

APPENDIX C.1

Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

The Ranch ±530-Acre Site
City of Ranch Cordova, California

DRAFT

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Acronyms and Abbreviations

CWA	Clean Water Act
FAC	Facultative plants
FACU	Facultative upland plants
FACW	Facultative wetland plants
GIS	Geographic Information System
GPS	Global Positioning System
MSL	mean sea level
NAD	North American Datum
NRCS	Natural Resource Conservation Service
NWI	National Wetland Inventory
OBL	Obligate wetland plants
OHWM	Ordinary High Water Mark
PEM	palustrine emergent
UPL	upland
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey

Executive Summary

This report presents the results of a delineation of the aquatic resources at the 530-acre The Ranch, located in the City of Rancho Cordova, California. Aquatic resources were identified and delineated following the technical guidelines provided in the *Corps of Engineers Wetlands Delineation Manual* (Corps Manual) (Environmental Laboratory 1987) and the U.S. Army Corps of Engineers (Corps) *Arid West Regional Supplement* (Supplement) (USACE 2008). The Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. The jurisdictional boundaries for other waters of the U.S. were identified based on the presence of an ordinary high water mark (OHWM) as defined in 33 C.F.R. 328.3(e).

A total of 21.53 acres of waters of the United States, comprising 2.92 acres of depressional seasonal wetlands, 15.04 acres of vernal pools, 1.66 acres of riverine seasonal wetlands, 0.06 acres of seasonal wet swale, 1.54 acres of intermittent drainage, and 0.30 acres of detention basin outfall were delineated at the project site. The detention basin outfall is authorized by the U.S. Army Corps of Engineers Regulatory Permit #200100252.

1.0 INTRODUCTION

The purpose of this document is to present the results of a formal delineation of jurisdictional waters of the United States (U.S.), including wetlands, on the ±530-acre The Ranch (site) located in the City of Ranch Cordova, California (**Figure 1**). This report was prepared in accordance with the *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (USACE 2016) and presents the results of Foothill Associates' review of available literature, aerial photographs, soil surveys (**Figure 2**), and fieldwork within the Site. The delineation methodology is described in this report, followed by the results of the delineation. Contact information and directions to the Site are provided in **Appendix A**. Site access notification information is provided in **Appendix B**. Details regarding soils, topography, hydrology, and vegetation are summarized herein and routine wetland determination data forms are provided in **Appendix C**. A detailed delineation map that illustrates potential waters of the U.S. within the Site is included in **Figure 3**.

All aquatic features that may have been impacted by The Ranch were mapped and addressed in a 2014 Preliminary Jurisdictional Determination (Regulatory No. SPK-2004-00707) issued by the U.S. Army Corps of Engineers; but modifications to the proposed design layout requires a new jurisdictional delineation.

2.0 REGULATORY BACKGROUND

The Corps regulates discharge of dredged or fill material into waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharges of fill material” is defined as the addition of fill material into waters of the U.S., including, but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; fill for intake and outfall pipes; and subaqueous utility lines [33 C.F.R. §328.2(f)].

Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Section 404 of the CWA requires approval prior to discharging dredged or fill material into the waters of the United States. Typical activities requiring Section 404 permits are:

- Depositing of fill or dredged material in waters of the U.S. or adjacent wetlands;
- Site development fill for residential, commercial, or recreational developments;
- Construction of revetments, groins, breakwaters, levees, dams, dikes, and weirs; and
- Placement of riprap and road fills.

Section 10 of the Rivers and Harbors Act of 1899 requires approval prior to the accomplishment of any work in or over navigable waters of the United States, or which affects the course, location, condition, or capacity of such waters. Typical activities requiring Section 10 permits are:

- Construction of piers, wharves, bulkheads, dolphins, marinas, ramps, floats intake structures, and cable or pipeline crossings; and
- Dredging and excavation.

Any person, firm, or agency (including Federal, state, and local government agencies) planning to work in navigable waters of the United States, or dump or place dredged or fill material in waters of the United States, must first obtain a permit from the Corps. Permits, licenses, variances, or similar authorization may also be required by other Federal, state, and local statutes.

2.1. Waters of the United States

Waters of the United States were defined in a Federal Rule published on June 29, 2015 and which went into effect on August 28, 2015. The term “waters of the United States” includes (a) traditional navigable waters, (b) interstate waters, (c) territorial seas, (d) impoundments of jurisdictional waters, and (e) their tributaries. Tributaries must have a bed and bank and

ordinary high water mark and may have ephemeral, intermittent, or perennial flow. Additionally, the rule defines “adjacent waters” as jurisdictional due to their significant nexus with a jurisdictional water in class (a) through (e). Adjacent waters include any waters located in whole or part within 100 feet of a jurisdictional water in class (a) through (e); any waters located within the 100-year floodplain and within 1,500 feet of a jurisdictional water in class (a) through (e); and any waters within 1,500 feet (f) the ordinary high water mark of a traditionally navigable water, territorial sea, or the Great Lakes. Five classes of waters, prairie potholes, Carolina bays and Delmarva bays, pocosins, western vernal pools, and Texas coastal prairie wetlands, were determined to be jurisdictional due to their nexus with jurisdictional waters when considered in combination with similarly situated waters. Other waters not previously defined as jurisdictional that are located within the 100-year floodplain of a traditionally navigable water, interstate water, or territorial sea or are within 4,000 feet of the ordinary high water mark of a jurisdictional water in class (a) through (e) are evaluated on a case-specific basis.

The rule specifically exempts the following types of features from Federal jurisdiction: waste treatment systems, including ponds or lagoons designed to meet the requirements of the Clean Water Act, prior converted cropland, ditches with ephemeral or intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands, ditches that do not flow directly or indirectly into a jurisdictional water, artificially irrigated areas that would revert to dry land should irrigation cease, artificial constructed lakes, ponds, reflecting pools, or swimming pools constructed in uplands, water filled depressions created in uplands incidental to mining or construction activity, erosional features, puddles, and stormwater control features and wastewater recycling structures constructed in uplands [33 C.F.R. § 328.3].

The new rule was challenged in court and on October 9, 2015 the U.S. Court of Appeals for the Sixth Circuit stayed the new rule nationwide. Until a final ruling is made, the Corps will continue to operate pursuant to the Supreme Court’s decision in the consolidated cases *Rapanos v. United States* and *Carabell v. United States* (126 S. Ct. 2208) and agency guidance subsequent to this decision. Under these rules, the Corps will assert jurisdiction over wetlands adjacent to traditional navigable waters, relatively permanent non-navigable tributaries (i.e., waters that have a continuous flow at least three months out of the year), and wetlands that abut relatively permanent tributaries. The Corps will determine jurisdiction over waters that are non-navigable tributaries that are not relatively permanent, and wetlands adjacent to these tributaries, by making a determination whether such waters “significantly affect the chemical, physical, and biological integrity of other jurisdictional waters more readily understood as “navigable.” Finally, the Corps generally does not consider the following to be “waters of the United States”: swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent or short duration flow) and ditches “wholly in and draining only uplands...which do not carry a relatively permanent flow of water.” Navigable waters of the United States are defined as waters that have been used in the past, are now used, or are susceptible to use as a means to transport interstate or foreign commerce up to the head of navigation.

Section 10 and/or Section 404 permits are required for construction activities in these waters. Boundaries between jurisdictional waters and uplands are determined in a variety of ways depending on which type of water is present. Methods for delineating wetlands and non-tidal waters are described below.

Wetlands are defined as *“those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”* [33 C.F.R. §328.3(b)]. Presently, to be a wetland, a site must exhibit positive indicators of three wetland criteria: hydrophytic vegetation, hydric soils, and wetland hydrology existing under the “normal circumstances” for the site.

The lateral regulatory extent of non-tidal waters is determined by delineating the ordinary high water mark (OHWM) [33 C.F.R. §328.4(c)(1)]. The OHWM is defined by the Corps as *“that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas”* [33 C.F.R. §328.3(e)].

3.0 METHODS

3.1. *Site-Specific References*

Available information pertaining to the natural resources of the region was reviewed. All references reviewed for this delineation are listed in **Section 6.0**. Pertinent site-specific reports and general references utilized for the delineation include the following:

- Baldwin, G., D. Goldman, D. Keil, R. Patterson, and T.J. Rosatti. 2012. *The Jepson Manual, 2nd Edition*. Vascular Plants of California. ISBN: 9780520253124. January 12, 2013;
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. U.S. Army Corps of Engineers Waterways Experiment Station. Vicksburg, MS;
- Gretag Macbeth. 2000. *Munsell Soil Color Charts*. New Windsor, NY;
- Lichvar, R.W., Butterwick, M., Melvin, N.C., and Kirchner, W. 2016. *The National Wetland Plant List: 2016 Wetland Ratings*. Phytoneuron 2016-30: 1–17. Published April 28, 2016. ISSN 2153 733X;
- U.S. Army Corps of Engineers (USACE). 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, MS;
- USACE. 2014. *Preliminary Jurisdictional Determination; SPK-2004-00707*. October 14, 2014;
- U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS). 2010. *Field Indicators of Hydric Soils in the United States, Version 7.0*. L.M. Vasilas, G.W. Hurt, and C.V. Noble (Eds). USDA, NRCS in cooperation with the National Committee for Hydric Soils. Fort Worth, TX; and
- U.S. Geological Survey. 1967 (Photorevised 1980). *Buffalo Creek, California*. 7.5 -minute series topographic quadrangle. U.S. Department of the Interior.

3.2. *Research and Field Methodology*

This delineation utilized the Corps' 1987 three-parameter (vegetation, hydrology, and soils) methodology to delineate aquatic resources. The Supplement was also used in conjunction with the Corps Manual for applications in the Arid West Region. Where differences in the two documents occur, the Supplement takes precedence over the Corps Manual.

The Arid West Region consists of all or significant portions of 11 states, including California (USACE 2008). This region is differentiated from other surrounding areas by having a predominantly dry climate and long summer dry season. Vegetation characteristics of the Arid West Region include little to no forest cover consisting of mainly annual grasslands, shrublands, hardwood savannas, deciduous woodlands, and pinyon/juniper woodlands. The Arid West

Supplement was used on this site because it is located in the *Mediterranean California* Land Resource Region (LRR C), which is characterized by warm, wet winters and dry summers.

The three-parameter methodology requires the collection of data on soils, vegetation, and hydrology at several locations to establish the jurisdictional boundary of wetlands. Additional methods to identify and delineate other waters of the U.S. (e.g., streams, drainages, lakes) were used as applicable. The method typically used for delineation of non-wetland waters of the U.S. is the delineation of the OHWM. The OHWM was identified based on soils, vegetation, slope, and other indicators such as debris and high water marks.

A review of historic and recent aerial photographs, topographic maps, and soils survey data was conducted before delineating the Site in December 2003, and January through April 2004. Revisions were made in the field with Justin Cutler and/or Will Ness of the U.S. Army Corps of Engineers in April and June in 2005 and a reverification was conducted in October 2014. Biologists visually inspected the entire site and collected representative data at points within potential wetland areas and corresponding uplands. The location of each data point is depicted in **Figure 3** and corresponding routine wetland determination data forms are provided in **Appendix C**.

Correlations were developed between the three parameters (vegetation, hydrology, and soils) to make wetland determinations. Specifically, plots at data point locations were evaluated to determine the composition and identification of dominant plant species. The indicator status of all dominant plant species [as determined by the current *National Wetland Plant List*] was applied and evaluated as part of the vegetation assessment portion of the wetland determination process. The plant indicator status includes the following categories:

- | | |
|------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Obligate wetland plants (OBL): | Occur almost always under natural wetland conditions (estimated probability > 99%). |
| Facultative wetland plants (FACW): | Usually occur in wetlands, but occasionally found in non-wetlands (67-99%). |
| Facultative plants (FAC): | Equally likely to occur in wetlands and non-wetlands (34-66%). |
| Facultative upland plants (FACU): | Usually occur in non-wetlands, but occasionally found in wetlands (1-33%). |
| Upland (UPL): | Occur almost always under natural conditions in non-wetlands (>99%); may occur in wetlands in other regions. |

The absolute cover was estimated for each vegetation stratum; these strata include tree, sapling/shrub, herb, and woody vine. Species that are dominant in more than one stratum were counted multiple times. Some wetland plant communities may fail a test based only on dominant species. Where indicators of hydric soils and hydrology are present and vegetation is

not dominated by hydrophytes, the vegetation was re-evaluated with the prevalence index, which takes into consideration all plant species in the community, not just the subset of dominant species.

The onsite soils were examined for hydric indicators. Hydric soil indicators are described in the *Field Indicators of Hydric Soils in the U.S.*, Version 7.0 (USDA, NRCS, 2010 and 2015). If one or more of these indicators are present, then the soil is hydric. Nearly all hydric soils exhibit characteristic morphologies that are caused by anaerobic, reduced soil conditions due to prolonged soil saturation. The most commonly observed indicators are related to iron (Fe) and manganese (Mn) redox concentrations or depletions. Less commonly observed indicators include gleyed matrix and black histic (low amounts of Fe-Mn and accumulations of organic carbon).

Observations were made and recorded for both primary and secondary wetland hydrology indicators, if present. Without monitoring or direct observation of inundation/saturation, indirect indicators of wetland hydrology are typically used and include primary indicators such as water marks, drift lines, and sediment deposits, or secondary indicators such as crayfish burrows or the FAC-neutral test.

3.3. GPS Data Integration

Boundaries of wetlands and other waters of the U.S. within the Site were surveyed and mapped with a Trimble GeoXT Global Positioning System (GPS) hand-held unit. This is a mapping-grade GPS unit capable of real-time differential correction and sub-meter accuracy. The GPS data were downloaded from the unit and differentially corrected utilizing Trimble Pathfinder Office software and appropriate base station data, and then converted to ESRI® shape file format. Data are typically exported to the Geographic Information System (GIS) software in the State Plane coordinate system (NAD 83) with units as "survey feet." Within the GIS, data are edited and linear features are built into polygons using recorded width information. All wetland shape files are merged to create a single wetland file with calculated acreages. These results are presented in **Figure 3**.

4.0 RESULTS

4.1. *Site Location and Land Use*

4.1.1. Site Location

The ±530-acre Site is located in southeastern Sacramento County, approximately five miles south of U.S. Highway 50, east of Sunrise Boulevard, and the Folsom South Canal, and north of Jackson Road (Highway 16) within the City of Ranch Cordova. The Site lies east of and adjacent to Rancho Cordova Parkway, south of Douglas Road, and west of and adjacent to the proposed Americanos Boulevard. The Site is located in Township 8 North, Range 7 East, Section 16, in an area covered by the USGS *Buffalo Creek* 7.5-minute quadrangle (**Figure 1**).

4.1.2. Land Use

The majority of the Site is annual grassland, previously used to livestock grazing. Land uses surrounding the Site include residential development and agricultural (livestock grazing).

4.2. *Physical Features*

4.2.1. Soils

The Natural Resources Conservation Service has mapped five soil units on the Site (**Figure 2**). These include: **Fiddyment Fine Sandy Loam, 1 to 8 Percent Slopes**, **Hicksville Gravelly Loam, 0 to 2 Percent Slopes, Occasionally Flooded**, **Red Bluff-Redding Complex, 0 to 5 Percent Slopes**, **Redding Gravelly Loam, 0 to 8 Percent Slopes**, and **Redding Loam, 2 to 8 Percent Slopes**. General characteristics associated with these soils types are described below.

- **Fiddyment Fine Sandy Loam, 1 to 8 Percent Slopes:** This moderately deep, well-drained soil is located on hills between 50 and 350 feet above mean sea level (MSL). This soil formed in material weathered from consolidated sandstone or siltstone. Permeability is very slow and available water capacity is low. As a result, this soil type takes a very long time to saturate and the capacity of the soil to hold water available for use by most plant species is low. This soil unit is typically used for rangeland, irrigated hay and pasture, or for dryland crops, such as wheat. Typically, vegetation on this soil unit consists mainly of non-native grasses and herbaceous plant species. The hydric soils list for Sacramento County does not identify any hydric inclusions occurring within this soil type.
- **Hicksville Gravelly Loam, 0 to 2 Percent Slopes, Occasionally Flooded:** This very deep, moderately well-drained soil is on low stream terraces and the alluvial flats adjacent to drainageways on high terraces and hills between 75 to 230 feet above MSL. This soil unit formed in alluvium derived from mixed rock sources. Permeability is moderately slow in this soil type and available water capacity is low. As a result, this soil type takes a moderately long time to saturate and the capacity of the soil to hold water available for use by most plant species is low. This soil type is typically used as rangeland or for irrigated crops. Typically, vegetation on this soil unit consists mainly of non-native

grasses and herbaceous plant species. The hydric soils list for Sacramento County identifies two hydric inclusions occurring within this soil type, Columbia and Hicksville.

- **Red Bluff-Redding Complex, 0 to 5 Percent Slopes:** This soil complex is located on high terraces, between 90 to 310 feet above MSL. The Red Bluff soil is very deep and well drained. This soil formed in alluvium derived from mixed rock sources. This soil complex consists of approximately 45 percent Red Bluff soil and 40 percent Redding soil. Permeability is moderately slow and available water capacity is high in the Red Bluff soil. As a result, this soil type takes a moderately long time to saturate and the capacity of the soil to hold water available for use by most plant species is high. The Redding soil is moderately deep and moderately well drained. Permeability is very slow in the Redding soil and available water capacity is low. As a result, this soil type takes a long time to saturate and the capacity of the soil to hold water available for use by most plant species is low. This soil complex is used mainly as rangeland or to cultivate dry land crops, such as wheat. Typically, vegetation on this soil complex consists of non-native annual grasses and herbaceous plant species. The hydric soils list for Sacramento County identifies one unnamed hydric inclusion found within depressions of this soil type.
- **Redding Gravelly Loam, 0 to 8 Percent Slopes:** This moderately deep, well-drained soil type is located on high terraces and terrace remnants between 40 to 390 above MSL. This soil formed in gravelly and cobbled alluvium derived from mixed rock sources. Permeability is slow in Redding gravelly loam and available water capacity is low. As a result, this soil type takes a long time to saturate and the capacity of the soil to hold water available for use by most plant species is low. This soil unit is mainly used as rangeland for livestock grazing. In some areas this unit is used for irrigated hay and pasture or for dryland crops, such as wheat. Typically, vegetation on this soil unit consists of non-native annual grasses and herbaceous plant species. The hydric soils list for Sacramento County identifies one unnamed hydric inclusion found within depressions of this soil type.
- **Redding Loam, 2 to 8 Percent Slopes:** This moderately deep, moderately well-drained soil is on high terraces and terrace remnants between 40 to 170 feet above MSL. This soil formed in gravelly and cobbly alluvium derived from mixed rock sources. Permeability is very slow in the Redding soil and available water capacity is low. As a result, this soil type takes a long time to saturate and the capacity of the soil to hold water available for use by most plant species is low. This soil type is typically used for rangeland and less frequently for dryland crops, such as wheat, or irrigated crops, such as hay. Typically, vegetation on this soil unit consists of non-native annual grasses and herbaceous plant species. The hydric soils list for Sacramento County identifies one unnamed hydric inclusion found within depressions of this soil type.

4.2.2. Topography

The Site exhibits low relief topography with elevations ranging between 170 and 220 feet above MSL. The slopes throughout the Site range from approximately 0 to 8 percent. Moderate rolling

hills and extensive flatlands interspersed with seasonal drainage courses and wetlands typify the topography of the Site.

4.2.3. Regional Hydrology

The Site is located in the Upper Morrison Creek and Laguna Creek Watersheds (Hydrologic Unit Codes: 180201630402 and 180201630403). The Upper Morrison Creek Watershed encompasses approximately 50 square miles. The Laguna Creek Watershed encompasses approximately 45 square miles.

4.2.4. Site-Specific Hydrology

The Site is crossed by an unnamed intermittent drainage that runs northeast to southwest and flows offsite under Rancho Cordova Parkway. Water leaves the Site through the intermittent drainage as well as over land and through small riverine wetlands towards the east and south. Water enters the Site through the intermittent drainage, as well as through seasonal precipitation.

4.3. *Vegetation*

The vegetation assemblages and habitat types occurring on the Site include the following: California annual grassland and disturbed/development habitat.

4.3.1. California Annual Grassland

California annual grassland consists of a myriad of native and non-native annual plant species and occurs in a majority of the state at elevations from sea level to approximately 4,000 feet above MSL. Composition of this vegetation community varies depending on distribution, geographic location and land use. Additional major influences on this vegetation community include soil type, annual precipitation, and fall temperatures.

The plant community covering the majority of the Site is annual grassland, which accounts for 506.07 acres of the Site and is characterized primarily by an assemblage of non-native grasses and forbs. Much of the vegetation in these communities is common to the Central Valley. Dominant grass species consists of Italian rye grass (*Festuca perennis*), rattail sixweeks grass (*Festuca myuros*), soft brome (*Bromus hordeaceus*), and slender wild oat (*Avena fatua*). Common dominant herbaceous non-natives include jointed charlock (*Raphanus raphanistrum*) and field bindweed (*Convolvulus arvensis*).

4.3.2. Disturbed/Developed

Disturbed/developed habitat accounts for 2.45 acres in the Site. This habitat occurs in strictly defined areas consisting of portions of Rancho Cordova Parkway and a dirt roadway entering the Site from Big Meadow Way.

4.4. *Classification of Aquatic Resources*

As discussed previously in **Section 2.0**, aquatic resources are classified into multiple types based on topography, edaphics (soils), vegetation, and hydrologic regime. Primarily, the Corps

establishes two distinctions: wetland and non-wetland waters, which are commonly referred to as other waters.

Wetland types mapped within the Site include the following: depressional seasonal wetland, vernal pool, riverine seasonal wetland. Other waters delineated within the Site include: intermittent drainage, seasonal wet swale, and detention basin outfall. A description of all of the features delineated within the Site is provided in the following sections. Wetland data sheets are included in **Appendix C**.

4.4.1. Depressional Seasonal Wetland

A total of approximately **2.92 acres** of depressional seasonal wetlands have been identified within the Site. Depressional seasonal wetlands exhibit a hydrologic regime dominated by saturation, rather than inundation. Depressional seasonal wetlands were identified in the Site as depressions within the topography with a hydrologic regime dominated by saturation and capable of supporting hydrophytic plant species and hydric soils. Plant species in depressional seasonal wetlands are adapted to withstand short periods of saturation or saturated soils conditions but will not withstand prolonged periods of inundation, as is common in vernal pools. Vegetation observed in seasonal wetlands included: coyote thistle (*Eryngium vaseyi*), rabbitsfoot grass (*Polypogon monspeliensis*), hyssop loosestrife (*Lythrum hyssopifolia*), annual hairgrass (*Deschampsia danthonioides*), and Fremont's goldfields (*Lasthenia fremontii*).

4.4.2. Vernal Pool

A total of **15.04 acres** of vernal pools have been identified within the Site. Vernal pools are shallow, seasonally inundated depressional wetlands that form in soils with a subsurface layer that restricts the downward flow of water. These layers include hardpans, claypans, or thick clay layers. Vernal pools were identified in the Site as depressions within the topography with a hydrologic regime dominated by inundation and capable of supporting hydrophytic plant species and hydric soils. Plant species found within vernal pools are those that require extended periods of inundation and, as such, are commonly associated with these seasonal wetland features. Vegetation observed in the vernal pools onsite included: coyote thistle, Mediterranean barley, and stalked popcornflower (*Plagiobothrys stipitatus*).

4.4.3. Riverine Seasonal Wetland

A total of **1.66 acres** of riverine seasonal wetlands have been identified within the Site. Riverine seasonal wetlands are defined by a hydrologic regime dominated by unidirectional flow of water. Riverine seasonal wetlands typically occur in topographic folds or swales and represent natural drainages that convey sufficient water to support wetland vegetation. Riverine seasonal wetlands typically convey water during and shortly after storm events. Riverine seasonal wetlands may have a moderately defined bed and bank and often exhibit sufficient gradient to convey water. As in depressional seasonal wetlands, plant species found within riverine seasonal wetlands are typically adapted to a hydrologic regime dominated by saturation rather than inundation. Dominant vegetation within the riverine seasonal wetlands includes: coyote thistle, rabbitsfoot grass, hyssop loosestrife, annual hairgrass, and Fremont's goldfields.

4.4.4. Seasonal Wet Swale

The seasonal wet swale accounts for **0.06 acres** of the Site and is located at the center of the southern boundary of the Site. Seasonal wet swales are not considered jurisdictional waterbodies, but do convey and hold water during and after storm events and can exhibit assemblages of wetland vegetation. Dominant vegetation of seasonal wet swales typically consists of grass and other wetland vegetation.

4.4.5. Intermittent Drainage

Intermittent drainages account for **1.54 acres** of the Site. Intermittent drainages are features that may not meet the three-parameter criteria for vegetation, hydrology, and soils, but do convey water and exhibit an OHWM. Water flows within intermittent drainages are fed primarily by precipitation and stormwater runoff. Dominant vegetation within consists of coyote thistle.

4.4.6. Detention Basin Outfall

The detention basin outfall accounts for **0.30 acres** of the Site and is located near the eastern end of the northern border. This detention basin outfall is actively maintained with reinforced large gravel barriers at either end. In addition, there does not appear to be any vegetation within or on the banks of the basin. The detention basin outfall is authorized by Regulatory Permit # 200100252.

5.0 CONCLUSIONS

All aquatic features that may have been impacted by The Ranch were mapped and addressed in a 2014 Preliminary Jurisdictional Determination (SPK-2004-00707), but modifications to the proposed design layout requires a new jurisdictional delineation.

The wetland types mapped within the Site include: depressional seasonal wetlands, vernal pools, and riverine seasonal wetlands. Non-wetland waters that were delineated within the Site include: seasonal wet swale, intermittent drainage, and detention basin outfall. The detention basin outfall is authorized by Regulatory Permit # 200100252. Areas deemed jurisdictional will be subject to the regulatory requirements of the federal Clean Water Act including permitting and mitigation, as required.

Table 1, below, summarizes the acreage per class of aquatic feature found on the Site. Detailed information on each feature is included in **Appendix C**.

TABLE 1 — AQUATIC RESOURCES WITHIN THE SITE

Aquatic Resource Type	Aquatic Resources Classification	Aquatic Resource Size (acres)
Depressional Seasonal Wetland	PEM2B	2.92
Vernal Pool	PEM2C	15.04
Riverine Seasonal Wetland	PEM2B	1.66
Seasonal Wet Swale	R4SB7	0.06
Intermittent Drainage	R4SB	1.54
Detention Basin Outfall	R4SB5	0.30
Total	--	21.53*

*Acreages are calculated to six significant figures and subsequently round to three significant figures. Total acreage is further rounded to two significant figures.

6.0 REFERENCES

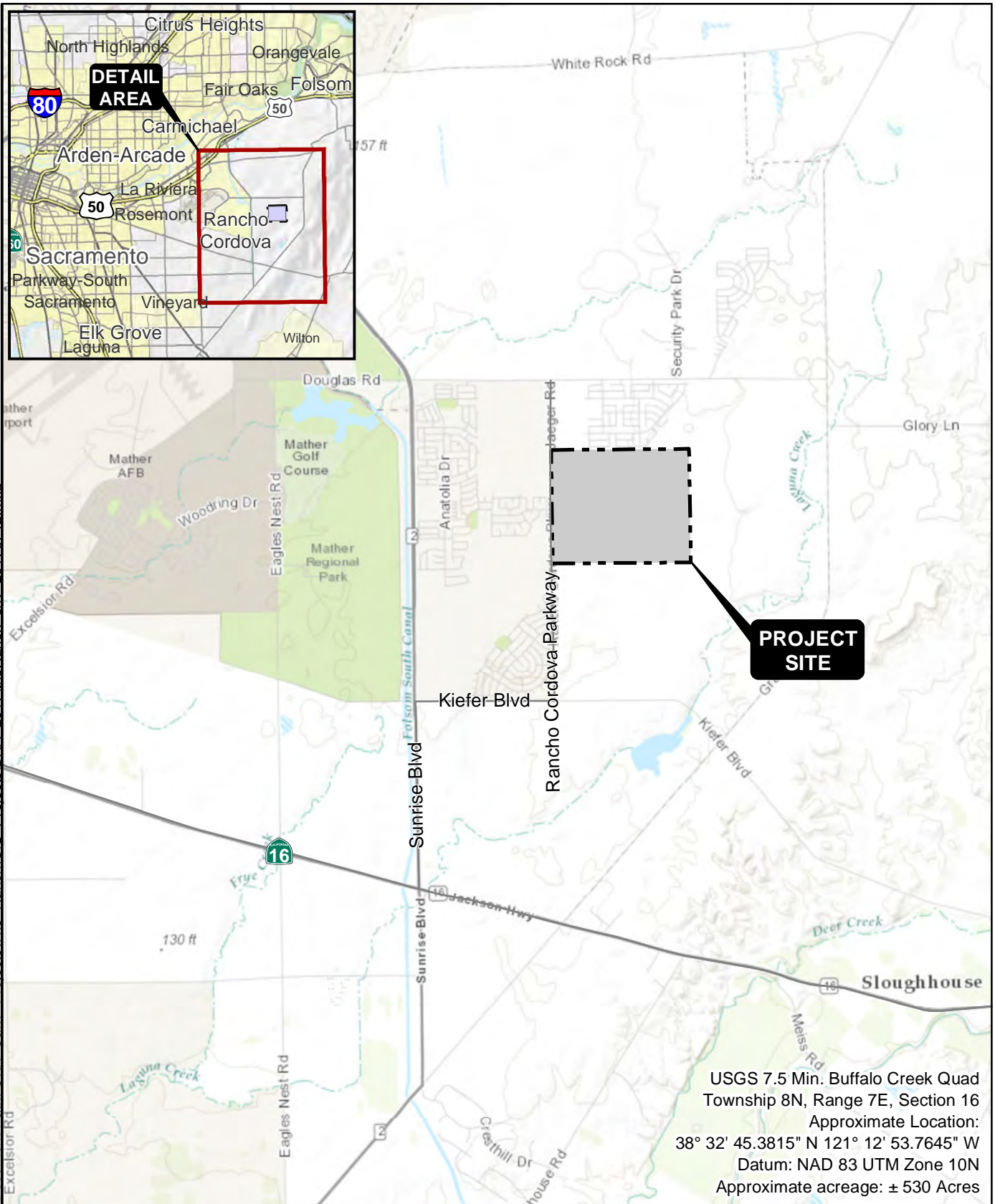
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DRAFT

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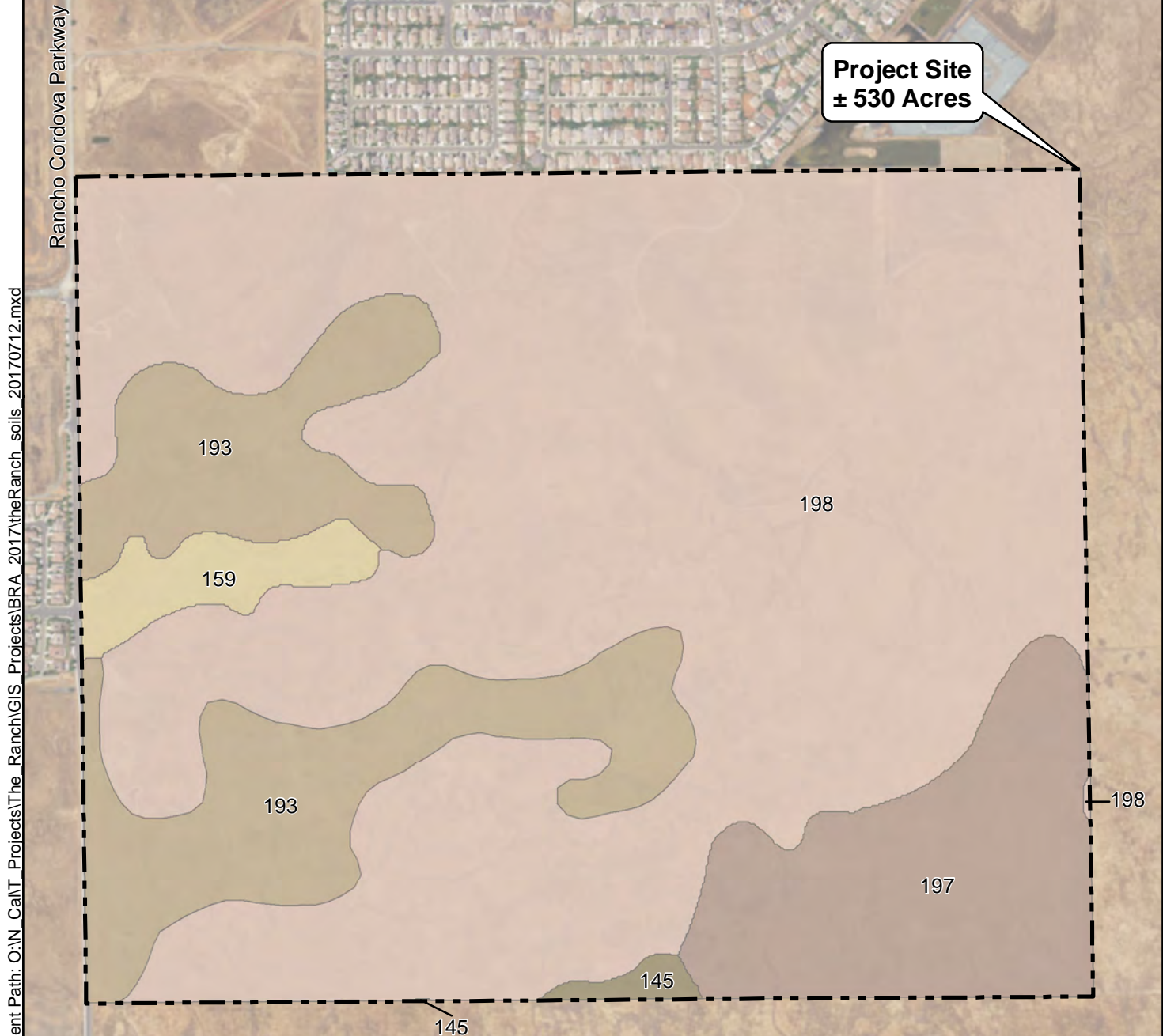
0 0.5 1
 Miles
 1 in = 1 miles

Drawn By: JFI
 QA/QC: AMP
 Date: 07/27/2017

FIGURE 1

Soils

-  198 - REDDING GRAVELLY LOAM, 0 TO 8 PERCENT SLOPES
-  159 - HICKSVILLE GRAVELLY LOAM, 0 TO 2 PERCENT SLOPES, OCCASIONALLY FLOODED
-  197 - REDDING LOAM, 2 TO 8 PERCENT SLOPES
-  145 - FIDDYMENT FINE SANDY LOAM, 1 TO 8 PERCENT SLOPES
-  193 - RED BLUFF-REDDING COMPLEX, 0 TO 5 PERCENT SLOPES

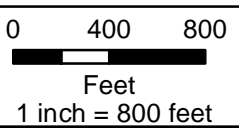


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USDA, Soil Conservation Service, digital soil data derived from SSURGO data, El Dorado County CA, 2010

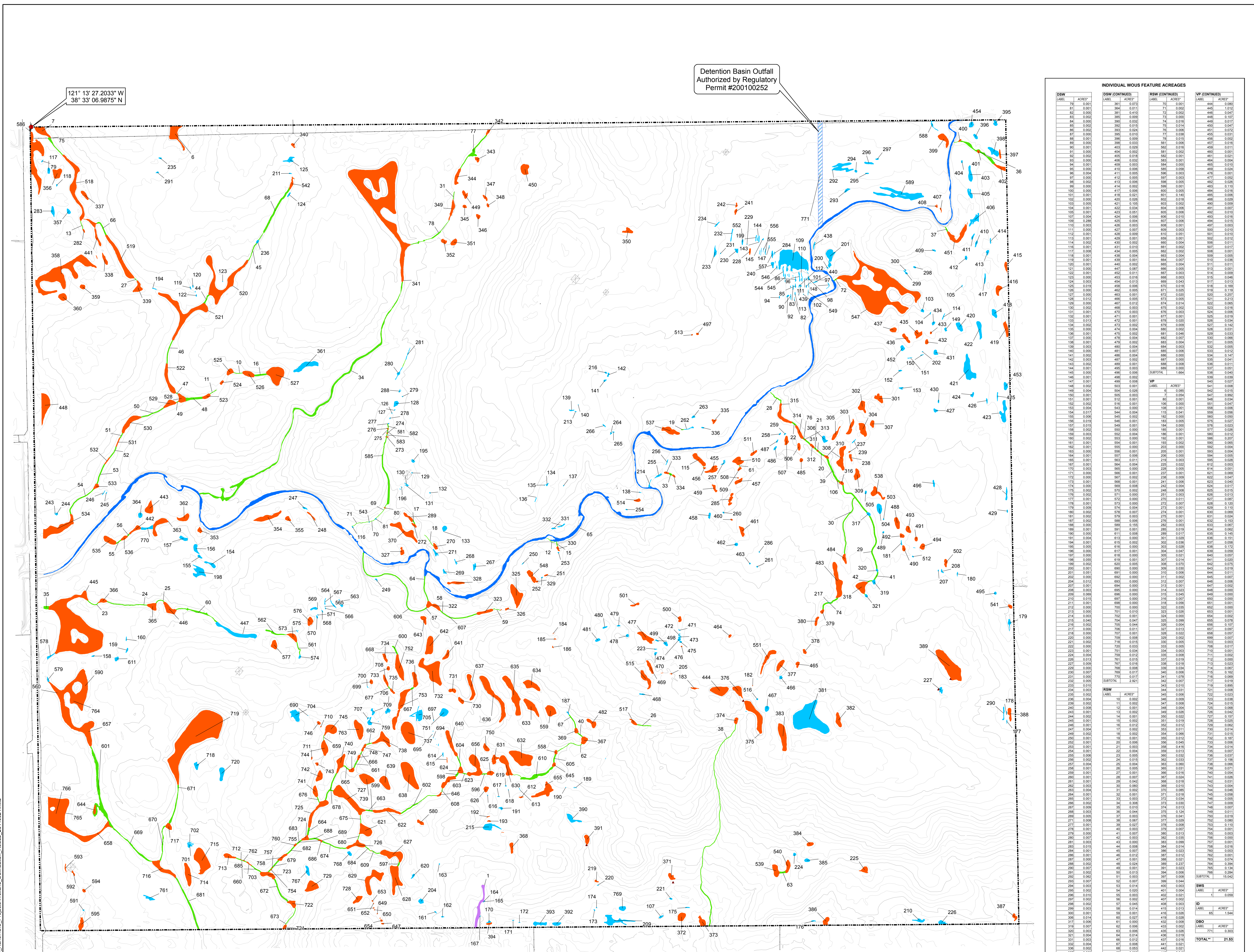
Aerial Imagery Source: NAIP 2014, USDA FSA, ESRI
Aerial Imagery Date: 06/21/2014

SOILS



Drawn By: JFI
QA/QC: AMP
Date: 07/27/2017

FIGURE 2



121° 13' 27.2033" W
38° 33' 06.9875" N

Detention Basin Outfall
Authorized by Regulatory
Permit #200100252

DSW (CONTINUED)		RSW (CONTINUED)		VP (CONTINUED)	
LABEL	ACRES*	LABEL	ACRES*	LABEL	ACRES*
79	0.001	361	0.073	70	0.001
80	0.000	362	0.071	71	0.000
81	0.000	363	0.070	72	0.000
82	0.000	364	0.069	73	0.000
83	0.000	365	0.068	74	0.000
84	0.000	366	0.067	75	0.000
85	0.000	367	0.066	76	0.000
86	0.000	368	0.065	77	0.000
87	0.000	369	0.064	78	0.000
88	0.000	370	0.063	79	0.000
89	0.000	371	0.062	80	0.000
90	0.000	372	0.061	81	0.000
91	0.000	373	0.060	82	0.000
92	0.000	374	0.059	83	0.000
93	0.000	375	0.058	84	0.000
94	0.000	376	0.057	85	0.000
95	0.000	377	0.056	86	0.000
96	0.000	378	0.055	87	0.000
97	0.000	379	0.054	88	0.000
98	0.000	380	0.053	89	0.000
99	0.000	381	0.052	90	0.000
100	0.000	382	0.051	91	0.000
101	0.000	383	0.050	92	0.000
102	0.000	384	0.049	93	0.000
103	0.000	385	0.048	94	0.000
104	0.000	386	0.047	95	0.000
105	0.000	387	0.046	96	0.000
106	0.000	388	0.045	97	0.000
107	0.000	389	0.044	98	0.000
108	0.000	390	0.043	99	0.000
109	0.000	391	0.042	100	0.000
110	0.000	392	0.041	101	0.000
111	0.000	393	0.040	102	0.000
112	0.000	394	0.039	103	0.000
113	0.000	395	0.038	104	0.000
114	0.000	396	0.037	105	0.000
115	0.000	397	0.036	106	0.000
116	0.000	398	0.035	107	0.000
117	0.000	399	0.034	108	0.000
118	0.000	400	0.033	109	0.000
119	0.000	401	0.032	110	0.000
120	0.000	402	0.031	111	0.000
121	0.000	403	0.030	112	0.000
122	0.000	404	0.029	113	0.000
123	0.000	405	0.028	114	0.000
124	0.000	406	0.027	115	0.000
125	0.000	407	0.026	116	0.000
126	0.000	408	0.025	117	0.000
127	0.000	409	0.024	118	0.000
128	0.000	410	0.023	119	0.000
129	0.000	411	0.022	120	0.000
130	0.000	412	0.021	121	0.000
131	0.000	413	0.020	122	0.000
132	0.000	414	0.019	123	0.000
133	0.000	415	0.018	124	0.000
134	0.000	416	0.017	125	0.000
135	0.000	417	0.016	126	0.000
136	0.000	418	0.015	127	0.000
137	0.000	419	0.014	128	0.000
138	0.000	420	0.013	129	0.000
139	0.000	421	0.012	130	0.000
140	0.000	422	0.011	131	0.000
141	0.000	423	0.010	132	0.000
142	0.000	424	0.009	133	0.000
143	0.000	425	0.008	134	0.000
144	0.000	426	0.007	135	0.000
145	0.000	427	0.006	136	0.000
146	0.000	428	0.005	137	0.000
147	0.000	429	0.004	138	0.000
148	0.000	430	0.003	139	0.000
149	0.000	431	0.002	140	0.000
150	0.000	432	0.001	141	0.000
151	0.000	433	0.000	142	0.000
152	0.000	434	0.000	143	0.000
153	0.000	435	0.000	144	0.000
154	0.000	436	0.000	145	0.000
155	0.000	437	0.000	146	0.000
156	0.000	438	0.000	147	0.000
157	0.000	439	0.000	148	0.000
158	0.000	440	0.000	149	0.000
159	0.000	441	0.000	150	0.000
160	0.000	442	0.000	151	0.000
161	0.000	443	0.000	152	0.000
162	0.000	444	0.000	153	0.000
163	0.000	445	0.000	154	0.000
164	0.000	446	0.000	155	0.000
165	0.000	447	0.000	156	0.000
166	0.000	448	0.000	157	0.000
167	0.000	449	0.000	158	0.000
168	0.000	450	0.000	159	0.000
169	0.000	451	0.000	160	0.000
170	0.000	452	0.000	161	0.000
171	0.000	453	0.000	162	0.000
172	0.000	454	0.000	163	0.000
173	0.000	455	0.000	164	0.000
174	0.000	456	0.000	165	0.000
175	0.000	457	0.000	166	0.000
176	0.000	458	0.000	167	0.000
177	0.000	459	0.000	168	0.000
178	0.000	460	0.000	169	0.000
179	0.000	461	0.000	170	0.000
180	0.000	462	0.000	171	0.000
181	0.000	463	0.000	172	0.000
182	0.000	464	0.000	173	0.000
183	0.000	465	0.000	174	0.000
184	0.000	466	0.000	175	0.000
185	0.000	467	0.000	176	0.000
186	0.000	468	0.000	177	0.000
187	0.000	469	0.000	178	0.000
188	0.000	470	0.000	179	0.000
189	0.000	471	0.000	180	0.000
190	0.000	472	0.000	181	0.000
191	0.000	473	0.000	182	0.000
192	0.000	474	0.000	183	0.000
193	0.000	475	0.000	184	0.000
194	0.000	476	0.000	185	0.000
195	0.000	477	0.000	186	0.000
196	0.000	478	0.000	187	0.000
197	0.000	479	0.000	188	0.000
198	0.000	480	0.000	189	0.000
199	0.000	481	0.000	190	0.000
200	0.000	482	0.000	191	0.000
201	0.000	483	0.000	192	0.000
202	0.000	484	0.000	193	0.000
203	0.000	485	0.000	194	0.000
204	0.000	486	0.000	195	0.000
205	0.000	487	0.000	196	0.000
206	0.000	488	0.000	197	0.000
207	0.000	489	0.000	198	0.000
208	0.000	490	0.000	199	0.000
209	0.000	491	0.000	200	0.000
210	0.000	492	0.000	201	0.000
211	0.000	493	0.000	202	0.000
212	0.000	494	0.000	203	0.000
213	0.000	495	0.000	204	0.000
214	0.000	496	0.000	205	0.000
215	0.000	497	0.000	206	0.000
216	0.000	498	0.000	207	0.000
217	0.000	499	0.000	208	0.000
218	0.000	500	0.000	209	0.000
219	0.000	501	0.000	210	0.000
220	0.000	502	0.000	211	0.000
221	0.000	503	0.000	212	0.000
222	0.000	504	0.000	213	0.000
223	0.000	505	0.000	214	0.000
224	0.000	506	0.000	215	0.000
225	0.000	507	0.000	216	0.000
226	0.000	508	0.000	217	0.000
227	0.000	509	0.000	218	0.000
228	0.000	510	0.000	219	0.000
229	0.000	511	0.000	220	0.000
230	0.000	512	0.000	221	0.000
231	0.000	513	0.000	222	0.000
232	0.000	514	0.000	223	0.000
233	0.000	515	0.000	224	0.000
234	0.000	516	0.000	225	0.000
235	0.000	517	0.000	226	0.000
236	0.000	518	0.000	227	0.000
237	0.000	519	0.000	228	0.000
238	0.000	520	0.000	229	0.000
239	0.000	521	0.000	230	0.000
240	0.000	522	0.000	231	0.000
241	0.000	523	0.000	232	0.000
242	0.000	524	0.000	233	0.000
243	0.000	525	0.000	234	0.000
244	0.000	526	0.000	235	0.000
245	0.000	527	0.000	236	0.000
246	0.000	528	0.000	237	0.000
247	0.000	529	0.000	238	0.000
248	0.000	530	0.000	239	0.000
249	0.000	531	0.000	240	0.000
250	0.000	532	0.000	241	0.000
251	0.000	533	0.000	242	0.000
252	0.000	534	0.000	243	0.000
253	0.000	535	0.000	244	0.000
254	0.000	536	0.000	245	0.000
255	0.000	537	0.000	246	0.000
256	0.000	538	0.000	247	0.000
257	0.000	539	0.000	248	0.000
258	0.000	540	0.000	249	0.000
259	0.000	541	0.000	250	0.000
260	0.000	542	0.000	251	0.000
261	0.000	543	0.000	252	0.000
262	0.000	544	0.000	253	0.000
263	0.000	545	0.000	254	0.000
264	0.000	546	0.000	255	0.000
265	0.000	547	0.000	256	0.000
266	0.000	548	0.000	257	0.000
267	0.000	549	0.000	258	0.000
268	0.000	550	0.000	259	0.000
269	0.000	551	0.000	260	0.000
270	0.000	552	0.000	261	0.000
271	0.000	553	0.000	262	0.000
272	0.000	554	0.000	263	0.000
273	0.000	555	0.000	264	0.000
274	0.000	556	0.000	265	0.000
275	0.000	557	0.000	266	0.000
276	0.000	558	0.000	267	0.000
277	0.000	559	0.000	268	0.000
278	0.000	560	0.000	269	0.000
279	0.000	561	0.000	270	0.000
280	0.000	562	0.000	271	0.000
281	0.000	563	0.000	272	0.000
28					

Appendix A — Contact Information and Directions

Client/Agent Contact Information:

Olga Sciorelli
K. Hovnanian Homes
3721 Douglas Boulevard, Suite 150
Roseville, CA 95661
Phone Number: (916) 945-5362
Email: osciorelli@khov.com

Delineation Conducted By:

David Bise (Point of Contact)
Rosie Black
Cristian Singer
Foothill Associates
590 Menlo Drive, Suite 5
Rocklin, CA 95765
Phone Number: (916) 435-1202
Email: dbise@foothill.com

Directions to the Project Site:

From Highway 50 east, take the Zinfandel Drive exit, turn right to stay on Zinfandel Drive, left onto Douglas Road, right onto Sunrise Boulevard, left onto Chrysanthy Boulevard, right on Steccato Drive, left on Appolon Drive, right on Sophistry Drive, left on Pericles Drive, and then left on Rancho Cordova Parkway. Rancho Cordova Parkway is the west boundary of the Project Site. The Project Site can be located within Section 16 of Township 8 North, Range 7 East on the USGS *Buffalo Creek*, California 7.5-minute quadrangle (38°32'45.6"N, 121°12'54.5"W).

**Appendix B — Signed Statement Form Property Owner(s)
Allowing Access**

DRAFT

In the event the U.S. Army Corps of Engineers determined that a site inspection is necessary, I request the USACE to first contact Foothill Associates (Attn: David Bise) at (916) 435-1202 to schedule a date and time to enter the property described in this report. If the property is land-locked, the owner or proponent must obtain permission from the adjacent property owner(s) in order to provide access. I understand that this may delay the USACE's jurisdictional determination and the USACE's issuance of a determination letter.

Signature of Property Owner (s)

Date

Printed Name

Signature of Property Owner (s)

Date

Printed Name

Appendix C — Routine Wetland Determination Data Forms

Data forms provided herein are from the original 2005 delineation. While modifications and additions to jurisdictional features occurred between the original delineation and the 2014 Preliminary Jurisdictional Determination (Regulatory No. SPK-2004-00707), formal data forms were not required and are therefore not included.

DRAFT

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>River West Investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>1</u> Plot ID: <u>N/A</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Trifolium subterraneum (65%)</u>	<u>HERB</u>		9. _____		
2. <u>Deschampsia danthonioides (15%)</u>	<u>HERB</u>	<u>FACW</u>	10. _____		
3. <u>Elatine sp. (5%)</u>	<u>HERB</u>	<u>OBL</u>	11. _____		
4. <u>Poa annua (10%)</u>	<u>HERB</u>	<u>FACW-</u>	12. _____		
5. <u>Ranunculus bonariensis (5%)</u>	<u>HERB</u>	<u>OBL</u>	13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0 %

Remarks: Trifolium subterraneum is not on the list (NL). Dominant vegetation is not hydrophytic.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ <u>N/A</u> (in.) Depth to Free Water in Pit: _____ <u>N/A</u> (in.) Depth to Saturated Soil: _____ <u>10.0</u> (in.)	
Remarks: <u>Wetland hydrology present.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Redding loam, 2-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
1-2	O	N/A	N/A	N/A	N/A
2-12	A	5YR 3/4	10 YR 5/1	comm,med, distinct	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: First 1-2 inches consist of mainly organic matter, root zone with no discernible matrix, etc. Hydric soil indicators not present.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: Does not meet all three parameters; sampling period occurred during the wet season, hydrology unreliable; upland (UPL).	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>River West Investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>2</u> Plot ID: <u>N/A</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Trifolium subterraneum (60%)</u>	<u>HERB</u>		9. _____	_____	_____
2. <u>Hordeum marinum (15%)</u>	<u>HERB</u>	<u>FAC</u>	10. _____	_____	_____
3. <u>Poa annua (10%)</u>	<u>HERB</u>	<u>FACW-</u>	11. _____	_____	_____
4. <u>Elatine sp. (5%)</u>	<u>HERB</u>	<u>OBL</u>	12. _____	_____	_____
5. <u>(Hypochaeris glabra) (10%)</u>	<u>HERB</u>	<u>NI</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0 %

Remarks: Trifolium subterraneum is not on the list (NL). Hydrophytic vegetation not dominant.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ <u>N/A</u> (in.) Depth to Free Water in Pit: _____ <u>N/A</u> (in.) Depth to Saturated Soil: _____ <u>12.0</u> (in.)	
Remarks: <u>Wetland hydrologic indicators present.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Redding loam, 2-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
1-2	O	N/A	N/A	N/A	N/A
2-14	A	5 YR 3/4	10 YR 5/1	comm. lg, distinct	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>Manganese stains, mottling common. Meets criteria.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: <u>Does not all three parameters; sampling period occurred during the wet season, hydrology unreliable; upland (UPL).</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>River West investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>3</u> Plot ID: <u>N/A</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. Trifolium subterraneum (65%)	HERB		9.		
2. Deschampsia danthonioides 10%	HERB	FACW	10.		
3. Poa annua (5%)	HERB	FACW-	11.		
4. Elatine sp. (5%)	HERB	OBL	12.		
5.			13.		
6.			14.		
7.			15.		
8.			16.		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0 %

Remarks: Trifolium subterraneum is not on the list (NL). Dominant vegetation is not hydrophytic.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>N/A</u> (in.) Depth to Free Water in Pit: <u>N/A</u> (in.) Depth to Saturated Soil: <u>N/A</u> (in.)	
Remarks: <u>Moist but not saturated at 12.0 inches. Wetland hydrologic indicators not present. Does not meet criteria.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Redding gravelly loam, 0-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-2	O	N/A	N/A	N/A	gravelly loam w/cobble
1-4	A	7.5 YR 3/4	2.5Y 6/1	comm., lrg, promine	gravelly silt loam
4-12	A	5 YR 3/4	2.5Y 6/1	comm., lrg, promine	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: First 1-2 inches are mix of root zone and cobble, gravel. Cobble up to 2.0" throughout but somewhat smaller at 6"-12" profile. Mottling and manganese up to at least 12.0": Mottle and matrix co-dominate in 1"-4" profile. Does not meet criteria					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: Does not meet all three parameters; upland (UPL).	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>Rive West Investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>DSW</u> Transect ID: <u>4</u> Plot ID: <u>A</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Ranunculus bonariensis (40%)</u>	<u>HERB</u>	<u>OBL</u>	9. <u>other species, 3-5% cover</u>		
2. <u>Hordeum marinum (15%)</u>	<u>HERB</u>	<u>FAC</u>	10. <u>Cordylanthus sp.</u>	<u>HERB</u>	<u>NI</u>
3. <u>Trifolium subterraneum (10%)</u>	<u>HERB</u>	<u>NI</u>	11. <u>Briza minor</u>	<u>HERB</u>	<u>FACW-</u>
4. <u>Poa annua (15%)</u>	<u>HERB</u>	<u>FACW-</u>	12. <u>Juncus bufonius</u>	<u>HERB</u>	<u>FACW+</u>
5. _____	_____	_____	13. <u>Psilocarphus sp.</u>	<u>HERB</u>	<u>OBL</u>
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). **100 %**

Remarks: Hydrophytic vegetation dominant.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ <u>N/A</u> (in.) Depth to Free Water in Pit: _____ <u>N/A</u> (in.) Depth to Saturated Soil: _____ <u>N/A</u> (in.)	
Remarks: <u>Shallow depression; wetland hydrology indicators present.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Redding loam, 2-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
1-12	A	5 YR 3/4	10 YR 5/1	com., med, promine	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>Hydric soil indicators present.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: <u>Meets all three parameters; depressional seasonal wetland (DSW).</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>River West Investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>4</u> Plot ID: <u>B</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Taeniatherum caput-medusae 35%</u>	<u>HERB</u>	<u>NI</u>	9. _____	_____	_____
2. <u>Holcarpha virgata (20%)</u>	<u>HERB</u>	<u>NI</u>	10. _____	_____	_____
3. <u>Bromus hordeaceus (20%)</u>	<u>HERB</u>	<u>FACU-</u>	11. _____	_____	_____
4. <u>Trifolium subterraneum (10%)</u>	<u>HERB</u>	<u>NI</u>	12. _____	_____	_____
5. <u>Hordeum marinum (10%)</u>	<u>HERB</u>	<u>FAC</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-). 0 %

Remarks: NI/FACU vegetation dominant.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ <u>N/A</u> (in.) Depth to Free Water in Pit: _____ <u>N/A</u> (in.) Depth to Saturated Soil: _____ <u>N/A</u> (in.)	Remarks: <u>Wetland hydrology indicators not present.</u>

SOILS

Map Unit Name (Series and Phase): <u>Redding loam, 2-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-12	A	7.5 YR 3/3	N/A	few, fine, faint	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>Concretions are small and hard - relict. Does not meet criteria.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Wetland Hydrology Present? <input type="radio"/> Yes <input checked="" type="radio"/> No Hydric Soils Present? <input type="radio"/> Yes <input checked="" type="radio"/> No	Is this Sampling Point Within a Wetland? <input type="radio"/> Yes <input checked="" type="radio"/> No
Remarks: <u>Does not meet criteria; upland (UPL).</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>River West Investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input checked="" type="radio"/> Yes <input type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>VP</u> Transect ID: <u>5</u> Plot ID: <u>A</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Ranunculus bonariensis (45%)</u>	<u>HERB</u>	<u>OBL</u>	9. _____	_____	_____
2. <u>Eryngium vaseyi (20%)</u>	<u>HERB</u>	<u>FACW</u>	10. _____	_____	_____
3. <u>Glyceria sp. (15%)</u>	<u>HERB</u>	<u>OBL</u>	11. _____	_____	_____
4. <u>Eleocharis macrostachya (10%)</u>	<u>HERB</u>	<u>OBL</u>	12. _____	_____	_____
5. <u>Deschampsia danthonioides (10%)</u>	<u>HERB</u>	<u>FACW</u>	13. _____	_____	_____
6. _____	_____	_____	14. _____	_____	_____
7. _____	_____	_____	15. _____	_____	_____
8. _____	_____	_____	16. _____	_____	_____

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 100 %

Remarks: Hydrophytic vegetation dominant.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input checked="" type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: <u>4.0-7.0</u> (in.) Depth to Free Water in Pit: <u>0.0</u> (in.) Depth to Saturated Soil: <u>0.0</u> (in.)	Remarks: <u>Wetland hydrology indicators present.</u>

SOILS

Map Unit Name (Series and Phase): <u>Redding loam, 2-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-3	A	7.5 YR 4/1	N/A	few,small,faint	silty clay loam
3-12	A	7.5 YR 4/2	2.5 YR 3/6	many, lrg, distinct	silty clay loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input checked="" type="checkbox"/> Gleyed or Low-Chroma Colors		<input checked="" type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input checked="" type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: <u>Many soft, large concretions. Large mottles throughout the 3-12 inch layer. Hydric soil indicators present.</u>					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: <u>Meets all three parameters; vernal pool (VP).</u>	

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: <u>Jaeger 530</u> Applicant/Owner: <u>River West Investments, Inc.</u> Investigator: <u>Cristian Singer</u>	Date: <u>03/24/2004</u> County: <u>Sacramento</u> State: <u>California</u>
Do Normal Circumstances exist on the site? <input checked="" type="radio"/> Yes <input type="radio"/> No Is the site significantly disturbed (Atypical Situation)? <input type="radio"/> Yes <input checked="" type="radio"/> No Is the area a potential Problem Area? <input type="radio"/> Yes <input checked="" type="radio"/> No (If needed, explain on reverse.)	Community ID: <u>UPL</u> Transect ID: <u>5</u> Plot ID: <u>B</u>

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>Trifolium subterraneum (70%)</u>	<u>HERB</u>		9. _____		
2. <u>Taeniatherum caput-medusae 15'</u>	<u>HERB</u>	<u>NI</u>	10. _____		
3. <u>Erodium sp. (10%)</u>	<u>HERB</u>	<u>NI</u>	11. _____		
4. _____			12. _____		
5. _____			13. _____		
6. _____			14. _____		
7. _____			15. _____		
8. _____			16. _____		

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 0 %

Remarks: Trifolium subterraneum is not listed (NL). Vegetation community is dominantly NI.

HYDROLOGY

<input checked="" type="checkbox"/> Recorded Data (Describe in Remarks): <input type="checkbox"/> Stream, Lake, or Tide Gauge <input checked="" type="checkbox"/> Aerial Photographs <input type="checkbox"/> Other <input type="checkbox"/> No Recorded Data Available	Wetland Hydrology Indicators: Primary Indicators: <input type="checkbox"/> Inundated <input checked="" type="checkbox"/> Saturated in Upper 12 Inches <input type="checkbox"/> Water Marks <input type="checkbox"/> Drift Lines <input type="checkbox"/> Sediment Deposits <input type="checkbox"/> Drainage Patterns in Wetlands Secondary Indicators (2 or more required): <input checked="" type="checkbox"/> Oxidized Root Channels in Upper 12 Inches <input type="checkbox"/> Water-Stained Leaves <input type="checkbox"/> Local Soil Survey Data <input type="checkbox"/> FAC-Neutral Test <input type="checkbox"/> Other (Explain in Remarks)
Field Observations: Depth of Surface Water: _____ <u>N/A</u> (in.) Depth to Free Water in Pit: _____ <u>N/A</u> (in.) Depth to Saturated Soil: _____ <u>10.0</u> (in.)	
Remarks: <u>Wetland hydrology indicators present.</u>	

SOILS

Map Unit Name (Series and Phase): <u>Redding loam, 2-8% slopes</u>		Drainage Class: <u>D</u>			
Taxonomy (Subgroup): <u>Abruptic Durixeralfs</u>		Field Observations Confirm Mapped Type? <input checked="" type="radio"/> Yes <input type="radio"/> No			
Profile Description:					
Depth (inches)	Horizon	Matrix Color (Munsell Moist)	Mottle Colors (Munsell Moist)	Mottle Abundance/ Size/Contrast	Texture, Concretions, Structure, etc.
0-10	A	5 YR 4/3	N/A	N/A	silt loam
Hydric Soil Indicators:					
<input type="checkbox"/> Histosol <input type="checkbox"/> Histic Epipedon <input type="checkbox"/> Sulfidic Odor <input type="checkbox"/> Aquic Moisture Regime <input type="checkbox"/> Reducing Conditions <input type="checkbox"/> Gleyed or Low-Chroma Colors		<input type="checkbox"/> Concretions <input type="checkbox"/> High Organic Content in Surface Layer in Sandy Soils <input type="checkbox"/> Organic Streaking in Sandy Soils <input type="checkbox"/> Listed on Local Hydric Soils List <input type="checkbox"/> Listed on National Hydric Soils List <input type="checkbox"/> Other (Explain in Remarks)			
Remarks: Hydric soil indicators not present.					

WETLAND DETERMINATION

Hydrophytic Vegetation Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Wetland Hydrology Present? <input checked="" type="radio"/> Yes <input type="radio"/> No Hydric Soils Present? <input checked="" type="radio"/> Yes <input type="radio"/> No	Is this Sampling Point Within a Wetland? <input checked="" type="radio"/> Yes <input type="radio"/> No
Remarks: Does not meet all three parameters; upland (UPL).	

Appendix D — Aquatic Resources Excel Spreadsheet

Information that would normally be included in the aquatic resources excel spreadsheet can be found in the CD submitted with the associated new Clean Water Act 404 application package.

DRAFT