

**U.S. ARMY CORPS OF ENGINEERS
JURISDICTIONAL DELINEATION
FOR THE
ELDER CREEK PROPERTY
SACRAMENTO COUNTY, CALIFORNIA**



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TABLE OF CONTENTS

1.0	INTRODUCTION	2
1.1	Scope.....	2
1.2	Location	2
1.3	Survey Area Description.....	3
2.0	METHODOLOGY	3
2.1	Overview.....	3
2.2	Corps Definitions.....	4
2.3	Data Collection for Potential Jurisdictional Wetlands/Waters	8
3.0	TECHNICAL FINDINGS	9
3.1	Vegetation Conditions	9
3.2	Vegetation Analysis of the Survey Area.....	12
3.2.1	Non-Native Annual Grassland	12
3.2.2	Seasonal Wetland	12
3.3	Hydrology Conditions.....	13
3.3.1	Hydrologic Analysis of the Survey Area	14
3.4	Soils Conditions.....	15
3.5	Soil Analysis of the Survey Area.....	16
3.5.1	Soil Analysis of the Survey Area	17
4.0	AREAS POTENTIALLY REGULATED BY THE CORPS OF ENGINEERS	17
4.1	Areas Potentially Subject to Regulation (Wetlands/Waters of the U.S.).....	17
4.1.1	Potential Wetlands.....	17
4.1.2	Potential Waters	20
4.1.3	Section 10 Navigable Waters	20
4.2	Areas Potentially Excluded from Regulation under Section 404	20
4.2.1	Discretionary Exemptions	20
4.2.2	Application of Discretionary Exemptions.....	21
4.2.3	Isolated Wetlands/Waters.....	21
4.2.4	Application of Isolated Waters Exemptions.....	22
5.0	CONCLUSIONS	22
6.0	LITERATURE CITED.....	25

TABLES

Table 1. Wetland Plant Indicator Status Categories	12
Table 2. Hydrology Indicators	13
Table 3. Arid West Region - Hydrology Indicators.....	14
Table 4. Aquatic Features	25

LIST OF ATTACHMENTS

ATTACHMENT 1 FIGURES

Figure 1	Survey Area Location Map
Figure 2	Survey Area Vicinity Map
Figure 3	USGS Topographic Map
Figure 4	Aerial Map
Figure 5	Jurisdictional Wetland Delineation
Figure 6	Soils Map

ATTACHMENT 2 PLANT LIST

ATTACHMENT 3 WETLAND DELINEATION DATA FORMS

ATTACHMENT 4 SITE PHOTOGRAPHS

ATTACHMENT 5 SOILS DATA

ATTACHMENT 6 RESUME OF JEFF OLBERDING

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SUMMARY

Olberding Environmental, Inc. (Olberding Environmental) investigated the geographic extent of areas potentially subject to U.S. Army Corps of Engineers (Corps) jurisdiction under Section 404 of the Clean Water Act (wetlands and other waters) within the designated boundaries of the approximately 46.69-acre Survey Area, located within Sacramento County, east of the City of Sacramento, California. General location maps are provided in Attachment 1, Figures 1-3, while an aerial map of the Survey Area is provided in Attachment 1, Figure 4.

Results of the jurisdictional delineation survey identified a total of 3.82 acres of wetland features. This includes fourteen seasonal wetland features totaling 3.82 acres. The hydrology for these features originates from direct precipitation with very little surface runoff.

Features SW 1, SW 2, and SW 3 are relatively small features located in the northeastern portion of the Survey Area occurring within depressions created by old fence lines, old roads, and/or tire ruts. Feature SW 4 is a large feature occurring within a depression created by an old fence line and old ruts likely created from mowing or disking the area.

Feature SW 5 is a small, linear feature that occurs along the northern fence boundary of the Survey Area. Features SW 6 and SW 7 are large features occurring within natural depressions within the landscape. Feature SW 8 is a small linear feature that occurs along the western fence boundary of the Survey Area. This feature consists of an incised pit that has eroded between two fence posts.

Feature SW 9 is a small, square pit that has been artificially excavated into the surrounding topography. The pit is approximately 6 feet by six feet across and contains vertical banks. Feature SW 10 is a large feature located in the southeast corner of the Survey Area. The eastern edge of this feature has been regularly disked while the remainder of the feature occurs within a natural topographic depression. Feature SW 11 is a small feature that is located in a depression created around a concrete pad. Feature SW 12 is a large feature that occurs in the southwest corner of the Survey Area. Most of this feature occurs within an area that is regularly disked.

Feature SW 13 is a small, linear feature located in the northeastern portion of the Survey Area. Feature SW 14 is a smaller, linear feature located south of feature SW 13. Both of these features are located along an old road, where the clay soils have been compacted to form a hardpan that occurs approximately four to six inches beneath the surface. Despite this hardpan layer, the features contained similar vegetation to the other seasonal wetland features identified within the Survey Area.

1.0 INTRODUCTION

1.1 Scope

Olberding Environmental investigated the geographic extent of areas potentially subject to Corps jurisdiction under Section 404 of the Clean Water Act (wetlands and other waters) within a portion of the identified boundaries of the Elder Creek Property, in Sacramento County, California. The Survey Area is approximately 46.69 acres in size, and includes the following APNs: 630-130-006, 630-130-019, and 630-130-022.

On February 13, 2024, a field survey was performed for the purposes of determining the presence and possible extent of Corps jurisdiction within predetermined boundaries identifying the Survey Area. The Survey Area was investigated in order to make a technical evaluation as to the extent of Corps jurisdiction based on current and historic land use conditions. Visual observations as to the presence or absence of indicators of wetland soil, vegetation and hydrology conditions were made during the investigation of the Survey Area. The boundaries of all potential wetland/water features observed were mapped and further defined in accordance with the Corps regulations and the required methodology described in the 1987 Corps Wetlands Delineation Manual (1987 Manual) and Arid West Supplement to the 1987 Manual (Arid West Supplement, 2008).

1.2 Location

The Elder Creek Survey Area is located south of State Highway 16 (CA-16), at the intersection of Bradshaw Road and Elder Creek Road, in Sacramento County. A large excavation pit and detention basin are located to the west of the Survey Area. The southern boundary of the Survey Area is bounded by Elder Creek Road, and a portion of the eastern boundary is bounded by Bradshaw Road, while the rest of the Survey Area is surrounded by residential/industrial property or grazing pastures.

Attachment 1, Figure 1 depicts the regional location of the Survey Area in Sacramento County, while Attachment 1, Figure 2 illustrates the vicinity of the Survey Area in relationship to CA-16. Attachment 1, Figure 3 identifies the location of the Survey Area on the Carmichael USGS 7.5' Quadrangle. An aerial photograph of the Survey Area has been included as Attachment 1, Figure 4.

Access to the Survey Area is provided from Sacramento. Take State Highway 99 South/Interstate 80 Business/US 50 East and follow to Watt Avenue. Take Watt Avenue south to CA-16 East/Jackson Road. Turn left onto CA-16 for approximately one mile before turning right onto Bradshaw Avenue. The Survey Area is approximately 200 feet on the right.

1.3 Survey Area Description

The Survey Area consists of approximately 46.69 acres of open land. A portion of the Survey Area was previously used as a residence but was demolished prior to the survey. The Survey Area is relatively flat, with elevation ranging from 65 feet above sea level to 60 feet above sea level. Most of the Survey Area is vegetated with grasses and herbaceous species, with a few scattered trees. Historically, the Survey Area has been used for grazing.

The Survey Area contains two habitat types consisting of non-native annual grassland, and seasonal wetlands. The seasonal wetlands are scattered throughout the Survey Area, intermixed with the grassland habitat. Several black walnut trees (*Juglans nigra*) occur along the northern boundary and in the middle of the Survey Area, and several large blue gum trees (*Eucalyptus globulus*) are located in the southern portion of the Survey Area.

2.0 METHODOLOGY

2.1 Overview

Potential wetlands were delineated using Corps' methodology during site investigation conducted on February 13, 2024. The existing landforms as well as associated vegetation, hydrology, and soil conditions were studied to identify areas that would likely contain wetland/waters and/or aquatic habitats. Potential jurisdictional areas were identified on field maps and compared to available aerial photography and topographical maps.

Prior to completing the site survey for this report, site maps, topographic maps, and aerial photographs of the Survey Area were obtained from several sources and reviewed. This information was used in association with the detailed delineation survey to determine the extent and boundaries of wetland features. Resource materials used for the site analysis were as follows:

- U. S. Geological Survey 7.5-Minute Quadrangle Maps for Carmichael, California,
- Google Earth aerial images,
- Soils map information contained in the *Soil Survey of Sacramento County, California* (Soil Conservation Service 1993), and
- The National Hydrology Dataset Online Map Viewer (USGS 2024).

The extent or boundary of wetland habitats was further defined using the 1987 “Corps Wetlands Delineation Manual” (1987 Manual)¹, the “Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region” (Arid West Supplement)², routine on-site wetland determination protocol currently in use by the Corps, published Corps of Engineers regulatory guidance letters, and Sacramento District regulatory policy.

2.2 Corps Definitions

Pursuant to the 1987 Manual, key criteria for determining the presence of wetlands are:

- a) the presence of inundated or saturated soil conditions resulting from permanent or periodic inundation by ground water or surface water, and
- b) a prevalence of vegetation typically adapted for life in saturated soil conditions (hydrophytic vegetation).

Explicit in the definition is the consideration of three environmental parameters: hydrology, soil, and vegetation. Positive wetland indicators of all three parameters are normally present in wetlands. The assessment of all three parameters enhances the technical accuracy, consistency, and credibility of wetland determination and is required per the 1987 Corps Manual.

Aquatic habitats other than wetlands that are considered to be waters of the United States were also investigated as part of this study. On January 23, 2020, the EPA and the Corps enacted the Navigable Waters Protection Rule (NWPR) to redefine “waters of the United States” to include four categories. However, the EPA and Corps are in receipt of the U.S. District Court for the District of Arizona’s August 30, 2021, order vacating and remanding the NWPR in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency*. On January 18, 2023, the EPA released a “Revised Definition of ‘Waters of the United States’” [88 FR 3004]. This ruling largely reverts back to the “pre-2015” ruling but with additional guidance on the definitions of “adjacency” and “significant nexus”. The EPA and Corps issued a final rule to amend the final “Revised Definition of ‘Waters of the United States’” rule, published in the Federal Register on January 18, 2023. This final rule conforms the definition of “waters of the United States” to the U.S. Supreme Court’s May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. Parts of the January 2023 Rule are invalid under the Supreme Court’s interpretation of the Clean Water Act in the *Sackett* decision. Therefore, the agencies amended key aspects of the regulatory text to

¹ Environmental Laboratory. 1987. “Corps of Engineers Wetlands Delineation Manual.” U.S. Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 pp. plus appendices.

² Environmental Laboratory. 2008. “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0).” U.S. Army Engineer Research and Development Center. Vicksburg, Mississippi. 123 pp.

conform it to the Court's decision. The conforming rule was published in the Federal Register (88 FR 61964) and became effective September 8, 2023. Under this ruling, Waters of the U.S. are defined as:

(a)(1) Waters which are:

- (i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- (ii) The territorial seas; or
- (iii) Interstate waters;

(a)(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(a)(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing, or continuously flowing bodies of water;

(a)(4) Wetlands adjacent to the following waters:

- (i) Waters identified in paragraph (a)(1) of this section; or
- (ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3)(i) of this section and with a continuous surface connection to those waters;

(a)(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing, or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

Non-jurisdictional waters.

The following are included as exemptions to "waters of the United States":

- (1) waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
- (2) prior converted cropland;
- (3) ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
- (4) artificially irrigated areas that would revert to dry land if the irrigation ceased;
- (5) artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

- (6) artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
 - (7) waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
 - (8) swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.
- (b) *Definitions.* In this section, the following definitions apply:
- (1) *Adjacent wetlands.* Adjacent means having a continuous surface connection.
 - (2) *Ditch.* A constructed or excavated channel used to convey water.
 - (3) *Ephemeral.* (e.g., rain or snow fall).
 - (4) *High tide line.* The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along the shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings of characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide.
 - (5) *Intermittent.* Surface water flowing continuously during certain times of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts).
 - (6) *Lakes and ponds, and impoundments of jurisdictional waters.* Standing bodies of open water that contribute surface water flow to territorial seas or traditional navigable waters in a typical year either directly or through one or tributaries, lakes, ponds, and impoundments of jurisdictional waters, or adjacent wetlands. A lake, pond, or impoundment of a jurisdictional water does not lose its jurisdictional status if it contributes to surface water flow to a downstream jurisdictional water in a typical year through a channelized non-jurisdictional surface water feature, through a culvert, dike, spillway, or similar artificial feature, or through a debris pile, boulder field, or similar natural feature. A lake or pond, or impoundment of a jurisdictional waters is also jurisdictional if it is inundated by flooding from territorial seas or traditional navigable waters, tributaries, lakes, ponds, and impoundments of jurisdictional waters, or adjacent wetlands in a typical year.
 - (7) *Ordinary high-water mark.* That line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

- (8) *Perennial*. Surface water flowing continuously year-round.
- (9) *Prior converted cropland*. Any area that prior to December 23, 1985, was drained or otherwise manipulated for the purpose, or having the effect, of making production of an agricultural product possible. An area is no longer considered prior converted cropland for purposes of the CWA when the area is abandoned and has reverted to wetlands, as defined in paragraph (c)(16) of this section. Abandonment occurs when prior converted cropland is not used for, or in support of, agricultural purposes at least one in the immediately preceding five years.
- (10) *Snowpack*. Layers of snow that accumulate over extended periods of time in certain geographic regions or at high elevation.
- (11) *Tidal waters and waters subject to the ebb and flow of the tide*. Those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters and waters subject to the ebb and flow of the tide end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.
- (12) *Tributary*. A river, stream, or similar naturally occurring surface water channel that contributes surface water flow to the territorial seas or traditional navigable waters in a typical year either directly or through one of more tributaries, lakes, ponds, and impoundments of jurisdictional waters, or adjacent wetlands. A tributary must be perennial or intermittent in a typical year.
- (13) *Typical year*. When precipitation and other climatic variables are within the normal periodic range (e.g., seasonally, annually) for the geographic area of the applicable aquatic resource based on a rolling thirty-year period.
- (14) *Upland*. Any land area that under normal circumstances does not satisfy all three wetland factors (i.e., hydrology, hydrophytic vegetation, hydric soils) identified in paragraph (c)(16) of this section and does not lie below the ordinary high-water mark or the high tide line of a jurisdictional water.
- (15) *Waste treatment system*. Includes all components, including lagoons and treatment ponds (such as settling or cooling ponds), designed to either convey or retain, concentrate, settle, reduce, or remove pollutants, either actively or passively, from wastewater prior to discharge (or eliminating any such discharge).
- (16) *Wetlands*. Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

The Survey Area was also reviewed to assess the potential for qualifying for Section 10 jurisdiction as a navigable water of the United States. Navigable waters of the U.S. are those waters that are

subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (33 CFR 329, Section 329.4). Section 10 jurisdiction extends to the lateral extent of the ordinary high-water mark (OHWM) on opposing channel banks. Ultimately, the determination of navigability is made by the division engineer (33 CFR, Part 329, Section 329.14).

2.3 Data Collection for Potential Jurisdictional Wetlands/Waters

Data was collected by Olberding Environmental biologist Scott Tidball for the determination of wetlands/waters on February 13, 2024, as outlined in the methodology section. Specific information on the vegetation, soils, and hydrology were gathered during this survey. Attachment 1, Figure 5 depicts the jurisdictional delineation map of the Survey Area. The purpose of this investigation was to identify and delineate potential jurisdictional waters, including wetlands. The Survey Area was examined for topographic features, drainages, alterations to site hydrology and areas of recent disturbance. All vascular plant species that were identifiable at the time of the survey were recorded in Attachment 2 of this report and were identified using keys and descriptions in *The Jepson Manual* (Baldwin 2012).

The habitat types occurring in the Survey Area were characterized according to pre-established categories. In classifying the habitat types on the site, the generalized plant community classification schemas of *A Manual of California Vegetation* (Sawyer, Keeler-Wolf and Evens 2009) were consulted. The final classification and characterization of the habitat types found on the Survey Area were based on field observations.

Data was collected on vegetation, soils, and hydrology using wetland determination protocol as described in the 1987 Manual. Both upland and wetland data were collected to distinguish wetland boundaries from the adjacent upland. No soil test pits were taken within potential aquatic features that were confined to channels, thus conforming to the definition of “other waters” of the U.S. (i.e., exhibits a distinct bed and bank, with an OHWM). A total of 23 sample points were established within the boundaries of the Survey Area.

The survey was conducted early in the 2023-2024 rainy season, and precipitation was below average for the time of year. The nearby Sacramento National Weather Forecast Station measured a total of 7.84 inches of rain from October 2023 through January 2024, compared to the 20-year average of 10.05 inches (NOAA 2024). Weather on February 13, 2024, was typical for the time of year, with a high of 63 degrees Fahrenheit with partially cloudy skies. The survey took place six days following the most recent rain event.

The approximate location and extent of potentially jurisdictional wetlands/waters as well as other relevant data were transferred on to a 1” = 200’ scale topographical map of the survey area while in the field. Information obtained at the sample point locations was recorded on modified Corps

data sheets included in this report (Attachment 3). Representative photographs of the Survey Area can be viewed in Attachment 4.

3.0 TECHNICAL FINDINGS

The following discussion reports the hydrology, soil and vegetation conditions observed in the Survey Area during the course of the investigation.

3.1 Vegetation Conditions

The 1987 Manual states that the diagnostic environmental characteristics indicating wetland vegetation conditions are met when the prevalent vegetation (more than 50%) consists of macrophytes that are typically adapted to areas having hydrologic and soil conditions described above. In addition, hydrophytic species, due to morphological, physiological, and/or reproductive adaptation(s), have the ability to grow, effectively compete, reproduce, and/or persist in anaerobic soil conditions. Indicators of vegetation associated with wetlands include:

1. more than 50% of the dominant species are rated as Obligate (“OBL”), Facultative Wet (“FACW”) or Facultative (“FAC”) on lists of plant species that occur in wetlands;³
2. visual observations of plant species growing in areas of prolonged inundation or soil saturation; and
3. reports in the technical literature indicating the prevalent vegetation is commonly found in saturated soils” (1987 Manual).

In addition, hydrophytic indicators are applied to plant communities using the Arid West Supplement (December 2006) in the following sequence:

1. Apply the dominance test – more than 50% of the dominant species are rated as OBL, FACW, or FAC on lists of plant species that occur in wetlands.
 - a. If the plant community passes the dominance test, then the vegetation is hydrophytic and no further vegetation analysis is required.

³ Lichvar, R.W. 2012. The National Wetland Plant List. Indicator Rating Definitions (ERDC/CRREL TR-12-11). U.S. Army Engineer Research and Development Center Cold Regions Research and Engineering Laboratory, Hanover, NH.

- b. If the plant community fails the dominance test, but indicators of hydric soil and wetland hydrology are both present, proceed to step 2.
2. Apply the prevalence index – a weighted average wetland indicator status of all plant species (OBL=1, FACW=2, FAC=3, FACU=4, UPL=5). Weighting is by abundance (percent cover). A hydrophytic plant community will result in a prevalence index of 3.0 or less.
 - c. If the plant community satisfies the prevalence index, then the vegetation is hydrophytic. No further vegetation analysis is required.
 - d. If plant community fails prevalence index, proceed to step 3.
3. Apply morphological adaptations – morphological features which help plants survive prolonged inundation or saturation in the root zone, must occur on more than 50% of the FACU species living in an area where indicators of hydric soil and wetland hydrology are present.

Since 2006, the Corps has assumed administrative responsibility for the National Wetland Plant List (NWPL). The Corps initiated a national effort, led by a National Panel (NP) made up of representatives of the four agencies responsible for the NWPL, to update the NWPL indicator status categories, nomenclature, and geographic regions.⁴ To more accurately reflect the existing information on plant frequencies, the NP dropped the 1988 numeric rating categories and revised the narrative definitions to be based on ecological descriptions; the plus (+) and minus (–) indicators were also eliminated. The following are the final refined wetland indicator definitions:

OBL (Obligate Wetland Plants) - Almost always occur in wetlands. With few exceptions, these plants (herbaceous or woody) are found in standing water or seasonally saturated soils (14 or more consecutive days) near the surface.

These plants are of four types:

- Submerged (plants that conduct virtually all of their growth and reproductive activity under water),
- Floating (plants that most often grow with the leaves and other vegetative and reproductive organs floating on the water surface),
- Floating-leaved (plants that are rooted in sediment but also have leaves that float on the water surface), and

⁴ Lichvar, R., and P. Minkin. 2008. Concepts and Procedures for Updating the National Wetland Plant List. ERDC/CRREL TN-08-03. Hanover, NH: U.S. Army Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory. <http://libweb.erdc.usace.army.mil/Archimages/2295.PDF>.

- **Emergent** (herbaceous and woody plants that grow with their bases submerged and rooted in inundated sediment or seasonally saturated soil and their upper portions, including most of the vegetative and reproductive organs, growing above the water level).

FACW (Facultative Wetland Plants) - Usually occur in wetlands but may occur in non-wetlands. These plants predominately occur with hydric soils, often in geomorphic settings where water saturates the soils or floods the soil surface at least seasonally.

FAC (Facultative Plants) - Occur in wetlands and non-wetlands. These plants can grow in hydric, mesic⁵, or xeric⁶ habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology, such as shade tolerance, soil pH, and elevation, and they have a wide tolerance of soil moisture conditions.

FACU (Facultative Upland Plants) - Usually occur in non-wetlands but may occur in wetlands. These plants predominately occur on drier or more mesic sites in geomorphic settings where water rarely saturates the soils or floods the soil surface seasonally.

UPL (Upland Plants) - Almost never occur in wetlands. These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

Table 1 provides a summary of the wetland plant indicator status categories used to determine if a particular plant species qualifies as a macrophyte which has adapted to areas having hydrologic and soil conditions.

It is important to note that, although there is a high probability that one would expect to find obligate, facultative wet and facultative plants growing in wetlands, there is also a significant possibility that the obligate, facultative wet, and facultative species will occur in areas that do not exhibit wetland soil and/or wetland hydrology conditions.

⁵ The mesic habitat description is essentially defined as occurring in a variety of habitats, typically with dense vegetation that shades “damp or moist” soils that are not hydric. In these settings, organic matter, which accumulates as plants decay, moderates soil temperatures, and increases the soil’s water-holding capacity.

⁶ Nationally, the habitat description “xeric” is based in two different concepts. The xeric habitats of the Arid West typically occur in areas of low rainfall and in what are referred to as desert conditions. The other concept of xeric occurs throughout the remainder of the country in habitats often, but not always, located on hilltops and ridges, on south- or west-facing slopes, or on flatlands with sandy, porous soils. Vegetative cover in xeric habitats is sparser than the vegetation associated with mesic soils. As such, more sunlight reaches the soil surface, creating warmer, drier conditions in the rooting zone. Surface runoff and wind often erode topsoil, maintaining a shallow, excessively well drained to dry soil profile with a low water- holding capacity.

Table 1. Wetland Plant Indicator Status Categories		
Indicator Category	Symbol	Ecological Description
OBLIGATE WETLAND PLANTS	OBL	Almost always occur in wetlands
FACULTATIVE WETLAND PLANTS	FACW	Usually occur in wetlands, but may occur in non-wetlands
FACULTATIVE PLANTS	FAC	Occur in wetlands and non-wetlands
FACULTATIVE UPLAND PLANTS	FACU	Usually occur in non-wetlands, but may occur in wetlands
UPLAND PLANTS	UPL	Almost never occur in wetlands
*Based upon revised information contained in Army Corps of Engineers 2012 The National Wetland Plant List. Indicator Rating Definitions (ERDC/CRREL TR-12-11)		

3.2 Vegetation Analysis of the Survey Area

The Survey Area supports two habitat types consisting of non-native annual grassland and seasonal wetland. In classifying the habitat types in the Survey Area, generalized plant community classification schemes were used (Sawyer, Keeler-Wolf, and Evens 2009). The final classification and characterization of the habitat types of the Survey Area was based on field observations. A complete list of plant species observed in the Survey Area, with each species' Wetland Plant Indicator Status, can be found in Attachment 2.

3.2.1 Non-Native Annual Grassland

The majority of the Survey Area is dominated by non-native annual grassland habitat. Historically the Survey Area was grazed. Currently portions of it are mowed or disked, while the remainder is left fallow. Vegetation within this habitat area was dominated by grass species including rattail sixweek grass (*Festuca [Vulpia] myuros*), ripgut brome (*Bromus diandrus*), and wall barley (*Hordeum murinum*). Other dominant herbaceous species include broadleaf filaree (*Erodium botrys*), field mustard (*Brasica rapa*), and mouse ear chickweed (*Cerastium glomeratum*). While some native herbaceous species were identified, this plant community is dominated by introduced, non-native grasses and herbs.

3.2.2 Seasonal Wetland

There are 14 seasonal wetlands that occur within the Survey Area. These features range in size from less than 0.01 acre to over 1.20 acres in size. Each of the seasonal wetland features identified

contained areas of ponding water ranging from one inch deep to approximately ten inches deep. One feature, SW 9, has been artificially excavated to a depth of over eight feet. Vegetation within the seasonal wetland features were dominated by spinyfruit buttercup (*Ranunculus muricatus*) (FACW), curly dock (*Rumex crispus*) (FAC), purple sand spurry (*Spergularia rubra*) (FAC), marsh purslane (*Ludwigia palustris*) (OBL), aquatic pygmy weed (*Crassula aquatica*) (OBL), and the upland species common Timothy grass (*Phleum pratense*) (FACU).

3.3 Hydrology Conditions

The Corps 1987 Manual states that the diagnostic environmental characteristics indicative of wetland hydrology conditions are: "the area is inundated either permanently or periodically at mean water depths less than or equal to 6.6 feet, or the soil is saturated to the surface at some time during the growing season of the prevalent vegetation" (1987 Manual, p. 14). According to the Manual, indicators of hydrologic conditions that occur in wetlands may include features provided in Table 2.

Table 2. Hydrology Indicators	
Primary Indicators	Secondary Indicators
Inundation, Saturation	Oxidized Rhizospheres Associated with Living Roots
Watermarks	Water-Stained Leaves
Drift Lines	FAC-Neutral Test
Water-Borne Sediment Deposits	Local Soil Survey Data
Drainage Patterns Within Wetlands (With Caution)	

Department of the Army, U.S. Army Corps of Engineers, Washington, D.C., *Memorandum - Subject: Clarification and Interpretation of the 1987 Manual*, dated March 8, 1992, provides further clarification that:

"Areas which are seasonally inundated and/or saturated to the surface for a consecutive number of days for more than 12.5 percent of the growing season are wetlands, provided the soil and vegetation parameters are met. Areas wet between 5 percent and 12.5 percent of the growing season in most years (see Table 5, page 36 of the 1987 Manual) may or may not be wetlands. Areas saturated to the surface for less than 5 percent of the growing season are non-wetlands. Wetland hydrology exists if field indicators are present as described herein and in the enclosed data sheet."

The presence of wetland hydrology using the Arid West Supplement (December 2006) is dependent on the presence of any one primary indicator or two or more secondary indicators included in Table 3.

Table 3. Arid West Region - Hydrology Indicators	
Primary Indicators	Secondary Indicators
Surface Water	Water Marks (riverine)
High Water Table	Sediment Deposits (riverine)
Saturation	Drift Deposits (riverine)
Water Marks (nonriverine)	Drainage Patterns
Sediment Deposits (nonriverine)	Dry-Season Water Table
Drift Deposits (nonriverine)	Thin Muck Surface
Surface Soil Cracks	Crayfish Burrows
Inundation Visible on Aerial Imagery	Saturation Visible on Aerial Imagery
Water-Stained Leaves	Shallow Aquitard
Salt Crust	FAC-Neutral Test
Biotic Crust	
Aquatic Invertebrates	
Hydrogen Sulfide Odor	
Oxidized Rhizospheres along Living Roots	
Presence of Reduced Iron	
Recent Iron Reduction in Plowed Soils	

3.3.1 Hydrologic Analysis of the Survey Area

A total of 23 sample points were examined for positive field indicators of wetland hydrology. During the February 2024 survey, primary indicators were used to determine the wetland/upland boundary in the Survey Area. Due to the presence of saturated soils, all 23 of the sample points contained indicators of hydric soils. The survey took place six days after the most recent storm event, and due to the flat topography and clay nature of the soils throughout the Survey Area, the soils remained saturated from the winter rains. In addition to soil saturation, many of the sample points contained hydrologic indicators including surface water, high water table, drift deposits, water-stained leaves, biotic crust, aquatic invertebrates, and oxidized rhizospheres along living roots. These primary hydrologic indicators were used to make a determination on the presences of wetland features within the Survey Area.

3.4 Soils Conditions

The Corps' 1987 Manual states that the diagnostic environmental characteristics indicative of wetland soil conditions are met where "soils are present and have been classified as hydric, or they possess characteristics that are associated with reducing soil conditions" (1987 Manual, p. 14). According to the Manual, indicators of soils developed under reducing conditions may include:

1. Organic soils (Histosols),
2. Histic epipedons,
3. Sulfidic material,
4. Aquic or peraquic moisture regime,
5. Reducing soil conditions,
6. Soil colors (chroma of 2 or less),
7. Soil appearing on hydric soils list, and
8. Iron and manganese concretions.

According to the most recent version of the National Technical Committee for Hydric Soils, the criteria to be used by the Corps for what constitutes current hydric soil/wetland soil conditions for the soils found at the Site are:

1. Minimum Saturation at 12" to the surface: 14 consecutive days during the growing season.
2. Minimum Inundation (Flooded or Ponded): Soils that are frequently "ponded" for long duration (15 to 30 consecutive days) or very long duration (> 30 consecutive days) during the growing season, or soils that are frequently "flooded" for long duration or very long duration during the growing season.

According to the Arid West Supplement (September 2008), indicators for hydric soils are presented in three groups. Indicators for "all soils" (A) are used in any soil regardless of texture. Indicators for "sandy soils" (S) are used in soil layers with USDA textures of loamy fine sand or coarser. Indicators for "loamy or clayey soils" (F) are used with soil layers of loamy very fine sand and finer (2006 Arid West Supplement, p.32). Hydric soils can be identified by the following indicators:

- | | |
|-------------------------|-----------------------------|
| 1. Histosol (A) | 11. Sandy Redox (S) |
| 2. Histic Epipedon (A) | 12. Stripped Matrix (S) |
| 3. Black Histic (A) | 13. Loamy Mucky Mineral (F) |
| 4. Hydrogen Sulfide (A) | 14. Loamy Gleyed Matrix (F) |

- | | |
|------------------------------------|-------------------------------|
| 5. Stratified Layers (A) | 15. Depleted Matrix (F) |
| 6. 1 cm Muck (A) | 16. Redox Dark Surface (F) |
| 7. Depleted Below Dark Surface (A) | 17. Depleted Dark Surface (F) |
| 8. Thick Dark Surface (A) | 18. Redox Depressions (F) |
| 9. Sandy Mucky Mineral (S) | 19. Vernal Pools (F) |
| 10. Sandy Gleyed Matrix (S) | |

Where possible, the top 12 inches of the soil profile was examined for hydric characteristics. Such characteristics include the presence of organic soils (Histisols), histic epipedons, aquic or peraquic moisture regime, presence of soil on hydric soil list, mottling indicated by the presence of gleyed or bright spots of color within the soil horizons observed. Mottling of soils usually indicates poor aeration and lack of good drainage. A Munsell soil color charts (Kollmorgen Instr. Corp. 1990) were reviewed to obtain the soil color matrix for each soil sample. The last digit of the Munsell Soil Notation refers to the chroma of the sample. This notation consists of numbers beginning with zero for neutral grays and increasing at equal intervals to a maximum of about 20. Chroma values of the soil matrix which are one or less, or of two or less when mottling is present, are typical of soils which have developed under anaerobic conditions.

In sandy soils, such as alluvial deposits in the bottom of drainage channels, hydric soil indicators include high organic matter content in the surface horizon and streaking of subsurface horizons by organic matter.

3.5 Soil Analysis of the Survey Area

The NRCS (2024) reports four soil types within the Survey Area. A detailed map of the soil for the Survey Area can be found in Attachment 1, Figure 6. More detailed information about the soil types located in the Survey Area can be found in Attachment 5. The soil mapped includes the following types as described in the Soil Survey of Sacramento County, California (USGS 1993):

- **157 – Hedge loam, 0 to 2 percent slopes**
- **164 – Kimball silt loam, 0 to 2 percent slopes**
- **213 – San Joaquin silt loam, leveled, 0 to 1 percent slopes**
- **215 – San Joaquin silt loam, 3 to 8 percent slopes**

Soil types 157 and 213 are classified as predominantly nonhydric, and soil types 164 and 215 are classified as nonhydric. The NRCS (2024) defines “nonhydric” as no major or minor components for the map unit are rated hydric. “Predominantly nonhydric” is defined as no major component listed for a given map unit is rated as hydric, and at least one contrasting minor component is rated as hydric. Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough

during the growing season to develop anoxic conditions in the upper part.

3.5.1 Soil Analysis of the Survey Area

Soils were analyzed for color within the seasonal wetland areas. A total of 23 soil test pits were dug by shovel to a maximum depth of 14 inches at locations representative of various hydrogeomorphic surface conditions of a seasonal wetland, or at paired upland points.

Within the upland areas, soils were observed to be 10 YR 3/3, 3/4, or 4/3 with redox concentrations observed of 10 YR 2/1, 5 YR 3/4, and 2.5 YR 3/6 with sandy clay soils. Wetland sample points were observed to be 10 YR 3/3, 3/4, and 4/4 with redox concentrations observed of 10 YR 2/1, 5 YR 3/4, 2.5 YR 2.5/4, and 2.5 YR 3/6. It was not possible to take soil samples at several of the sample points due to saturation of the soils and/or regular disking of the soils that prevent the formation of a soil profile. The soils at sample points 7B, 8B, 9B, 10B, 11B, and 12B were too saturated to get an accurately record the soil color or consistency. In addition, sample point 13B has also been regularly disked. Each of the wetland sample points where soil samples were taken meet the requirements for Redox Depressions (F8). The presence of hydric soil indicators was used to make a determination on the presence of wetland features within the Survey Area.

4.0 AREAS POTENTIALLY REGULATED BY THE CORPS OF ENGINEERS

4.1 Areas Potentially Subject to Regulation (Wetlands/Waters of the U.S.)

The EPA and Corps regulations define wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (40 C.F.R. §230.3(t); 33 C.F.R. §328.3(c)(16)). The term "waters of the United States" are defined in 88 FR 3004 and summarized in Section 2.2 of this report.

4.1.1 Potential Wetlands

Based on information obtained during the February 2024 survey event, it was determined that there are 14 potential wetland features mapped within the Survey Area, totalling 3.82 acres. Data sheets for the sample points are included in Attachment 3.

The seasonal wetland features are fed by direct precipitation and small amounts of surface water runoff. Many of the aquatic features have formed along old roads, along fence lines, and within areas that have been regularly disked. All of the aquatic features contained some areas of ponding water during the survey event. A description of each feature is included below.

Feature SW 1 is a linear feature located near the middle of the Survey Area. Vegetation within this feature was dominated by aquatic pygmy weed and Mediterranean barley. This feature contained soils with distinct and prominent redox concentrations that meet the requirements of a Redox Depression (F8). The northern edge of the feature is bound by an artificial berm where a fence line likely once ran. The eastern boundary of the feature is also bound by an artificial berm created along an existing fence line that separates the Survey Area from the adjacent parcel. This feature contained ponded water ranging from 1"-6" deep, water-stained leaves, and a biotic crust of algae.

Features SW 2 is also located near the middle of the Survey Area. Vegetation within this feature was dominated by spiny buttercup and rattail sixweeks grass. This feature contained soils with distinct and prominent redox concentrations that meet the requirements of a Redox Depression (F8). The soil sample from this feature also contained large amounts of oxidized rhizospheres along living roots in addition to water-stained leaves. This feature is located within a depression that is at least partially created by old tire ruts and was shallow, with only one inch of water throughout.

Feature SW 3 is a narrow, linear depression that occurs along an old road. Vegetation within this feature was dominated by purple sand spurry, spiny buttercup, and Mediterranean barley. This feature contained soils with distinct and prominent redox concentrations that meet the requirements of a Redox Depression (F8). The soil sample from this feature also contained large amounts of oxidized rhizospheres along living roots. The edges of the road act as berms that run along the north and south sides of the feature, while the east and west portions of the feature gradually transition into upland habitat. This feature contained between one and two inches of ponded water, water-stained leaves, and large amounts of oxidized rhizospheres along living roots.

Feature SW 4 is a large feature located near the north end of the Survey Area. Vegetation within the feature was dominated by spiny buttercup, Mediterranean barley, and broad leaf filaree. This feature contained soils with distinct and prominent redox concentrations that meet the requirements of a Redox Depression (F8). The western edge of this feature consists of an artificial berm where a fence line likely once ran, while the rest of the feature is within a depression likely created from mowing or disking the area. The feature contained 1"-6" of ponded water, water-stained leaves, and numerous aquatic invertebrates.

Feature SW 5 is a small feature located along the northern fence line of the Survey Area. Vegetation within this feature was dominated by smooth cats ear (*Hypochaeris glabra*) and aquatic pygmy weed. The soils within this feature were too saturated to get an accurate reading of color or texture. A one-foot-tall berm runs along the length of this fence line, separating the Survey Area from the parcel to the north. This feature contained 1"-2" of ponded water, water-stained leaves, a biotic crust of algae, and aquatic invertebrates.

Feature SW 6 is a large feature in the northwest portion of the Survey Area. Vegetation within this feature was dominated by Mediterranean barley. The soils within this feature were too saturated to get an accurate reading of color or texture. This feature occurs within a natural depression in the landscape and contained scattered areas of standing water from 1"-4" deep, water-stained leaves, and a biotic crust of algae. The larger, deeper pools contained aquatic invertebrates.

Feature SW 7 is also a large feature located in the northwest portion of the Survey Area that occurs within a natural depression in the landscape. Vegetation within this feature was dominated by curly dock and purple sand spurry. The soils within this feature were too saturated to get an accurate reading of color or texture. This feature contained scatter areas of ponded water from 2"-4" deep, water-stained leaves, and a biotic crust of algae. The larger, deeper pools also contained aquatic invertebrates.

Feature SW 8 is a small feature located along the northwestern fence line of the Survey Area. The vegetation within this feature was dominated by spiny buttercup and Mediterranean barley. The soils within this feature were too saturated to get an accurate reading of color or texture. The feature consists of an incised pit that has eroded between fence posts. The ponded water within the feature was approximately 10" deep and contained a biotic crust of algae, water-stained leaves, and aquatic invertebrates.

Feature SW 9 is a small, square pit that has been artificially excavated into the surrounding topography. This feature was excavated in 2016 to determine the percolation characteristics of the site. The pit is approximately six feet by six feet across and contains vertical banks. Due to the murkiness of the water, its total depth was not able to be determined, but it is at least eight feet deep. A sample point was not taken at this feature due to the depth of the water and the vertical nature of the walls of the feature. This precluded any hydrophytic vegetation from growing within or around the feature, and a soil sample was not possible.

Feature SW 10 is a large feature located in the southeast corner of the Survey Area. The eastern edge of this feature has been regularly disked while the remainder of the feature occurs within a natural topographic depression. Vegetation within this feature was dominated by aquatic pygmy weed, Mediterranean barley, and winged water starwort (*Callitriche marginata*). This feature contained ponded water up to six inches deep with algal matting and numerous aquatic invertebrates.

Feature SW 11 is a small feature that is located in a depression created around a concrete pad. Vegetation within this feature was dominated by aquatic pygmy weed and Mediterranean barley. This feature was up to eight inches deep and contained algal matting, aquatic invertebrates, and drift deposits around its upland border.

Feature SW 12 is a large feature that occurs in the southwest corner of the Survey Area. Vegetation within this feature was dominated by Mediterranean barley. Most of this feature occurs within an area that is regularly disked. Due to saturation and disked nature of the soil, a soil sample was not taken within this feature. This feature contained a couple of inches of ponded water throughout, in addition to algal matting, water-stained leaves, and drift deposits around its upland border.

Feature SW 13 is a small, linear feature located in the northeastern portion of the Survey Area. This feature was dominated by spiny buttercup and common Timothy grass. This feature contained soils that met the requirements for Redox Depression (F8) and contained a hardpan layer of compacted clay at six inches. This feature contained several inches of ponded water, water-stained leaves, and aquatic invertebrates.

Feature SW 14 is also a small, linear feature located in the northeastern portion of the Survey Area. This feature contained similar vegetation to SW 13 and was also dominated by spiny buttercup and common Timothy grass. This feature contained soils that met the requirements for Redox Depression (F8) and contained a hardpan layer of compacted clay at four inches. This feature contained several inches of ponded water, water-stained leaves, and a biotic crust of algae. Both features SW 13 and SW 14 are located along an old road, where the clay soils have been compacted to form a hardpan that occurs beneath the surface. Despite this hardpan layer, the features contained similar vegetation to the other seasonal wetland features identified within the Survey Area.

4.1.2 Potential Waters

Based on the information obtained during the February 2024 survey, it was determined that there are no other water features within the Survey Area. The wetland features act as basins, collecting direct precipitation. Therefore, there are no linear features that drain into or out of the wetland features.

4.1.3 Section 10 Navigable Waters

There are no Section 10 Navigable Waters in the Survey Area.

4.2 Areas Potentially Excluded from Regulation under Section 404

4.2.1 Discretionary Exemptions

A number of exemptions from Section 404 Clean Water Act regulations exist for waters of the United States. These exemptions fall into two basic categories: (1) discretionary and (2) non-discretionary.

According to the 2023 EPA definition of “Waters of the U.S.” [88 FR 3004], certain areas which may meet the technical definition of a wetland are generally not regulated. Such areas include:

- (1) waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;
- (2) prior converted cropland;
- (3) ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;
- (4) artificially irrigated areas that would revert to dry land if the irrigation ceased;
- (5) artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
- (6) artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;
- (7) waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and
- (8) swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

4.2.2 Application of Discretionary Exemptions

Based on the description above, it is our determination that the aquatic features identified within the Survey Area would not meet any of the above discretionary exemptions. While feature SW 9 was artificially excavated from dry land, the feature was excavated in 2016 and construction activity has not continued. Therefore, it would not meet any of the above exemptions.

4.2.3 Isolated Wetlands/Waters

The U.S. Supreme Court ruled that isolated, non-navigable wetlands and other waters are not subject to federal regulation even if they provide habitat for migratory birds and endangered species. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (hereinafter SWANCC) (No. 99-1178). The Corps has attempted to define isolated as “not having hydrological connectivity to other jurisdictional features.” Based on this determination, the Court has eliminated the need to secure fill permits from the Corps under Section 404 of the Clean Water Act when isolated wetlands are encountered. Nevertheless, the decision is by no means a blanket repeal of Section 404. Every landowner’s on-the-ground situation is unique and must be analyzed individually. In the aftermath of this decision, each landowner must still carefully assess its situation to determine whether its survey area contains features which qualify as “waters of the

U.S.” It is therefore recommended that a jurisdictional delineation be verified by the Corps rather than making an assumption regarding the potential regulation of a specific wetland/water feature.

The RWQCB has indicated that they intend to continue regulation of isolated wetlands under the Porter-Cologne Act (Water Code Section 13260). Their interpretation of the Court ruling indicates that the SWANCC decision has no bearing on the RWQCB’s regulation of “waters of the state” and as such they will continue to issue waste discharge requirements (WDRs) in lieu of a Section 401 Certification which is required when the Corps issues a Section 404 permit.

4.2.4 Application of Isolated Waters Exemptions

The seasonal wetland features identified within the Survey Area are not directly hydrologically connected to any other jurisdictional features. The general topography of the Survey Area slopes from the north to the south, with water pooling in topographically low areas. A berm is located along the fence line that forms the southern boundary of the Survey Area. This berm is high enough that it prevents the wetland features identified within the Survey Area from having a direct surface connection with the roadside ditch that flows along Elder Creek Road. In addition, there are no culverts, drains, or other water conveyance features that allow water from the seasonal wetlands to flow out of the Survey Area. Therefore, the seasonal wetland features identified in the Survey Area would be isolated from any other jurisdictional features.

5.0 CONCLUSIONS

Results of the field delineation conducted by Olberding Environmental on February 13, 2024, identified the presence of fourteen (14) wetland features totaling 3.82 acres (166,416 square feet). Details of the aquatic features identified in the Survey Area are included in Table 4 below.

Features SW 1, SW 2, and SW 3 are relatively small features (0.08 ac, 0.04 ac, and 0.02 ac respectively) occurring within depressions created by old fence lines, old roads, and/or tire ruts. These features contained areas of ponded water ranging from one inch to several inches deep, in addition to some algal matting. Feature SW 4 is a large feature (0.27 ac) occurring within a depression created by an old fence line and old ruts likely created from mowing or disking the area. This feature contained areas of ponded water up to six inches deep in addition to aquatic invertebrates.

Feature SW 5 is a small, linear feature (0.01 ac) that occurs along the northern fence boundary of the Survey Area. This feature contained a couple inches of ponded water and algal matting. Features SW 6 and SW 7 are large features (0.48 ac and 0.69 ac respectively) occurring within natural depressions within the landscape. These features contained ponded water up to four inches deep with algal matting and numerous aquatic invertebrates. Feature SW 8 is a small linear feature (<0.01 ac) that occurs along the western fence boundary of the Survey Area. This feature consists

of an incised pit that has eroded between two fence posts. This feature contained ponded water up to ten inches deep with algal matting and aquatic invertebrates.

Feature SW 9 is a small, square pit (<0.01 ac) that has been artificially excavated into the surrounding topography. The pit is approximately 6 feet by six feet across and contains vertical banks. Due to the murkiness of the water, its total depth was not able to be determined, but it is at least eight feet deep. Feature SW 10 is a large feature (0.99 ac) located in the southeast corner of the Survey Area. The eastern edge of this feature has been regularly disked while the remainder of the feature occurs within a natural topographic depression. This feature contained ponded water up to six inches deep with algal matting and numerous aquatic invertebrates. Feature SW 11 is a small feature (0.01 ac) that is located in a depression created around a concrete pad. This feature was up to eight inches deep and contained algal matting, aquatic invertebrates, and drift deposits around its upland border. Feature SW 12 is a large feature (1.23 ac) that occurs in the southwest corner of the Survey Area. Most of this feature occurs within an area that is regularly disked. This feature contained a couple of inches of ponded water throughout, in addition to algal matting and drift deposits around its upland border.

Feature SW 13 is a small, linear feature (0.02 ac) located in the northeastern portion of the Survey Area. This feature contained several inches of ponded water, water-stained leaves, and aquatic invertebrates. Feature SW 14 is a smaller, linear feature (<0.01 ac) located south of feature SW 13. This feature also contained several inches of ponded water and algal matting. Both of these features are located along an old road, where the clay soils have been compacted to form a hardpan that occurs approximately four to six inches beneath the surface. Despite this hardpan layer, the features contained similar vegetation to the other seasonal wetland features identified within the Survey Area.

While feature SW 9 was artificially excavated from dry land, it is no longer used for stock watering, irrigation, settling basins, or rice growing. Therefore, it would not meet any of the discretionary exemptions.

Each of the seasonal wetland features had had a prevalence of hydrophytic vegetation, presence of hydric soil indicators, and contained primary hydrologic indicators. These features are fed by direct precipitation with very little surface runoff. However, it is our determination that these features are isolated, as there is no direct hydrological connection to any other jurisdictional features. A berm is located along the fence line that forms the southern boundary of the Survey Area. This berm is high enough that it prevents the wetland features identified within the Survey Area from having a direct surface connection with the roadside ditch that flows along Elder Creek Road. In addition, there are no culverts, drains, or other water conveyance features that allow the seasonal wetlands to flow out of the Survey Area. Therefore, the seasonal wetland features identified in the Survey Area would be isolated from any other jurisdictional features.

Table 4. Aquatic Features		
Wetlands		
Seasonal Wetland (SW) 1	0.08 ac	3,350 sqft
SW 2	0.04 ac	1,667 sqft
SW 3	0.02 ac	722 sqft
SW 4	0.27 ac	11,553 sqft
SW 5	0.01 ac	386 sqft
SW 6	0.48 ac	20,877 sqft
SW 7	0.69 ac	29,868 sqft
SW 8	<0.01 ac	150 sqft
SW 9	<0.01 ac	54 sqft
SW 10	0.99 ac	43,092 sqft
SW 11	0.01 ac	314 sqft
SW 12	1.23 ac	53,465 sqft
SW 13	0.02 ac	706 sqft
SW 14	<0.01 ac	215 sqft
TOTAL AQUATIC FEATURES	3.82 ac	166,416 sqft

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ATTACHMENTS

ATTACHMENT 1

FIGURES

Figure 1	Survey Area Location Map
Figure 2	Survey Area Vicinity Map
Figure 3	USGS Topographic Map
Figure 4	Aerial Map
Figure 5	Jurisdictional Wetland Delineation
Figure 6	Soils Map

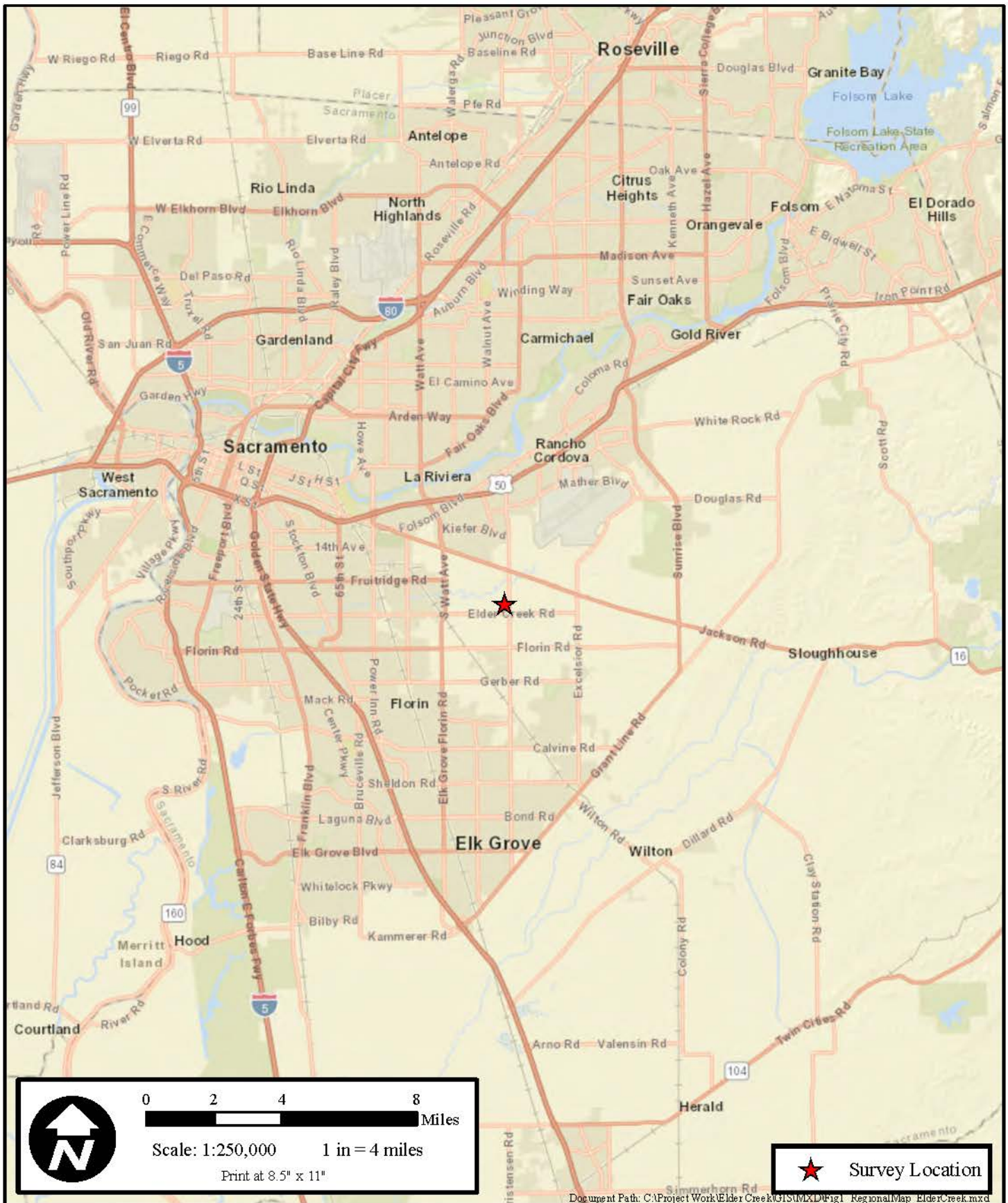


**Figure 1: Regional Map
Elder Creek Property
Sacramento County, California**



193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

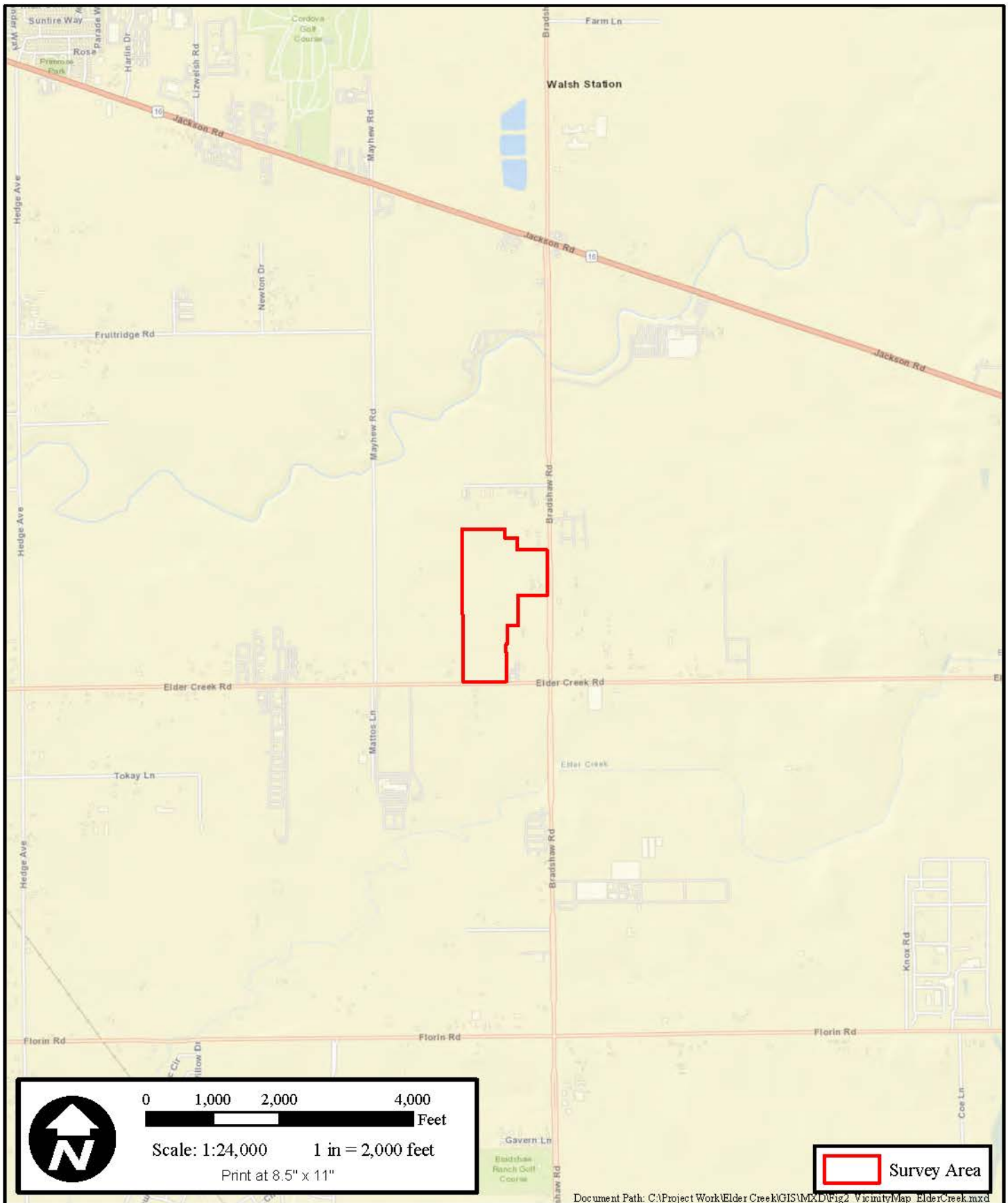


Figure 2: Vicinity Map
Elder Creek Property
Sacramento County, California

Revision Date : 02/14/2024



193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

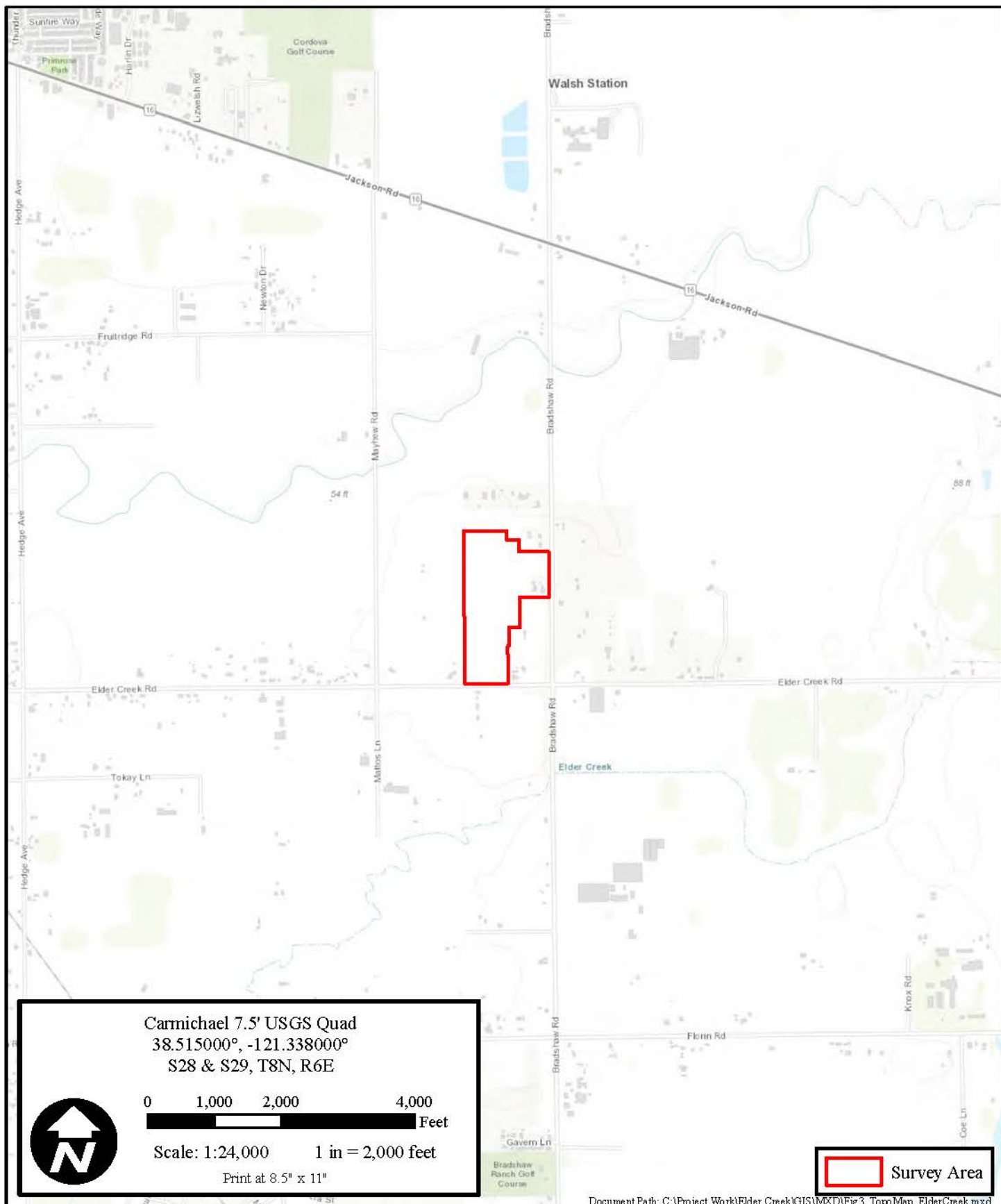


Figure 3: USGS Topographic Map
Elder Creek Property
Sacramento County, California



193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

Revision Date : 02/14/2024

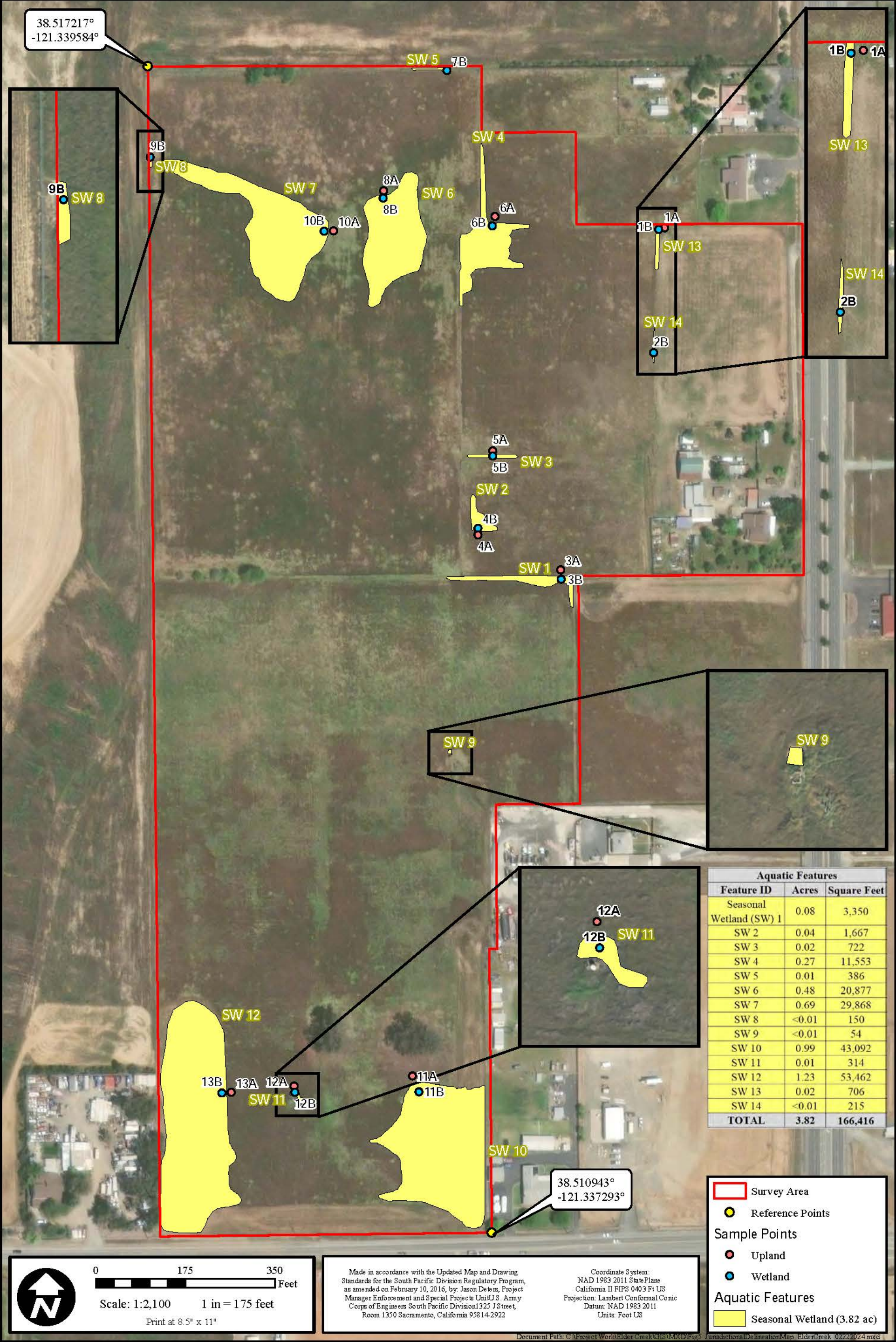


Figure 4: Aerial Map
Elder Creek Property
Sacramento County, California

Revision Date: 02/14/2024



193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188



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Figure 5: Jurisdictional Delineation Map
Elder Creek Property
Sacramento County, California

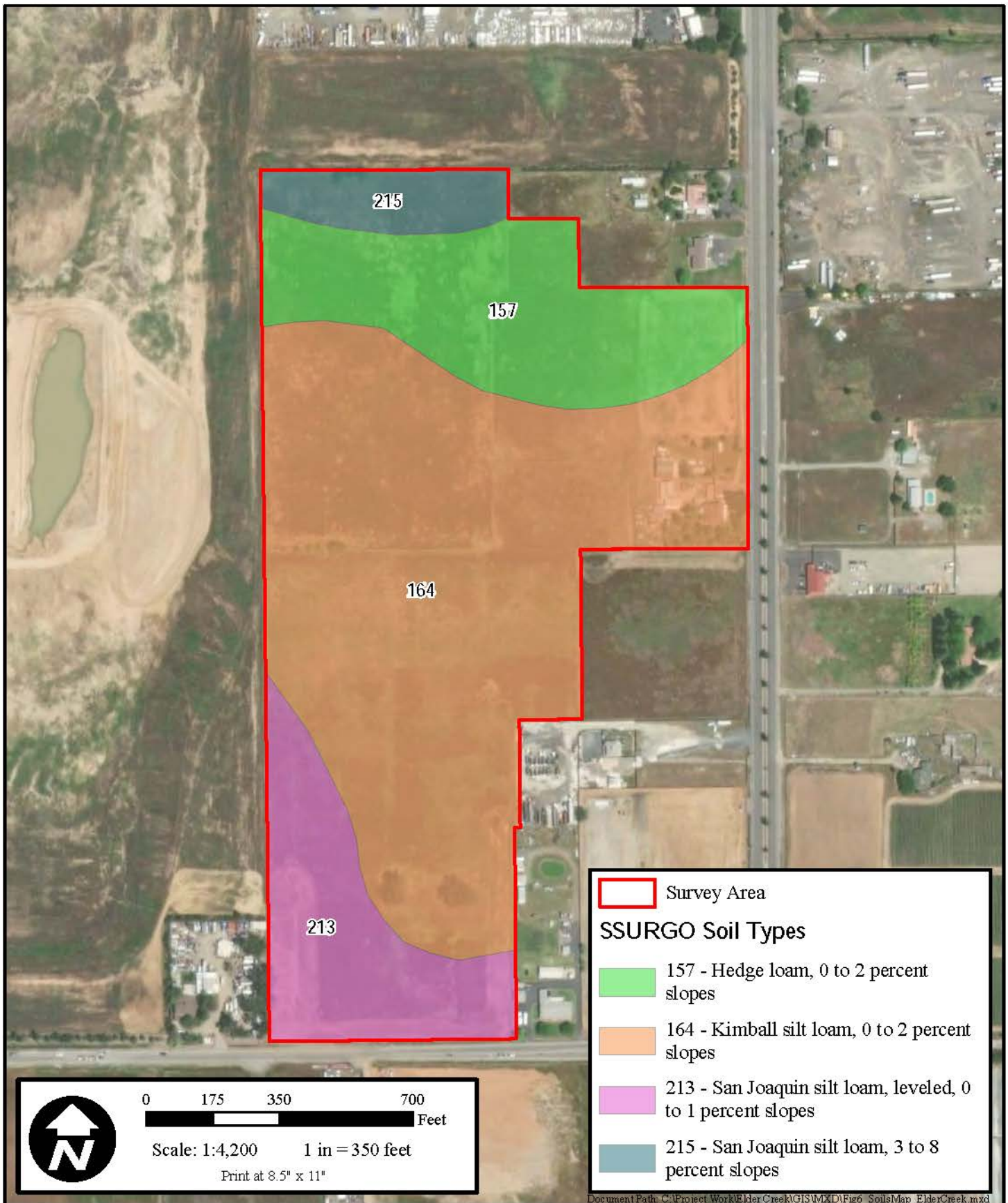


Figure 6: Soils Map
Elder Creek Property
Sacramento County, California

Revision Date: 02/14/2024



193 Blue Ravine Road, Ste. 165
Folsom, CA 95630
Phone: (916) 985-1188

ATTACHMENT 2

PLANT LIST

Attachment 2: Elder Creek Property Plant Species Observed (2024)

Species Name	Common Name	Indicator Status
<i>Acacia dealbata</i>	silver wattle	NL (UPL)
<i>Allium vineale</i>	vineyard onion	FACU
<i>Amsinckia menziesii</i>	fiddleneck	NL (UPL)
<i>Brassica rapa</i>	field mustard	FACU
<i>Bromus diandrus</i>	ripgut brome	NL (UPL)
<i>Capsella bursa-pastoris</i>	shepard's purse	FACU
<i>Calandrinia ciliata</i>	redmaids	FACU
<i>Callitriche marginata</i>	winged water starwort	OBL
<i>Cardus pycnocephalus</i>	Italian thistle	NL (UPL)
<i>Centaurea solstitialis</i>	yellow star thistle	NL (UPL)
<i>Cerastium fontanum</i>	common mouse ear chickweed	FACU
<i>Convolvulus arvensis</i>	field bindweed	NL (UPL)
<i>Crassula aquatica</i>	aquatic pygmy weed	OBL
<i>Dittrichia graveolens</i>	stinkwort	NL (UPL)
<i>Elymus canadensis</i>	Canada wild rye	FAC
<i>Epilobium brachycarpum</i>	annual fireweed	FAC
<i>Erodium botrys</i>	broad leaf filaree	FACU
<i>Eryngium vaseyi</i>	coyote thistle	FACW
<i>Eucalyptus globulus</i>	blue gum trees	NL (UPL)
<i>Festuca [Vulpia] myros</i>	rattail sixweeks grass	FACU
<i>Festuca perennis</i>	Italian rye grass	FAC
<i>Heterotheca grandiflora</i>	telegraph weed	NL (UPL)
<i>Hordeum marinum</i>	Mediterranean barley	FAC
<i>Hordeum murinum</i>	wall barley	FAU
<i>Hypochaeris glabra</i>	smooth cats ear	NL (UPL)
<i>Juglans nigra</i>	black walnut	UPL
<i>Lactuca serriola</i>	prickly lettuce	FACU
<i>Lamium amplexicaule</i>	henbit	NL (UPL)
<i>Ludwigia palustris</i>	marsh purslane	OBL
<i>Lupinus bicolor</i>	miniature lupine	NL (UPL)
<i>Narcissus tazetta</i>	cream narcissus	NL (UPL)
<i>Phleum pratense</i>	common timothy grass	FACU
<i>Prunus persica</i>	peach	NL (UPL)
<i>Ranunculus muicatus</i>	spiny buttercup	FACW
<i>Raphanus raphanistrum</i>	wild raddish	NL (UPL)
<i>Rumex crispus</i>	curly dock	FAC
<i>Senecio vulgaris</i>	common groundsel	FACU
<i>Silybum marianum</i>	milk thistle	NL (UPL)
<i>Spergularia rubra</i>	purple sand spurry	FAC
<i>Trifolium sp.</i>	clover	-
<i>Vicia villosa</i>	hairy vetch	NL (UPL)

ATTACHMENT 3

WETLAND DELINEATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 1A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.516334° Long: -121.336058° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data points 1B and 2B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Bromus diandrus</u>	<u>90</u>	<u>yes</u>	<u>NL (UPL)</u>	Prevalence Index = B/A = <u> </u>
2. <u>Vulpia myuros</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Indicators: ☐ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes ☐ No ☒
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u> </u>		
Remarks: Vegetation is dominated by ripgut				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 3/3</u>	<u>100</u>	_____	_____	_____	_____	<u>clay loam</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

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

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

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☐

No

☒Remarks: Absence of hydric soil indicators**HYDROLOGY****Wetland Hydrology Indicators:**

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

- ☐ Surface Water (A1)
☐ High Water Table (A2)
☒ Saturation (A3)
☐ Water Marks (B1) (**Nonriverine**)
☐ Sediment Deposits (B2) (**Nonriverine**)
☐ Drift Deposits (B3) (**Nonriverine**)
☐ Surface Soil Cracks (B6)
☐ Inundation Visible on Aerial Imagery (B7)
☐ Water-Stained Leaves (B9)
☐ Salt Crust (B11)
☐ Biotic Crust (B12)
☐ Aquatic Invertebrates (B13)
☐ Hydrogen Sulfide Odor (C1)
☐ Oxidized Rhizospheres along Living Roots (C3)
☐ Presence of Reduced Iron (C4)
☐ Recent Iron Reduction in Tilled Soils (C6)
☐ Thin Muck Surface (C7)
☐ Other (Explain in Remarks)

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)
☐ 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): 12Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 14 inches, so does not meet hydrology requirements.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 1B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.516320° Long: -121.336098° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total % Cover of:	Multiply by:
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u>	x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u>	x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u>	x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u>	x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u>	x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A)	<u> </u> (B)
1. <u>Ludwigia palustris</u>	<u>10</u>	<u>no</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>	
2. <u>Ranunculus muricatus</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators:	
3. <u>Phleum pratense</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	☒ Dominance Test is >50%	
4. <u>Lactuca serriola</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	☐ Prevalence Index is ≤3.0 ¹	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes ☒ No ☐	
50% = <u>35</u> , 20% = <u>14</u>	<u>70</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u> </u>)					
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
% Bare Ground in Herb Stratum <u>30</u>	% Cover of Biotic Crust <u> </u>				
Remarks: <u>Bare ground consists of surface water.</u>					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-6</u>	<u>10 YR 4/4</u>	<u>80</u>	<u>2.5 YR 3/6</u>	<u>20</u>	<u>C</u>	<u>M</u>	<u>clay loam</u>	<u>hardpan at 6"</u>

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8). Hardpan layer at 6" created by compaction of clay soils.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-3"Water Table Present? Yes ☒ No ☐ Depth (inches): 4"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: While water was ponding on the surface and the soils saturated, the water table did not begin until 4".

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 2B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.515657° Long: -121.336142° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Ludwigia palustris</u>	<u>10</u>	<u>no</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>
2. <u>Ranunculus muricatus</u>	<u>18</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Phleum pratense</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	
4. <u>Cerastium fontanum</u>	<u>2</u>	<u>no</u>	<u>FACU</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>30</u> , 20% = <u>12</u>	<u>60</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>40</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
<u>Bare ground consists of surface water.</u>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-4</u>	<u>10 YR 3/3</u>	<u>90</u>	<u>2.5 YR 3/6</u>	<u>10</u>	<u>C</u>	<u>M</u>	<u>clay loam</u>	<u>hardpan at 4"</u>

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8). Hardpan layer at 4" created by compaction of clay soils.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-2"Water Table Present? Yes ☒ No ☐ Depth (inches): 4"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: While water was ponding on the surface and the soils saturated, the water table did not begin until 4".

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 3A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.514500° Long: -121.336781° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 3B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Multiply by:
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		FACU species <u> </u> x4 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				UPL species <u> </u> x5 = <u> </u>
1. <u>Bromus diandrus</u>	<u>90</u>	<u>yes</u>	<u>NL (UPL)</u>	Column Totals: <u> </u> (A) <u> </u> (B)
2. <u>Dittrichia graveolens</u>	<u>2</u>	<u>no</u>	<u>NL (UPL)</u>	Prevalence Index = B/A = <u> </u>
3. <u>Brassica rapa</u>	<u>3</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:
4. <u>Erodium botrys</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Dominance Test is >50%
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes ☐ No ☒
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>0</u>	% Cover of Biotic Crust <u> </u>			
Remarks: Vegetation is dominated by ripgut				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-12</u>	<u>10 YR 4/3</u>	<u>85</u>	<u>2.5 YR 3/6</u>	<u>15</u>	<u>C</u>	<u>M, PL</u>	<u>sandy clay</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Field Observations:Surface Water Present? Yes ☐ No ☐ Depth (inches): _____Water Table Present? Yes ☒ No ☐ Depth (inches): 9"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 9 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 3B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.514441° Long: -121.336776° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total % Cover of: <u> </u> Multiply by: <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Ludwigia palustris</u>	<u>5</u>	<u>no</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>
2. <u>Ranunculus muricatus</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
3. <u>Rumex crispus</u>	<u>5</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
4. <u>Lupinus bicolor</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	☒ Dominance Test is >50%
5. <u>Crassula aquatica</u>	<u>15</u>	<u>yes</u>	<u>OBL</u>	☐ Prevalence Index is ≤3.0 ¹
6. <u>Hordeum marinum</u>	<u>30</u>	<u>yes</u>	<u>FAC</u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = <u>33</u> , 20% = <u>13</u>	<u>65</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present? Yes ☒ No ☐
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>35</u>	% Cover of Biotic Crust <u> </u>			
Remarks: <u>Bare ground consists of surface water.</u>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-14	10 YR 4/3	80	2.5 YR 2.5/4	15	C	M	sandy clay loam	
			10 YR 2/1	5	C	M		

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8).

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-6"Water Table Present? Yes ☒ No ☐ Depth (inches): 6"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: While water was ponding on the surface and the soils saturated, the water table did not begin until 4".

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 4A
 Investigator(s): Olberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.514681° Long: -121.337351° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 4B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Vulpia myuros</u>	<u>60</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u> </u>
2. <u>Dittrichia graveolens</u>	<u>10</u>	<u>no</u>	<u>NL (UPL)</u>	
3. <u>Ranunculus muricatus</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	
4. <u>Cerastium fontanum</u>	<u>15</u>	<u>no</u>	<u>FACU</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>48</u> , 20% = <u>19</u>	<u>95</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>5</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				Hydrophytic Vegetation Present? Yes ☐ No ☒
Vegetation is dominated by rattail sixweeks grass.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-12</u>	<u>10 YR 4/3</u>	<u>90</u>	<u>5 YR 3/4</u>	<u>10</u>	<u>C</u>	<u>M</u>	<u>sandy clay</u>	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 6Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 6 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 4B
 Investigator(s): Olberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.514729° Long: -121.337346° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:	
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total % Cover of:	Multiply by:
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u>	x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u>	x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u>	x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u>	x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u>	x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals:	<u> </u> (A) <u> </u> (B)
1. <u>Ranunculus muricatus</u>	<u>30</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u> </u>	
2. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:	
3. <u>Dittrichia graveolens</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	☒ Dominance Test is >50%	
4. <u>Vulpia myuros</u>	<u>55</u>	<u>yes</u>	<u>FACU</u>	☐ Prevalence Index is ≤3.0 ¹	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes ☒ No ☐	
50% = <u>48</u> , 20% = <u>19</u>	<u>95</u>	= Total Cover			
Woody Vine Stratum (Plot size: <u> </u>)					
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>		
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover			
% Bare Ground in Herb Stratum <u>5</u>	% Cover of Biotic Crust <u> </u>				
Remarks: <u>Bare ground consists of surface water.</u>					

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-6</u>	<u>10 YR 4/3</u>	<u>80</u>	<u>5 YR 3/4</u>	<u>20</u>	<u>C</u>	<u>M, PL</u>	<u>sandy clay loam</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8).

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☒ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 5A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.515141° Long: -121.337245° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 5B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x1 = <u> </u> FACW species <u> </u> x2 = <u> </u> FAC species <u> </u> x3 = <u> </u> FACU species <u> </u> x4 = <u> </u> UPL species <u> </u> x5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Herb Stratum (Plot size: <u> </u>)				
1. <u>Hordeum murinum</u>	<u>65</u>	<u>yes</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators: ☐ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
3. <u>Spergularia rubra</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
4. <u>Erodium botrys</u>	<u>15</u>	<u>no</u>	<u>FACU</u>	
5. <u>Cerastium fontanum</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes ☐ No ☒
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			
Remarks: Vegetation is dominated by wall barley.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 4/3</u>	<u>85</u>	<u>5 YR 3/4</u>	<u>15</u>	<u>C</u>	<u>M</u>	<u>sandy clay</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 12Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 12 inches, which does not meet the requirements for a hydrology indicator.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 5B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.515110° Long: -121.337245° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Spergularia rubra</u>	<u>20</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = <u> </u>
2. <u>Ranunculus muricatus</u>	<u>25</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Hordeum marinum</u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	
4. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>48</u> , 20% = <u>19</u>	<u>95</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>5</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
<u>Bare ground consists of surface water.</u>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-10</u>	<u>10 YR 3/4</u>	<u>85</u>	<u>5 YR 3/4</u>	<u>15</u>	<u>C</u>	<u>M, PL</u>	<u>sandy clay loam</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8).

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|---|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☒ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-2"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 6A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.516392° Long: -121.337218° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 6B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Erodium botrys</u>	<u>40</u>	<u>yes</u>	<u>FACU</u>	Prevalence Index = B/A = <u> </u>
2. <u>Dittrichia graveolens</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
3. <u>Hordeum murinum</u>	<u>30</u>	<u>yes</u>	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>25</u>	<u>yes</u>	<u>NL (UPL)</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Vegetation is dominated by filaree, wall barley, and ripgut.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 4/3</u>	<u>95</u>	<u>5 YR 3/4</u>	<u>5</u>	<u>C</u>	<u>M</u>	<u>sandy clay</u>	
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 10"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 10 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 6B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.516348° Long: -121.337235° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Multiply by:
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		FACU species <u> </u> x4 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				UPL species <u> </u> x5 = <u> </u>
1. <u>Spergularia rubra</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	Column Totals: <u> </u> (A) <u> </u> (B)
2. <u>Ranunculus muricatus</u>	<u>20</u>	<u>yes</u>	<u>FACW</u>	Prevalence Index = B/A = <u> </u>
3. <u>Hordeum marinum</u>	<u>25</u>	<u>yes</u>	<u>FAC</u>	Hydrophytic Vegetation Indicators:
4. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
5. <u>Erodium botrys</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	☐ Prevalence Index is ≤3.0 ¹
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = <u>38</u> , 20% = <u>15</u>	<u>75</u>	= Total Cover		Hydrophytic Vegetation Present? Yes ☒ No ☐
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>25</u>		% Cover of Biotic Crust <u> </u>		
Remarks: <u>Bare ground consists of surface water.</u>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-14	10 YR 3/4	80	5 YR 3/4	15	C	M	sandy clay loam	
			10 YR 2/1	5	C	M	sandy clay loam	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8).

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-6"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 7B
 Investigator(s): Olberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.517183° Long: -121.337539° Datum:
 Soil Map Unit Name: 215 - San Joaquin silt loam, 3 to 8 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: <u>Wetland point taken within shallow surface water. Soils were too saturated to take a sample. Hydric soils assumed.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Hypochaeris glabra</u>	<u>15</u>	<u>yes</u>	<u>NL (UPL)</u>	Prevalence Index = B/A = <u> </u>
2. <u>Crassula aquatica</u>	<u>40</u>	<u>yes</u>	<u>OBL</u>	
3. <u>Ranunculus muricatus</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	
4. <u>Eryngium yaseyi</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
5. <u>Dittrichia graveolens</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>38</u> , 20% = <u>15</u>	<u>75</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>25</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
<u>Bare ground consists of surface water.</u>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading. Hydric soils assumed.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-2"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 8A
 Investigator(s): Olberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.516540° Long: -121.337973° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 8B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Erodium botrys</u>	<u>15</u>	<u>no</u>	<u>FACU</u>	Prevalence Index = B/A = <u> </u>
2. <u>Dittrichia graveolens</u>	<u>25</u>	<u>yes</u>	<u>NL (UPL)</u>	
3. <u>Vulpia myros</u>	<u>50</u>	<u>yes</u>	<u>FACU</u>	
4. <u>Cerastium fontanum</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Vegetation is dominated by sixweek rattail fescue and stinkwort.				
Hydrophytic Vegetation Present?				Yes ☐ No ☒

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 4/3</u>	<u>95</u>	<u>10 YR 2/1</u>	<u>5</u>	<u>C</u>	<u>M</u>	<u>sandy clay</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 12"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 12 inches, which does not meet the requirements for hydrology indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 8B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.516499° Long: -121.337978° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: Wetland point taken within shallow surface water. Soils were too saturated to take a sample. Hydric soils assumed.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Eryngium yaseyi</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	Prevalence Index = B/A = <u> </u>
2. <u>Dittrichia graveolens</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
3. <u>Hordeum marinum</u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	
4. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
5. <u>Ranunculus muricatus</u>	<u>10</u>	<u>no</u>	<u>FACW</u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>35</u> , 20% = <u>14</u>	<u>70</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>30</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Bare ground consists of surface water.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading. Hydric soils assumed.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-4"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 9B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.516726° Long: -121.339569° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: Wetland point taken within shallow surface water. Soils were too saturated to take a sample. Hydric soils assumed.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	Prevalence Index = B/A = <u> </u>
2. <u>Ranunculus muricatus</u>	<u>10</u>	<u>yes</u>	<u>FACW</u>	
3. <u>Hordeum marinum</u>	<u>35</u>	<u>yes</u>	<u>FAC</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>25</u> , 20% = <u>10</u>	<u>50</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>50</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Bare ground consists of surface water.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading. Hydric soils assumed.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 2-10"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 10A
 Investigator(s): Olberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.516324° Long: -121.338320° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 10B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Multiply by:
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		FACU species <u> </u> x4 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				UPL species <u> </u> x5 = <u> </u>
1. <u>Erodium botrys</u>	<u>25</u>	<u>yes</u>	<u>FACU</u>	Column Totals: <u> </u> (A) <u> </u> (B)
2. <u>Dittrichia graveolens</u>	<u>15</u>	<u>no</u>	<u>NL (UPL)</u>	Prevalence Index = B/A = <u> </u>
3. <u>Vulpia myros</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	Hydrophytic Vegetation Indicators:
4. <u>Cerastium fontanum</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	
5. <u>Bromus diandrus</u>	<u>40</u>	<u>yes</u>	<u>NL (UPL)</u>	☐ Prevalence Index is ≤3.0 ¹
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Problematic Hydrophytic Vegetation ¹ (Explain)
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Present?
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			
Remarks: Vegetation is dominated by filaree and ripgut.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 4/3</u>	<u>95</u>	<u>10 YR 2/1</u>	<u>5</u>	<u>C</u>	<u>M</u>	<u>sandy clay</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 10Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 10 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 10B
 Investigator(s): Olberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.516320° Long: -121.338386° Datum:
 Soil Map Unit Name: 157 - Hedge loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: Wetland point taken within shallow surface water. Soils were too saturated to take a sample. Hydric soils assumed.		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Rumex crispus</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	Prevalence Index = B/A = <u> </u>
2. <u>Spergularia rubra</u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Hordeum marinum</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
4. <u>Ludwigia palustris</u>	<u>5</u>	<u>no</u>	<u>OBL</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>38</u> , 20% = <u>15</u>	<u>75</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>25</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Bare ground consists of surface water.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading. Hydric soils assumed.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 2-4"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 11A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.511781° Long: -121.337823° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 11B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Vicia villosa</u>	<u>30</u>	<u>yes</u>	<u>NL (UPL)</u>	Prevalence Index = B/A = <u> </u>
2. <u>Vulpia myros</u>	<u>60</u>	<u>yes</u>	<u>FACU</u>	
3. <u>Erodium botrys</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
4. <u>Bromus diandrus</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				Hydrophytic Vegetation Present? Yes ☐ No ☒
Vegetation is dominated by vetch and sixweek rattail fescue				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 3/4</u>	<u>95</u>	<u>10 YR 2/1</u>	<u>5</u>	<u>C</u>	<u>M</u>	<u>sandy clay</u>	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: Soils meet the requirements for Redox Depressions (F8)

HYDROLOGY**Wetland Hydrology Indicators:**

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

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

Field Observations:Surface Water Present? Yes ☐ No ☐ Depth (inches): _____Water Table Present? Yes ☒ No ☐ Depth (inches): 14"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 14 inches, which does not meet the requirements for hydrology indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 11B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.511698° Long: -121.337783° Datum:
 Soil Map Unit Name: 164 - Kimball silt loam, 0 to 2 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐	
Wetland Hydrology Present?	Yes ☒ No ☐	
Remarks: <u>Wetland point taken within shallow surface water. Soils were too saturated to take a sample.</u>		

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Prevalence Index worksheet: Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x1 = <u> </u> FACW species <u> </u> x2 = <u> </u> FAC species <u> </u> x3 = <u> </u> FACU species <u> </u> x4 = <u> </u> UPL species <u> </u> x5 = <u> </u> Column Totals: <u> </u> (A) <u> </u> (B) Prevalence Index = B/A = <u> </u>
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Herb Stratum (Plot size: <u> </u>)				
1. <u>Crassula aquaticae</u>	<u>25</u>	<u>yes</u>	<u>OBL</u>	Hydrophytic Vegetation Indicators: ☒ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain)
2. <u>Hordeum marinum</u>	<u>15</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Ranunculus muricatus</u>	<u>5</u>	<u>no</u>	<u>FACW</u>	
4. <u>Erodium botrys</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
5. <u>Callitriche marginata</u>	<u>15</u>	<u>yes</u>	<u>OBL</u>	
6. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
7. <u>Spergularia rubra</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>38</u> , 20% = <u>15</u>	<u>75</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Hydrophytic Vegetation Present? Yes ☒ No ☐
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u>25</u>	% Cover of Biotic Crust <u> </u>			
Remarks: <u>Bare ground consists of surface water and mud.</u>				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 2-6"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: / Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 12A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.511736° Long: -121.338630° Datum:
 Soil Map Unit Name: 213 - San Joaquin silt loam, leveled, 0 to 1 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 12B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Erodium botrys</u>	<u>10</u>	<u>no</u>	<u>FACU</u>	Prevalence Index = B/A = <u> </u>
2. <u>Hordeum murinum</u>	<u>75</u>	<u>yes</u>	<u>FACU</u>	
3. <u>Dittrichia graveolens</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
4. <u>Convolvulus arvensis</u>	<u>10</u>	<u>no</u>	<u>NL (UPL)</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Vegetation is dominated by wall barley.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
0-14	10 YR 3/4	100					sandy clay	

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☐

No

☒

Remarks: Absence of hydric soil indicators.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 10Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 10 inches.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 12B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.511698° Long: -121.338630° Datum:
 Soil Map Unit Name: 213 - San Joaquin silt loam, leveled, 0 to 1 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water. Soils were too saturated to take a sample.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Crassula aquaticae</u>	<u>35</u>	<u>yes</u>	<u>OBL</u>	Prevalence Index = B/A = <u> </u>
2. <u>Hordeum marinum</u>	<u>40</u>	<u>yes</u>	<u>FAC</u>	
3. <u>Callitriche marginata</u>	<u>10</u>	<u>no</u>	<u>OBL</u>	
4. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>45</u> , 20% = <u>18</u>	<u>90</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>25</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				Hydrophytic Vegetation Present? Yes ☒ No ☐
Bare ground consists of surface water and mud.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☒ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 2-8"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 13A
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): none Slope (%): 1
 Subregion (LRR): Lat: 38.511702° Long: -121.339060° Datum:
 Soil Map Unit Name: 213 - San Joaquin silt loam, leveled, 0 to 1 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☐ No ☒	Is the Sampled Area within a Wetland?	Yes ☐ No ☒
Hydric Soil Present?	Yes ☐ No ☒		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: Paired upland sample point for data point 13B.			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Erodium botrys</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	Prevalence Index = B/A = <u> </u>
2. <u>Vulpia myros</u>	<u>85</u>	<u>yes</u>	<u>FACU</u>	
3. <u>Festuca perennis</u>	<u>10</u>	<u>no</u>	<u>FAC</u>	
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
6. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
7. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u>100</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
% Bare Ground in Herb Stratum <u> </u>	% Cover of Biotic Crust <u> </u>			
Hydrophytic Vegetation Indicators: ☐ Dominance Test is >50% ☐ Prevalence Index is ≤3.0 ¹ ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Hydrophytic Vegetation Present? Yes ☐ No ☒				
Remarks: Vegetation is dominated by sixweek rattail fescue.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
<u>0-14</u>	<u>10 YR 3/4</u>	<u>100</u>	_____	_____	_____	_____	<u>sandy clay</u>	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|--|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☒ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☐

No

☒Remarks: Absence of hydric soil indicators.**HYDROLOGY****Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☐ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☐ High Water Table (A2) | ☐ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☐ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☐ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☐ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 14Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Soils were saturated at the surface. Water table was observed at 14 inches, which does not meet the requirements for hydrology indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: Elder Creek Property City/County: /Sacramento Sampling Date: 2/13/2024
 Applicant/Owner: State: CA Sampling Point: 13B
 Investigator(s): Oiberding Environmental INC Section, Township, Range:
 Landform (hillslope, terrace, etc.): Local relief (concave, convex, none): concave Slope (%): 1
 Subregion (LRR): Lat: 38.511698° Long: -121.339121° Datum:
 Soil Map Unit Name: 213 - San Joaquin silt loam, leveled, 0 to 1 percent slopes NWI classification:
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☒, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present?	Yes ☒ No ☐	Is the Sampled Area within a Wetland?	Yes ☒ No ☐
Hydric Soil Present?	Yes ☒ No ☐		
Wetland Hydrology Present?	Yes ☒ No ☐		
Remarks: <u>Wetland point taken within shallow surface water. Soils were too saturated to take a sample and have regularly been disked.</u>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u> </u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test Worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		
Sapling/Shrub Stratum (Plot size: <u> </u>)				Prevalence Index worksheet:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	OBL species <u> </u> x1 = <u> </u>
3. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACW species <u> </u> x2 = <u> </u>
4. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FAC species <u> </u> x3 = <u> </u>
5. <u> </u>	<u> </u>	<u> </u>	<u> </u>	FACU species <u> </u> x4 = <u> </u>
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		UPL species <u> </u> x5 = <u> </u>
Herb Stratum (Plot size: <u> </u>)				Column Totals: <u> </u> (A) <u> </u> (B)
1. <u>Spergularia rubra</u>	<u>15</u>	<u>no</u>	<u>FAC</u>	Prevalence Index = B/A = <u> </u>
2. <u>Rumex crispus</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
3. <u>Convolvulus arvensis</u>	<u>5</u>	<u>no</u>	<u>NL (UPL)</u>	
4. <u>Epilobium brachycarpum</u>	<u>5</u>	<u>no</u>	<u>FAC</u>	
5. <u>Erodium botrys</u>	<u>5</u>	<u>no</u>	<u>FACU</u>	
6. <u>Hordeum marinum</u>	<u>45</u>	<u>yes</u>	<u>FAC</u>	
7. <u>Callitriche marginata</u>	<u>5</u>	<u>no</u>	<u>OBL</u>	
8. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
50% = <u>43</u> , 20% = <u>17</u>	<u>85</u>	= Total Cover		
Woody Vine Stratum (Plot size: <u> </u>)				Hydrophytic Vegetation Indicators:
1. <u> </u>	<u> </u>	<u> </u>	<u> </u>	
2. <u> </u>	<u> </u>	<u> </u>	<u> </u>	☐ Prevalence Index is ≤3.0 ¹
50% = <u> </u> , 20% = <u> </u>	<u> </u>	= Total Cover		☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
% Bare Ground in Herb Stratum <u>25</u>	% Cover of Biotic Crust <u> </u>			☐ Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				
Bare ground consists of surface water and algal matting.				

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (Moist)	%	Type ¹	Loc ²		
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

¹Type: C= Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Sandy Redox (S5) |
| ☐ Histic Epipedon (A2) | ☐ Stripped Matrix (S6) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) (LRR C) | ☐ Depleted Matrix (F3) |
| ☐ 1 cm Muck (A9) (LRR D) | ☐ Redox Dark Surface (F6) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Dark Surface (F7) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Depressions (F8) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Vernal Pools (F9) |
| ☐ Sandy Gleyed Matrix (S4) | |

Indicators for Problematic Hydric Soils³:

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

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.**Restrictive Layer (if present):**

Type: _____

Depth (Inches): _____

Hydric Soils Present?

Yes

☒

No

☐

Remarks: The soils were too saturated to get an accurate color or texture reading. In addition soils have been regularly disked.

HYDROLOGY**Wetland Hydrology Indicators:**

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

- | | |
|--|--|
| ☒ Surface Water (A1) | ☐ Salt Crust (B11) |
| ☒ High Water Table (A2) | ☒ Biotic Crust (B12) |
| ☒ Saturation (A3) | ☒ Aquatic Invertebrates (B13) |
| ☐ Water Marks (B1) (Nonriverine) | ☐ Hydrogen Sulfide Odor (C1) |
| ☐ Sediment Deposits (B2) (Nonriverine) | ☐ Oxidized Rhizospheres along Living Roots (C3) |
| ☒ Drift Deposits (B3) (Nonriverine) | ☐ Presence of Reduced Iron (C4) |
| ☐ Surface Soil Cracks (B6) | ☐ Recent Iron Reduction in Tilled Soils (C6) |
| ☐ Inundation Visible on Aerial Imagery (B7) | ☐ Thin Muck Surface (C7) |
| ☒ Water-Stained Leaves (B9) | ☐ 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) |
| ☐ 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): 1-2"Water Table Present? Yes ☒ No ☐ Depth (inches): 0"Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0"**Wetland Hydrology Present?**

Yes

☒

No

☐

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

Remarks: Water table is just below the surface.

ATTACHMENT 4

SITE PHOTOGRAPHS



1. Photo 1 is taken from the northeastern boundary of the Survey Area, facing southwest. The photo shows the flat topography of the Survey Area. Photo taken 2/13/2024.



2. Photo 2 is taken from the southern boundary of the Survey Area, facing north. The photo shows some large blue gum trees growing in the southern portion of the Survey Area and the flat topography. Photo taken 2/13/2024.



3. Photo 3 is taken facing west. This photo shows sample point 3B (blue shovel) and feature SW 1. Photo taken 2/13/2024.



4. Photo 4 is taken facing south. This photo shows sample point 6B and feature SW 6. Photo taken 2/13/2024.



5. Photo 5 is taken facing south. This photo shows sample point 8B and feature SW 6. Numerous, scattered pools of water can be seen throughout the vegetation. Photo taken 2/13/2024.



6. Photo 6 is taken near the middle of the Survey Area. The photo shows feature SW 9, which consists of an excavated pit approximately 6 feet across. Photo taken 2/14/2024.



7. Photo 7 is taken from the north side of feature SW 10, facing southeast. The photo shows the ponding that is found throughout much of this feature. Photo taken 2/13/2024.



8. Photo 8 is taken in the southern portion of the Survey Area, facing west. The photo shows feature SW 11 located around a concrete pad. Photo taken 2/13/2024.



9. Photo 9 is taken along the southwestern fence line of the Survey Area, facing south. The photo shows feature SW 12, much of which is located within an area that is regularly disced with little vegetation. Photo taken 2/13/2024.



10. Photo 10 is taken near the northern border of the Survey Area, looking north. The photo shows feature SW 13. This feature occurs along an old dirt road. Photo taken 2/13/2024.

ATTACHMENT 5

SOILS DATA

Sacramento County, California

157—Hedge loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hhn1

Elevation: 20 to 140 feet

Mean annual precipitation: 18 inches

Mean annual air temperature: 61 degrees F

Frost-free period: 275 to 300 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Hedge and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hedge

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 14 inches: loam

H2 - 14 to 23 inches: loam

H3 - 23 to 31 inches: clay loam

H4 - 31 to 38 inches: loam

H5 - 38 to 44 inches: cemented

H6 - 44 to 60 inches: sandy loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: 38 to 44 inches to duripan

Drainage class: Moderately well drained

Runoff class: Low

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

Depth to water table: About 0 inches

Frequency of flooding: Rare

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0
mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: C/D
Ecological site: R017XD081CA - LOAM STREAM TERRACE
Hydric soil rating: No

Minor Components

Columbia

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread
Hydric soil rating: Yes

Hicksville

Percent of map unit: 3 percent
Hydric soil rating: No

Kimball

Percent of map unit: 3 percent
Hydric soil rating: No

San joaquin

Percent of map unit: 3 percent
Hydric soil rating: No

Unnamed, unloam subsoil

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, occasional flooded

Percent of map unit: 1 percent
Hydric soil rating: No

Unnamed, shallow to harpan

Percent of map unit: 1 percent
Hydric soil rating: No

Data Source Information

Soil Survey Area: Sacramento County, California
Survey Area Data: Version 23, Aug 31, 2023

Sacramento County, California

164—Kimball silt loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: hhn8

Elevation: 30 to 1,000 feet

Mean annual precipitation: 12 to 25 inches

Mean annual air temperature: 59 to 64 degrees F

Frost-free period: 250 to 300 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Kimball and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kimball

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 24 inches: silt loam

H2 - 24 to 36 inches: clay

H3 - 36 to 60 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Well drained

Runoff class: High

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

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: D

Ecological site: R017XY905CA - Dry Alluvial Fans and Terraces

Hydric soil rating: No

Minor Components

Bruella

Percent of map unit: 4 percent

Hydric soil rating: No

San joaquin

Percent of map unit: 4 percent

Hydric soil rating: No

Durixeralfs

Percent of map unit: 3 percent

Hydric soil rating: No

Xerarents

Percent of map unit: 3 percent

Hydric soil rating: No

Unnamed, weak hardpan

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Sacramento County, California

Survey Area Data: Version 23, Aug 31, 2023

Sacramento County, California

215—San Joaquin silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: hhpX

Elevation: 20 to 500 feet

Mean annual precipitation: 10 to 22 inches

Mean annual air temperature: 61 to 63 degrees F

Frost-free period: 250 to 300 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

San joaquin and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Joaquin

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Riser

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 23 inches: silt loam

H2 - 23 to 28 inches: clay loam

H3 - 28 to 54 inches: indurated

H4 - 54 to 60 inches: stratified sandy loam to loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches; 28 to 54 inches to duripan

Drainage class: Moderately well drained

Runoff class: High

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

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 3e

Land capability classification (nonirrigated): 3e

Hydrologic Soil Group: C

Ecological site: R017XD045CA - LOAMY

Hydric soil rating: No

Minor Components

Columbia

Percent of map unit: 4 percent

Landform: Drainageways

Hydric soil rating: Yes

Hedge

Percent of map unit: 4 percent

Hydric soil rating: No

Kimball

Percent of map unit: 4 percent

Hydric soil rating: No

Galt

Percent of map unit: 1 percent

Landform: Depressions

Hydric soil rating: Yes

Unnamed, rarely flooded

Percent of map unit: 1 percent

Hydric soil rating: No

Unnamed, steeper slopes

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Sacramento County, California

Survey Area Data: Version 23, Aug 31, 2023

Sacramento County, California

213—San Joaquin silt loam, leveled, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: hhpv

Elevation: 20 to 500 feet

Mean annual precipitation: 10 to 22 inches

Mean annual air temperature: 61 to 63 degrees F

Frost-free period: 250 to 300 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

San joaquin and similar soils: 85 percent

Minor components: 15 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of San Joaquin

Setting

Landform: Terraces

Landform position (two-dimensional): Toeslope

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Alluvium derived from granite

Typical profile

H1 - 0 to 23 inches: silt loam

H2 - 23 to 28 inches: clay loam

H3 - 28 to 54 inches: indurated

H4 - 54 to 60 inches: stratified sandy loam to loam

Properties and qualities

Slope: 0 to 1 percent

Depth to restrictive feature: More than 80 inches; 28 to 54 inches to duripan

Drainage class: Moderately well drained

Runoff class: High

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

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: C

Ecological site: R017XY902CA - Duripan Vernal Pools

Hydric soil rating: No

Minor Components

Bruella

Percent of map unit: 3 percent

Hydric soil rating: No

Durixeralfs

Percent of map unit: 3 percent

Hydric soil rating: No

Galt

Percent of map unit: 2 percent

Landform: Depressions

Hydric soil rating: Yes

Hedge

Percent of map unit: 2 percent

Hydric soil rating: No

Kimball

Percent of map unit: 2 percent

Hydric soil rating: No

Xerarents

Percent of map unit: 2 percent

Hydric soil rating: No

Unnamed, rarely flooded

Percent of map unit: 1 percent

Hydric soil rating: No

Data Source Information

Soil Survey Area: Sacramento County, California

Survey Area Data: Version 23, Aug 31, 2023

ATTACHMENT 6

RESUME OF JEFF OLBERDING

Jeff Olberding

President/
Wetland & Endangered Species Regulatory Specialist

AREA OF EXPERTISE

Environmental permitting associated with wetlands and endangered species – Species and habitat mitigation

CAPABILITIES AND EXPERIENCE

Background

Mr. Olberding has over 32 years of experience in environmental regulation and permitting pertaining to wetland, riparian and wildlife resources. Prior to the establishment of Olberding Environmental, Inc., Mr. Olberding was a senior project manager in the Regulatory Branch of the U. S. Army Corps of Engineers in San Francisco. Mr. Olberding has acquired expertise in many areas of natural resource management, including permitting, wetland delineations, resource agency coordination, environmental impact assessment, restoration design, Section 7 Endangered Species Act coordination, NEPA/CEQA compliance/documentation, and mitigation and monitoring plan design and construction. Mr. Olberding has a unique background that also includes several years of experience managing commercial, residential and industrial development projects in Southern California. This combination of public and private sector experience has given him a unique perspective on project development and the permitting process in a wide variety of settings.

Mr. Olberding has managed over 3, 200 multi-disciplinary projects including many complex, controversial and environmentally sensitive in nature. Current job responsibilities include the evaluation, preparation and management of permit applications; delineation of wetlands; preparation of wetland maps; assessment of project impacts on the environment; evaluation and analysis of cumulative, direct and indirect environmental effects on wetland and riparian ecosystems; development and evaluation of mitigation and monitoring requirements to reduce the significance and/or offset impacts to biological resources; interpretation of monitoring results to evaluate mitigation site performance; preparation of biological assessments on endangered species; initiation of formal and informal Section 7 consultation on endangered species and oversight of the implementation of mitigation site construction.

While at the Corps, Mr. Olberding was responsible for the management of permit applications and the preparation of environmental documentation supporting permit decisions for individual, regional and nationwide permits pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. This past experience allows Mr. Olberding to assist clients utilizing his knowledge of environmental laws, regulations and policies, drawing from his personal interaction with other agency personnel as he managed projects related to bank stabilization and erosion protection; complex wetland delineations; sediment removal; channel maintenance activities; marina and harbor dredging; dam construction; construction of flood control channels; transportation structures; highway development; lagoon breaching; bridge replacements; construction of water control structures; large urban and commercial development projects; fish habitat enhancement projects; levee rehabilitation and construction; in stream gravel mining; percolation dams; mitigation bank development; wetland and riparian habitat management and wetland enhancement

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projects.

Professional Experience

The following projects are representative of those managed by Mr. Olberding which are similar in scope and impacts to those being considered.

On-Call Services

Contra Costa Water District - Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse, California red-legged frog, California tiger salamander,), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Stanford University – Biological Studies, ESA Studies Documentation and Coordination (California red-legged frog, California tiger salamander, steelhead), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Port of Oakland - Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse, snowy plover), Environmental Assessments, Resource Management, Stormwater Management, Regulatory Permitting, Mitigation Planning, CEQA/NEPA Documentation, Agency Coordination

Pacific Gas & Electric - Biological Studies, ESA Studies Documentation and Coordination (California red-legged frog, California tiger salamander), Environmental Assessments, Regulatory Permitting, Mitigation Planning, CEQA/NEPA Documentation, Agency Coordination

City of Fremont - Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse, burrowing owl, California red-legged frog, California tiger salamander, steelhead), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Dredging Projects

Monterey Harbor - Biological Studies, ESA Studies Documentation and Coordination, Environmental Assessments, Regulatory Permitting, Mitigation Planning, CEQA/NEPA Documentation, Agency (DMMO) Coordination

Moss Landing Harbor - Biological Studies, ESA Studies Documentation and Coordination, Environmental Assessments, Regulatory Permitting, Mitigation Planning, Agency Coordination

Santa Cruz Harbor - Biological Studies, ESA Studies Documentation and Coordination, Environmental Assessments, Regulatory Permitting, Mitigation Planning, Agency Coordination

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Chevron Corporation – Fisherman’s Wharf - Biological Studies, ESA Studies Documentation and Coordination (long-fin smelt, green sturgeon Steelhead, Coho), Environmental Assessments, Regulatory Permitting, Mitigation Planning, CEQA/NEPA Documentation, Agency (DMMO) Coordination

Other Projects

Hawthorne Mill Development Project – Complex Wetland Delineation, Biological Studies, ESA Studies Documentation and Coordination (Contra Costa goldfields and listed branchiopods), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Agency Coordination

Caltrans/Solano County - Suisun Creek Mitigation Project - Biological Studies, ESA Studies Documentation and Coordination (California red-legged frog, salt marsh harvest mouse), Corps Jurisdictional Delineation, Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Monterey Peninsula Water Management District - Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse, steelhead), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Jamestown Effluent Disposal Pipeline Project- Biological Studies, ESA Studies Documentation and Coordination (California red-legged frog), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Oro Loma Marsh Restoration Project - Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Breuner Marsh Restoration Project - Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Livermore Valley Preserve Mitigation Bank – Biological Studies, ESA Studies Documentation and Coordination (California clapper rail, salt marsh harvest mouse), Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, CEQA/NEPA Documentation, Agency Coordination

Jordan Ranch Development Project - Biological Studies, ESA Studies Documentation and Coordination (California red-legged frog, California tiger salamander, burrowing owl, San Joaquin kit fox), Corps Jurisdictional Delineation, Environmental Assessments, Regulatory Permitting, Mitigation Planning, Biological/Construction Monitoring, Agency Coordination

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EDUCATION

- Graduate Studies, Environmental Studies (Environmental Policy), San Jose State University, San Jose, California, 1994-1996
- B. S., Environmental Studies (Restoration Ecology), San Jose State University, San Jose, California, 1994

EXPERIENCE

Olberding Environmental, Inc. 1997 to Present
San Ramon & Folsom, California

Principal and Wetlands Regulatory Scientist: Environmental consulting.

U.S. Army Corps of Engineers, Regulatory Branch 1992 to 1997
San Francisco, California

Senior Project Manager: Wetland permitting, regulation and enforcement.

Aegean Construction Company 1987 to 1992
Long Beach, California

Superintendent: Residential and commercial construction

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