UAIC TRIBAL SCHOOL PROJECT

Aquatic Resources Delineation Report

Prepared for
United Auburn Indian Community (UAIC)

April 2017

ESA

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Aquatic Resources Delineation Report

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CHAPTER 1
Introduction

This report has been prepared to document the results and conclusions of an aquatic resources delineation field survey conducted for the United Auburn Indian Community (UAIC) Tribal School (Project) study area in March 2017. The study area includes approximately 42.8 acres of land located in an unincorporated area of Placer County, California (**Figures 1** through **3**), adjacent to the Town of Loomis. On behalf of the UAIC, Environmental Science Associates (ESA) investigated the extent of potentially jurisdictional wetlands and other waters of the United States (U.S.) subject to regulation under Section 404 of the Clean Water Act (CWA).

The study concludes that there are 1.311 acres of potentially jurisdictional waters of the U.S in the study area. These include:

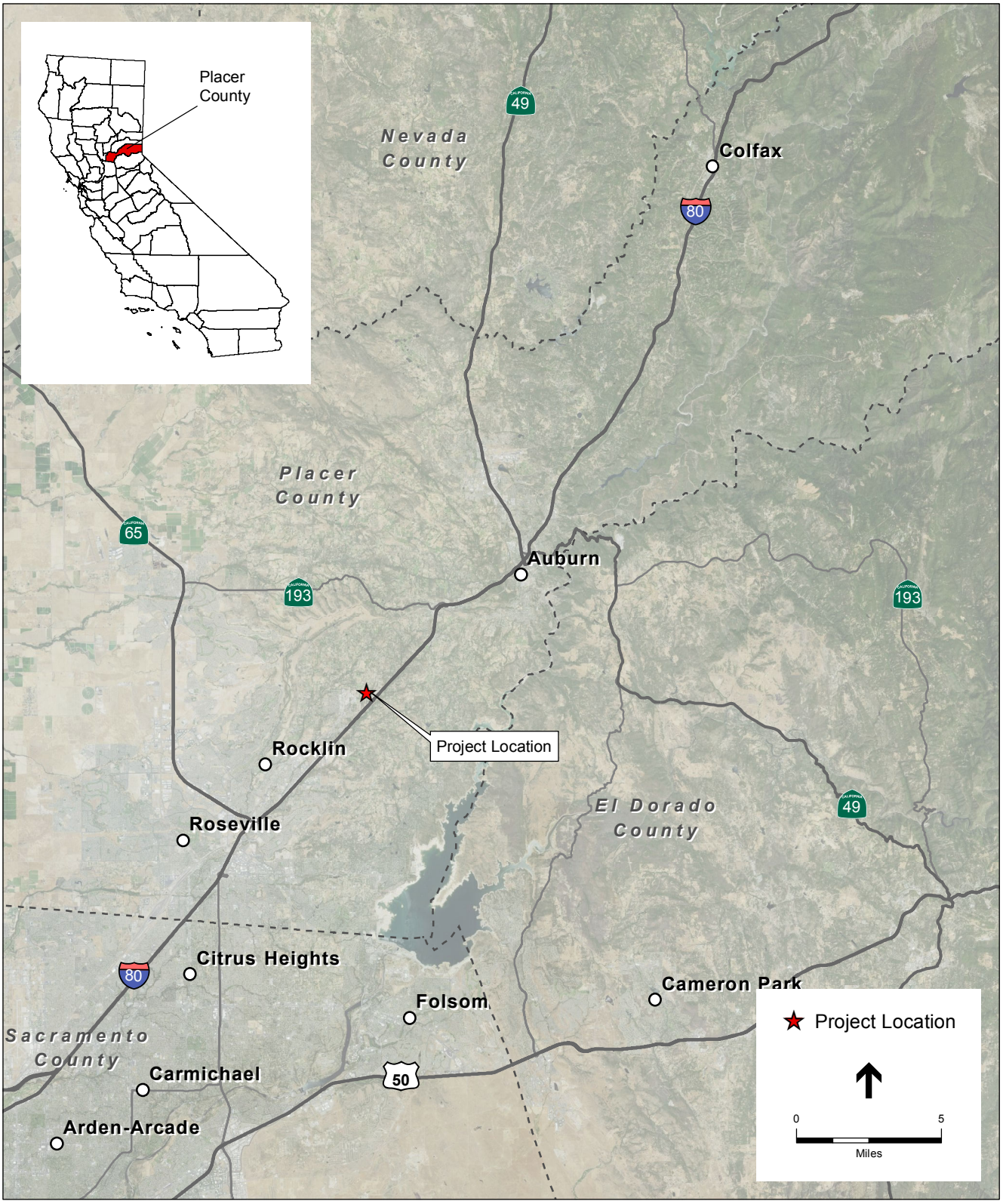
- 0.061 acre of seasonal wetland;
- 0.173 acre of ephemeral drainage; and
- 1.077 acres of pond.

This report documents the wetland and other waters of the U.S. boundary delineation using field data and the best professional judgment of ESA investigators. All conclusions presented should be considered preliminary and subject to change pending official review and verification in writing by the U.S. Army Corps of Engineers (USACE).

1.1 Responsible Parties

The property owner and applicant is:

Brian Guth, Interim Tribal Administrator
United Auburn Indian Community
10720 Indian Hill Road
Auburn, CA 95603
(530) 883-2375
bguth@auburnrancheria.com



SOURCE: NAIP, 2014; ESRI, 2012; ESA, 2016

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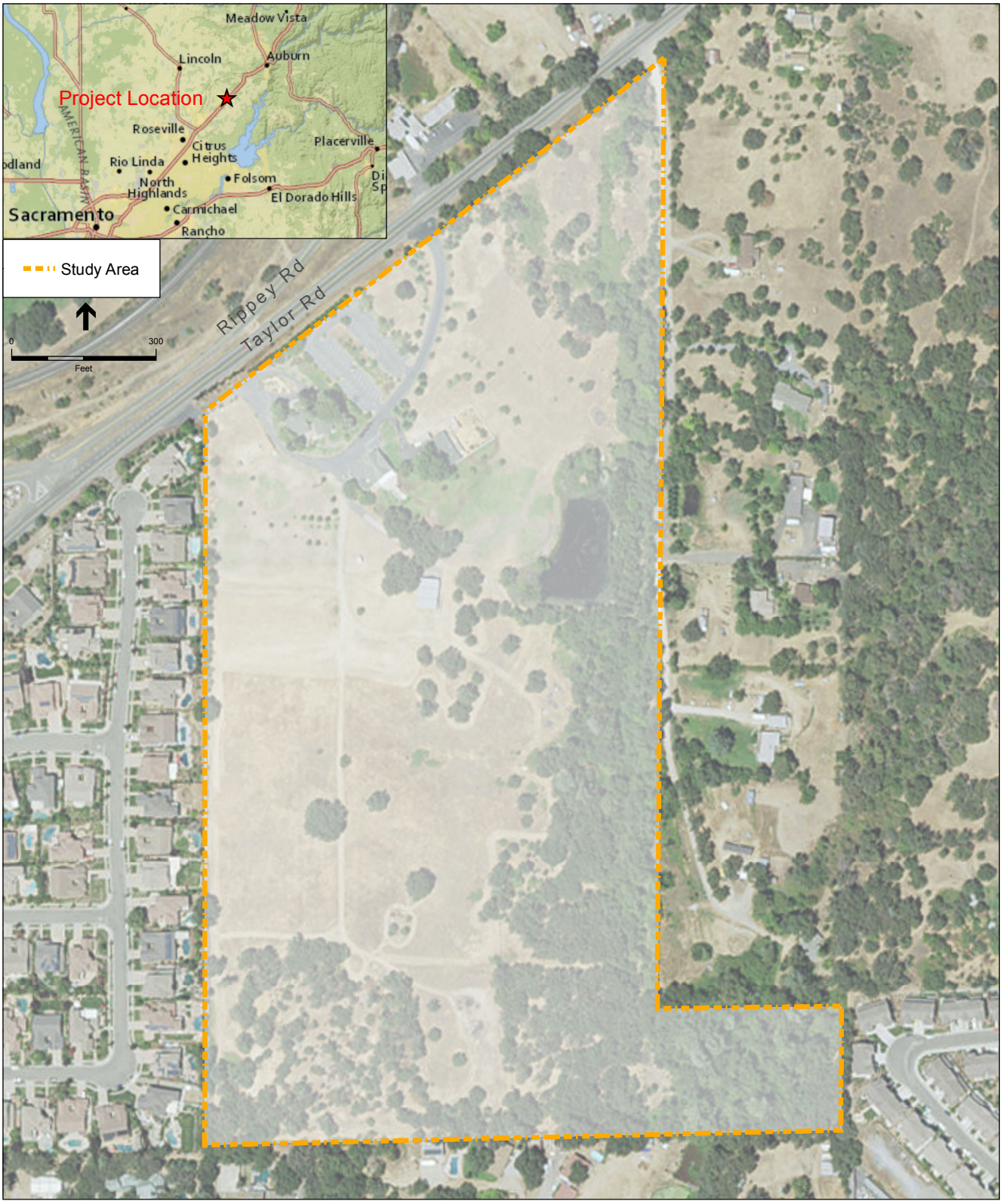
Figure 1
Project Location



SOURCE: ESA, 2016

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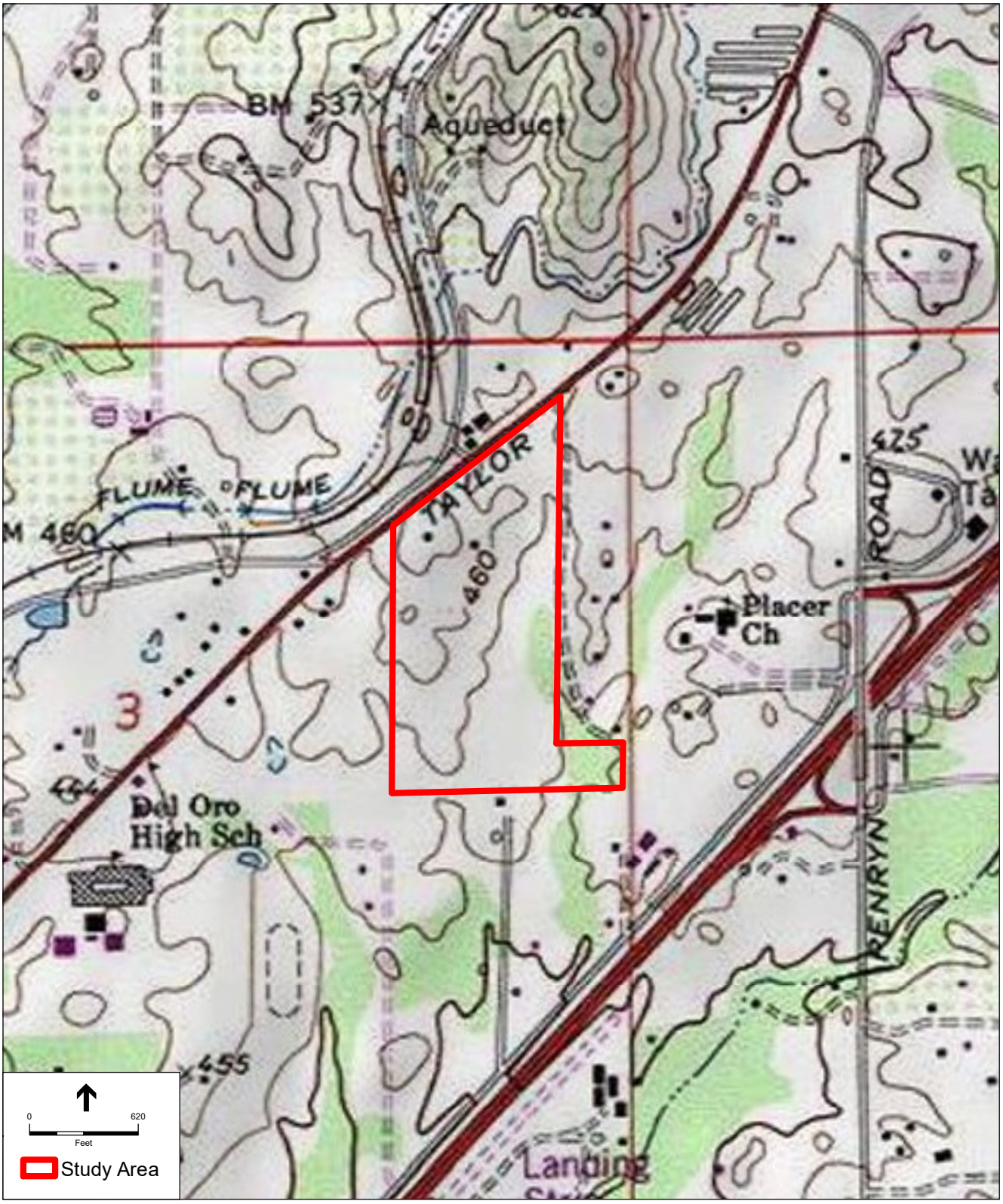
Figure 2

Study Area



SOURCE: USGS

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Figure 3

Study Area

Rocklin Quadrangle Topographic Map: Township 11N; Range 07E; Sections 3

The point of contact for regulatory permitting is:

Joshua Boldt, Senior Technical Associate
Environmental Science Associates
2600 Capitol Avenue, Suite 200
Sacramento, CA 95816
(916) 564-4500
jboldt@esassoc.com

1.2 Directions to Site

Directions to the site from Sacramento:

- Take I-80 E
- Take exit 112 for Penryn Road
- Turn left onto Penryn Road
- Turn left onto Taylor Road for 0.6 miles. Arrive at 3141 Taylor Road.

1.3 Purpose

The purpose of this investigation is to describe and delineate all potential wetlands and other waters of the U.S. within the study area that may be subject to Section 404 of the Clean Water Act. Information from this report may be used in preparing permit applications for future actions proposed in the study area. This report is intended to be reviewed by the USACE to verify their jurisdiction over wetlands and other waters of the U.S. in the study area.

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CHAPTER 2
Setting

2.1 Study Area

As described above, the study area is located in an unincorporated area of Placer County, California, adjacent to the Town of Loomis. The study area's Assessor Parcel Number (APN) is 043-013-010, and it is located south of Taylor Road, west of Tumble Lane, north of Interstate 80, and east of Orchard Park Court. This location corresponds to Section 3 of Township 11 North, Range 7 East of the Rocklin, California U.S. Geological Survey (USGS) 7.5-minute series quadrangle. The approximate centroid of the study area is 38º 50' 06.17" North, 121º 10' 34.81" West. The study area is approximately 42.8 acres in size.

The study area lies just beyond the easternmost reach of the Great Valley and is located within the lowest elevations of the Sierra Nevada Foothills. Regional natural plant communities surrounding the study area include those that are prevalent to the lower Sierra Nevada Foothills such as mixed oak/foothill pine woodlands and annual grasslands. Elevations with the study area range from 420 feet in the southeast to 495 feet in the northwest. The climate is temperate with mean annual precipitation of 34.39 inches and mean annual temperatures ranging from a high of 72.4 to a low of 48.3 degrees Fahrenheit (Western Regional Climate Center, 2017). The wetland delineation was conducted within the study area by ESA biologist Joshua Boldt on March 9, 2017. According to the National Weather Service, daily temperatures for that date ranged from a low of 46 to a high of 74 degrees Fahrenheit. 0.16 inches of rain had fallen in the Sacramento area the previous seven days. The most recent significant rainfall event in the area prior to the site visit occurred on February 20, 2017, when 1.69 inches of rain fell (National Weather Service, 2017).

Land use immediately surrounding the study area is characterized by low to medium density residential. The northern portion of the study area is developed with various buildings, parking areas, and roads. The property appears to have first been developed in 1906 as a home and orchard. By 1966 the orchard was mostly gone and the property was primarily undeveloped land. By 1984, the current buildings on the property, as well as the large pond, were developed. The property was used as a bed and breakfast until 2008. A dirt road allows access to the southern portion of the study area. Topography throughout the study area is gently sloped, with drainage generally flowing to the south and east.

2.2 Soils

The *Custom Soil Resource Report for Placer County, California, Western Part* (NRCS, 2017a; included as **Appendix A**) and the soil map for the study area (**Figure 4**) shows two soil units

occurring within the study area (**Table 1**). Both of the soil units present within the study area are listed on the national hydric soils list for Placer County, California (NRCS, 2017b). A brief description of each soil unit is provided below.

- **Andregg Coarse Sandy Loam, 2 to 9 percent slopes.** This soil unit occurs on hills with parent material comprised of residuum weathered from granite. This is a well-drained soil with a low available water storage comprised of about 3.5 inches. The typical profile is comprised of coarse sandy loam from 0 to 29 inches and weathered bedrock from 29 to 33 inches. The hydric soils list for Placer County identifies an unnamed component found in drainageways of this soil type as hydric (NRCS, 2017b).
- **Xerothents, Placer Areas.** This soil unit has a parent material comprised of mine spoil or earthy fill. This is a well-drained soil with a low available water storage comprised of about 3.5 inches. The typical profile is variable from 0 to 60 inches. The hydric soils list for Placer County identifies an unnamed component found in drainageways of this soil type as hydric (NRCS, 2017b).

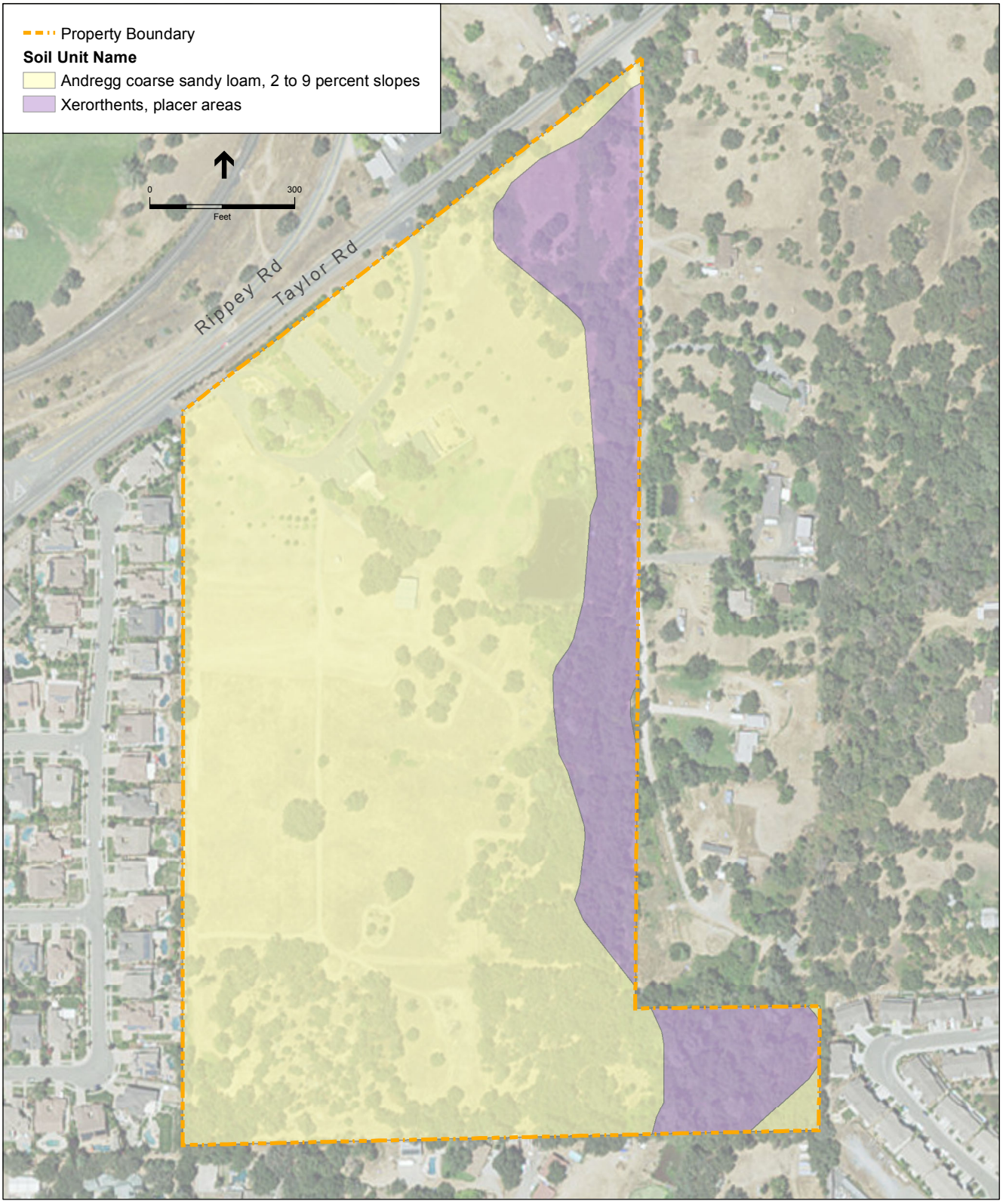
TABLE 1.
STUDY AREA SOIL UNITS

Soil Map Unit Name	Hydric Status	Landforms
106: Anderson coarse sandy loam, 2 to 9 percent slopes	Non-hydric component with hydric inclusions	Drainageways
197: Xerothents, placer areas	Non-hydric component with hydric inclusions	Drainageways

SOURCE: NRCS, 2017a,b

2.3 Hydrology

Topography throughout the study area is gently sloped, generally draining south and east. A large pond is located along the eastern boundary of the site, and a smaller pond is found in the southeast corner of the study area. Both of these ponds appear to be man-made. Drainage of the study area occurs through surface channels, surface sheet flow, and percolation. Irrigation water from adjacent properties to the west drain to the southwestern portion of the study area, and then drains to a closed depressional area on private property south of the study area, where surface flows likely infiltrate into the ground. The northern and eastern part of the study area receives flows from parcels north of the study area, which eventually drains south and east to an unnamed channel that flows parallel to the eastern boundary of the study area. Eventually this unnamed channel flows south under Interstate 80 to Secret Ravine Creek, a perennial channel, approximately 0.4 mile south of the study area. Secret Ravine Creek flows southwest to Dry Creek, which eventually drains to the Natomas East Main Drainage Canal. This canal drains to the Sacramento River just north of its confluence with the American River near downtown Sacramento. The Sacramento River is considered a traditional navigable water of the United States (TNW) from its mouth to Keswick Dam north of Redding. Potentially jurisdictional features in the study area have a surface hydrological connection to the Sacramento River.



SOURCE: NRCS, 2016; ESA, 2016

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Figure 4

Soil Types

2.4 Vegetation/Habitat Types

Vegetation communities are assemblages of plant species that occur together in the same area and are defined by species composition and relative abundance. The vegetation community classification presented herein is based on field observations and the Placer County Wildlife Habitat Relationships Classification of Habitat and Land Cover Types in the Phase I Natural Conservation Plan/Habitat Conservation Plan Planning Areas (Placer County Planning Department, 2004). The following habitat types occur within the study area: annual grassland, interior live oak, valley foothill riparian, urban, lacustrine, seasonal wetland, riverine, and drainage ditch.

Annual Grassland

Annual grassland is the largest habitat type within the study area. Dominant vegetation within this habitat type includes slender wild oat (*Avena barbata*), soft chess (*Bromus hordaceous*), ripgut grass (*Bromus. diandrus*), barleys (*Hordeum* spp.), rat-tail fescue (*Festuca myuros*), soap plant (*Chlorogalum pomeridium* var. *pomeridium*), winter vetch (*Vicia villosa*), and broadleaf filaree (*Erodium botrys*). Isolated interior live oak (*Quercus wislizeni*), valley oak (*Quercus lobata*), and ornamental landscape trees occur within the annual grassland.

Interior Live Oak

Interior live oak occurs within the northeastern and southern portions of the study area. The dominant species in the overstory is interior live oak, with valley oak, blue oak (*Quercus douglasii*), and California buckeye (*Aesculus californicus*) interspersed throughout. Dominant understory vegetation includes Himalayan blackberry (*Rubus armeniacus*), western poison oak (*Toxicodendron diversilobum*), soft chess, rip-gut brome, and wild oat.

Valley Foothill Riparian

Valley foothill riparian occurs in association with an ephemeral channel in the eastern portion of the study area. Dominant overstory vegetation includes Fremont cottonwood (*Populus fremontii* subsp. *fremontii*), willow (*Salix* sp.), and big-leaf maple (*Acer macrophyllum*). Dominant understory vegetation includes Himalayan blackberry, western poison oak, California wild grape (*Vitis californica*), and annual grasses.

Urban

Urban areas occur within the northwestern portion of the study area. Urban areas include a residential dwelling and associated outbuilding, graded driveways, and ornamental landscaping. Ornamental landscape trees include coast redwood (*Sequoia sempervirens*), ornamental cedar (*Cedrus* sp.), white mulberry (*Morus alba*), citrus (*Citrus* sp.), and plum (*Pyrus* sp.).

Lacustrine

Lacustrine ponds occur within two areas of the study area: along the eastern boundary and in the southeast corner. Dominant vegetation within the lacustrine ponds includes broadleaf cattail

(*Typha latifolia*), duckweed (*Lemna* sp.) and Himalayan blackberry. Dominant vegetation along the banks of the lacustrine ponds includes those identified under the valley foothill riparian habitat type.

Seasonal Wetland

Seasonal wetlands are freshwater wetlands that support ponded or saturated soil conditions during winter and spring and are mostly dry through the summer and fall. Vegetation is characterized by both annual and perennial species including native and non-native grasses and forbs. Plant species found within seasonal wetlands are adapted to withstand short periods of inundation. Seasonal wetland plants typically initiate growth as aquatic or semi-aquatic plants and transition to a dry-land environment as the wetland dries. Seasonal wetlands are colonized by low-growing, hardy perennials that tolerate disturbance and annuals that tolerate seasonal soil saturation. Upland grasses and forbs often establish after wetland species desiccate and features become dry. Within the study area, five small seasonal wetlands occur in topographic micro-depressions in the southern section of the study area, surrounded by non-native annual grasslands or interior live oak woodland. Associated wetland plant species identified within these features include Italian rye grass (*Festuca perennis*), Lemmon's canary grass (*Phalaris lemmonii*), iris leaved rush (*Juncus xiphioides*), umbrella sedge (*Cyperus eragrostis*), curly dock (*Rumex crispus*), miner's lettuce (*Claytonia perfoliata* subsp. *perfoliata*), and spiny-fruit buttercup (*Ranunculus muricatus*).

Riverine

Riverine drainages occur in the eastern portion of the study area. Dominant vegetation along the banks of the riverine drainages includes those identified within the valley foothill riparian or interior live oak habitat types.

Drainage Ditch/Drainage Swale

Two small man-made drainage ditches occur in the southwestern corner of the study area. These ditches drain adjacent residential properties. The upper ditch eventually flows to a seasonal wetland, and the lower ditch flows out of the seasonal wetland to a culvert along the southern boundary of the study area. This culvert drains south off the site to a closed depressional area on private property south of the study area, where surface flows likely infiltrate into the ground. These ditches are unvegetated and dirt lined. An additional drainage swale occurs within the urban area and drains the parking lot and roadways. This drainage swale is a manmade cobble-lined feature that lacks vegetation.

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CHAPTER 3
Methodology

3.1 Regulatory Setting

The federal government defines "Waters of the United States" in 33 CFR (Code of Federal Regulations) 328.3 as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purpose by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under the definition;
5. Tributaries of the above waters;
6. The territorial seas;
7. Wetlands adjacent to the above waters (other than waters that are themselves wetlands). Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 123.11(m) which also meet the criteria of this definition) are not waters of the United States.
8. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the U.S. Environmental Protection Agency (EPA).

The term "wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Under normal

circumstances, the definition of wetlands requires three wetland identification parameters be present: wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands may include freshwater marsh, seasonal wetlands, and vernal pool complexes that are adjacent to perennial waters of the U.S.

"Other waters of the U.S." refers to those hydric features that are regulated by the CWA but are not wetlands (33 CFR 328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high water mark. The term "ordinary high water mark" refers to that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. Examples of other waters of the U.S. may include rivers, creeks, ponds, and lakes.

In January 2001, the U.S. Supreme Court issued a decision in the case of the *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* that altered the USACE regulatory authority over wetlands that are isolated from navigable waters.[1] On June 5, 2007, the EPA and the USACE released guidance on the definitions of jurisdictional waters of the U.S. in response to *Rapanos v. United States* and *Carabell v. United States*. According to this guidance the USACE and the EPA will take jurisdiction over the following waters:

1. Traditional navigable waters, which is defined as all waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. Wetlands adjacent to traditional navigable waters; including adjacent wetlands that do not have a continuous surface connection to traditional navigable waters;
3. Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months);
4. Wetlands adjacent to non-navigable tributaries as defined above; that have a continuous surface connection to such tributaries (e.g. they are not separated by uplands, a berm, dike, or similar feature).

The EPA and the USACE decide jurisdiction over the following waters, based on a fact-specific analysis to determine if there is a significant nexus, as defined below, to a traditional navigable water (TNW):

1. Non-navigable tributaries that are not relatively permanent;

[1] Since the SWANCC decision, waters covered solely by this definition by virtue of their use as habitat by migratory birds are no longer considered "waters of the U.S." The Supreme Court's opinion did not specifically address what other connections with interstate commerce might support the assertion of CWA jurisdiction over "nonnavigable, isolated, intrastate waters" under this definition, and USACE is recommending case-by-case consideration. A factor that may be relevant to this consideration includes, but is not limited to, the following: Jurisdiction of isolated, intrastate, and nonnavigable waters may be possible if their use, degradation, or destruction could affect other "waters of the U.S.," thus establishing a significant nexus between the water in question and other "waters of the U.S." (USACE and EPA, 2001).

2. Wetlands adjacent to non-navigable tributaries that are not relatively permanent;
3. Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

The EPA and the USACE generally do not assert jurisdiction over the following features:

1. Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow);
2. Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The EPA and the USACE have defined the significant nexus standard as follows:

1. A significant nexus analysis assesses the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream traditional navigable waters;
2. Significant nexus includes consideration of hydrologic and ecologic factors including:
    a. Volume, duration, and frequency of flow, including consideration of certain physical characteristics of the tributary,
    b. Proximity to the traditional navigable water,
    c. Size of the watershed,
    d. Average annual rainfall,
    e. Average annual winter snow pack,
    f. Potential of tributaries to carry pollutants and flood waters to traditional navigable waters,
    g. Provision of aquatic habitat that supports a traditional navigable water,
    h. Potential of wetlands to trap and filter pollutants or store flood waters, and
    i. Maintenance of water quality in traditional navigable waters.

The USACE and EPA provided further clarification on the definitions of jurisdictional waters of the U.S. in response to *Rapanos* in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE and EPA, 2007). This guidance states that:

- Certain geographical features (e.g., ditches, canals) that transport relatively permanent (continuous at least seasonal) flow directly into TNWs or between two (or more) waters of the U.S., including wetlands, are jurisdictional waters under the CWA.
- Certain geographical features (e.g., swales, ditches, pipes) may contribute to a surface hydrologic connection where the features:
    – replace or relocate a water of the U.S., or
    – connect a water of the U.S. to another water of the U.S., or
    – provide relatively permanent flow to a water of the U.S.

The scope of waters of the U.S. does not include all waters. EPA and the USACE previously have described in preambles to CWA regulations waters that the agencies generally do not consider to be waters of the U.S. The categories of waters generally not waters of the U.S. include:

- Wet areas that are not tributaries or open waters and do not meet the regulatory definition of wetlands.
- Waterbodies excluded from coverage under the CWA by existing regulations.
- Waters that lack a significant nexus when one is required for jurisdiction.
- Artificially irrigated areas which would revert to upland if the irrigation ceased.
- Artificial lakes and ponds created by excavating and/or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing.
- Artificial reflecting pools or swimming pools excavated in uplands.
- Small ornamental bodies of water created by excavating and/or diking dry land to retain water primarily for aesthetic reasons.
- Water-filled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel, unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the U.S.
- Groundwater drained through subsurface drainage systems.
- Erosional features (gullies and rills), and swales and ditches that are not tributaries or wetlands.

3.2 Pre-field Review

Prior to conducting the field investigation, the following background tasks were performed:

- Review of Rocklin, California USGS 7.5-minute topographic quadrangle map;
- Review of color aerial photography for vegetative, topographic, and hydrographic signatures;
- Review of the *Custom Soil Resource Report for Placer County, California, Western Part* (NRCS, 2017a), for information about soils and geomorphology;
- Review of the National Hydric Soils List for Placer County, California (NRCS, 2017b) to determine if any soils mapped within the study area are considered hydric at the level of soil series; and
- Review of the National Wetlands Inventory (U.S Fish and Wildlife Service [USFWS], 2017)

3.3 Field Survey Methods

The wetland delineation was conducted within the study area by ESA biologist Joshua Boldt on March 9, 2017. The delineation used the “Routine Determination Method” as described in the

1987 Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987), hereafter called the "1987 Manual." The 1987 Manual was used in conjunction with the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE, 2008), hereafter called the "Arid West Supplement." For areas where the 1987 Manual and the Arid West Supplement differ, the Arid West Supplement was followed.

Three positive parameters must normally be present for an area to be considered a wetland: 1) a dominance of wetland vegetation, 2) presence of hydric soils, and 3) presence of wetland hydrology. Presence or absence of positive indicators for wetland vegetation, soils, and hydrology was assessed per the 1987 Manual and Arid West Supplement guidelines. Data points were taken within suspected wetland and a paired point taken (where acceptable) in nearby uplands. Data points were recorded on Arid West wetland delineation forms, which are provided as **Appendix B**.

At each data point, a visual assessment of the dominant plant species within a 6-foot radius was made. Dominant species were assessed using the recommended "50/20" rule per the Arid West Supplement. Plants were identified to species using *The Jepson Manual: Vascular Plants of California, second edition* (Baldwin et al., 2012). The *Arid West 2016 Regional Wetland Plant List* (Lichvar et al., 2016) was used to determine the wetland indicator status of all plants. A list of plant species observed in the study area is provided in **Appendix C**. Soils at each data point were characterized by color, texture, organic matter accumulation, and the presence or absence of hydric soil indicators. Color was described using Munsell soil color charts (Kollmorgen Instruments Corporation, 1990). Presence of wetland hydrology was determined as each data point by presence of one or more of the primary and/or secondary indicators, per guidance of the Arid West Supplement.

3.4 Mapping and Acreage Calculations

All features, including sample points, wetland boundaries, and channel courses were recorded using a Global Positioning System (GPS) unit (Trimble GeoXT) with real-time differential correction and an instrument-rated mapping accuracy of +/- 1 meter. Boundaries of wetlands were demarcated in the field using GPS by walking the margin of the wetland and taking points at set intervals.

In the office, data from sample points and wetland boundaries were downloaded from the GPS unit and mapped using GIS software on an overlay of both topography and geo-referenced aerial photography. GPS-determined wetland boundaries and data points were visually confirmed. Acreage of wetland and waters of the U.S. polygons, and the length of linear features were determined using ArcGIS.

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CHAPTER 4
Results

4.1 Results

The wetland delineation identified 1.311 acres of potentially jurisdictional wetlands within the 42.8-acre study area that are expected to be subject to regulation under Section 404 of the CWA. Aquatic community and habitat were classified using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). Details of the potentially jurisdictional aquatic resources within the study area are presented in **Table 2** and described below. **Figure 5** shows the location and extent of the potentially jurisdictional features within the study area. The Aquatic Resources Spreadsheet is provided in **Appendix D**. Study area photographs are provided in **Appendix E**.

TABLE 2.
POTENTIALLY JURISDICTIONAL WETLANDS AND OTHER WATERS OF THE U.S.

Map ID	Water Type – Cowardin Classification	Total Acres
Wetlands		
SW-2	Seasonal Wetland – Palustrine Emergent Wetland (Seasonally Flooded)	0.040
SW-3	Seasonal Wetland – Palustrine Emergent Wetland (Seasonally Flooded)	0.005
SW-4	Seasonal Wetland – Palustrine Emergent Wetland (Seasonally Flooded)	0.002
SW-5	Seasonal Wetland – Palustrine Emergent Wetland (Seasonally Flooded)	0.014
	Wetland Subtotal:	**0.061**
Other Waters of the U.S.		
ED-1	Ephemeral Drainage – Riverine Intermittent	0.012
ED-2	Ephemeral Drainage – Riverine Intermittent	0.005
ED-3	Ephemeral Drainage – Riverine Intermittent	0.009
ED-4	Ephemeral Drainage – Riverine Intermittent	0.099
ED-5	Ephemeral Drainage – Riverine Intermittent	0.031
ED-6	Ephemeral Drainage – Riverine Intermittent	0.017
Pond 1	Pond – Lacustrine Limnetic	0.973
Pond 2	Pond – Lacustrine Limnetic	0.104
	Other Waters Subtotal:	**1.250**
	Total Area of Jurisdictional Features:	**1.311**

SOURCE: ESA, 2017

4.1.1 Potentially Jurisdictional Features

Seasonal Wetland/Palustrine Emergent Wetland (Seasonally Flooded)

Based upon observations or inferences of wetland hydrology, soils, and vegetation, four seasonal wetlands were noted onsite in the southern portion of the study area totaling approximately 0.061 acre. Seasonal wetlands are ephemeral wetlands that pond water or remain saturated for extended periods during a portion of the year, often throughout the wet season, then dry up in spring or early summer. The seasonal wetlands within the study area are classified as "palustrine emergent wetland (seasonally flooded)" using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). Within the study area, seasonal wetlands are characterized by sample points DP-8 and DP-11, and the adjacent upland areas are represented by DP-09 and DP-12 (**Photos 1, 2, 17** and **18** of Appendix E). Common plant species observed include the following: Italian rye grass (*Festuca perennis*, FAC),[2] spiny-fruit buttercup (*Ranunculus muricatus*, FACW),[3] iris leaved rush (*Juncus xiphioides*, OBL),[4] Lemmon's canary grass (*Phalaris lemmonii*, FACW), umbrella sedge (*Cyperus eragrostis*, FACW), miner's lettuce (*Claytonia perfoliata* subsp. *Perfoliata*, FAC), and curly dock (*Rumex crispus*, FAC). Vegetation in these features was weakly to strongly hydrophytic. At the time of the survey, many upland annual grasses and weeds were beginning to become established along the periphery of the features. The seasonal wetlands are likely hydrologically connected to the Sacramento River (a TNW) through surface flows. There was surface water present in all four seasonal wetlands at the time of the delineation. SW-2 (DP-8) and SW-5 (DP-11) showed evidence of hydric soil characteristics in the form of hydric soil indicator F8: Redox Depressions.

Ephemeral Drainage/Riverine Intermittent

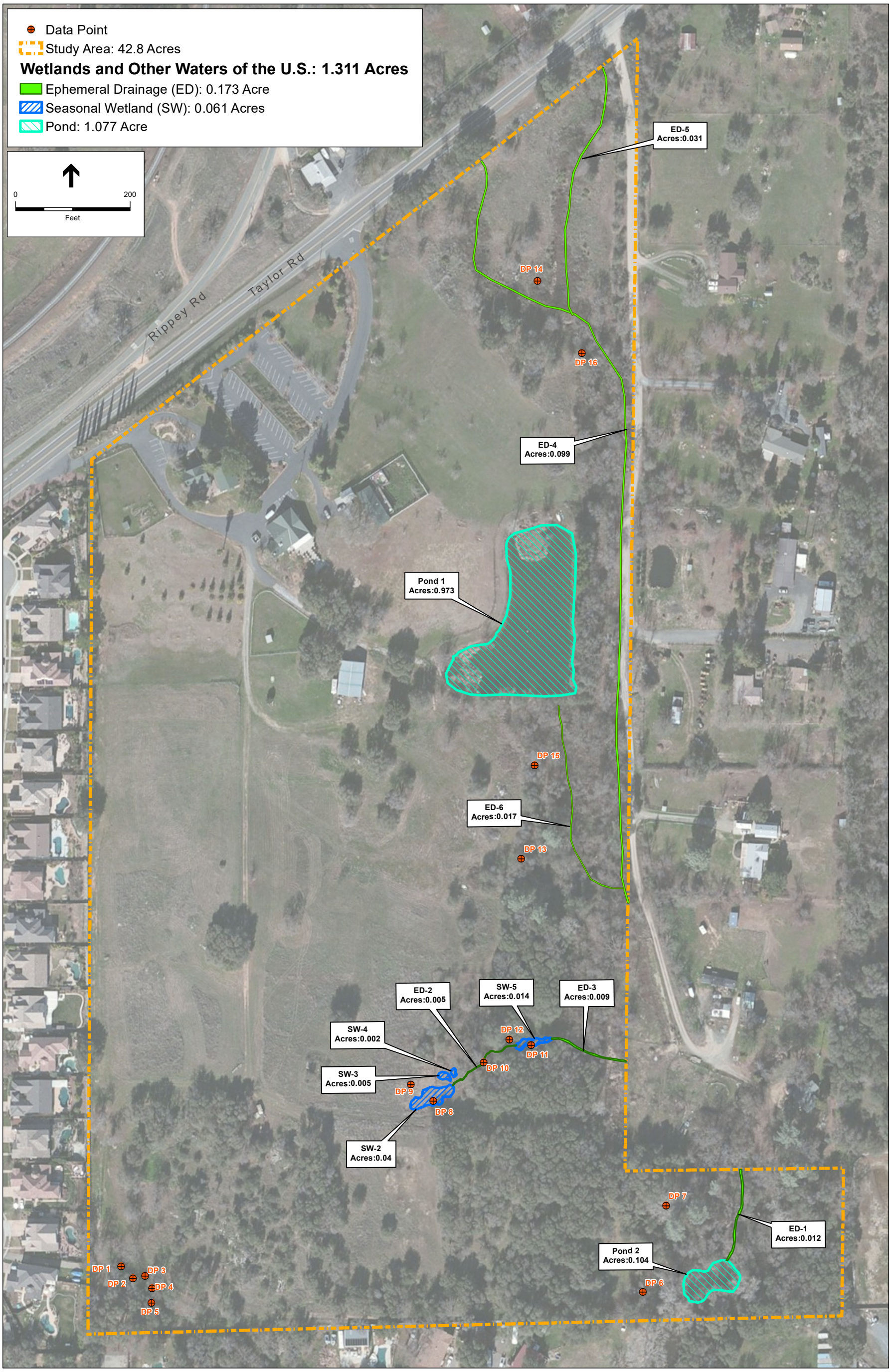
Ephemeral drainages are classified as "riverine intermittent" using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. al, 1979). An ephemeral channel has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

The study area contains six ephemeral channels, totaling approximately 0.173 acre (**Photo 3** of Appendix E). These channels range from approximate one to three feet in width. Ephemeral channels in the study area are typically low gradient and flow through annual grassland, interior oak woodland, and valley foothill riparian. Bed material consists of soil and gravel, and the beds are typically not vegetated. The boundaries of ephemeral channels were determined by the OHWM.

2 FAC = facultative (occurs in wetlands and non-wetlands)

3 FACW = facultative wetland (usually occurs in wetlands, but may occur in non-wetlands)

4 OBL = obligate wetland (almost always occurs in wetlands under natural conditions)



Prepared on 3/27/17 by Josh Boldt and Wes McCullough, ESA

SOURCE: ESA, 2017

UAIC Tribal School . 150225

Figure 5

Potentially Jurisdictional Aquatic Resourcs

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Pond/Lacustrine Limnetic

Ponds are classified as "lacustrine limnetic" using the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et. al, 1979). Both ponds in the study area appear to be man-made and total approximately 1.077 acres (**Photos 4-5** of Appendix E). The larger pond (Pond-1) is connected to a pump and irrigation system and has historically been used for irrigation. Although its original function is unknown, Pond 2 was likely initially constructed to serve as a water source for livestock or agriculture, but no longer serves this purpose. Duckweed (*Lemna* sp., OBL) occurs sporadically throughout the surface of both ponds, and both are fringed by tall, perennial, emergent monocots such as broadleaf cattail (*Typha latifolia*, OBL). The ponds also support numerous trees and shrubs along their banks such as Fremont cottonwood (*Populus fremontii* subsp. *fremontii*, NL), willow (*Salix* sp., FACW-OBL), and big-leaf maple (*Acer macrophyllum*, FAC). The larger pond (Pond-1) is fed from Placer County Water Agency's Red Ravine Canal. The smaller pond (Pond-2) is fed by ED-1.

4.2 Jurisdictional Analysis

4.2.1 Potentially Jurisdictional Features

The USACE and EPA issued guidance related to the Rapanos decision on June 5, 2007. The *Rapanos-Carabell* consolidated decisions addressed several issues, including the question of jurisdiction in relation to waters that are relatively permanent (RPW) or are not relatively permanent (non-RPW). It was concluded that non-RPWs that have a "significant ecological nexus" with a TNW, including non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally, wetlands adjacent to such tributaries, and wetlands adjacent to but that do not directly abut permanent, non-navigable tributary, may be considered waters of the U.S. A significant nexus can be determined to be present if the tributary, in combination with any adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical, and biological integrity of a TNW. Key considerations when evaluating a significant nexus include volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to the TNW, plus hydrologic, ecologic, and other functions related to the tributary and all of its adjacent wetlands.

Four potentially jurisdictional seasonal wetlands were identified in the study area. These features are seasonally inundated and/or saturated as evidenced by hydrophytic plants, hydric soils, and wetland hydrology. The seasonal wetland features are considered "wetlands adjacent to non-navigable tributaries that are not relatively permanent". These features have a direct surface hydrologic connection to the Sacramento River via the unnamed channel located along the eastern boundary of the study area. As described in the "Hydrology" section of Chapter 2, this unnamed channel eventually flows to the Sacramento River via Secret Ravine Creek, Dry Creek, and the Natomas East Main Drainage Canal (see **Figure 6**). The ephemeral drainages in the study area are considered "non-navigable tributaries that are not relatively permanent". As with the seasonal wetlands, they have a direct surface hydrological connection to the Sacramento River. The Sacramento River is considered a TNW under Section 404 of the Clean Water Act. The seasonal wetlands and ephemeral channels within the study area contribute rainfall runoff to the

SOURCE: ESA, 2017

UAIC Tribal School . 150225

Figure 6

Route to Traditional Navigable Water

chemical (minerals, carbon, sediment) and physical (water volume) integrity of the Sacramento River. Therefore, it was determined that the seasonal wetlands and ephemeral drainages onsite *would* contribute towards the ecological function of the TNW (Sacramento River), and therefore should be considered as potentially jurisdictional features under the CWA.

There are a number of potential biological, chemical, and physical processes being performed by the seasonal wetlands and ephemeral drainages identified in this delineation. These include processing of organic wastes, attenuation of downstream flooding through interception of surface runoff and water storage onsite, reduction of suspended sediment delivered to downstream waters, groundwater replenishment, provision of breeding and foraging habitat for common and special-status wildlife, and supporting biodiversity at the site and watershed levels through provision of wetland habitat. No specific studies regarding duration of flow, groundwater measurement, or ecological function and values of the wetland covered in this delineation were conducted. The magnitude at which these functions are being performed is also, for the most part, unknown.

4.2.2 Non-Jurisdictional Features

A number of features in the study area were characterized as potentially non-jurisdictional. These features are described briefly below and the rationale for their potential non-jurisdictional status is provided. **Table 3** provides the total extent of potentially non-jurisdictional features within the study area. **Figure 7** shows the location and extent of the potentially non-jurisdictional features at a scale of 1 inch equal to 200 ft. Data sheets and representative site photographs are included in Appendices B and D, respectively.

TABLE 3.
NON-JURISDICTIONAL FEATURES

Map ID	Acres
Seasonal Wetland (Isolated)	
SW-1	0.060
Drainage Ditch	
DD-1	0.004
DD-2	0.002
Drainage Swale	
DS-1	0.010

Drainage Ditch/Drainage Swale

According to the guidance issued by the EPA and the USACE in response to the *Rapanos-Carabell* consolidated decisions in 2007, these agencies generally do not assert jurisdiction over the following features:

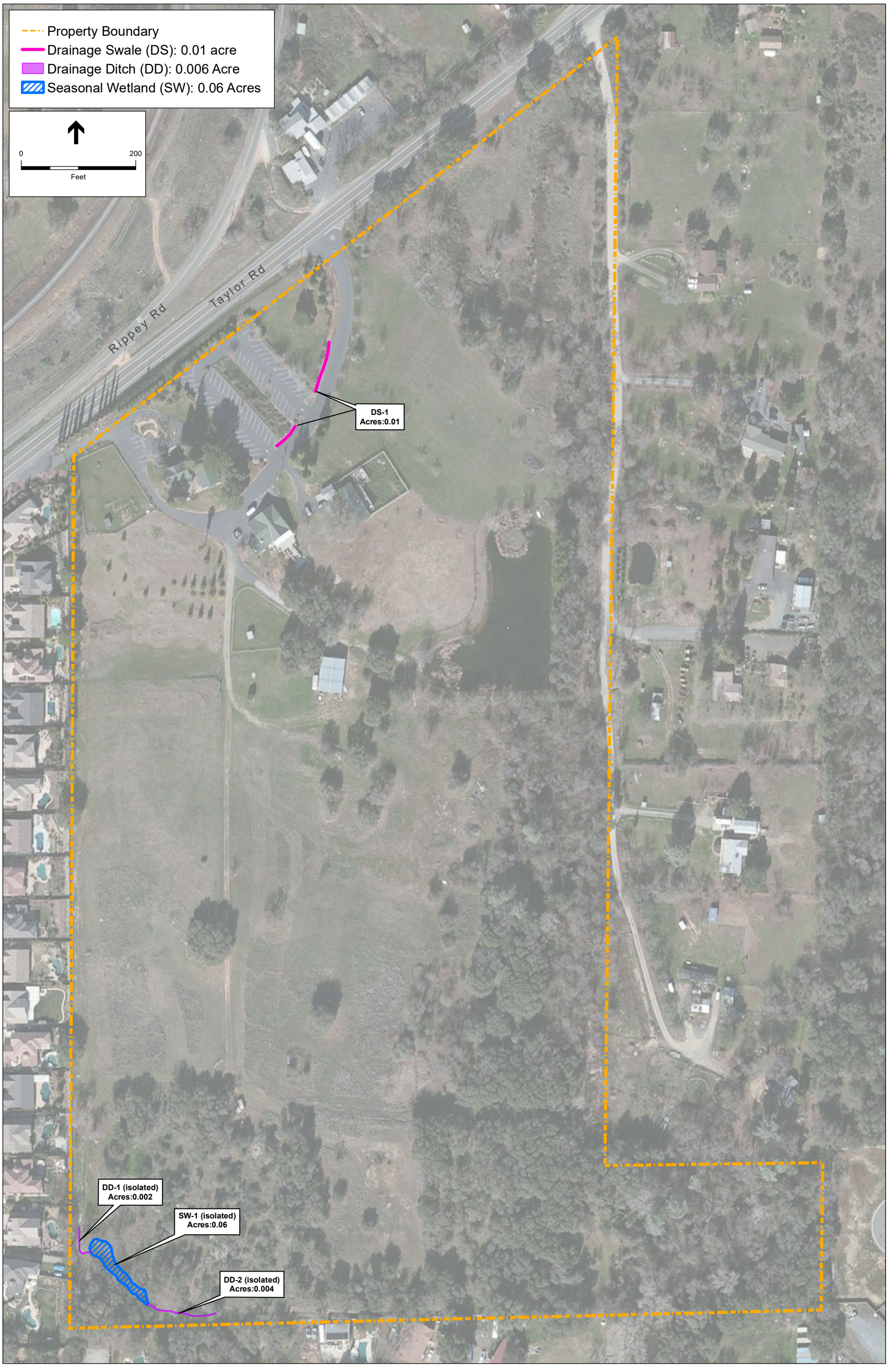
1. Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow);

2. Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water.

The USACE and EPA provided further clarification on the definitions of jurisdictional waters of the U.S. in response to *Rapanos* in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook* (USACE and EPA, 2007). This guidance states that:

- Certain geographical features (e.g., ditches, canals) that transport relatively permanent (continuous at least seasonal) flow directly into TNWs or between two (or more) waters of the U.S., including wetlands, are jurisdictional waters under the CWA.
- Certain geographical features (e.g., swales, ditches, pipes) may contribute to a surface hydrologic connection where the features:
    - replace or relocate a water of the U.S., or
    - connect a water of the U.S. to another water of the U.S., or
    - provide relatively permanent flow to a water of the U.S.

As discussed in Chapter 2, Section 2.4 (Vegetation/Habitat Types), two small man-made drainage ditches occur in the southwestern corner of the study area (**Photos 7-8** of Appendix E). These ditches appear to drain adjacent residential properties. The water source for these ditches is irrigation water runoff from landscaping associated with residences. The upper ditch eventually flows to a seasonal wetland, and the lower ditch flows out of the seasonal wetland to a culvert along the southern boundary of the study area. These features were evaluated during the field survey to determine if they exhibited any characteristics of waters of the U.S. According to a review of historical aerial photographs (Google Earth, 2017), the subdivision was built sometime between July 2004 and August 2005. Prior to the construction of this subdivision, there does not appear to be any drainage features in or adjacent to the southwestern corner of the study area (see **Figure 8**). These ditches were likely built in response to excessive irrigation runoff flowing from the adjacent subdivision onto the study area. The two ditches do not carry a relatively permanent flow of water, were excavated wholly in uplands, and exist solely to drain irrigation water runoff. Therefore, according to the guidance issued by the EPA and the USACE in response to the *Rapanos-Carabell* consolidated decisions in 2007, these ditches should not be considered regulated features under the CWA. In addition, these ditches do not satisfy the additional clarification on the jurisdictional status of ditches provided by the USACE and EPA in response to *Rapanos* in the *U.S. Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook*. These ditches do not replace or relocate a water of the U.S., nor do they connect a water of the U.S. to another water of the U.S., and they do not appear to directly or indirectly connect to a traditional navigable water or interstate water. Therefore, these ditches do not have a significant nexus with the Sacramento River (TNW) since they not have a hydrological connection to any jurisdictional features. These ditches are isolated and convey irrigation water to a closed depression south of the study area, not to a TNW or its tributaries. Thus, these ditches are not likely to contribute to the ecological function of the Sacramento River and therefore should be considered isolated features under the Rapanos guidance and should not be regulated under the Clean Water Act.



SOURCE: ESA, 2017

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Figure 7

Non-Jurisdictional Features

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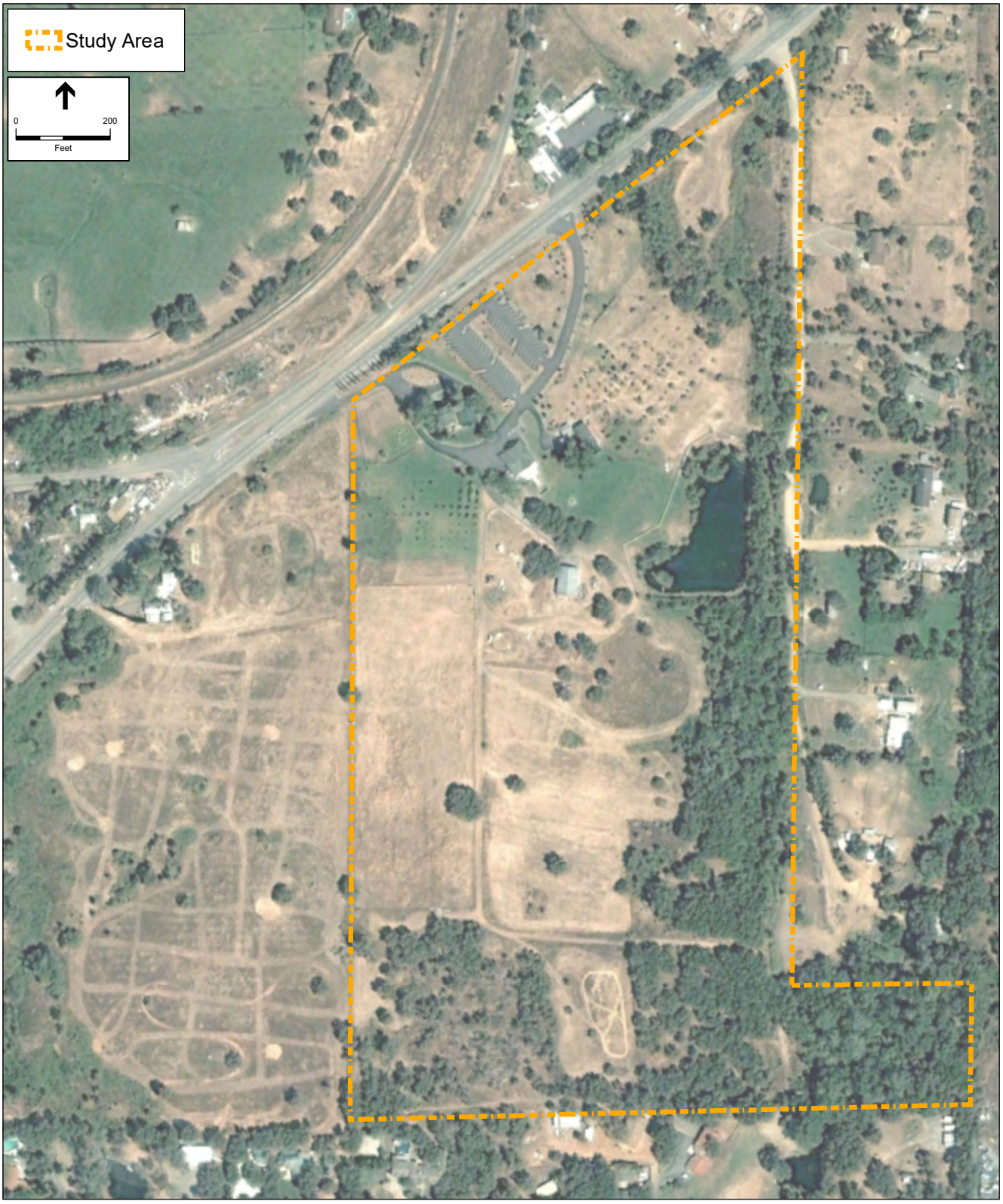

SOURCE: ESA, 2017; Google Earth, 2003

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Figure 8

Study Area with Aerial Photo from 2003

A seasonal wetland feature is directly adjacent to these ditches (SW-1 – isolated) (**Photo 6** of Appendix E. Because these ditches do not have a significant nexus with the Sacramento River (TNW) and are isolated, this adjacent wetland feature is also considered isolated. In addition, this seasonal wetland features is entirely supported by irrigation runoff from the adjacent subdivision. According to a review of historical aerial photographs (Google Earth, 2017), the subdivision was built sometime between July 2004 and August 2005. Prior to the construction of this subdivision, there does not appear to be any drainage features in or adjacent to the southwestern corner of the study area that would have supported the wetland hydrology of this seasonal wetland. In accordance with the 1986 preamble to 33 CFR Part 328.3 (51 FR 41217), the USACE generally does not consider artificially irrigated areas which would revert to uplands if the irrigation ceased to be waters of the U.S. under Section 404 of the Clean Water Act. Therefore, this feature is not considered to be a regulated feature under the CWA because it do not have a significant ecological nexus with a TNW and it would revert to uplands if the artificial irrigation ceased.

As discussed in Chapter 2, Section 2.4 (Vegetation/Habitat Types), a cobble-lined drainage swale occurs within the urban area in the northern part of the study area and drains the parking lot and roadways (**Photo 9** of Appendix E). This feature was evaluated during the field survey to determine if it exhibited any characteristics of waters of the U.S. The drainage swale lacks vegetation and does not exhibit a bed, bank, or OHWM. The swale collects water from the impervious surfaces of the parking lot and roadways and drains to an annual grassland area adjacent to the parking lot. The drainage swale is a manmade cobble-lined feature constructed in uplands to drain surface water from the surrounding urban area following storm events (characterized by low volume, infrequent, and short duration flow). It does not replace or relocated a water of the U.S.; connect a water of the U.S. to another water of the U.S.; or provide relatively permanent flow to a water of the U.S. Based on these conditions, it was determined that this drainage swale does not exhibit characteristics that would qualify it as a regulated feature under the CWA.

4.3 Conclusions

A total of 1.311 acres of potentially jurisdictional wetlands occur within the 42.8-acre study area. This report documents the wetland boundary delineation and best professional judgment of ESA investigators. All conclusions presented should be considered preliminary and subject to change pending official review and preliminary jurisdictional determination in writing by the USACE.

CHAPTER 5
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Appendix A
NRCS Soils Report

United States Department of Agriculture

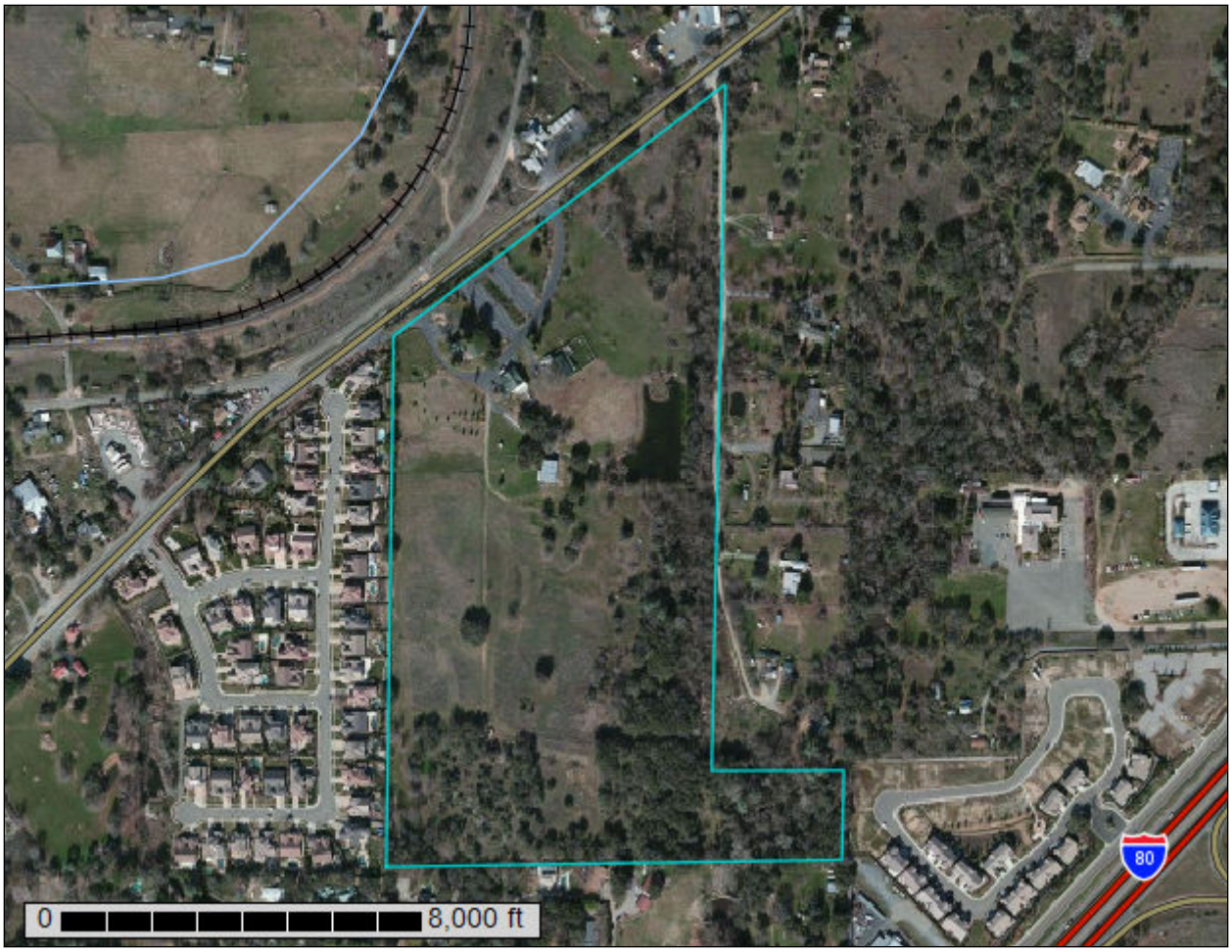
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Placer County, California, Western Part

UAIC Tribal School Project



March 24, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

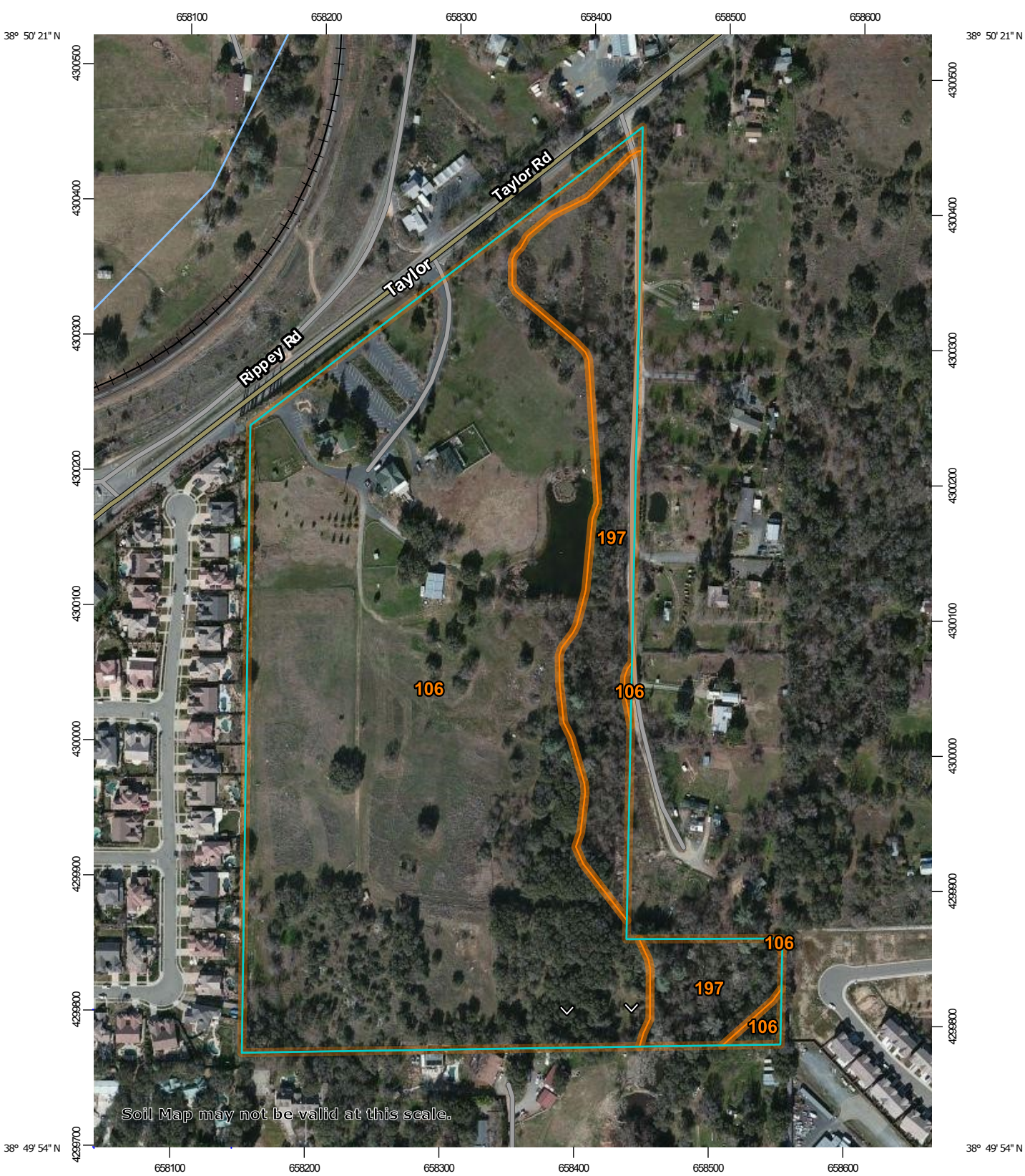
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:4,010 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 150 300 600 900

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Placer County, California, Western Part
Survey Area Data: Version 8, Sep 21, 2016

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2011—Apr 29, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Placer County, California, Western Part (CA620)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
106	Andregg coarse sandy loam, 2 to 9 percent slopes	35.1	81.9%
197	Xerorthents, placer areas	7.7	18.1%
Totals for Area of Interest		**42.8**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Placer County, California, Western Part

106—Andregg coarse sandy loam, 2 to 9 percent slopes

Map Unit Setting

National map unit symbol: hfyf
Elevation: 200 to 1,500 feet
Mean annual precipitation: 12 to 35 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 200 to 270 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Andregg and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Andregg

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite

Typical profile

H1 - 0 to 15 inches: coarse sandy loam
H2 - 15 to 29 inches: coarse sandy loam
H3 - 29 to 33 inches: weathered bedrock

Properties and qualities

Slope: 2 to 9 percent
Depth to restrictive feature: 29 to 33 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: GRANITIC (R018XD080CA)
Hydric soil rating: No

Minor Components

Caperton

Percent of map unit: 5 percent
Hydric soil rating: No

Sierra
Percent of map unit: 5 percent
Hydric soil rating: No

Unnamed, mod deep
Percent of map unit: 4 percent
Hydric soil rating: No

Unnamed
Percent of map unit: 1 percent
Landform: Drainageways
Hydric soil rating: Yes

197—Xerorthents, placer areas

Map Unit Setting
National map unit symbol: hg1c
Elevation: 50 to 3,200 feet
Mean annual precipitation: 8 to 18 inches
Mean annual air temperature: 61 to 64 degrees F
Frost-free period: 150 to 280 days
Farmland classification: Not prime farmland

Map Unit Composition
Xerorthents and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Xerorthents

Setting
Parent material: Mine spoil or earthy fill

Typical profile
H1 - 0 to 60 inches: variable

Properties and qualities
Slope: 2 to 5 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Very low (about 0.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Ecological site: PLACER DIGGINGS (R018XD084CA)
Hydric soil rating: No

Minor Components

Unnamed

Percent of map unit: 10 percent
Landform: Drainageways
Hydric soil rating: Yes

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Appendix B
Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 1

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1. *Salix gooddingii*	10	Yes	FACW
2.			
3.			
4.			
5.			
Total Cover:	10 %		
Herb Stratum			
1. *Festuca perennis*	30	Yes	FAC
2. *Juncus xiphioides*	20	Yes	OBL
3. *Stellaria media*	10	No	FACU
4. *Claytonia perfoliata subsp. perfoliata*	15	No	FAC
5. *Rumex crispus*	10	No	FAC
6. *Geranium molle*	5	No	Not Listed
7.			
8.			
Total Cover:	90 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	20	x 1 =	20
FACW species	10	x 2 =	20
FAC species	55	x 3 =	165
FACU species	10	x 4 =	40
UPL species	5	x 5 =	25
Column Totals:	100 (A)		270 (B)

Prevalence Index = B/A = 2.70

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◉ No ◯

Remarks:

SOIL

Sampling Point: DP 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
1-14	7.5 YR 2.5/1	85	5 YR 4/6	15	RM	M	Sandy clay loam	
14-18	7.5 YR 2.5/1	100					Sandy clay laom	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ○

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ◉	No ○	Depth (inches): 3
Water Table Present?	Yes ◉	No ○	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches): surface

Wetland Hydrology Present? Yes ◉ No ○

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 2

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Festuca perennis*	65	Yes	FAC
2. *Silybum marianum*	10	No	Not Listed
3. *Juncus xiphioides*	10	No	OBL
4. *Stellaria media*	6	No	FACU
5. *Galium aparine*	2	No	FACU
6. *Claytonia perfoliata subsp. perfoliata*	2	No	FAC
7.			
8.			
Total Cover:	95 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species		x 2 =	0
FAC species	67	x 3 =	201
FACU species	8	x 4 =	32
UPL species	10	x 5 =	50
Column Totals:	95 (A)		293 (B)

Prevalence Index = B/A = 3.08

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◉ No ◯

Remarks:

SOIL

Sampling Point: DP 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
1-10	10 YR 2/2	90	5 YR 4/6	10	RM	M	Sandy clay loam	
10-16	10 YR 2/2	90	5 YR 4/6	10	RM	M	Sandy clay loam	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ◯

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ◉	No ◯	Depth (inches): 2
Water Table Present?	Yes ◉	No ◯	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ◉	No ◯	Depth (inches): survace

Wetland Hydrology Present? Yes ◉ No ◯

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 3

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	10	Yes	FACU
2. *Quercus wislizeni*	5	Yes	Not Listed
3.			
4.			
Total Cover:	15 %		
Sapling/Shrub Stratum			
1. *Toxicodendron diversilobum*	5	Yes	FACU
2.			
3.			
4.			
5.			
Total Cover:	5 %		
Herb Stratum			
1. *Bromus hordeaceus*	25	Yes	FACU
2. *Avena barbata*	20	Yes	Not Listed
3. *Chlorogalum pomeridium var.pomeridium*	20	Yes	Not Listed
4. *Geranium molle*	10	No	Not Listed
5. *Claytonia perfoliata subsp. perfoliata*	10	No	FAC
6. *Galium aparine*	5	No	FACU
7. *Vicia villosa*	2	No	Not Listed
8. *Silybum marianum*	2	No	Not Listed
Total Cover:	94 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	10	x 3 =	30
FACU species	45	x 4 =	180
UPL species	59	x 5 =	295
Column Totals:	114 (A)		505 (B)

Prevalence Index = B/A = 4.43

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
1-14	7.5 YR 3/2	100					Sandy loam	no redox

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches): 4

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks: Saturation present at 4 inches. However, no associated water table located below saturation zone. Saturation due to recent rainfall.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 4

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Festuca perennis*	45	Yes	FAC
2. *Ranunculus muricatus*	15	Yes	FACW
3. *Rumex crispus*	15	Yes	FAC
4. *Juncus xiphioides*	2	No	OBL
5. *Galium aparine*	4	No	FACU
6.			
7.			
8.			
Total Cover:	81 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	15	x 2 =	30
FAC species	60	x 3 =	180
FACU species	4	x 4 =	16
UPL species		x 5 =	0
Column Totals:	81 (A)		228 (B)

Prevalence Index = B/A = 2.81

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◉ No ◯

Remarks:

SOIL

Sampling Point: DP 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
1-14	7.5 YR 2.5/1	85	5 YR 4/6	15	RM	M	Sandy clay loam	
14-18	7.5 YR 2.5/1	100					Sandy clay loam	gravelly

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ◯

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ◉	No ◯	Depth (inches): 2
Water Table Present?	Yes ◉	No ◯	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ◉	No ◯	Depth (inches): survace

Wetland Hydrology Present? Yes ◉ No ◯

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 5

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus wislizeni*	25	Yes	Not Listed
2.			
3.			
4.			
Total Cover:	25 %		
Sapling/Shrub Stratum			
1. *Toxicodendron diversilobum*	5	Yes	FACU
2. *Rubus armeniacus*	7	Yes	FAC
3.			
4.			
5.			
Total Cover:	12 %		
Herb Stratum			
1. *Bromus hordeaceus*	20	Yes	FACU
2. *Avena barbata*	10	Yes	Not Listed
3. *Stellaria media*	3	No	FACU
4. *Geranium molle*	7	No	Not Listed
5. *Galium aparine*	15	Yes	FACU
6.			
7.			
8.			
Total Cover:	55 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	6	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	16.7 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	7	x 3 =	21
FACU species	43	x 4 =	172
UPL species	42	x 5 =	210
Column Totals:	92 (A)		403 (B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
1-14	7.5 YR 3/2	100					Sandy loam	no redox

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ●	Depth (inches):
Water Table Present?	Yes ○	No ●	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ●	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP-6

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Xerothents, placer areas NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Data point taken in depression in riparian woodland.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	30	Yes	FACU
2. *Quercus wislizeni*	20	Yes	Not Listed
3. *Triadica sebifera*	3	No	FAC
4.			
Total Cover:	53 %		
Sapling/Shrub Stratum			
1. *Rubus armeniacus*	20	Yes	FAC
2. *Toxicodendron diversilobum*	3	No	FACU
3.			
4.			
5.			
Total Cover:	23 %		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	23	x 3 =	69
FACU species	33	x 4 =	132
UPL species	20	x 5 =	100
Column Totals:	76 (A)		301 (B)

Prevalence Index = B/A = 3.96

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP-6

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-14	10 YR 4/4	90	5 YR 4/6	10	RM	M	Sandy gravelly loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ○	Depth (inches):
Water Table Present?	Yes ○	No ○	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks: No hydrology indicators. Area does not appear to pond water.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP-7

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Xerothents, placer areas NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Data point taken in swale area in riparian woodland.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	45	Yes	FACU
2. *Quercus wislizeni*	5	No	Not Listed
3. *Populus fremontii*	30	Yes	FACW
4.			
Total Cover:	80 %		
Sapling/Shrub Stratum			
1. *Rubus armeniacus*	30	Yes	FAC
2.			
3.			
4.			
5.			
Total Cover:	30 %		
Herb Stratum			
1. *Hedera helix*	35	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	35 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ___ % % Cover of Biotic Crust ___ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	30	x 2 =	60
FAC species	30	x 3 =	90
FACU species	80	x 4 =	320
UPL species	5	x 5 =	25
Column Totals:	145 (A)		495 (B)

Prevalence Index = B/A = 3.41

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP-7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-14	10 YR 4/4	90					Gravelly clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ●	Depth (inches):
Water Table Present?	Yes ○	No ●	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ●	No ○	Depth (inches): 7

Wetland Hydrology Present? Yes ○ No ●

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

Remarks: Saturation present at 7 inches. However, no associated water table located below saturation zone. Saturation due to recent rainfall. Area does not appear to pond water.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 8

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Phalaris lemmonii*	100	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	100 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species	100	x 2 =	200
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	100 (A)		200 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◉ No ◯

Remarks:

SOIL

Sampling Point: DP 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
1-14	10 YR 3/2	80	5 YR 4/6	20	RM	RC	gravelly clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ◯

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ◉	No ◯	Depth (inches): 4
Water Table Present?	Yes ◉	No ◯	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ◉	No ◯	Depth (inches): surface

Wetland Hydrology Present? Yes ◉ No ◯

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 9

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Bromus hordeaceus*	30	Yes	FACU
2. *Avena barbata*	20	Yes	Not Listed
3. *Festuca myuros*	20	Yes	Not Listed
4. *Festuca perennis*	10	No	FAC
5. *Geranium molle*	5	No	Not Listed
6. *Vicia villosa*	5	No	Not Listed
7. *Stellaria media*	3	No	FACU
8.			
Total Cover:	93 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	10	x 3 =	30
FACU species	33	x 4 =	132
UPL species	50	x 5 =	250
Column Totals:	93 (A)		412 (B)

Prevalence Index = B/A = 4.43

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 9

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12	10 YR 3/3	100					Sandy clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ◉

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ◉	Depth (inches):
Water Table Present?	Yes ○	No ◉	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ◉	No ○	Depth (inches): 3

Wetland Hydrology Present? Yes ○ No ◉

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

Remarks: Saturation present at 3 inches. However, no associated water table located below saturation zone. Saturation due to recent rainfall.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 10

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Data point taken within channel ED-3 where channel widens and flow slows, allowing vegetation to establish.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	15	Yes	FACU
2.			
3.			
4.			
Total Cover:	15 %		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Festuca perennis*	75	Yes	FAC
2. *Rumex crispus*	15	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	90 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	2	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	50.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	90	x 3 =	270
FACU species	15	x 4 =	60
UPL species		x 5 =	0
Column Totals:	105 (A)		330 (B)

Prevalence Index = B/A = 3.14

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◉ No ◯

Remarks: Weakly hydrophytic vegetation.

SOIL

Sampling Point: DP 10

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
1-14	10 YR 3/2	80	5 YR 4/6	20	RM	M	gravelly clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ◉ No ◯

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ◉	No ◯	Depth (inches): 3
Water Table Present?	Yes ◉	No ◯	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ◉	No ◯	Depth (inches): surface

Wetland Hydrology Present? Yes ◉ No ◯

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

Remarks: Data point within channel with flowing water.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 11

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	%		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Cyperus eragrostis*	20	Yes	FACW
2. *Rumex crispus*	20	Yes	FAC
3. *Festuca perennis*	15	Yes	FAC
4. *Juncus xiphioides*	3	No	OBL
5.			
6.			
7.			
8.			
Total Cover:	58 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	3	(A)
Total Number of Dominant Species Across All Strata:	3	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	100.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	3	x 1 =	3
FACW species	20	x 2 =	40
FAC species	35	x 3 =	105
FACU species		x 4 =	0
UPL species		x 5 =	0
Column Totals:	58 (A)		148 (B)

Prevalence Index = B/A = 2.55

Hydrophytic Vegetation Indicators:

- ☒ Dominance Test is >50%
- ☒ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◉ No ◯

Remarks:

SOIL

Sampling Point: DP 11

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12	7.5 YR 3/2	80	7.5 YR 5/6	20	RM	M	sandy clay loam	

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes (●) No ( )

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes (●)	No ( )	Depth (inches): 3
Water Table Present?	Yes (●)	No ( )	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes (●)	No ( )	Depth (inches): surface

Wetland Hydrology Present? Yes (●) No ( )

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 12

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus wislizeni*	35	Yes	Not Listed
2. *Quercus douglasii*	30	Yes	Not Listed
3.			
4.			
Total Cover:	65 %		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	%		
Herb Stratum			
1. *Bromus hordeaceus*	15	Yes	FACU
2. *Bromus diandrus*	10	Yes	Not Listed
3. *Geranium molle*	10	Yes	Not Listed
4. *Silybum marianum*	3	No	Not Listed
5.			
6.			
7.			
8.			
Total Cover:	38 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species	15	x 4 =	60
UPL species	88	x 5 =	440
Column Totals:	103 (A)		500 (B)

Prevalence Index = B/A = 4.85

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 12

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12	10 Yr 3/3	100					sandy clay loam	no redox

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ○	Depth (inches):
Water Table Present?	Yes ○	No ○	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 13

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	35	Yes	FACU
2. *Quercus wislizeni*	10	Yes	Not Listed
3.			
4.			
Total Cover:	45 %		
Sapling/Shrub Stratum			
1. *Rubus armeniacus*	35	Yes	FAC
2.			
3.			
4.			
5.			
Total Cover:	35 %		
Herb Stratum			
1. *Galium aparine*	15	Yes	FACU
2. *Bromus hordeaceus*	10	Yes	FACU
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	25 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	5	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	20.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species		x 1 =	0	
FACW species		x 2 =	0	
FAC species	35	x 3 =	105	
FACU species	60	x 4 =	240	
UPL species	10	x 5 =	50	
Column Totals:	105	(A)	395	(B)

Prevalence Index = B/A = 3.76

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 13

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-10	10 YR 4/4	100					sandy clay loam	no redox

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ○	Depth (inches):
Water Table Present?	Yes ○	No ○	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 14

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks: Data point in low area near ED-5.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Prunus sp.*	10	Yes	Not Listed
2.			
3.			
4.			
Total Cover:	10 %		
Sapling/Shrub Stratum			
1. *Baccharis pilularis*	15	Yes	Not Listed
2.			
3.			
4.			
5.			
Total Cover:	15 %		
Herb Stratum			
1. *Foeniculum vulgare*	10	Yes	Not Listed
2. *Silybum marianum*	10	Yes	Not Listed
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	0	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	0.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species		x 3 =	0
FACU species		x 4 =	0
UPL species	45	x 5 =	225
Column Totals:	45 (A)		225 (B)

Prevalence Index = B/A = 5.00

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 14

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-14	7.5 YR 4/4	100					sandy clay loam	no redox

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ○	Depth (inches):
Water Table Present?	Yes ○	No ○	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks: Area does not appear to pond water.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 15

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	45	Yes	FACU
2. *Quercus wislizeni*	20	Yes	Not Listed
3. *Triadica sebifera*	10	No	FAC
4.			
Total Cover:	75 %		
Sapling/Shrub Stratum			
1. *Rubus armeniacus*	55	Yes	FAC
2. *Toxicodendron diversilobum*	10	No	Not Listed
3.			
4.			
5.			
Total Cover:	65 %		
Herb Stratum			
1. *Bromus hordeaceus*	5	Yes	FACU
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	5 %		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC:	1	(A)
Total Number of Dominant Species Across All Strata:	4	(B)
Percent of Dominant Species That Are OBL, FACW, or FAC:	25.0 %	(A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:		
OBL species		x 1 =	0	
FACW species		x 2 =	0	
FAC species	65	x 3 =	195	
FACU species	50	x 4 =	200	
UPL species	30	x 5 =	150	
Column Totals:	145	(A)	545	(B)

Prevalence Index = B/A = 3.76

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks:

SOIL

Sampling Point: DP 15

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-12	10 YR 4/4	100					snndy clay loam	no redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.
[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ○	Depth (inches):
Water Table Present?	Yes ○	No ○	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks:

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: UAIC Tribal School Project City/County: Placer County Sampling Date: 3/9/17

Applicant/Owner: United Auburn Indian Community State: CA Sampling Point: DP 16

Investigator(s): Joshua Boldt Section, Township, Range: Section 3, T 11 N, R 7 E (Rocklin CA quad)

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

Subregion (LRR): C - Mediterranean California Lat: 38º 50' 06.17" North Long: 121º 10' 34.81" West Datum:

Soil Map Unit Name: Andregg coarse sandy loam, 2 to 9 percent slopes NWI classification:

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

Are Vegetation ☐ Soil ☐ or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ◉ No ◯

Are Vegetation ☐ Soil ☐ or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus lobata*	25	Yes	FACU
2. *Quercus wislizeni*	10	Yes	Not Listed
3.			
4.			
Total Cover:	35 %		
Sapling/Shrub Stratum			
1. *Rubus armeniacus*	75	Yes	FAC
2.			
3.			
4.			
5.			
Total Cover:	75 %		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	%		
Woody Vine Stratum			
1.			
2.			
Total Cover:	%		

% Bare Ground in Herb Stratum ____ % % Cover of Biotic Crust ____ %

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.3 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	0
FACW species		x 2 =	0
FAC species	75	x 3 =	225
FACU species	25	x 4 =	100
UPL species	10	x 5 =	50
Column Totals:	110 (A)		375 (B)

Prevalence Index = B/A = 3.41

Hydrophytic Vegetation Indicators:

- ◉ Dominance Test is >50%
- ◉ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ◯ No ◉

Remarks: Blackberry thicket

SOIL

Sampling Point: DP 16

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture[3]	Remarks
0-8	10 YR 4/4	100					sandy clay loam	no redox

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

[3]Soil Textures: Clay, Silty Clay, Sandy Clay, Loam, Sandy Clay Loam, Sandy Loam, Clay Loam, Silty Clay Loam, Silt Loam, Silt, Loamy Sand, Sand.

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

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

Indicators for Problematic Hydric Soils[4]:

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

[4]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ○ No ●

Remarks: Dense root system from blackberry shrubs.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present?	Yes ○	No ○	Depth (inches):
Water Table Present?	Yes ○	No ○	Depth (inches):
Saturation Present? (includes capillary fringe)	Yes ○	No ○	Depth (inches):

Wetland Hydrology Present? Yes ○ No ●

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

Remarks:

Appendix C

Plant Species Observed within the Study Area

APPENDIX C

Plant Species Observed within the Study Area

TABLE C-1.
VASCULAR FLORA RECORDED FROM THE PROJECT SITE

Scientific Name*	Common Name	Wetland Indicator Status
Gymnosperms		
Cupressaceae		
Calocedrus decurrens	Incense cedar	NL
Sequoia sempervirens	Coast redwood	NL
Pinaceae		
Pinus sp.	Ornamental pine	NL
Angiosperms Dicotyledonae		
Anacardiaceae		
Toxicodendron diversilobum	Western poison oak	FACU
Apiaceae		
Daucus carota	Queen Anne's-lace	UPL
Foeniculum vulgare	Fennel	NL
Araliaceae		
Hedera helix	English ivy	FACU
Asteraceae		
Baccharis pilularis	Coyote brush	NL
Centaurea solstitialis	Yellow star-thistle	NL
Helminthotheca echioides	Bristly ox-tongue	FACU
Silybum marianum	Milk thistle	NL
Sonchus oleraceus	Common sow thistle	UPL
Betulaceae		
Alnus rhombifolia	White alder	FACW
Boraginaceae		
Plagiobothrys sp.	Popcornflower	FACW-OBL
Brassicaceae		
Brassica nigra	Black mustard	NL
Raphanus sativus	Wild radish	NL
Caryophyllaceae		
Stellaria media	Common chickweed	FACU
Euphorbiaceae		
Triadica sebifera	Chinese tallowtree	FAC

TABLE C-1.
VASCULAR FLORA RECORDED FROM THE PROJECT SITE

Scientific Name*	Common Name	Wetland Indicator Status
Fabaceae		
Lupinus bicolor	Miniature lupine	NL
Robinia pseudoacacia	Black locust	FACU
Trifolium sp.	Clover	-
Vicia villosa	Hairy vetch	NL
Fagaceae		
Quercus douglasii	Blue oak	NL
Quercus lobata	Valley oak	FACU
Quercus wislizeni	Interior live oak	NL
Geraniaceae		
Erodium botrys	Broadleaf filaree	FACU
Erodium cicutarium	Red-stemmed filaree	NL
Geranium dissectum	Cut-leaved geranium	NL
Geranium molle	Woodland geranium	NL
Juglandaceae		
Juglans sp.	Walnut	-
Montiaceae		
Claytonia perfoliata subsp. *perfoliata*	Miner's lettuce	FAC
Moraceae		
Morus alba	White mulberry	FACU
Papaveraceae		
Eschscholzia californica	California poppy	NL
Polygonaceae		
Rumex crispus	Curly dock	FAC
Ranunculaceae		
Ranunculus muricatus	Spiny-fruit buttercup	FACW
Rosaceae		
Heteromeles arbutifolia	Toyon	NL
Prunus sp.	Cherry	-
Rubus armeniacus	Himalayan blackberry	FAC
Rubiaceae		
Galium aparine	Goose grass	FACU
Salicaceae		
Populus fremontii subsp. *fremontii*	Fremont cottonwood	FAC
Salix gooddingii	Black willow	FACW
Salix sp.	Willow	FACW-OBL
Sapindaceae		
Acer macrophyllum	Big-leaf maple	FAC
Aesculus californica	California buckeye	NL

TABLE C-1.
VASCULAR FLORA RECORDED FROM THE PROJECT SITE

Scientific Name*	Common Name	Wetland Indicator Status
Simaroubaceae		
Ailanthus altissima	Tree-of-heaven	FACU
Vitaceae		
Vitis californica	California wild grape	FACU
Angiosperms Monocotyledonae		
Agavaceae		
Chlorogalum pomeridium var. *pomeridium*	Soap plant	NL
Araceae		
Lemna sp.	Duckweed	OBL
Arecaceae		
Washingtonia robusta	Mexican fan palm	FACW
Cyperaceae		
Cyperus eragrostis	Umbrella sedge	FACW
Eleocharis macrostachya	Spikerush	OBL
Juncaceae		
Juncus xiphioides	Iris-leaved rush	OBL
Poaceae		
Avena barbata	Slender oat	NL
Avena fatua	Wild oat	NL
Bromus diandrus	Ripgut brome	NL
Bromus hordeaceus	Soft brome	FACU
Festuca myuros	Rat-tail fescue	FACU
Festuca perennis	Italian ryegrass	FAC
Hordeum marinum var. *gussoneanum*	Mediterranean barley	FAC
Hordeum murinum var. *leporinum*	Hare barley	FACU
Phalaris lemmonii	Lemmon's canary grass	FACW
Typhaceae		
Typha latifolia	Broadleaf cattail	OBL

NOTES:
* Arid West 2014 Regional Wetland Plant List (Lichvar, 2014).
Plant taxonomy follows the Jepson Manual (Baldwin et al., 2012)

Wetland Indicator Status Notes:

OBL = Obligate Wetland; occur almost always (estimated probability >99%) under natural conditions in wetlands.
FACW = Facultative Wetland; usually occur in wetlands (estimated probability 67–99%), but occasionally found in non-wetlands.
FAC = Facultative; equally likely to occur in wetlands or nonwetlands (estimated probability 34-66%).
FACU = Facultative Upland; usually occur in nonwetlands (estimated probability 67–99%), but occasionally found in wetlands.
UPL = Obligate Upland; occur almost always (estimated probability >99%) under natural conditions in nonwetlands within this region.
NL = Not listed

Appendix D
Aquatic Resources

Waters_Name	State	Cowardin_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude
SW-2	CALIFORNIA	PEM2	Area	0.04	ACRE	NRPWW	38 50' 1.132" N	121 10' 32.888" W
SW-3	CALIFORNIA	PEM2	Area	0.005	ACRE	NRPWW	38 50' 1.481" N	121 10' 32.629" W
SW-4	CALIFORNIA	PEM2	Area	0.002	ACRE	NRPWW	38 50' 1.528" N	121 10' 32.425" W
SW-5	CALIFORNIA	PEM2	Area	0.014	ACRE	NRPWW	38 50' 2.042" N	121 10' 30.684" W
ED-1	CALIFORNIA	R4SB5	Area	0.012	ACRE	NRPW	38 49' 58.962" N	121 10' 26.221" W
ED-2	CALIFORNIA	R4SB5	Area	0.005	ACRE	NRPW	38 50' 1.659" N	121 10' 31.811" W
ED-3	CALIFORNIA	R4SB5	Area	0.009	ACRE	NRPW	38 50' 1.850" N	121 10' 29.432" W
ED-4	CALIFORNIA	R4SB5	Area	0.099	ACRE	NRPW	38 50' 10.014" N	121 10' 28.625" W
ED-5	CALIFORNIA	R4SB5	Area	0.031	ACRE	NRPW	38 50' 16.929" N	121 10' 29.578" W
ED-6	CALIFORNIA	R4SB5	Area	0.017	ACRE	NRPW	38 50' 6.071" N	121 10' 29.751" W
Pond 1	CALIFORNIA	L1AB3	Area	0.973	ACRE	IMPNDMNT	38 50' 9.237" N	121 10' 30.513" W
Pond 2	CALIFORNIA	L1AB3	Area	0.104	ACRE	IMPNDMNT	38 49' 57.952" N	121 10' 26.753" W

Appendix E
Study Area Photographs

UAIC Tribal School Project.105225

Photo 1
SW-2. March 9, 2017

UAIC Tribal School Project.105225

Photo 2
SW-5. March 9, 2017

UAIC Tribal School Project.105225

Photo 3
ED-4. March 9, 2017

UAIC Tribal School Project.105225

Photo 4
Pond-1. March 9, 2017

UAIC Tribal School Project.105225

Photo 5
Pond-2. March 9, 2017

UAIC Tribal School Project.105225

Photo 6
SW-1 (isolated). March 9, 2017

UAIC Tribal School Project.105225

Photo 7
DD-1 (isolated). March 9, 2017

UAIC Tribal School Project.105225

Photo 8
DD-2 (isolated). March 9, 2017

UAIC Tribal School Project.105225

Photo 9
DS-1. March 9, 2017

UAIC Tribal School Project.105225

Photo 10
Sample Point DP-1 (SW-1 isolated). March 9, 2017

UAIC Tribal School Project.105225

Photo 11
Sample Point DP-2 (SW-1 isolated). March 9, 2017

UAIC Tribal School Project.105225

Photo 12
Sample Point DP-3 (upland). March 9, 2017

UAIC Tribal School Project.105225

Photo 13
Sample Point DP-4 (SW-1 isolated). March 9, 2017

UAIC Tribal School Project.105225

Photo 14
Sample Point DP-5 (upland). March 9, 2017

UAIC Tribal School Project.105225

Photo 15
Sample Point DP-6 (upland). March 9, 2017

UAIC Tribal School Project.105225

Photo 16
Sample Point DP-7 (upland). March 9, 2017

UAIC Tribal School Project.105225

Photo 17
Sample Point DP-8 (SW-2). March 9, 2017

UAIC Tribal School Project.105225

Photo 18
Sample Point DP-11 (SW-5). March 9, 2017

UAIC Tribal School Project.105225

Photo 19
Sample Point DP-13 (upland). March 9, 2017

UAIC Tribal School Project.105225

Photo 20
Sample Point DP-14 (upland). March 9, 2017

UAIC Tribal School Project.105225

Photo 21

Sample Point DP-16 (upland). March 9, 2017