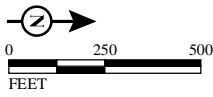


FIGURE A-2

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND		Acronym Names	
	Study Area	C - Canal	
	Claribel Rd. Widening Project	D - Ditch	
	SR-219 Widening Project	P - Pond	
	Converted to Orchard	SW - Seasonal Wetland	
	Irrigated Pasture	PM - Perennial Marsh	
		IW - Irrigated Wetland	
Potential Jurisdictional Waters of the U.S. - (82.85 ac)			
	Non-Wetland Waters - (37.30 ac)		
	Wetlands - (45.55 ac)		
	Data Point		
	Photo Point		

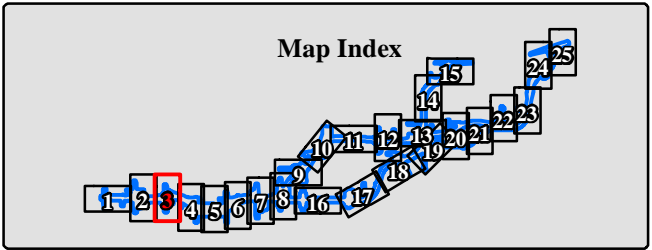
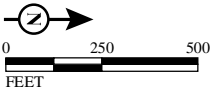
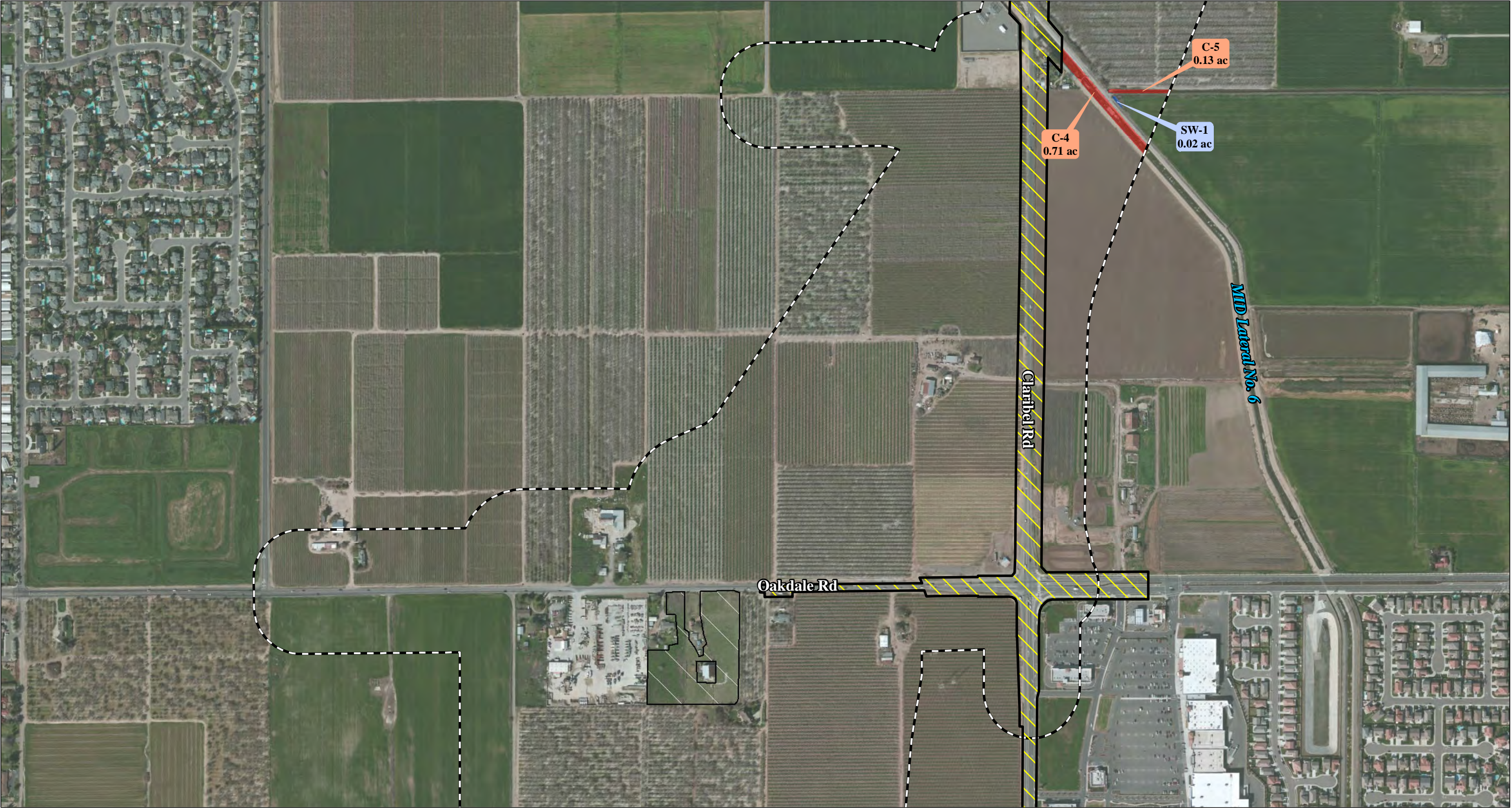


FIGURE A-3

Preliminary Jurisdictional Delineation
 EA: 10-0S800, Project ID # 1000000263
 North County Corridor New State Route 108 Project
 Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)
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LEGEND		Acronym Names
	Study Area	
	Claribel Rd. Widening Project	C - Canal
	SR-219 Widening Project	D - Ditch
	Converted to Orchard	P - Pond
	Irrigated Pasture	SW - Seasonal Wetland
		PM - Perennial Marsh
		IW - Irrigated Wetland
Potential Jurisdictional Waters of the U.S. - (82.85 ac)		
	Non-Wetland Waters - (37.30 ac)	
	Wetlands - (45.55 ac)	
	Data Point	
	Photo Point	

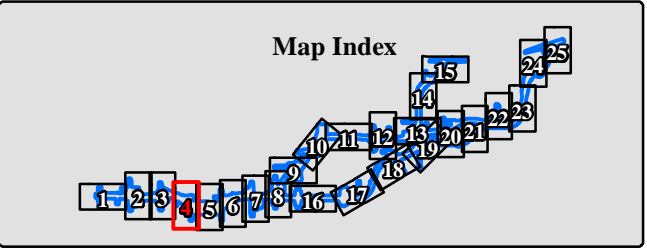


FIGURE A-4

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

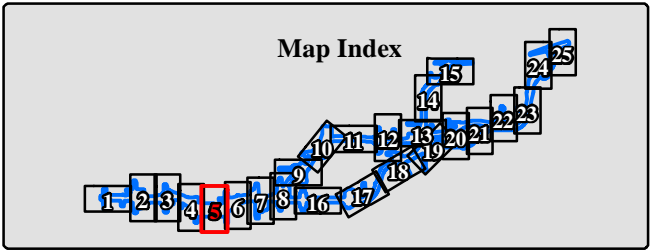
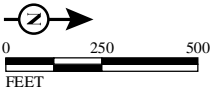


FIGURE A-5

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)
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LEGEND		Acronym Names	
	Study Area	C - Canal	
	Claribel Rd. Widening Project	D - Ditch	
	SR-219 Widening Project	P - Pond	
	Converted to Orchard	SW - Seasonal Wetland	
	Irrigated Pasture	PM - Perennial Marsh	
		IW - Irrigated Wetland	
Potential Jurisdictional Waters of the U.S. - (82.85 ac)			
	Non-Wetland Waters - (37.30 ac)		
	Wetlands - (45.55 ac)		
	Data Point		
	Photo Point		

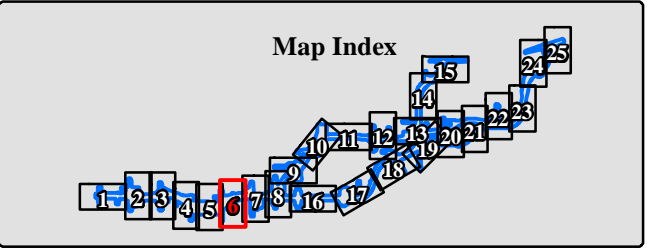
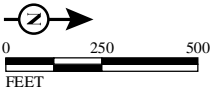


FIGURE A-6

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND		Acronym Names
	Study Area	
	Claribel Rd. Widening Project	C - Canal
	SR-219 Widening Project	D - Ditch
	Converted to Orchard	P - Pond
	Irrigated Pasture	SW - Seasonal Wetland
		PM - Perennial Marsh
		IW - Irrigated Wetland
Potential Jurisdictional Waters of the U.S. - (82.85 ac)		
	Non-Wetland Waters - (37.30 ac)	
	Wetlands - (45.55 ac)	
	Data Point	
	Photo Point	

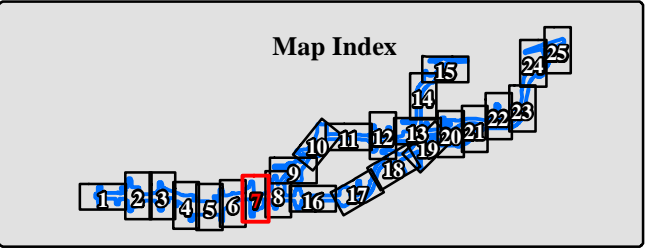
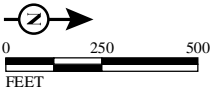


FIGURE A-7

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

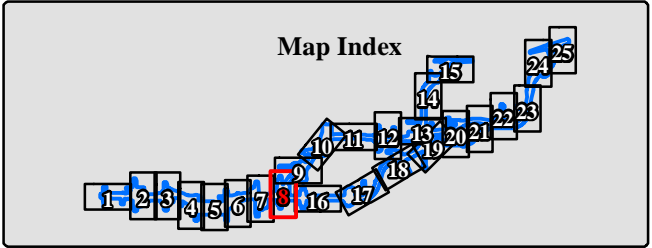


FIGURE A-8

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



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LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

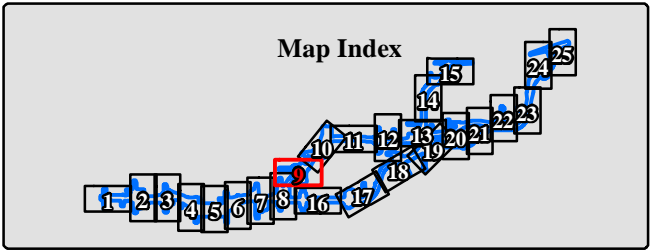
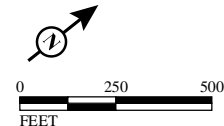


FIGURE A-9

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND		Acronym Names	
	Study Area	C - Canal	
	Claribel Rd. Widening Project	D - Ditch	
	SR-219 Widening Project	P - Pond	
	Converted to Orchard	SW - Seasonal Wetland	
	Irrigated Pasture	PM - Perennial Marsh	
		IW - Irrigated Wetland	
	Potential Jurisdictional Waters of the U.S. - (82.85 ac)		
	Non-Wetland Waters - (37.30 ac)		
	Wetlands - (45.55 ac)		
	Data Point		
	Photo Point		

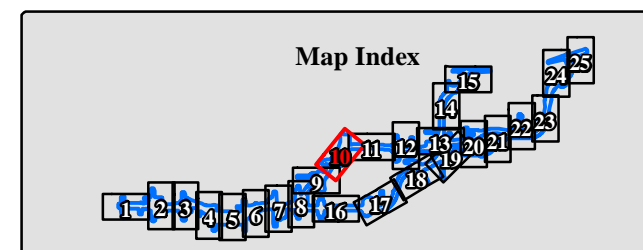


FIGURE A-10

Preliminary Jurisdictional Delineation
 EA: 10-0S800, Project ID # 1000000263
 North County Corridor New State Route 108 Project
 Stanislaus County, California

SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

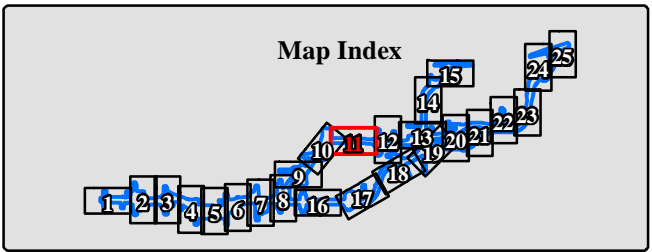
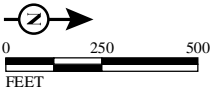


FIGURE A-11

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

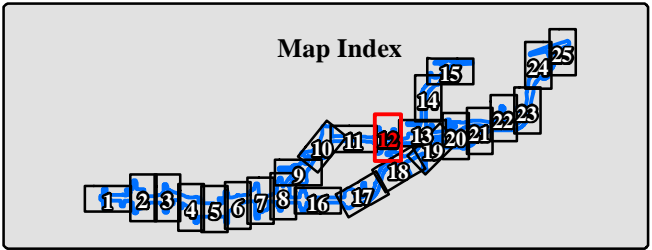


FIGURE A-12

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

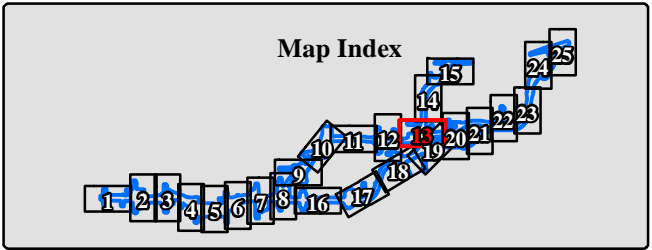
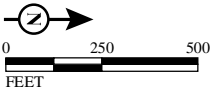


FIGURE A-13

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)
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LEGEND		Acronym Names	
	Study Area	C - Canal	
	Claribel Rd. Widening Project	D - Ditch	
	SR-219 Widening Project	P - Pond	
	Converted to Orchard	SW - Seasonal Wetland	
	Irrigated Pasture	PM - Perennial Marsh	
		IW - Irrigated Wetland	
Potential Jurisdictional Waters of the U.S. - (82.85 ac)			
	Non-Wetland Waters - (37.30 ac)		
	Wetlands - (45.55 ac)		
	Data Point		
	Photo Point		

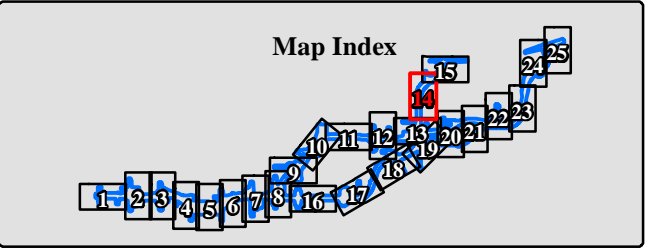
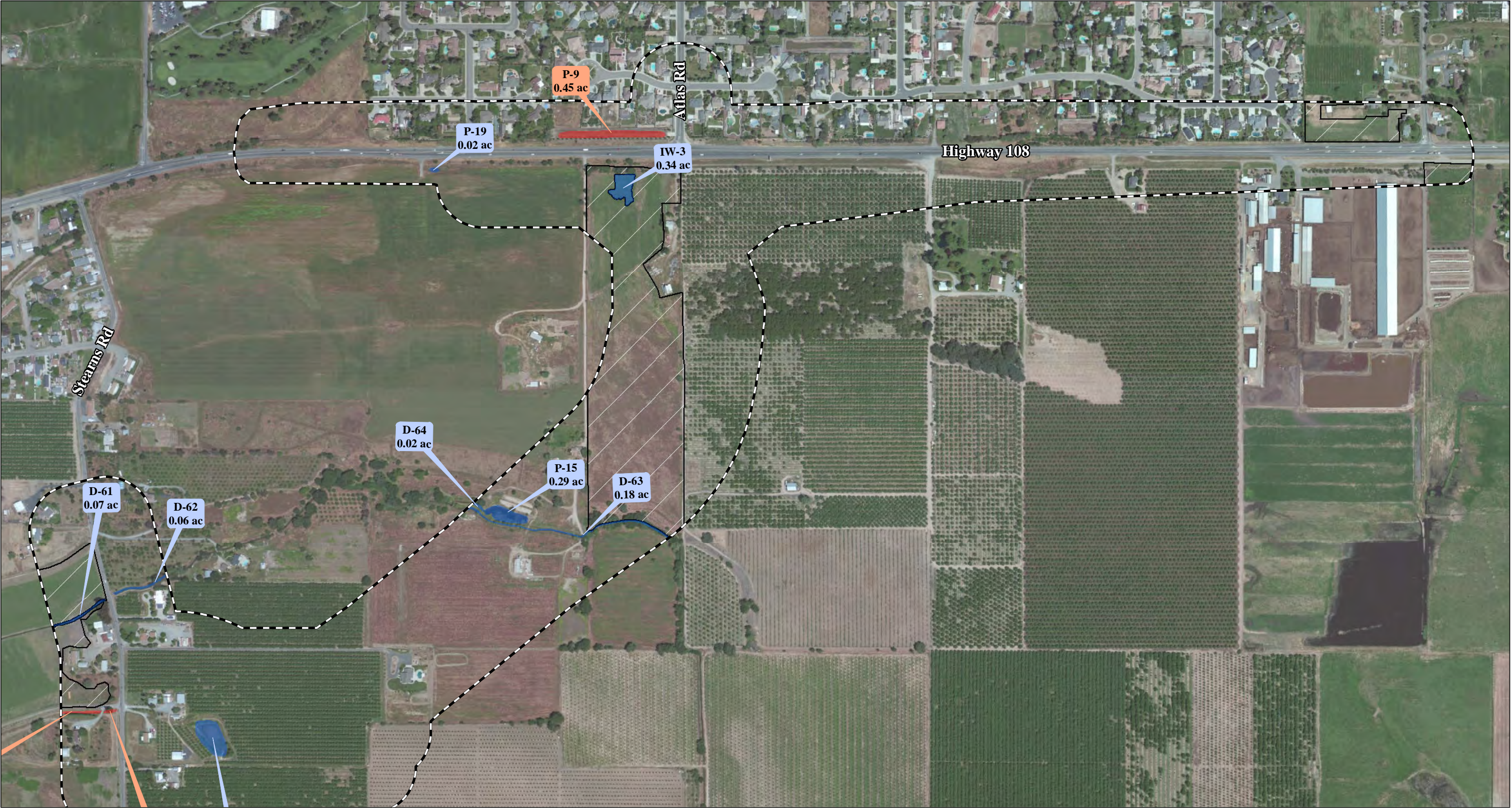


FIGURE A-14

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

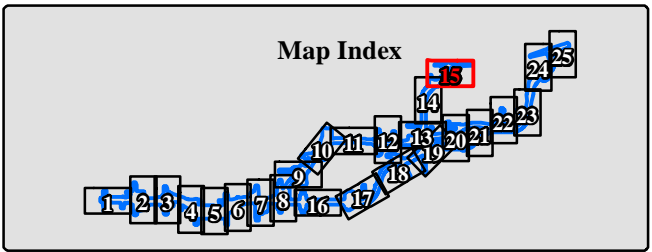
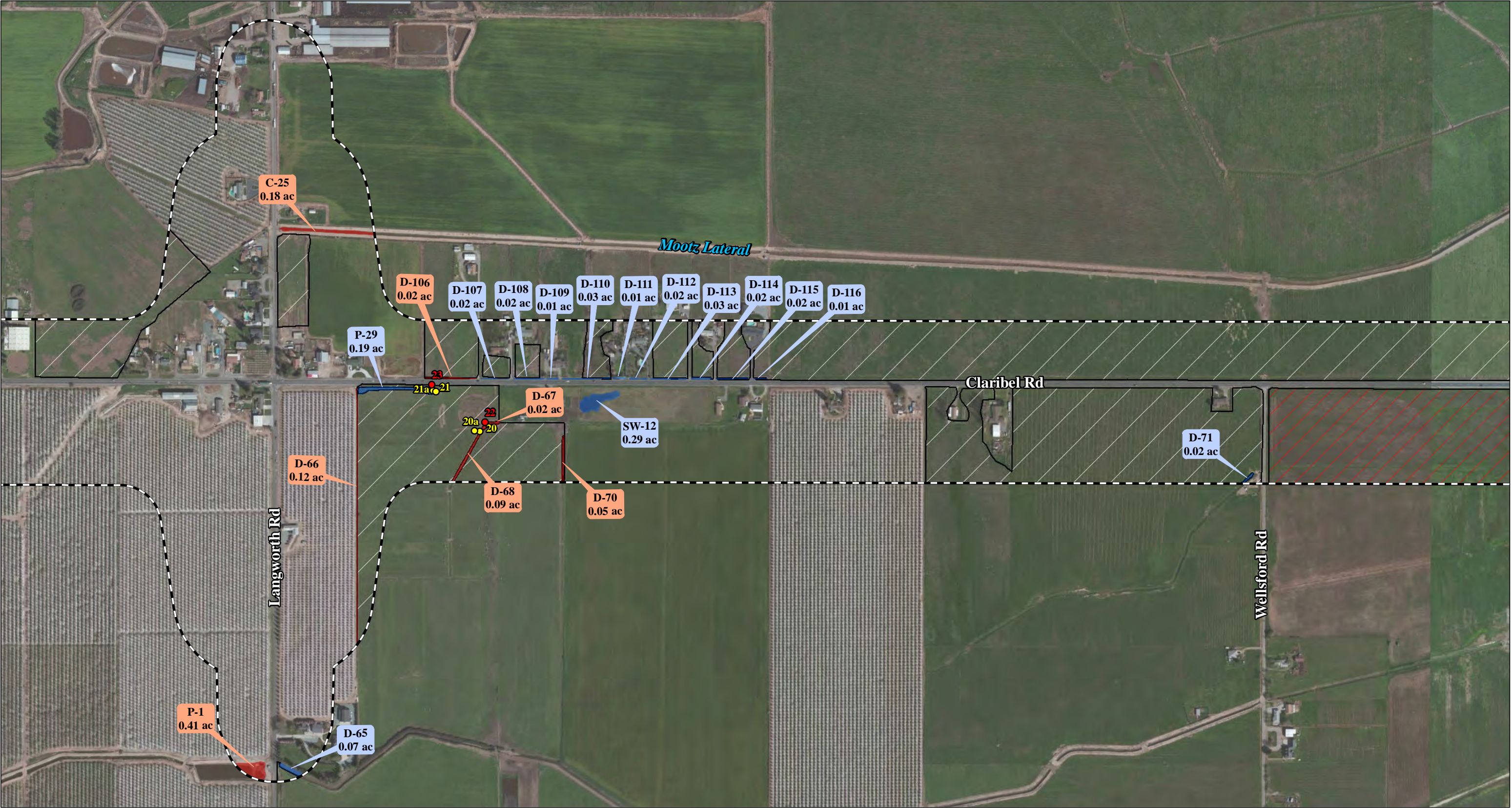


FIGURE A-15

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



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FEET

LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

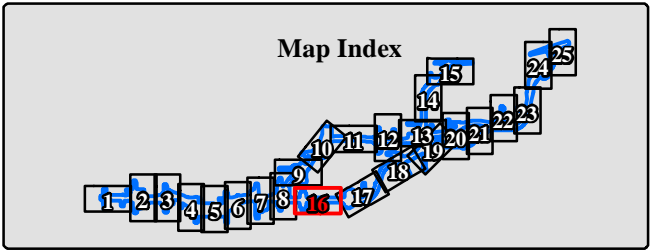
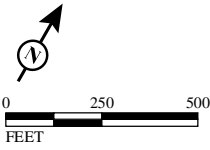


FIGURE A-16

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California

SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND		Acronym Names
	Study Area	
	Claribel Rd. Widening Project	C - Canal
	SR-219 Widening Project	D - Ditch
	Converted to Orchard	P - Pond
	Irrigated Pasture	SW - Seasonal Wetland
		PM - Perennial Marsh
		IW - Irrigated Wetland
Potential Jurisdictional Waters of the U.S. - (82.85 ac)		
	Non-Wetland Waters - (37.30 ac)	
	Wetlands - (45.55 ac)	
	Data Point	
	Photo Point	

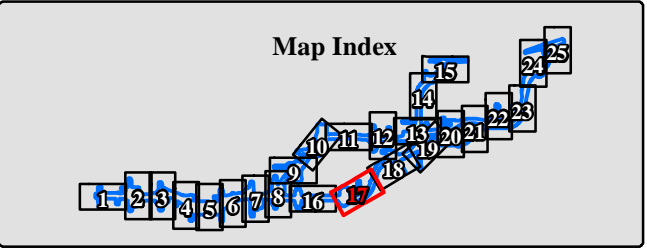
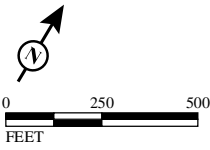


FIGURE A-17

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND		Acronym Names
	Study Area	
	Claribel Rd. Widening Project	C - Canal
	SR-219 Widening Project	D - Ditch
	Converted to Orchard	P - Pond
	Irrigated Pasture	SW - Seasonal Wetland
		PM - Perennial Marsh
		IW - Irrigated Wetland
Potential Jurisdictional Waters of the U.S. - (82.85 ac)		
	Non-Wetland Waters - (37.30 ac)	
	Wetlands - (45.55 ac)	
	Data Point	
	Photo Point	

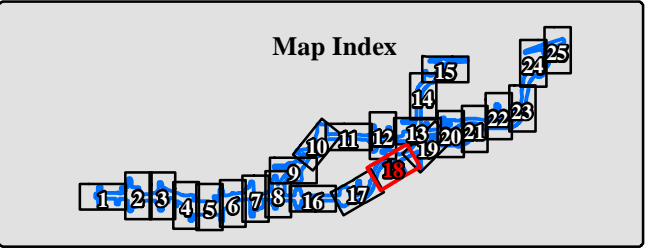
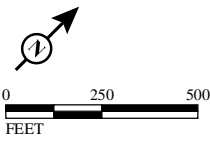


FIGURE A-18

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND		Acronym Names
	Study Area	
	Claribel Rd. Widening Project	C - Canal
	SR-219 Widening Project	D - Ditch
	Converted to Orchard	P - Pond
	Irrigated Pasture	SW - Seasonal Wetland
	Potential Jurisdictional Waters of the U.S. - (82.85 ac)	PM - Perennial Marsh
	Wetlands - (45.55 ac)	IW - Irrigated Wetland
	Data Point	
	Photo Point	

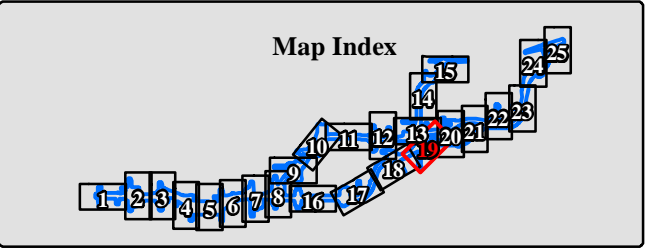
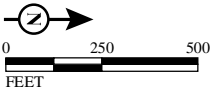


FIGURE A-19

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND		Acronym Names
	Study Area	
	Claribel Rd. Widening Project	C - Canal
	SR-219 Widening Project	D - Ditch
	Converted to Orchard	P - Pond
	Irrigated Pasture	SW - Seasonal Wetland
		PM - Perennial Marsh
		IW - Irrigated Wetland
Potential Jurisdictional Waters of the U.S. - (82.85 ac)		
	Non-Wetland Waters - (37.30 ac)	
	Wetlands - (45.55 ac)	
	Data Point	
	Photo Point	

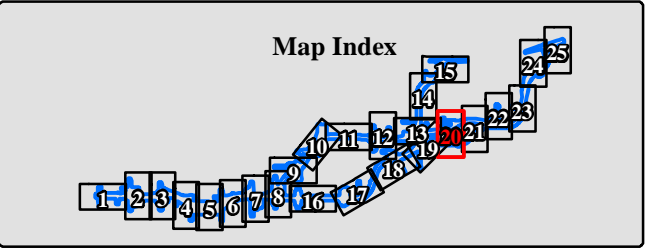
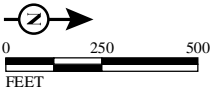
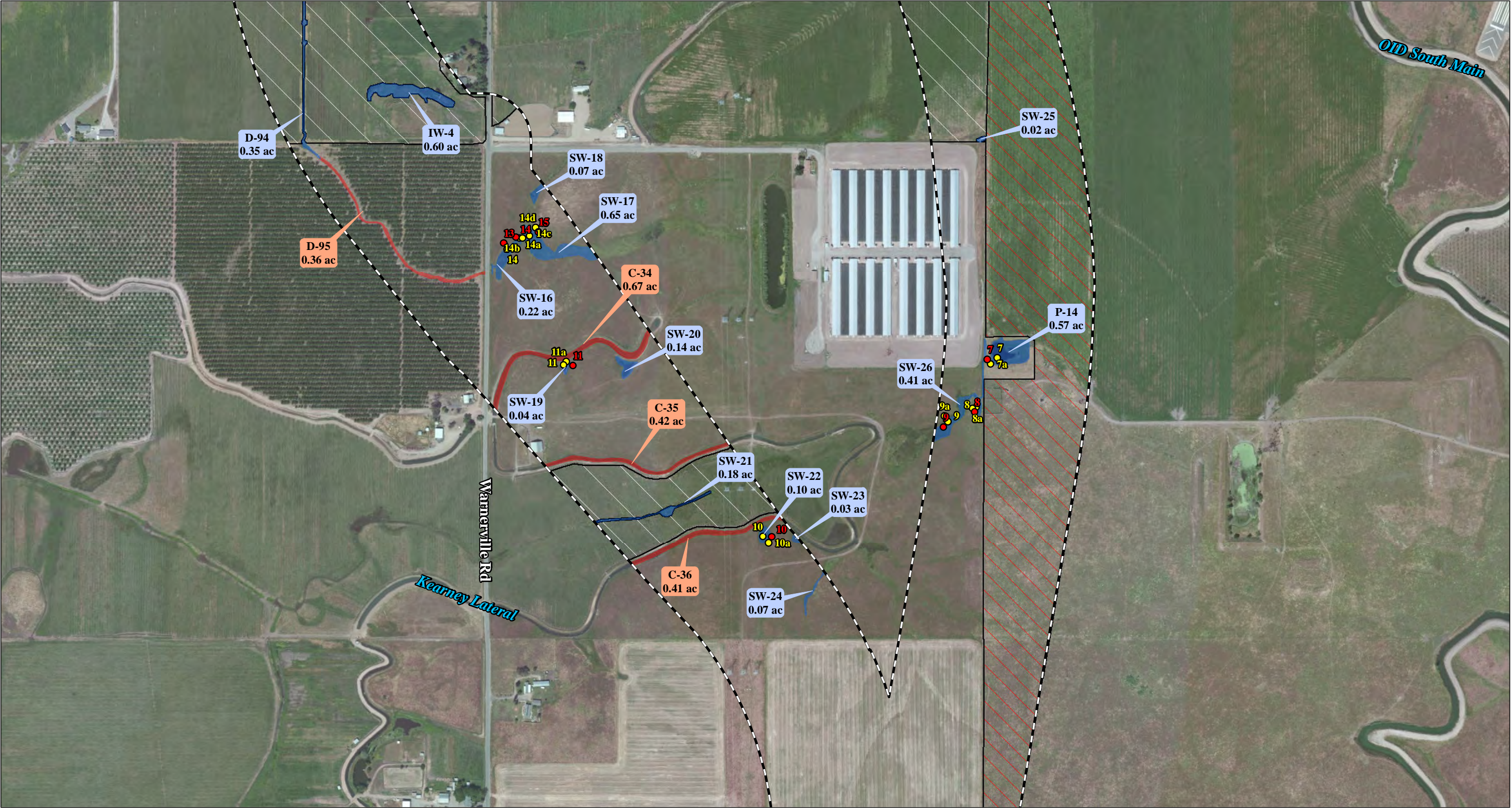


FIGURE A-20

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

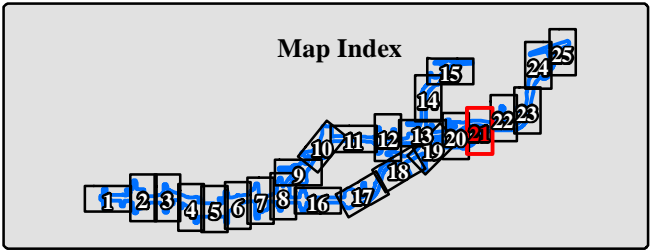
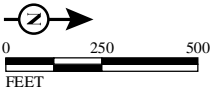


FIGURE A-21

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)

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LEGEND		Acronym Names	
	Study Area	C - Canal	
	Claribel Rd. Widening Project	D - Ditch	
	SR-219 Widening Project	P - Pond	
	Converted to Orchard	SW - Seasonal Wetland	
	Irrigated Pasture	PM - Perennial Marsh	
		IW - Irrigated Wetland	
Potential Jurisdictional Waters of the U.S. - (82.85 ac)			
	Non-Wetland Waters - (37.30 ac)		
	Wetlands - (45.55 ac)		
	Data Point		
	Photo Point		

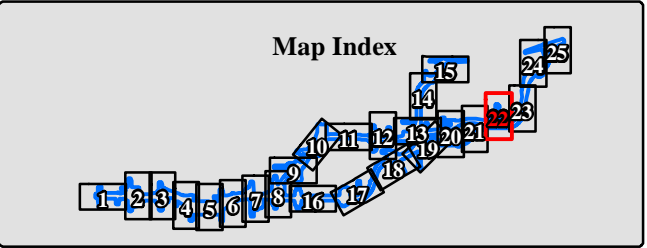
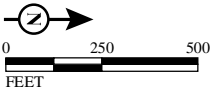


FIGURE A-22

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)
I:\Dhg1302\GIS\Reports\Delin\delin_11x17_500ft.mxd (1/21/2015)

LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

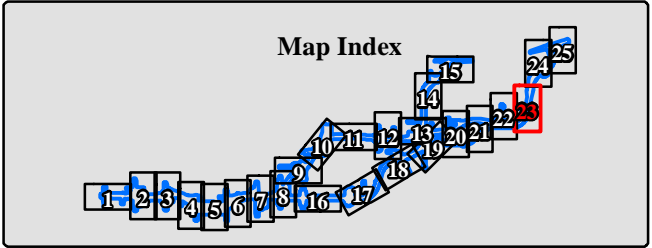
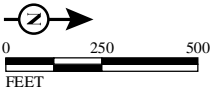


FIGURE A-23

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



SOURCE: Basemap - ESRI Aerial Imagery (2011); Mapping - LSA Associates, Inc. (2014); ICF (2011)
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LEGEND

- Study Area
- Claribel Rd. Widening Project
- SR-219 Widening Project
- Converted to Orchard
- Irrigated Pasture

Potential Jurisdictional Waters of the U.S. - (82.85 ac)

- Non-Wetland Waters - (37.30 ac)
- Wetlands - (45.55 ac)
- Data Point
- Photo Point

Acronym Names

- C - Canal
- D - Ditch
- P - Pond
- SW - Seasonal Wetland
- PM - Perennial Marsh
- IW - Irrigated Wetland

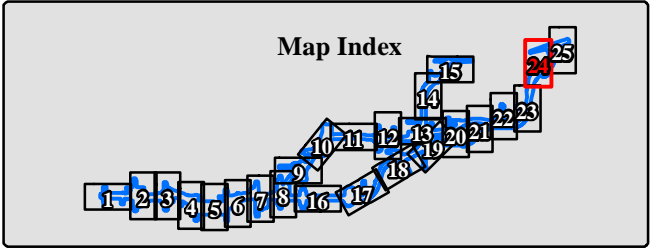
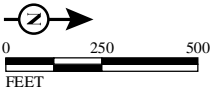


FIGURE A-24

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California



LEGEND		Acronym Names	
	Study Area	C - Canal	
	Claribel Rd. Widening Project	D - Ditch	
	SR-219 Widening Project	P - Pond	
	Converted to Orchard	SW - Seasonal Wetland	
	Irrigated Pasture	PM - Perennial Marsh	
		IW - Irrigated Wetland	
Potential Jurisdictional Waters of the U.S. - (82.85 ac)			
	Non-Wetland Waters - (37.30 ac)		
	Wetlands - (45.55 ac)		
	Data Point		
	Photo Point		

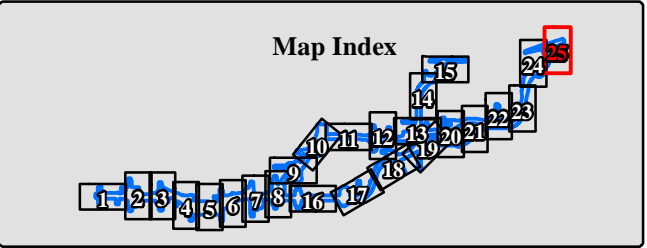


FIGURE A-25

Preliminary Jurisdictional Delineation
EA: 10-0S800, Project ID # 1000000263
North County Corridor New State Route 108 Project
Stanislaus County, California

North County Corridor New State Route 108 - Potential Jurisdictional Waters			
Feature Class	Label	Area (ac)	Wetlands?
Canal	C-1	0.59	No
Canal	C-10	0.08	No
Canal	C-11	1.04	No
Canal	C-12	0.47	No
Canal	C-13	2.02	No
Canal	C-14	0.48	No
Canal	C-15	0.23	No
Canal	C-16	0.34	No
Canal	C-17	0.12	No
Canal	C-18	0.66	No
Canal	C-19	1.31	No
Canal	C-2	1.40	No
Canal	C-20	2.28	No
Canal	C-21	0.64	No
Canal	C-22	0.05	No
Canal	C-23	1.24	No
Canal	C-24	0.21	No
Canal	C-25	0.18	No
Canal	C-26	0.51	No
Canal	C-27	0.32	No
Canal	C-28	0.05	No
Canal	C-29	0.60	No
Canal	C-3	0.16	No
Canal	C-30	0.50	No
Canal	C-31	0.01	No
Canal	C-32	0.29	No
Canal	C-33	0.46	No
Canal	C-34	0.67	No
Canal	C-35	0.42	No
Canal	C-36	0.41	No
Canal	C-37	0.28	No
Canal	C-38	1.05	No
Canal	C-39	0.30	No
Canal	C-4	0.71	No
Canal	C-40	0.90	No
Canal	C-41	0.61	No
Canal	C-42	0.15	No
Canal	C-43	1.15	No
Canal	C-44	0.24	No
Canal	C-45	0.27	No
Canal	C-5	0.13	No
Canal	C-6	0.18	No
Canal	C-7	0.18	No
Canal	C-8	1.33	No

North County Corridor New State Route 108 - Potential Jurisdictional Waters			
Canal	C-9	1.49	No
Ditch	D-1	0.02	Yes
Ditch	D-10	0.15	No
Ditch	D-100	0.01	Yes
Ditch	D-101	0.04	No
Ditch	D-102	0.06	No
Ditch	D-103	0.02	No
Ditch	D-104	0.02	No
Ditch	D-105	0.06	No
Ditch	D-106	0.02	No
Ditch	D-107	0.02	Yes
Ditch	D-108	0.02	Yes
Ditch	D-109	0.01	Yes
Ditch	D-11	0.01	Yes
Ditch	D-110	0.03	Yes
Ditch	D-111	0.01	Yes
Ditch	D-112	0.02	Yes
Ditch	D-113	0.03	Yes
Ditch	D-114	0.02	Yes
Ditch	D-115	0.02	Yes
Ditch	D-116	0.01	Yes
Ditch	D-117	0.15	Yes
Ditch	D-12	0.00	Yes
Ditch	D-13	0.00	Yes
Ditch	D-14	0.31	Yes
Ditch	D-15	0.12	Yes
Ditch	D-16	0.01	Yes
Ditch	D-17	0.13	No
Ditch	D-18	0.46	No
Ditch	D-19	0.11	No
Ditch	D-2	0.02	Yes
Ditch	D-20	0.00	No
Ditch	D-21	0.08	Yes
Ditch	D-22	0.08	No
Ditch	D-23	0.23	Yes
Ditch	D-24	0.04	No
Ditch	D-25	0.09	No
Ditch	D-26	0.07	No
Ditch	D-27	0.16	Yes
Ditch	D-28	0.01	Yes
Ditch	D-29	0.06	No
Ditch	D-3	0.03	Yes
Ditch	D-30	0.09	No
Ditch	D-31	0.41	Yes
Ditch	D-32	0.33	Yes

North County Corridor New State Route 108 - Potential Jurisdictional Waters			
Ditch	D-33	0.21	Yes
Ditch	D-34	0.05	No
Ditch	D-35	0.01	No
Ditch	D-36	0.07	No
Ditch	D-37	0.06	Yes
Ditch	D-38	0.11	Yes
Ditch	D-39	0.04	Yes
Ditch	D-4	0.01	No
Ditch	D-40	0.13	No
Ditch	D-41	0.03	Yes
Ditch	D-42	0.02	No
Ditch	D-43	0.05	No
Ditch	D-44	0.05	No
Ditch	D-45	0.13	Yes
Ditch	D-46	0.09	Yes
Ditch	D-47	0.05	Yes
Ditch	D-48	0.06	Yes
Ditch	D-49	0.04	Yes
Ditch	D-5	0.37	Yes
Ditch	D-50	0.05	Yes
Ditch	D-51	0.10	Yes
Ditch	D-52	0.16	Yes
Ditch	D-53	0.09	Yes
Ditch	D-54	0.17	No
Ditch	D-55	0.20	No
Ditch	D-56	0.09	Yes
Ditch	D-57	0.04	No
Ditch	D-58	0.31	Yes
Ditch	D-59	0.05	No
Ditch	D-6	0.09	Yes
Ditch	D-60	0.02	No
Ditch	D-61	0.07	Yes
Ditch	D-62	0.06	Yes
Ditch	D-63	0.18	Yes
Ditch	D-64	0.02	Yes
Ditch	D-65	0.07	Yes
Ditch	D-66	0.12	No
Ditch	D-67	0.02	No
Ditch	D-68	0.09	No
Ditch	D-69	0.12	Yes
Ditch	D-7	0.27	Yes
Ditch	D-70	0.05	No
Ditch	D-71	0.02	Yes
Ditch	D-72	0.20	No
Ditch	D-73	0.13	Yes

North County Corridor New State Route 108 - Potential Jurisdictional Waters			
Ditch	D-74	0.08	Yes
Ditch	D-75	0.08	Yes
Ditch	D-76	0.06	No
Ditch	D-77	0.30	No
Ditch	D-78	0.32	Yes
Ditch	D-79	0.17	No
Ditch	D-8	0.11	Yes
Ditch	D-80	0.06	Yes
Ditch	D-81	0.04	Yes
Ditch	D-82	0.02	Yes
Ditch	D-83	0.08	No
Ditch	D-84	0.07	Yes
Ditch	D-85	0.07	Yes
Ditch	D-86	0.45	Yes
Ditch	D-87	0.48	No
Ditch	D-88	0.07	No
Ditch	D-89	0.04	No
Ditch	D-9	0.10	Yes
Ditch	D-90	0.26	No
Ditch	D-91	0.34	Yes
Ditch	D-92	0.05	Yes
Ditch	D-93	0.03	Yes
Ditch	D-94	0.35	Yes
Ditch	D-95	0.36	No
Ditch	D-96	0.07	No
Ditch	D-98	0.01	Yes
Ditch	D-99	0.00	Yes
Irrigated Wetland	IW-1	2.15	Yes
Irrigated Wetland	IW-2	0.08	Yes
Irrigated Wetland	IW-3	0.34	Yes
Irrigated Wetland	IW-4	0.60	Yes
Irrigated Wetland	IW-5	0.57	Yes
Pond/Basin	P-1	0.25	No
Pond/Basin	P-10	1.40	No
Pond/Basin	P-11	1.22	No
Pond/Basin	P-12	0.26	Yes
Pond/Basin	P-13	0.47	Yes
Pond/Basin	P-14	0.57	Yes
Pond/Basin	P-15	0.29	Yes
Pond/Basin	P-16	0.04	Yes
Pond/Basin	P-17	1.94	Yes
Pond/Basin	P-18	0.10	Yes
Pond/Basin	P-19	0.02	Yes
Pond/Basin	P-2	0.13	No
Pond/Basin	P-20	1.70	Yes

North County Corridor New State Route 108 - Potential Jurisdictional Waters			
Pond/Basin	P-21	0.57	Yes
Pond/Basin	P-22	0.03	Yes
Pond/Basin	P-23	0.17	Yes
Pond/Basin	P-24	0.05	Yes
Pond/Basin	P-25	0.62	Yes
Pond/Basin	P-26	1.17	Yes
Pond/Basin	P-27	0.16	Yes
Pond/Basin	P-28	0.17	Yes
Pond/Basin	P-29	0.19	Yes
Pond/Basin	P-3	0.01	No
Pond/Basin	P-30	0.12	No
Pond/Basin	P-31	0.03	Yes
Pond/Basin	P-32	0.05	Yes
Pond/Basin	P-33	0.10	Yes
Pond/Basin	P-34	0.07	Yes
Pond/Basin	P-35	0.41	Yes
Pond/Basin	P-36	0.04	Yes
Pond/Basin	P-37	0.50	Yes
Pond/Basin	P-38	0.39	Yes
Pond/Basin	P-4	0.05	No
Pond/Basin	P-5	0.17	No
Pond/Basin	P-6	0.18	No
Pond/Basin	P-7	0.28	No
Pond/Basin	P-8	1.58	No
Pond/Basin	P-9	0.45	No
Perennial Marsh	PM-1	0.51	Yes
Perennial Marsh	PM-10	2.18	Yes
Perennial Marsh	PM-11	0.27	Yes
Perennial Marsh	PM-12	0.12	Yes
Perennial Marsh	PM-13	0.05	Yes
Perennial Marsh	PM-14	0.07	Yes
Perennial Marsh	PM-2	0.86	Yes
Perennial Marsh	PM-3	0.22	Yes
Perennial Marsh	PM-4	1.51	Yes
Perennial Marsh	PM-5	0.08	Yes
Perennial Marsh	PM-6	3.10	Yes
Perennial Marsh	PM-7	2.44	Yes
Perennial Marsh	PM-8	2.30	Yes
Perennial Marsh	PM-9	0.42	Yes
Seasonal Wetland	SW-1	0.02	Yes
Seasonal Wetland	SW-10	0.02	Yes
Seasonal Wetland	SW-11	0.15	Yes
Seasonal Wetland	SW-12	0.29	Yes
Seasonal Wetland	SW-13	0.26	Yes
Seasonal Wetland	SW-14	0.79	Yes

North County Corridor New State Route 108 - Potential Jurisdictional Waters			
Seasonal Wetland	SW-15	1.73	Yes
Seasonal Wetland	SW-16	0.22	Yes
Seasonal Wetland	SW-17	0.65	Yes
Seasonal Wetland	SW-18	0.07	Yes
Seasonal Wetland	SW-19	0.04	Yes
Seasonal Wetland	SW-2	0.06	Yes
Seasonal Wetland	SW-20	0.14	Yes
Seasonal Wetland	SW-21	0.18	Yes
Seasonal Wetland	SW-22	0.10	Yes
Seasonal Wetland	SW-23	0.03	Yes
Seasonal Wetland	SW-24	0.07	Yes
Seasonal Wetland	SW-25	0.02	Yes
Seasonal Wetland	SW-26	0.41	Yes
Seasonal Wetland	SW-27	1.17	Yes
Seasonal Wetland	SW-28	1.65	Yes
Seasonal Wetland	SW-29	1.45	Yes
Seasonal Wetland	SW-3	0.14	Yes
Seasonal Wetland	SW-4	0.10	Yes
Seasonal Wetland	SW-5	0.01	Yes
Seasonal Wetland	SW-6	0.04	Yes
Seasonal Wetland	SW-7	0.09	Yes
Seasonal Wetland	SW-8	0.30	Yes
Seasonal Wetland	SW-9	0.04	Yes

Appendix B Wetland Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 1
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Polygonum sp.</u>	<u>40</u>	<u>y</u>	<u>DBI</u>	Hydrophytic Vegetation Indicators: Dominance Test is >50% <u>X</u> Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Geranium dissectum</u>	<u>10</u>	<u>n</u>	<u>TU</u>	
3. <u>Hordeum maximum</u>	<u>20</u>	<u>n</u>	<u>FAC</u>	
4. <u>Rumex acetosella</u>	<u>40</u>	<u>y</u>	<u>FACU</u>	
Total Cover: <u>110</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <u>X</u> No _____

Remarks:

Sampling Point: 1

HYDROLOGY

Arid West – Version 11-1-2006

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 1a
 Investigator(s): Mike Truchlood/Daphna Winkler Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		
Remarks: <u>Upland point</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Hordeum</u> <u>Murinum</u>	<u>80</u>	<u>y</u>	<u>FACU</u>	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
2. <u>Centaurea solstitialis</u>	<u>10</u>	<u>n</u>	<u>UPL</u>	
3. <u>Rumex acetosella</u>	<u>10</u>	<u>n</u>	<u>UPL</u>	
4. <u>Amsinckia menziesii</u>	<u>4</u>	<u>n</u>	<u>UPL</u>	
5. <u>Capsella bursa-pastoris</u>	<u>1</u>	<u>n</u>	<u>FACU</u>	
Total Cover: <u>105</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: 1A

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		
0-12"	75 YR 2/2	100						Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): 712"Saturation Present? Yes _____ No ✓ Depth (inches): 712"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 2
 Investigator(s): Mike Truchess, Dagna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes <u>X</u> No _____
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: _____				% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____ Remarks:
Herb Stratum				
1. <u>Glyceria declinata</u>	<u>40</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Polygonum sp.</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Lactuca serriola</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	Total Cover: <u>100</u>
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
Total Cover: _____				Woody Vine Stratum
1. _____ 2. _____				

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		
0-4"	10YR 3/1	100						clay loam
5-10"	10YR 3/2	95	7.5YR 3/4	5	C	M		clay loam
10-15"	7.5YR 3/3	100						clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

Concretions also observed

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|---|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

- | | | |
|------------------------|--|---------------------------------|
| Surface Water Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): <u> — </u> |
| Water Table Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): <u> 7.5" </u> |
| Saturation Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): <u> 7.5" </u> |

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: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 2a
 Investigator(s): Mike Truchlood/Daphna Winkler Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Rumex acetosella</u> <u>10</u> <u>n</u> <u>FACU</u> 2. <u>Glyceria declinata</u> <u>15</u> <u>n</u> <u>FACW</u> 3. <u>Rumex crispus</u> <u>30</u> <u>y</u> <u>FAC</u> 4. <u>Rumex sp.</u> <u>50</u> <u>y</u> <u>FAC</u> 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>105</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																				
Remarks: <u>Rumex sp. assumed FAC species due to presence in wet area only</u>																				

SOIL

Sampling Point: 2a

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		
D-12"	10 YR 3/1	100%					clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:
☐ 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.

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

Hydric Soil Present? Yes ____ No ☒

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<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"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> — </u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> > 12" </u>		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> > 12" </u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 2b
 Investigator(s): Mike Truchlood/Dan Hawwincher Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Rumex crispus</u> <u>50</u> <u>Y</u> <u>FAC</u> 2. <u>Rumex sp.</u> <u>30</u> <u>Y</u> <u>Fac</u> 3. <u>Glyceria sp. decinata</u> <u>15</u> <u>M</u> <u>FacW</u> 4. <u>Rumex acetosella</u> <u>10</u> <u>N</u> <u>FACU</u> 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>105</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: <u>Rumex sp. assumed FAC species due to presence in wet area only</u>				

Sampling Point: 2b

HYDROLOGY

US Army Corps of Engineers

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 3
 Investigator(s): Mike Truchess/Danah Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Discard basin</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	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 = _____
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>55</u>				
Herb Stratum				
1. <u>unidentified annual grass</u>	<u>55</u>	<u>Yes</u>	<u>-</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>55</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>45</u> % Cover of Biotic Crust _____				
Hydrophytic Vegetation Present? Yes _____ No _____				
Remarks: <u>Vegetation criteria not used Basin recently discard, vegetation not identifiable.</u>				

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		
0-8	10YR 3/2	100	—	—	—	—	—	Coarse sandy loam - Pseud
8-11	10YR 3/2	95	7.5YR 4/4	5	C	M	—	Coarse sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

SOIL disc'd Top 8 inches

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input checked="" type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): 711"Saturation Present? Yes _____ No ☒ Depth (inches): 711"

(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: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 4
 Investigator(s): Mike Trueblood Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Centaurea solstitialis</u> <u>5</u> <u>no</u> <u>UPL</u> 2. <u>unknown annual grass</u> <u>10</u> <u>no</u> <u>—</u> 3. <u>Juncus effusus</u> <u>40</u> <u>yes</u> <u>FACW</u> 4. <u>Cyperus eragrostis</u> <u>5</u> <u>no</u> <u>FACW</u> 5. <u>Polygonum sp.</u> <u>10</u> <u>no</u> <u>FACW</u> 6. <u>Eleocharis macrostachya</u> <u>5</u> <u>no</u> <u>OBL</u> 7. <u>Ranunculus sp.</u> <u>55</u> <u>yes</u> <u>OBL</u> 8. _____ Total Cover: <u>130</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																				
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		
0-10	7.5YR 2.5/1	80	2.5YR 9/6	10	C	m		Sandy loam
			5YR 5/8	10	C	m		Sandy loam
10"	—	—						hard claypan

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

claypan @ 10 inches

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ 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 Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☒ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): —
 Water Table Present? Yes ☐ No ☒ Depth (inches): 7-10"
 Saturation Present? Yes ☐ No ☒ Depth (inches): 7-10"
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

matted vegetation from water. obvious snake feature.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 4a
 Investigator(s): Mike Truchlood/Dawn Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes _____ No _____		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Rumex sp</u>	<u>30</u>	<u>yes</u>	<u>FAC</u>	
2. <u>Juncus effusus</u>	<u>50</u>	<u>yes</u>	<u>OBL</u>	
3. <u>Unknown grass</u>	<u>40</u>	<u>yes</u>	<u>FACW</u>	
4. <u>Dolichopus sp</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
5. <u>Trisetum hirtum</u>	<u>1</u>	<u>no</u>	<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
6. <u>Bromus hordeaceus</u>	<u>1</u>	<u>no</u>	<u>FACU</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>117</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				
<u>Unknown annual grassland present, however other indicators show wetland</u>				

SOIL

Sampling Point: 4a

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		
0-8"	7.5YR 3/3	93	5YR 4/6	7	C	M		Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

hardpan at 8 inches

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <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 checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input checked="" 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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input checked="" type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

- | | | |
|--|--|--------------------------------|
| Surface Water Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): <u> — </u> |
| Water Table Present? | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): <u> 78" </u> |
| Saturation Present?
(includes capillary fringe) | Yes _____ No <input checked="" type="checkbox"/> | Depth (inches): <u> 78" </u> |

Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

matted vegetation, obvious snake feature

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 4b
 Investigator(s): Mike Trueblood Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Upland data point</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)																
1. _____																				
2. _____																				
3. _____																				
4. _____																				
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum																				
1. _____																				
2. _____																				
3. _____																				
4. _____																				
5. _____																				
Total Cover: _____																				
Herb Stratum				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)																
1. <u>Unknown grass</u>	<u>90</u>	<u>y</u>	<u>UPL</u>																	
2. <u>Holcus virgatus</u>	<u>15</u>	<u>n</u>	<u>UPL</u>																	
3. <u>Erodium sp.</u>	<u>2</u>	<u>n</u>	<u>UPL</u>																	
4. <u>Bromus hordeaceus</u>	<u>20</u>	<u>n</u>	<u>FACU</u>																	
5. <u>Amsinckia menziesii</u>	<u>15</u>	<u>n</u>	<u>UPL</u>																	
6. _____																				
7. _____																				
8. _____																				
Total Cover: <u>132</u>																				
Woody Vine Stratum				¹ Indicators of hydric soil and wetland hydrology must be present.																
1. _____																				
2. _____																				
Total Cover: _____																				
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																
Remarks:																				

Sampling Point: 46

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <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 type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):

Water Table Present? Yes ☐ No ☒ Depth (inches): 78"

Saturation Present? Yes ☐ No ☒ Depth (inches): 78"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 5
 Investigator(s): Mike Trueblood/Daphne Welch Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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"/>	Is the Sampled Area within a Wetland? 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"/>	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Unknown grass</u>	<u>40</u>	<u>y</u>	<u>FAC</u>	
2. <u>Paspalum dilatatum</u>	<u>45</u>	<u>y</u>	<u>FAC</u>	Remarks: <u>Unknown annual grass heavily grazed. Assumed facultative since it is only present in the shale depression.</u>
3. <u>Trifolium hirsutum</u>	<u>30</u>	<u>n</u>	<u>LPL</u>	
4. <u>Juncus tenuis</u>	<u>15</u>	<u>n</u>	<u>FACW</u>	
5. _____	<u>7</u>	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Total Cover: <u>130</u>
8. _____	_____	_____	_____	
Woody Vine Stratum				Total Cover: _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Cover: _____
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Remarks:
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		
0-9"	10YR 2/2	95	5YR 3/4	5	C	M		Silty loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ 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 Plowed Soils (C6)
☐ Other (Explain in Remarks)
- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☒ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☒ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

- Surface Water Present? Yes ☐ No ☒ Depth (inches): -
 Water Table Present? Yes ☐ No ☒ Depth (inches): >9"
 Saturation Present? Yes ☐ No ☒ Depth (inches): >9"
 (includes capillary fringe)

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

matted vegetation from recent water. obvious shale feature.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/12/14

Applicant/Owner: Stanislaus County State: CA Sampling Point: 6

Investigator(s): Mike Truchlood/Dan H. Winkler Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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"/>	Is the Sampled Area within a Wetland?	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"/>		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75%</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____	Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> 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) _____
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) _____																	
Total Cover: _____																		
Sapling/Shrub Stratum																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
Total Cover: _____																		
Herb Stratum																		
1. <u>Unknown grass</u>	<u>30</u>	<u>Yes</u>	<u>FAC</u>															
2. <u>Trifolium hirtum</u>	<u>30</u>	<u>Yes</u>	<u>UPL</u>															
3. <u>Juncus tenuis</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
4. <u>Ranunculus sp.</u>	<u>20</u>	<u>Yes</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
Total Cover: <u>100</u>																		
Woody Vine Stratum																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
Total Cover: _____																		
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																		
Hydrophytic Vegetation Indicators: <input checked="" 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)																		
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																		

Remarks:

Sampling Point: 6

Wetland Hydrology Indicators:			Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)				
<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 checked="" 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"/> Thin Muck Surface (C7)		
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)		
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)		
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)		
		<input type="checkbox"/> FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> — </u>		
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> > 12" </u>		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> > 12" </u>		
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: Evidence of water, abrupt vegetation type edge and matted vegetation Obvious snake feature.				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 7
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: <input checked="" 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.
1. <u>Nasturtium officinale</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
2. <u>Typha latifolia</u>	<u>70</u>	<u>Y</u>	<u>OBL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Total Cover: <u>110</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
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		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-12"	7.5 YR 2.5/1	90	2.5 YR 2.5/4	10	C	m		clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | |
|--|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input checked="" 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) | |

- ☐ 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- | | |
|---|--|
| <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 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 Plowed Soils (C6) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): —
Water Table Present? Yes ☐ No ☒ Depth (inches): >14"
Saturation Present? Yes ☐ No ☒ Depth (inches): >14"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/13/2014

Applicant/Owner: Stanislaus County State: CA Sampling Point: 7a

Investigator(s): Mike Truchlood/Dawnawhelen Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		
Remarks: <u>Upland data point</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				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 = _____
1. <u>Acacia</u>	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Hieracium muricatum Hypericum</u>	<u>50%</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Amsinckia menziesii</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>	
3. <u>Eriogonum sp.</u>	<u>20%</u>	<u>Yes</u>	<u>UPL</u>	
4. <u>Centauria sulcatifolia</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	
5. <u>Arenaria sativa</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>90%</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>10%</u> % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: 7a

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

Depth (inches)	Matrix		Redox Features			Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹			
0-12"	7.5 YR 3/3	100%						cobbly silty clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ☒

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): 712"Saturation Present? Yes _____ No ☒ Depth (inches): 712"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/12/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 8
 Investigator(s): Mike Trueblood/Dagna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Juncus effusus</u> <u>20%</u> <u>Yes</u> <u>OBL</u> 2. <u>Elymus canadensis</u> <u>60%</u> <u>Yes</u> <u>OBL</u> 3. <u>Lythrum hyssopifolia</u> <u>10%</u> <u>No</u> <u>FACW</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>90%</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum <u>10%</u> % Cover of Biotic Crust _____				
Hydrophytic Vegetation Indicators: <input checked="" 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)				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
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		
1 - 10"	7.5YR 3/2	90%	5YR 3/4	10%	C	M		Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | |
|--|--|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) |
| <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 checked="" 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) | |

- ☐ 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.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | |
|--|--|
| <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 type="checkbox"/> Presence of Reduced Iron (C4) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | |

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☒ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 710"
Water Table Present? Yes ☐ No ☒ Depth (inches): 710"
Saturation Present? Yes ☐ No ☒ Depth (inches): 710"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/13/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 8a
 Investigator(s): Mike Trueblood/Daphne Winchen Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>Upland data point</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
Herb Stratum				
1. <u>Cynodon dactylon</u>	<u>10%</u>	<u>NO</u>	<u>UPL</u>	
2. <u>Eragrostis sp.</u>	<u>30%</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>Heteropogon multiflorus leucanthus</u>	<u>40%</u>	<u>Yes</u>	<u>UPL</u>	
4. <u>Bromus inermis</u>	<u>2%</u>	<u>NO</u>	<u>UPL</u>	Remarks:
5. <u>Heteropogon virgatus</u>	<u>10%</u>	<u>NO</u>	<u>UPL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>92%</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>8%</u> % Cover of Biotic Crust _____				

SOIL

Sampling Point: 8a

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		
0-10"	10YR 3/2	75%	7.5YR 5/8	5%	C	M		clay loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): > 10"Saturation Present? Yes ☐ No ☒ Depth (inches): > 10"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 9
 Investigator(s): Mike Truchlood/Daphne Wicken Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Juncus effusus</u> <u>50</u> <u>y</u> <u>FACW</u> 2. <u>Unknown annual grass</u> <u>50</u> <u>y</u> <u>FAC</u> 3. <u>Erodium cicutarium</u> <u>2</u> <u>n</u> <u>UPL</u> 4. <u>Lythrum hyssopifolium</u> <u>2</u> <u>n</u> <u>FACW</u> 5. <u>Conyza Canadensis</u> <u>2</u> <u>n</u> <u>FACU</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>100</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

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.

Hydrophytic Vegetation Present? Yes ☒ No _____

Remarks:

Unknown annual grass assumed Facultative since it only occurs in the shale area.

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		
0-7"	10YR 2/2	95	5YR 4/6	5	C	M		clayloam
7-11"	10YR 3/2	80	5YR 4/6	20	C	M		loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <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 checked="" type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) | <input checked="" 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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input checked="" type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): 711"Water Table Present? Yes _____ No ☒ Depth (inches): 711"Saturation Present? Yes _____ No ☒ Depth (inches): 711"
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/12
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 9a
 Investigator(s): Mike Trueblood/Dawn Winchester Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>✓</u>
Hydric Soil Present? Yes <u>✓</u> No _____	
Wetland Hydrology Present? Yes _____ No <u>✓</u>	
Remarks: <u>Upland data point</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Herb Stratum				
1. <u>Holocarpha virgata</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	Remarks:
2. <u>Erodium cicutarium</u>	<u>50</u>	<u>N</u>	<u>UPL</u>	
3. <u>unknown annual grass</u>	<u>60</u>	<u>Y</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>120</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Sampling Point:

9a

[illegible]

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

☐ 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.

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No

Remarks:

Wetland Hydrology Indicators:

<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 type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-Stained Leaves (B9)	

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☐ No ☒ Depth (inches): 710

Saturation Present? Yes ☐ No ☒ Depth (inches): 710
(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: North County Corridor City/County: Stanislaus Sampling Date: 3/13/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 10
 Investigator(s): Mike Truitt / Dawn Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Eriogonum sp.</u> <u>20%</u> <u>Yes</u> <u>FACW</u> 2. <u>Erodium botrys</u> <u>1%</u> <u>No</u> <u>UPL</u> 3. <u>Eleocharis maculata</u> <u>5%</u> <u>No</u> <u>OBL</u> 4. <u>Eleocharis acicularis</u> <u>20%</u> <u>Yes</u> <u>CHL</u> 5. <u>Phacelia sp.</u> <u>5%</u> <u>No</u> <u>FACW</u> 6. <u>Lesqueris glaberrima</u> <u>50%</u> <u>Yes</u> <u>OBL</u> 7. _____ 8. _____ Total Cover: <u>96%</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum <u>4%</u> % Cover of Biotic Crust _____				
Hydrophytic Vegetation Indicators: <input checked="" 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)				
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____				
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		
0-12"	10YR 3/2	95%	5YR 4/6	5%	C	M		loamy clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|---|--|--|
| <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 checked="" 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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): 212"

Saturation Present? (includes capillary fringe) Yes ☐ No ☒ Depth (inches): 212"

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: North County Corridor City/County: Stanislaus Sampling Date: 3/13/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 10a
 Investigator(s): Mike Trueblood / Daphna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>	
Remarks: <u>upland data point</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Helocarpus virgata</u> <u>20%</u> <u>Yes</u> <u>UPL</u> 2. <u>Erodium cicutarium</u> <u>30%</u> <u>Yes</u> <u>UPL</u> 3. <u>Bromus diandrus</u> <u>50%</u> <u>Yes</u> <u>UPL</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>100%</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																				
Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																				
Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>																				
Remarks: _____																				

Sampling Point: 103

HYDROLOGY

Arid West – Version 11-1-2006

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 11
 Investigator(s): Mike Truchlood/Dagna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Plagiobothrys sp.</u> <u>20</u> <u>y</u> <u>FACW</u> 2. <u>Unknown annual grass</u> <u>20</u> <u>y</u> <u>FAC</u> 3. <u>Erodium botrys</u> <u>5</u> <u>n</u> <u>UPL</u> 4. <u>Deschampsia danthonioides</u> <u>10</u> <u>n</u> <u>FACW</u> 5. <u>Lathraea glaberrima</u> <u>50</u> <u>y</u> <u>OBL</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>105</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Hydrophytic Vegetation Indicators:

X 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.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Unknown annual grass assumed facultative since it only occurs in the depression.
 Heavily grazed vegetation.

Sampling Point: 11

HYDROLOGY		
Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u>		<u>Secondary Indicators (2 or more required)</u>
<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 checked="" 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 Plowed Soils (C6) <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"/> Thin Muck Surface (C7) <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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>7 1/2"</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>7 1/2"</u> (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:		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 11a
 Investigator(s): Mike Trueblood & Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>upland data point</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Bromus diandrus</u> <u>20</u> <u>y</u> <u>UPL</u> 2. <u>Bromus hordeaceus</u> <u>20</u> <u>y</u> <u>FACU</u> 3. <u>Erodium sp.</u> <u>40</u> <u>y</u> <u>UPL</u> 4. <u>Hibiscus virginica</u> <u>10</u> <u>n</u> <u>UPL</u> 5. <u>Lactuca taraxacoides</u> <u>5</u> <u>n</u> <u>UPL</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>95</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum <u>5</u> % Cover of Biotic Crust _____				
Hydrophytic Vegetation Present? Yes _____ No <u>X</u>				
Remarks:				

Sampling Point: 11a

HYDROLOGY

Secondary Indicators (2 or more required)

Arid West – Version 11-1-2006

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 12
 Investigator(s): Mike Trueblood/Dan Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Eupha latifolia</u> <u>50</u> <u>Y</u> <u>Obl</u> 2. <u>polgynum sp.</u> <u>30</u> <u>Y</u> <u>FACW</u> 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>80</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust _____																				
Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				
Remarks:																				

Sampling Point: 12

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
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JS Army Corps of Engineers Arid West – Version 11-1-2006

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 12a
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>Upland point</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Centaurea solstitialis</u> <u>5</u> <u>n</u> <u>UPI</u> 2. <u>Festuca perennis</u> <u>60</u> <u>y</u> <u>FACU</u> 3. <u>Erodium sp</u> <u>10</u> <u>n</u> <u>UPI</u> 4. <u>Malva parviflora</u> <u>5</u> <u>n</u> <u>UPI</u> 5. <u>Cynodon dactylon</u> <u>5</u> <u>n</u> <u>UPI</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>85</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust _____				
Remarks: _____				

SOIL

Sampling Point: 12g

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		
0-9"	5YR 4/14	100						loamy clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): 29"

Saturation Present? Yes _____ No ✓ Depth (inches): 29"

(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: North County Corridor City/County: Stanislaus Sampling Date: 3/14/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 13
 Investigator(s): Mike Trueblood/Dan Winkler Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: <u>Irrigated pasture, wetlands present due to irrigation only.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>75</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Matricaria discolora</u> <u>15</u> <u>y</u> <u>FACU</u> 2. <u>Rumex sp.</u> <u>2</u> <u>n</u> <u>FAC</u> 3. <u>Plantago lanceolata</u> <u>2</u> <u>n</u> <u>FAC</u> 4. <u>Eleocharis sp.</u> <u>30</u> <u>y</u> <u>OBL</u> 5. <u>Nastrutium officinale</u> <u>15</u> <u>y</u> <u>OBL</u> 6. <u>Callitriche sp.</u> <u>15</u> <u>y</u> <u>OBL</u> 7. _____ 8. _____ Total Cover: <u>79</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum <u>21</u> % Cover of Biotic Crust _____																				
Hydrophytic Vegetation Indicators: <input checked="" 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.																				
Hydrophytic Vegetation Present? Yes <u>X</u> No _____																				
Remarks:																				

SOIL

Sampling Point: 13

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		
0-13"	10YR 4/1	80	5YR 3/4	20	C	M		loamy clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|---|--|--|
| <input checked="" 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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): 7 inWater Table Present? Yes ☒ No ☒ Depth (inches): SurfSaturation Present? Yes ☒ No _____ Depth (inches): Surf

(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: North County Corridor City/County: Stanislaus Sampling Date: 3/13/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 3A
 Investigator(s): Mike Trueblood/Danina Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
 Are Vegetation X, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No X
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>Vegetation was chewed down by cattle. Higher spot in irrigated pasture.</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</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>0</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____	_____	_____	_____	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 = _____
Herb Stratum				Column Totals: _____ (A) _____ (B)
1. <u>Matricaria discolor</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____
2. <u>Unknown grass</u>	<u>65</u>	<u>Yes</u>	<u>UPL</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>105</u>				
Woody Vine Stratum				Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	___ Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
Total Cover: _____				___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks: <u>In the middle of pasture, all plants were chewed down</u>				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>

Sampling Point: 13a

[illegible]

Indicators for Problematic Hydric Soils³:

- ³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Hydric Soil Present? Yes No ☒

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes _____ No X

Irrigated pasture

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 14
 Investigator(s): Mike Trueblood/Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: <input checked="" 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. <u>Eleocharis macrostachya</u>	<u>80%</u>	<u>Yes</u>	<u>OBL</u>	
2. <u>Juncus effusus</u>	<u>20%</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Glyceria declinata</u>	<u>7%</u>	<u>No</u>	<u>OBL</u>	
4. <u>Rumex crispus</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
5. <u>Mimulus guttatus</u>	<u>1%</u>	<u>No</u>	<u>OBL</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>109%</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: 14

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		
0-13"	10YR 3/1	88%	2.5YR 2.5/4	12%	C	M		Clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

A soil

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|---|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <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): >13"Saturation Present? Yes ☐ No ☒ Depth (inches): >13"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: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014

Applicant/Owner: Stanislaus County State: CA Sampling Point: 14a

Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Erechtia's macrostachya</u>	<u>75%</u>	<u>Yes</u>	<u>Obl</u>	
2. <u>Glyceria declinata</u>	<u>20%</u>	<u>Yes</u>	<u>Obl</u>	Remarks:
3. <u>Juncus effusus</u>	<u>5%</u>	<u>No</u>	<u>Obl</u>	
4. <u>Ranunculus sp.</u>	<u>1%</u>	<u>No</u>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	Total Cover: <u>101</u>
8. _____	_____	_____	_____	
Woody Vine Stratum				Remarks:
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Total Cover: _____
Remarks:				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Remarks:
Remarks:				

SOIL

Sampling Point: 14a

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		
0-12"	10YR23/1	90%	2.5YR2.5/4	10%	C	m		Clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

- ☐ 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)

Indicators for Problematic Hydric Soils³:

- ☐ 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.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ☐ 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 Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches):
Water Table Present? Yes ☐ No ☒ Depth (inches): 712"
Saturation Present? Yes ☐ No ☒ Depth (inches): 712"
(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: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014

Applicant/Owner: Stanislaus County State: CA Sampling Point: 14b

Investigator(s): Mike Truchlood & Dayna Winchell Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species <u>30</u> x 1 = <u>30</u> FACW species <u>6</u> x 2 = <u>12</u> FAC species <u>3</u> x 3 = <u>9</u> FACU species <u>8</u> x 4 = <u>32</u> UPL species <u>55</u> x 5 = <u>275</u> Column Totals: <u>102</u> (A) <u>358</u> (B) Prevalence Index = B/A = <u>3.5</u>
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____	_____	_____	_____	
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>
5. _____	_____	_____	_____	
Total Cover: _____	_____	_____	_____	
Herb Stratum				
1. <u>Trisetum hirtum</u>	<u>55%</u>	<u>Yes</u>	<u>UPL</u>	Remarks:
2. <u>Juncus bursarius</u>	<u>1%</u>	<u>No</u>	<u>FACW</u>	
3. <u>Festuca perenne</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
4. <u>Bromus hordeaceus</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>	
5. <u>Eleocharis macrostachya</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>	
6. <u>Ranunculus sp.</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
7. <u>Lymnaea fruticosa</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
8. <u>Hordeum maximum var. gussoneanum</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
Total Cover: <u>102%</u>	_____	_____	_____	
Woody Vine Stratum				
1. _____	_____	_____	_____	Remarks:
2. _____	_____	_____	_____	
Total Cover: _____	_____	_____	_____	
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____			

Sampling Point: 14b

HYDROLOGY

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 Plowed Soils (C6)
- ☐ Other (Explain in Remarks)

- ___ Water Marks (B1) (Riverine)
- ___ Sediment Deposits (B2) (Riverine)
- ___ Drift Deposits (B3) (Riverine)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Surface Water Present? Yes ☐ No ☒ Depth (inches): —

Water Table Present? Yes ☐ No ☒ Depth (inches): 28"

Saturation Present? Yes ☐ No ☒ Depth (inches): 28"
(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No ☒

Remarks: Small beam. water sheet flows over area. Lity flows ~~under~~ Through well drained sand.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 14c
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
Herb Stratum				
1. <u>Elaeagnus macrocarpa</u>	<u>85%</u>	<u>Yes</u>	<u>Obl</u>	Remarks:
2. <u>Glycyrrhiza elaeagnifolia</u>	<u>5%</u>	<u>No</u>	<u>Obl</u>	
3. _____	_____	_____	_____	
4. <u>Simmondsia chinensis</u>	<u>15%</u>	<u>No</u>	<u>Obl</u>	
5. <u>Nasturtium officinale</u>	<u>5%</u>	<u>No</u>	<u>Obl</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>110%</u>				Remarks:
Woody Vine Stratum				
1. _____	_____	_____	_____	Remarks:
2. _____	_____	_____	_____	
Total Cover: _____				Remarks:
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 14d
 Investigator(s): Mike Truchillo & Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ✓ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>✓</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>✓</u>
Hydric Soil Present?	Yes _____ No <u>✓</u>		
Wetland Hydrology Present?	Yes _____ No <u>✓</u>		
Remarks: <u>Upland data point</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> 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) _____
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) _____																	
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																		
Herb Stratum 1. <u>Hordeum marinum var. gussonianum</u> <u>15</u> <u>No</u> <u>FAC</u> 2. <u>Erodium botrys</u> <u>20</u> <u>Yes</u> <u>UPL</u> 3. <u>Bromus hordeaceus</u> <u>25</u> <u>Yes</u> <u>FACU</u> 4. <u>Amsinckia menziesii</u> <u>10</u> <u>No</u> <u>UPL</u> 5. <u>Hordeum murinum leporichum</u> <u>10</u> <u>No</u> <u>FACU</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>85</u>																		
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																		
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust _____																		
Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.																		
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>																		
Remarks: _____																		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 15
 Investigator(s): Mike Truettblood/Dagna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____				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				Prevalence Index worksheet:	
1. _____				Total % Cover of:	Multiply by:
2. _____				OBL species <u>115</u>	x 1 = <u>115</u>
3. _____				FACW species <u>35</u>	x 2 = <u>70</u>
4. _____				FAC species _____	x 3 = _____
5. _____				FACU species _____	x 4 = _____
Total Cover: _____				UPL species <u>50</u>	x 5 = <u>200</u>
				Column Totals: <u>200</u>	(A) <u>385</u> (B)
				Prevalence Index = B/A = <u>1.92</u>	
Herb Stratum				Hydrophytic Vegetation Indicators:	
1. <u>Typha latifolia</u>	<u>70</u>	<u>y</u>	<u>OBL</u>	___ Dominance Test is >50%	
2. <u>Juncus sp.</u>	<u>10</u>	<u>n</u>	<u>FACW</u>	<u>X</u> Prevalence Index is ≤3.0 ¹	
3. <u>Artemisia dasylasana</u>	<u>25</u>	<u>n</u>	<u>FACW</u>	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. <u>Leymus triticoides</u>	<u>50</u>	<u>y</u>	<u>OPL</u>	___ Problematic Hydrophytic Vegetation ¹ (Explain)	
5. <u>Arthrochloa affinis</u>	<u>45</u>	<u>n</u>	<u>OBL</u>		
6. _____					
7. _____					
8. _____					
Total Cover: <u>200</u>					
Woody Vine Stratum				Hydrophytic Vegetation Present?	
1. _____				Yes <u>X</u>	No _____
2. _____					
Total Cover: _____					
% Bare Ground in Herb Stratum _____	% Cover of Biotic Crust _____				
Remarks:					

Sampling Point:

15.

[illegible]Hydric Soil Present? Yes ☒ No ☐

Soils too wet for positive redox identification. However, adjacent more seasonal areas show redox. Assume redox is present but too wet to identify.

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 15a
 Investigator(s): Mike Truchblood/Peggy Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present? Yes <u>X</u> No _____	
Wetland Hydrology Present? Yes <u>X</u> No _____	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% <u>X</u> Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____				
3. _____				
4. _____				
5. _____				
Total Cover: _____				
Herb Stratum				
1. <u>Festuca hirtum</u>	<u>5</u>	<u>no</u>	<u>UPL</u>	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. <u>Mimulus guttatus</u>	<u>7</u>	<u>no</u>	<u>OBL</u>	
3. <u>Rumex crispus</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	
4. <u>Glyceria declinata</u>	<u>30</u>	<u>yes</u>	<u>OBL</u>	
5. <u>Festuca perennis</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	
6. <u>Plantago lanceolata</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
7. <u>Bromus hordeaceus</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
Total Cover: <u>102</u>				
Woody Vine Stratum				
1. _____				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: 15a

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

Depth (inches)	Matrix		Redox Features		Type ¹	Loc ²	Texture	Remarks
	Color (moist)	%	Color (moist)	%				
0-10"	10YR 3/1	90	7.5YR 5/6	10	C	M		Sandy clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <input checked="" 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 checked="" 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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes ☒ No _____ Depth (inches): 2"Water Table Present? Yes ☒ No _____ Depth (inches): SurfaceSaturation Present? Yes ☒ No _____ Depth (inches): Surface
(includes capillary fringe)Wetland Hydrology Present? Yes ☒ No _____

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

Remarks:

Field under current irrigation. False positive hydrology indicator for surface water. however, aerial imagery and obvious slump patterns were observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 15b
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>upland hillock</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> 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) _____
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) _____																	
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
Herb Stratum																		
1. <u>Hordeum murinum lepidum</u>	<u>60</u>	<u>y</u>	<u>UPL</u>															
2. <u>Hordeum maritimum subserotum</u>	<u>20</u>	<u>n</u>	<u>FAC</u>															
3. <u>Bromus hordeaceus</u>	<u>15</u>	<u>n</u>	<u>FACW</u>															
4. <u>Trifolium hirsutum</u>	<u>30</u>	<u>y</u>	<u>UPL</u>															
5. <u>Rumex crispus</u>	<u>2</u>	<u>n</u>	<u>FAC</u>	Remarks: 														
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
Total Cover: <u>127</u>																		
Woody Vine Stratum				Remarks: 														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
Total Cover: _____																		
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																		

SOIL

Sampling Point 156

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		
0-4"	10YR 3/2	97	7.5YR 5/6	3	C	M		Sandyclay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Very hard soil, not very deep

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____Water Table Present? Yes _____ No X Depth (inches): 24"Saturation Present? Yes _____ No X Depth (inches): 24"
(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: North County Corridor City/County: Stanislaus Sampling Date: 4/15/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 15C
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (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>	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		
Remarks: <u>area was irrigated yesterday, water still flowing</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> 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) _____
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) _____																	
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Total Cover: _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>														
Herb Stratum																		
1. <u>Pectica perennis</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>															
2. <u>Trifolium hirtum</u>	<u>55</u>	<u>Yes</u>	<u>UPL</u>															
3. <u>Eleocharis macrotachya</u>	<u>2</u>	<u>No</u>	<u>OBL</u>															
Total Cover: <u>117</u>																		
Woody Vine Stratum				Remarks:														
1. _____																		
2. _____																		
Total Cover: _____																		
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____																

15c

[illegible]

Remarks:

Irrigation activities ongoing during data collection. False positive inundation indicator. However, aerial imagery and slow patterns were observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 16
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology X naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: <u>recent irrigation area still inundated.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Trifolium hirtum</u>	<u>2</u>	<u>N</u>	<u>UPL</u>	
2. <u>Glyceria decumbens</u>	<u>60</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Leymus triticoides</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Eleocharis macrostachya</u>	<u>5</u>	<u>N</u>	<u>OBL</u>	
5. <u>Rumex crispus</u>	<u>20</u>	<u>N</u>	<u>FAC</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Total Cover: <u>137</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks:				

Sampling Point: 16

HYDROLOGY

Arid West – Version 11-1-2006

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/15/2014

Applicant/Owner: Stanislaus County State: CA Sampling Point: 16a

Investigator(s): Mike Trueblood/Danya Winchell Section, Township, Range: _____

Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____

Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes Y No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present? Yes _____ No <u>X</u>	
Wetland Hydrology Present? Yes _____ No <u>X</u>	
Remarks: <u>upland data point</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Hordelymus muricatus leperichii</u> <u>40</u> <u>Yes</u> <u>UPL</u> 2. <u>Festuca perennis</u> <u>40</u> <u>Yes</u> <u>FACU</u> 3. <u>Bromus hordeaceus</u> <u>10</u> <u>No</u> <u>FACU</u> 4. <u>Trifolium hirtum</u> <u>10</u> <u>No</u> <u>UPL</u> 5. <u>Erodium cicutarium</u> <u>5</u> <u>No</u> <u>UPL</u> 6. _____ 7. _____ 8. _____ Total Cover: <u>105</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:

SOIL

Sampling Point: 16a

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		
0-9"	10YR3/2	100						Sandy loamy clay

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): -Water Table Present? Yes _____ No X Depth (inches): 79"Saturation Present? Yes _____ No X Depth (inches): 79"
(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: North County Corridor City/County: Stanislaus Sampling Date: 4/1/16
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 17
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u>	No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			
Remarks:					

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Salix lasiolepis</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>		Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. <u>Populus fremontii</u>	<u>5%</u>	<u>No</u>	<u>FACW</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>66.7</u> (A/B)	
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: <u>15</u>					
Sapling/Shrub Stratum					
1. _____	_____	_____	_____		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 = _____	
Herb Stratum				Column Totals: _____ (A) _____ (B)	
1. <u>Festuca perennis</u>	<u>40</u>	<u>Yes</u>	<u>FACU</u>	Prevalence Index = B/A = _____	
2. <u>Spergularia rubra</u>	<u>35</u>	<u>Yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Vicinia villosa</u>	<u>5</u>	<u>No</u>	<u>UPL</u>		___ Dominance Test is >50%
4. <u>Rumex crispus</u>	<u>2</u>	<u>No</u>	<u>FAC</u>		___ Prevalence Index is ≤3.0 ¹
5. <u>Lycium hyssopifolium</u>	<u>3</u>	<u>No</u>	<u>FACW</u>		___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
6. _____	_____	_____	_____		___ Problematic Hydrophytic Vegetation ¹ (Explain)
7. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.	
8. _____	_____	_____	_____		
Total Cover: <u>82</u>				Hydrophytic Vegetation Present? Yes <u>X</u> No _____	
Woody Vine Stratum					
1. _____	_____	_____	_____	Remarks:	
2. _____	_____	_____	_____		
Total Cover: _____					
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust _____					

SOIL

Sampling Point: 17

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"	7.5YR 3/2	95	5YR 5/6	5	C	M		loamy sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|--|---|
| <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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|---|
| <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 checked="" 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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input checked="" 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): 76"Saturation Present? Yes _____ No ☒ Depth (inches): 76"

(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: North County Corridor City/County: Stanislaus Sampling Date: 4/16/17
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 17A
 Investigator(s): Mike Truchlood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>upland data point</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. <u>Bromus diandrus</u>	<u>35</u>	<u>Yes</u>	<u>UPL</u>	
2. <u>Erodium cicutarium</u>	<u>45</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>Vicia villosa</u>	<u>20</u>	<u>Yes</u>	<u>UPL</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
Total Cover: <u>100</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____
2. _____	_____	_____	_____	
Total Cover: _____				
Remarks:				

Sampling Point:

at: 17a

[illegible]

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Indicators for Problematic Hydric Soils³:

<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.

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

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

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): —

Water Table Present? Yes ☐ No ☒ Depth (inches): 77"

Saturation Present? Yes ☐ No ☒ Depth (inches): 77"
(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: North County Corridor City/County: Stanislaus Sampling Date: 4/16/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 18
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____
 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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Bromus hordeaceus</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Glycerhiza declinata</u>	<u>40</u>	<u>Yes</u>	<u>OBL</u>	
3. <u>Polygonum sp.</u>	<u>45</u>	<u>Yes</u>	<u>FACW</u>	
4. <u>unknown rhizomatous vine</u>	<u>5</u>	<u>No</u>	<u>-</u>	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <u>X</u> No _____
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

Sampling Point: 18

HYDROLOGY		
Wetland Hydrology Indicators:		
Primary Indicators (any one indicator is sufficient)		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 Plowed Soils (C6) <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"/> Thin Muck Surface (C7) <input type="checkbox"/> Crayfish Burrows (C8) <input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Shallow Aquitard (D3) <input checked="" type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u> </u>	
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>78"</u>	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>78"</u>	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/16/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 19
 Investigator(s): Mike Trueblood / Dayna Winchel Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> 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) _____
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) _____																	
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																		
Herb Stratum 1. <u>hardy marimum</u> <u>10</u> <u>n</u> <u>FAC</u> 2. <u>glaucous declinata</u> <u>20</u> <u>n</u> <u>Obl</u> 3. <u>rusticum officinale</u> <u>100</u> <u>y</u> <u>Obl</u> 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>130</u>																		
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																		
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																		
Remarks:																		

Hydrophytic Vegetation Indicators:
X 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.

Hydrophytic Vegetation Present? Yes X No _____

19

[illegible]

Indicators for Problematic Hydric Soils³:

- ³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Hydric Soil Present? Yes X No

Inundated soils, unable to identify redox, would likely be identifiable in drier soils
Assumed soil hydric indicator met.

Secondary Indicators (2 or more required)

- ☐ Water Marks (B1) (Riverine)
- ☐ Sediment Deposits (B2) (Riverine)
- ☐ Drift Deposits (B3) (Riverine)
- ☐ Drainage Patterns (B10)
- ☐ Dry-Season Water Table (C2)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Wetland Hydrology Present? Yes X No

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/22/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 20
 Investigator(s): Mike Trueblood / Dayna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland?	Yes _____ No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes _____ No <u>X</u>		
Remarks: <u>Irrigation ditch not currently in use.</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)														
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> </table> 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) _____
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) _____																	
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)														
Herb Stratum 1. <u>Glyceria declinata</u> <u>60</u> <u>y</u> <u>FACW</u> 2. <u>Bromus hordeaceus</u> <u>5</u> <u>n</u> <u>FACU</u> 3. <u>Drachampsia danthonoides</u> <u>50</u> <u>y</u> <u>FACW</u> 4. <u>Cyperus eragrostis</u> <u>5</u> <u>x</u> <u>FACW</u> 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>120</u>																		
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																		
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																		
Remarks: _____																		

SOIL

Sampling Point: 20

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		
0-10"	7.5YR 4/2	85	5YR 4/6	15	C	M		Sandy loam
10-13"	7.5YR 4/2	85	5YR 4/6	15	C	M		Sand

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- ☐ 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 Plowed Soils (C6)
☐ Other (Explain in Remarks)

- ☐ Water Marks (B1) (Riverine)
☐ Sediment Deposits (B2) (Riverine)
☐ Drift Deposits (B3) (Riverine)
☐ Drainage Patterns (B10)
☐ Dry-Season Water Table (C2)
☐ Thin Muck Surface (C7)
☐ Crayfish Burrows (C8)
☐ Saturation Visible on Aerial Imagery (C9)
☐ Shallow Aquitard (D3)
☒ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ☒ Depth (inches): _____Water Table Present? Yes _____ No ☒ Depth (inches): 213"Saturation Present? Yes _____ No ☒ Depth (inches): 213"
(includes capillary fringe)Wetland Hydrology Present? Yes _____ No ☒

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

Remarks:

Irrigation ditch that is no longer being used

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 11/22/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 20A
 Investigator(s): Mike Truchlood/Dagna Winchel Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>Updated data point in irrigated pasture.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: <u>X</u> Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Cynodon dactylon</u>	<u>45</u>	<u>y</u>	<u>FAC</u>	
2. <u>Trifolium hirsutum</u>	<u>35</u>	<u>n</u>	<u>UPL</u>	
3. <u>Bromus hordeaceus</u>	<u>10</u>	<u>n</u>	<u>FACW</u>	
4. <u>Plantago lanceolata</u>	<u>5</u>	<u>n</u>	<u>FACU</u>	
5. <u>Atriplex sp</u>	<u>2</u>	<u>n</u>	<u>UPL</u>	¹ Indicators of hydric soil and wetland hydrology must be present.
6. <u>Hordeum murinum</u>	<u>5</u>	<u>n</u>	<u>UPL</u>	
7. <u>Deschampsia elatior</u>	<u>55</u>	<u>y</u>	<u>FACW</u>	
8. _____	_____	_____	_____	
Total Cover: <u>175</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes <u>X</u> No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: 20A

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		
0-12"	7.5YR 2/3.4	100						sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): 7.12"

Water Table Present? Yes _____ No X Depth (inches): 7.12"

Saturation Present? Yes _____ No X Depth (inches): 7.12"
(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: North County Corridor City/County: Stanislaus Sampling Date: 4/22/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 21
 Investigator(s): Mike Truchblood/Dan Winchester Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland?	Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u> No _____		
Wetland Hydrology Present?	Yes <u>X</u> No _____		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Brassica nigra</u> <u>15</u> <u>n</u> <u>UPL</u> 2. <u>Ranunculus sp.</u> <u>10</u> <u>n</u> <u>FACW</u> 3. <u>Trifolium hirtum</u> <u>10</u> <u>n</u> <u>UPL</u> 4. <u>Bromus hordeaceus</u> <u>15</u> <u>n</u> <u>FACW</u> 5. <u>Elymus declinata</u> <u>40</u> <u>y</u> <u>FACW</u> 6. <u>Cyperus eragrostis</u> <u>5</u> <u>n</u> <u>FACW</u> 7. <u>Leptidium sp.</u> <u>2</u> <u>n</u> <u>-</u> 8. _____ Total Cover: <u>107</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																				
Remarks:																				

Sampling Point: 21

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<input checked="" 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"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): 12 in		
Water Table Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Sur Face		
Saturation Present?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): Sur Face		
(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:			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/22/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 21A
 Investigator(s): Mike Trueblood/Dan Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____ No <u>X</u>	
Wetland Hydrology Present?	Yes _____ No <u>X</u>	
Remarks: <u>Upland data point.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Hordium murinum lepidum</u>	<u>60</u>	<u>Y</u>	<u>UPL</u>	
2. <u>Brassica nigra</u>	<u>15</u>	<u>N</u>	<u>UPL</u>	
3. <u>erodium betryg</u>	<u>40</u>	<u>Y</u>	<u>UPL</u>	
4. <u>malva parviflora</u>	<u>10</u>	<u>N</u>	<u>UPL</u>	
Total Cover: _____				Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks: _____				

SOIL

Sampling Point: 21A

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		
0-3"	7.5 YR 3/4	100						Sandy loam

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

- ☐ 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)

Indicators for Problematic Hydric Soils³:

- ☐ 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.

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

Hydric Soil Present? Yes _____ No X

Remarks: Very hard soil

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<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"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>7</u>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>23"</u>		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>23"</u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 4/22/14
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 22
 Investigator(s): Mike Trueblood/Dagna Winchell Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil X, or Hydrology _____ naturally problematic? (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>X</u> No _____	Is the Sampled Area within a Wetland? Yes <u>X</u> No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes <u>X</u> No _____	
Remarks: <u>Soil criteria not used, Deep inundation and insised bank prohibit pit digging.</u>		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)																
1. _____	_____	_____	_____																	
2. _____	_____	_____	_____																	
3. _____	_____	_____	_____																	
4. _____	_____	_____	_____																	
Total Cover: _____				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>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: _____</td> <td>(A) _____ (B) _____</td> </tr> <tr> <td colspan="2">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 = _____																				
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____																				
Herb Stratum 1. <u>Nasturtium officinale</u> <u>30</u> <u>y</u> <u>Obl</u> 2. <u>Festuca perennis</u> <u>30</u> <u>y</u> <u>FACW</u> 3. <u>Superus angustifolius</u> <u>5</u> <u>n</u> <u>FACW</u> 4. <u>Rumex crispus</u> <u>5</u> <u>n</u> <u>_____</u> 5. <u>Typha sp.</u> <u>2</u> <u>n</u> <u>Obl</u> 6. <u>Uersia oryzoides</u> <u>20</u> <u>n</u> <u>_____</u> 7. _____ 8. _____ Total Cover: <u>82</u>																				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																				

Remarks: The nasturtium is in the water while the Festuca is located on the banks

Sampling Point: 22

HYDROLOGY		
Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>		
<input checked="" 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 Plowed Soils (C6) <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"/> Thin Muck Surface (C7) <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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>24 inch</u> Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u> Saturation Present? (includes capillary fringe) Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>Surface</u>	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:		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 6/6/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 23
 Investigator(s): Mike Trueblood Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>✓</u>	Is the Sampled Area within a Wetland? Yes _____ No <u>✓</u>
Hydric Soil Present? Yes _____ No <u>✓</u>	
Wetland Hydrology Present? Yes _____ No <u>✓</u>	
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				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 = _____
Sapling/Shrub Stratum 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ Total Cover: _____				
Herb Stratum 1. <u>Festuca perennis</u> <u>100%</u> <u>Yes</u> <u>UPL</u> 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ Total Cover: <u>100%</u>				
Woody Vine Stratum 1. _____ 2. _____ Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain)				
Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>				

Remarks:

SOIL

Sampling Point: 23

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			
0-10"	7.5YR 3/2	100%	—	—	—	—	Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<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)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<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"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>—</u> Water Table Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>710"</u> Saturation Present? Yes _____ No <input checked="" type="checkbox"/> Depth (inches): <u>710"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes _____ No <input checked="" type="checkbox"/>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 6/6/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 24
 Investigator(s): Mike Trivedi Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes ☒ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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 _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>Rubus armeniacus</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: <u>20%</u>				
Herb Stratum				
1. <u>Typha latifolia</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Rumex crispus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
3. <u>Cyperus aragostis</u>	<u>10%</u>	<u>No</u>	<u>FACW</u>	
4. <u>Festuca perennis</u>	<u>12%</u>	<u>No</u>	<u>OBL</u>	
5. <u>Glycerhla declinata</u>	<u>30%</u>	<u>Yes</u>	<u>OBL</u>	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>65%</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>20%</u> % Cover of Biotic Crust _____				

Remarks:

SOIL

Sampling Point: 14

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)	
Primary Indicators (any one indicator is sufficient)			
<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 checked="" 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"/> Thin Muck Surface (C7)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> — </u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> 712" </u>		
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> 712" </u>		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 6/6/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 24a
 Investigator(s): Mike Trueblood Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>✓</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>✓</u>
Hydric Soil Present?	Yes <u>✓</u> No _____		
Wetland Hydrology Present?	Yes _____ No <u>✓</u>		
Remarks:			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Bromus hordeaceus</u>	<u>10%</u>	<u>no</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: _____ Dominance Test is >50% _____ Prevalence Index is ≤3.0 ¹ _____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) _____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. <u>Glycerhiza declinata</u>	<u>10%</u>	<u>no</u>	<u>OBL</u>	
3. <u>Festuca perennis</u>	<u>30%</u>	<u>Yes</u>	<u>UPL</u>	
4. <u>Juncus tenuis</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
5. <u>Eleocharis macrostachya</u>	<u>5%</u>	<u>no</u>	<u>OBL</u>	
6. <u>Rumex crispus</u>	<u>2%</u>	<u>no</u>	<u>FAC</u>	
7. <u>Lynx triticeus</u>	<u>10%</u>	<u>no</u>	<u>FAC</u>	
8. _____	_____	_____	_____	
Total Cover: <u>87%</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>13%</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>

Remarks:

SOIL

Sampling Point: 24a

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			
0-12"	7.5YR 3/3	95%	2.5YR 4/6	5%	C	m	Sandy loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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 checked="" 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.

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

Remarks: _____

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<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"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input checked="" type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations: Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u> </u> Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>712"</u> Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>712"</u> (includes capillary fringe)		Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: _____

Remarks: _____

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: North County Corridor City/County: Stanislaus Sampling Date: 6/6/2014
 Applicant/Owner: Stanislaus County State: CA Sampling Point: 25
 Investigator(s): Mike Trueblood Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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? Are "Normal Circumstances" present? Yes X No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (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>✓</u>	Is the Sampled Area within a Wetland?	Yes _____ No <u>✓</u>
Hydric Soil Present?	Yes <u>✓</u> No _____		
Wetland Hydrology Present?	Yes _____ No <u>✓</u>		
Remarks: <u>irrigated pasture - approximately 30 cattle in field during survey</u>			

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				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 = _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				Hydrophytic Vegetation Indicators: ____ Dominance Test is >50% ____ Prevalence Index is ≤3.0 ¹ ____ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ____ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>Bromus hordeaceus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Festuca perennis</u>	<u>50%</u>	<u>Yes</u>	<u>UPL</u>	
3. <u>Erodium cicutarium</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>	
4. <u>Hordeum murinum leporidium</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	
5. <u>Trisetum hirtum</u>	<u>10%</u>	<u>No</u>	<u>UPL</u>	
6. <u>Aristida menziesii</u>	<u>5%</u>	<u>No</u>	<u>UPL</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>100%</u>				
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes _____ No <u>✓</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks:

SOIL

Sampling Point: 25

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)		
<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"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
		<input type="checkbox"/> FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

Appendix C Representative Photos



Photopoint # 1: Data Point # 1.



Photopoint # 2: Data Point # 2.



Photopoint # 3: Data Points # 2a and 2b.



Photopoint # 4: Data Point # 3.



Photopoint # 5: Data Point # 4.



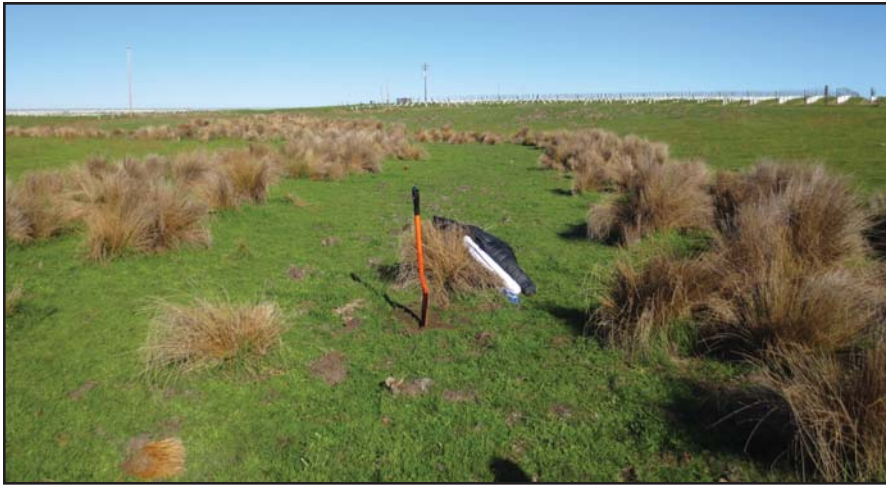
Photopoint # 6: Seasonal marsh swale near Data Points 4 through 6. APN # 010-072-004.



Photopoint # 7: Data Points # 7 and 7a.



Photopoint # 8: Data Points # 8.



Photopoint # 9: Data Point # 9.



Photopoint # 10: Data Point # 10.



Photopoint # 11: Data Point # 11.



Photopoint # 12: Data Points # 12 and 12a.



Photopoint # 13: Data Point # 14.



Photopoint # 14: Data Points # 14a and 14b.



Photopoint # 15: Data Point # 14d.



Photopoint # 16: Data Point # 15.



Photopoint # 17: Data Point # 15c.



Photopoint # 18: Data Points # 16 and 16a.



Photopoint # 19: Data Points # 17 and 17a.



Photopoint # 20: Data Point # 18.



Photopoint # 21: Data Point # 19.



Photopoint # 22: Data Points # 20 and 20a.



Photopoint # 23: Data Point # 21.



Photopoint # 24: Data Point # 22.



Photopoint # 25: Newly planted orchard; previously seasonal wetlands. APN # 010-041-039.



Photopoint # 26: Typical irrigation ditch in orchard. APN # 064-031-032.



Photopoint # 27: Dredged irrigation ditch. APN # 014-002-014.



Photopoint # 28: Cattail marsh next to Stearns Road. APN # 064-029-017.



Photopoint # 29: Irrigated pasture and ditch. APN # 011-016-023.



Photopoint # 30: Inundated pool in irrigated pasture adjacent to Claribel Road. APN # 075-025-011.



Photopoint # 31: Cavill Drain Irrigation ditch at Claribel Road. APN # 014-049-001.



Photopoint # 32: Wetland ditch in irrigated pasture. APN # 062-025-005.



Photopoint # 33: Irrigation ditch in agricultural field. APN # 063-027-002.



Photopoint # 34: Irrigated pasture. APN # 010-040-004.

Appendix D Summary of Waters of the U.S. by Build Alternative

Summary of Potential Waters of the U.S. in the Study Area by Build Alternative

	Alternative 1A	Alternative 1B	Alternative 2A	Alternative 2B
Seasonal Wetland	1.59	6.33	2.63	10.52
Perennial Marsh	11.71	9.78	8.28	3.29
Ponds	2.85	3.26	5.28	3.74
Ditches	6.40	6.60	6.00	7.09
Canal	10.56	19.97	15.48	18.88
Irrigated Wetlands	0.42	0.66	2.57	3.41
Total	33.53	46.60	40.24	46.93