Wetland Delineation

For

Whitlow Property

Sacramento County, California

April 7, 2006

Prepared for:
Lennar Communities

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

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1.0 INTRODUCTION

1.1 Background

On behalf of Lennar Communities, ECORP Consulting, Inc. (ECORP), has conducted a wetland delineation of the Whitlow Property Project Area (project) located in Sacramento County, California. The 42 ± acre project is a rural residence located in mostly undeveloped lands north of Douglas Road and west of Grant Line Road (Figure 1 – *Project Site and Vicinity Map*). The site corresponds to Section 3 Township 8 North, Range 7 East of the Buffalo Creek, California" 7.5-minute quadrangles (U.S. Department of the Interior Geological Survey).

This report describes the boundaries of wetlands and "other waters of the United States" that occur within the project under jurisdiction of the U.S. Army Corps of Engineers (ACOE) under Section 404 of the Clean Water Act. The information presented in this report provides responses to the data required by the U.S. Army Corps of Engineers Sacramento District's Minimum Standard for Acceptance of Preliminary Wetland Delineations (U.S. Army Corps of Engineers 2001). The waters of the U.S. boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the site, and are subject to modification following the Corps verification process.

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1.2 Existing Site Conditions

The Project is located in the Sacramento Valley, east of the Greater Sacramento Metropolitan Area (see Figure 1). The site is comprised of gently rolling topography, and is situated at elevations ranging from 200 to 240 feet above mean sea level. With the exception of the on

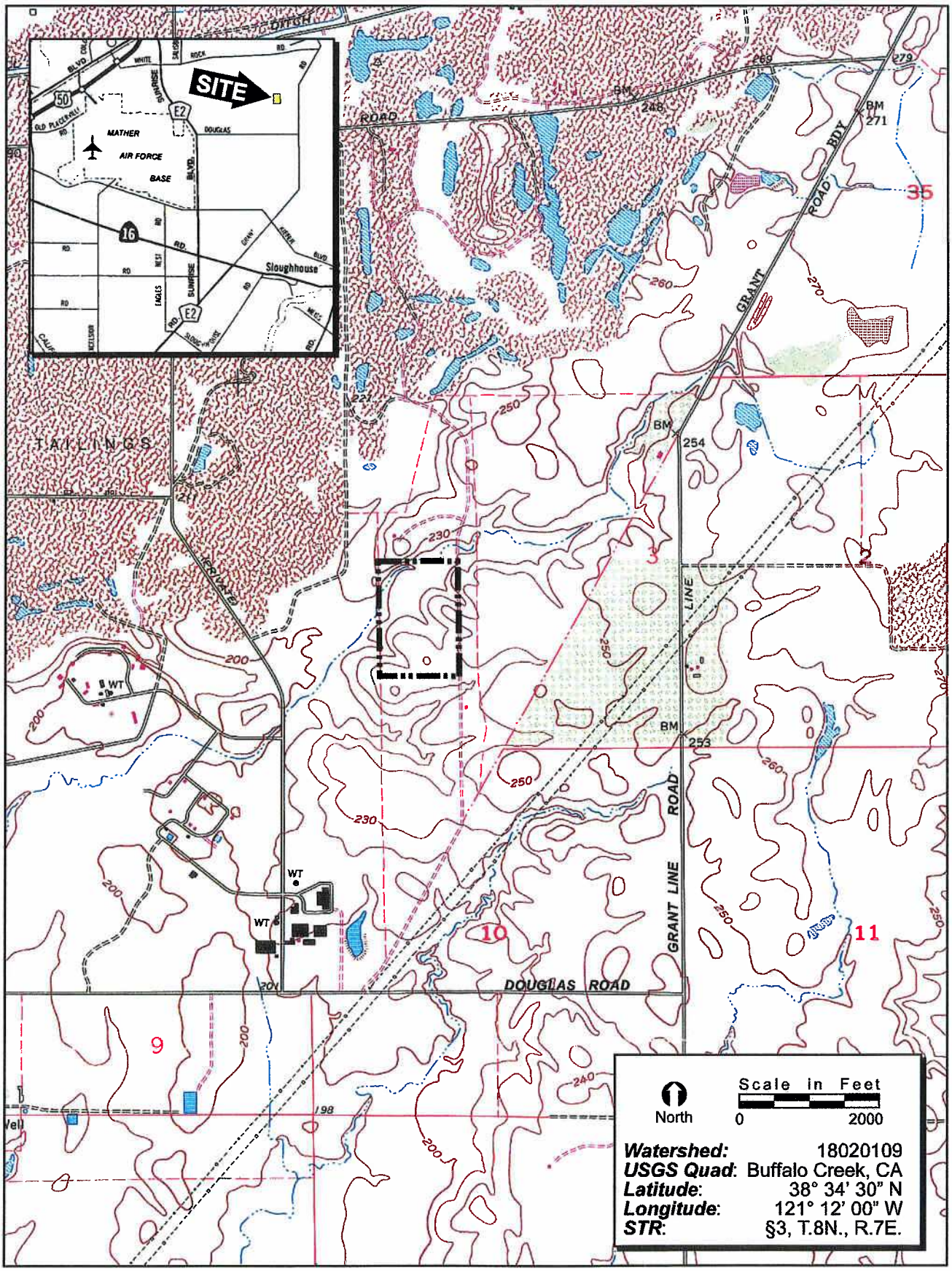

FIGURE 1. Project Site and Vicinity Map

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site residential area, the site can generally be characterized as an annual grassland community that is interspersed with a complex of ephemeral pools and drainage swales. The site also contains a manmade perennial pond. The site has traditionally been used as pastureland, and surrounding land uses include rural residences, developed and undeveloped roadways, pastureland, and areas that have a similar composition of annual grasslands and vernal pools and swales. The drainages that occur on site are considered headwater tributary features to Morrison Creek, which originates in the vicinity of the project area.

A detailed description of the methodologies used for describing the project's wetland areas is presented below (Section 2.0), and the results of the wetland determination are presented in Section 5.0.

2.0 METHODS

This wetland delineation was conducted in accordance with the Corps of Engineers Wetlands Delineation Manual (Environmental laboratory 1987). The Corps jurisdictional boundaries were delineated through aerial photography interpretation and standard field methodologies (i.e., paired data set analyses), and all wetland data were collected on Routine Wetland Determination Forms (Appendix A – *Routine Wetland Delineation Forms*). A color aerial photograph (1"=200' scale, Airphoto 2002) was utilized to assist with mapping and ground-truthing. A Munsell Soil Color Chart (Kollmorgen Instruments Corp. 1990) and the Sacramento County Soil Survey Report and map (United States Department of Agriculture 1980) was used to aid in identifying hydric soils in the field, and the Jepson Manual (Hickman 1993) was used for plant identification.

Field wetland surveys were conducted by ECORP's wetland biologist Tom Scofield on September 23, 27, 29 and October 6, 2004, and included walking the entire property to determine the location of potential jurisdictional boundaries within the property. Six locations were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported a determination of jurisdictional or non-jurisdictional. At each location, the paired set of data points was located, such that one point was within the estimated jurisdictional area, and the other was outside the limits of the estimated jurisdictional area. The total area and linear distance of the jurisdictional

wetlands and other waters within the property were recorded in the field using a post-processing capable global positioning satellite (GPS) unit with sub-meter accuracy (Trimble Pro XR-TSCE Data Collector).

3.0 WATERS OF THE UNITED STATES

This report describes waters of the United States that may be regulated by the Corps under Section 404 of the Clean Water Act. Wetlands are "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" [33 CFR 328.3(b), 51 FR 41250, November 13, 1986]. Wetlands can be perennial or intermittent, and isolated or adjacent to other waters.

Other waters are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses [33 CFR 328.3(a), 51 FR 41250, November 13, 1986]. The limit of Corps jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the "ordinary high water mark" (OHWM). The OHWM is defined as the "*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*" [33 CFR 328.3(e), 51 FR 41250, November 13, 1986]. The bank-to-bank extent of the channel that contains the water-flow during a normal rainfall year generally serves as a good first approximation of the lateral limit of Corps jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

4.0 ROUTINE DETERMINATIONS

To be determined a wetland; the following three parameters should be present:

- A majority of dominant vegetation species are wetland associated species;

- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

4.1 Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "a prevalence of vegetation typically adapted for life in saturated soil conditions." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The "50/20 rule" was used to determine the dominant plant species at each data point location. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of abundance and cumulatively totaled) that immediately exceed 50 percent of the total dominance measure for the stratum, plus any additional species that individually comprise 20 percent or more of the total dominance measure for the stratum.

Dominant plant species observed at each data point were then classified according to their indicator status (probability of occurrence in wetlands) (Table 1), in accordance with the U.S. Fish and Wildlife Service's (USFWS) National List of Vascular Plant Species That Occur in Wetlands: California (Region 0) (Reed 1988). If the majority (greater than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC) (excluding FAC-), then the site is considered to by dominated by hydrophytic vegetation.

Table 1 – Classification of Wetland-Associated Plant Species[1]

Plant Species Classification	Abbreviation[2]	Probability of Occurring in Wetland
Obligate	OBL	>99%
Facultative Wetland	FACW	66-99%
Facultative	FAC	33-66%
Facultative Upland	FACU	1-33%
Upland	UPL	<1%
No indicator status	NI	Insufficient information to determine status
Plants That Are Not Listed (assumed upland species)	NL	Does not occur in wetlands in any region.

[1] Source: Reed 1988

[2] A '+' or '–' symbol can be added to the classification to indicate greater or lesser probability, respectively, of occurrence in a wetland.

4.2 Soils

A hydric soil is defined as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (USDA-NRCS 2003). Indicators that a hydric soil is present include soil color (gleyed soils and soils with bright mottles and/or low matrix chroma), aquic or preaquic moisture regime, reducing soil conditions, sulfidic material (odor), soils listed on hydric soils list, iron and manganese concretions, organic soils (Histosols), histic epipedon, high organic content in surface layer in sandy soils, and organic streaking in sandy soils.

A soil pit was excavated to a depth of 16 inches or refusal at each data point. The soil was then examined for hydric soil indicators. The matrix color and mottle color (if present) of the soil was determined using the Munsell Soil Color Charts.

4.3 Hydrology

Wetlands, by definition, are seasonally inundated or saturated at or near (within 12 inches of) the soil surface. To be classified as a wetland, a site should have at least one primary indicator or two secondary indicators of wetland hydrology. Primary indicators of wetland hydrology may include, but are not limited to: water marks, drift lines, sediment deposition, drainage patterns, visual observation of saturated soils, and visual observation of inundation. In addition to the primary indicators, there are a variety of secondary wetland hydrology indicators. Secondary indicators include, but are not limited to: oxidized root channels in the upper 12 inches, water-

stained leaves, and local soil survey data. When no primary indicators of wetland hydrology are observed at a data point, two or more secondary indicators are required to confirm wetland hydrology.

5.0 RESULTS

A total of 4.422 acres of wetlands and other Waters of the U.S. were delineated on the property. These include 1.223 acres of vernal pools, 1.139 acres of seasonal wetland swale, 0.002-acre of seasonal wetland, and 2.058 acres of "other waters" (Table 2). The acreage of "other waters" within the project is primarily associated with the manmade pond, but also includes two ephemeral drainages with defined bed and banks. The results are presented below, and a detailed map of the jurisdictional boundaries within the project are presented in Figure 2 and Appendix B.

Table 2 – Wetland Types and Acreages

Wetland Type	Acreage
Wetlands	
Vernal pool	1.223
Seasonal wetland swale	1.139
Seasonal wetland	0.002
Other Waters	
Pond	1.914
Ephemeral drainage	0.144
Total:	**4.422**

5.1 Vegetation

The primary vegetation community within the project area is annual grassland with interspersed seasonal wetland pools and swales (vernal pools and seasonal wetland swales). The annual grassland community is principally comprised of non-native naturalized grass species including ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), wild oats (*Avena* sp.), mouse barley (*Hordeum murinum*), and ryegrass (*Lolium multiflorum*). Other non-native herbaceous species in this community include sticky tarweed (*Holocarpha virgata*), vinegar weed (*Trichostema lanceolatum*) and common tarweed (*Hemizonia pungens*). Within the project, annual grassland occurs in all non-jurisdictional areas, with the exception of ruderal disturbed

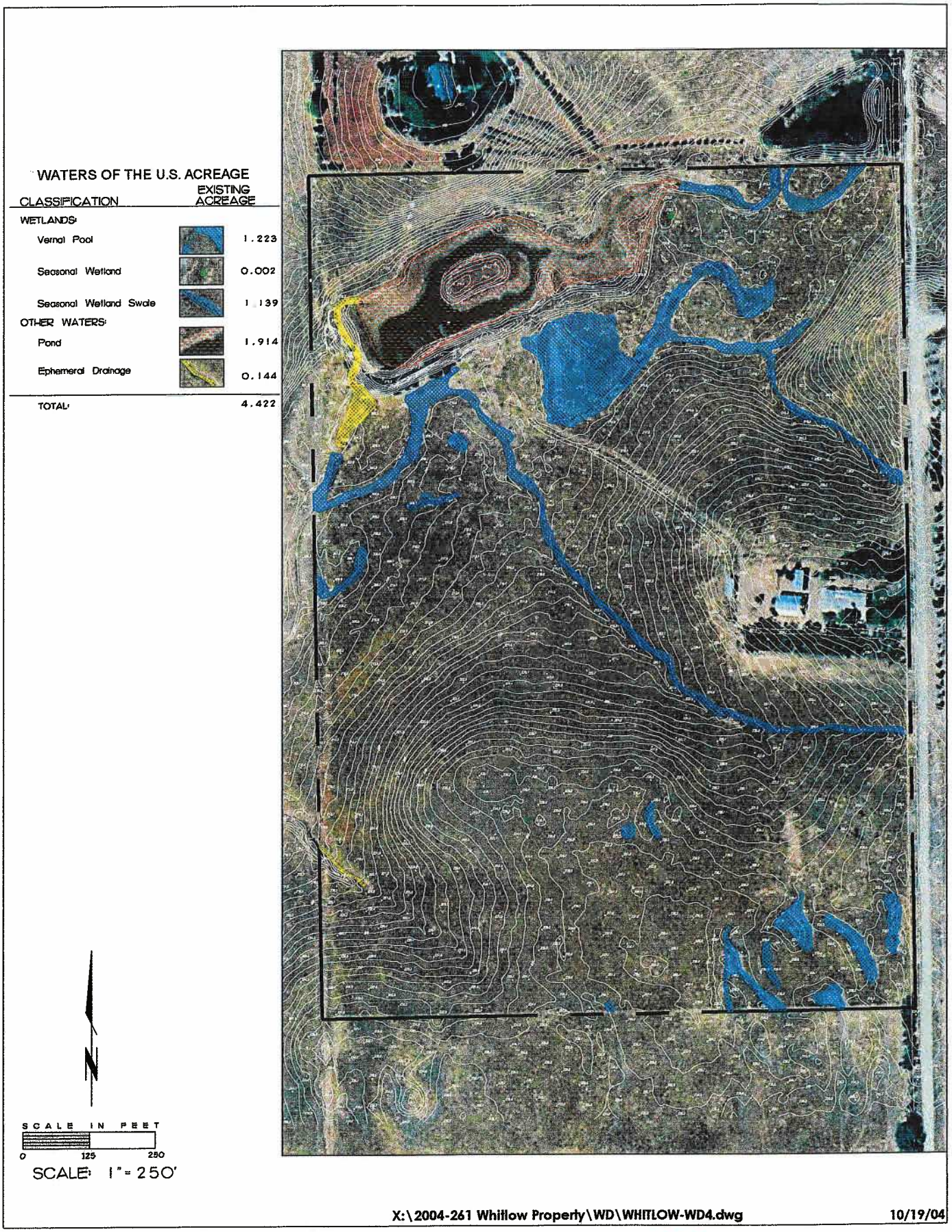

FIGURE 2. Wetland Delineation

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areas associated with the project's rural residence and associated structures (i.e., storage sheds). Additionally, several medium sized eucalyptus trees occur near the rural residence and around the perimeter of the manmade pond.

Wetland vegetation within the project area occurs within the project's vernal pools and seasonal wetland swales, a manmade pond, seasonal wet depressions, and in other drainages found on site (see Figure 2, Appendix B). The plant species observed within vernal pools, seasonal wetland swales, and other seasonally wet areas were predominantly native annual species that include species such as Hyssop loosestrife (*Lythrum hyssopifolium*), Carter's buttercup (*Ranunculus bonariensis*), dwarf-wooly marbles (*Psilocarphus brevissimus*), swamp grass (*Crypsis schoenoides*), and creeping spikerush (*Eleocharis macrostachya*).

Emergent marsh vegetation likely occurs along the fringes of the manmade pond during normal water cycles. No emergent wetland vegetation, however, was observed along the pond during the field survey. This is likely a result of low and rapidly decreasing water levels that have left the pond mostly dry. Vegetation within the dry portions of the pond is comprised of a mix of wetland and upland plant species such as creeping spikerush, swamp grass, soft chess, little quaking grass (*Briza minor*), and Bermuda grass.

Two small drainages with defined bed and banks (see "other waters" Figure 2, Appendix B) were observed on site. Of these two, the northern drainage (which is the overflow channel for the manmade pond) supports some sparse wetland vegetation including creeping spikerush, ryegreass, and curly dock (*Rumex crispis*).

5.2 Hydrology

A variety of hydrologic/hydraulic features occur within the project area including low-lying vernal pools, seasonal wetland swales, and seasonal wet area, a manmade pond, and other drainage features (see Figure 2, Appendix B). The sites drainage features are headwater tributaries of Morrison Creek (blue line ephemeral watercourse within the project area). Although on site and surrounding land uses (e.g., roadways, rural residences, gravel mining, manmade ponds, and agriculture) have likely altered the natural hydrological conditions in the

vicinity, the project remains relatively undisturbed. The hydrological sources include overland surface flow in the form of precipitation runoff that collects in the projects drainage features and low-lying areas and run-off from adjacent properties and upstream drainages that enter the site.

5.3 Soils

The predominant soil series that occur within the project boundaries (Figure 3 – *Natural Resources Conservation Service Soil Types*) include Hicksville gravelly loam (0-2% slopes) and Red Bluff – Redding complex (2-5% slopes). According to the Sacramento County Soil Survey (USDA 1993), the Hicksville gravelly loam is an occasionally flooded soil type that occurs on slopes ranging from 0-2 percent between the elevations of 75 – 230 feet. This deep soil is found on low stream terraces, and is moderately to well-drained. The Red Bluff – Redding complex is a deep well-drained soil that occurs on high terraces at elevations ranging from 90 – 310 feet. Two additional soil types occur in the northwest corner of the project including Red Bluff loam (2-5%) and Redding gravelly loam (0-8%). Both of these soils are well drained and occur on high terraces. No wetlands within the project occur on these soil types.

All the soils observed at the wetland study point sample locations (1, 3, and 5) had soil reduction characteristics (e.g., mottles) indicative of wetland soils. Thus, soils at each of the wetland study point locations stay saturated at, or near, the surface long enough to support the existing wetland.

6.0 CONCLUSIONS

Potentially jurisdictional waters of the U.S. mapped on-site include wetlands (2.364-acres) and other waters (2.058-acres). Wetlands within the project area occur within the larger grassland community and consist of seasonally wet areas located in vernal pools, seasonal wetland swales, and other seasonally wet areas. The seasonal wetland swales on site are broad gently sloping drainages that, in some areas, connect vernal pool depressions. Most of the projects seasonal wetland swales share similar physiological traits to the vernal pools (depth, vegetation, hydrology, and soil).

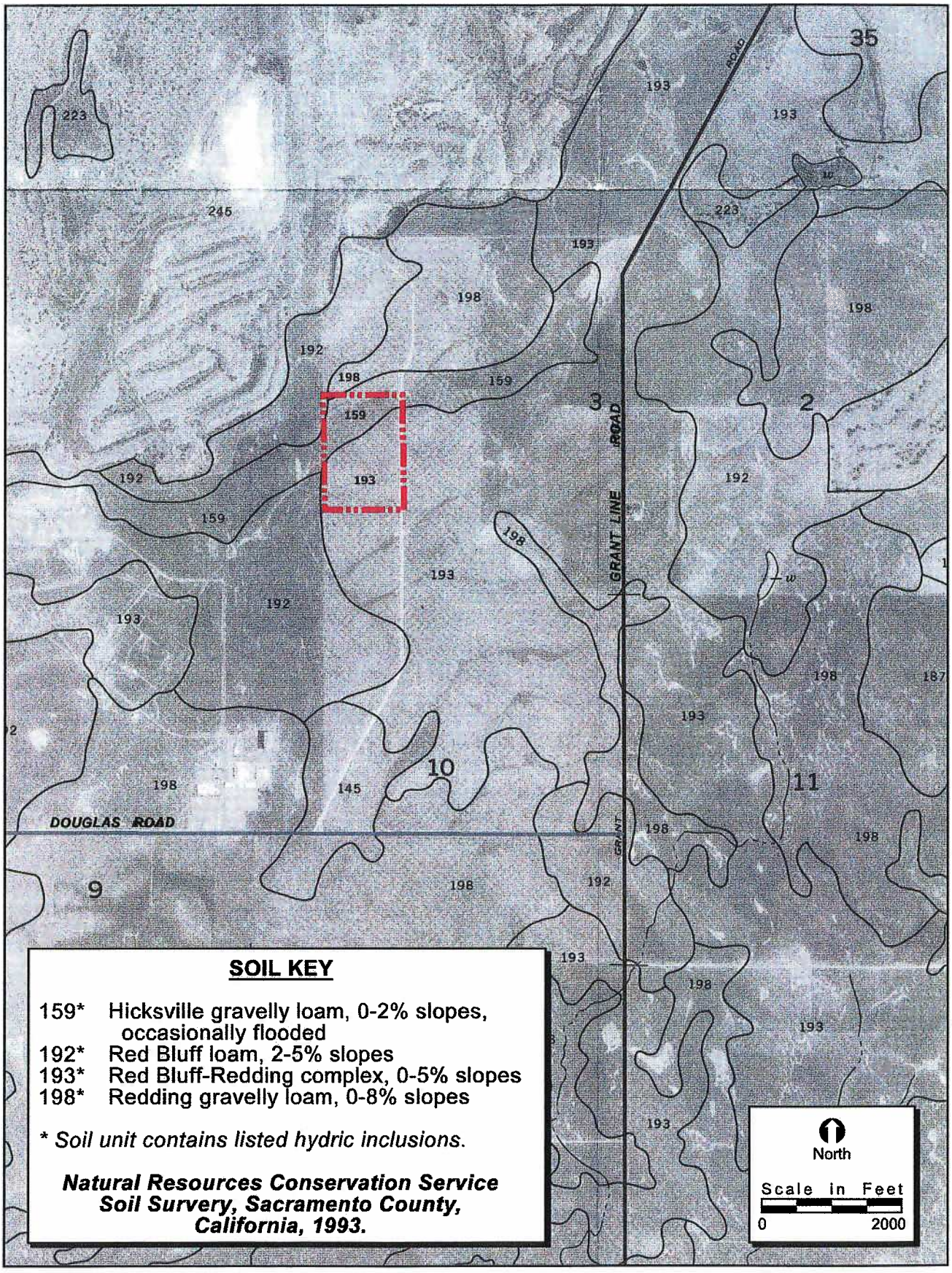

FIGURE 3. Natural Resources Conservation Service Soil Types

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The vernal pools are generally isolated topographic basins. Both vernal pools and seasonal wetland swales share an impermeable or semi-permeable soil layer that stays inundated during the wet season and dries out by late spring.

Other seasonal wet areas on site occur in low-lying depressions, but do not pond water long enough to be considered vernal pool habitat. Other waters include the bank-to-bank extent of two small ephemeral drainage channels found within the project area and a large manmade ephemeral pond.

Overland flows within the project congregate within the seasonal wetlands and spills into Morrison Creek, ultimately reaching the Sacramento River (considered a navigable water of the U.S.). Thus, the water on site should be considered connected with and/or adjacent to a Waters of a U.S. and would therefore be connected with interstate and/or foreign commerce.

5.0 REFERENCES

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LIST OF APPENDICES

APPENDIX A

Routine Wetland Determination Forms

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ROUTINE WETLAND DELINEATION

Project/Site: Whitlow Property Date: 9/27/04 Sample Point: 1

Applicant/Owner: Whitlow Family Field Investigator(s): T. Scofield

County: Sacramento State: CA Plant Community: VNAG / Vernal

Quad(s): Buffalo Creek Section/Township/Range: S 3, T. 8N., R 7E.

Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain:

Atypical Situation? Yes ☐ No ☒ Explain:

Is this a potential Problem Area? Yes ☐ No ☒ Explain:

VEGETATION — HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) Crypsis sch	OBL	H	80	5)			
2) Ranunculus ban.	OBL	H	10	6)			
3) Psilocarpus brev.	OBL	H	5	7)			
4) Trichostema lan.	N/L	H	5	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 3/4 = 75 %

Comments: Large vernal pool

HYDROLOGY — WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☐ If yes,

Depth of surface water: _____ (in.) Depth to free water in pit: _____ (in.) Depth to saturated soil: _____ (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other

Comments: Vernal pool

SOILS — HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Drainage Class:

Taxonomy [Subgroup]: Confirm Map Type: Yes ☐ No ☐

☐ Histosol ☐ Histic Epipedon ☐ Sufidic Odor ☐ Aquic Moisture Regime ☒ Reducing Conditions ☒ Gleyed/Low Chroma Colors ☐ Concretions

☐ High Organic Content in Surface Layer in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-1	A	10YR 4/2	7.5YR 4/5	Few - med	Silty loam
1-6"	B	10YR 4/2	7.5YR 4/5	Many - med	Clay loam w/ cobble

Comments:

DECISION * — WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale:

General comments:

Wetland Type:

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ROUTINE WETLAND DELINEATION

Project/Site: Whitlow Property Date: 1/2-3/04 Sample Point: ZN

Applicant/Owner: Whitlow Family Field Investigator(s): T. Scofield

County: SAC State: CA Plant Community: NVAG

Quad(s): Buffalo Creek Section/Township/Range: S 3, T. 8N, R 7E.

Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain:

Atypical Situation? Yes ☐ No ☒ Explain:

Is this a potential Problem Area? Yes ☐ No ☒ Explain:

EGETATION — HYDROPHYTIC VEGETATION? Yes ☐ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) Lolium mult.	FAC	H	30	5)			
2) Bromus hord.	FACU	H	25	6)			
3) Bromus dian.	NI	H	25	7)			
4) Tae cap med.	N/L	H	20	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/4 = 25 %

Comments: upland area, atypical VP

HYDROLOGY — WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☐ If yes,

Depth of surface water: _____ (in.) Depth to free water in pit: _____ (in.) Depth to saturated soil: _____ (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other

Comments: ABNC H_2O mark of vernal pool

OILS — HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Drainage Class:

Taxonomy [Subgroup]: Confirm Map Type: Yes ☐ No ☒

☐ Histosol ☐ Histic Epipedon ☐ Sufidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma Colors ☐ Concretions

☐ High Organic Content in Surface Layer in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes ☐ No ☒

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-6"	A	10YR 3/3	~	~	sandy loam

Comments:

ECISION * — WETLAND / WATERS DETERMINATION? Yes ☐ No ☐

Rationale:

eneral comments:

Wetland Type:

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ROUTINE WETLAND DELINEATION

Project/Site: Whitlaw Property Date: 9/27/04 Sample Point: 3

Applicant/Owner: T. Scofield Field Investigator(s): T. Scofield

County: SAC State: CA Plant Community: Vernal swale in NWAE

Quad(s): Buffalo Creek Section/Township/Range: S 3, T.8N., R 7E.

Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain:

Atypical Situation? Yes ☐ No ☒ Explain:

Is this a potential Problem Area? Yes ☐ No ☒ Explain:

EGETATION — HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) Eleoch. mac	OBL	H	60	5) Hemizonia p.	FAC	H	5
2) Lolium mult	FAC	H	25	6)			
3) Ran sun.	OBL	H	5	7)			
4) Trichostema l.	U/L	H	5	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 4/5 = 80 %

Comments: Wet veg in vernal swale

HYDROLOGY — WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☐ If yes,

Depth of surface water: _____ (in.) Depth to free water in pit: _____ (in.) Depth to saturated soil: _____ (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☒ Water Marks ☒ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other

Comments: Vernal swale

SOILS — HYDRIC SOILS? Yes ☒ No ☐

Series/Phase: Drainage Class:

Taxonomy [Subgroup]: Confirm Map Type: Yes ☐ No ☐

☐ Histosol ☐ Histic Epipedon ☐ Sufidic Odor ☐ Aquic Moisture Regime ☒ Reducing Conditions ☐ Gleyed/Low Chroma Colors ☐ Concretions

☐ High Organic Content in Surface Layer in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0 - 6"	A	10YR 3/3	10YR 5/5	med./many	gravelly - loam

Comments:

DECISION * — WETLAND / WATERS DETERMINATION? Yes ☒ No ☐

Rationale:

General comments:

Wetland Type:

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ROUTINE WETLAND DELINEATION

Project/Site: Whitlow Property Date: 9/27/04 Sample Point: 4N

Applicant/Owner: Whitlow Family Field Investigator(s): T. Scofield

County: SAC State: CA Plant Community: NNAG/ Vernal swale

Quad(s): Buffalo Creek Section/Township/Range: S 3, T. 8N., R 7E.

Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain:

Atypical Situation? Yes ☐ No ☒ Explain:

Is this a potential Problem Area? Yes ☐ No ☒ Explain:

VEGETATION — HYDROPHYTIC VEGETATION? Yes ☐ No ☒

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) Tac cal. mon	N/L	H	40	5)			
2) Bromus hord	FACU	H	30	6)			
3) Br diandrus	NI	H	30	7)			
4)				8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 0/3 = 0 %

Comments: upland veg.

HYDROLOGY — WETLAND HYDROLOGY? Yes ☐ No ☒

Recorded Data: Yes ☐ No ☐ If yes,

Depth of surface water: _____ (in.) Depth to free water in pit: _____ (in.) Depth to saturated soil: _____ (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other

Comments: outside vernal swale / upland

SOILS — HYDRIC SOILS? Yes ☐ No ☒

Series/Phase: Drainage Class:

Taxonomy [Subgroup]: Confirm Map Type: Yes ☐ No ☐

☐ Histosol ☐ Histic Epipedon ☐ Sufidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma Colors ☐ Concretions

High Organic Content in Surface Layer in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-6"	A	10YR 3/3	n/a	n/a	gravelly loam

Comments:

DECISION* — WETLAND / WATERS DETERMINATION? Yes ☐ No ☒

Rationale:

General comments:

Wetland Type:

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ROUTINE WETLAND DELINEATION

Project/Site: Whitlow Property Date: 9/27/04 Sample Point: S

Applicant/Owner: Whitlow Family Field Investigator(s): T Scofield

County: SAC State: CA Plant Community: VNG/VP

Quad(s): Buffalo Creek Section/Township/Range: S 3, T. 8N., R 7E.

Do normal environmental conditions exist site? Yes ☒ No ☐ If no, explain:

Atypical Situation? Yes ☐ No ☒ Explain:

Is this a potential Problem Area? Yes ☐ No ☒ Explain:

VEGETATION — HYDROPHYTIC VEGETATION? Yes ☒ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) Psilocarpus bre.	OBL	H	25	5)			
2) Ranunculus bon.	OBL	H	25	6)			
3) Hekizonia pu.	FAC	H	25	7)			
4) Lythrum hy.	FACW	H	25	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 4/4 = 100 %

Comments: Vernal pool

HYDROLOGY — WETLAND HYDROLOGY? Yes ☒ No ☐

Recorded Data: Yes ☐ No ☐ If yes,

Depth of surface water: _____ (in.) Depth to free water in pit: _____ (in.) Depth to saturated soil: _____ (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☒ Water Marks ☐ Drift Lines ☒ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☒ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other

Comments: H2O-mulch - deep VP

SOILS — HYDRIC SOILS? Yes ☐ No ☐

Series/Phase: Drainage Class:

Taxonomy [Subgroup]: Confirm Map Type: Yes ☐ No ☐

☐ Histosol ☐ Histic Epipedon ☐ Sufidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma Colors ☐ Concretions

High Organic Content in Surface Layer in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-6"	A	10YR 4/3	10YR 5/6	Few - sm	gravelly loam

Comments:

DECISION * — WETLAND / WATERS DETERMINATION? Yes ☐ No ☐

Rationale:

General comments:

Wetland Type:

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ENVIRONMENTAL CONSULTANTS

ROUTINE WETLAND DELINEATION

Project/Site: Whitlow Property Date: 9/27/04 Sample Point: UN

Applicant/Owner: WHITLOW FAMILY Field Investigator(s): T. Scofield

County: SAC State: CA Plant Community: NVAG

Quad(s): Buffalo Creek Section/Township/Range: S 3, T.8N., R 7E.

Do normal environmental conditions exist site? Yes ☐ No ☐ If no, explain:

Atypical Situation? Yes ☐ No ☐ Explain:

Is this a potential Problem Area? Yes ☐ No ☐ Explain:

VEGETATION — HYDROPHYTIC VEGETATION? Yes ☐ No ☐

Dominant Species	Ind. Status	Stratum	Rel. % Cover	Dominant Species	Ind. Status	Stratum	Rel. % Cover
1) Hord mar.	FAC	H	20	5)			
2) Bromus hord.	FACU	H	40	6)			
3) Tae. cap mad.	N/L	H	20	7)			
4) Hellenphy vir.	N/L	H	20	8)			

Percentage of dominant species that are OBL, FACW, and/or FAC [excluding FAC-]: 1/4 = 25 %

Comments: not dominated by wet veg

HYDROLOGY — WETLAND HYDROLOGY? Yes ☐ No ☐

Recorded Data: Yes ☐ No ☐ If yes,

Depth of surface water: _____ (in.) Depth to free water in pit: _____ (in.) Depth to saturated soil: _____ (in.)

Primary Indicators: ☐ Inundated ☐ Saturated in Upper 12 in. ☐ Water Marks ☐ Drift Lines ☐ Sediment Deposits ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more required):

☐ Oxidized Root Channels in Upper 12 in. ☐ Water-stained Leaves ☐ Local Soil Survey Data ☐ FAC-Neutral Test ☐ Other

Comments: outside VP

SOILS — HYDRIC SOILS? Yes ☐ No ☐

Series/Phase: Drainage Class:

Taxonomy [Subgroup]: Confirm Map Type: Yes ☐ No ☐

☐ Histosol ☐ Histic Epipedon ☐ Sufidic Odor ☐ Aquic Moisture Regime ☐ Reducing Conditions ☐ Gleyed/Low Chroma Colors ☐ Concretions

☐ High Organic Content in Surface Layer in Sandy Soils ☐ Organic Streaking in Sandy Soils ☐ Listed on Hydric Soils List ☐ Other

Inclusions [Series/Phase]: On Hydric Soils List: Yes ☐ No ☐

Depth (in.)	Horizon	Matrix Color	Mottle Color	Mottle (Abund/Contrast/Size)	Texture, Concretions, Structure
0-8"	A	7.5YR 4/4 (RADDISH)	—	—	cemented - gravelly loam

Comments:

DECISION* — WETLAND / WATERS DETERMINATION? Yes ☐ No ☐

Rationale:

General comments:

Wetland Type:

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APPENDIX B

Jurisdictional Boundaries Within the Project Area

Exhibit Has Been Omitted Due
To Its Large Size

The Omitted Exhibit Is Available For
Review at the Following Address:

Rancho Cordova City Hall
2729 Prospect Park Drive
Rancho Cordova, CA 95670

Please Contact the Planning Department At
916-851-8750 to Arrange an Appointment
to View the Exhibit