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Delineation of Areas Meeting Wetland and Other Waters Criteria

LAKEPORT CINEMA AND DRIVE-IN
LAKE COUNTY
CALIFORNIA

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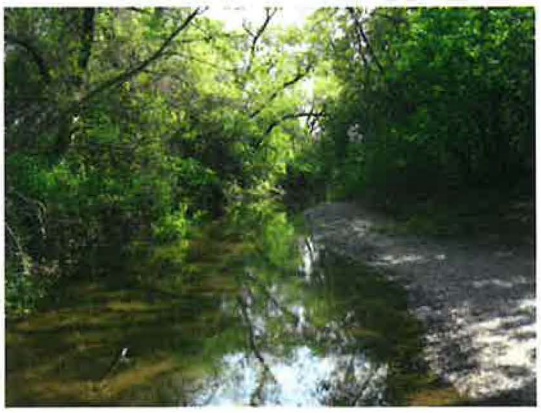

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1.0 INTRODUCTION

1.1 Study Background

The Lakeport Cinema and Drive-In (Study Area) consists of 25.5 acres in Lakeport, California in Lake county. The Study Area is bounded on the north by ruderal fields, on the east by Manning Creek, on the south by light industrial development and ruderal fields and on the west by Soda Bay Road (Figure 1).

On January 14 and April 24, 2008, WRA conducted a routine wetland delineation in the Study Area to determine the presence of potential wetlands and waters subject to federal jurisdiction under Section 404 of the Clean Water Act. This report presents the results of this delineation.

1.2 Purpose of Study

The property owner is investigating potential lot-splitting option and has requested this study to assist with planning. The wetland delineation will be used to split the lot into parcels to develop with minimal wetlands and another parcel with majority wetlands for preservation.

1.3 Regulatory Background

1.3.1 Section 404 of the Clean Water Act

Section 404 of the Clean Water Act gives the U.S. Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) regulatory and permitting authority regarding discharge of dredged or fill material into "navigable waters of the United States". Section 502(7) of the Clean Water Act defines navigable waters as "waters of the United States, including territorial seas." Section 328 of Chapter 33 in the Code of Federal Regulations defines the term "waters of the United States" as it applies to the jurisdictional limits of the authority of the Corps under the Clean Water Act. A summary of this definition of "waters of the U.S." in 33 CFR 328.3 includes (1) waters used for commerce; (2) interstate waters and wetlands; (3) "other waters" such as intrastate lakes, rivers, streams, and wetlands; (4) impoundments of waters; (5) tributaries to the above waters; (6) territorial seas; and (7) wetlands adjacent to waters. Therefore, for purposes of the determining Corps jurisdiction under the Clean Water Act, "navigable waters" as defined in the Clean Water Act are the same as "waters of the U.S." defined in the Code of Federal Regulations above.

In the Corps Rivers and Harbors regulations (33 CFR Part 329.4), the term "navigable waters of the U.S." is defined to include all those waters that are subject to the ebb and flow of the tide, and/or presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.

In 2006, the Supreme Court addressed the jurisdictional scope of Section 404 of the Clean Water Act in Rapanos v. U.S. and in Carabell v. U.S. The decision provides two analytical standards for determining whether water bodies that are not traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction: (1) if the water body is relatively permanent, or if the water body is a wetland that directly abuts (e.g., the wetland is not separated from the tributary by uplands, a berm, dike, or similar feature) a relatively permanent water (RPW), or (2) if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs.

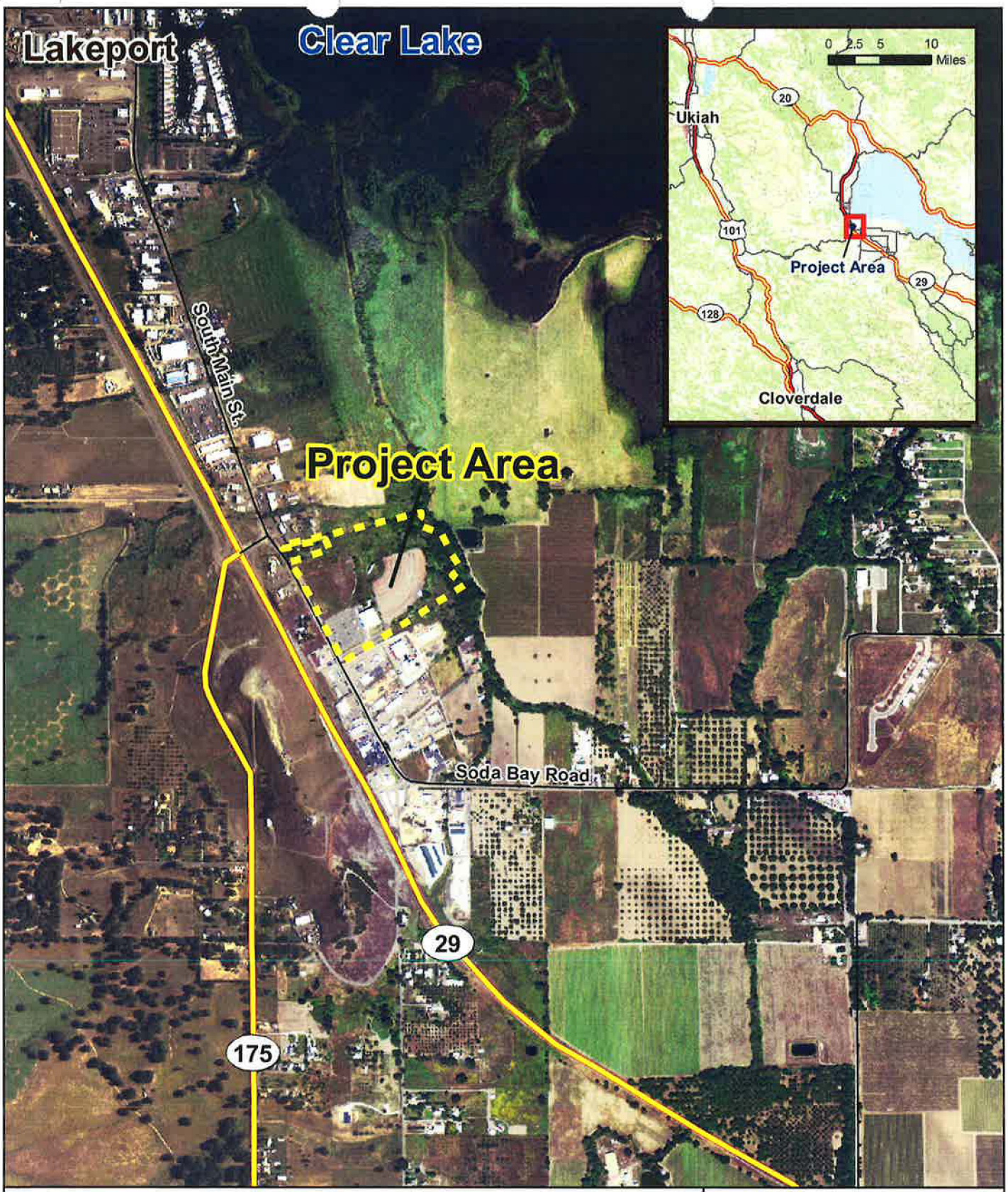

Figure 1. Study Area Location Map

N

0 500 1,000 2,000
Feet

Tegtmeier Lakeport Property
Lake County, CA

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Date: January 2008
Photo: 2005, NAIP
Map By: Michael Rochelle
Filepath: I:\Acad2000\18000\18002\gis\Arcmap\Location.mxd

When determining whether a water body qualifies as TNW, relevant considerations include whether a Corps district has determined that the water body is a navigable waters of the U.S. pursuant to 33 CFR Section 329.14, or the water body qualifies as a navigable water of the U.S. under any of the tests set forth in 33 CFR Section 329, or a federal court has determined that the water body is navigable-in-fact under federal law for any purpose, or the water body in navigable-in-fact under the standards that have been used by the federal courts.

As a result, the EPA and Corps will assert jurisdiction over the following categories of water bodies: TNWs; all wetlands adjacent to TNWs; non-navigable tributaries of TNWs that are relatively permanent (i.e, tributaries that typically flow year-round or have continuous flow at least seasonally); and wetlands that directly abut such tributaries. In addition, the EPA and Corps will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to a have a significant nexus with a TNW. The classes of water body that are subject to EPA and Corps jurisdiction only if such a significant nexus is demonstrated are: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary.

The limits of Corps jurisdiction under Section 404 as given in 33 CFR Section 328.4 are as follows: (a) *Territorial seas:* three nautical miles in a seaward direction from the baseline; (b) *Tidal waters of the U.S.:* high tide line or to the limit of adjacent non-tidal waters; (c) *Non-tidal waters of the U.S.:* ordinary high water mark or to the limit of adjacent wetlands; (d) *Wetlands:* to the limit of the wetland.

1.3.2 State Water Resources Control Board and Regional Water Quality Control Board

The Dickey Water Pollution Act of 1949 and Porter Cologne Act of 1969, established the State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCB) in the State of California. The SWRCB and each RWQCB regulate activities in Waters of the State which include Waters of the U.S. Waters of the State are defined by the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." Section 401 of the Clean Water Act gives the State broad latitude to protect water quality by regulating activities in streams, wetlands, and riparian areas.

The RWQCB regulates discharges of fill and dredged material under Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act through the State Water Quality Certification Program. State Water Quality Certification is necessary for all projects that require a Corps permit, or fall under other federal jurisdiction, and have the potential to impact Waters of the State. In order for a Section 404 permit to be valid, Section 401 of the Clean Water Act requires a Water Quality Certification or waiver to be obtained. The Water Quality Certification (or waiver) determines that the permitted activities will not violate water quality standards individually or cumulatively over the term of the action. Water quality certification must be consistent with the requirements of the Federal Clean Water Act, the California Environmental Quality Act, the California Endangered Species Act, and Porter-Cologne Act.

If a proposed project or portion of a proposed project does not require a federal permit, but does involve dredge or fill activities that may result in a discharge to Waters of the State, the RWQCB has the option to regulate the dredge and fill activity under its state authority in the form of Waste Discharge Requirements or Certification of Waste Discharge Requirements. In these cases, a

Water Quality Certification is not necessary under Section 401 of the Clean Water Act because federal jurisdiction does not apply.

1.3.3 California Department of Fish and Game

The California Department of Fish and Game (CDFG) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. Streams and lakes, as habitat for fish, wildlife, and native plant species, are subject to jurisdiction by CDFG under Sections 1600-1616 of the State Fish and Game Code. Fish and Game Code Section 1602 requires any person, state or local governmental agency, or public utility to notify CDFG before beginning any activity that will do one or more of the following: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

These regulated activities require a 1602 Lake and Streambed Alteration Agreement. Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from CDFG.

The term stream, which includes creeks and rivers, is defined in the California Code of Regulations (CCR) as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife (CDFG ESD 1994). Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself" (CDFG ESD 1994).

2.0 SUMMARY OF POTENTIAL JURISDICTIONAL AREAS

Appendix A depicts the extent of Corps jurisdiction within the Study Area based on a wetland delineation conducted by WRA on January 14 and April 24, 2008. The acreage of potential Section 404 jurisdictional areas is summarized in Table 1 below.

Table 1. Summary of Potential Section 404 Jurisdictional Areas Within the Study Area

Habitat	Size (acres) [Length (linear feet)]	Non-jurisdictional areas	**Potential Jurisdictional Waters of the U.S. (acres)**
Wetlands			
Seasonal wetlands	6.41 acres	-	6.41
Riparian wetlands	0.42 acres	-	0.42
Other waters			
Perennial creeks	0.19 acres (821 l.f.)	-	0.19
Man-made drainage	0.06 acres (1,264 l.f.)	0.02 acres (383 l.f.)	0.04
Total	**7.08 acres**	**0.02**	**7.06**

2.1 Waters of the U.S.

There is 0.02 acre of potentially jurisdictional "Waters of the U.S." in the Study Area. These waters include one Relatively Permanent Waters (RPW) with a defined ordinary high water mark (OHWM) that has seasonally continuous flow for over three months in addition to two non-RPW man-made drainage ditches and wetlands that directly abut or are adjacent to the RPW.

2.2 Waters of the State

All areas meeting criteria for wetlands and waters located within the Study Area, including wetlands that may be considered isolated or otherwise excluded from Corps jurisdiction, may be considered Waters of the State. Therefore, the Waters of the State total 7.08 acres within the Project Area.

2.3 California Department of Fish and Game

There is 2.15 acres of riparian habitat on Manning Creek in the eastern section of the Study Area subject to CDFG jurisdiction. These areas include portions of Manning Creek, abutting riparian areas and adjacent riparian wetlands.

3.0 METHODS

Prior to conducting field surveys, reference materials were reviewed, including the Soil Survey of Lake County, California (USDA 1989), the Lakeport USGS 7.5' quadrangle (USGS 1958), and aerial photos of the site.

A focused evaluation of indicators of wetlands and waters was performed in the Study Area on April 24, 2008. The methods used in this study to delineate jurisdictional wetlands and waters are based on the *U.S. Army Corps of Engineers Wetlands Delineation Manual* ("Corps Manual"; Environmental Laboratory 1987) and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* ("Arid West Supplement"; Corps 2006). The routine method for wetland delineation described in the Corps Manual was used to identify areas potentially subject to Corps Section 404 jurisdiction within the Study Area. A general description of the Study Area, including plant communities present, topography, and land use was also generated during the delineation visits. The methods for evaluating the presence of wetlands and Other Waters of the U.S. employed during the site visit are described in detail below.

3.1 Potential Section 404 Waters of the U.S.

3.1.1 Wetlands

The Study Area was evaluated for the presence or absence of indicators of the three wetland parameters described in the Corps Manual (Environmental Laboratory 1987) and Arid West Supplement (Corps 2006).

Section 328.3 of the Federal Code of Regulations defines wetlands as:

"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas."

EPA, 40 CFR 230.3 and CE, 33 CFR 328.3 (b)

The three parameters used to delineate wetlands are the presence of: (1) hydrophytic vegetation, (2) wetland hydrology, and (3) hydric soils. According to the Corps Manual, for areas not considered "problem areas" or "atypical situations":

"....[E]vidence of a minimum of one positive wetland indicator from each parameter (hydrology, soil, and vegetation) must be found in order to make a positive wetland determination."

Data on vegetation, hydrology, and soils collected at sample points during the delineation site visit was reported on Arid West Supplement data forms. Once an area was determined to be a potential jurisdictional wetland, its boundaries were delineated using GPS equipment and mapped on a topographic map. The areas of potential jurisdictional wetlands were measured digitally using ArcGIS software. Indicators described in the Arid West Supplement were used to make wetland determinations at each sample point in the Study Area and are summarized below.

Vegetation

Plant species identified on the Study Area were assigned a wetland status according to the U.S. Fish and Wildlife Service list of plant species that occur in wetlands (Reed 1988). This wetland classification system is based on the expected frequency of occurrence in wetlands as follows:

OBL	Always found in wetlands	>99% frequency
FACW(±)	Usually found in wetlands	67-99%
FAC	Equal in wetland or non-wetlands	34-66%
FACU	Usually found in non-wetlands	1-33%
UPL/NL	Upland/Not listed (upland)	<1%

The Arid West Supplement requires that a three-step process be conducted to determine if hydrophytic vegetation is present. The procedure first requires the delineator to apply the "50/20 rule" (Indicator 1) described in the manual. To apply the "50/20 rule", dominant species are chosen independently from each stratum of the community. In general, dominant species are determined for each vegetation stratum from a sampling plot of an appropriate size surrounding the sample point. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total vegetative cover in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total cover. If greater than 50 percent of the dominant species has an OBL, FACW, or FAC status, ignoring + and - qualifiers, the sample point meets the hydrophytic vegetation criterion.

If the sample point fails Indicator 1 and both hydric soils and wetland hydrology are not present, then the sample point does not meet the hydrophytic vegetation criterion, unless the site is a problematic wetland situation. However, if the sample point fails Indicator 1 but hydric soils and wetland hydrology are both present, the delineator must apply Indicator 2.

Indicator 2 is known as the Prevalence Index. The prevalence index is a weighted average of the wetland indicator status for all plant species within the sampling plot. Each indicator status is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Indicator 2 requires the delineator to estimate the percent cover of each species in every stratum of the community and sum the cover estimates for any species that is present in more than one stratum. The delineator must then organize all species into groups according to their wetland indicator status and calculate the Prevalence Index using the following formula, where A equals total percent cover:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

The Prevalence Index will yield a number between 1 and 5. If the Prevalence Index is equal to or less than 3, the sample point meets the hydrophytic vegetation criterion. However, if the community fails Indicator 2, the delineator must proceed to Indicator 3.

Indicator 3 is known as Morphological Adaptations. If more than 50 percent of the individuals of a FACU species have morphological adaptations for life in wetlands, that species is considered to be a hydrophyte and its indicator status should be reassigned to FAC. If such observations are made, the delineator must recalculate Indicators 1 and 2 using a FAC indicator status for this species. The sample point meets the hydrophytic vegetation criterion if either test is satisfied.

Hydrology

The Corps jurisdictional wetland hydrology criterion is satisfied if an area is inundated or saturated for a period sufficient to create anoxic soil conditions during the growing season (a minimum of 14 consecutive days in the Arid West region). Evidence of wetland hydrology can include primary indicators, such as visible inundation or saturation, drift deposits, oxidized root channels, and salt crusts, or secondary indicators such as the FAC-neutral test, presence of a shallow aquitard, or crayfish burrows. The Arid West Supplement contains 16 primary hydrology indicators and 10 secondary hydrology indicators. Only one primary indicator is required to meet the wetland hydrology criterion; however, if secondary indicators are used, at least two secondary indicators must be present to conclude that an area has wetland hydrology.

The presence or absence of the primary or secondary indicators described in the Arid West Supplement was utilized to determine if sample points within the Study Area met the wetland hydrology criterion.

Soils

The Natural Resource Conservation Service (NRCS) defines a hydric soil as follows:

> *"A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part."*
>
> Federal Register July 13, 1994,
> U.S. Department of Agriculture, NRCS

Soils formed over long periods of time under wetland (anaerobic) conditions often possess characteristics that indicate they meet the definition of hydric soils. Hydric soils can have a hydrogen sulfide (rotten egg) odor, low chroma matrix color, generally designated 0, 1, or 2, used to identify them as hydric, presence of redox concentrations, gleyed or depleted matrix, or high organic matter content.

Specific indicators that can be used to determine whether a soil is hydric for the purposes of wetland delineation are provided in the NRCS *Field Indicators of Hydric Soils in the U.S.* (USDA 2006). The Arid West Supplement provides a list of 23 of these hydric soil indicators which are known to occur in the Arid West region. Soil samples were collected and described according to the methodology provided in the Arid West Supplement. Soil chroma and values were determined by utilizing a standard Munsell soil color chart (GretagMacbeth 2000).

Hydric soils were determined to be present if any of the soil samples met one or more of the 23 hydric soil indicators described in the Arid West Supplement.

3.1.2 Other Waters of the U.S.

This study also evaluated the presence of "Waters of the United States" other than wetlands potentially subject to U.S. Army Corps of Engineers jurisdiction under Section 404 of the Clean Water Act. Other areas, besides wetlands, subject to Corps jurisdiction include lakes, rivers and streams (including intermittent streams) in addition to all areas below the HTL in areas subject to tidal influence. Jurisdiction in non-tidal areas extends to the ordinary high water mark (OHW) defined as:

> "*...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*"
>
> Federal Register Vol. 51, No. 219,
> Part 328.3 (e). November 13, 1986

Identification of the ordinary high water mark followed the Corps Regulatory Guidance Letter No. 05-05, *Ordinary High Water Mark Identification* (Corps 2005).

3.2 Waters of the State

The SWRCB and RWQCB have not established a formal wetland definition nor have they developed a wetland delineation protocol; however these agencies generally adhere to the same delineation protocol set forth by the Corps (Environmental Laboratory 1987; Corps 2006). Therefore, the methods used to determine potential Waters of the State were the same as those described above for potential Section 404 jurisdiction.

3.3 California Department of Fish and Game

CDFG jurisdiction over lakes and streams is to the top of bank, or edge of riparian vegetation as determined by the outer edge of dripline, whichever is further. Areas of potential CDFG jurisdiction under sections 1600-1616 of the State Fish and Game Code were identified in the field and areas calculated using GIS.

3.4 Significant Nexus Evaluation

Although no threshold for significant nexus has been established, the Jurisdictional Determination Form Instructional Guidebook (Corps 2007) contains guidelines for evaluating the presence of a significant nexus for a tributary and adjacent and abutting wetlands. The Guidebook requires an evaluation of the "relevant reach" of a tributary with respect to a delineation site to determine if the connection between this tributary and its adjacent and abutting wetlands have a significant effect (i.e., more than speculative or insubstantial) on the chemical, physical, and biological integrity of a traditional navigable water. The Guidebook also requires that the significant nexus evaluation be performed at the farthest downstream point of the relevant reach, prior to entering the next highest order stream. The following methods were used to support the evaluation of a significant nexus between the Study Area and the closest traditional navigable water (TNW).

3.4.1 Identifying the Relevant Reach and TNW

As defined by the Guidebook, a tributary is a natural, man-altered, or man-made water body that carries flow directly or indirectly into a TNW. The relevant reach as defined by the Guidebook is the entire reach of a stream between the point of confluence where two lower order streams meet to form a tributary, and downstream to the point where the tributary enters a higher order stream (e.g., the entire reach of a stream that is of the same order). ArcGIS, aerial photographs from Google Earth, USGS 7.5' quadrangle maps and field observations were utilized to determine the applicable relevant reach to the Study Area.

TNWs are jurisdictional waters of the U.S. determined by support documentation, a Federal court decision (33 CFR 329.14) or through an established test (33 CFR 329). Tests may determine if the water body is subject to the ebb and flow of the tide; is presently used, has been used or may be used to transport interstate or foreign commerce; is "navigable-in-fact", i.e., currently used or susceptible to use in its existing condition, for any commercial purpose involving navigation (33 CFR 328.3; 40 CFR 230.3). Corps districts maintain lists (33 CFR 329.16) of final determinations of whether particular water bodies qualify as navigable waters of the U.S. under the Rivers and Harbors Act of 1899 (33 USC 401-403). However, absence from the lists should not be taken as an indication that a water body is not navigable. ArcGIS, aerial photographs from Google Earth, USGS 7.5' quadrangle maps and field observations and photographs were utilized to determine the nearest TNW.

3.4.2 Determining Physical, Chemical and Biological Characteristics of the Relevant Reach

ArcGIS, field observations, review of previous studies and discussions with local agencies and residents were utilized to determine if the tributaries and wetlands within the Study Area have an insubstantial or speculative effect on the physical, chemical and/or biological integrity of the nearest TNW (Table 2).

Table 2. Determining the Physical, Chemical and Biological Characteristics

Characteristic	Component	Purpose	Method of Analysis
Physical characteristics	Stream order and relevant reaches	Establish tributary boundaries and watersheds	ArcGIS and field observations
	Tributary conditions	Establish tributary geometry and size	Field observations: origin, width, depth, steepness of side slopes, substrate composition, tributary stability, presence of riffle pools, and tributary geometry
	Flow characteristics	Establish volume and duration of flow (RPW determination)	Anecdotal evidence and field observations
	Proximity to nearest TNW	Establish significance of tributary and TNW connectivity	ArcGIS
	Wetland extant and characteristics	Determine wetland connectivity with tributary	Wetland delineation data and delineation maps
Chemical characteristics	Point source pollutants	Determine type and effect of pollutants on nearest TNW	Land use history review, field observations, background literature review
	Non-point source pollutants		
Biological characteristics	Special status species	Determine presence and effects on biological resources	Field observations and review of previous biological studies, agency correspondence, and background literature
	Habitat		

3.5 Areas Exempt from Section 404 Jurisdiction

Some areas that meet the technical criteria for wetlands or Waters may not be jurisdictional under the Clean Water Act. Included in this category are some man-induced wetlands, which are areas that have developed at least some characteristics of naturally occurring wetlands due to either intentional or incidental human activities. Examples of man-induced wetlands may include, but are not limited to, irrigated wetlands, impoundments, or drainage ditches excavated in uplands, wetlands resulting from filling of formerly deep water habitats, dredged material disposal areas, and depressions within construction areas.

In addition, some isolated wetlands and waters may also be considered outside of Corps jurisdiction as a result of the Supreme Court's decision in *Solid Waste Agency of Northern Cook County (SWANCC) v. United States Army Corps of Engineers* (531 U.S. 159 (2001)). Isolated wetlands and waters are those areas that do not have a surface or groundwater connection to, and are not adjacent to a navigable "Waters of the U.S.", and do not otherwise exhibit an interstate commerce connection.

4.0 STUDY AREA DESCRIPTION

The Study Area is approximately 25.5 acres and is located in Lakeport, Lake County, California (Figure 1). Elevations range from approximately 1330 to 1345 feet NGVD. The Study Area is bounded by residential, commercial and light industrial development to the north, west and south; ruderal fields to the north and south; and Manning Creek with dense valley oak-Oregon ash riparian canopy to the east. A vineyard resides approximately 50 feet beyond Manning Creek to the east. The Study Area contains approximately 8.61 acres of developed sites primarily composed of paved and unpaved parking areas (drive-in movie theater) and buildings (indoor movie theater and projection booth).

Vegetation

Vegetation within the Study Area consists primarily of ruderal, non-native grass and herbaceous species in upland and seasonal wetland areas, and native trees and shrubs in the riparian areas. Dominant vegetation in upland areas include wild oats (*Avena barbata*, NL), rip-gut brome (*Bromus diandrus*, NI), soft chess (*Bromus hordeaceus*, FACU), redstem filaree (*Erodium cicutarium*, NL), cut-leaf geranium (*Geranium dissectum*, NL), bur clover (*Medicago polymorpha*, NL), shamrock clover (*Trifolium dubium*, FACU), purple vetch (*Vicia benghalensis*, NL), and common vetch (*Vicia sativa*, FACU).

Seasonal wetlands dominate the total wetland area within the Study Area. Seasonal wetlands support a mix of non-native and native graminoid and forb species including brown-head rush (*Juncus phaeocephalus*, FACW), velvet grass (*Holcus lanatus*, FAC), Mediterranean barley (*Hordeum marinum*, FAC), chicory lettuce (*Lactuca pulchella*, FAC), bird's-foot trefoil (*Lotus corniculatus*, FAC), pennyroyal (*Mentha pulegium*, OBL), ryegrass (*Lolium multiflorum*, FAC), curly dock (*Rumex crispus*, FACW), moth mullein (*Verbascum blattaria*, FACW). Riparian wetlands support a woody dominated strata with minor herbaceous component including poison hemlock (*Conium maculatum*, FACW), Oregon ash (*Fraxinus latifolia*, FACW), valley oak (*Quercus lobata*, FAC), California rose (*Rosa californica*, FAC), Himalayan blackberry (*Rubus discolor*, FACW), and red willow (*Salix laevigata*, NL).

Hydrology

Natural hydrological sources for the Study Area include precipitation, surface run-off from adjacent lands, and occasional flood waters from Manning Creek. A drainage ditch lying between the indoor theater and the drive-in theater drains water from the parking lot and South Main Street into the center of the Study Area. This area is dominated by a large seasonally wet area that drains into a culvert on the northern boundary. A drainage ditch lying in the northwest section of the Study Area also drains water into this culvert, which flows through a shallow, wide channel in a ruderal field to the north of the Study Area. Flow continues north into a man-made drainage canal and then east into Manning Creek. Manning Creek , a blue line on the Lakeport Quadrangle (USGS 1958), flows for approximately 0.65 miles to the north where it enters Clear Lake.

Soils

The Soil Survey of Lake County, California (USDA 1989) indicates that the Study Area has three native soil types: Cole Variant clay loams, Henneke-Montara complex, and Still loams. These soil types are described in detail below and are shown in Figure 2:

Cole Variant clay loam, calcareous substratum (125). The Cole Variant consists of very deep, moderately well drained soils typically occurring on flood plains of 0 to 2 percent slopes. These soils formed in alluvium from mixed rock. Permeability and runoff are slow. Cole Variant soils are not considered hydric (USDA 1989).

Henneke-Montara complex (141). The Henneke-Montara complex consists of a mixture of Henneke gravelly loam and Montara clay loam. This complex is typically found on hills and mountains of 8 to 15 percent slopes. Henneke soils are shallow and somewhat excessively well drained, while Montara soils are shallow and well drained. Both soils were formed in material weathered from serpentinitic rock. Permeability is moderately slow and runoff is medium for both soils. The Henneke-Montara complex is not considered hydric (USDA 1989).

Still loam, stratified substratum (233). Still loams consist of very deep, well drained soils typically occurring on alluvial plains of 0 to 2 percent slopes. These soils formed in alluvium from mixed rock. Permeability is moderately slow and runoff is very slow. Still loam soils are not considered hydric (USDA 1989).

5.0 RESULTS

Vegetation, soils and hydrology data collected during delineation site visits are reported on standard Corps Arid West Region data forms in Appendix A. Potential Section 404 jurisdictional areas are described in the following sections and depicted in Appendix A. Photos of representative portions of the Study Area and sample points are shown in Appendix B. A list of plant species observed during the site visits is included in Appendix C. The significant nexus evaluation and map are included in Appendix D.

5.1 Potential Section 404 Waters of the U.S.

5.1.1 Wetlands

A large, contiguous seasonal wetland (NWI = PEMC, palustrine emergent wetland, seasonally flooded) identified as a potentially jurisdictional wetland is present surrounding the parking area of the drive-in movie theater within the center of the Study Area. Smaller seasonal wetlands reside in northwest section of the Study Area, bordering a contiguous disturbed area dominated by fill soils. All seasonal wetlands are dominated by FAC to OBL wetland species including brown-head rush, curly dock, Mediterranean barley, moth mullein and pennyroyal. Soils in areas identified as seasonal wetlands generally consist of native soils which contain redoximorphic features and/or a dark matrix. A few of the smaller seasonal wetlands exhibit vernal pool features including native forbs, such as calico flower and button celery, and dark soils. Vegetation in seasonal wetlands also passed the FAC-neutral test.

In general, the border between seasonal wetland and upland communities was determined primarily by changes in topography and vegetation. Areas without depressional features (i.e. toe-of-slope, sinks) and dominated by upland vegetation species were not included in the areas identified as potentially jurisdictional wetlands. Soils in the areas identified as uplands lacked hydric soil indicators or consisted of disturbed fill material that was difficult to characterize.

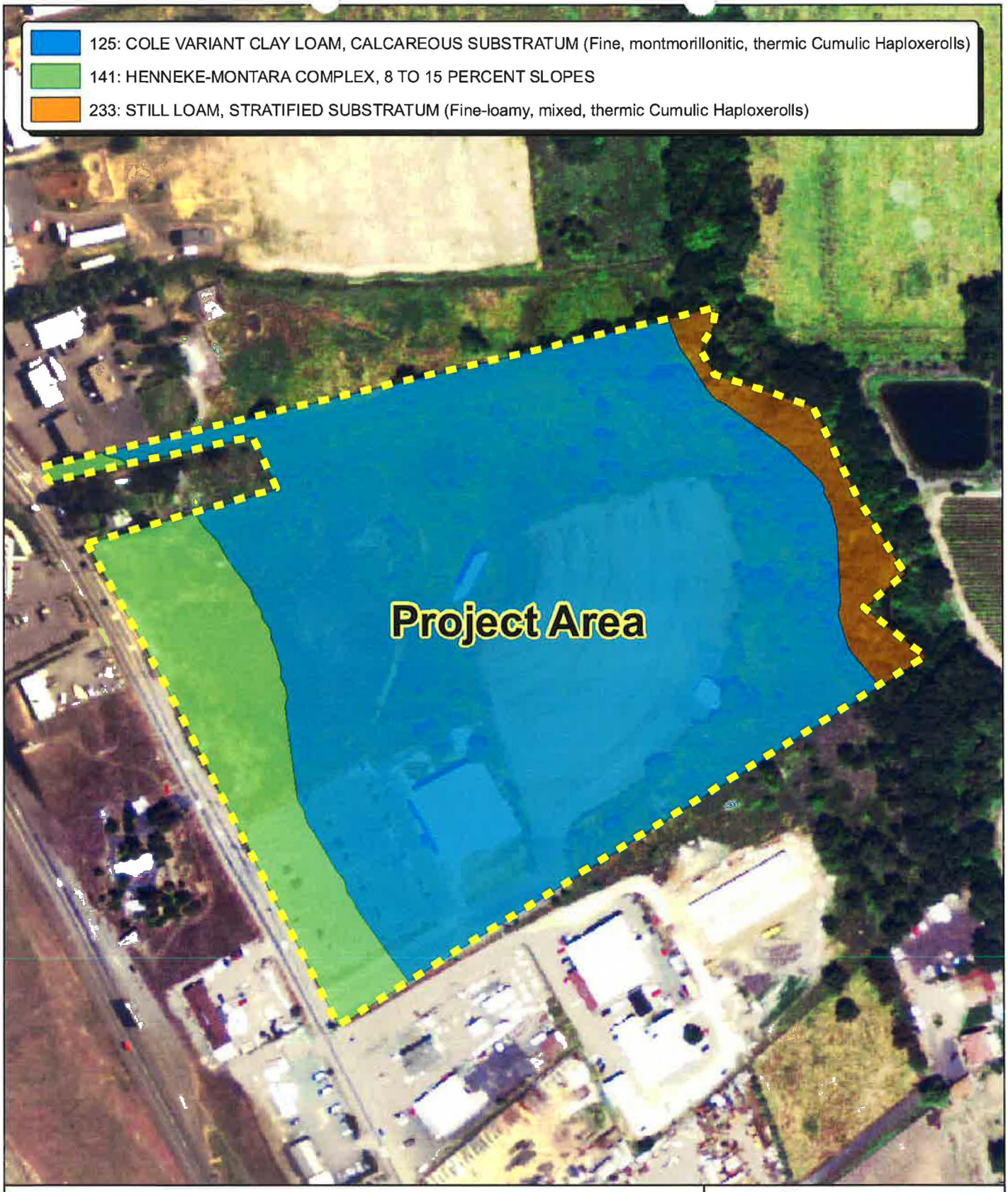

Figure 2. Study Area Soils Map

N

0 100 200 400
Feet

Tegtmeier Lakeport Property
Lake County, CA

wra
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Date: January 2008
Photo: 2005, NAIP
Map By: Michael Rochelle
Filepath: I:\Acad2000\18000\18002\gis\Arcmap\BA*.mxd

All wetlands mapped and presented in this report are likely to be considered jurisdictional by the Corps as they are directly connected to a navigable "Waters of the U.S." (Clear Lake). Water can flow overland and through the culvert on the northern boundary of the Study Area, through a man-made ditch before draining into Manning Creek and on to Clear Lake.

5.1.2 Other Waters of the U.S.

Two, two-foot wide unvegetated man-made drainage ditches run inside the Study Area, totalling 0.06 acre. The first ditch lies in the northwest section of the Study Area and generally runs from west to east, entering a culvert that continues drainage off-site to the north. The western-most portion of this ditch (0.02 acres) was dug in uplands and therefore may be exempt from Corps jurisdiction. The second ditch lies in the center of the Study Area, between the indoor and drive-in theaters, and generally runs from south to north, entering the large, contiguous seasonal wetland, which continues to flow into the same culvert on the northern boundary of the Study Area. Both ditches have clear connectivity to the wetlands within the Study Area and the relevant reach (Manning Creek) determined by the significant nexus evaluation (Section 5.4). Additionally, Manning Creek partially runs through the Study Area for a total of 0.019 acre.

5.2 Waters of the State

There are 7.06 acres of jurisdictional Waters of the State located within the Study Area boundary. These 7.06 acres are comprised of 0.25 acre of "other waters", 0.42 acre of riparian wetlands and 6.41 acres of seasonal wetlands as described aforementioned.

5.3 California Department of Fish and Game

The Department of Fish and Game may assume jurisdiction over the area within the "top of bank" of the seasonal drainage in the Study Area. Additionally, the riparian habitat along the bank's edge in eastern section of the Study Area also falls under their jurisdiction as sensitive riparian habitat for a total of 2.15 acres.

5.4 Significant Nexus

The wetlands within the Study Area have clear connectivity to and affect upon the nearest TNW (Clear Lake). This determination was made by analyzing the physical, chemical and biological connection between the wetlands and the nearest TNW (Appendix D, Table 3).

Type & flow pattern	Stream order	# of tributaries to TNW	Distance to nearest TNW (miles) from Study Area		Length of reach (miles)	Drainage area (acres)	Associated wetlands w/in Study Area	
			aerial	river			#	area (acres)
seasonal	3	1	0.64	0.69	4.7	6,038	11	6.83

5.4.1 Identifying the Relevant Reach and TNW

The nearest TNW is Clear Lake, approximately 0.65 miles downstream from the Study Area. It was determined that one relevant reach is present within the Study Area, Manning Creek, a blue line on the Lakeport 7.5' Quadrangle (USGS 1958).

5.4.2 Significant Nexus Determination of Relevant Reach

Physical Characteristics

Manning Creek is a seasonal stream with a stable and distinct OHWM and clear and direct connectivity to the nearest TNW, Clear Lake. Based on a review of aerial photographs and topographic maps, Manning Creek generally flows from south to north and appears to be a 3rd-order stream.

The wetlands and small man-made drainage ditches within the Study Area have clear overland surface connectivity with Manning Creek and thereon the nearest TNW, Clear Lake. The contiguous seasonal wetland conveys water via overland sheet flow into a culvert on the northern boundary of the Study Area. This culvert conveys flow via a narrow channel into an unlined man-made canal and into Manning Creek north of the Study Area. The riparian wetlands are contiguous to the large seasonal wetland and therefore convey flow along the same pattern. The small seasonal swale in the southwest corner of the Study Area conveys flow a via man-made drainage ditch and into the contiguous seasonal wetland. The small vernal pool-like seasonal wetlands in the western section of the Study Area connect to the contiguous seasonal wetland via overland sheet-flow approximately 150 linear feet.

Chemical Characteristics

No point source pollutants were observed along Manning Creek or the wetlands within the Study Area. Observations of aerial photographs and topographic maps coupled with land use interpretation within the watershed determined that point source pollutants outside of the Study Area are unlikely. Non-point source pollutants within the Study Area are minimal though may include road run-off from two parking areas and adjacency to roads. Non-point source pollutants within the watershed include run-off from roads, developed areas and agricultural fields.

Biological Characteristics

Within and outside of the Study Area, Manning Creek contains contiguous and dense riparian areas dominated by shrubs and trees including Oregon ash, valley oak, California buckeye, California rose, poison oak, Himalayan blackberry and snowberry. Due to at least seasonal flows, close proximity to the wetlands within the Study Area, and the large volume of upstream and wetland organic inputs, Manning Creek contributes significant biological resources to resident and downstream foodwebs including to the nearest TNW, Clear Lake.

5.5 Areas Exempt from Section 404 Jurisdiction

The western-most portion of the man-made drainage ditch (383 linear feet) in the northwest section of the Study Area was dug in uplands and may be exempt from Corps jurisdiction. All wetlands and "other waters" mapped and presented in this report are likely to be considered jurisdictional by the Corps as they were not created by human activities and are directly connected to a navigable "Waters of the U.S." (Hastings Slough and San Francisco Bay).

6.0 POTENTIAL CORPS OF ENGINEERS JURISDICTION

The Study Area has 6.83 acres of wetlands and 0.23 acres (1,702 linear feet) of "other waters" that may be considered jurisdictional under Section 404 of the Clean Water Act. The wetland areas were either seasonal wetlands or riparian wetlands dominated by hydrophytic vegetation with FAC, FACW and OBL classified plants. They also contained hydric soil and wetland hydrology indicators. In addition, these areas are tributary to a navigable "Waters of the U.S." and therefore meet the definition of jurisdictional wetlands and Other Waters for Section 404 of the Clean Water Act.

The conclusion of this delineation is based on conditions observed at the time of the field surveys conducted on January 14 and April 24, 2008.

7.0 REFERENCES

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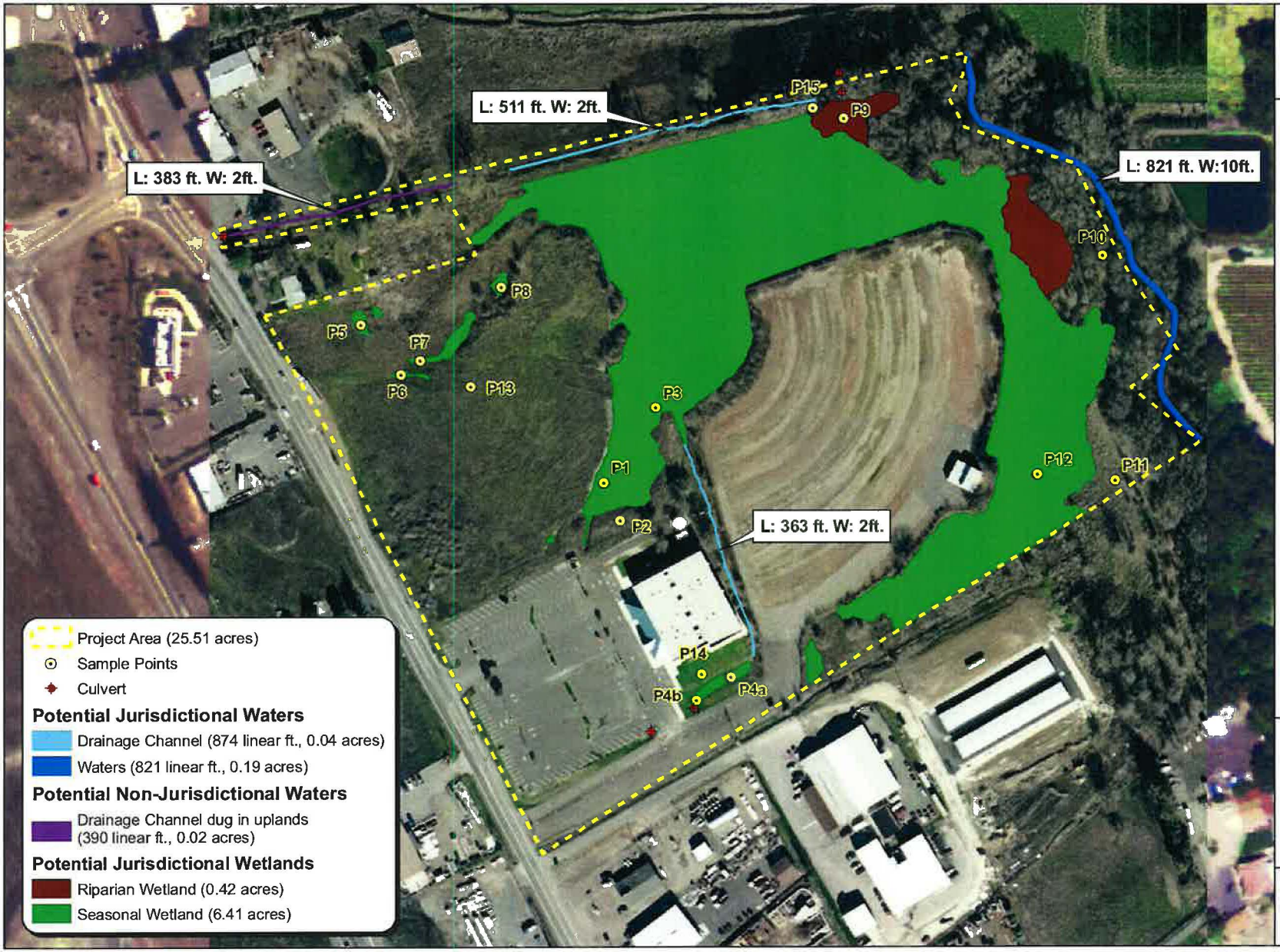
U.S. Geological Survey (USGS). 1958. Lakeport. 7.5 minute topographic map. Photo-revised 1978.

Appendix A - Preliminary Section 404 Jurisdictional Map and Data Sheets



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Lakeport

Lake County, CA

Appendix A.

Potential Section 404 Jurisdictional Features

1 inch equals 150 feet

0 75 150 300

Feet

Date: April 2008
Map by: Michael Rochelle

File path; I:\acad2000\18000\18002\gis\arcmap\Delineation*.mxd

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P1

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and toe of slope.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	5	yes	FAC
2.			
3.			
4.			
Tree Stratum Total Cover:	5		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Juncus phaeocephalus*	75	yes	FACW
2. *Mimulus guttatus*	10	no	OBL
3. *Lathyrus sp.*	5	no	?
4. *Rumex crispus*	5	no	FACW
5. *Lactuca pulchella*	1	no	FAC
6. *Bromus hordeaceus*	1	no	FACU
7. *Hordeum marinum*	1	no	FAC
8. *Lotus corniculatus*	1	no	FAC
Herb Stratum Total Cover:	99		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 1 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/1						clay	moist, not saturated

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B7) ponding observed on aerial photos and during January 14, 2008 site visit; (B12) algal matting present; (D5) passes the FAC-neutral test.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P2

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) upland fill Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: Only one wetland hydrology indicator present (hydrophytic vegetation); however, hydric soil and wetland hydrology not present at the sample point. Sample point is a paired upland point to sample points 1 & 3.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	5	yes	FAC
2.			
3.			
4.			
Tree Stratum Total Cover:	5		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Lolium perenne*	70	yes	FAC
2. *Vicia sativa*	10	no	FACU
3. *Rumex crispus*	5	no	FACW
4. *Phalaris paradoxa*	5	no	NL
5. *Holcus lanatus*	5	no	FAC
6. *Lamium purpureum*	1	no	NL
7. *Geranium dissectum*	1	no	NL
8. *Lathyrus sp.*	1	no	?
Herb Stratum Total Cover:	98		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 2 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes the dominance test.

SOIL

Sampling Point P2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-12	10YR 2/2						sandy loam	fill soil (asphalt); no mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators present.

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): _____

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

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology not present.

Wetland Determination Data Form - Arid West Region

Project/Site: Lakeport Cinema and Drive-In | City: Lakeport | County: Lake | Sampling Date: 4/24/2008

Applicant/Owner: John Tegtmeier | State: CA | Sampling Point: P3

Investigator(s): Geoff Smick, Aaron Arthur | Section,Township,Range: T14N,R9W,sec31

Landform (hillslope, terrace, etc.): floodplain | Local Relief (concave, convex, none): none | Slope(%): 0-3

Subregion(LRR): LRR C (Medit. CA) | Lat: 39.016 | Long: 122.905 | Datum: NAD 27 (feet)

Soil Map Unit Name: Cole Variant clay loam | NWI classification:

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology | Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and toe of slope.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Lolium multiflorum*	80	yes	FAC
2. *Lactuca pulchella*	5	no	FAC
3. *Rumex crispus*	5	no	FACW
4. *Juncus phaeocephalus*	5	no	FACW
5. *Hordeum marinum*	1	no	FAC
6. *Lotus corniculatus*	1	no	FAC
7. *Eryngium sp.*	1	no	?
8.			
Herb Stratum Total Cover:	97		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum: 3 | % cover of biotic crust:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/1						clay	no mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B2) sediment deposits on leaves.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P4a

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☒ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: All three wetland parameters present; therefore the sample point is within a wetland.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Lolium multiflorum*	50	yes	FAC
2. *Vulpia bromoides*	20	yes	FACW
3. *Bromus hordeaceus*	5	no	FACU
4. *Rumex crispus*	5	no	FACW
5. *Festuca arundinacea*	5	no	FAC
6. *Trifolium dubium*	5	no	FACU
7. *Cerastium glomeratum*	1	no	FACU
8. *Erodium cicutarium*	1	no	NL
Herb Stratum Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 2 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test. (Additional herbs present: *Lupinus bicolor* 1% NL; *Plantago lanceolata* 1% FAC; *Medicago polymorpha* 1% NL).

SOIL

Sampling Point P4a

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/2		????	?			loam	redox disappears on wetting

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F6) dark chroma present with redox disappearing upon wetting.

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): _____

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

Wetland Hydrology Present ? ☐ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B12) algal matting present; (D5) passes the FAC-neutral test.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P4b

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☒ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: All three wetland parameters present; therefore the sample point is within a wetland.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Hordeum marinum*	40	yes	FAC
2. *Juncus patens*	20	yes	FAC
3. *Lolium multiflorum*	20	yes	FAC
4. *Limnanthes douglasii ssp. nivea*	5	no	OBL
5. *Bromus hordeaceus*	5	no	FAC
6. *Trifolium dubium*	5	no	NL
7. *Cerastium glomeratum*	<1	no	FACU
8. *Erodium cicutarium*	<1	no	NL
Herb Stratum Total Cover:	97		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: vegetation passes dominance test.

SOIL

Sampling Point P4b

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/2		10YR 6/8	5			loam	redox disappears on wetting

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F6) dark chroma present with redox disappearing upon wetting.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B12) algal matting present.

Wetland Determination Data Form - Arid West Region

Project/Site: Lakeport Cinema and Drive-In | City: Lakeport | County: Lake | Sampling Date: 4/24/2008

Applicant/Owner: John Tegtmeier | State: CA | Sampling Point: P5

Investigator(s): Geoff Smick, Aaron Arthur | Section,Township,Range: T14N,R9W,sec31

Landform (hillslope, terrace, etc.): floodplain | Local Relief (concave, convex, none): none | Slope(%): 0-3

Subregion(LRR): LRR C (Medit. CA) | Lat: 39.016 | Long: 122.905 | Datum: NAD 27 (feet)

Soil Map Unit Name: Cole Variant clay loam | NWI classification:

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology | Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☒ **Yes** ☐ **No**
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and depressional topography.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Juncus phaeocephalus*	65	yes	FACW
2. *Hordeum marinum*	15	no	FAC
3. *Rumex crispus*	5	no	FACW
4. *Downingia pulchella*	1	no	OBL
5. *Ebilobium ciliatum*	1	no	FACW
6. *Lotus humistratus*	1	no	NL
7. *Carex sp.*	1	no	?
8. Asteraceae sp.	1	no	?
Herb Stratum Total Cover:	90		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum: 10 | % cover of biotic crust:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P5

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 2/1						clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B7) ponding observed on aerial photos and during January 14, 2008 site visit; (B12) algal matting present; (B2) sediment deposits present on leaves; (D5) passes the FAC-neutral test.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P6

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and depressional topography.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Hordeum marinum*	25	yes	FAC
2. *Rumex crispus*	15	no	FACW
3. Asteraceae sp.	5	no	?
4. *Lupinus bicolor*	<1	no	NL
5. *Vicia benghalensis*	<1	no	NL
6.			
7.			
8.			
Herb Stratum Total Cover:	45		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 55 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes the dominance test.

SOIL

Sampling Point P6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Redox Features Type[1]	Redox Features Loc[1]	Texture	Remarks
0-1	10YR 3/2	100					clay	fill present
1-4	10YR 3/2	80					clay	fill present
	7.5YR 5/8	20					clay	fill present
4-12	10YR 3/2	100					clay	fill present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression. Adjacent to fill pile, some fill in soil.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B6) surface of soil cracked; (B13) ostrocods present; (B12) algal matting present.

Wetland Determination Data Form - Arid West Region

Project/Site: Lakeport Cinema and Drive-In | City: Lakeport | County: Lake | Sampling Date: 4/24/2008

Applicant/Owner: John Tegtmeier | State: CA | Sampling Point: P7

Investigator(s): Geoff Smick, Aaron Arthur | Section,Township,Range: T14N,R9W,sec31

Landform (hillslope, terrace, etc.): floodplain | Local Relief (concave, convex, none): none | Slope(%): 0-3

Subregion(LRR): LRR C (Medit. CA) | Lat: 39.016 | Long: 122.905 | Datum: NAD 27 (feet)

Soil Map Unit Name: Cole Variant clay loam | NWI classification:

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology | Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☒ Yes ☐ No
Hydric Soil Present?	☒ Yes ☐ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and depressional topography.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Plantago lanceolata*	40	yes	FAC
2. Asteraceae sp.	20	yes	?
3. *Juncus phaeocephalus*	10	no	FACW
4. *Lolium multiflorum*	10	no	FAC
5. *Rumex crispus*	5	no	FACW
6. *Lupinus bicolor*	<1	no	NL
7. *Vicia benghalensis*	<1	no	NL
8.			
Herb Stratum Total Cover:	85		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum: 15 | % cover of biotic crust:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 2 (B)

% of dominant species that are OBL, FACW, or FAC? 50 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species	0	x1	0
FACW species	15	x2	30
FAC species	50	x3	150
FACU species	0	x4	0
UPL species	20	x5	100
Column Totals	85 (A)		280 (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? ☒ Yes ☐ No

Remarks: Sample point contains an unidentifiable species (Asteraceae sp.) that affects the dominance test and prevalence index; however, because remaining vegetation is dominant hydrophytic, and hydric soils and wetland hydrology present, it is assumed that the unknown species is hydrophytic.

SOIL

Sampling Point P7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-1	10YR 4/2						clay	
1-12	10YR 3/1						clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B12) algal matting present.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P8

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and depressional topography.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Juncus phaeocephalus*	30	yes	FACW
2. *Junus patens*	20	yes	FAC
3. *Lactuca pulchella*	20	yes	FAC
4. *Rumex crispus*	10	no	FACW
5. *Holcus lanatus*	10	no	FAC
6. *Carex sp.*	5	no	?
7. *Vicia benghalensis*	<5	no	NL
8.			
Herb Stratum Total Cover:	95+		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P8

Profile description: (Describe to the depth needed t. ocument the indicator or confirm the absence of in. ors.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-1	10YR 4/2						clay	
1-12	10YR 3/2						clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B6) surface of soil cracked; (D5) passes the FAC-neutral test.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P9

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on hydrophytic vegetation and toe-of-slope.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	35	yes	FAC
2. *Fraxinus latifolia*	35	yes	FACW
3. *Salix laevigata*	20	no	NL
4.			
Tree Stratum Total Cover:	**90**		
Sapling/Shrub Stratum			
1. *Rosa californica*	20	yes	FAC
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	**20**		
Herb Stratum			
1. *Phalaris aquatica*	10	yes	FAC
2. *Juncus patens*	5	yes	FAC
3. *Atriplex sp.*	5	yes	?
4. *Rumex crispus*	1	no	FACW
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	**21**		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 80 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 5 (A)

Total number of dominant species across all strata? 6 (B)

% of dominant species that are OBL, FACW, or FAC? 83.3 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%
☐ Prevalence Index is </= 3.0[1]
☐ Morphological adaptations (provide supporting data in remarks)
☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-2	10YR 3/1		5YR 5/8	40			sandy clay	
2-12	10YR 4/1		5YR 5/8	40			sandy clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F3) matrix depleted.

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): 4

Saturation Present? (includes capillary fringe) ☒ Yes ☐ No Depth (inches): 2

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (A2) free water in pit at 4"; (A3) saturation at 2" during beginning of dry season; (B2) sediment deposits on leaves.

Wetland Determination Data Form - Arid West Region

Project/Site: Lakeport Cinema and Drive-In | City: Lakeport | County: Lake | Sampling Date: 4/24/2008

Applicant/Owner: John Tegtmeier | State: CA | Sampling Point: P10

Investigator(s): Geoff Smick, Aaron Arthur | Section,Township,Range: T14N,R9W,sec31

Landform (hillslope, terrace, etc.): floodplain | Local Relief (concave, convex, none): none | Slope(%): 0-3

Subregion(LRR): LRR C (Medit. CA) | Lat: 39.016 | Long: 122.905 | Datum: NAD 27 (feet)

Soil Map Unit Name: Cole Variant clay loam | NWI classification:

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology | Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☒ Yes ☐ No	

Remarks: Two wetland indicators present (hydrophytic vegetation & wetland hydrology); however, hydric soil not present at the sample point.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	40	yes	FAC
2. *Salix laevigata*	20	yes	NL
3. *Fraxinus latifolia*	20	yes	FACW
4. *Juglans californica*	5	no	FAC
Tree Stratum Total Cover:	**85**		
Sapling/Shrub Stratum			
1. *Rubus discolor*	30	yes	FACW
2. *Toxicodendron diversiloba*	10	no	NL
3. *Rosa californica*	5	no	FAC
4.			
Sapling/Shrub Stratum Total Cover:	**45**		
Herb Stratum			
1. *Conium maculatum*	10	yes	FACW
2. *Carex sp.*	10	yes	?
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	**20**		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum: 80 | % cover of biotic crust:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 4 (A)

Total number of dominant species across all strata? 6 (B)

% of dominant species that are OBL, FACW, or FAC? 66.6 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	7.5YR 4/3						sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators present.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B2) sediment deposits on leaves.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P11

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: No wetland parameters met at the sample point. Sample point is a paired upland for sample point 12.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Phalaris aquatica*	95	yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 5 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2						sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators present.

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): _____

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

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology not present.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P12

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) floodplain Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present? ☒ Yes ☐ No
Hydric Soil Present? ☒ Yes ☐ No
Wetland Hydrology Present? ☒ Yes ☐ No

Is the Sampled Area within a Wetland? ☒ **Yes** ☐ **No**

Remarks: All three wetland parameters present; therefore the sample point is within a wetland. Wetland boundary based on extent of hydrophytic vegetation.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Phalaris aquatica*	60	yes	FAC
2. *Mentha pulegium*	15	no	OBL
3. *Dipsacus fullonum*	10	no	NI
4. *Rumex crispus*	5	no	FACW
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	90		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 10 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:
OBL species		x1
FACW species		x2
FAC species		x3
FACU species		x4
UPL species		x5
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☐ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P12

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/1		7.5YR 5/8	2			clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☒ Yes ☐ No

Remarks: Hydric soil present: (F9) dark chroma present within the top 6" within a closed depression.

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):

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

Wetland Hydrology Present ? ☒ Yes ☐ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology present: (B2) sediment deposits on leaves; (B12) algal matting present; (C3) oxidized rhizospheres present.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P13

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) upland fill Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☐ Yes ☒ No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: No wetland parameters met at the sample point. Sample point is a paired upland for sample point 12.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Lolium multiflorum*	20	yes	FAC
2. *Avena barbata*	10	yes	NL
3. *Eschscholzia californica*	10	yes	NL
4. *Erodium cicutarium*	5	no	NL
5. *Geranium dissectum*	5	no	NL
6. *Centaurea solstitialis*	5	no	NL
7.			
8.			
Herb Stratum Total Cover:	45		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 50 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 33.3 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:
OBL species		x1
FACW species		x2
FAC species		x3
FACU species		x4
UPL species		x5
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

- ☐ Dominance Test is >50%
- ☐ Prevalence Index is </= 3.0[1]
- ☐ Morphological adaptations (provide supporting data in remarks)
- ☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☐ Yes ☒ No

Remarks: Hydrophytic vegetation not present.

SOIL

Sampling Point P13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2						sandy loam	fill soil (asphalt); no mottles

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches): _____

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators present.

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): _____

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

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology not present.

Wetland Determination Data Form - Arid West Region

Project/Site Lakeport Cinema and Drive-In City Lakeport County Lake Sampling Date 4/24/2008

Applicant/Owner John Tegtmeier State CA Sampling Point P14

Investigator(s) Geoff Smick, Aaron Arthur Section,Township,Range T14N,R9W,sec31

Landform (hillslope, terrace, etc.) upland fill Local Relief (concave, convex, none) none Slope(%) 0-3

Subregion(LRR) LRR C (Medit. CA) Lat: 39.016 Long: 122.905 Datum: NAD 27 (feet)

Soil Map Unit Name Cole Variant clay loam NWI classification

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: Only one wetland hydrology indicator present (hydrophytic vegetation); however, hydric soil and wetland hydrology not present at the sample point. Sample point is a paired upland point to sample points 4a/b.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Tree Stratum Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:			
Herb Stratum			
1. *Hordeum marinum*	40	yes	FAC
2. *Lolium multiflorum*	20	no	FAC
3. *Geranium dissectum*	5	no	NL
4. *Erodium cicutarium*	5	no	NL
5. *Trifolium dubium*	<5	no	NL
6.			
7.			
8.			
Herb Stratum Total Cover:	75		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum 25 % cover of biotic crust

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 1 (A)

Total number of dominant species across all strata? 1 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:
OBL species		x1
FACW species		x2
FAC species		x3
FACU species		x4
UPL species		x5
Column Totals	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P14

Profile description: (Describe to the depth needed ocument the indicator or confirm the absence of ir. tors.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2						sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators present.

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):

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

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology not present.

Wetland Determination Data Form - Arid West Region

Project/Site: Lakeport Cinema and Drive-In | City: Lakeport | County: Lake | Sampling Date: 4/24/2008

Applicant/Owner: John Tegtmeier | State: CA | Sampling Point: P15

Investigator(s): Geoff Smick, Aaron Arthur | Section,Township,Range: T14N,R9W,sec31

Landform (hillslope, terrace, etc.): floodplain | Local Relief (concave, convex, none): none | Slope(%): 0-3

Subregion(LRR): LRR C (Medit. CA) | Lat: 39.016 | Long: 122.905 | Datum: NAD 27 (feet)

Soil Map Unit Name: Cole Variant clay loam | NWI classification:

Are climatic/hydrologic conditions on-site typical for this time of year? ☒ Yes ☐ No (If no, explain in remarks)

Are any of the following significantly disturbed? ☐ Vegetation ☐ Soil ☐ Hydrology | Are "Normal Circumstances" present? ☒ Yes ☐ No

Are any of the following naturally problematic? ☐ Vegetation ☐ Soil ☐ Hydrology (If needed, explain any answers in remarks)

SUMMARY OF FINDINGS - Attach site map showing sample point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	☒ Yes ☐ No	**Is the Sampled Area within a Wetland?** ☐ Yes ☒ No
Hydric Soil Present?	☐ Yes ☒ No	
Wetland Hydrology Present?	☐ Yes ☒ No	

Remarks: Only one wetland hydrology indicator present (hydrophytic vegetation); however, hydric soil and wetland hydrology not present at the sample point. Sample point is a paired upland point to sample point 9.

VEGETATION

Tree stratum (use scientific names)	Absolute % cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	25	yes	FAC
2. *Salix laevigata*	10	no	NL
3.			
4.			
Tree Stratum Total Cover:	35		
Sapling/Shrub Stratum			
1. *Rosa californica*	5	yes	FAC
2.			
3.			
4.			
Sapling/Shrub Stratum Total Cover:	5		
Herb Stratum			
1. *Phalaris aquatica*	10	yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Herb Stratum Total Cover:	10		
Woody Vine Stratum			
1.			
2.			
Woody Vine Stratum Total Cover:			

% Bare ground in herb stratum: 90 | % cover of biotic crust:

Dominance Test Worksheet

Number of Dominant Species that are OBL, FACW, or FAC? 3 (A)

Total number of dominant species across all strata? 3 (B)

% of dominant species that are OBL, FACW, or FAC? 100 (A/B)

Prevalence Index Worksheet

Total % cover of:		Multiply by:	
OBL species		x1	
FACW species		x2	
FAC species		x3	
FACU species		x4	
UPL species		x5	
Column Totals	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators

☒ Dominance Test is >50%

☐ Prevalence Index is </= 3.0[1]

☐ Morphological adaptations (provide supporting data in remarks)

☐ Problematic hydrophytic vegetation[1] (explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present ? ☒ Yes ☐ No

Remarks: Hydrophytic vegetation present: passes dominance test.

SOIL

Sampling Point P15

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[1]	Texture	Remarks
0-12	10YR 3/2							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: 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)
- ☐ 1cm 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 Soils[3]:

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

[3]Indicators of hydric vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N/A

Depth (inches):

Hydric Soil Present ? ☐ Yes ☒ No

Remarks: No hydric soil indicators present.

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):

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

Wetland Hydrology Present ? ☐ Yes ☒ No

Describe recorded data (stream guage, monitoring well, aerial photos, etc.) if available.

Remarks: Wetland hydrology not present.

Appendix B - Representative Photographs of the Study Area

Contiguous seasonal wetland inundated during wet season

Above: center of Study Area (north) near P3

Below: southern portion of Study Area (north) near P12

Photographs taken January 14, 2008

wra
ENVIRONMENTAL CONSULTANTS

Contiguous seasonal wetland in growing season

Above: center of Study Area (north) near P3

Below: center of Study Area (south) near P3

Photographs taken April 24, 2008

wra
ENVIRONMENTAL CONSULTANTS

Seasonal wetlands with vernal pool vegetation (e.g. button celery, meadowfoam & calico flower)

Above: seasonal swale in southern portion of Study Area (west) near P4b

Below: vernal pool in western portion of Study Area (north) near P6

Photographs taken April 24, 2008

wra
ENVIRONMENTAL CONSULTANTS

Riparian wetland inundated with pronounced valley oak canopy

Above: between contiguous seasonal wetland and Manning Creek (east)

Below: on edge of contiguous seasonal wetland (northwest)

Photographs taken January 14, 2008

wra
ENVIRONMENTAL CONSULTANTS

Manning Creek (RPW) and associated riparian vegetation

Above: Manning Creek with perennial flow (south)

Below: non-wetland riparian community (south)

Photographs taken April 24, 2008

wra
ENVIRONMENTAL CONSULTANTS

Drainage ditches: non-RPW "other waters"

Above: drainage ditch in northern portion of Study Area (east)

Below: man-made ditch dug in uplands in northwestern portion of Study Area (west)

Photographs taken January 14 & April 24, 2008

wra
ENVIRONMENTAL CONSULTANTS

Upland areas: dominated by upland vegetation, fill soils and little/no evidence of wetland hydrology

Above: upland edge of contiguous seasonal wetland (west)

Below: western portion of Study Area (northeast)

Photographs taken April 24, 2008

wra
ENVIRONMENTAL CONSULTANTS

Appendix C - Plant Species Observed in the Study Area

Scientific Name	Common Name	Origin	Status
Acer macrophyllum	big-leaf maple	native	FAC
Acer negundo	box elder	native	FACW
Aesculus californica	buckeye	native	NL
Arctostaphylos columbiana	hairy manzanita	native	NL
Arctostaphylos canescens ssp. canescens	hoary manzanita	native	NL
Arbutus menziesii	madrone	native	NL
Artemisia douglasiana	mugwort	native	FACW
Arundo donax	giant reed	exotic	FACW
Asparagus officinalis ssp. officinalis	asparagus	exotic	FACU
Atriplex sp.	spearscale	various	NI - FACW
Avena barbata	barbed oatgrass	exotic	NL
Baccharis pilularis	coyote brush	native	NL
Barbarea orthoceras	American wintercress	native	FACW
Briza minor	little quaking grass	exotic	FACW
Bromus diandrus	rip-gut brome	exotic	NI
Bromus hordeaceus	soft chess	exotic	FACU
Carex sp.	sedge	various	UPL - OBL
Ceanothus sp.	ceanothus	native	NL - NI
Centuarea solstitialis	yellow star thistle	exotic	NL
Cerastium glomeratum	sticky chickweed	exotic	FACU
Cichorium intybus	chicory	exotic	NL
Cirsium vulgare	bull thistle	exotic	FACU
Conium maculatum	poison hemlock	exotic	FACW
Cornus sericea	red-osier dogwood	native	FACW
Cyperus eragrostis	tall flat sedge	native	FACW
Dipsacus fullonum	wild teasel	exotic	NI
Distichlis spicata	salt grass	native	FACW
Downingia pulchella	flat-face calico flower	native	OBL
Epilobium ciliatum	hairy willow herb	native	FACW

Scientific Name	Common Name	Origin	Status
Epilobium densiflorum	dense flower willow herb	native	OBL
Erodium cicutarium	redstem filaree	exotic	NL
Eryngium sp.	button celery	native	FACW - OBL
Eschscholzia californica	California poppy	native	NL
Festuca arundinacea	tall fescue	exotic	FAC
Fraxinus latifolia	Oregon ash	native	FACW
Geranium dissectum	cut-leaf geranium	exotic	NL
Holcus lanatus	velvet grass	exotic	FAC
Hordeum marinum	Mediterranean barley	exotic	FAC
Hypochaeris radicata	rough cat's-ear	exotic	NL
Juglans californica	California walnut	native	FAC
Juncus patens	spreading rush	native	FAC
Juncus phaeocephalus	brown-head rush	native	FACW
Juncus sp.	rush	native	NL - OBL
Lactuca pulchella	chicory lettuce	exotic	FAC
Lamium amplexicaule	henbit dead nettle	exotic	NL
Lamium purpureum	purple dead nettle	exotic	NL
Lathyrus sp.	pea	variable	NL - OBL
Limnanthes douglasii ssp. nivea	Douglas' meadowfoam	native	OBL
Lolium multiflorum	ryegrass	exotic	FAC
Lolium perenne	perennial ryegrass	exotic	FAC
Lotus corniculatus	bird's-foot trefoil	exotic	FAC
Lotus humistratus	short pod lotus	native	NL
Lupinus bicolor	miniature lupine	native	NL
Marah fabaceus	wild cucumber	native	NL
Medicago polymorpha	bur clover	exotic	NL
Mentha pulegium	pennyroyal	exotic	OBL
Mimulus guttatus	seep monkeyflower	native	OBL
Phalaris aquatica	harding grass	exotic	FAC

Scientific Name	Common Name	Origin	Status
Phoradendron sp.	mistletoe	native	NL
Plantago lanceolata	English plantain	exotic	FAC
Poa bulbosa	bulbous bluegrass	exotic	NL
Polygonum sp.	knotweed	various	NL - OBL
Quercus lobata	valley oak	native	FAC
Rosa californica	California rose	native	FAC
Rubus discolor	Himalayan blackberry	exotic	FACW
Rumex crispus	curly dock	exotic	FACW
Salix laevigata	red willow	native	NL
Symphoricarpos albus	snowberry	native	FACU
Taeniatherum caput-medusae	medusa head grass	exotic	NL
Toxicodendron diversiloba	poison oak	native	NL
Trifolium albopurpureum var. dichotomum	branched Indian clover	native	NL
Trifolium dubium	shamrock clover	exotic	FACU
Umbellularia californica	California bay laurel	native	FAC
Verbascum blattaria	moth mullein	exotic	FACW
Vicia benghalensis	purple vetch	exotic	NL
Vicia sativa	common vetch	exotic	FACU
Vinca major	periwinkle	exotic	NL
Vitis californica	wild grape	native	FACW
Vulpia bromoides	six-weeks brome	exotic	FACW
Vulpia myuros	rattail fescue	exotic	FACU
Xanthium sp.	cocklebur	native	FAC

Appendix D - Significant Nexus Evaluation

Reach 1: Manning Creek

Section I. Background				
State: **California**	County: **Lake**	City: **Lakeport**	Lat: **39.016 N**	Long: **122.905 W**
Field date: **04.24.08**	Nearest waterbody: **Clear Lake**	Nearest TNW: **Clear Lake**		Watershed & HUC: **18020116 Upper Cache Creek**

Section II. Findings				
A.	There **Are Not** "navigable waters of the U.S."			
B.	1.a. Indicate which waters present in the review area:	**RPW with abutting and adjacent wetlands**		
	1.b. Size of waters (linear ft. or acres): **821 (in Study Area)**		1.b. Size of wetlands (acres): **6.82**	
	2. Describe any non-regulated waters & wetlands: **N/A**			

Section III. CWA Analysis				
A.	Is tributary TNW: **No**			
B.	1. Characteristics of non-TNW that flow directly or indirectly into TNW			
(i)	Watershed (acres): **6038**	Drainage area (acres): **6038**	Avg. rainfall (in.): **33.5**	Avg. snow (in.): **trace**
(ii)	Flows directly into TNW: **Y / N**		No. of tributaries to TNW (include the tributary itself):	
	River miles to TNW: **0**	Aerial miles to TNW: **0**	River miles to RPW: **0**	Aerial miles to RPW: **0**
	Describe flow route: **Manning Creek arises as a stream in the mountains to the southwest of the Study Area as a 1st order stream. After meeting several over streams of equivalent or lesser order, Manning Creek flows through the Study Area as a 3rd order stream. Flow continues for ~0.65 miles where it empties into Clear Lake.**			
	Tributary is: Natural: **Yes**	Artificial (explain): **No**	Manipulated (explain): **Yes; appears to be slightly routed south of Lakeport**	
	Avgerage width (feet): **10**	Average depth (feet): **3**	Average side slope (feet): **2:1**	
	Substrate: **sand, gravel, cobbles, large stones**			
	Tributary stability: **stable**			Tributary geometry: **relatively straight in the lower portion (near Study Area); somewhat tortured in upper portion**
	Run/riffle/pool complexes: **large pools in lower portions**			Tributary gradient (%): **1-3% in lower portion; probably much higher in upper portion**
	Type of flow: **seasonal; at least 6 months in year**	Describe flow regime: **flows as a narrow somewhat seasonal mountain stream in headwaters, and widens as slows as stream enters floodplain near Lakeport**		
	Estimated # flow events: **1-3 continuous during wet season**	Describe flow duration & volume: **flow is likely continuous throughout wet season with occasional late spring and early fall flows of shorter duration**		
	Type of surface flow: **confined to stream channel with occasional flooding following large storms**		Known subsurface flow: **unknown; likely some subsurface flow in headwaters**	
	Tributary has:	Bed and banks: **present and distinct**		

		OHWM indicators: **present and distinct; water marks, wrack, bent vegetation, sediment sorting**			
		Discontinuous OHWM: **no breaks in the OHWM observed**			
(iii)	Chemical characteristics:				
	Pollutants (point & non-point source): **No point source pollutants were observed within or near the Study Area. Suspected that point source pollutants along entire reach is unlikely or minimal. Non-point source pollutants include road, development and agricultural run-off.**				
(iv)	Riparian corridor: **Present within the Study Area and elsewhere on aerial topography, particularly in lower portions of the reach. Riparian of dense valley oak, Oregon ash, box-elder and shrubs/woody vines. Canopy dense and tall.**				
	Wetland fringe: **Present as riparian wetlands dominated by valley oak that intergrade into seasonal wetlands.**				
	Habitat: **Possibly aquatic habitat for trout and other fishes. Amphibian habitat present in slower moving pools and dense vegetation. Bird and mammal habitat in the riparian corridor. Special status plants (mosses) along banks in upper portions of stream. Yellow-legged frog observed in upper headwaters. Sacramento perch present in downstream outlet (Clear Lake).**				
B.	2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW				
(i)	Wetland size (acres): **6.82**	Wetland type: **seasonal wetlands and riparian wetlands**	Wetland quality: **low to high quality habitat; the riparian wetlands are dominated by native species particularly in the tree and shrub strata; small vernal pool-like complex containing native forbs**		
	Flow type: **overland sheet flow and channelized flow**	Type of surface flow: **overland**	Known subsurface flow: **unknown**		
	Wetland adjacency:	Directly abutting: **Yes**			
		Adjacent wetlands: **9**	Hydrologic connection: **yes, via overland sheetflow and channelized flow**		
			Ecological connection: **yes, plant communities intergrade from riparian to riparian wetland to seasonal wetland without pronounced tree stratum**		
			Separated: **only natural topography separates some wetlands, but these are overcome during high flow events**		
	River miles b/t wetlands & TNW: **0 (direct connection)**	Aerial miles b/t wetlands & TNW: **0 (direct connection)**	Direction of flow: **from Study Area to TNW**	Location within floodplain: **within the 100-year floodplain**	
(ii)	Chemical characteristics of wetlands:				
	Pollutants (point & non-point source): **No point source pollutants observed within the Study Area. Non-point source pollutants relatively low to moderate primarily from road and development run-off.**				
(iii)	Riparian buffer: **Present, particularly in riparian wetlands**				
	Vegetation type & % cover: **non-native grasses and forbs in seasonal wetlands; native forbs small seasonal wetland; pronounced tree and shrub strata in riparian wetlands**				
	Habitat: **native forbs in vernal pool-like seasonal wetlands; macro-invertabrates observed in seasonal wetlands**				
B.	3. Characteristics of all wetlands adjacent to the tributary				
	Total number of wetlands being considered:		Total wetlands area (acres):		
	Abutting wetland ID:	Size (acres):	Adjacent wetland ID:	Size (acres):	

			AD #1 RPW-1 **AD #2 RPW-1** **AD #3 RPW-1** **AD #4 RPW-1** **AD #5 RPW-1** **AD #6 RPW-1** **AD #7 RPW-1** **AD #8 RPW-1** **AD #9 RPW-1**	**6.82 (total)**
	Summary of wetlands physical, chemical and biological functions:			

C.	Significant Nexus Determination			
	3. Describe findings for wetlands adjacent to but do not abut a RPW: **The two riparian wetlands and the nine seasonal wetlands all share clear hydrologic connectivity to the RPW, Manning Creek, through overland sheetflow and channels. Flow is generally from west to east and south to north into a single culvert residing on the northern property boundary. From here flow continues into a man-made/altered canal in the neighboring parcel which conveys water into Manning Creek.**			
D.	The waters are (select and describe all that apply)			
	2. RPW that flow directly or indirectly into TNW	Flow is: **seasonal**		rationale: **presence of distinct OHWM indicators include watermarks, wrack line, sorted sediment, sediment deposition**
		linear feet: **821**	width (feet): **10**	Other waters (type & size): **0.04 acres of non-RPW drainage ditches connect to Manning Creek through off-site flow channels**

Section IV. Data Sources

A.	Maps, plans, plots: **maps included herein**		
	USGS maps:	Name: **Lakeport 1958 (photo revised 1978)**	Scale: **1:24,000**
	USDA NRCS Soil Survey:	Name: **Soil Survey of Lake County, California. USDA. NRCS. 1989**	
	FEMA/FIRM maps: **FEMA analysis conducted**		
	Photographs:	Aerial:	Other:

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Lake County, CA

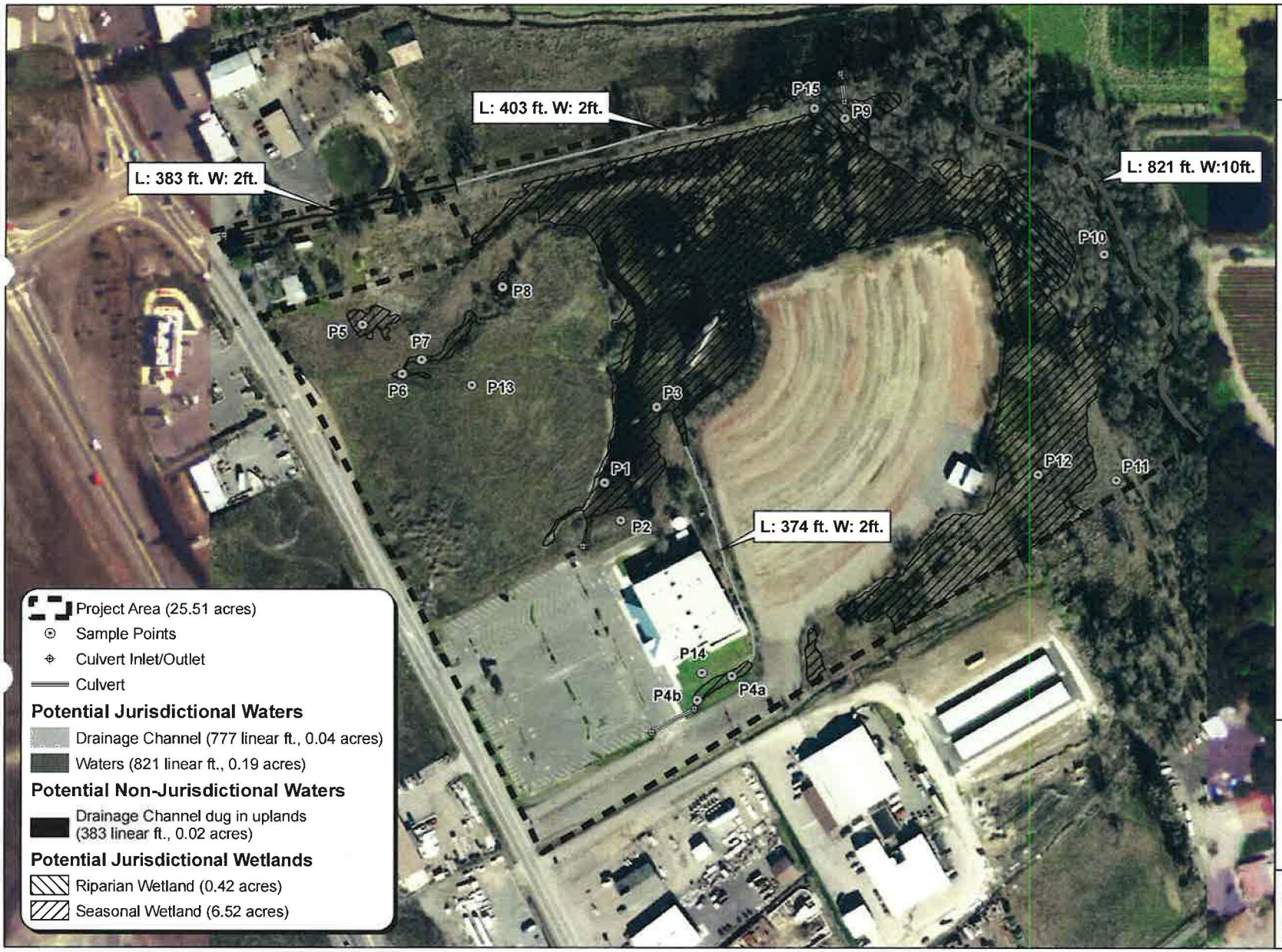
Appendix D.

Significant Nexus Determination

0 75 150 300
Feet

Date: May 2008
Map by: Michael Rochelle

File path; I:\acad2000\18000\18002\gis\arcmap\Delineation*.mxd



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Appendix A.

Potential Section 404 Jurisdictional Features

N
W E
S

1 inch = 150 feet

0 75 150 300

Feet

Date: November 2008
Map by: Michael Rochelle

File path, I:\acad2000\18000\18002\gis\arcmap\Delineation*.mxd

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Appendix A.

Potential Section 404 Jurisdictional Features

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