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# Appendix C Biological Resources Reports and Arborist Report

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# Biological Resources Report



**DRAFT**  
**BIOLOGICAL RESOURCES REPORT**  
**COSTCO WHOLESALE PROJECT**  
**TOWN OF LOOMIS, PLACER COUNTY, CALIFORNIA**



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- ATTACHMENT 5.** USACE Wetland Determination Letter, June 14, 2016

This report should be cited as: *Draft Biological Resources Report, Costco Wholesale Project, Town of Loomis, Placer County, California*. April 2017. San Rafael, California 36 pp. plus attachments. Prepared for Costco Wholesale.

## **1.0 INTRODUCTION**

On behalf of Costco Wholesale, Huffman-Broadway Group, Inc. (HBG) has prepared a Biological Resources Report for the Costco Wholesale Project in The Town of Loomis, Placer County, California. It is expected that this Biological Resources Report will be incorporated into an environmental document prepared by Placer County to satisfy requirements of the California Environmental Quality Act (CEQA). This report describes biological resources and ecological constraints present on the 17.88-acre Project Site, including the presence of sensitive habitats and an evaluation of the potential for rare, threatened, or endangered species of flora and/or fauna to occur at the site or in the project vicinity. The report also includes a preliminary review of biological impacts associated with implementation of the project and recommended mitigation measures, as needed.

Our analysis included a review of pertinent literature on habitat characteristics of the site, species of plants and animals expected to utilize the site, a review of planning documents referencing ecological aspects of the site, and field site surveys. The Biological Resources Report also incorporates the results of a wetland jurisdictional determination prepared for the site by Salix Consulting Inc., in May of 2016. This report was a detailed delineation of wetlands and waters of the United States at the property, conducted per criteria of the U.S. Army Corps of Engineers, and the results of the wetland delineation are summarized herein. Also considered is an Arborist's Report prepared by Mann Made Resources. Both the wetland delineation and arborist's report are included as attachments. The California Natural Diversity Data Base (CNDDB) was consulted to determine if any populations of endangered, threatened, or rare species have occurred historically or currently are known to exist near the project. The study site was surveyed by HBG biologists during February of 2017.



## **2.0 PROJECT DESCRIPTION**

### **2.1 Location of Project Site**

The Project Site is in the Town of Loomis in Placer County, California. The site is north of Interstate 80, in the southeastern corner of the intersection between Sierra College Boulevard and Brace Road. The location corresponds to Section 28 of Township 11 North and Range 7 East on the 7.5 minute Rocklin, CA United States Geological Survey (USGS) quadrangle (Figure 1). The latitude and longitude of the approximate center of the site are 38°48'34" North and 121°12'16" West. The Assessor Parcel Numbers (APNs) are 045-042-011, 045-042-012, 045-042-023, 045-042-034, 045-042-035, 045-042-036, and 045-042-037. The property is located on the Loomis 7.5-minute U.S. Geographic (USGS) topographic quadrangle map.

Refer to Exhibit 1, Figure 1 for the project site location map, Figure 2 for the location of the project on the Loomis USGS 7.5-minute quadrangle map, and Figure 3 for an aerial photograph of the project site.

### **2.2 Project Description**

Costco Wholesale is proposing to construct a Costco facility at the site as shown in Figure 4. The facility includes the Costco warehouse and associated parking and other planned infrastructure. The proposed project would cover the entire site.

## 3.0 EXISTING SETTING

### 3.1 Site Description

The Project Site is in the Town of Loomis in Placer County, California. The site is north of Interstate 80, in the southeastern corner of the intersection between Sierra College Boulevard and Brace Road. Adjacent land uses include a multi-family residential building along the northern boundary the Homewood Lumber complex to the north, single family residential to the east, commercial and undeveloped land to the south, and an office building and undeveloped land to the west (Figure 3). The study area is bounded by Brace Road to the north and Sierra College Boulevard to the west.

General features of the project site are as follows:

- **Soils and Topography.** One soil unit is mapped in the study area (Figure 5): Andregg coarse sandy loam, 2 to 9 percent slopes. Andregg soils are well drained and have moderately rapid permeability. This soil is neither ponded nor flooded. This soil does not meet hydric criteria. The study area is located at an elevation between approximately 320 and 340 feet. The topography of the study area gently slopes to the west.
- **Hydrology.** The Project Site is in the Dry Creek watershed (Hydrologic Unit Code 1802011101), as shown in the watershed map of Figure 6. A wetland swale and drainage ditch located in the southwest corner of the site drain water westerly and convey water offsite through culverts underneath Sierra College Boulevard. Water continues to drain westerly on the adjacent property and drains into Sucker Ravine which drains into Secret Ravine. Secret Ravine is a tributary of Miners Ravine, which ultimately reaches Dry Creek and then the American River. The constructed drainage in the northeastern corner conveys storm water and urban runoff from the residential development to the east through a storm drain system.
- **Vegetation.** Based on field reconnaissance by HBG conducted in February 2017 and review of the wetland jurisdictional report (Salix 2016), the Project Site is made up of Valley Oak Woodland, Annual Grassland and Valley Freshwater Marsh. Details of vegetation are provided below in Section 3.2.
- **Climate.** Loomis has a temperate Mediterranean climate with dry hot summers and mild winters. Average high temperature typically varies from 54 degrees F in the winter to approximately 92 degrees in the summer. Average rainfall for the area is approximately 25 inches per year, most occurring between November and April.

## 3.2 Biological Setting

### 3.2.1 Plant Communities

An HBG biologist conducted field reconnaissance of the project site on February 11, 2017. All habitats on the project sites were surveyed on foot and assessed for similarity to sites known to support special status species within the area. Qualitative information on the composition and distribution of plant species on the sites was obtained during the site visits. Plant communities were identified on aerial photographs of the site.

Vegetation communities are assemblages of plant species growing in an area of similar biological and environmental factors. Vegetation communities and habitats at the project site were identified based on the currently accepted List of Vegetation Alliances and Associations (or Natural Communities List) (CDFW 2010). The list is based on A Manual of California Vegetation, Second Edition (Sawyer and Keeler-Wolf 2009), which is the National Vegetation Classification applied to California. The project site contains three habitat types per this classification: Valley Oak Woodland (7.96 acres), Annual Grassland (10.16 acres), and Valley Freshwater Marsh (0.15 acres). Figure 7 shows the extent and distribution of vegetation types on the property. A list of plant species identified on the property during surveys is included in Attachment 2, Table 1. The main source for the plant list in Table 1 was the wetland delineation report prepared by Salix (2016), which was augmented with additional species noted during surveys by HBG.

Wetland habitats on-site were further classified using the U.S. Fish and Wildlife's Service's "Classification System for Wetland and Deepwater Habitats" (Cowardin et al. 1979); the wetlands at the property are defined as palustrine emergent seasonal wetlands, palustrine emergent vernal pools, and palustrine scrub-shrub wetlands per the Cowardin et al criteria.

#### Annual Grassland

Annual grassland is the predominant habitat type on site, comprising 10.16 acres, or approximately 56% of the land area. The Annual Grassland found on the property is comprised largely of non-native grasses and forage species. Grasses included Italian ryegrass (*Festuca perennis*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), wild oat (*Avena fatua*), hedgehog dogtail (*Cynosurus echinatus*), foxtail barley (*Hordeum jubatum*), and medusahead (*Elymus caput-medusae*). Forbs present include Italian thistle (*Carduus pycnocephalus*), California mugwort (*Artemisia douglasiana*), field hedge parsley (*Torilis arvensis*), klamathweed (*Hypericum perforatum*), broad-leaf filaree (*Erodium botrys*), common vetch (*Vicia sativa*), and cut-leaf geranium (*Geranium dissectum*), yellow starthistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), smooth's cat-ear (*Hypochaeris glabra*), common fiddleneck (*Amsinckia menziesii*), short-podded mustard (*Hirschfeldia incana*), and bindweed (*Convolvulus arvensis*). The annual grassland onsite appears to be disked annually.

#### Valley Oak Woodland

Valley Oak Woodland comprises 7.96 acres or approximately 44% of the site. The foothill woodland varies in density throughout the site, being mostly open, and it is dominated by

valley oak (*Quercus lobata*) and interior live oak (*Quercus wislizeni*), with a small number of blue oak (*Quercus douglasii*), and a few scattered foothill pines (*Pinus sabiniana*). Shrubs in the understory include thickets of coyote brush (*Baccharis pilularis*) and Himalayan berry (*Rubus armeniacus*). Groundcover is mostly the non-native herbaceous plants and grasses that are noted as occurring in the Annual Grassland above.

A tree survey conducted on the site by Mann Made Resources (see Attachment 3) found 372 trees that were determined to be of protected size. These 372 trees consisted of 284 valley oaks, 86 Interior live oaks, and two blue oaks. Of these, 162 trees were found to be in good or fair condition and 210 trees were found to be in poor, very poor, or dead condition. The 210 trees included 68 trees in poor condition, 38 trees in very poor condition, and four trees that were dead. The Tree Preservation Ordinance of the Town of Loomis provided the requirements for data collection; blue oaks 4 inches in diameter and greater and valley and interior live oaks 6 inches in diameter and greater are considered Protected Trees. Detailed information regarding all trees on the property is included in the Tree Report (Mann Made Resources, see Attachment 3), including information on species, size, condition, suitability for preservation.

The California Oak Woodlands Conservation Program recognizes oak woodlands as a vital statewide resource providing benefits including wildlife habitat, monetary and ecological value, and an ability to reduce soil erosion, enhance water quality and moderate temperatures.

### **Valley Freshwater Marsh**

Valley Freshwater Marsh habitat occurs within three separate swales occurring on the property. The marsh habitats total 0.15 acres. The three separate wetland swales are shown in Figure 7 and are described in detail in Section 3.2.3 (Wetland and Other Waters of the U.S. Delineation).

One of three swales flows westerly through the oak woodland into a culvert under Sierra College Boulevard. The eastern end of the swale is a small open area dominated by iris leaf rush (*Juncus xiphioides*). The swale flows through a patch of coyote brush, and the lower portion of the swale includes wetland plant species such as hyssop loosestrife (*Lythrum hyssopifolia*), curly dock (*Rumex crispus*), prickly lettuce (*Lactuca serriola*), Italian ryegrass, and Mexican rush (*Juncus mexicanus*). A short swale in the northeast corner of the site is vegetated with Himalayan blackberry and flows under Starlight Lane. The third swale in the southwestern corner of the study area is an area where stormwater runoff drains onto the Project Site from nearby commercial development and travels about 175 feet before exiting the site through a culvert under Sierra College Boulevard. Wetland species such as water plantain (*Alisma triviale*), speedwell (*Veronica* sp.), moth mullein (*Verbascum blattaria*), water cress (*Nasturtium officinale*), and curly dock are present.

### **3.2.2 Animal Populations**

The species discussed in this study are based on review of available literature, visits to the area by HBG wildlife biologist for many years, and habitat observations made during qualitative surveys conducted by an HBG wildlife biologist on February 11, 2017. A complete listing of the references from which information was compiled on the flora and fauna inhabiting the region is

contained in the References section. Table 1 (Attachment 2) provides species lists based on these reconnaissance level observations for reptiles, amphibians, birds and mammals. The table lists all wildlife species observed or expected on the project sites and in the site vicinity and includes the scientific names of all species mentioned in the text.

The wetland habitats and the disturbed annual grassland and oak woodland habitats onsite support a variety of wildlife species. The complex of habitats includes the presence of small streams that can accommodate wildlife adapted to aquatic areas, and upland vegetation that provides potential foraging areas for species of mammals, reptiles, amphibians and birds. Native trees and shrubs are present along with native and non-native herbaceous plants and grasses that provide a mix of habitats suitable to support nesting by a variety of both passerine and non-passerine avian species.

Much of the wildlife observed at the site during the February 11 field reconnaissance included resident and wintering species of birds that are adapted to the mix of wetland and upland habitats found at the site. Resident bird species observed during the field review, many of which may also nest at or in the vicinity of the site, include red-shouldered hawk, Anna's hummingbird, mourning dove, Northern flicker, acorn woodpecker, Nuttall's woodpecker, black phoebe, western bluebird, California scrub-jay, European starling, Northern mockingbird, oak titmouse, bushtit, white-breasted nuthatch, Bewick's wren, California towhee, white-crowned sparrow, song sparrow, purple finch and house finch. Species observed that are expected only during the winter include red-breasted sapsucker, American robin, hermit thrush, ruby-crowned kinglet, yellow-rumped warbler, and golden crowned sparrow. Additional neotropical migrants that could be expected to nest at the site during the spring and summer months include Pacific-slope flycatcher, western wood-pewee, western kingbird, ash-throated flycatcher, black-headed grosbeak and Bullock's oriole. Additional wildlife surveys will be conducted by an HBG wildlife biologist in late-April or May of 2017.

Although no mammals were documented at the site, it is expected that mammals adapted to urban environments would be found on the property including striped skunk, raccoon, Virginia opossum, deer mouse and mule deer. Despite looking under logs and boards, no reptiles were observed and the only amphibian recorded was Pacific treefrog. Additional amphibians likely include western toad, and common reptiles likely include western fence lizard, southern alligator lizard, western skink, ringneck snake, gopher snake and common garter snake.

### **3.2.3 Wetland and Other Waters of the U.S. Delineation**

#### **Definitions of Wetlands and Other Waters of the U.S.**

The Department of the Army, acting through the U.S. Army Corps of Engineers (Corps), has the authority to permit the discharge of dredge or fill material in waters of the U.S. under Section 404 of the Clean Water Act (CWA), and permit work and placement of structures in navigable waters of the U.S. under Section 10 of the Rivers and Harbors Act of 1899 (RHA).

EPA and the Corps define wetlands as: "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" (EPA regulations at 40 CFR § 230.3(t); Corps regulations at 33 CFR § 328.3(b)). The term "under normal circumstances" refers to situations in which the vegetation has not been substantially altered by man's activities as defined in Appendix A of the Corps' 1987 *Wetlands Delineation Manual*. Clarification of the term, as it pertains to farmed wetlands, was further defined in Regulatory Guidance Letter 90-7 dated September 26, 1990, as "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed."

Under Section 10 of the Rivers and Harbors Act of 1899, the Corps also regulates the construction of structures in, over, or under; excavation of material from; or deposition of material into navigable waters. As described by Corps' regulation 33 CFR § 329.4, the general definition of "navigable waters" includes those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or might be susceptible for use to transport interstate or foreign commerce. Several factors must be examined when making a determination whether a waterbody is a navigable water. These factors include (a) past, present, or potential presence of interstate or foreign commerce; (b) physical capabilities for use by commerce and (c) defined geographic limits of the waterbody. A determination of navigability, once made by the Corps, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which impeded or destroy navigable capacity. Based on this provision, the Corps also has the discretion to regulate activities in historically navigable waters. Historically navigable waters are areas that were navigable in the past, but are no longer navigable because of artificial modifications, such as levees, dikes, and dams.

Furthermore, waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 C.F.R. §328.3(e)).

### **Detailed Wetland and Other Waters of the U.S. Delineation-Methodology**

Salix Consulting, Inc. conducted a preliminary wetland delineation of the property in May of 2016 (Salix Consulting 2016) in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the Corps' 1987 *Wetlands Delineation Manual* (1987 Manual), the Corps' 2008 *Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid West, Version 2.0* (Arid West Regional Supplement) and supporting guidance documents. The 1987 Manual provides technical guidance and procedures, from a national perspective, for identifying and delineation of wetlands that may be subject to Section 404 of the CWA. Pursuant to the 1987 Manual, key criteria for determining the presence of wetlands are: (a) the presence of inundated or saturated soil conditions resulting from permanent or periodic inundation by groundwater or surface water; and (b) a prevalence of vegetation typically adapted for life in saturated soil conditions (i.e., hydrophytic vegetation). Explicit in the definition is the consideration of three environmental parameters: hydrology, soil, and

vegetation. The Arid West Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. The combined use of the 1987 Manual and Arid West Regional Supplement enhances the technical accuracy, consistency, and credibility of wetland determinations.

### **Detailed Wetland Delineation-Results**

A total of 0.15 acres of vegetated palustrine emergent wetlands were found within the project site as shown in Figure 8. This finding is based on the collective presence of hydric soil, wetland hydrology, and wetland vegetation indicators. The identified palustrine emergent wetlands contained low chroma soils, evidence of wetland hydrology and vegetation adapted for life in saturated soil conditions. The 0.15 acres of vegetated wetlands on the project site are palustrine emergent seasonal wetlands and palustrine scrub-shrub wetlands per Cowardin et al. (1979) criteria. The wetlands mapped on site consist of areas located within the three drainages found on the property. The 0.15 acres of jurisdictional waters of the US serve the functions of flood flow alteration, groundwater recharge, sediment reconstruction, sediment/toxicant retention, nutrient removal/ transformation, production export, and wildlife habitat.

Aquatic resources within the Study Area and adjacent to the Study Area were examined with respect to the *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) exclusion from Clean Water Act regulation. No areas were found that could either potentially be exempted or excluded from regulation in accordance with SWANCC. HBG has also reviewed the wetlands with respect to the *Rapanos v. United States* and *Carabell v. United States* 547 U.S. 715 (2006) and found the areas in question to be jurisdictional pursuant to the Corps criteria.

The wetland map was verified by the Sacramento District of the Corps of Engineers on June 14, 2016. Three areas of jurisdictional wetland have been verified on the property. These are noted in Figure 8 as Wetland Swale (WS)-1, WS-2 and WS-3 and are described below with information contained the wetland delineation report (Salix Consulting 2016).

- WS-1 (0.12 acres) occurs within the foothill woodland habitat. The swale begins in the middle of the study area, where it collects surface water (in the form of sheet flow) and then drains westerly, where it then exits the study area through a culvert underneath Sierra College Boulevard. The swale then continues west to culvert adjacent to Sierra College Boulevard.
- WS-2 (0.01 acres) enters the study area through a culvert along the eastern boundary in the northeast corner of the study area. The swale appears to convey stormwater runoff and urban water westerly for approximately 80 feet within the study area, and then exits the study area through a culvert underneath Starlight Lane.
- WS-3 (0.02 acres) occurs in the southwestern corner of the study area, where stormwater runoff drains onto the study area through an 18-inch PVC culvert located on the commercial development (McDonald's/Chevron) to the south. The swale continues

for approximately 175 feet west until it merges with a narrower excavated ditch that drains water from a 12-inch concrete culvert located under the commercial development to the south. Water exits the study area along the western boundary through a 30-inch corrugated metal pipe culvert under Sierra College Boulevard.

### **3.2.4 Special Status Species**

Sensitive species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the “rare” or “endangered” criteria defined in Title 14, California Code of Regulations, Section 15380.

The CDFW maintains records for the distribution and known occurrences of sensitive species and habitats in the California Natural Diversity Database (CNDDDB). The CNDDDB is organized into map areas based on 7.5 minute topographic maps produced by the U.S. Geological Survey (USGS). All known occurrences of sensitive species and important natural communities are mapped onto the quadrangle map. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat. The Project Site is in the Rocklin 7.5-minute USGS topographic quadrangle map. The relevant adjacent quads within the search area are the Roseville, Lincoln, Gold Hill, Auburn, Pilot Hill, Folsom, and Citrus Heights quadrangles. HBG collected all information contained within the CNDDDB regarding special status species within a 10-mile radius of the Project Site.

A search of the CNDDDB records of occurrence for special status animals and plants and natural communities within these quadrangles indicated that none have been documented as occurring on the Project Site itself, but that a number of special status animal species have been known to occur in the project vicinity. The absence of a special animal, plant, or natural community from the report does not necessarily mean they are absent from the area in question, but only that no occurrence data have been entered for that species or natural community in the CNDDDB inventory. The occurrence of special status plant and animal species near the project area may be an indication that they also could occur at the Project Site, depending on habitat conditions at the site. Therefore, occurrences of special status species throughout the quadrangles mentioned above were noted in considering the potential presence of these species on the Project Site.

An evaluation of all special status plant species reported near the Project Site is presented in Table 3 (Attachment 2). Table 4 presents an evaluation of special status animal species that have been reported near the project.



### Special Status Plant Species

Special status plant species include: (i) species that are listed or proposed for listing as threatened or endangered under the federal Endangered Species Act; (ii) species that are listed, or proposed for listing by the state of California as threatened or endangered under the California Endangered Species Act; (iii) plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California and elsewhere; and (iv) plant species that meet the definition of rare or endangered under CEQA.

A target list of special status plants found within 10 miles of the site is shown in Table 3 that includes all species mentioned in the CNDDDB occurring within 10 miles of the project site. Many of the species mentioned in the CNDDDB as occurring within 10 miles of the project require habitats that are not found on the Project (e.g., vernal pools, chaparral, coniferous forest) or microhabitat conditions such as soils that do not occur on the property (gabbro or serpentine). Based on field review of the habitats and conditions occurring on the site, HBG has determined that several species are possible at the Project Site. These species are listed below along with their flowering periods (Munz and Keck 1973).

- Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) a CNPS List 1B.2 plant, that is sometimes, but not always found in serpentine. Flowering period from March to June.
- Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeae*), a CNPS List 4.2 plant. Flowering period from May to July.
- Stinkbells (*Fritillaria agrestis*), a CNPS List 4.2 plant, that is sometimes, but not always found in serpentine. Flowering period from March to June.

A systematic survey of the site for special status plant species is planned for the spring and summer of 2017. Dr. Terry Huffman, Ph.D. botanist, will conduct systematic surveys both early and late in the flowering period of target species. Surveys will be conducted between late-March and late-June.

### Special Status Animal Species

The special status animal species evaluated in Table 4 (Attachment 2) include those noted in the CNDDDB as occurring within 10 miles of the site and those that are known to occur in the general vicinity based on the knowledge of HBG biologists. Key species are either known to occur in the vicinity of the property or with a potential to occur at the site, or that require specific study to determine presence/absence, are discussed below.

HBG has consulted the CDFW California Natural Diversity Data Base (CNDDDB) to ascertain the potential for special status animal species occurring within the 7.5-minute quadrangle map areas in the project site vicinity. The CNDDDB indicates that seven special status species deserve note as having occurred within the 10-mile radius of the site: vernal pool fairy shrimp (*Branchinecta lynchi*), California linderiella (*Linderiella occidentalis*), Steelhead-Central Valley DPS (*Oncorhynchus mykiss irideus*), Western spadefoot toad (*Spea hammondi*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*) and tricolored blackbird (*Agelaius*

*tricolor*). These species are discussed below. Other species found to occur within the general CNDDDB search area, or determined to be potentially present based on the knowledge of the investigators, are evaluated in Table 4.

HBG wildlife biologist Gary Deghi conducted a variety of special status species surveys and habitat assessments on the project site during a field visit conducted on February 11, 2017. The field work included an evaluation of wetlands swales areas for suitability to support the vernal pool fairy shrimp, vernal pool tadpole shrimp and western spadefoot toad. Gary Deghi of HBG also conducted habitat evaluations related to other special status species including possible use of the site by special status raptors (including Swainson's hawk, burrowing owl, white-tailed kite and others) and other special status species such as Western pond turtle, tricolored blackbird and loggerhead shrike.

#### Listed Vernal Pool Large Branchiopods

The two most common of the large branchiopods occurring in the Central Valley, that are listed under the federal Endangered Species Act, are the threatened vernal pool fairy shrimp (VPFS, *Branchinecta lynchi*) and endangered vernal pool tadpole shrimp (VPTS, *Lepidurus packardii*). These large branchiopods are ephemeral creatures. When the temporary water bodies that they inhabit dry up, the population remains in the dry basin as cysts (embryonic eggs). These cysts can withstand harsh conditions (i.e., freezing and desiccation) while they await the return of rain to fill their pools. After the appropriate environmental conditions (i.e., water temperature, pH, oxygen concentration, etc.) prevail, the young hatch, quickly mature, and then mate to ensure the next generation.

Potential habitat for listed large branchiopods is considered any seasonally-inundated depression that on average ponds water at a sufficient depth and duration for a listed branchiopod to complete its lifecycle. Potential habitat for the VPFS and VPTS are defined as any seasonal inundated depression that on average ponds water 2.0 inches or greater in depth for 14 or more consecutive days and 30 or more consecutive days, respectively. Generally, these habitats occur within the California Floristic Province at elevations below 5,600 feet in Coast Range and below 3,000 feet elevations for the rest of the State and Oregon. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages) or semi-to-permanently inundated areas that support perennial population of predators (e.g. bullfrogs, fish, and crayfish) are generally not considered suitable habitat for federally listed large branchiopods.

The records search of the CNDDDB (CDFW 2017) revealed occurrences of the VPFS or VPTS within vernal pool landscapes as close as about 3 miles to the south and west of the Project Site. It was determined that the seasonal swales at the Project Site were flowing-water systems of insufficient depth that do not exhibit the characteristics that would accommodate use of the site by either of these listed species of vernal pool crustacean.

#### California Linderiella

The California linderiella (*Linderiella occidentalis*), also known as the California fairy shrimp, is

not listed by the federal ESA or CESA, but was at one time a federal species of concern and is listed by the International Union for the Conservation of Nature (IUCN) as a species threatened with extinction. It is generally found in the same types of aquatic habitats as vernal pool fairy shrimp and frequently co-occurs with this species. This species tends to live in large, fairly clear vernal pools and lakes. However, they can survive in clear to turbid water with a pH from 6.1 to 8.5, and they have also been found in very small pools. They are tolerant of water temperatures from 41 degrees to 85 degrees F, making them the most heat tolerant fairy shrimp in California. The California fairy shrimp is the most common fairy shrimp in the Central Valley. It has been documented in most land forms, geologic formations and soil types supporting vernal pools in California, at altitudes as high as 3800 feet above sea level. The range extends from Shasta County south to Fresno County and across the valley to the coast and Transverse Ranges from Willits in Mendocino County south to near Sulfur Mountain in Ventura County.

The CNDDDB documents that California linderiella have occurred in vernal pool landscapes as near as two miles south of the Project Site. None of the seasonal wetlands found on the Project Site have inundation characteristics making them suitable to support California linderiella.

#### *Steelhead- Central Valley DPS*

Central Valley steelhead was originally listed in 1998 as a threatened species and the listing was reconfirmed in January of 2005. The Central Valley Distinct Population Segment (DPS) includes all naturally spawned populations of steelhead (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco Bay and San Pablo Bays and their tributaries. Central Valley steelhead spawn and rear, or have the potential to spawn and rear, in western Placer County streams, including Coon Creek, Doty Ravine, Auburn Ravine, Secret Ravine, and Miners Ravine. In the project area, Central Valley steelhead are found in Dry Creek and its tributaries in Secret Ravine and Miners Ravine, located about four miles southwest of the Project Site.

Steelhead are anadromous, but some individuals may complete their life cycle within a given river reach. Historical records indicate that adult steelhead enter the mainstem of the Sacramento River in July, peak in abundance in September and October, and continue migrating through February or March. Most steelhead spawn from December through April, with the most spawning occurring from January through March. Unlike Pacific salmon, some steelhead may survive to spawn more than once, returning to the ocean between spawning migrations. Juvenile migration to the ocean generally occurs from December through August. Most Sacramento River steelhead migrate in spring and early summer. After 2 to 3 years of ocean residence, adult steelhead return to their natal stream to spawn as 3- or 4-year-olds.

Local populations of Central Valley steelhead are found in Dry Creek and its tributaries, most notably in Secret Ravine and Miners Ravine. The CNDDDB (CDFW 2017) reports that the mainstem of Dry Creek is used by the fish as a migratory corridor as the water quality and substrate are too degraded to support spawning. Spawning and rearing habitat is found in tributaries upstream from Dry Creek, including both Secret Ravine and Miners Ravine, which are located about four miles southwest of the Project Site. Electrofishing surveys conducted in

2004 caught 136 steelhead in Secret Ravine and evidence of spawning was also reported in 2007. Cottonwood Dam was a barrier to fish passage in Miners Ravine until the dam's collapse in 2009.

### Western Spadefoot Toad

The western spadefoot toad (*Scaphiopus hammondi*) is a state-designated species of special concern that is known from the Central Valley and adjacent foothills, and from the coast ranges south of San Francisco Bay to Baja California. Western spadefoot toads require presence of an aquatic habitat for breeding and a terrestrial habitat for feeding and aestivation. Western spadefoot toads are mostly terrestrial, using upland habitats to feed and burrow in for their long dry-season dormancy. The species primarily occurs in grasslands habitat, typically near extensive areas of friable soils (but usually not sandy), but can occur in valley-foothill woodlands, coastal scrub and chaparral communities below 3,000 ft. elevation.

The western spadefoot toad requires seasonally-inundated wetlands for reproduction and metamorphosis, but have been known to utilize slow-moving waters and pools within washes, river floodplains, alluvial fans, alkali lakes and playas. They mate during the rainy season (generally from January to March), usually after heavy rains. Potential western spadefoot toad breeding habitat includes any seasonally to semi-permanently inundated depression that on average ponds water at a sufficient depth and duration for a toad to complete its lifecycle (eggs to metamorphous) which occurs in the known range of the species. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages) or support populations of predators (e.g. bullfrogs, fish, crayfish) are generally not considered suitable habitat for western spadefoot toad larvae.

The CNDDDB reports occurrences of western spadefoot toad in suitable habitat approximately 3.5 miles southwest of the Project Site. A review of habitat conditions found on the site during field studies conducted on February 11, 2017 revealed that the seasonal swales are flowing streams of insufficient depth and duration to support the western spadefoot toad.

### Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is a medium-sized hawk that is state-listed in California as threatened species and designated by the USFWS as a Bird Species of Conservation Concern. Most Swainson's hawk territories in the Central Valley are in riparian systems adjacent to suitable foraging habitats. Valley oak, Fremont cottonwood, walnut and large willows with an average height of about 58 feet, and ranging from 41 to 82 feet, are the most commonly used nest trees in the Central Valley (CDFG 2007), but eucalyptus is also commonly used. Swainson's hawks often nest peripherally to riparian systems of the valley as well as utilizing lone trees or groves of trees in agricultural fields. Suitable foraging areas include grasslands, pastures, alfalfa and other hay crops, and certain grain and row croplands. In the Central Valley, Swainson's hawks find suitable foraging habitat in such agricultural areas near suitable nest sites, however, nesting habitat is in decline due primarily to flood control projects, agricultural practices, and urban development. The current population of Swainson's hawk in California's Central Valley is estimated at 1,948 breeding pairs (CDFW 2007), with most of this population occurring in the

area from Stanislaus County north to Butte County.

The nearest documentation of nesting Swainson's hawk is about 7 miles west of the Project Site, according to the CNDDDB. Swainson's hawk is much more likely to nest in trees near riparian habitats or agricultural fields on the Valley floor rather than in oak woodland in the foothills, such as found at the Project Site. Use of the Project Site by this species is probably limited to occasional visits while foraging. Nevertheless, spring surveys of the site planned by an HBG wildlife biologist between late-April and May of 2017 will include searches for this species.

#### Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a state species of special concern and designated by the USFWS as a Bird Species of Conservation Concern. Burrowing owls are small terrestrial owls commonly found in open grassland topography ranging from western Canada to portions of South America. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. In California, burrowing owls most commonly use ground squirrel burrows, but they also may use man-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers during migration. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or, alternatively, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance.

The nearest report of burrowing owl in the CNDDDB is more than eight miles west of the site. A survey of the project area was conducted by HBG wildlife biologist Gary Deghi during the February 11, 2017 site visit, and no burrowing owls were observed. The site is also lacking in colonies of California ground squirrels that are the most common burrow occupied by burrowing owl. In addition, habitat at the Project Site was found to be unsuitable to support burrowing owl, as heights of herbaceous plants and grasses throughout the onsite uplands were too high to support foraging by this species. Based on these findings, it is very unlikely that burrowing owl occurs on the Project Site. In addition, no California ground squirrels or their burrows were observed anywhere on the site during field review, indicating that presence of burrowing owl on the property is extremely unlikely. Nevertheless, spring surveys of the site planned by an HBG wildlife biologist between late-April and May of 2017 will include searches for this species.

#### Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a Candidate for listing as Endangered under CESA and is also designated by the USFWS as a Bird Species of Conservation Concern. Commencing on December 29, 2014, tricolored blackbird nesting colonies were given a six-month emergency listing as an endangered species under the California Endangered Species Act. Tricolored blackbird is a highly colonial nesting species that breeds near freshwater, preferably in emergent wetlands with tall, dense growth of cattails or tules. Even when the preferred nesting substrates are available, other vegetation may be used for nesting including sedges, nettles,

willows, thistles, mustard, blackberry, wild rose, foxtail grass or barley. Since the 1970s with declines in populations, nesting in cereal crops and dairy silage has been documented. Tricolored blackbird foraging areas include rangeland, fields of alfalfa or cut hay, or irrigated pastures with an abundance of insects. No areas of the Project Site provide suitable habitat for a nesting colony of tricolored blackbird, nor do onsite habitats provide foraging habitat for the species.

*Special Status Raptor Species*- Six raptor species designated with special status by the State of California have a small potential to nest at the site. These species include ground-nesting species: burrowing owl (State Species of Special Concern and Federal Bird Species of Conservation Concern), and Northern harrier (State Species of Special Concern and Federal Bird Species of Conservation Concern); and tree nesting species: white-tailed kite (California Fully Protected), Cooper's hawk (California Watch List Species), Sharp-shinned hawk (California Watch List Species) and Swainson's hawk (state-listed threatened).

Three raptor species that could occur are designated as state species of special concern based on presence of wintering habitat (ferruginous hawk, golden eagle, and merlin). These species are wide-ranging species often wintering over a broad area, and incidental use of the site by any these species in winter is certainly possible. The site, however, contains no unique habitat features that would highlight the importance of the site as a wintering location for any of these species.

### **3.2.5 Essential Fish Habitat**

The Magnuson-Stevens Fishery Conservation and Management Act conserves and manages the fishery resources found off the coasts of the United States, the anadromous species, and the Continental Shelf fishery resources of the United States, including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The National Marine Fisheries Service (NMFS) enforces the Magnuson-Stevens Fishery Conservation and Management Act and regulates commercial and recreational fishing and the management of fisheries resources. Consultation with NOAA Fisheries is required for all projects with the potential to affect EFH for any MSA species. Central Valley fall/late fall–run Chinook salmon is a Magnuson-Stevens Fishery Conservation and Management Act managed species.

In the Central Valley, fall/late fall–run Chinook historically spawned in all major streams draining the Sierra Nevada, but fish passage has since been blocked by dams. Currently, fall/late fall–run Chinook salmon compose about 80% of the total Chinook salmon produced in the Sacramento and San Joaquin drainages. Fall/late fall–run Chinook salmon spawn in the Sacramento and San Joaquin Rivers and most of their tributaries. Central Valley fall/late fall–run Chinook salmon spawn and rear, or have the potential to spawn and rear, in western Placer County streams including Bear River, Coon Creek, Doty Ravine, Auburn Ravine, Dry Creek, Antelope Creek, Secret Ravine, and Miners Ravine (Jones and Stokes 2005). Antelope Creek, Secret Ravine and Miners Ravine may be considered as Essential Fish Habitat

(EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of Central Valley fall/late fall–run Chinook salmon.

## 4.0 REGULATORY AGENCIES AND POLICIES

The following is a description of federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

### FEDERAL

#### ***Clean Water Act-Section 404***

The U.S. Army Corps of Engineers regulates discharges of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into Waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2(f)). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency are responsible for implementing the Section 404 program. Section 404(a) authorizes the Corps to issue permits, after notice and opportunity for comment, for discharges of dredged or fill material into waters of United States. Section 404(b) requires that the Corps issue permits in compliance with EPA guidelines, which are known as the Section 404(b)(1) Guidelines. Specifically, the Section 404(b) (1) guidelines require that the Corps only authorize the “least environmentally damaging practicable alternative” (LEDPA) and include all practicable measures to avoid and minimize impacts to the aquatic ecosystem. The guidelines also prohibit discharges that would cause significant degradation of the aquatic environment or violate state water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 C.F.R. §328.3(b)).

Furthermore, Jurisdictional Waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. §328.3(e)).



Tidal waters are also under the jurisdiction of the Corps. The landward limits of jurisdiction in tidal waters extend to the high tide line...“or, when adjacent non-tidal waters of the United States are present, to the limits of jurisdiction for such non-tidal waters” (33 C.F.R. §328.4(b)) High tide is further defined to include the line reached by spring high tides and other high tides that occur with periodic frequency (33 C.F.R. §328.3(d)).

All wetlands at the Project Site were reviewed to determine if they could be disclaimed from Corps jurisdiction as isolated wetlands following two recent US Supreme Court decisions. In *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC)*, No. 99-1178 (2001), some isolated wetlands may be excluded from the Corps’ Section 404 jurisdiction because they are (1) non-tidal, (2) non-navigable, (3) not hydrologically connected to navigable waters or adjacent to such waters, and (4) not subject to foreign or interstate commerce.

Subsequent to SWANCC, the U.S. Supreme Court decided on *Rapanos v. United States* and *Carabell v. United States*, 126 U.S. 2208 (2006) (herein referred to as Rapanos). In 2007, guidance was given to EPA regions and Corps districts to implement the Supreme Court’s decision which addresses the jurisdiction over waters of the U.S. under the Clean Water Act. The Rapanos guidance requires the Corps to conduct detailed analysis of the functions and values of wetlands and other waters of the U.S. potentially onsite and in some cases offsite, determine if there is a nexus to traditional navigable waters and the significance of the nexus to the traditional navigable water. Neither the Court nor the recently-issued guidance draw a clear line regarding the geographic reach of jurisdiction, particularly in drainages where flows are ephemeral and where wetlands are adjacent to but not directly abutting relatively permanent water, such as the wetlands delineated on the study site.

The guidance includes requirements for additional documentation, particularly regarding whether there is a “significant nexus” to a traditionally-navigable water (TNW). For water bodies that are traditionally navigable (and their adjacent wetlands), and for tributaries that are “relatively permanent waters” (RPW’s: streams that are not perennial but that flow for 3 months or more annually, and their adjacent wetlands that directly abut the RPW’s), the Corps and EPA will assert jurisdiction under the Clean Water Act, without the need for any exhaustive documentation of “significant nexus.” There is no dispute that Clean Water Act jurisdiction encompasses traditionally-navigable waters and their perennial and relatively-permanent tributaries. Activities that result in discharges of pollutants into these waters can adversely affect the physical, chemical, and biological integrity of navigable waters.

For wetlands adjacent to but not directly abutting a RPW, jurisdiction may be asserted under the Clean Water Act if there is a “significant nexus” and for tributaries that typically do not flow more 3 months or more annually, and if there are adjacent wetlands associated with these non-relatively permanent waters (non-RPW’s), jurisdiction may be asserted under the Clean Water Act if there is a “significant nexus.” A significant nexus analysis, using the Corps’ approved jurisdictional determination form, “will assess the flow characteristics and functions of the

tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW.” These factors include (a) the capacity to carry pollutants or flood water into a TNW; (b) the capacity to provide habitat for species that are present in the downstream TNW; (c) the capacity of transferring nutrients and organic carbon to a TNW; or (d) other “relationships to the physical, chemical, or biological integrity of the TNW.

### ***Clean Water Act-NPDES Requirements***

In 1972, the Clean Water Act was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollution Discharge Elimination System (NPDES) permit. The 1987 amendments established a framework for regulating municipal, industrial, and construction-related storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water from construction projects that encompass one or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. The California State Water Resource Control Board has developed a general construction storm water permit to implement this requirement.

### ***Federal Endangered Species Act***

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The FESA establishes an official listing process for plants and animals considered to be in danger of extinction; requires development of specific plans of action for the recovery of listed species; and restricts activities perceived to harm or kill listed species or affect critical habitat (16 USC 1532, 1536).

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3) Taking can result in civil or criminal penalties. Federal regulation 50 CFR 17.3 further defines the term harm in the take definition to mean any act that kills or injures a federally listed species, including significant habitat modification or degradation. Additionally, FESA prohibits the destruction or adverse modification of designated critical habitat. In the Service’s regulations at 50 CFR 402.2, destruction or adverse modification is defined as a “direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.

The ESA also requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or adversely modify critical habitat (16 USC 1536). Therefore, the ESA is invoked when the property contains a federally listed threatened or

endangered species that may be affected by a permit decision. In the event that listed species are involved and a Corps permit is required for impacts to jurisdictional waters, the Corps must initiate consultation with USFWS (or the National Marine Fisheries Service, NMFS) pursuant to Section 7 of the ESA (16 USC 1536; 40 CFR § 402). If formal consultation is required, USFWS or NMFS will issue a biological opinion stating whether the permit action is likely to jeopardize the continued existence of the listed species, recommending reasonable and prudent measures to ensure the continued existence of the species, establishing terms and conditions under which the project may proceed, and authorizing incidental take of the species.

### ***Magnuson-Stevens Fishery Conservation and Management Act***

The Magnuson-Stevens Fishery Conservation and Management Act (MSFA) conserves and manages the fishery resources found off the coasts of the United States, the anadromous species, and the Continental Shelf fishery resources of the United States, including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The NMFS enforces the MSFA and regulates commercial and recreational fishing and the management of fisheries resources. The Sustainable Fisheries Act of 1996 amended the MSFA to include new fisheries conservation provisions by emphasizing the importance of fish habitat in regards to the overall productivity and sustainability of U.S. marine fisheries (Public Law 104-267). The revised MSFA mandates the identification and protection of Essential Fish Habitat (EFH) for managed species during the review of projects conducted under federal permits that have the potential to affect such habitat. Federal agencies are required to consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency, which may adversely affect EFH (MSFA 305.b.2).

Under the MSFA, NMFS identifies, conserves, and enhances EFH for those species regulated under a federal fisheries management plan (FMP). EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity and includes all associated physical, chemical and biological properties of aquatic habitat that are used by fish. Projects that have the potential to adversely affect EFH must initiate consultation with NMFS. Adverse effects are any impacts that reduce the quality and/or quantity of EFH and can include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). There are four FMPs in California, Oregon, and Washington that identify EFH for groundfish, coastal pelagic species, Pacific salmon, and Pacific highly migratory fisheries.

Central Valley fall/late fall–run Chinook salmon is a Magnuson-Stevens Fishery Conservation and Management Act managed species. This species either spawns or has the potential to spawn in western Placer County streams, that near the project include Antelope Creek, Secret Ravine, and Miners Ravine, which would be considered as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of Central Valley fall/late fall–run Chinook salmon.

### ***Migratory Bird Treaty Act***

The federal Migratory Bird Treaty Act is administered by the USFWS. The Act provides that it is unlawful to: pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product unless permitted by regulations. Most bird species within California fall under the provisions of the Act. Excluded species include nonnative species such as house sparrow, starling, and ring-necked pheasant and native game species such as quail.

### ***Fish and Wildlife Coordination Act***

The USFWS also has responsibility for project review under the Fish and Wildlife Coordination Act. This statute requires that all federal agencies consult with USFWS, NMFS, and the state's wildlife agency (California Department of Fish and Wildlife, CDFW) for activities that affect, control, or modify streams and other water bodies. Under the authority of the Fish and Wildlife Coordination Act, USFWS, NMFS, and CDFW review applications for permits issued under Section 404 and provide comments to the Corps about potential environmental impacts.

## **STATE**

### ***California Endangered Species Act***

The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW) when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that "overriding considerations" exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The CESA prohibits the taking of state-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

### ***Section 401 of the Federal Clean Water Act/Porter Cologne Water Quality Act***

Pursuant to section 401 of the Federal Clean Water Act, projects that require a Corps permit for the discharge of dredge or fill material must obtain water quality certification that confirms a project complies with state water quality standards before the Corps permit is valid. State

water quality is regulated/administered by the State Water Resources Control Board and its nine Regional Water Quality Control Boards (RWQCB). The state also maintains independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Act.

The California State Water Resource Control Board has developed a general construction storm water permit to implement the requirements for the federal National Pollution Discharge Elimination System (NPDES) permit. The permit requires submittal of a Notice of Intent to comply, fees, and the implementation of a Storm Water Pollution Prevention Plan.

### ***CDFW Species of Special Concern***

CDFW tracks species in California whose numbers, reproductive success, or habitat may be threatened. Even though not formally listed under FESA or CESA, such plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern” developed by the CDFW. CDFW has also designated special-status natural communities which are considered rare in the region, support special status species or otherwise receive some form of regulatory protection. Documentation pertaining to these communities, as well as special status species (including species of special concern), is kept by CDFW as part of the CNDDDB.

### ***Natural Community Conservation Planning Act***

The Natural Communities Conservation Planning Act (NCCP) program, which began in 1991 under the California Natural Community Conservation Planning Act, is broader in its orientation and objectives than CESA and ESA; these laws are designed to identify and protect individual species that are already listed as threatened or endangered and their habitats. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land use.

Placer County is currently involved in efforts to prepare the Placer County Conservation Plan, a Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) that may eventually be applicable to projects in the Loomis area. A draft of the HCP/NCCP has not been developed as of the date of this report.

### ***California Department of Fish and Wildlife-Streambed Alteration Agreement***

Section 1602 of the California Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify CDFW of such proposed activity. CDFW may propose reasonable modifications, based on the information contained in the notification form and a possible field inspection, CDFW may propose reasonable modifications in the proposed construction as would allow for the protection of fish and wildlife resources. Upon request, the parties may meet to discuss the modifications. If the parties cannot agree and execute a Lake and Streambed Alteration Agreement, then the matter may be referred to arbitration.

**California Department of Fish and Wildlife Fish and Game Code 3503 and 3503.5**

Section 3503 of the Fish and Game Code makes it unlawful to take, possess, or needlessly destroy the nests or eggs of any bird. Section 3503.5 makes it unlawful to take or possess birds of prey (hawks, eagles, vultures, owls) or destroy their nests or eggs.

**California Department of Fish and Wildlife Fully Protected Animal Species**

The classification of Fully Protected was an effort by the State of California in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Most Fully-Protected species have also been listed as threatened or endangered species under state endangered species laws and regulations. Species classified as Fully Protected Species by the CDFW may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock (as per California Fish and Game Code Section 3511(a)(1)).

**Public Resources Code Section 21084.4 for Oak Woodlands Conservation**

As of January 2005, Public Resources Code Section 21083.4 requires California Counties acting as Lead Agencies under CEQA to determine whether a project “may result in a conversion of oak woodlands that will have a significant effect on the environment.” If individual or cumulative impacts to oak woodlands are identified, the law requires that the impacts be mitigated. Acceptable mitigation measures include, but are not limited to, conservation of other oak woodlands through the use of conservation easements, planting replacement trees which must be maintained for seven years, contribution to the Oak Woodland Conservation Fund established under Section 1363(a) of the Fish and Game Code, or other measures.

**LOCAL**

**Placer County General Plan**

In addition to federal and state regulations, the development of the property must be accomplished consistent with the land use designations and natural resource and other policies of the Placer County General Plan.

**OTHER STATUTES, CODES, AND POLICIES AFFORDING LIMITED PROTECTION**

**California Native Plant Society**

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2014: <https://www.cnps.org/cnps/rareplants/inventory/>). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings: <https://www.cnps.org/cnps/rareplants/ranking.php>

California Rare Plant Rank 1A:           Plants presumed extirpated in California and either rare or extinct elsewhere.

California Rare Plant Rank1B: Plants rare, threatened, or endangered in California and elsewhere.

California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.

California Rare Plant Rank 3: Plants about which more information is needed – a review list.

California Rare Plant Rank 4: Plants of limited distribution – a watch list.

## 5.0 IMPACTS AND MITIGATION MEASURES

### 5.1 Standards of Significance

According to the Environmental Checklist in Appendix G of the CEQA Guidelines (Title 14, California Code of Regulations, 15000 et seq.), the project would be considered to have a significant impact on biological resources if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Wildlife and Game or U.S. Fish and Wildlife Service.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 5.2 Relevant Project Characteristics

Costco Wholesale is proposing to construct Costco warehouse facility on the property. A plan view of conceptual design for the configuration of proposed project can be seen in Figure 4. The facility includes the Costco warehouse and associated parking and other infrastructure. The proposed project would cover the entire site.

### 5.3 *Impacts and Mitigation Measures*

#### 5.3.1 *Plant Communities and Vegetation*

Impacts to biological resources will result from vegetation removal due to the conversion of upland areas composed of Annual Grassland, Valley Oak Woodland and Valley Freshwater Marsh to accommodate the proposed Costco facility. The acreage of each of the vegetation



communities found on the property, and impacts resulting from site development as planned are shown in Table A. Figure 9 shows the development footprint as an overlay of the vegetation communities found on the project site. The footprint for the proposed project would cover 100% of the site.

**TABLE A. IMPACTS TO VEGETATION COMMUNITIES**

| Habitat Type            | Existing Acreage in Overall Study Area (acres) | Impacted Acreage (acres) |
|-------------------------|--|--------------------------|
| Annual Grassland        | 10.16  | 10.16                    |
| Valley Freshwater Marsh | 0.15   | 0.15                     |
| Valley Oak Woodland     | 7.96   | 7.96                     |
| <b>TOTAL</b>            | <b>18.27</b>                                   | <b>18.27</b>             |

**Wetlands and Waters of the U.S.**

Wetlands and waters of the U.S. are regulated by state and federal agencies and would be considered sensitive natural communities as defined by CEQA. Impacts to waters of the U.S. would be potentially significant if appropriate mitigation was not implemented for all regulated wetlands as required by state and federal regulations.

The ecological constraints to development at the site include approximately 0.15 acres of wetlands and waters of the U.S. potentially subject to Corps jurisdiction pursuant to Section 404 of the Federal Clean Water Act as shown in Figure 8. As the palustrine emergent wetlands are located in various portions of the site, complete avoidance of jurisdictional wetlands would not be possible. Impacts to wetlands and waters of the U.S. potentially subject to Corps jurisdiction are shown in Figure 10. The development plan for the site would permanently impact 0.15 acres of palustrine emergent wetlands located on the site that are potentially under the jurisdiction of the Corps under Clean Water Act Section 404. Without mitigation, project impacts to wetlands or waters of the U.S. would be significant.

**Impact 1:** Direct (fill) impacts to 0.15 acres of waters of the U.S. would result from implementation of the proposed Costco warehouse facility.

**Mitigation Measure 1:** The developer will submit applications for a Nationwide permit from the Corps of Engineers (see Section 4.5, Permit Requirements), and Section 401 water quality certification from the Central Valley Regional Water Quality Control Board (RWQCB), required for the Corps permit to be valid. Appropriate wetland mitigation would be required by the Corps and RWQCB for impacts to the 0.15 acres of seasonal wetlands located at the site, and a wetland mitigation plan to mitigate impacts to jurisdictional areas would need to be developed as part of the Corps and RWQCB permit

process. Corps jurisdictional areas must be replaced at a minimum 1:1 ratio through wetland creation (preferably on-site) to ensure that no net loss of acreage or functions and values to these areas occurs. Options for providing mitigation include creation of wetlands on site or contributions to an agency-approved wetland mitigation bank. As the footprint of the proposed project requires use of most, if not all, of the site, the preferred method of mitigation is through contributions to an agency-approved mitigation bank.

### **Oak Woodlands**

Project construction would result in the loss of approximately 7.96 acres of Valley Oak Woodland habitat on the site (see Figure 9). Tree removal and impact to oak woodland habitat was assumed within the graded footprint of the project, and included all trees on the property.

Mann Made Resources (see Attachment 3) determined that the project would result in the removal of 372 trees determined to be of protected size. Of these 372 trees, 162 were found to be in good and fair condition for a total mitigation planting requirement of potentially 290 #15 container trees. It should be possible to plant these trees on the property as part of the project landscape design and parking lot shade.

Oaks woodlands provide significant wildlife habitat value. Oak woodlands are protected by the California Department of Fish and Game, State of California regulations including Public Resources Code Section 21083.4, and policies of the Town of Loomis. Public Resources Code Section 21083.4 directs Counties to mitigate significant effects of oak woodland conversion, and would not apply to a project reviewed by the Town of Loomis as a CEQA Lead Agency.

**Impact 2:** The project would require construction within 7.96 acres of Valley Oak Woodland habitat and the direct removal of 372 mature trees determined to be of protected size.

**Mitigation Measure 2:** The applicant should prepare an Oak Woodland Tree Replacement and Protection Plan including: (i) planting of 290 #15 container trees as recommended by the arborist to attain tree replacement ratios prescribed by the Town of Loomis; (ii) the specific location of the tree planting, (including a map and planting plan); (iii) schedules and methodologies for maintaining and monitoring the success of the Plan; and (iv) performance standards.

### **Landscaping/Invasive Species**

Invasive, exotic weeds compete with native vegetation and can degrade the quality of wildlife habitats. Project landscaping and construction activity has the potential to introduce invasive, exotic, non-native vegetation, some of which may not now exist in the area. Also, highways and various construction projects provide a pathway for dispersal of invasive plants. Invasive plant species include those designated as noxious weeds by the U.S. Department of Agriculture, problem species listed by the California Department of Food and Agriculture, and other invasive plants designated by the California Invasive Plant Council. Where appropriate, vegetation removed because of project activities should be replaced with native species which are of value

to local wildlife. Native plants generally are more valuable as wildlife food sources and require less irrigation, fertilizers, and pesticides than exotic species.

**Impact 3:** Project landscaping is expected to introduce exotic, non-native vegetation, some of which may not exist in the area.

**Mitigation Measure 3:** Landscaping should be designed to enhance the wildlife value and aesthetic quality of undeveloped portions of the project site. Where appropriate, vegetation removed because of project activities should be replaced with native species which are of value to local wildlife, and native vegetation should be retained. Weed management practices may be warranted, including identification and removal of infestations of noxious weeds prior to construction, use of construction equipment and materials such as fill and erosion control devices that are known to be weed-free, power-washing of construction vehicles to remove mud, dirt and vegetative material before working in relatively weed-free areas, and removal of invasive species from undeveloped areas within the project boundary.

### **5.3.2 Animal Species**

Loss of vegetation associated with the habitats on site will disrupt and displace existing wildlife. Some bird roosting, nesting, and foraging areas will be eliminated. Reptiles, amphibians, and small mammals that utilize these areas will be displaced to remaining undisturbed areas. Open space areas near the project area should be capable of accommodating these species. Animal species that have adapted to living in close association with human disturbance can be expected to increase after the proposed project. These species include mammals such as raccoon, California ground squirrel, deer mouse, and house mouse, and birds such as rock pigeon, Eurasian-collared dove, American robin, European starling, house sparrow, Brewer's blackbird and brown-headed cowbird.

#### **Nesting Birds**

Nesting bird species protected by the federal Migratory Bird Treaty Act could be impacted during project construction. The removal of trees and shrubs during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present. Therefore, preconstruction surveys should be conducted of the development area to determine if nesting is occurring. If nests are found, a construction plan would need to be developed that would allow successful nesting (fledging of young birds).

Many species of raptors (birds of prey) are sensitive to human incursion and construction activities. Therefore, to ensure that nesting raptor species are not present near the construction site, preconstruction surveys should include a thorough search for nesting raptor species, including raptor species of special status such as Swainson's hawk and burrowing owl, among others (see Mitigation Measure #7 below). Even though the Project Site does not contain suitable habitats for nesting by special status bird species such as tricolored blackbird and loggerhead shrike, preconstruction surveys should include searches for these species to

ensure nests of these species, if they were to found at the site, are not harmed.

**Impact 4:** The removal of vegetation during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present.

**Mitigation Measure 4:** If feasible, construction work should take place outside of the February 1 to August 31 breeding window for nesting birds. If construction is to be conducted during the breeding season, a qualified biologist should conduct a pre-construction breeding bird survey in areas of suitable habitat within 15 days prior to the onset of construction activity. If bird nests are found, appropriate buffer zones should be established around all active nests to protect nesting adults and their young from construction disturbance. Size of buffer zones should be determined in consultation with wildlife agency staff based on site conditions and species involved. Buffer zones should be maintained until it can be documented that either the nest has failed or the young have fledged. Preconstruction surveys should include appropriate survey for nesting species of raptor, including special status raptor species (see Mitigation Measure #7) and other avian species with special status and with a small chance of occurring on the Project Site, such as tricolored blackbird and loggerhead shrike.

### **Water Quality**

Construction activities on the project site would involve disturbance and exposure of soils through grading and removal of vegetative cover, excavation to install supports for the solar array, and other activities. These activities would result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment in the runoff. If not managed properly, the runoff could cause increased sedimentation and turbidity in surface waters outside of the Project Site, resulting in degradation of water quality. Water from the Project Site drains west toward the adjacent property and then into Sucker Ravine, which drains into Secret Ravine. Secret Ravine is a tributary of Miners Ravine, which ultimately reaches Dry Creek and then the American River.

Ground-disturbing activities could promote erosion and allow elevated levels of sediment to wash into downstream creeks, where potential impacts to fish and wildlife species would be possible. In the absence of water quality controls, indirect impacts to animal populations in wetlands and other aquatic habitats could result from the proposed project due to elevated contaminants in stormwater runoff. However, the requirement for the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with identification of proper construction techniques and Best Management Practices (BMPs) will minimize adverse effects associated with these activities. Furthermore, standard techniques to control contaminants in stormwater such as oil and grease traps will be employed to mitigate water quality concerns.

**Impact 5:** Placement of fill and other ground disturbing activities could promote erosion and allow elevated levels of sediment to wash into downstream aquatic areas, potentially affecting fish and wildlife resources.

**Mitigation Measure 5:** Best Management Practices and all requirements as detailed in the Stormwater Pollution Prevention Plan shall be implemented to control erosion and migration of sediments off-site. Implementation of water quality controls shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook-Construction. In addition, vegetation should only be cleared from the permitted construction footprint. Areas cleared of vegetation, pavement, or other substrates should be stabilized as quickly as possible to prevent erosion and runoff.

### **Essential Fish Habitat**

Antelope Creek, Secret Ravine and Miners Ravine would be considered as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of Central Valley fall/late fall–run Chinook salmon. Secret Ravine and Miners Ravine are located about four miles southwest of the Project Site; runoff from the site drains over the adjacent property to the west and then into Sucker Ravine which drains into Secret Ravine. Portions of Antelope Creek run approximately 0.7 miles to the northwest of the Project Site, but drainage flow is not in the direction of the creek. An unnamed drainage located just north of the property is a tributary to Antelope Creek.

In the absence of water quality controls, indirect impacts to EFH for Central Valley fall/late fall–run Chinook salmon could result from the proposed project due to elevated contaminants in stormwater runoff that eventually flow into Secret Ravine. However, the requirement for the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with identification of proper construction techniques and Best Management Practices (BMPs) will minimize adverse effects associated with these activities (see Mitigation Measure 5). Furthermore, standard techniques to control contaminants in stormwater such as oil and grease traps will be employed to mitigate water quality concerns.

### **5.3.3 Special Status Species**

A review of habitat requirements of sensitive animal species documented by the CNDDDB as occurring in the project vicinity, and sensitive animal species known to occur in the general vicinity, was conducted by HBG. Animal species of special concern are present or possible as described below.

### **Special Status Plants**

Habitat conditions at the project site are potentially suitable to support several species of special status plant. If present, development of the site as proposed could result in impacts to special status botanical species. The only way to ensure that populations of special status plants are not present in development sites would be to conduct a systematic protocol survey during the flowering period of the species.

**Impact 6:** If special status plant species are present at the site, project development could result in the elimination of populations of these species.

**Mitigation 6:** Systematic protocol rare plant surveys should be conducted during the flowering period of target species to definitively determine their presence or absence at the site. These plants, along with their flowering periods include, but are not necessarily limited to: big-scale balsamroot (March to June), Brandegees clarkia (May to July), and stinkbells (March to June).

### **Special Status Animals**

Vernal Pool Crustaceans -The seasonal wetland swales within the several drainages on the property do not provide suitable habitat for listed species of vernal pool crustaceans. The swales are flowing systems and not seasonal inundated depressions with more than two inches of ponding for at least two weeks (for VPFS) or four weeks (for VPTS). The drainages are also not suitable habitat for the California linderiella. No impacts to vernal pool fairy shrimp, vernal pool tadpole shrimp, or California linderiella would result from project development.

Steelhead Central Valley DPS- In the project area, Central Valley steelhead are found in Dry Creek and its tributaries in Secret Ravine and Miners Ravine, located as close as about 4 miles from the Project Site. No direct impacts would occur to steelhead habitat as no spawning or rearing habitat or occupied tributary streams are found on the Project Site. However, uncontrolled erosion from the developed site could result in consequent downstream sedimentation that could adversely affect spawning areas in Secret Ravine or Miners Ravine, and untreated stormwater runoff from onsite impervious surfaces could introduce contaminants that could adversely affect water quality that currently supports the life cycle of steelhead in these tributaries. Implementation of Mitigation Measure 5, with requirements to implement Best Management Practices as part of a Stormwater Pollution Prevention Plan to control erosion and migration of sediments off-site and other water quality control practices, will ensure that impacts to local steelhead populations do not occur.

Western Spadefoot Toad- A review of habitat conditions found on the site revealed that the seasonal swales at the site are flowing water systems that do not pond water for sufficient depth and duration to support the western spadefoot toad. No impacts to western spadefoot toad would result from project development.

Swainson's Hawk- Swainson's hawk is much more likely to nest in trees near riparian habitats or agricultural fields on the Valley floor rather than in oak woodland in the foothills, such as found at the Project Site. Nesting by Swainson's hawk at the Project Site is unlikely. Use of the Project Site by this species is probably limited to occasional visits while foraging. No impacts to Swainson's hawk breeding or foraging habitat is anticipated due to project development. Mitigation measures for preconstruction surveys of nesting birds include inclusion of this species in the surveys.

Burrowing Owl- No burrowing owls, California ground squirrel colonies or California ground squirrels were observed during field reviews. In addition, heights of grasses within the onsite grassland are too tall to provide habitat for burrowing owl, which prefers grasslands with low

profile vegetation. No impacts to burrowing owl breeding or wintering habitat is anticipated due to project development. Nevertheless, spring surveys of the site planned by an HBG wildlife biologist between late April and May of 2017 will include searches for this species, and mitigation measures for preconstruction surveys of nesting birds include inclusion of this species in the surveys.

*Tricolored Blackbird*-Vegetation within the onsite wetland swales is not of a type that would be preferred to support a nesting colony of tricolored blackbird. No impacts to tricolored blackbird would result from project development. Nevertheless, spring surveys of the site planned by an HBG wildlife biologist between late-April and May of 2017 will include searches for this species, and mitigation measures for preconstruction surveys of nesting birds include inclusion of this species in the surveys.

*Special Status Raptor Species*- Six raptor species designated with special status by the State of California have a potential to nest at the site. These species include burrowing owl (State Species of Special Concern and Federal Bird Species of Conservation Concern), Northern harrier (State Species of Special Concern and Federal Bird Species of Conservation Concern), white-tailed kite (California Fully Protected), Cooper's hawk (California Watch List Species), Sharp-shinned hawk (California Watch List Species) and Swainson's hawk (state-listed threatened). Preconstruction surveys for tree-nesting special status raptor species (e.g., white-tailed kite, Cooper's hawk, sharp-shinned hawk, Swainson's hawk) will be necessary if tree removal occurs during the February 1 to August 31 nesting season. Preconstruction surveys for ground-nesting special status raptor species (Northern harrier and burrowing owl) would be necessary prior to any ground disturbance in grasslands.

**Impact 7:** Construction during the nesting season could impact any of six raptor species designated with special status by the State of California: burrowing owl, Northern harrier, white-tailed kite, Cooper's hawk, sharp-shinned hawk, and Swainson's hawk.

**Mitigation Measure 7:** Preconstruction surveys conducted for nesting birds pursuant to the MBTA should include specific preconstruction surveys for special status species of raptors. Preconstruction surveys for special status tree-nesting raptor species (white-tailed kite, Cooper's hawk, sharp-shinned hawk, Swainson's hawk) will be necessary if tree removal occurs during the February 1 to August 31 nesting season. A preconstruction survey for ground-nesting special status raptor species (Northern harrier and burrowing owl) should be conducted to ensure impacts to ground-nesting species do not occur. Preconstruction surveys should be conducted within 15 days of initiation of construction activity. If an active raptor nest is identified, appropriate mitigation measures shall be developed and implemented in consultation with CDFW. Mitigation would include development of a construction plan that establishes buffer zones around active nests during construction activity and/or until young have fledged.

## 6.0 AGENCY PERMIT REQUIREMENTS

Any potential impacts to jurisdictional wetlands or waters of the U.S. at the site will require authorization from the Army Corps of Engineers pursuant to Section 404 of the Clean Water Act. NWP 39 authorizes “discharges of dredged or fill material into non-tidal waters of the U.S., excluding non-tidal wetlands adjacent to tidal waters, for the construction or expansion of residential, commercial, and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures” provided the activities meet the following criteria:

- The discharge does not cause the loss of greater than 0.5-acre of non-tidal waters of the U.S.;
- The discharge does not cause the loss of greater than 300 linear feet of a stream bed (unless the criterion is waived by the District Engineer);
- The discharge is part of a single and complete project;
- The permittee avoids and minimizes discharges into waters of the U.S. to the maximum extent practicable;
- The discharge does not cause more than minimal degradation of water quality or more than minimal changes to stream flow characteristics; and
- The permittee establishes and maintains vegetated buffers next to open water to the maximum extent practicable.

As the 0.15 acres of seasonal wetlands are scattered throughout the site and avoidance of these wetlands would be problematic with any layout of land uses, a permit from the Corps is a certainty for development at this site. Wetland impacts would not exceed the 0.5-acre limit of Nationwide Permit 39; therefore, the Corps would determine that the proposed project would qualify for a Nationwide Permit 39 and an Individual Permit would not be required. A wetland mitigation plan describing procedures to mitigate impacts to jurisdictional areas would need to be developed as part of the Corps permit process. The applicant would need to demonstrate that wetlands have been avoided to the extent possible and provide documentation of how the project has been minimized to reduce onsite impacts.

The requirement for a Clean Water Act Section 404 Nationwide permit means that any development project at this site will also require Section 401 water quality certification from the Central Valley Regional Water Quality Control Board (RWQCB) for the Corps permit to be valid. Prior to issuance of the water quality certification, RWQCB will require the applicant to demonstrate that requirements of the County of Placer pursuant to the California Environmental Quality Act (CEQA) have been satisfied. Mitigation of wetlands will be required to obtain Corps and RWQCB approval. It does not appear as though A Section 7 consultation with USFWS or NOAA Fisheries/NMFS would be warranted as neither federally-listed species nor their habitats would not be adversely affected by project development. An Essential Fish Habitat evaluation conducted in conjunction with NMFS is also not likely warranted.



## 7.0 REFERENCES

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, and T.J. Rosatti, editors. 2012. *The Jepson Manual. Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded*. University of California Press, Berkeley, California.
- California Department of Fish and Wildlife. 2007. Final Report, California Swainson's Hawk Inventory 2005-2007. U.C. Davis Wildlife Health Center, Department of Fish and Game Resource Assessment Program, Final Report. May 31, 2007.
- California Department of Fish and Wildlife. 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. September.  
[http://www.dfg.ca.gov/biogeodata/vegcamp/natural\\_comm\\_list.asp](http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp).
- California Department of Fish and Wildlife. 2016. Special Animals List For State of California produced by Biogeographic Data Branch, California Natural Diversity Database, California Department of Fish and Wildlife. List dated July 2016. Current as of July 2016.
- California Department of Fish and Wildlife. 2013. State and Federally Listed Endangered, Threatened, and Rare Plants of California. April.  
<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf>.
- California Department of Fish and Wildlife. 2017. Natural Heritage Division, Natural Diversity Data Base for the Rocklin Quadrangle Map and surrounding areas, February 2017.
- California Native Plant Society, Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 04 April 2014].
- Cowardin, Lewis M., Virginia Carter, Francis C. Golet and Edward T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*, for Office of Biological Services, Fish and Wildlife Service, U.S. Department of the Interior.
- Jones and Stokes. 2005. Assessment of Habitat Conditions for Chinook Salmon and Steelhead in Western Placer County, California. Prepared for Placer County Planning Department. May 2005.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 Wetlands Ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- Munz, Philip A. and David D. Keck 1973. *A California Flora and Supplement*. University of California Press.

National Geographic Society. 2011. *Field Guide to North American Birds*. Sixth edition. National Geographic Society. Washington, D.C.

Reid, Fiona A. 2006. *Mammals of North America*. Peterson Field Guides. Fourth Edition. Houghton Mifflin Co., Boston.

Salix Consulting, Inc. 2016. Wetland Delineation for the 17.88-acre Sierra-Brace Study Area, Town of Loomis, Placer County, California. Prepared Manikas Properties. May 2016.

Sawyer, J. O., and T. Keeler-Wolf. 2009. *A Manual of California Vegetation*. Second Edition. In cooperation with The Nature Conservancy and the California Department of Fish and Game. California Native Plant Society. Sacramento, California.

Sibley, David A. 2014. *The Sibley Guide to Birds*. Second Edition. National Audubon Society. Chanticleer Press, Inc. New York, N.Y. 624 pp.

Stebbins, R.C. 2003. *Western Reptiles and Amphibians*. Peterson Field Guides. Houghton Mifflin Co., Boston. Third edition.

U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual*, Technical Report Y-87-1. Prepared by the Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture, Natural Resources Conservation Service [NRCS]. 2017. Web Soil Survey, Placer County. Natural Cooperative Soil Survey. February 2017.

US Fish and Wildlife Service. 2014. Listings and occurrences for California. Federally-listed threatened and endangered plant and animal species in California.  
[http://ecos.fws.gov/tess\\_public/pub/stateListingAndOccurrenceIndividual.jsp?state=CA](http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=CA)

US Fish and Wildlife Service. 2014. Species proposed for listing in California based on published population data.  
[http://ecos.fws.gov/tess\\_public/pub/stateListingIndividual.jsp?state=CA&status=proposed](http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=CA&status=proposed).

US Fish and Wildlife Service. 2014. Candidate species in California based on published population data.  
[http://ecos.fws.gov/tess\\_public/pub/stateListingIndividual.jsp?state=CA&status=candidate](http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=CA&status=candidate).

Zeiner , D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a . *California's Wildlife, Volume I. Amphibians and Reptiles*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

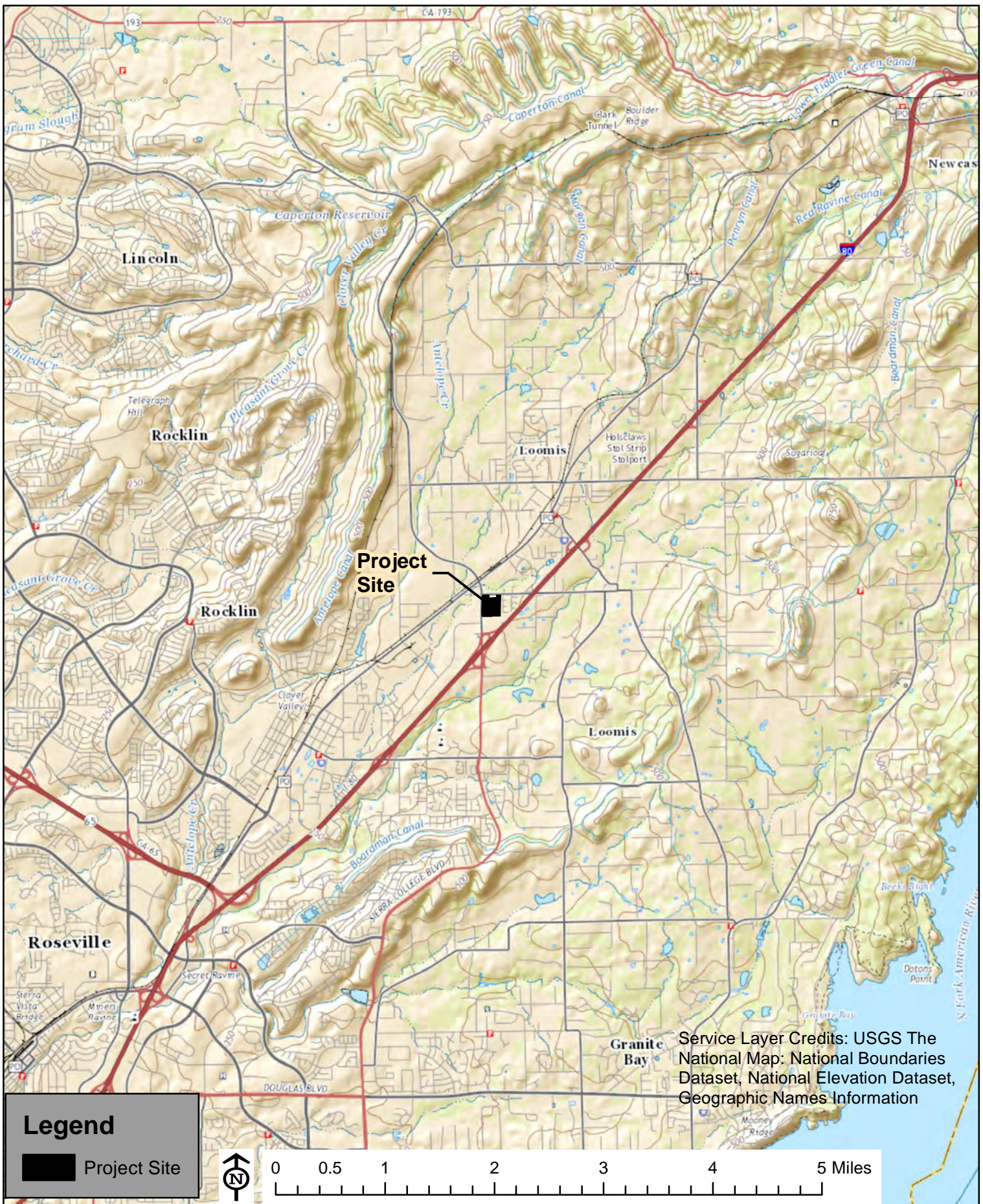
Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990b. *California's Wildlife, Volume II: Birds*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990c. *California's Wildlife, Volume III: Mammals*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

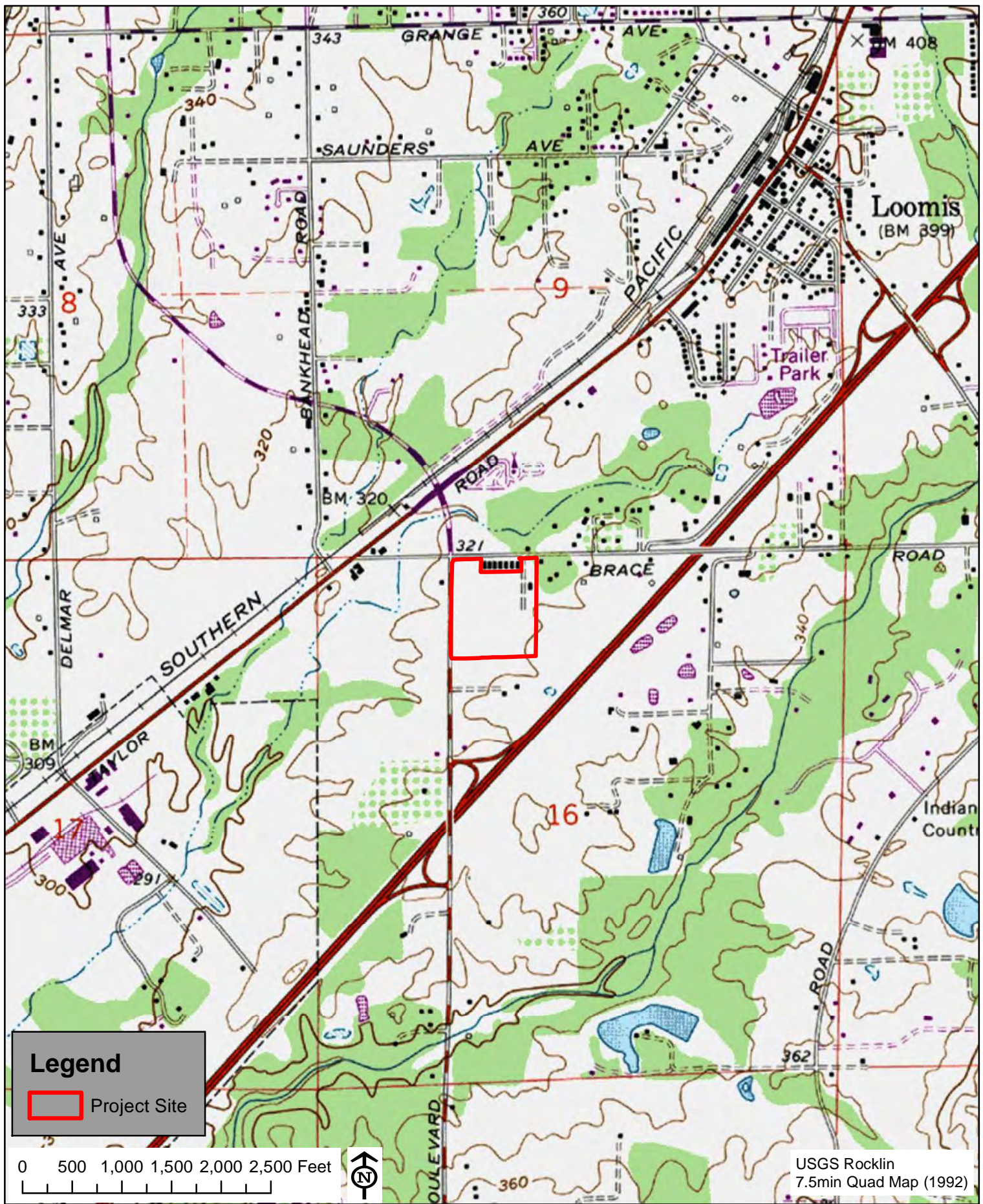
## **ATTACHMENT 1**

### **Figures**

- Figure 1. Project Location
- Figure 2. U.S.G.S Map of the Project Site
- Figure 3. Aerial Photo of the Project Site
- Figure 4. Costco Wholesale Project Conceptual Plan
- Figure 5. Soil Map of the Project Area
- Figure 6. Watershed Map of the Project Area
- Figure 7. Map of Vegetation Communities at the Project Site
- Figure 8. Wetlands and Waters of the U.S. Potentially Subject to Corps Jurisdiction
- Figure 9. Impacts to Vegetation Communities Occurring on the Project Site
- Figure 10. Impacts to Wetlands and Waters of the U.S. Potentially Subject to Corps Jurisdiction

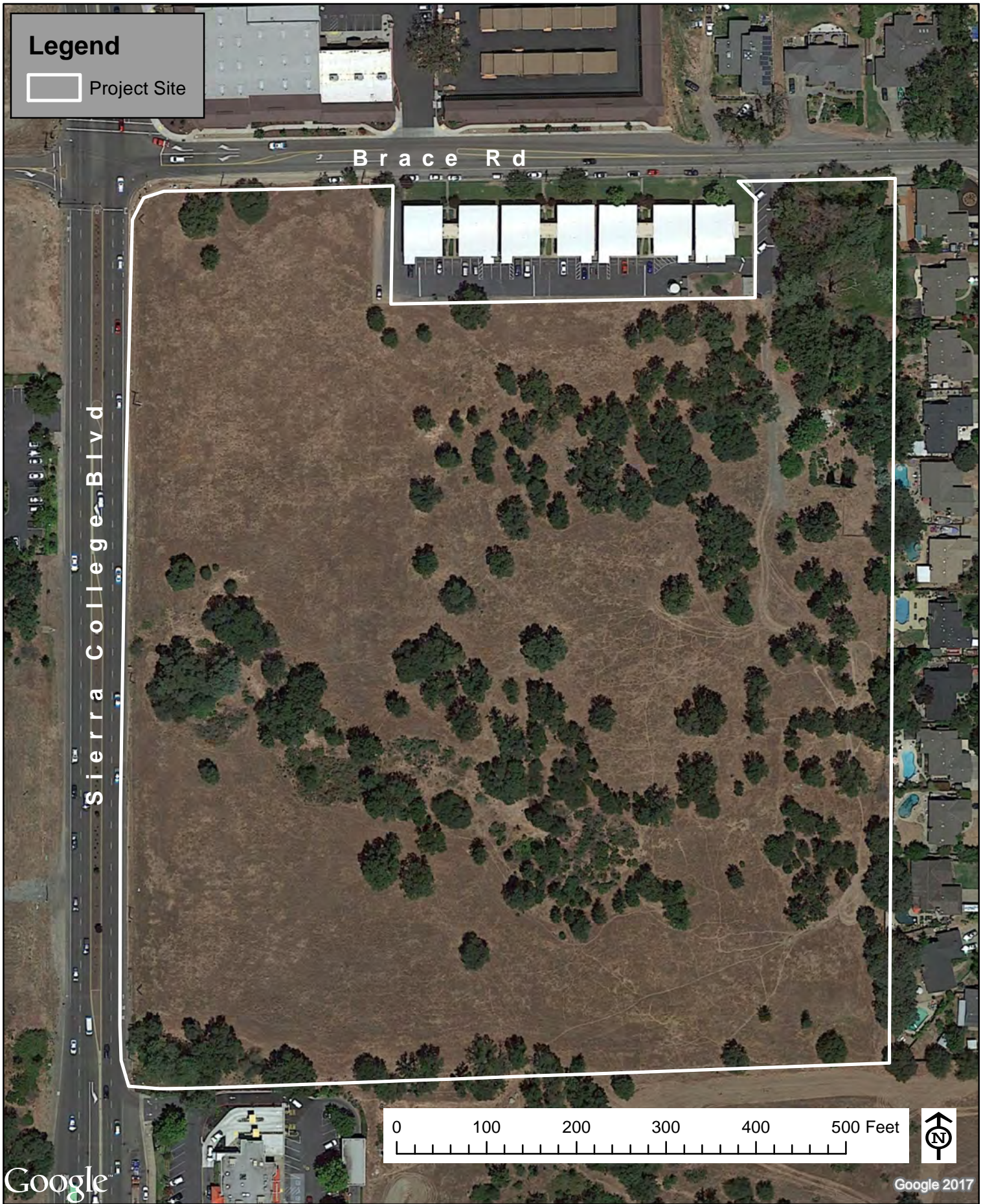


**Figure 1. Project Location**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California



**Figure 2. U.S.G.S Map of the Project Site**

Costco Wholesale Project  
Town of Loomis, Placer County, California



**Legend**

Project Site

Brace Rd

Sierra College Blvd

0 100 200 300 400 500 Feet



Google

Google 2017

**Figure 3. Aerial Photo of the Project Site**  
Costco Wholesale Project  
Town of Loomis, Placer County, California



**Figure 4. Costco Wholesale Project Conceptual Plan**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

**Project Data**

Client: Costco Wholesale  
 999 Lake Drive  
 Issaquah, WA 98027

Project Address: Sierra College Blvd.,  
 Loomis, CA  
 Town of Loomis

**Site Data**

Costco Site Area: ±17.2 AC (±750,120 s.f.)  
 Total:

Jurisdiction: Town of Loomis, CA

Zoning: GC - General Commercial  
 RM - 5 Medium Density Residential

Boundary Information: This plan has been prepared using record information from Assessor's Parcel Maps and is for Preliminary use only. All dimensions and acreages are approximate only.

**Building Data**

Total: ± 152,101 s.f.

No Gas Expansion

**Parking Data**

10' wide stalls: 774 stalls

Accessible stalls: 16 stalls

Total Parking: 790 Stalls  
 (5.2 / 1,000)

Required Parking: 760  
 (5.0 / 1,000)

DBA# P.256

**DB+A**

DAVID BABCOCK + ASSOCIATES  
 ARCHITECTURE LANDSCAPE PLANNING  
 3581 MT. DIABLO BLVD., SUITE 235  
 LAFAYETTE, CALIFORNIA 94549  
 T: 925.283.5070



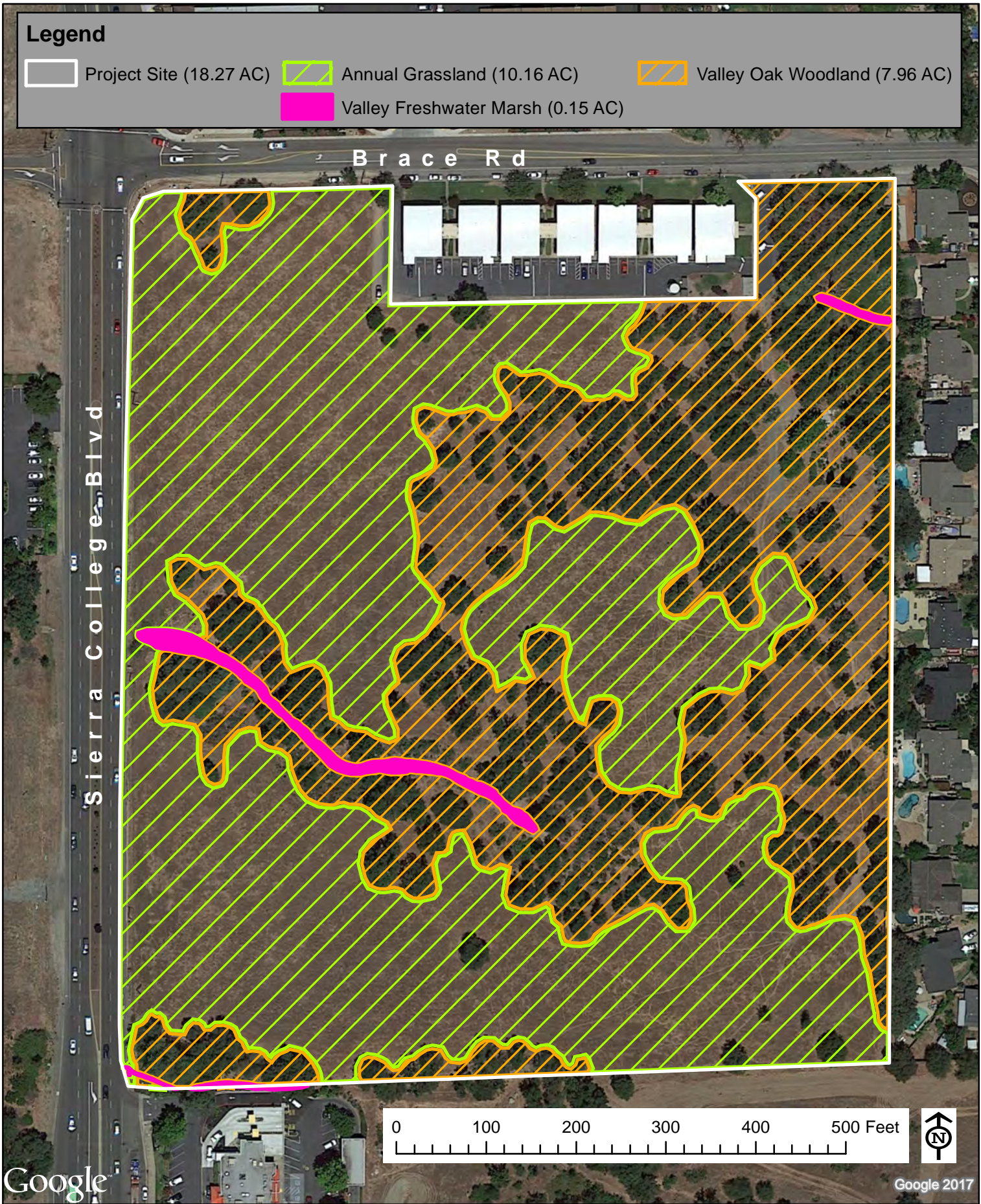


**Figure 5. Soil Map of the Project Site**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

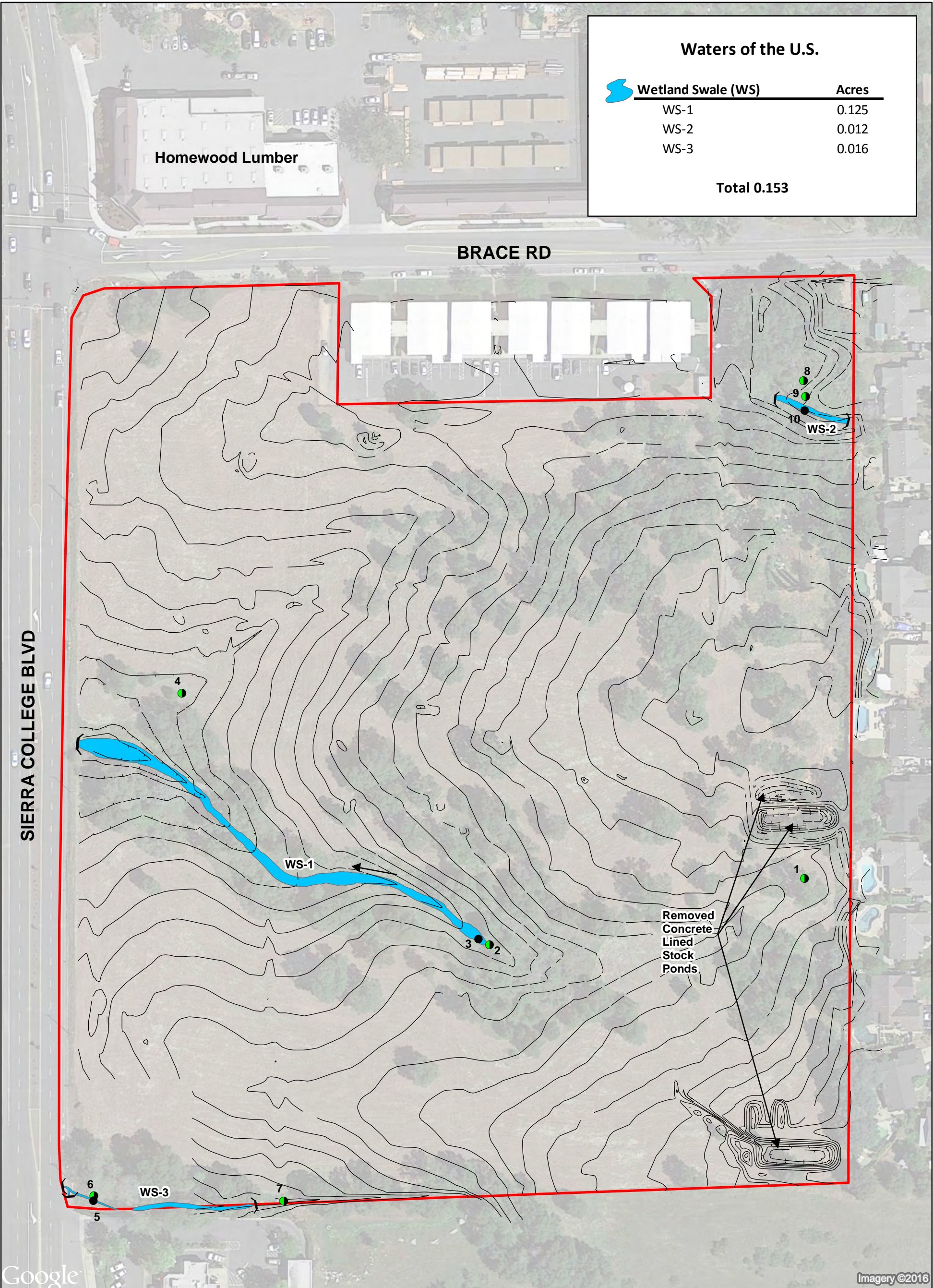


**Figure 6. Watershed Map of the Project Area**

Costco Wholesale Project  
 Town of Loomis, Placer County, California



**Figure 7. Map of Vegetation Communities at the Project Site**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

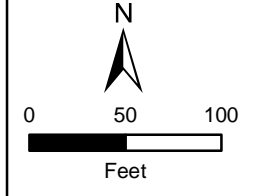


| Waters of the U.S. |       |
|--------------------|-------|
| Wetland Swale (WS) | Acres |
| WS-1               | 0.125 |
| WS-2               | 0.012 |
| WS-3               | 0.016 |
| <b>Total 0.153</b> |       |

Google

Imagery ©2016

Prepared By:  
  
 Prepared For:  
 Manikas Properties  
 1817 Maryal Drive, Suite 100  
 Sacramento, CA 95864



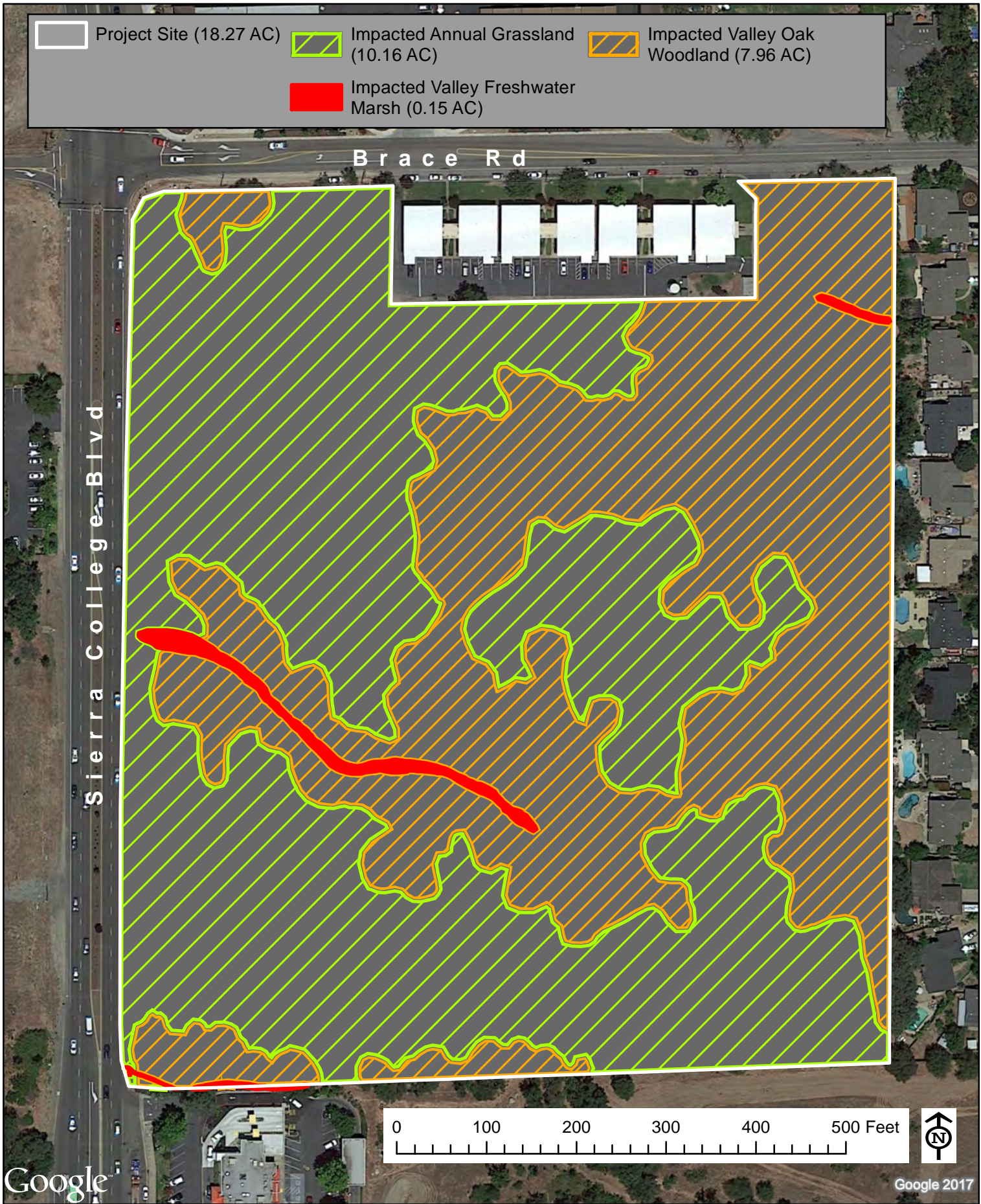
| Legend                    |                    |
|---------------------------|--------------------|
| Study Area (±18.20 acres) | Wetland Data Point |
| Culvert                   | Upland Data Point  |

**Figure 5**  
**WETLAND DELINEATION**  
*Sierra-Brace*  
 Town of Loomis, Placer County, CA

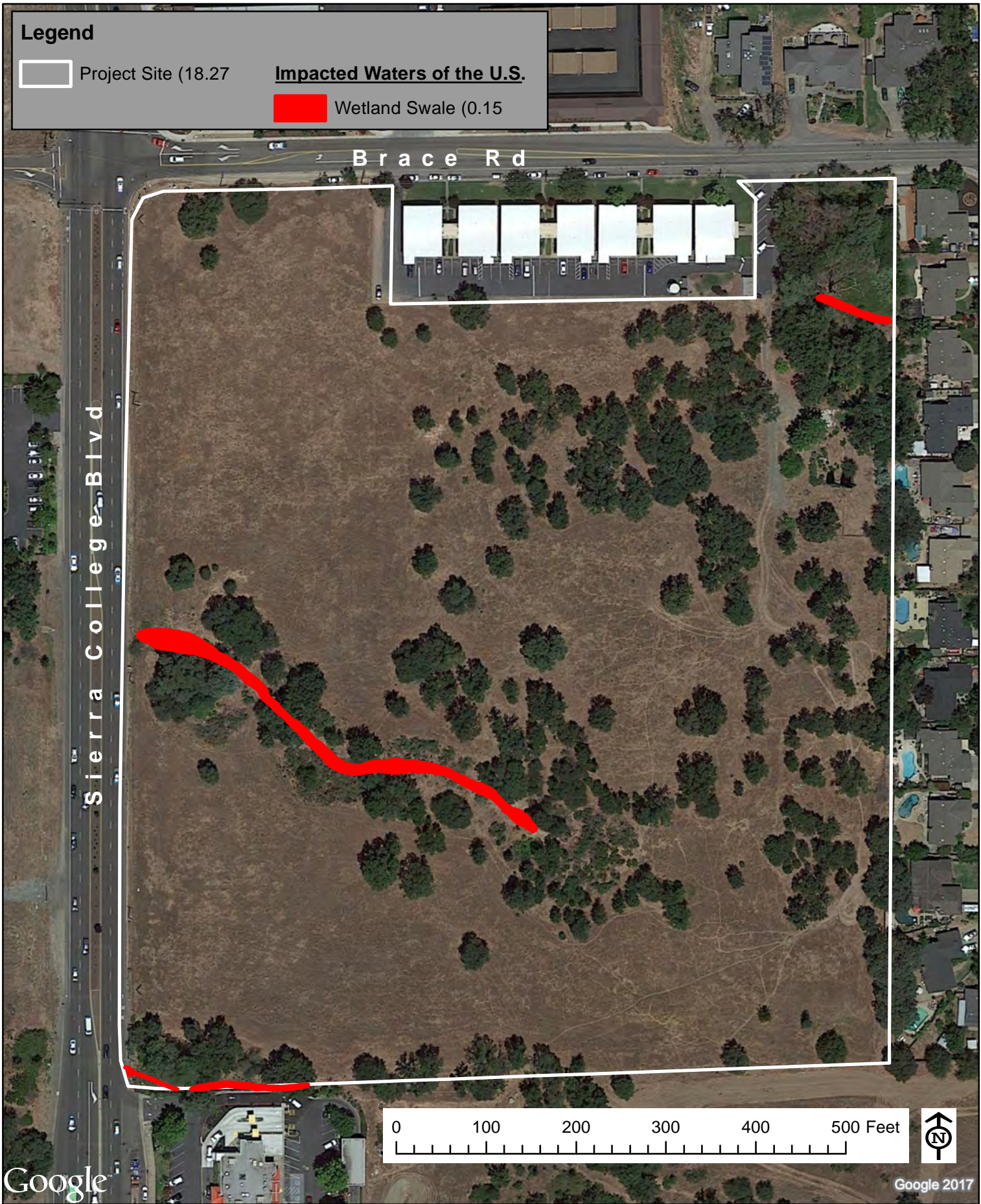
Figure 8. Wetlands and Waters of the U.S.  
 Subject to Corps Jurisdiction  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

NOTES: Revised wetland delineation conducted March 2016.  
 Original delineation conducted by Pat Britton and Barry Anderson  
 of North Fork Associates in 2007.

April 18, 2016



**Figure 9. Impacts to Vegetation Communities Occurring on the Project Site**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California



**Figure 10. Impacts to Wetlands and Waters of the U.S. Subject to Corps Jurisdiction**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

## **ATTACHMENT 2**

### **SUPPLEMENTAL BIOLOGICAL INFORMATION**

- Table 1. Plant List for Property
- Table 2. Animal Species Observed on the Project Site or Expected to Utilize the Project Site
- Table 3. Special Status Plants Known to Occur in the Vicinity of the Project Area, Placer County, California
- Table 4. Special Status Animal Species that have been Reported in the Vicinity of the Project Area, Placer County, California

**TABLE 1. PLANT LIST FOR THE PROPERTY**

| <b>Scientific Name</b>                               | <b>Common Name</b>        | <b>Wetland Status</b> |
|--|---------------------------|-----------------------|
| <i>Acacia baileyana</i>                              | Cootamundra wattle        | UPL                   |
| <i>Acmispon americanus</i> var. <i>americanus</i>    | Spanish-clover            | UPL                   |
| <i>Alisma triviale</i>                               | California water plantain | OBL                   |
| <i>Amsinckia menziesii</i>                           | common fiddleneck         | UPL                   |
| <i>Artemisia douglasiana</i>                         | California mugwort        | FAC                   |
| <i>Arundo donax</i>                                  | Giant reed                | FACW                  |
| <i>Avena fatua</i>                                   | Wild oat                  | UPL                   |
| <i>Baccharis pilularis</i>                           | Coyote brush              | UPL                   |
| <i>Briza minor</i>                                   | Small quaking grass       | FAC                   |
| <i>Bromus diandrus</i>                               | Ripgut grass              | UPL                   |
| <i>Bromus hordeaceus</i>                             | Soft chess                | FACU                  |
| <i>Carduus pycnocephalus</i>                         | Italian thistle           | UPL                   |
| <i>Centaurea solstitialis</i>                        | Yellow starthistle        | UPL                   |
| <i>Cichorium intybus</i>                             | Chicory                   | FACU                  |
| <i>Cirsium arvense</i>                               | Canada thistle            | FACU                  |
| <i>Clarkia</i> sp.                                   | Clarkia                   | UPL                   |
| <i>Claytonia perfoliata</i>                          | Common miner's lettuce    | FAC                   |
| <i>Convolvulus arvensis</i>                          | Bindweed                  | UPL                   |
| <i>Cynodon dactylon</i>                              | Bermudagrass              | FACU                  |
| <i>Cynosurus echinatus</i>                           | Hedgehog dogtail          | UPL                   |
| <i>Cyperus eragrostis</i>                            | Tall flatsedge            | FACW                  |
| <i>Cytisus scoparius</i>                             | Scotch broom              | UPL                   |
| <i>Elymus caput-medusae</i>                          | Medusahead                | UPL                   |
| <i>Epilobium brachycarpum</i>                        | Summer cottonweed         | UPL                   |
| <i>Erigeron canadensis</i>                           | Canadian horseweed        | FACU                  |
| <i>Erodium botrys</i>                                | Broad-leaf filaree        | FACU                  |
| <i>Erodium cicutarium</i>                            | Red-stem filaree          | UPL                   |
| <i>Eschscholzia californica</i>                      | California poppy          | UPL                   |
| <i>Festuca perennis</i>                              | Italian ryegrass          | FAC                   |
| <i>Galium aparine</i>                                | Goose grass               | FACU                  |
| <i>Geranium dissectum</i>                            | Cut-leaf geranium         | UPL                   |
| <i>Geranium molle</i>                                | Dove's-foot geranium      | UPL                   |
| <i>Hirschfeldia incana</i>                           | Short-podded mustard      | UPL                   |
| <i>Hordeum jubatum</i>                               | Foxtail barley            | UPL                   |
| <i>Hordeum marinum</i> subsp. <i>gussoneanum</i>     | Mediterranean barley      | FAC                   |
| <i>Hordeum murinum</i>                               | Wall barley               | FACU                  |
| <i>Hypericum perforatum</i> subsp. <i>perforatum</i> | Klamathweed               | FACU                  |
| <i>Hypochaeris glabra</i>                            | Smooth cat's-ear          | UPL                   |
| <i>Juncus mexicanus</i>                              | Mexican rush              | FACW                  |
| <i>Juncus xiphioides</i>                             | Iris-leaved rush          | OBL                   |
| <i>Lactuca serriola</i>                              | Prickly lettuce           | FACU                  |



|   |                      |        |
|---|----------------------|--------|
| <i>Lamium amplexicaule</i>                | Deadnettle           | UPL    |
| <i>Lupinus bicolor</i>                    | Miniature lupine     | UPL    |
| <i>Lythrum hyssopifolia</i>               | Hyssop loosestrife   | OBL    |
| <i>Melilotus sp.</i>                      | Melilotus            | UPL    |
| <i>Nasturtium officinale</i>              | Watercress           | OBL    |
| <i>Olea europaea</i>                      | Olive                | UPL    |
| <i>Paspalum dilatatum</i>                 | Dallis grass         | FAC    |
| <i>Pinus sabiniana</i>                    | Gray pine            | UPL    |
| <i>Plantago lanceolata</i>                | English plantain     | FAC    |
| <i>Polypogon monspeliensis</i>            | Annual beard grass   | FACW   |
| <i>Populus fremontii subsp. fremontii</i> | Fremont cottonwood   | FAC    |
| <i>Prunus dulcis</i>                      | Almond tree          | UPL    |
| <i>Pyracantha sp.</i>                     | Pyracantha           | UPL    |
| <i>Pyrus sp.</i>                          | Pear                 | UPL    |
| <i>Quercus douglasii</i>                  | Blue oak             | UPL    |
| <i>Quercus lobata</i>                     | Valley oak           | FACU   |
| <i>Quercus wislizeni</i>                  | Interior live oak    | UPL    |
| <i>Rubus armeniacus</i>                   | Himalayan blackberry | FACU   |
| <i>Rumex crispus</i>                      | Curly dock           | FAC    |
| <i>Salix exigua var. exigua</i>           | Narrowleaf willow    | FACW   |
| <i>Salix lasiolepis</i>                   | Arroyo willow        | FACW   |
| <i>Silybum marianum</i>                   | Milk thistle         | UPL    |
| <i>Sonchus asper subsp. asper</i>         | Prickly sow-thistle  | FAC    |
| <i>Spartium junceum</i>                   | Spanish broom        | UPL    |
| <i>Torilis arvensis</i>                   | Field hedgeparsley   | UPL    |
| <i>Toxicodendron diversilobum</i>         | Western poison-oak   | FACU   |
| <i>Trifolium hirtum</i>                   | Rose clover          | UPL    |
| <i>Verbascum blattaria</i>                | Moth mullein         | UPL    |
| <i>Verbascum thapsus</i>                  | Woolly mullein       | FACU   |
| <i>Veronica sp.</i>                       | Speedwell            | VARIES |
| <i>Vicia sativa</i>                       | Common vetch         | FACU   |
| <i>Vicia villosa</i>                      | Winter vetch         | UPL    |
| <i>Vinca major</i>                        | Periwinkle           | UPL    |

Source: Salix Consulting, Inc. 2016.

**TABLE 2. ANIMAL SPECIES OBSERVED ON THE PROJECT SITE OR EXPECTED TO UTILIZE THE PROJECT SITE**

**MAMMALS**

|                            |                                  |
|----------------------------|----------------------------------|
| Virginia Opossum           | <i>Didelphis virginiana</i>      |
| Broad-footed Mole          | <i>Scapanus latimanus</i>        |
| California Myotis          | <i>Myotis californicus</i>       |
| Yuma Myotis                | <i>Myotis yumanensis</i>         |
| Western Pipistrelle        | <i>Pipistrellus hesperus</i>     |
| Big Brown Bat              | <i>Eptesicus fuscus</i>          |
| Hoary Bat                  | <i>Lasiurus cinereus</i>         |
| Red Bat                    | <i>Lasiurus borealis</i>         |
| Pallid Bat                 | <i>Antrozous pallidus</i>        |
| Brazilian Free-tailed Bat  | <i>Tadarida brasiliensis</i>     |
| Black-tailed Hare          | <i>Lepus californicus</i>        |
| Desert Cottontail          | <i>Sylvilagus audubonii</i>      |
| California Ground Squirrel | <i>Spermophilus beecheyi</i>     |
| Botta's Pocket Gopher      | <i>Thomomys bottae</i>           |
| Western Harvest Mouse      | <i>Reithrodontomys megalotis</i> |
| Deer Mouse                 | <i>Peromyscus maniculatus</i>    |
| Dusky-footed Woodrat       | <i>Neotoma fuscipes</i>          |
| California Vole            | <i>Microtus californicus</i>     |
| Black Rat                  | <i>Rattus rattus</i>             |
| Norway Rat                 | <i>Rattus norvegicus</i>         |
| House Mouse                | <i>Mus musculus</i>              |
| Coyote                     | <i>Canis latrans</i>             |
| Gray Fox                   | <i>Urocyon cinereoargenteus</i>  |
| Raccoon                    | <i>Procyon lotor</i>             |
| Long-tailed Weasel         | <i>Mustela frenata</i>           |
| Striped Skunk              | <i>Mephitis mephitis</i>         |
| Mule Deer                  | <i>Odocoileus hemionus</i>       |

**REPTILES AND AMPHIBIANS**

|                           |                                   |
|---------------------------|-----------------------------------|
| Pacific Treefrog          | <i>Pseudacris regilla</i>         |
| Western Toad              | <i>Bufo boreas</i>                |
| Western Fence Lizard      | <i>Sceloporus occidentalis</i>    |
| Coast Horned Lizard       | <i>Phrynosoma coronatum</i>       |
| Western Skink             | <i>Eumeces skiltonianus</i>       |
| Gilbert's Skink           | <i>Eumeces gilberti</i>           |
| Western Whiptail          | <i>Cnemidophorus tigris</i>       |
| Southern Alligator Lizard | <i>Gerrhonotus multicarinatus</i> |

Ringneck Snake  
Sharp-tailed Snake  
Racer  
California Whipsnake  
Coachwhip  
Gopher Snake  
Common Kingsnake  
Common Garter Snake  
Western Terrestrial Garter Snake  
Night Snake  
Western Rattlesnake

*Diadophis punctatus*  
*Contia tenuis*  
*Coluber constrictor*  
*Masticophis lateralis*  
*Masticophis flagellum*  
*Pituophis melanoleucus*  
*Lampropeltis getulus*  
*Thamnophis sirtalis*  
*Thamnophis elegans*  
*Hopsiglena torquata*  
*Crotalis viridis*

### **BIRDS**

Turkey Vulture  
White-tailed Kite  
Northern Harrier  
Sharp-shinned Hawk  
Cooper's Hawk  
Red-tailed Hawk  
Red-shouldered Hawk  
Golden Eagle  
Bald Eagle  
American Kestrel  
Prairie Falcon  
Peregrine Falcon  
Merlin  
California Quail  
Killdeer  
Wilson's Snipe  
Ring-billed Gull  
California Gull  
Herring Gull  
Rock Dove  
Mourning Dove  
Barn Owl  
Great Horned Owl  
Western Screech-Owl  
Vaux's Swift  
Anna's Hummingbird  
Northern Flicker  
Acorn Woodpecker  
Lewis's Woodpecker  
Red-breasted Sapsucker

*Cathartes aura*  
*Elanus caeruleus*  
*Circus cyaneus*  
*Accipiter striatus*  
*Accipiter cooperi*  
*Buteo jamaicensis*  
*Buteo lineatus*  
*Aquila chrysaetos*  
*Haliaeetus leucocephalus*  
*Falco sparverius*  
*Falco mexicanus*  
*Falco peregrinus*  
*Falco columbarius*  
*Callipepla californica*  
*Charadrius vociferous*  
*Gallinago delicata*  
*Larus delawarensis*  
*Larus californicus*  
*Larus argentatus*  
*Columba livia*  
*Zenaida macroura*  
*Tyto alba*  
*Bubo virginianus*  
*Otus kennicottii*  
*Chaetura vauxi*  
*Calypte annas*  
*Colaptes auratus*  
*Melanerpes formicivorus*  
*Melanerpes lewis*  
*Sphyrapicus ruber*

Nuttall's Woodpecker  
Downy Woodpecker  
Black Phoebe  
Say's Phoebe  
Pacific-slope Flycatcher  
Ash-throated Flycatcher  
Western Kingbird  
Barn Swallow  
Cliff Swallow  
Tree Swallow  
Violet-green swallow  
Northern Rough-winged Swallow  
California Scrub-jay  
American Crow  
Common Bushtit  
Oak Titmouse  
White-breasted Nuthatch  
Bewick's Wren  
House Wren  
American Robin  
Hermit Thrush  
Western Bluebird  
Ruby-crowned Kinglet  
Northern Mockingbird  
Cedar Waxwing  
Loggerhead Shrike  
Hutton's Vireo  
Orange-crowned Warbler  
Yellow Warbler  
Yellow-rumped Warbler  
Townsend's Warbler  
Common Yellowthroat  
Western Tanager  
Black-headed Grosbeak  
Lazuli Bunting  
Spotted Towhee  
California Towhee  
Savannah Sparrow  
Lark Sparrow  
White-crowned Sparrow  
Golden-crowned Sparrow  
Fox Sparrow  
Song Sparrow  
Lincoln's Sparrow

*Picoides nuttallii*  
*Dendrocopos pubescens*  
*Sayornis nigricans*  
*Sayornis saya*  
*Empidonax difficilus*  
*Myiarchus cinerascens*  
*Tyrannus verticalis*  
*Hirundo rustica*  
*Petrochelidon pyrrhonota*  
*Tachycineta bicolor*  
*Tachycineta thalassina*  
*Stelgidopteryx serripennis*  
*Aphelocoma californica*  
*Corvus brachyrhynchos*  
*Psaltriparus minimus*  
*Parus inornatus*  
*Sitta carolinensis*  
*Thryomanes bewickii*  
*Troglodytes aedon*  
*Turdus migratorius*  
*Hylocichla guttata*  
*Sialia mexicana*  
*Regulus calendula*  
*Mimus polyglottos*  
*Bombycilla cedrorum*  
*Lanius ludovicianus*  
*Vireo huttoni*  
*Orethlypis celata*  
*Setophaga petechia*  
*Setophaga coronata*  
*Setophaga townsendi*  
*Geothlypis trichas*  
*Piranga ludoviciana*  
*Pheucticus melanocephalus*  
*Passerina amoena*  
*Pipilo maculatus*  
*Pipilo crissalis*  
*Passerculus sandwichensis*  
*Chondestes grammacus*  
*Zonotrichia leucophrys*  
*Zonotrichia atricapilla*  
*Passerella iliaca*  
*Melospiza melodia maxillaris*  
*Melospiza lincolnii*

Dark-eyed Junco  
Western Meadowlark  
Red-winged Blackbird  
Brewer's Blackbird  
Brown-headed Cowbird  
Bullock's Oriole  
Purple Finch  
House Finch  
Pine Siskin  
American Goldfinch  
Lesser Goldfinch  
House Sparrow

*Junco hyemalis*  
*Sturnella neglecta*  
*Agelaius phoeniceus*  
*Euphagus cyanocephalus*  
*Molothrus ater*  
*Icterus bullockii*  
*Haemorhous purpureus*  
*Carpodacus mexicanus*  
*Spinus pinus*  
*Spinus tristis*  
*Spinus psaltria*  
*Passer domesticus*

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Mayer and Laudenslayer (1988)  
National Geographic Society (2011)  
Reid (2006)  
Sibley (2014)  
Stebbins (2003)  
Zeiner et al. (1990a, 1990b, 1990c)

**TABLE 3. SPECIAL STATUS PLANTS KNOWN TO OCCUR IN THE VICINITY OF THE PROJECT AREA, PLACER COUNTY, CALIFORNIA <sup>1</sup>**

| SCIENTIFIC NAME  | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE   |
|--|---------------------|---|--|
| Big-scale (California) balsamroot<br>( <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> ) | --/--/1B.2          | Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentinite; 90-1400m.   | Possible. Suitable habitat may be present on the site. Surveys to be conducted spring/summer 2017. |
| Stebbins morning-glory<br>( <i>Calystegia stebbinsii</i> )                                     | FE/CE/1B1           | Found in chaparral, cismontane woodland. Occurs on red clay soils of the pine-hill formation, on gabbro or serpentinite. Prefers open areas. 300-725 M.   | Not present. Suitable habitat not present at the site.   |
| Pine Hill ceanothus<br>( <i>Ceanothus roderickii</i> )   | FE/Rare/1B.2        | Found in chaparral and cismontane woodland. In gabbroic soils, often in disturbed area with other rare plants. 260-630 m.   | Not present. Suitable habitat not present at the site.   |
| Brandegee's clarkia<br>( <i>Clarkia biloba</i> ssp. <i>brandegeae</i> )                        | --/--/4.2           | Found in chaparral, cismontane woodland, and lower montane coniferous forest. Often in roadcuts. 75-915 m.  | Possible. Suitable habitat may be present on the site. Surveys to be conducted spring/summer 2017. |
| Red Hill soaproot<br>( <i>Chlorogalum grandiflorum</i> )                                       | --/--/1B.2          | Found in cismontane woodland, chaparral, and lower montane coniferous forest. Occurs frequently on serpentinite or gabbro, but also on non-ultramafic substrates and often on disturbed sites. 240-760 m. | Not present. Suitable habitat not present at the site.   |
| Hispid salty bird's beak<br>( <i>Chloropyron molle</i> ssp. <i>hispidum</i> )                  | --/--/1B/1          | Found in damp alkaline soils in meadows, seeps, playas, valley and foothill grassland. Especially in alkaline meadows and alkali sins with <i>Distichlis</i> . 1-155 M.                                   | Not present. Suitable habitat not present at the site.   |
| Dwarf downingia<br>( <i>Downingia pusilla</i> )  | --/--/2B.2          | Found vernal pools and mesic sites within valley and foothill grassland. Found along margins of several types of vernal pools. 1-445 m.   | Not present. Suitable habitat not present at the site.   |

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE  | OCCURRENCE   |
|---|---------------------|--|--|
| Stinkbells<br>( <i>Fritillaria agrestis</i> )                                 | --/--/4.2           | Found in cismontane woodland, chaparral, and valley and foothill grassland. Sometimes found on serpentine, mostly found in non-native grassland or in grassy openings in clay soil. 10-1555 m. | Possible. Suitable habitat may be present on the site. Surveys to be conducted spring/summer 2017. |
| El Dorado bedstraw<br>( <i>Galium californicum</i> ssp. <i>sierra</i> )       | FE/Rare/1B.2        | Found in cismontane woodland, chaparral, and lower montane coniferous forest. Occurs in pine-oak woodland or chaparral. Restricted to gabbroic or serpentine soils. 130-585 M.                 | Not present. Suitable habitat not present at the site.   |
| Bogg's Lake hedge hyssop<br>( <i>Gratiola heterosepala</i> )                  | --/CE/1B.2          | Inhabits vernal pools and freshwater swamps and marshes. In clay soils and usually in vernal pools, sometime on lake margins. 10-2375 m.   | Not present. Suitable habitat not present at the site.   |
| Bisbee Peak rush-rose<br>( <i>Helianthemum suffrutescens</i> )                | --/--/3.2           | Found in openings in chaparral, often on serpentine, gabbroic, or lone formation soils. 45-840 m.  | Not present. Suitable habitat not present at the site.   |
| Ahart's dwarf rush<br>( <i>Juncus leiospermus</i> var. <i>ahartii</i> )       | --/--/ 1B.2         | Restricted to the edge of vernal pools. Vernal pools and grasslands. 30-229 m.   | Not present. Suitable habitat not present at the site.   |
| Red Bluff dwarf rush<br>( <i>Juncus leiospermus</i> var. <i>leiospermus</i> ) | --/--/1B.1          | Found in vernal mesic sites, sometimes on edges of vernal pools within chaparral, valley and foothill grassland, cismontane woodland, vernal pools, meadows and seeps. 30-1025 M.              | Not present. Suitable habitat not present at the site.   |
| Legenere<br>( <i>Legenere limosa</i> )  | --/--/1B.1          | Found in the beds of vernal pools. Many historical occurrences are extirpated. 1-880 m.  | Not present. Suitable habitat not present at the site.   |
| Pincushion navarretia<br>( <i>Navarretia myersii</i> ssp. <i>myersii</i> )    | --/--/1B.1          | Found in vernal pools, in clay soils within non-native grassland. 20-330 m.  | Not present. Suitable habitat not present at the site.   |
| Sacramento Orcutt grass<br>( <i>Orcuttia viscida</i> )                        | FE/CE/1B.1          | Found in vernal pools. 30-100 m.   | Not present. Suitable habitat not present at the site.   |

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE   |
|---|---------------------|---|--|
| Layne's ragwort<br>( <i>Packera layneae</i> )               | FT/Rare/1B.2        | Found in ultramafic soil, occasionally along streams in chaparral and cismontane woodland. 200-1000 m.  | Not present. Suitable habitat not present at the site. |
| Sanford's arrowhead<br>( <i>Sagittaria sanfordii</i> )      | --/--/1B.2          | Found in marshes and swamps. In standing or slow-moving freshwater ponds, marshes and ditches. 0-650 m.   | Not present. Suitable habitat not present at the site. |
| El Dorado County mule ears<br>( <i>Wyethia reticulata</i> ) | --/--/1B.2          | Found in chaparral, cismontane woodland, and lower montane coniferous forest. Found in stony red clay and gabbroic soils, often in openings in gabbro chaparral. 185-630 m. | Not present. Suitable habitat not present at the site. |

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Rocklin 7.5-Minute Quadrangle Map and surrounding areas, information dated February 2017.

2. Status Codes:

FE Federal-listed Endangered  
 FT Federal-listed Threatened  
 FPE Federal Proposed Endangered  
 FPT Federal Proposed Threatened  
 CE California State-listed Endangered  
 CT California State-listed Threatened  
 CR California Rare  
 FP California Fully Protected  
 CSC California Species of Special Concern

California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.

California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.

California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.

California Rare Plant Rank 3: Plants about which more information is needed – a review list.

California Rare Plant Rank 4: Plants of limited distribution – a watch list.

CNPS Threat Ranks

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)



0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

**TABLE 4. SPECIAL STATUS ANIMAL SPECIES THAT HAVE BEEN REPORTED IN THE VICINITY OF THE PROJECT AREA, PLACER COUNTY, CALIFORNIA**

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE   |
|---|---------------------|---|--|
| <b>Invertebrates</b>  |                     |   |  |
| Vernal Pool Fairy Shrimp<br>( <i>Branchinecta lynchi</i> )                        | FT/--               | Inhabits vernal pools; occurs throughout the Delta and Central Valley.  | Not present. Suitable habitat is not present on site.  |
| Vernal Pool Tadpole Shrimp<br>( <i>Lepidurus packardii</i> )                      | FE/--               | Inhabits vernal pools; known from scattered locations in the Delta and Central Valley.  | Not present. Suitable habitat is not present on site.  |
| California Linderiella<br>( <i>Linderiella occidentalis</i> )                     | --/--               | Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.   | Not present. Suitable habitat is not present on site.  |
| Valley Elderberry Longhorn Beetle<br>( <i>Desmocerus californicus dimorphus</i> ) | FT/--               | Inhabits blue elderberry bushes (host plant); restricted to the Central Valley and adjacent foothills.  | Not present. No elderberries were observed at the site during site surveys, therefore no potential habitat exists at the site for this species |
| Ricksecker's Water Scavenger Beetle<br>( <i>Hydrochara rickseckeri</i> )          | --/--               | Aquatic beetle that lives in weedy shallow, open water associated freshwater seeps, springs, farm ponds, vernal pools (playa type pools) and slow-moving stream habitats. | Not present. Suitable habitat is not present on site.  |
| Alabaster Cave harvestman<br><i>Banksula californica</i>                          | --/--               | Known only from the type locality, Alabaster Cave in El Dorado County. The type locality has been partly destroyed by mining and the species may be extinct.              | Not present. Suitable habitat is not present on site.  |

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE  |
|---|---------------------|---|---|
| <b>Fish</b>   |                     |   |   |
| Conumnes stripetail<br>( <i>Cosumnoperla hypocrena</i> )                | --/--               | Found in intermittent streams on the western slope of the Central Sierra Foothill in the American and Cosumnes River Basins.  | Not present. Suitable habitat is not present on site.   |
| Steelhead- Central Valley DPS<br>( <i>Oncorhynchus mykiss irideus</i> ) | FT/--               | Population occur in the Sacramento and San Joaquin Rivers and their tributaries. In the project area found in Dry Creek and its tributaries in Secret Ravine and Miners Ravine. | Not present. Suitable habitat is not present onsite; no large river systems or suitable spawning streams. Suitable spawning habitat located about 4 miles southwest of the site in Secret Ravine and Miners Ravine. Best Management Practices are necessary to control contaminants in stormwater runoff. |
| <b>Amphibians</b>   |                     |   |   |
| Western Spadefoot Toad<br>( <i>Spea hammondi</i> )                      | --/CSC              | Breeds in vernal pools/seasonal stock ponds in the Central Valley and southern coast.   | Not present. Although there are records in the CNDDDB in vicinity of the property, onsite wetlands do not have characteristics sufficient to support this species.  |
| California Red-legged Frog<br>( <i>Rana draytonii</i> )                 | FT/CSC              | Inhabits freshwater creeks and ponds in the scattered areas along the Coast Rangers from northern California down to northern Baja.   | Not present. No CNDDDB records in immediate vicinity of the property. The study site is considered to be outside of the current range of this species. Additionally, non-tidal wetlands onsite are seasonal and do not provide the perennial waters typically required for California Red-legged Frog.    |

| <b>Reptiles</b>   |                           |   |  |
|---|---------------------------|---|--|
| Western Pond Turtle<br>( <i>Emys marmorata</i> )                | --/CSC                    | Inhabits freshwater ponds and sluggish streams; occurs from WA to Baja, mostly west of the Sierra crest.  | Not present. Suitable habitat is not present on site.  |
| <b>Birds</b>  |                           |   |  |
| Great Blue Heron (rookery site)<br>( <i>Ardea herodias</i> )    | --/--                     | Forms rookeries in large tree stands; occurs throughout California and elsewhere.   | Rookery not present. Rookeries unlikely on the study site due to a lack of suitable trees.   |
| Prairie Falcon<br>( <i>Falco mexicanus</i> )(Nesting)           | BCC/WL                    | Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields and desert scrub. Permanent resident and migrant along inner coast and ranges. | Nesting unlikely. Appropriate nest sites not present. This species may forage on the site in winter, though none were observed in February 2017. |
| Peregrine Falcon<br>( <i>Falco peregrinus anatum</i> )(Nesting) | Delisted,BCC /Delisted,FP | Inhabits open wetlands near cliffs, also occurs in some cities where nests on buildings and bridges.  | Nesting unlikely. Appropriate nest sites not present.  |
| Merlin<br>( <i>Falco columbarius</i> ) [wintering]              | -/WL                      | Breeds in Canada, winters in a variety of California habitats, including grasslands, savannahs, wetlands, etc.  | Wintering possible. The species may sporadically utilize the site as a winter foraging habitat.  |

|   |         |   |   |
|---|---------|---|---|
| Sharp-shinned Hawk<br>( <i>Accipiter striatus</i> ) [nesting] | -/WL    | Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter. | Nesting unlikely. Appropriate nesting habitat not present on site. Species likely forages on or near the site, especially in winter.  |
| Cooper's Hawk<br>( <i>Accipiter cooperii</i> ) [nesting]      | -/WL    | Nests primarily in deciduous riparian forests; forages in open woodlands.   | Nesting unlikely. Appropriate nesting habitat not present on site. Species likely forages on or near the site, especially in winter.  |
| Osprey<br>( <i>Pandion haliaetus</i> ) [Nesting]              | --/WL   | Breeds in northern California from the Cascade Ranges south to Lake Tahoe, and along the coast south to Marin County. Associated strictly with large, fish-bearing waters, primarily in Ponderosa pine through mixed conifer habitats.  | Nesting unlikely. Suitable nesting habitat not present on site.   |
| Ferruginous Hawk<br>( <i>Buteo regalis</i> )<br>(wintering)   | BCC/CSC | Inhabits open country. Winters in small numbers along California coast and inland valleys.  | Wintering possible. The site is considered suitable wintering foraging habitat, though none were observed in February 2017 field studies.   |
| Swainson's Hawk (nesting)<br>( <i>Buteo swainsoni</i> )       | BCC/CT  | Nests in trees and riparian stands; summer migrant to Central Valley. Suitable foraging areas include grasslands, pastures, alfalfa and other hay crops, and certain grain and row croplands.   | Nesting unlikely. CNDDDB records indicate this species nests within two miles of the site. Nests unlikely on the property. The site may provide marginally suitable foraging habitat for this species. To be included in preconstruction surveys. |

|  |                        |  |  |
|--|------------------------|--|--|
| Northern Harrier<br>( <i>Circus cyaneus</i> )<br>(nesting)                   | --/CSC                 | Forages and nests in grasslands, marshes, and agricultural fields; occurs throughout California, concentrated in the Central Valley and coastal valleys.   | Nesting unlikely. Suitable nesting habitat not present on site.  |
| White-tailed Kite<br>( <i>Elanus leucurus</i> )<br>(nesting)                 | --/FP                  | Nests in dense oaks, willows, other trees; occurs in the Central Valley and adjacent low foothills.  | Nesting unlikely. No CNDDDB nesting records in vicinity. Nests unlikely on the study site due to a lack of suitable trees. |
| Bald Eagle<br>( <i>Haliaeetus leucocephalus</i> )<br>(nesting and wintering) | Delisted,BCC<br>/CE,FP | In winter, maybe be found throughout most of California at lakes, reservoirs, rivers and some rangelands and coastal wetlands. California's breeding habitats are mainly located in mountains and foothill forests near permanent water sources. | Nesting unlikely. Suitable nesting habitat not present on site.  |
| Golden Eagle<br>( <i>Aquila chrysaetos</i> )<br>[nesting and wintering]      | BCC/WL,FP              | Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.  | Wintering possible. The site likely receives sporadic use by the species in winter.  |
| California black rail<br>( <i>Laterallus jamaicensis coturniculus</i> )      | --/CT,FP               | Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh with dense growths of pickleweed; also occurs in freshwater and brackish marshes.   | Not present. Suitable habitat is not present at the site.  |
| Short-eared Owl (nest site)<br>( <i>Asio flammeus</i> )                      | --/CSC                 | Forages and nests in perennial marsh and grassland habitat; occurs in the Central Valley, coast, and east Sierra regions.  | Nesting unlikely. Suitable nesting habitat not present on site.  |

|  |             |  |  |
|--|-------------|--|--|
| Western Burrowing Owl<br>( <i>Athene cunicularia hypugea</i> )<br>(burrow sites) | BCC/CSC     | Nests in mammal burrows, rock cavities in grassland and scrub; occurs throughout much of mid and lower California.   | Not present. Although CNDDDB documents nesting records in the project, suitable habitat is not present at the site due to tall heights of upland grasses and general lack of California ground squirrels and ground squirrel burrows. No individuals were observed during surveys in February 2017. To be included in preconstruction surveys. |
| Purple Martin<br>( <i>Progne subis</i> )   | --/CSC      | Uses a variety of wooded, low-elevation habitats throughout California. Uses hardwood and hardwood-conifer habitats as well as riparian habitats. Now a rare and local breeder on the coast and in interior mountain ranges. | Nesting unlikely. Suitable nesting habitat not present on site.  |
| Loggerhead Shrike<br>( <i>Lanius ludovicianus</i> )<br>(nesting)                 | BCC/CSC     | Habitat includes open areas such as desert, grasslands, and savannah. Nests in thickly foliated trees or tall shrubs. Forages in open habitat which contains trees, fence posts, utility poles and other perches.            | Unlikely. Although not recorded for the project area in the CNDDDB, trees and shrubs provide suitable nesting habitat. Not observed during surveys conducted in February 2017. To be included in preconstruction surveys.  |
| Grasshopper Sparrow<br>( <i>Ammodramus savannarum</i> )                          | --/CSC      | Found in dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches.   | Nesting unlikely. Suitable nesting habitat not present on site.  |
| Yellow Warbler<br>( <i>Setophaga petechia</i> )<br>[nesting]                     | BCC/CSC     | Breeds in deciduous riparian woodlands, widespread during fall migration.  | Nesting not present. May occur on site during fall migration, but suitable nesting habitat is not present at the site.   |
| Tricolored Blackbird<br>( <i>Agelaius tricolor</i> )<br>(nesting colony)         | BCC/CE, CSC | Nests in cattails, riparian scrub, and other dense marsh vegetation; occurs in SF Bay, Delta, and Central Valley basin.  | Nesting not present. Appropriate nest sites not present. To be included in preconstruction surveys.  |

| <b>Mammals</b>   |            |   |   |
|--|------------|---|---|
| Silver-haired bat<br>( <i>Lasionycteris noctivagans</i> )      | --/--      | Coastal and montane forests. Feeds over streams, ponds and open bushy areas, roosts in hollow trees.                                  | Not present. Suitable habitat is not present at the site. |
| Pallid bat<br>( <i>Antrozous pallidus</i> )                    | -/CSC      | Roosts primarily in oak woodland and ponderosa pine habitats; forages in open areas.  | Not present. Suitable habitat is not present at the site. |
| Townsend's Big-eared Bat<br>( <i>Corynorhinus townsendii</i> ) | --/CCT,CSC | Found in desert scrub and coniferous forests. Roost in caves or abandoned mines and occasionally are found to roost in buildings.     | Not present. Suitable habitat is not present at the site. |
| American badger<br>( <i>Taxidea taxus</i> )                    | -/CSC      | Drier open stages of most shrub, forest, and herbaceous habitats; needs sufficient food, friable soils and open, uncultivated ground. | Not present. Suitable habitat is not present at the site. |

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Rocklin 7.5-Minute Quadrangle Map and surrounding areas, information dated February 2017.

2. Status Codes:

FE Federal-listed Endangered

FT Federal-listed Threatened

FPE Federally Proposed Endangered

FPT Federally Proposed Threatened

BCC USFWS Bird Species of Conservation Concern

CE California State-listed Endangered

CT California State-listed Threatened

CR California Rare

FP California Fully Protected

CSC CDFW Species of Special Concern

WL CDFW Watch List Species



**ATTACHMENT 3**

**Arborists Report for Costco Site, Loomis, CA,  
Prepared by Mann Made Resources, December 9, 2016.**



# Mann Made Resources

Arborist Consulting and Tree Conservation Products

December 9, 2016

Mr. Steve Calcagno  
Kier & Wright Civil Engineers & Surveyors  
2850 Collier Canyon Road  
Livermore, CA 94551

**SUBJECT: ARBORISTS REPORT FOR COSTCO SITE, LOOMIS, CA**

Dear Mr. Calcagno,

Thank you for the opportunity to provide Arborist Consulting Services. The trees on the subject property were inspected on Friday, Saturday, and Sunday, November 18, 19, and 20, and December 9, 2016, and this report provides the findings from the inspections.

**Assignment and Background:** You contacted my office on October 30<sup>th</sup> to request an arborist inspection of the trees located within the construction site in Loomis on Sierra College Boulevard and Brace Road for a proposed Costco. I provided a proposal, and you provided the site image to work from. The assignment was to list all Blue Oak trees 4 inches diameter and greater, and all Live Oak and Valley Oak trees 6 inches diameter and greater. You also asked for an estimate of the mitigation required for the removal of the trees on the property.

**Observations:** The site was inspected on Friday, Saturday, and Sunday, November 18, 19, and 20, with a re-visit on Friday, December 9, 2016 to capture 9 trees that were not completed during the previous site visits. The site is an open area surrounded by fencing, bordered by Sierra College Boulevard top the west, Brace Road to the north, and the Rocklin Border to the south. An apartment complex is adjacent to the property on Brace Road, and the entry gate to the property was behind the driveway into the apartment complex. There is a piece of excess property to the east of the apartment complex that was included in the survey. Twenty eight trees were found to be in the excess property.

Prior to beginning the survey, I reviewed the Loomis Tree Preservation Ordinance to assure the data collected meets their requirements. A Trimble Geo7X unit was used to capture the data and tree locations. A tree ID number was listed on the map image, and the tree tag number was listed for each tree, and the data spreadsheet lists both numbers for easier field identification. The Tree ID number is shown on the KMZ file except for the last 9 trees along Brace Road that were captured using Google Earth, and the Tree ID number and the tag number are the same for those trees.

Each Oak tree was visited and measured. Undersized trees were not listed. Most of the trees had 1 or two previous tag numbers, and a new number was given to each tree for this inspection. Three trees were double numbered with 301, 302, and 303, before I caught that the same numbers were already used. The double number trees are differentiated by the Tree ID numbers. The tag I installed has the nail head tilted downward so the tag falls away from the tree. Tree tags are typically good for at least three years. After three years, tags may need to be replaced as the tree can grow over the tag which makes the tag number unable to be read. Each tree ID number is the number shown on the KMZ file aerial image.

The required data to be collected was:

- i. Tree number
- ii. Tree species/common name
- iii. Diameter at 4.5' above grade, or the best measurement for diameter if 4.5 was not a good representation of the trunk diameter.
- iv. Condition determined by combining vigor, structure, and ability to grow on the site, rated from Excellent, Good, Fair, Major Problems, Extreme Problems, or Dead. Condition ratings are used to calculate mitigation requirements.
- v. Comments supporting the condition rating.

All of the trees were viewed while standing on the ground. The diameter was measured using a diameter tape. A probe was used to learn the depth of cavities. A mallet was used to sound the wood and listen for hollow spots.

Three Hundred Seventy Two (372) trees were listed as being of protected size. One hundred sixty two (162) trees were found to be in good or fair condition. Two hundred ten (210) trees were found to be in poor, very poor, or dead condition. The inspection data is shown on the attached 20 page spreadsheet.

**Other testing or examination:** No other testing or examination was agreed to as part of the inspection assignment.

**Discussion:** The Town's Tree Preservation Ordinance provided the requirements for data collection. Blue Oaks 4 inches diameter and greater, and Valley and Live Oaks 6 inches diameter and greater are considered Protected Trees.

A total of 372 trees were listed found to be of protected size. Of the 372 total trees, 210 trees were found to be in condition rating 2, 1, and 0, and do not require mitigation. Of the 210 trees, 168 trees were found to be in poor condition, a numerical 2 rating, considered major problems. Thirty eight (38) trees were found to be in very poor condition a 1 rating, considered extreme problems. Four (4) trees were found to be dead, a zero rating.

One hundred sixty two (162) trees were found to be in good and fair condition. Eight (8) trees were found to be in good condition, a 4 rating. Fifteen (15) #15 container size trees are required for mitigation. One hundred fifty four (154) trees were found to be in fair condition, a 3 rating. Two Hundred Seventy Five (275) #15 container size trees are required for mitigation. Per the Town's ordinance, a total of 290 #15 container size trees may be required to be planted on the site for mitigation.

Two (2) of the existing trees in good and fair condition were found to be blue oaks, and require higher mitigation planting. Eighty six (86) of the existing trees were found to be Live Oaks. Two hundred eighty four trees were found to be Valle Oaks.

The spreadsheet includes the tree map ID number, the tree tag number, common name, species, diameter at 4.5 measurement or other appropriate location, tree condition using the Town of Loomis 0-5 rating system, and comments with notes supporting the condition rating. The spreadsheet is sorted 3 ways, by tree tag number, tree condition to calculate mitigation planting, and by species.

**Conclusion:** Three hundred seventy two (372) trees were found to be of protected size. Of those trees, 162 were found to be in good and fair condition for a total mitigation planting requirement of potentially 290 #15 container trees. It should be possible to plant these trees on the property as part of the project landscape design and parking lot shade.

**Certification:** I certify that all the statements in this report are true, complete and correct to the best of my knowledge, and that all statements were made in good faith.

Please contact me at 650-740-3461 or at [gordon@mannandtrees.com](mailto:gordon@mannandtrees.com) if you have any questions about this report or if additional services are desired.

Respectfully submitted,



Gordon Mann, Consulting Arborist  
2011 ISA True Professional of Arboriculture  
Registered Consulting Arborist #480  
Certified Arborist #WE-0151AM  
Certified Urban Forester #127  
ISA TRAQ Qualified Tree Risk Assessor

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650-740-3461  
[www.mannandtrees.com](http://www.mannandtrees.com)

Attachments: Site image with tree ID numbers  
Spreadsheet of trees sorted by tree number, species, and condition  
KMZ file for aerial image with GPS coordinates

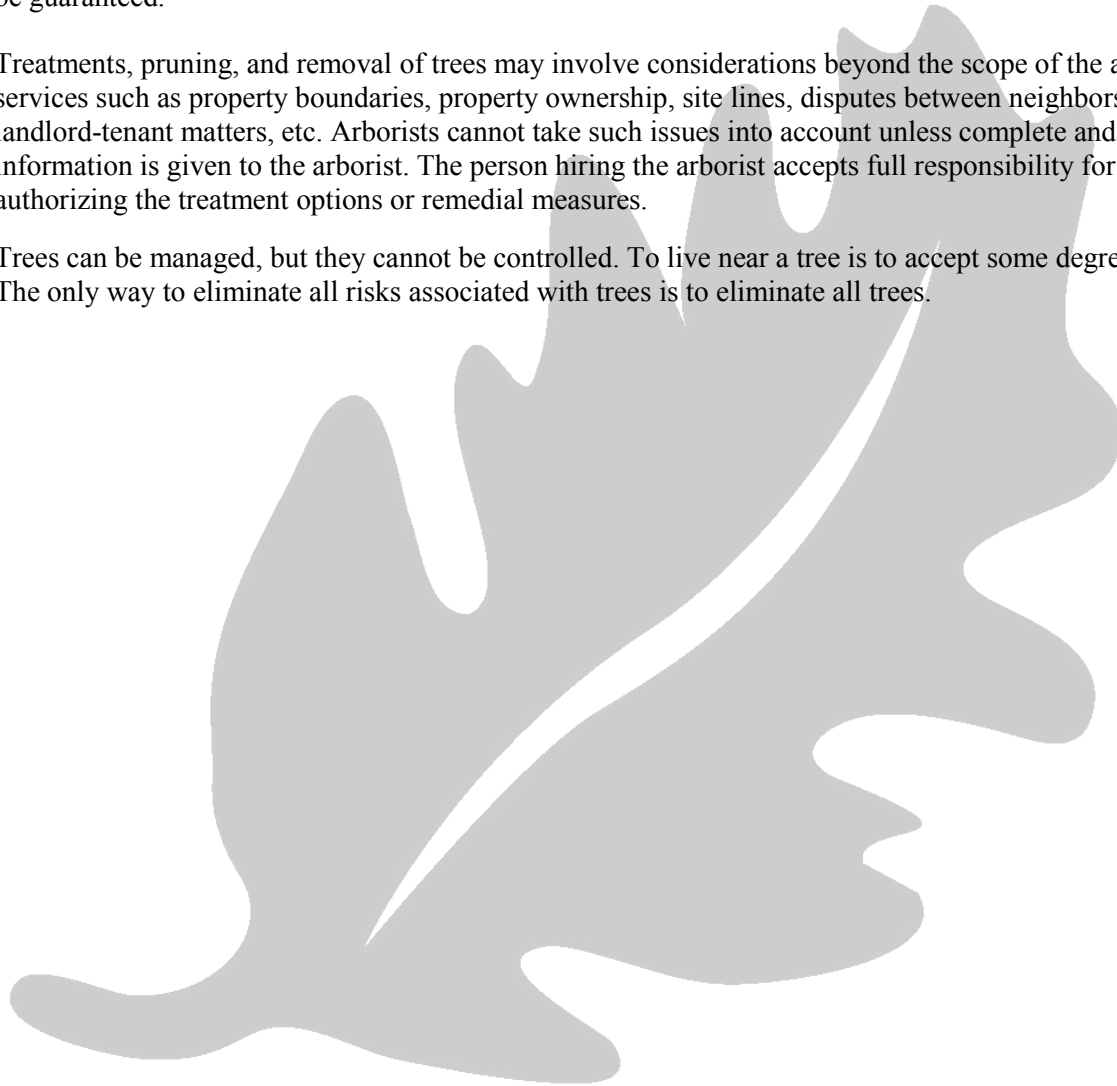
**Assumptions and Limitations:** This report provides information about the subject trees at the time of the inspection. Trees and conditions may change over time. This report is only valid for the conditions present at the time of the inspection. All observations were made while standing on the ground. The inspection consisted of visual observations. No further examinations were requested or performed.

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the options and recommendations of the arborist, or seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that can fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatments, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the treatment options or remedial measures.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks associated with trees is to eliminate all trees.



| Item No. | Map Image # | Tree Number | Common Name Species                     | Diameter Inches | Condition        | Comments   | Mitigation |
|----------|-------------|-------------|---|-----------------|------------------|--|------------|
| 1        | 2 195       | 101         | Valley Oak<br>Quercus lobata            | 24              | Fair             | co-dom at 6'; unmaintained   |            |
| 2        | 2 196       | 102         | Interior Live Oak<br>Quercus wislizenii | 6               | Major Problems   | under #101; 3 leaders at base;   |            |
| 3        | 2 197       | 103         | Valley Oak<br>Quercus lobata            | 11              | Good             | unpruned, straight co-domat 12'  |            |
| 4        | 2 198       | 104         | Interior Live Oak<br>Quercus wislizenii | 10              | Fair             | unmaintained low branches  |            |
| 5        | 2 199       | 105         | Valley Oak<br>Quercus lobata            | 7               | Fair             | low branch at 5'; unmaintained   |            |
| 6        | 2 200       | 106         | Valley Oak<br>Quercus lobata            | 9               | Fair             | 2 small trees right next to, 1 undersized  |            |
| 7        | 2 201       | 107         | Valley Oak<br>Quercus lobata            | 7               | Major Problems   | right next to 106  |            |
| 8        | 2 202       | 108         | Valley Oak<br>Quercus lobata            | 7               | Major Problems   | severe lean west; 1-sided crown; right next to undersized valley & live; under 109 |            |
| 9        | 2 203       | 109         | Valley Oak<br>Quercus lobata            | 11              | Fair             | between 108 & 110  |            |
| 10       | 2 204       | 110         | Valley Oak<br>Quercus lobata            | 7               | Fair             | 1-sided crown; next to undersized valley   |            |
| 11       | 2 205       | 111         | Valley Oak<br>Quercus lobata            | 8               | Fair             | co-dom at 9'   |            |
| 12       | 2 206       | 112         | Valley Oak<br>Quercus lobata            | 8               | Fair             | twig gall  |            |
| 13       | 2 207       | 113         | Interior Live Oak<br>Quercus wislizenii | 7               | Fair             | next to 115; 1-sided   |            |
| 14       | 2 208       | 114         | Interior Live Oak<br>Quercus wislizenii | 8               | Extreme Problems | severe lean south; wounds  |            |
| 15       | 2 209       | 115         | Interior Live Oak<br>Quercus wislizenii | 9               | Major Problems   | right next to touching undersized valley; leann se                                 |            |
| 16       | 2 210       | 116         | Valley Oak<br>Quercus lobata            | 11              | Fair             | unmaintained   |            |

|          |                        |                    |  |   |
|----------|------------------------|--------------------|--|---|
|          | Valley Oak             |                    |  |   |
| 17 2 211 | 117 Quercus lobata     | 7 Fair             |  | undersized valley stem right next to base   |
|          | Valley Oak             |                    |  | surrounded by undersized 2 valley & 1 live; |
| 18 2 212 | 118 Quercus lobata     | 7 Fair             |  | 1-sided crown                               |
|          | Valley Oak             |                    |  | codom at 2'; leaders both have 1-sided      |
| 19 2 213 | 119 Quercus lobata     | 4 Major Problems   |  | crowns; incl bark                           |
|          | Interior Live Oak      |                    |  |   |
| 20 2 214 | 120 Quercus wislizenii | 10 Fair            |  | undersized valley to sw                     |
|          | Valley Oak             |                    |  |   |
| 21 2 215 | 121 Quercus lobata     | 11 Fair            |  | unmaintained                                |
|          | Valley Oak             |                    |  |   |
| 22 2 216 | 122 Quercus lobata     | 7 Fair             |  | co-dom at 6'; 3 leaders                     |
|          | Valley Oak             |                    |  |   |
| 23 2 217 | 123 Quercus lobata     | 8 Fair             |  | crowded narrow crown                        |
|          | Valley Oak             |                    |  | co-dom at 7'; broken lead; 5.8" valley se   |
| 24 2 218 | 124 Quercus lobata     | 8 Major Problems   |  | next to                                     |
|          | Valley Oak             |                    |  | leans north, 1-sided crown; 4 undersized    |
| 25 2 219 | 125 Quercus lobata     | 9 Fair             |  | trees nearby                                |
|          | Valley Oak             |                    |  | co dom at 2'; incl bark; leaders lean       |
| 26 2 220 | 126 Quercus lobata     | 15 Major Problems  |  | outward                                     |
|          | Valley Oak             |                    |  |   |
| 27 2 221 | 127 Quercus lobata     | 7 Fair             |  | low lateral                                 |
|          | Valley Oak             |                    |  |   |
| 28 2 222 | 128 Quercus lobata     | 13 Fair            |  | co dom at 10'                               |
|          | Valley Oak             |                    |  | co-dom at 5'; low lateral; flattened        |
| 29 2 223 | 129 Quercus lobata     | 14 Major Problems  |  | circumference                               |
|          | Valley Oak             |                    |  |   |
| 30 2 224 | 130 Quercus lobata     | 8 Fair             |  | undersized live & valley at base            |
|          | Valley Oak             |                    |  |   |
| 31 2 225 | 131 Quercus lobata     | 15 Fair            |  | co dom; wood nailed on trunk                |
|          | Valley Oak             |                    |  |   |
| 32 2 226 | 132 Quercus lobata     | 7 Fair             |  | 1-sided crown under 133                     |
|          | Interior Live Oak      |                    |  |   |
| 33 2 227 | 133 Quercus wislizenii | 8 Extreme Problems |  | under #134; severe lean south; incl bark;   |
|          | Interior Live Oak      |                    |  |   |
| 34 2 228 | 134 Quercus wislizenii | 18 Fair            |  | low co-dom & laterals                       |
|          | Valley Oak             |                    |  |   |
| 35 2 229 | 135 Quercus lobata     | 6 Fair             |  | lean north                                  |

|    |   |     |   |                     |  |
|----|---|-----|---|---------------------|--|
| 36 | 2 | 230 | Interior Live Oak<br>136 Quercus wislizenii               | 12 Fair             | co-dom at 5';  |
| 37 | 2 | 231 | Interior Live Oak<br>137 Quercus wislizenii<br>Valley Oak | 16 Major Problems   | co-dom at 2'; co dom at 9'; incl bark  |
| 38 | 2 | 232 | 138 Quercus lobata  | 10 Fair             | 1" live at base  |
| 39 | 2 | 233 | Interior Live Oak<br>139 Quercus wislizenii<br>Valley Oak | 15 Major Problems   | co-dom at 2'; low laterals   |
| 40 | 2 | 234 | 140 Quercus lobata<br>Valley Oak                          | 10 Fair             | lean ne  |
| 41 | 2 | 235 | 141 Quercus lobata<br>Valley Oak                          | 8 Fair              | open growing   |
| 42 | 2 | 236 | 142 Quercus lobata  | 14 Fair             | open growing   |
| 43 | 2 | 237 | Valley Oak<br>143 Quercus lobata<br>Valley Oak            | 16 Major Problems   | co-dom stems st base; crown under main canopy not counted in dia.; incl bark |
| 44 | 2 | 238 | 144 Quercus lobata<br>Valley Oak                          | 15 Fair             | low lateral; undersized live oaks near                                       |
| 45 | 2 | 239 | 145 Quercus lobata<br>Valley Oak                          | 7 Major Problems    | 1 sided crown to east; under 144   |
| 46 | 2 | 240 | 146 Quercus lobata<br>Valley Oak                          | 14 Fair             | heavy twig gall  |
| 47 | 2 | 241 | 147 Quercus lobata  | 6 Fair              | narrow upright crown   |
| 48 | 2 | 242 | Interior Live Oak<br>148 Quercus wislizenii<br>Valley Oak | 7 Major Problems    | co dom at 4'; lean south; under 149  |
| 49 | 2 | 243 | 149 Quercus lobata  | 11 Extreme Problems | 3 leacers at base; basal decay; stems lean outward                           |
| 50 | 2 | 244 | Interior Live Oak<br>150 Quercus wislizenii<br>Valley Oak | 8 Major Problems    | lean west  |
| 51 | 2 | 245 | 151 Quercus lobata<br>Valley Oak                          | 35 Fair             | poison oak vines   |
| 52 | 2 | 246 | 152 Quercus lobata  | 20 Fair             | slight lean south;   |



|          |   |                     |  |
|----------|---|---------------------|--|
| 53 2 247 | Valley Oak<br>153 Quercus lobata                          | 16 Fair             | over 154   |
| 54 2 248 | Interior Live Oak<br>154 Quercus wislizenii<br>Valley Oak | 12 Extreme Problems | severe lean se; under 153 ; spur wounds on trunk           |
| 55 2 249 | 155 Quercus lobata<br>Valley Oak                          | 12 Extreme Problems | lean east; severe ivy vine                                 |
| 56 2 250 | 156 Quercus lobata  | 22 Major Problems   | co-dom at 7'; severe ivy                                   |
| 57 2 251 | Interior Live Oak<br>157 Quercus wislizenii<br>Valley Oak | 0 Major Problems    | co dom at base; under 158                                  |
| 58 2 252 | 158 Quercus lobata<br>Valley Oak                          | 13 Fair             | low laterals   |
| 59 2 253 | 159 Quercus lobata  | 12 Fair             | low lateral;   |
| 60 2 254 | Interior Live Oak<br>160 Quercus wislizenii               | 6 Major Problems    | co-dom at base; under 159                                  |
| 61 2 255 | Interior Live Oak<br>161 Quercus wislizenii               | 12 Major Problems   | 2 leaders at base; lean; sunscald                          |
| 62 2 256 | Interior Live Oak<br>162 Quercus wislizenii               | 16 Major Problems   | co dom at base; basal decay; low co doms                   |
| 63 2 257 | Interior Live Oak<br>163 Quercus wislizenii<br>Valley Oak | 9 Fair              | live; low dieback  |
| 64 2 258 | 164 Quercus lobata<br>Valley Oak                          | 26 Major Problems   | valley; co dom at 5'; 3 leaders; incl bark                 |
| 65 2 259 | 165 Quercus lobata  | 19 Fair             | open growing   |
| 66 2 260 | Interior Live Oak<br>166 Quercus wislizenii               | 7 Extreme Problems  | severe learn, suppressed                                   |
| 67 2 261 | Interior Live Oak<br>167 Quercus wislizenii<br>Valley Oak | 20 Extreme Problems | co-dom at base; split; incl bark; basal decay              |
| 68 2 262 | 168 Quercus lobata  | 12 Major Problems   | co dom at 2'; incl bark; next to undersized valley to west |

|          |   |                     |  |
|----------|---|---------------------|--|
| 69 2 263 | Valley Oak<br>169 Quercus lobata            | 7 Major Problems    | co dom at 1'; incl bark                                    |
| 70 2 264 | Valley Oak<br>170 Quercus lobata            | 16 Major Problems   | co dom at 2'; 3 stems; incl bark                           |
| 71 2 265 | Interior Live Oak<br>171 Quercus wislizenii | 16 Extreme Problems | 4 leaders at base lean outward;<br>16.16,8,10; basal decay |
| 72 2 266 | Valley Oak<br>172 Quercus lobata            | 21 Fair             | slight lean south;   |
| 73 2 267 | Interior Live Oak<br>173 Quercus wislizenii | 7 Major Problems    | under co dom 172; lean south; basal sprouts                |
| 74 2 268 | Interior Live Oak<br>174 Quercus wislizenii | 20 Major Problems   | significant lean south; trunk decay                        |
| 75 2 269 | Interior Live Oak<br>175 Quercus wislizenii | 17 Major Problems   | 3 leaders at base; incl bark; 17,9,10; basal decay         |
| 76 2 270 | Valley Oak<br>176 Quercus lobata            | 11 Fair             | lean sw  |
| 77 2 271 | Valley Oak<br>177 Quercus lobata            | 14 Major Problems   | co dom at 8'; incl bark;                                   |
| 78 2 272 | Valley Oak<br>178 Quercus lobata            | 11 Fair             | 1 sided crown to east                                      |
| 79 2 273 | Valley Oak<br>179 Quercus lobata            | 11 Major Problems   | co dom at 3'; lean sw                                      |
| 80 2 274 | 180 Quercus lobata                          | 7 Major Problems    | lean sw; basal decay                                       |
| 81 2 275 | Interior Live Oak<br>181 Quercus wislizenii | 8 Major Problems    | lean sw; large pruning wounds on trunk                     |
| 82 2 276 | Interior Live Oak<br>182 Quercus wislizenii | 7 Major Problems    | extreme lean north   |
| 83 2 277 | Valley Oak<br>183 Quercus lobata            | 10 Fair             | straight leader  |
| 84 2 278 | Interior Live Oak<br>184 Quercus wislizenii | 13 Major Problems   | 4 stems at base; stems lean outward; 13,<br>11,9,7         |
| 85 2 279 | Valley Oak<br>185 Quercus lobata            | 9 Fair              | slight lean west   |

|     |     |            |                        |                     |   |
|-----|-----|------------|------------------------|---------------------|---|
|     |     | Valley Oak |                        |                     |   |
| 86  | 2   | 280        | 186 Quercus lobata     | 13 Fair             | undersized valley between 185&&186          |
|     |     |            | Valley Oak             |                     |   |
| 87  | 2   | 281        | 187 Quercus lobata     | 7 Fair              | undersized valley south of                  |
|     |     |            | Valley Oak             |                     |   |
| 88  | 2   | 282        | 188 Quercus lobata     | 13 Major Problems   | co dom at 3'; east leader significant lean  |
|     |     |            | Valley Oak             |                     |   |
| 89  | 2   | 283        | 189 Quercus lobata     | 6 Fair              | open growing                                |
|     |     |            | Valley Oak             |                     |   |
| 90  | 2   | 284        | 190 Quercus lobata     | 11 Fair             | co dom at 7';                               |
|     |     |            | Valley Oak             |                     | lean north ; decay fruiting body om low     |
| 91  | 2   | 285        | 191 Quercus lobata     | 10 Major Problems   | trunk ptuning wound                         |
|     |     |            | Valley Oak             |                     |   |
| 92  | 2   | 286        | 192 Quercus lobata     | 12 Fair             | live sprouts at base                        |
|     |     |            | Valley Oak             |                     |   |
| 93  | 2   | 287        | 193 Quercus lobata     | 13 Fair             | co dom at 5'; low lateral;                  |
|     |     |            | Valley Oak             |                     |   |
| 94  | 1   |            | 194 Quercus lobata     | 7 Fair              | next to 195; 1 sided crown                  |
|     |     |            | Valley Oak             |                     |   |
| 95  | 3   |            | 195 Quercus lobata     | 17 Fair             | co dom at 6'; incl bark;                    |
|     |     |            | Valley Oak             |                     | co dom at 2'; incl bark; dead leader;       |
| 96  | 4   |            | 196 Quercus lobata     | 17 Extreme Problems | dieback                                     |
|     |     |            | Valley Oak             |                     |   |
| 97  | 5   |            | 197 Quercus lobata     | 10 Fair             | 1 sided crown                               |
|     |     |            |                        |                     |   |
|     |     |            | Interior Live Oak      |                     |   |
| 98  | 6   |            | 198 Quercus wislizenii | 0 Major Problems    | co dom at base; 1-sided crown               |
|     |     |            |                        |                     |   |
|     |     |            | Interior Live Oak      |                     |   |
| 99  | 7   |            | 199 Quercus wislizenii | 0 Extreme Problems  | co dom at 1'; basal decay at low trunk      |
|     |     |            | Valley Oak             |                     | wound                                       |
| 100 | 8   |            | 200 Quercus lobata     | 14 Fair             | symmetric crown                             |
|     |     |            | Valley Oak             |                     |   |
| 101 | 301 |            | 301 Quercus lobata     | 22 Fair             | co dom at 5';                               |
|     |     |            | Valley Oak             |                     |   |
| 102 | 9   |            | 301 Quercus lobata     | 8 Fair              | two trees received the 301 tag              |
|     |     |            | Valley Oak             |                     |   |
| 103 | 10  |            | 302 Quercus lobata     | 20 Fair             | symmetric crown                             |
|     |     |            | Valley Oak             |                     |   |
| 104 | 111 |            | 302 Quercus lobata     | 0 Extreme Problems  | trunk decay; two trees received the 302 tag |

|     |     |                        |                   |                                      |  |
|-----|-----|------------------------|-------------------|--------------------------------------|--|
|     |     | Valley Oak             |                   |                                      |  |
| 105 | 11  | 303 Quercus lobata     | 14 Fair           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 106 | 112 | 303 Quercus lobata     | 20 Fair           | two trees received the 303 tag       |  |
|     |     | Valley Oak             |                   |                                      |  |
| 107 | 12  | 304 Quercus lobata     | 12 Good           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 108 | 13  | 305 Quercus lobata     | 0 Fair            | crowded                              |  |
|     |     | Interior Live Oak      |                   |                                      |  |
| 109 | 14  | 306 Quercus wislizenii | 8 Major Problems  | lean se; basal decay                 |  |
|     |     | Valley Oak             |                   |                                      |  |
| 110 | 15  | 307 Quercus lobata     | 6 Major Problems  | suppressed by 306                    |  |
|     |     | Valley Oak             |                   |                                      |  |
| 111 | 16  | 308 Quercus lobata     | 7 Fair            | narrow crown                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 112 | 17  | 309 Quercus lobata     | 0 Major Problems  | crowded by 308; 1 sided crown        |  |
|     |     | Valley Oak             |                   |                                      |  |
| 113 | 18  | 310 Quercus lobata     | 8 Fair            |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 114 | 20  | 311 Quercus lobata     | 6 Major Problems  | crowded between 310&312              |  |
|     |     | Valley Oak             |                   |                                      |  |
| 115 | 21  | 312 Quercus lobata     | 8 Fair            |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 116 | 22  | 314 Quercus lobata     | 15 Good           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 117 | 24  | 315 Quercus lobata     | 15 Good           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 118 | 25  | 316 Quercus lobata     | 0 Major Problems  | 1 sided crown keans south            |  |
|     |     | Valley Oak             |                   | 2 stems at base; leans east & west ; |  |
| 119 | 26  | 317 Quercus lobata     | 18 Major Problems | crowded with 316                     |  |
|     |     | Valley Oak             |                   |                                      |  |
| 120 | 27  | 318 Quercus lobata     | 14 Fair           | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 121 | 28  | 319 Quercus lobata     | 27 Fair           | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 122 | 29  | 320 Quercus lobata     | 9 Fair            | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 123 | 30  | 321 Quercus lobata     | 22 Good           | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 124 | 31  | 322 Quercus lobata     | 13 Fair           |                                      |  |

|     |    |   |                    |   |
|-----|----|---|--------------------|---|
| 125 | 32 | Valley Oak<br>323 Quercus lobata            | 8 Extreme Problems | co-dom at base; incl bark; stems lean outward;              |
| 126 | 33 | Valley Oak<br>324 Quercus lobata            | 12 Fair            | 1 sided crown   |
| 127 | 34 | Valley Oak<br>324 Quercus lobata            | 0 Major Problems   | revised 1 sided crown; lean east; liveoaks growing at base; |
| 128 | 35 | Valley Oak<br>325 Quercus lobata            | 9 Fair             | narrow 1 sided crown  |
| 129 | 36 | Valley Oak<br>326 Quercus lobata            | 13 Fair            | co dom at 8';   |
| 130 | 37 | Valley Oak<br>327 Quercus lobata            | 13 Fair            | co dom at 8';   |
| 131 | 38 | Valley Oak<br>328 Quercus lobata            | 16 Major Problems  | line clearance pruned                                       |
| 132 | 39 | Valley Oak<br>329 Quercus lobata            | 15 Good            | open growing  |
| 133 | 40 | Valley Oak<br>330 Quercus lobata            | 17 Fair            | open growing  |
| 134 | 41 | Valley Oak<br>331 Quercus lobata            | 8 Major Problems   | lean south;   |
| 135 | 42 | 332 Quercus lobata                          | 13 Fair            | co dom at 6';   |
| 136 | 43 | Interior Live Oak<br>333 Quercus wislizenii | 10 Major Problems  | ytunk wounds; trunk decay                                   |
| 137 | 44 | Interior Live Oak<br>333 Quercus wislizenii | 10 Major Problems  | ad on next to fallen live oak                               |
| 138 | 45 | Valley Oak<br>334 Quercus lobata            | 18 Fair            | open growing  |
| 139 | 46 | Valley Oak<br>335 Quercus lobata            | 12 Major Problems  | severe lean west; soil piled at base;                       |
| 140 | 47 | 336 Quercus lobata                          | 10 Fair            | growing on mound  |
| 141 | 48 | Interior Live Oak<br>337 Quercus wislizenii | 0 Major Problems   | low laterals; trunk wound                                   |
| 142 | 49 | Valley Oak<br>338 Quercus lobata            | 7 Fair             | next to 339   |

|     |    |                                      |                    |   |  |
|-----|----|--------------------------------------|--------------------|---|--|
|     |    | Interior Live Oak                    |                    |   |  |
| 143 | 50 | 339 Quercus wislizenii<br>Valley Oak | 7 Major Problems   | too close to 338; lrans nw                  |  |
| 144 | 51 | 340 Quercus lobata<br>Valley Oak     | 6 Fair             | o mound                                     |  |
| 145 | 52 | 341 Quercus lobata<br>Valley Oak     | 12 Fair            | lean west;                                  |  |
| 146 | 53 | 342 Quercus lobata<br>Valley Oak     | 9 Good             |   |  |
| 147 | 54 | 343 Quercus lobata<br>Valley Oak     | 12 Fair            | co dom                                      |  |
| 148 | 55 | 344 Quercus lobata<br>Blue Oak       | 22 Good            | open growing                                |  |
| 149 | 56 | 345 Quercus douglasii<br>Valley Oak  | 22 Fair            | crowded with 344                            |  |
| 150 | 57 | 346 Quercus lobata<br>Valley Oak     | 14 Fair            | open growing                                |  |
| 151 | 58 | 347 Quercus lobata                   | 23 Fair            | lpw co dom open growing                     |  |
|     |    | Interior Live Oak                    |                    |   |  |
| 152 | 59 | 348 Quercus wislizenii<br>Valley Oak | 24 Major Problems  | co dom at 4'; basal decay; incl bark;       |  |
| 153 | 60 | 349 Quercus lobata<br>Valley Oak     | 20 Fair            | next to 350                                 |  |
| 154 | 61 | 350 Quercus lobata<br>Valley Oak     | 14 Major Problems  | lean west too close to 349                  |  |
| 155 | 62 | 351 Quercus lobata<br>Valley Oak     | 20 Fair            | co dom at 8'; open growing                  |  |
| 156 | 63 | 352 Quercus lobata<br>Valley Oak     | 6 Fair             | co dom at 6'; incl bark;                    |  |
| 157 | 64 | 353 Quercus lobata                   | 7 Major Problems   | kink in trunk; co dom at 8';                |  |
|     |    | Interior Live Oak                    |                    |   |  |
| 158 | 65 | 354 Quercus wislizenii<br>Valley Oak | 10 Major Problems  | lean away from 365                          |  |
| 159 | 67 | 355 Quercus lobata                   | 28 Fair            | co dom at 3'; incl bark; over 9 small trees |  |
|     |    | Interior Live Oak                    |                    |   |  |
| 160 | 68 | 356 Quercus wislizenii               | 8 Extreme Problems | 2 stems at base; suppressed                 |  |

|     |    |   |                   |                                       |
|-----|----|---|-------------------|---------------------------------------|
| 161 | 69 | Interior Live Oak<br>357 Quercus wislizenii               | 0 Major Problems  | suppressed by 355                     |
| 162 | 72 | Interior Live Oak<br>358 Quercus wislizenii               | 6 Major Problems  | crowded lean                          |
| 163 | 73 | Interior Live Oak<br>359 Quercus wislizenii               | 6 Major Problems  | crowded lean                          |
| 164 | 70 | Interior Live Oak<br>360 Quercus wislizenii<br>Valley Oak | 8 Major Problems  | lean south;                           |
| 165 | 74 | 361 Quercus lobata<br>Valley Oak                          | 0 Major Problems  | co dom at 2'; low lateral; lean north |
| 166 | 75 | 362 Quercus lobata  | 13 Fair           | lean east                             |
| 167 | 76 | Interior Live Oak<br>363 Quercus wislizenii               | 20 Major Problems | co doms; basal decay low lateral;     |
| 168 | 77 | Interior Live Oak<br>364 Quercus wislizenii<br>Valley Oak | 7 Major Problems  | crooked trunk                         |
| 169 | 78 | 365 Quercus lobata<br>Valley Oak                          | 7 Major Problems  | crooked trunk                         |
| 170 | 79 | 366 Quercus lobata  | 7 Major Problems  | lean south;                           |
| 171 | 80 | Interior Live Oak<br>367 Quercus wislizenii<br>Valley Oak | 12 Major Problems | basal decay                           |
| 172 | 81 | 368 Quercus lobata  | 34 Fair           | codm at 3'                            |
| 173 | 82 | Interior Live Oak<br>369 Quercus wislizenii<br>Valley Oak | 11 Major Problems | lean south;                           |
| 174 | 83 | 370 Quercus lobata  | 16 Fair           |                                       |
| 175 | 84 | Interior Live Oak<br>371 Quercus wislizenii               | 8 Major Problems  | severe lean south;                    |

|     |     |   |                     |   |
|-----|-----|---|---------------------|---|
| 176 | 85  | Interior Live Oak<br>372 Quercus wislizenii | 8 Major Problems    | severe lean south;                                  |
| 177 | 86  | Interior Live Oak<br>373 Quercus wislizenii | 10 Major Problems   | severe lean north                                   |
| 178 | 87  | Valley Oak<br>374 Quercus lobata            | 36 Fair             |   |
| 179 | 88  | Interior Live Oak<br>375 Quercus wislizenii | 7 Major Problems    | lean west basal decay                               |
| 180 | 89  | Interior Live Oak<br>376 Quercus wislizenii | 14 Major Problems   | lpw laterals; basal decay                           |
| 181 | 90  | Valley Oak<br>377 Quercus lobata            | 12 Fair             | slight lean south;                                  |
| 182 | 91  | Interior Live Oak<br>378 Quercus wislizenii | 19 Extreme Problems | lean south; basal decay                             |
| 183 | 92  | Valley Oak<br>379 Quercus lobata            | 12 Major Problems   | dead leaders at base; severe lean south;            |
| 184 | 93  | Interior Live Oak<br>380 Quercus wislizenii | 8 Major Problems    | lean west   |
| 185 | 94  | Valley Oak<br>381 Quercus lobata            | 11 Fair             |   |
| 186 | 95  | 382 Quercus lobata                          | 7 Major Problems    | growing too close to 381                            |
| 187 | 96  | Valley Oak<br>383 Quercus lobata            | 28 Fair             | open growing  |
| 188 | 97  | 384 Quercus lobata                          | 10 Fair             |   |
| 189 | 98  | Valley Oak<br>385 Quercus lobata            | 24 Fair             | open growing  |
| 190 | 99  | 386 Quercus lobata                          | 17 Major Problems   | decay in trunk; trunk wounds codominant at 7';<br>o |
| 191 | 100 | Valley Oak<br>387 Quercus lobata            | 12 Fair             | open growing  |
| 192 | 101 | 388 Quercus lobata                          | 18 Fair             | open growing  |



|     |     |                         |                     |  |   |
|-----|-----|-------------------------|---------------------|--|---|
|     |     | Valley Oak              |                     |  |   |
| 193 | 102 | 389 Quercus lobata      | 18 Fair             |  | co dom at 3'l open growing              |
|     |     | Valley Oak              |                     |  |   |
| 194 | 103 | 390 Quercus lobata      | 22 Major Problems   |  | trunk wounds low lateral;               |
|     |     | Valley Oak              |                     |  |   |
| 195 | 104 | 391 Quercus lobata      | 12 Dead             |  | trunk wounds bark falling off           |
|     |     | Blue Oak                |                     |  |   |
| 196 | 105 | 392 Quercus douglasii   | 0 Fair              |  | lean south; next to undersized valley   |
|     |     | Valley Oak              |                     |  |   |
| 197 | 106 | 393 Quercus lobata      | 13 Fair             |  |   |
|     |     | Valley Oak              |                     |  |   |
| 198 |     | 394 Quercus lobata      | 10 Extreme Problems |  | bark falling off                        |
|     |     | Valley Oak              |                     |  |   |
| 199 |     | 395 Quercus lobata      | 20 Major Problems   |  | trunk wounds; bowed trunk               |
|     |     | Interior Live Oak       |                     |  |   |
| 200 |     | 396 Quercus wislizenii  | 10 Major Problems   |  | lean east; basal decay                  |
|     |     | Interior Live Oak       |                     |  |   |
| 201 | 113 | 1501 Quercus wislizenii | 8 Major Problems    |  | basal decay                             |
|     |     | Valley Oak              |                     |  |   |
| 202 | 114 | 1502 Quercus lobata     | 6 Fair              |  |   |
|     |     | Valley Oak              |                     |  |   |
| 203 | 115 | 1503 Quercus lobata     | 12 Fair             |  | low laterals                            |
|     |     | Valley Oak              |                     |  |   |
| 204 | 116 | 1504 Quercus lobata     | 6 Major Problems    |  | lean west bowed trunk                   |
|     |     | Valley Oak              |                     |  |   |
| 205 | 117 | 1505 Quercus lobata     | 14 Fair             |  | low lateral;                            |
|     |     | Valley Oak              |                     |  |   |
| 206 | 118 | 1506 Quercus lobata     | 17 Major Problems   |  | 3 leaders at base; lean south;          |
|     |     | Valley Oak              |                     |  |   |
| 207 | 119 | 1507 Quercus lobata     | 20 Fair             |  | co dom at 7';                           |
|     |     | Valley Oak              |                     |  | co dom at base; 13" second leader leans |
| 208 | 120 | 1508 Quercus lobata     | 18 Major Problems   |  | west                                    |
|     |     | Valley Oak              |                     |  |   |
| 209 | 121 | 1509 Quercus lobata     | 8 Major Problems    |  | swollen trunk; co dom at 5'             |
|     |     | Valley Oak              |                     |  |   |
| 210 | 122 | 1510 Quercus lobata     | 7 Fair              |  |   |
|     |     | Valley Oak              |                     |  |   |
| 211 | 123 | 1511 Quercus lobata     | 7 Major Problems    |  | co dom at 6'; incl lateral;             |

|     |     |      |                    |    |   |
|-----|-----|------|--------------------|----|---|
|     |     |      | Valley Oak         |    |   |
| 212 | 124 | 1512 | Quercus lobata     | 12 | Fair  |
|     |     |      | Valley Oak         |    |   |
| 213 | 125 | 1513 | Quercus lobata     | 11 | Fair  |
|     |     |      | Valley Oak         |    |   |
| 214 | 126 | 1514 | Quercus lobata     | 14 | Fair  |
|     |     |      | Valley Oak         |    | 1 sided crown 3 undersized to east                  |
| 215 | 127 | 1515 | Quercus lobata     | 14 | Fair  |
|     |     |      | Valley Oak         |    |   |
| 216 | 128 | 1516 | Quercus lobata     | 15 | Fair  |
|     |     |      | Valley Oak         |    | open growing  |
| 217 | 129 | 1517 | Quercus lobata     | 10 | Fair  |
|     |     |      | Valley Oak         |    |   |
| 218 | 130 | 1518 | Quercus lobata     | 12 | Dead  |
|     |     |      | Valley Oak         |    | decay fruiting body                                 |
| 219 | 131 | 1519 | Quercus lobata     | 12 | Fair  |
|     |     |      | Interior Live Oak  |    |   |
| 220 | 132 | 1520 | Quercus wislizenii | 7  | Major Problems                                      |
|     |     |      | Valley Oak         |    | 2 stems at base; basal decay                        |
| 221 | 134 | 1521 | Quercus lobata     | 8  | Extreme Problems                                    |
|     |     |      | Valley Oak         |    | severe trunk wound                                  |
| 222 | 135 | 1522 | Quercus lobata     | 8  | Major Problems                                      |
|     |     |      | Valley Oak         |    | 3 leaders at base; basal decay                      |
| 223 | 136 | 1523 | Quercus lobata     | 6  | Major Problems                                      |
|     |     |      | Valley Oak         |    | low trunk wound decay                               |
| 224 | 138 | 1523 | Quercus lobata     | 7  | Extreme Problems                                    |
|     |     |      | Valley Oak         |    | several stems at base; incl bark; ncl;<br>7,7,4,2,3 |
| 225 | 137 | 1524 | Quercus lobata     | 6  | Major Problems                                      |
|     |     |      | Valley Oak         |    | 2 stems at base; incl bark;                         |
| 226 | 139 | 1526 | Quercus lobata     | 6  | Fair  |
|     |     |      | Valley Oak         |    | dense grouping of undersized trees                  |
| 227 | 140 | 1527 | Quercus lobata     | 6  | Major Problems                                      |
|     |     |      |                    |    | bowed trunk   |
|     |     |      | Interior Live Oak  |    |   |
| 228 | 142 | 1528 | Quercus wislizenii | 0  | Extreme Problems                                    |
|     |     |      |                    |    | multi stems at base; basal decay                    |
|     |     |      | Interior Live Oak  |    |   |
| 229 | 143 | 1529 | Quercus wislizenii | 7  | Extreme Problems                                    |
|     |     |      |                    |    | multi stems at base; basal decay                    |

|     |     |      |                                  |         |                     |   |
|-----|-----|------|----------------------------------|---------|---------------------|---|
|     |     |      | Interior Live Oak                |         |                     |   |
| 230 | 144 | 1530 | Quercus wislizenii<br>Valley Oak | 6,6,6,4 | Extreme Problems    | multi stems at base, basal decay          |
| 231 | 145 | 1531 | Quercus lobata<br>Valley Oak     |         | 8 Major Problems    | 4 stems at base - 6,6,5,2                 |
| 232 | 147 | 1532 | Quercus lobata<br>Valley Oak     |         | 10 Major Problems   | swollen trunk at base, laterals at base   |
| 233 | 146 | 1533 | Quercus lobata<br>Valley Oak     |         | 20 Extreme Problems | severe basal decay                        |
| 234 | 148 | 1534 | Quercus lobata                   |         | 19 Major Problems   | 4 stems at base; 19,18, 18, 9. incl bark; |
|     |     |      | Interior Live Oak                |         |                     |   |
| 235 | 149 | 1535 | Quercus wislizenii<br>Valley Oak |         | 8 Major Problems    | multi stems at base; incl bark;           |
| 236 | 150 | 1536 | Quercus lobata<br>Valley Oak     |         | 10 Fair             |   |
| 237 | 151 | 1537 | Quercus lobata<br>Valley Oak     |         | 12 Major Problems   | co dom at 2'; lateral in crotvh           |
| 238 | 152 | 1538 | Quercus lobata<br>Valley Oak     |         | 23 Major Problems   | basal decay                               |
| 239 | 153 | 1539 | Quercus lobata<br>Valley Oak     |         | 19 Fair             |   |
| 240 | 154 | 1540 | Quercus lobata<br>Valley Oak     |         | 9 Major Problems    | overgrown, lean south;                    |
| 241 | 155 | 1541 | Quercus lobata<br>Valley Oak     |         | 11 Major Problems   | 2 low codoms                              |
| 242 | 156 | 1542 | Quercus lobata<br>Valley Oak     |         | 11 Major Problems   | swollen trunk;, trunk wound               |
| 243 | 158 | 1543 | Quercus lobata                   |         | 13 Major Problems   | overgrown leans east;                     |
|     |     |      | Interior Live Oak                |         |                     |   |
| 244 | 159 | 1544 | Quercus wislizenii<br>Valley Oak |         | 23 Major Problems   | multi leaders at 5'; basal decay          |
| 245 | 160 | 1545 | Quercus lobata<br>Valley Oak     |         | 9 Fair              | open growing                              |
| 246 | 161 | 1546 | Quercus lobata<br>Valley Oak     |         | 8 Fair              | open growing on mound                     |
| 247 | 162 | 1547 | Quercus lobata<br>Valley Oak     |         | 18 Fair             | open growing                              |
| 248 | 163 | 1548 | Quercus lobata                   |         | 8 Fair              | barbed wire in tree                       |

|     |     |  |                    |                                |
|-----|-----|--|--------------------|--------------------------------|
| 249 | 164 | Interior Live Oak<br>1549 Quercus wislizenii | 6 Major Problems   | basal decay                    |
| 250 | 166 | Interior Live Oak<br>1550 Quercus wislizenii | 8 Major Problems   | low lateral; lean, basal decay |
| 251 | 167 | Valley Oak<br>1551 Quercus lobata            | 8 Fair             | crowded group                  |
| 252 | 168 | Valley Oak<br>1552 Quercus lobata            | 6 Major Problems   | bowed trunk                    |
| 253 | 169 | Valley Oak<br>1553 Quercus lobata            | 12 Fair            |                                |
| 254 | 170 | Valley Oak<br>1554 Quercus lobata            | 10 Fair            |                                |
| 255 | 172 | Valley Oak<br>1555 Quercus lobata            | 14 Fair            | co dom at 6';                  |
| 256 | 173 | Valley Oak<br>1557 Quercus lobata            | 18 Fair            | co dom at 10'                  |
| 257 | 174 | Valley Oak<br>1558 Quercus lobata            | 12 Fair            |                                |
| 258 | 175 | Valley Oak<br>1559 Quercus lobata            | 8 Major Problems   | crowded 1 sided crown          |
| 259 | 176 | Valley Oak<br>1560 Quercus lobata            | 10 Fair            |                                |
| 260 | 177 | Valley Oak<br>1561 Quercus lobata            | 9 Extreme Problems | trunk wound bark falling off   |
| 261 | 178 | Valley Oak<br>1562 Quercus lobata            | 11 Major Problems  | co-dom at 1' leaning leaders   |
| 262 | 179 | Valley Oak<br>1563 Quercus lobata            | 10 Major Problems  | co dom at 1'; incl bark;       |
| 263 | 180 | Valley Oak<br>1564 Quercus lobata            | 7 Fair             | crowded                        |
| 264 | 181 | Valley Oak<br>1565 Quercus lobata            | 9 Fair             |                                |
| 265 | 182 | Interior Live Oak<br>1566 Quercus wislizenii | 7 Major Problems   | basal decay                    |
| 266 | 184 | Valley Oak<br>1567 Quercus lobata            | 8 Major Problems   | co dom at 2'; incl bark;       |

|     |     |      |                                  |                     |                                      |
|-----|-----|------|----------------------------------|---------------------|--------------------------------------|
|     |     |      | Interior Live Oak                |                     |                                      |
| 267 | 185 | 1568 | Quercus wislizenii<br>Valley Oak | 7 Major Problems    | co dom at base; 1 stem suppressed    |
| 268 | 186 | 1569 | Quercus lobata<br>Valley Oak     | 8 Major Problems    | lean, bowed trunk                    |
| 269 | 189 | 1572 | Quercus lobata<br>Valley Oak     | 8 Fair              |                                      |
| 270 | 190 | 1573 | Quercus lobata<br>Valley Oak     | 6 Major Problems    | trunk wound                          |
| 271 | 191 | 1574 | Quercus lobata<br>Valley Oak     | 9 Major Problems    | 3 leaders at base; 8,5,5; incl bark; |
| 272 | 192 | 1575 | Quercus lobata<br>Valley Oak     | 8 Fair              | crowded                              |
| 273 | 193 | 1576 | Quercus lobata<br>Valley Oak     | 10 Fair             | open growing                         |
| 274 | 194 | 1577 | Quercus lobata<br>Valley Oak     | 16 Fair             | open growing                         |
| 275 | 288 | 1578 | Quercus lobata<br>Valley Oak     | 9 Major Problems    | 1 sided crown to west; >1/3 dieback  |
| 276 | 290 | 1579 | Quercus lobata<br>Valley Oak     | 14 Fair             | symmetric crown                      |
| 277 | 291 | 1580 | Quercus lobata<br>Valley Oak     | 14 Fair             | lean se                              |
| 278 | 292 | 1581 | Quercus lobata<br>Valley Oak     | 7 Major Problems    | suppressed to south;                 |
| 279 | 293 | 1582 | Quercus lobata<br>Valley Oak     | 7 Major Problems    | crowded lean south;                  |
| 280 | 295 | 1583 | Quercus lobata                   | 14 Fair             | co dom at 5';                        |
|     |     |      | Interior Live Oak                |                     |                                      |
| 281 | 296 | 1584 | Quercus wislizenii<br>Valley Oak | 16 Major Problems   | base; basal                          |
| 282 | 297 | 1585 | Quercus lobata                   | 6 Major Problems    | suppressed by 1586                   |
|     |     |      | Interior Live Oak                |                     |                                      |
| 283 | 298 | 1586 | Quercus wislizenii               | 16 Extreme Problems | basal and trunk decay                |
|     |     |      | Interior Live Oak                |                     |                                      |
| 284 | 299 | 1587 | Quercus wislizenii               | 23 Major Problems   | basal decay co dom at 5'             |

|     |     |      |   |                     |  |
|-----|-----|------|---|---------------------|--|
| 285 | 300 | 1588 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 6 Extreme Problems  | lean, basal decay  |
| 286 | 301 | 1589 | Quercus lobata  | 16 Major Problems   | co dom at 3', low lateral; incl bark;                    |
| 287 | 302 | 1590 | Interior Live Oak<br>Quercus wislizenii               | 7 Major Problems    | co dom at base; 2nd stem 7; lean south                   |
| 288 | 303 | 1591 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 6 Extreme Problems  | co dom at base; 5" other live stem; lean south;          |
| 289 | 304 | 1592 | Quercus lobata<br>Valley Oak                          | 12 Fair             | in blackberries  |
| 290 | 305 | 1593 | Quercus lobata<br>Valley Oak                          | 16 Fair             | open growing   |
| 291 | 306 | 1594 | Quercus lobata<br>Valley Oak                          | 12 Fair             | slight lean south;                                       |
| 292 | 307 | 1595 | Quercus lobata<br>Valley Oak                          | 16 Fair             | open growing   |
| 293 | 308 | 1596 | Quercus lobata<br>Valley Oak                          | 8 Major Problems    | 3 leaders at base; 8, 8, 6; basal decay                  |
| 294 | 309 | 1597 | Quercus lobata<br>Valley Oak                          | 6 Major Problems    | crowded lean south; laterals at base;                    |
| 295 | 310 | 1598 | Quercus lobata  | 6 Major Problems    | 2 stems at base; 6,6, sprouts at base;                   |
| 296 | 311 | 1599 | Interior Live Oak<br>Quercus wislizenii               | 10 Extreme Problems | 4 stems at base; basal decay all<br>10,4,6,8lean outward |
| 297 | 312 | 1600 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 10 Extreme Problems | 8 stems at base; 10, 4,5,2,7,6,8,7,5,5;<br>basal decay   |
| 298 | 314 | 1601 | Quercus lobata<br>Valley Oak                          | 6 Fair              | twig gall  |
| 299 | 315 | 1602 | Quercus lobata<br>Valley Oak                          | 8 Extreme Problems  | 3 stems at base; 8, 8,7; basal decay                     |
| 300 | 316 | 1603 | Quercus lobata<br>Valley Oak                          | 11 Major Problems   | 3 stems at base; 11,9,9; incl bark; lean outward;        |
| 301 | 317 | 1604 | Quercus lobata  | 8 Major Problems    | 2 stems at base; 8,7; sprouts                            |

|     |     | Interior Live Oak                     |                     |   |  |
|-----|-----|---------------------------------------|---------------------|---|--|
| 302 | 318 | 1605 Quercus wislizenii<br>Valley Oak | 7 Extreme Problems  | 3 stems at base; 6, 7,4; basal decay                    |  |
| 303 | 319 | 1606 Quercus lobata<br>Valley Oak     | 6 Major Problems    | 3 stems at base; 6,4,4; incl bark;                      |  |
| 304 | 320 | 1607 Quercus lobata<br>Valley Oak     | 7 Major Problems    | 2 stems at base; 7,4                                    |  |
| 305 | 321 | 1608 Quercus lobata<br>Valley Oak     | 8 Major Problems    | low laterals  |  |
| 306 | 322 | 1609 Quercus lobata<br>Valley Oak     | 8 Major Problems    | 2 stems at base; 8,5                                    |  |
| 307 | 323 | 1610 Quercus lobata<br>Valley Oak     | 6 Major Problems    | 3 stems at base; 6,4,3                                  |  |
| 308 | 324 | 1611 Quercus lobata<br>Valley Oak     | 6 Major Problems    | 4 stems at base; 6,4,3,3                                |  |
| 309 | 325 | 1612 Quercus lobata<br>Valley Oak     | 7 Fair              |   |  |
| 310 | 326 | 1613 Quercus lobata<br>Valley Oak     | 8 Major Problems    | 2 stems at base 8,8                                     |  |
| 311 | 327 | 1614 Quercus lobata<br>Valley Oak     | 16 Major Problems   | co dom at base; 12,12;1 leader leans north              |  |
| 312 | 328 | 1615 Quercus lobata<br>Valley Oak     | 7 Major Problems    | 2 stems at base; 7,6; incl bark;                        |  |
| 313 | 330 | 1616 Quercus lobata<br>Valley Oak     | 14 Extreme Problems | 2 stems at base; basal and trunk decay                  |  |
| 314 | 331 | 1617 Quercus lobata<br>Valley Oak     | 12 Fair             |   |  |
| 315 | 332 | 1618 Quercus lobata<br>Valley Oak     | 9 Major Problems    | trunk wound; lean south; crowded                        |  |
| 316 | 333 | 1619 Quercus lobata<br>Valley Oak     | 10 Major Problems   | 2 stems at base;  |  |
| 317 | 334 | 1620 Quercus lobata<br>Valley Oak     | 7 Major Problems    | 4 stems at base; 7,7,4,2; incl bark;                    |  |
| 318 | 335 | 1621 Quercus lobata<br>Valley Oak     | 0 Fair              | co dom at 7';   |  |
| 319 | 336 | 1622 Quercus lobata<br>Valley Oak     | 9 Major Problems    | growing under power lines                               |  |
| 320 | 337 | 1623 Quercus lobata<br>Valley Oak     | 9 Fair              |   |  |
| 321 | 338 | 1624 Quercus lobata                   | 21 Major Problems   | 4 stems at base; 21,20,14,10; basal decay<br>incl bark; |  |

|     |     |      |                    |                     |   |
|-----|-----|------|--------------------|---------------------|---|
|     |     |      | Valley Oak         |                     |   |
| 322 | 339 | 1625 | Quercus lobata     | 7 Major Problems    | suppressed by 1624                                    |
|     |     |      | Valley Oak         |                     |   |
| 323 | 340 | 1626 | Quercus lobata     | 12 Major Problems   | suppressed by 1624; leans se                          |
|     |     |      | Valley Oak         |                     |   |
| 324 | 341 | 1627 | Quercus lobata     | 8 Fair              | low small lateral at base                             |
|     |     |      | Valley Oak         |                     |   |
| 325 | 342 | 1628 | Quercus lobata     | 10 Fair             | straight leader                                       |
|     |     |      | Valley Oak         |                     |   |
| 326 | 343 | 1629 | Quercus lobata     | 12 Fair             | slight lean south;                                    |
|     |     |      | Interior Live Oak  |                     |   |
| 327 | 344 | 1630 | Quercus wislizenii | 37 Extreme Problems | 4 leaders at 2'; basal decay; incl bark; branch decay |
|     |     |      | Valley Oak         |                     |   |
| 328 | 345 | 1631 | Quercus lobata     | 16 Fair             | 2 leaders at 2'; incl bark; lean west;                |
|     |     |      | Valley Oak         |                     |   |
| 329 | 346 | 1632 | Quercus lobata     | 17 Major Problems   | low laterals; incl bark; lean outward;                |
|     |     |      | Valley Oak         |                     |   |
| 330 | 347 | 1633 | Quercus lobata     | 12 Fair             | open growing  |
|     |     |      | Valley Oak         |                     |   |
| 331 | 348 | 1634 | Quercus lobata     | 14 Fair             | open growing  |
|     |     |      | Valley Oak         |                     |   |
| 332 | 349 | 1635 | Quercus lobata     | 30 Major Problems   | co dom at 5'; incl bark; lean west & south;           |
|     |     |      | Valley Oak         |                     |   |
| 333 | 351 | 1636 | Quercus lobata     | 8 Major Problems    | lean south; bowed leaders                             |
|     |     |      | Valley Oak         |                     |   |
| 334 | 352 | 1637 | Quercus lobata     | 8 Fair              | crowded   |
|     |     |      | Valley Oak         |                     |   |
| 335 | 353 | 1638 | Quercus lobata     | 14 Major Problems   | 1 sided crown to west, leans west                     |
|     |     |      | Valley Oak         |                     |   |
| 336 | 354 | 1639 | Quercus lobata     | 0 Major Problems    | suppressed to west                                    |
|     |     |      | Valley Oak         |                     |   |
| 337 | 355 | 1640 | Quercus lobata     | 14 Major Problems   | co dom at 6'; incl bark; lean south                   |
|     |     |      | Valley Oak         |                     |   |
| 338 | 356 | 1641 | Quercus lobata     | 7 Major Problems    | suppressed to west                                    |
|     |     |      | Valley Oak         |                     |   |
| 339 | 357 | 1642 | Quercus lobata     | 7 Major Problems    | crowded leans se                                      |
|     |     |      | Valley Oak         |                     |   |
| 340 | 358 | 1643 | Quercus lobata     | 13 Major Problems   | lean west; >30% dieback                               |
|     |     |      | Valley Oak         |                     |   |
| 341 | 359 | 1645 | Quercus lobata     | 14 Major Problems   | severe lean west; bowed trunk                         |



|     |     |      |   |                     |  |
|-----|-----|------|---|---------------------|--|
| 342 | 360 | 1646 | Valley Oak<br>Quercus lobata                          | 7 Major Problems    | suppressed   |
| 343 | 361 | 1647 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 7 Major Problems    | suppressed west  |
| 344 | 362 | 1648 | Valley Oak<br>Quercus lobata                          | 0 Major Problems    | dieback  |
| 345 | 363 | 1649 | Valley Oak<br>Quercus lobata                          | 9 Major Problems    | dieback  |
| 346 | 364 | 1650 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 14 Major Problems   | co dom at 1'; dieback                                  |
| 347 | 365 | 1651 | Valley Oak<br>Quercus lobata                          | 0 Major Problems    | suppressed se  |
| 348 | 366 | 1652 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 12 Extreme Problems | 2 stems at base; 12, 8; dying                          |
| 349 | 367 | 1653 | Valley Oak<br>Quercus lobata                          | 9 Major Problems    | suppressed west  |
| 350 | 368 | 1654 | Valley Oak<br>Quercus lobata                          | 12 Major Problems   | lean west;   |
| 351 | 369 | 1655 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 6 Dead              |  |
| 352 | 370 | 1656 | Valley Oak<br>Quercus lobata                          | 12 Major Problems   | suppressed to west                                     |
| 353 | 371 | 1657 | Valley Oak<br>Quercus lobata                          | 11 Major Problems   | suppressed to west                                     |
| 354 | 372 | 1658 | Valley Oak<br>Quercus lobata                          | 6 Major Problems    | crowded lean west                                      |
| 355 | 373 | 1659 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 24 Dead             |  |
| 356 | 375 | 1660 | Valley Oak<br>Quercus lobata                          | 30 Fair             | lean north; base buried by duff and broken<br>btanches |
| 357 | 376 | 1661 | Valley Oak<br>Quercus lobata                          | 24 Extreme Problems | decay, bark missing on norh trunk, bowed<br>trunk      |
| 358 | 377 | 1662 | Interior Live Oak<br>Quercus wislizenii               | 14 Extreme Problems | under power lines; 3 stems at base; 14, 9,9            |

|     |      |      |   |             |                  |  |
|-----|------|------|---|-------------|------------------|--|
| 359 | 378  | 1663 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 0           | Extreme Problems | under power lines, 2 stems at base; 12, 9  |
| 360 | 380  | 1665 | Quercus lobata<br>Valley Oak                          | 14          | Extreme Problems | under power lines ; topped   |
| 361 | 381  | 1666 | Quercus lobata<br>Valley Oak                          | 18          | Extreme Problems | under power lines, topped  |
| 362 | 382  | 1667 | Quercus lobata<br>Valley Oak                          | 22          | Major Problems   | lean west; basal decay   |
| 363 | 383  | 1668 | Quercus lobata  | 20          | Major Problems   | ivy on trunk; dieback  |
| 364 | 1670 | 1670 | Interior Live Oak<br>Quercus wislizenii               | 38          | Major Problems   | Multi-leaders at base, included bark, basal decay, low laterals, crossing branches                               |
| 365 | 1671 | 1671 | Interior Live Oak<br>Quercus wislizenii               | 10          | Fair             | co-dom, low laterals   |
| 366 | 1672 | 1672 | Interior Live Oak<br>Quercus wislizenii               | 9           | Major Problems   | suppressed, growing at base of 1673  |
| 367 | 1673 | 1673 | Valley Oak<br>Quercus lobata                          | 13,14,14,17 | Extreme Problems | 4 leaders at base, next to 1672, included bark, basal decay, ourward leaning leaders                             |
| 368 | 1674 | 1674 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 11          | Major Problems   | low co-dom at 1', overgrown by 1673  |
| 369 | 1675 | 1675 | Quercus lobata<br>Valley Oak                          | 5.4         | Major Problems   | Undersized, crowded, 1-sided crown   |
| 370 | 1676 | 1676 | Quercus lobata<br>Valley Oak                          | 16 at 1'    | Major Problems   | co-doms at 1', included bark   |
| 371 | 1677 | 1677 | Quercus lobata<br>Valley Oak                          | 17          | Major Problems   | co-doms at 6', heavy line clearance pruned   |
| 372 | 1678 | 1678 | Quercus lobata  | 14          | Major Problems   | Line clearance pruned, suppressed leader under power lines, smaller diameter branches and minimal line clearance |
| 373 | 1679 | 1679 | Valley Oak<br>Quercus lobata                          | 9           | Fair             | pruned, not to standard stubs  |

| Item No. | Map Image # | Tree Number | Common Name Species                     | Diameter Inches | Condition        | Comments   | Mitigation |
|----------|-------------|-------------|---|-----------------|------------------|--|------------|
| 1        | 2 195       | 101         | Valley Oak<br>Quercus lobata            | 24              | Fair             | co-dom at 6'; unmaintained   |            |
| 2        | 2 196       | 102         | Interior Live Oak<br>Quercus wislizenii | 6               | Major Problems   | under #101; 3 leaders at base;   |            |
| 3        | 2 197       | 103         | Valley Oak<br>Quercus lobata            | 11              | Good             | unpruned, straight co-domat 12'  |            |
| 4        | 2 198       | 104         | Interior Live Oak<br>Quercus wislizenii | 10              | Fair             | unmaintained low branches  |            |
| 5        | 2 199       | 105         | Valley Oak<br>Quercus lobata            | 7               | Fair             | low branch at 5'; unmaintained   |            |
| 6        | 2 200       | 106         | Valley Oak<br>Quercus lobata            | 9               | Fair             | 2 small trees right next to, 1 undersized  |            |
| 7        | 2 201       | 107         | Valley Oak<br>Quercus lobata            | 7               | Major Problems   | right next to 106  |            |
| 8        | 2 202       | 108         | Valley Oak<br>Quercus lobata            | 7               | Major Problems   | severe lean west; 1-sided crown; right next to undersized valley & live; under 109 |            |
| 9        | 2 203       | 109         | Valley Oak<br>Quercus lobata            | 11              | Fair             | between 108 & 110  |            |
| 10       | 2 204       | 110         | Valley Oak<br>Quercus lobata            | 7               | Fair             | 1-sided crown; next to undersized valley   |            |
| 11       | 2 205       | 111         | Valley Oak<br>Quercus lobata            | 8               | Fair             | co-dom at 9'   |            |
| 12       | 2 206       | 112         | Valley Oak<br>Quercus lobata            | 8               | Fair             | twig gall  |            |
| 13       | 2 207       | 113         | Interior Live Oak<br>Quercus wislizenii | 7               | Fair             | next to 115; 1-sided   |            |
| 14       | 2 208       | 114         | Interior Live Oak<br>Quercus wislizenii | 8               | Extreme Problems | severe lean south; wounds  |            |
| 15       | 2 209       | 115         | Interior Live Oak<br>Quercus wislizenii | 9               | Major Problems   | right next to touching undersized valley; leann se                                 |            |
| 16       | 2 210       | 116         | Valley Oak<br>Quercus lobata            | 11              | Fair             | unmaintained   |            |

|          |                        |                    |  |   |
|----------|------------------------|--------------------|--|---|
|          | Valley Oak             |                    |  |   |
| 17 2 211 | 117 Quercus lobata     | 7 Fair             |  | undersized valley stem right next to base   |
|          | Valley Oak             |                    |  | surrounded by undersized 2 valley & 1 live; |
| 18 2 212 | 118 Quercus lobata     | 7 Fair             |  | 1-sided crown                               |
|          | Valley Oak             |                    |  | codom at 2'; leaders both have 1-sided      |
| 19 2 213 | 119 Quercus lobata     | 4 Major Problems   |  | crowns; incl bark                           |
|          | Interior Live Oak      |                    |  |   |
| 20 2 214 | 120 Quercus wislizenii | 10 Fair            |  | undersized valley to sw                     |
|          | Valley Oak             |                    |  |   |
| 21 2 215 | 121 Quercus lobata     | 11 Fair            |  | unmaintained                                |
|          | Valley Oak             |                    |  |   |
| 22 2 216 | 122 Quercus lobata     | 7 Fair             |  | co-dom at 6'; 3 leaders                     |
|          | Valley Oak             |                    |  |   |
| 23 2 217 | 123 Quercus lobata     | 8 Fair             |  | crowded narrow crown                        |
|          | Valley Oak             |                    |  | co-dom at 7'; broken leadef;5.8" valley se  |
| 24 2 218 | 124 Quercus lobata     | 8 Major Problems   |  | next to                                     |
|          | Valley Oak             |                    |  | leans north, 1-sided ctown; 4 undersized    |
| 25 2 219 | 125 Quercus lobata     | 9 Fair             |  | trees nearby                                |
|          | Valley Oak             |                    |  | co dom at 2'; incl bark; leaders lean       |
| 26 2 220 | 126 Quercus lobata     | 15 Major Problems  |  | outward                                     |
|          | Valley Oak             |                    |  |   |
| 27 2 221 | 127 Quercus lobata     | 7 Fair             |  | low lateral                                 |
|          | Valley Oak             |                    |  |   |
| 28 2 222 | 128 Quercus lobata     | 13 Fair            |  | co dom at 10'l                              |
|          | Valley Oak             |                    |  | co-dom at 5'; low lateral; flattened        |
| 29 2 223 | 129 Quercus lobata     | 14 Major Problems  |  | circumference                               |
|          | Valley Oak             |                    |  |   |
| 30 2 224 | 130 Quercus lobata     | 8 Fair             |  | undersized live &valley at base             |
|          | Valley Oak             |                    |  |   |
| 31 2 225 | 131 Quercus lobata     | 15 Fair            |  | co dom; wood nailed on trunk                |
|          | Valley Oak             |                    |  |   |
| 32 2 226 | 132 Quercus lobata     | 7 Fair             |  | 1-sided crown under133                      |
|          | Interior Live Oak      |                    |  |   |
| 33 2 227 | 133 Quercus wislizenii | 8 Extreme Problems |  | under #134; severe lean south; incl bark;   |
|          | Interior Live Oak      |                    |  |   |
| 34 2 228 | 134 Quercus wislizenii | 18 Fair            |  | low co-dom & laterals                       |
|          | Valley Oak             |                    |  |   |
| 35 2 229 | 135 Quercus lobata     | 6 Fair             |  | lean north                                  |

|          |   |                     |  |
|----------|---|---------------------|--|
| 36 2 230 | Interior Live Oak<br>136 Quercus wislizenii               | 12 Fair             | co-dom at 5';  |
| 37 2 231 | Interior Live Oak<br>137 Quercus wislizenii<br>Valley Oak | 16 Major Problems   | co-dom at 2'; co dom at 9'; incl bark  |
| 38 2 232 | 138 Quercus lobata  | 10 Fair             | 1" live at base  |
| 39 2 233 | Interior Live Oak<br>139 Quercus wislizenii<br>Valley Oak | 15 Major Problems   | co-dom at 2'; low laterals   |
| 40 2 234 | 140 Quercus lobata<br>Valley Oak                          | 10 Fair             | lean ne  |
| 41 2 235 | 141 Quercus lobata<br>Valley Oak                          | 8 Fair              | open growing   |
| 42 2 236 | 142 Quercus lobata  | 14 Fair             | open growing   |
| 43 2 237 | Valley Oak<br>143 Quercus lobata<br>Valley Oak            | 16 Major Problems   | co-dom stems st base; crown under main canopy not counted in dia.; incl bark |
| 44 2 238 | 144 Quercus lobata<br>Valley Oak                          | 15 Fair             | low lateral; undersized live oaks near                                       |
| 45 2 239 | 145 Quercus lobata<br>Valley Oak                          | 7 Major Problems    | 1 sided crown to east; under 144   |
| 46 2 240 | 146 Quercus lobata<br>Valley Oak                          | 14 Fair             | heavy twig gall  |
| 47 2 241 | 147 Quercus lobata  | 6 Fair              | narrow upright crown   |
| 48 2 242 | Interior Live Oak<br>148 Quercus wislizenii<br>Valley Oak | 7 Major Problems    | co dom at 4'; lean south; under 149  |
| 49 2 243 | 149 Quercus lobata  | 11 Extreme Problems | 3 leacers at base; basal decay; stems lean outward                           |
| 50 2 244 | Interior Live Oak<br>150 Quercus wislizenii<br>Valley Oak | 8 Major Problems    | lean west  |
| 51 2 245 | 151 Quercus lobata<br>Valley Oak                          | 35 Fair             | poison oak vines   |
| 52 2 246 | 152 Quercus lobata  | 20 Fair             | slight lean south;   |

|          |   |                     |   |
|----------|---|---------------------|---|
| 53 2 247 | Valley Oak<br>153 Quercus lobata                          | 16 Fair             | over 154  |
| 54 2 248 | Interior Live Oak<br>154 Quercus wislizenii<br>Valley Oak | 12 Extreme Problems | severe lean se; under 153 ; spur wounds<br>on trunk           |
| 55 2 249 | 155 Quercus lobata<br>Valley Oak                          | 12 Extreme Problems | lean east; severe ivy vine                                    |
| 56 2 250 | 156 Quercus lobata  | 22 Major Problems   | co-dom at 7'; severe ivy                                      |
| 57 2 251 | Interior Live Oak<br>157 Quercus wislizenii<br>Valley Oak | 0 Major Problems    | co dom at base; under 158                                     |
| 58 2 252 | 158 Quercus lobata<br>Valley Oak                          | 13 Fair             | low laterals  |
| 59 2 253 | 159 Quercus lobata  | 12 Fair             | low lateral;  |
| 60 2 254 | Interior Live Oak<br>160 Quercus wislizenii               | 6 Major Problems    | co-dom at base; under 159                                     |
| 61 2 255 | Interior Live Oak<br>161 Quercus wislizenii               | 12 Major Problems   | 2 leaders at base; lean; sunscald                             |
| 62 2 256 | Interior Live Oak<br>162 Quercus wislizenii               | 16 Major Problems   | co dom at base; basal decay; low co doms                      |
| 63 2 257 | Interior Live Oak<br>163 Quercus wislizenii<br>Valley Oak | 9 Fair              | live; low dieback   |
| 64 2 258 | 164 Quercus lobata<br>Valley Oak                          | 26 Major Problems   | valley; co dom at 5'; 3 leaders; incl bark                    |
| 65 2 259 | 165 Quercus lobata  | 19 Fair             | open growing  |
| 66 2 260 | Interior Live Oak<br>166 Quercus wislizenii               | 7 Extreme Problems  | severe lean, suppressed                                       |
| 67 2 261 | Interior Live Oak<br>167 Quercus wislizenii<br>Valley Oak | 20 Extreme Problems | co-dom at base; split; incl bark; basal<br>decay              |
| 68 2 262 | 168 Quercus lobata  | 12 Major Problems   | co dom at 2'; incl bark; next to undersized<br>valley to west |

|          |   |                     |  |
|----------|---|---------------------|--|
| 69 2 263 | Valley Oak<br>169 Quercus lobata            | 7 Major Problems    | co dom at 1'; incl bark                                    |
| 70 2 264 | Valley Oak<br>170 Quercus lobata            | 16 Major Problems   | co dom at 2'; 3 stems; incl bark                           |
| 71 2 265 | Interior Live Oak<br>171 Quercus wislizenii | 16 Extreme Problems | 4 leaders at base lean outward;<br>16.16,8,10; basal decay |
| 72 2 266 | Valley Oak<br>172 Quercus lobata            | 21 Fair             | slight lean south;   |
| 73 2 267 | Interior Live Oak<br>173 Quercus wislizenii | 7 Major Problems    | under co dom 172; lean south; basal sprouts                |
| 74 2 268 | Interior Live Oak<br>174 Quercus wislizenii | 20 Major Problems   | significant lean south; trunk decay                        |
| 75 2 269 | Interior Live Oak<br>175 Quercus wislizenii | 17 Major Problems   | 3 leaders at base; incl bark; 17,9,10; basal decay         |
| 76 2 270 | Valley Oak<br>176 Quercus lobata            | 11 Fair             | lean sw  |
| 77 2 271 | Valley Oak<br>177 Quercus lobata            | 14 Major Problems   | co dom at 8'; incl bark;                                   |
| 78 2 272 | Valley Oak<br>178 Quercus lobata            | 11 Fair             | 1 sided crown to east                                      |
| 79 2 273 | Valley Oak<br>179 Quercus lobata            | 11 Major Problems   | co dom at 3'; lean sw                                      |
| 80 2 274 | 180 Quercus lobata                          | 7 Major Problems    | lean sw; basal decay                                       |
| 81 2 275 | Interior Live Oak<br>181 Quercus wislizenii | 8 Major Problems    | lean sw; large pruning wounds on trunk                     |
| 82 2 276 | Interior Live Oak<br>182 Quercus wislizenii | 7 Major Problems    | extreme lean north   |
| 83 2 277 | Valley Oak<br>183 Quercus lobata            | 10 Fair             | straight leader  |
| 84 2 278 | Interior Live Oak<br>184 Quercus wislizenii | 13 Major Problems   | 4 stems at base; stems lean outward; 13, 11,9,7            |
| 85 2 279 | Valley Oak<br>185 Quercus lobata            | 9 Fair              | slight lean west   |

|     |     |            |                        |                     |   |
|-----|-----|------------|------------------------|---------------------|---|
|     |     | Valley Oak |                        |                     |   |
| 86  | 2   | 280        | 186 Quercus lobata     | 13 Fair             | undersized valley between 185&&186          |
|     |     |            | Valley Oak             |                     |   |
| 87  | 2   | 281        | 187 Quercus lobata     | 7 Fair              | undersized valley south of                  |
|     |     |            | Valley Oak             |                     |   |
| 88  | 2   | 282        | 188 Quercus lobata     | 13 Major Problems   | co dom at 3'; east leader significant lean  |
|     |     |            | Valley Oak             |                     |   |
| 89  | 2   | 283        | 189 Quercus lobata     | 6 Fair              | open growing                                |
|     |     |            | Valley Oak             |                     |   |
| 90  | 2   | 284        | 190 Quercus lobata     | 11 Fair             | co dom at 7';                               |
|     |     |            | Valley Oak             |                     | lean north ; decay fruiting body om low     |
| 91  | 2   | 285        | 191 Quercus lobata     | 10 Major Problems   | trunk ptuning wound                         |
|     |     |            | Valley Oak             |                     |   |
| 92  | 2   | 286        | 192 Quercus lobata     | 12 Fair             | live sprouts at base                        |
|     |     |            | Valley Oak             |                     |   |
| 93  | 2   | 287        | 193 Quercus lobata     | 13 Fair             | co dom at 5'; low lateral;                  |
|     |     |            | Valley Oak             |                     |   |
| 94  | 1   |            | 194 Quercus lobata     | 7 Fair              | next to 195; 1 sided crown                  |
|     |     |            | Valley Oak             |                     |   |
| 95  | 3   |            | 195 Quercus lobata     | 17 Fair             | co dom at 6'; incl bark;                    |
|     |     |            | Valley Oak             |                     | co dom at 2'; incl bark; dead leader;       |
| 96  | 4   |            | 196 Quercus lobata     | 17 Extreme Problems | dieback                                     |
|     |     |            | Valley Oak             |                     |   |
| 97  | 5   |            | 197 Quercus lobata     | 10 Fair             | 1 sided crown                               |
|     |     |            |                        |                     |   |
|     |     |            | Interior Live Oak      |                     |   |
| 98  | 6   |            | 198 Quercus wislizenii | 0 Major Problems    | co dom at base; 1-sided crown               |
|     |     |            |                        |                     |   |
|     |     |            | Interior Live Oak      |                     |   |
| 99  | 7   |            | 199 Quercus wislizenii | 0 Extreme Problems  | co dom at 1'; basal decay at low trunk      |
|     |     |            | Valley Oak             |                     | wound                                       |
| 100 | 8   |            | 200 Quercus lobata     | 14 Fair             | symmetric crown                             |
|     |     |            | Valley Oak             |                     |   |
| 101 | 301 |            | 301 Quercus lobata     | 22 Fair             | co dom at 5';                               |
|     |     |            | Valley Oak             |                     |   |
| 102 | 9   |            | 301 Quercus lobata     | 8 Fair              | two trees received the 301 tag              |
|     |     |            | Valley Oak             |                     |   |
| 103 | 10  |            | 302 Quercus lobata     | 20 Fair             | symmetric crown                             |
|     |     |            | Valley Oak             |                     |   |
| 104 | 111 |            | 302 Quercus lobata     | 0 Extreme Problems  | trunk decay; two trees received the 302 tag |



|     |     |                        |                   |                                      |  |
|-----|-----|------------------------|-------------------|--------------------------------------|--|
|     |     | Valley Oak             |                   |                                      |  |
| 105 | 11  | 303 Quercus lobata     | 14 Fair           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 106 | 112 | 303 Quercus lobata     | 20 Fair           | two trees received the 303 tag       |  |
|     |     | Valley Oak             |                   |                                      |  |
| 107 | 12  | 304 Quercus lobata     | 12 Good           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 108 | 13  | 305 Quercus lobata     | 0 Fair            | crowded                              |  |
|     |     | Interior Live Oak      |                   |                                      |  |
| 109 | 14  | 306 Quercus wislizenii | 8 Major Problems  | lean se; basal decay                 |  |
|     |     | Valley Oak             |                   |                                      |  |
| 110 | 15  | 307 Quercus lobata     | 6 Major Problems  | suppressed by 306                    |  |
|     |     | Valley Oak             |                   |                                      |  |
| 111 | 16  | 308 Quercus lobata     | 7 Fair            | narrow crown                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 112 | 17  | 309 Quercus lobata     | 0 Major Problems  | crowded by 308; 1 sided crown        |  |
|     |     | Valley Oak             |                   |                                      |  |
| 113 | 18  | 310 Quercus lobata     | 8 Fair            |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 114 | 20  | 311 Quercus lobata     | 6 Major Problems  | crowded between 310&312              |  |
|     |     | Valley Oak             |                   |                                      |  |
| 115 | 21  | 312 Quercus lobata     | 8 Fair            |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 116 | 22  | 314 Quercus lobata     | 15 Good           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 117 | 24  | 315 Quercus lobata     | 15 Good           |                                      |  |
|     |     | Valley Oak             |                   |                                      |  |
| 118 | 25  | 316 Quercus lobata     | 0 Major Problems  | 1 sided crown keans south            |  |
|     |     | Valley Oak             |                   | 2 stems at base; leans east & west ; |  |
| 119 | 26  | 317 Quercus lobata     | 18 Major Problems | crowded with 316                     |  |
|     |     | Valley Oak             |                   |                                      |  |
| 120 | 27  | 318 Quercus lobata     | 14 Fair           | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 121 | 28  | 319 Quercus lobata     | 27 Fair           | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 122 | 29  | 320 Quercus lobata     | 9 Fair            | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 123 | 30  | 321 Quercus lobata     | 22 Good           | open growing                         |  |
|     |     | Valley Oak             |                   |                                      |  |
| 124 | 31  | 322 Quercus lobata     | 13 Fair           |                                      |  |

|     |    |   |                    |   |
|-----|----|---|--------------------|---|
| 125 | 32 | Valley Oak<br>323 Quercus lobata            | 8 Extreme Problems | co-dom at base; incl bark; stems lean outward;              |
| 126 | 33 | Valley Oak<br>324 Quercus lobata            | 12 Fair            | 1 sided crown   |
| 127 | 34 | Valley Oak<br>324 Quercus lobata            | 0 Major Problems   | revised 1 sided crown; lean east; liveoaks growing at base; |
| 128 | 35 | Valley Oak<br>325 Quercus lobata            | 9 Fair             | narrow 1 sided crown  |
| 129 | 36 | Valley Oak<br>326 Quercus lobata            | 13 Fair            | co dom at 8';   |
| 130 | 37 | Valley Oak<br>327 Quercus lobata            | 13 Fair            | co dom at 8';   |
| 131 | 38 | Valley Oak<br>328 Quercus lobata            | 16 Major Problems  | line clearance pruned                                       |
| 132 | 39 | Valley Oak<br>329 Quercus lobata            | 15 Good            | open growing  |
| 133 | 40 | Valley Oak<br>330 Quercus lobata            | 17 Fair            | open growing  |
| 134 | 41 | Valley Oak<br>331 Quercus lobata            | 8 Major Problems   | lean south;   |
| 135 | 42 | 332 Quercus lobata                          | 13 Fair            | co dom at 6';   |
| 136 | 43 | Interior Live Oak<br>333 Quercus wislizenii | 10 Major Problems  | ytunk wounds; trunk decay                                   |
| 137 | 44 | Interior Live Oak<br>333 Quercus wislizenii | 10 Major Problems  | ad on next to fallen live oak                               |
| 138 | 45 | Valley Oak<br>334 Quercus lobata            | 18 Fair            | open growing  |
| 139 | 46 | Valley Oak<br>335 Quercus lobata            | 12 Major Problems  | severe lean west; soil piled at base;                       |
| 140 | 47 | 336 Quercus lobata                          | 10 Fair            | growing on mound  |
| 141 | 48 | Interior Live Oak<br>337 Quercus wislizenii | 0 Major Problems   | low laterals; trunk wound                                   |
| 142 | 49 | Valley Oak<br>338 Quercus lobata            | 7 Fair             | next to 339   |

|     |    |                                      |                    |   |
|-----|----|--------------------------------------|--------------------|---|
|     |    | Interior Live Oak                    |                    |   |
| 143 | 50 | 339 Quercus wislizenii<br>Valley Oak | 7 Major Problems   | too close to 338; lrans nw                  |
| 144 | 51 | 340 Quercus lobata<br>Valley Oak     | 6 Fair             | o mound                                     |
| 145 | 52 | 341 Quercus lobata<br>Valley Oak     | 12 Fair            | lean west;                                  |
| 146 | 53 | 342 Quercus lobata<br>Valley Oak     | 9 Good             |   |
| 147 | 54 | 343 Quercus lobata<br>Valley Oak     | 12 Fair            | co dom                                      |
| 148 | 55 | 344 Quercus lobata<br>Blue Oak       | 22 Good            | open growing                                |
| 149 | 56 | 345 Quercus douglasii<br>Valley Oak  | 22 Fair            | crowded with 344                            |
| 150 | 57 | 346 Quercus lobata<br>Valley Oak     | 14 Fair            | open growing                                |
| 151 | 58 | 347 Quercus lobata                   | 23 Fair            | lpw co dom open growing                     |
|     |    | Interior Live Oak                    |                    |   |
| 152 | 59 | 348 Quercus wislizenii<br>Valley Oak | 24 Major Problems  | co dom at 4'; basal decay; incl bark;       |
| 153 | 60 | 349 Quercus lobata<br>Valley Oak     | 20 Fair            | next to 350                                 |
| 154 | 61 | 350 Quercus lobata<br>Valley Oak     | 14 Major Problems  | lean west too close to 349                  |
| 155 | 62 | 351 Quercus lobata<br>Valley Oak     | 20 Fair            | co dom at 8'; open growing                  |
| 156 | 63 | 352 Quercus lobata<br>Valley Oak     | 6 Fair             | co dom at 6'; incl bark;                    |
| 157 | 64 | 353 Quercus lobata                   | 7 Major Problems   | kink in trunk; co dom at 8';                |
|     |    | Interior Live Oak                    |                    |   |
| 158 | 65 | 354 Quercus wislizenii<br>Valley Oak | 10 Major Problems  | lean away from 365                          |
| 159 | 67 | 355 Quercus lobata                   | 28 Fair            | co dom at 3'; incl bark; over 9 small trees |
|     |    | Interior Live Oak                    |                    |   |
| 160 | 68 | 356 Quercus wislizenii               | 8 Extreme Problems | 2 stems at base; suppressed                 |

|     |    |   |                   |                                       |
|-----|----|---|-------------------|---------------------------------------|
| 161 | 69 | Interior Live Oak<br>357 Quercus wislizenii               | 0 Major Problems  | suppressed by 355                     |
| 162 | 72 | Interior Live Oak<br>358 Quercus wislizenii               | 6 Major Problems  | crowded lean                          |
| 163 | 73 | Interior Live Oak<br>359 Quercus wislizenii               | 6 Major Problems  | crowded lean                          |
| 164 | 70 | Interior Live Oak<br>360 Quercus wislizenii<br>Valley Oak | 8 Major Problems  | lean south;                           |
| 165 | 74 | 361 Quercus lobata<br>Valley Oak                          | 0 Major Problems  | co dom at 2'; low lateral; lean north |
| 166 | 75 | 362 Quercus lobata  | 13 Fair           | lean east                             |
| 167 | 76 | Interior Live Oak<br>363 Quercus wislizenii               | 20 Major Problems | co doms; basal decay low lateral;     |
| 168 | 77 | Interior Live Oak<br>364 Quercus wislizenii<br>Valley Oak | 7 Major Problems  | crooked trunk                         |
| 169 | 78 | 365 Quercus lobata<br>Valley Oak                          | 7 Major Problems  | crooked trunk                         |
| 170 | 79 | 366 Quercus lobata  | 7 Major Problems  | lean south;                           |
| 171 | 80 | Interior Live Oak<br>367 Quercus wislizenii<br>Valley Oak | 12 Major Problems | basal decay                           |
| 172 | 81 | 368 Quercus lobata  | 34 Fair           | codm at 3'                            |
| 173 | 82 | Interior Live Oak<br>369 Quercus wislizenii<br>Valley Oak | 11 Major Problems | lean south;                           |
| 174 | 83 | 370 Quercus lobata  | 16 Fair           |                                       |
| 175 | 84 | Interior Live Oak<br>371 Quercus wislizenii               | 8 Major Problems  | severe lean south;                    |

|     |     |   |                     |   |
|-----|-----|---|---------------------|---|
| 176 | 85  | Interior Live Oak<br>372 Quercus wislizenii               | 8 Major Problems    | severe lean south;  |
| 177 | 86  | Interior Live Oak<br>373 Quercus wislizenii<br>Valley Oak | 10 Major Problems   | severe lean north   |
| 178 | 87  | 374 Quercus lobata  | 36 Fair             |   |
| 179 | 88  | Interior Live Oak<br>375 Quercus wislizenii               | 7 Major Problems    | lean west basal decay   |
| 180 | 89  | Interior Live Oak<br>376 Quercus wislizenii<br>Valley Oak | 14 Major Problems   | lpw laterals; basal decay                                       |
| 181 | 90  | 377 Quercus lobata  | 12 Fair             | slight lean south;  |
| 182 | 91  | Interior Live Oak<br>378 Quercus wislizenii<br>Valley Oak | 19 Extreme Problems | lean south; basal decay   |
| 183 | 92  | 379 Quercus lobata  | 12 Major Problems   | dead leaders at base; severe lean south;                        |
| 184 | 93  | Interior Live Oak<br>380 Quercus wislizenii<br>Valley Oak | 8 Major Problems    | lean west   |
| 185 | 94  | 381 Quercus lobata<br>Valley Oak                          | 11 Fair             |   |
| 186 | 95  | 382 Quercus lobata<br>Valley Oak                          | 7 Major Problems    | growing too close to 381  |
| 187 | 96  | 383 Quercus lobata<br>Valley Oak                          | 28 Fair             | open growing  |
| 188 | 97  | 384 Quercus lobata<br>Valley Oak                          | 10 Fair             |   |
| 189 | 98  | 385 Quercus lobata<br>Valley Oak                          | 24 Fair             | open growing<br>decay in trunk; trunk wounds co dom at 7';<br>o |
| 190 | 99  | 386 Quercus lobata<br>Valley Oak                          | 17 Major Problems   |   |
| 191 | 100 | 387 Quercus lobata<br>Valley Oak                          | 12 Fair             | open growing  |
| 192 | 101 | 388 Quercus lobata  | 18 Fair             | open growing  |

|     |     |                         |                     |  |   |
|-----|-----|-------------------------|---------------------|--|---|
|     |     | Valley Oak              |                     |  |   |
| 193 | 102 | 389 Quercus lobata      | 18 Fair             |  | co dom at 3'l open growing              |
|     |     | Valley Oak              |                     |  |   |
| 194 | 103 | 390 Quercus lobata      | 22 Major Problems   |  | trunk wounds low lateral;               |
|     |     | Valley Oak              |                     |  |   |
| 195 | 104 | 391 Quercus lobata      | 12 Dead             |  | trunk wounds bark falling off           |
|     |     | Blue Oak                |                     |  |   |
| 196 | 105 | 392 Quercus douglasii   | 0 Fair              |  | lean south; next to undersized valley   |
|     |     | Valley Oak              |                     |  |   |
| 197 | 106 | 393 Quercus lobata      | 13 Fair             |  |   |
|     |     | Valley Oak              |                     |  |   |
| 198 |     | 394 Quercus lobata      | 10 Extreme Problems |  | bark falling off                        |
|     |     | Valley Oak              |                     |  |   |
| 199 |     | 395 Quercus lobata      | 20 Major Problems   |  | trunk wounds; bowed trunk               |
|     |     | Interior Live Oak       |                     |  |   |
| 200 |     | 396 Quercus wislizenii  | 10 Major Problems   |  | lean east; basal decay                  |
|     |     | Interior Live Oak       |                     |  |   |
| 201 | 113 | 1501 Quercus wislizenii | 8 Major Problems    |  | basal decay                             |
|     |     | Valley Oak              |                     |  |   |
| 202 | 114 | 1502 Quercus lobata     | 6 Fair              |  |   |
|     |     | Valley Oak              |                     |  |   |
| 203 | 115 | 1503 Quercus lobata     | 12 Fair             |  | low laterals                            |
|     |     | Valley Oak              |                     |  |   |
| 204 | 116 | 1504 Quercus lobata     | 6 Major Problems    |  | lean west bowed trunk                   |
|     |     | Valley Oak              |                     |  |   |
| 205 | 117 | 1505 Quercus lobata     | 14 Fair             |  | low lateral;                            |
|     |     | Valley Oak              |                     |  |   |
| 206 | 118 | 1506 Quercus lobata     | 17 Major Problems   |  | 3 leaders at base; lean south;          |
|     |     | Valley Oak              |                     |  |   |
| 207 | 119 | 1507 Quercus lobata     | 20 Fair             |  | co dom at 7';                           |
|     |     | Valley Oak              |                     |  | co dom at base; 13" second leader leans |
| 208 | 120 | 1508 Quercus lobata     | 18 Major Problems   |  | west                                    |
|     |     | Valley Oak              |                     |  |   |
| 209 | 121 | 1509 Quercus lobata     | 8 Major Problems    |  | swollen trunk; co dom at 5'             |
|     |     | Valley Oak              |                     |  |   |
| 210 | 122 | 1510 Quercus lobata     | 7 Fair              |  |   |
|     |     | Valley Oak              |                     |  |   |
| 211 | 123 | 1511 Quercus lobata     | 7 Major Problems    |  | co dom at 6'; incl lateral;             |

|     |     |                                       |                    |   |  |
|-----|-----|---------------------------------------|--------------------|---|--|
|     |     | Valley Oak                            |                    |   |  |
| 212 | 124 | 1512 Quercus lobata<br>Valley Oak     | 12 Fair            |   |  |
| 213 | 125 | 1513 Quercus lobata<br>Valley Oak     | 11 Fair            |   |  |
| 214 | 126 | 1514 Quercus lobata<br>Valley Oak     | 14 Fair            | 1 sided crown 3 undersized to east                              |  |
| 215 | 127 | 1515 Quercus lobata<br>Valley Oak     | 14 Fair            |   |  |
| 216 | 128 | 1516 Quercus lobata<br>Valley Oak     | 15 Fair            | open growing  |  |
| 217 | 129 | 1517 Quercus lobata<br>Valley Oak     | 10 Fair            |   |  |
| 218 | 130 | 1518 Quercus lobata<br>Valley Oak     | 12 Dead            | decay fruiting body   |  |
| 219 | 131 | 1519 Quercus lobata                   | 12 Fair            |   |  |
|     |     | Interior Live Oak                     |                    |   |  |
| 220 | 132 | 1520 Quercus wislizenii<br>Valley Oak | 7 Major Problems   | 2 stems at base; basal decay                                    |  |
| 221 | 134 | 1521 Quercus lobata<br>Valley Oak     | 8 Extreme Problems | severe trunk wound  |  |
| 222 | 135 | 1522 Quercus lobata<br>Valley Oak     | 8 Major Problems   | 3 leaders at base; basal decay                                  |  |
| 223 | 136 | 1523 Quercus lobata<br>Valley Oak     | 6 Major Problems   | low trunk wound decay<br>several stems at base; incl bark; ncl; |  |
| 224 | 138 | 1523 Quercus lobata<br>Valley Oak     | 7 Extreme Problems | 7,7,4,2,3   |  |
| 225 | 137 | 1524 Quercus lobata<br>Valley Oak     | 6 Major Problems   | 2 stems at base; incl bark;                                     |  |
| 226 | 139 | 1526 Quercus lobata<br>Valley Oak     | 6 Fair             | dense grouping of undersized trees                              |  |
| 227 | 140 | 1527 Quercus lobata                   | 6 Major Problems   | bowed trunk   |  |
|     |     | Interior Live Oak                     |                    |   |  |
| 228 | 142 | 1528 Quercus wislizenii               | 0 Extreme Problems | multi stems at base; basal decay                                |  |
|     |     | Interior Live Oak                     |                    |   |  |
| 229 | 143 | 1529 Quercus wislizenii               | 7 Extreme Problems | multi stems at base; basal decay                                |  |

|     |     |      |                                  |         |                     |   |
|-----|-----|------|----------------------------------|---------|---------------------|---|
|     |     |      | Interior Live Oak                |         |                     |   |
| 230 | 144 | 1530 | Quercus wislizenii<br>Valley Oak | 6,6,6,4 | Extreme Problems    | multi stems at base, basal decay          |
| 231 | 145 | 1531 | Quercus lobata<br>Valley Oak     |         | 8 Major Problems    | 4 stems at base - 6,6,5,2                 |
| 232 | 147 | 1532 | Quercus lobata<br>Valley Oak     |         | 10 Major Problems   | swollen trunk at base, laterals at base   |
| 233 | 146 | 1533 | Quercus lobata<br>Valley Oak     |         | 20 Extreme Problems | severe basal decay                        |
| 234 | 148 | 1534 | Quercus lobata                   |         | 19 Major Problems   | 4 stems at base; 19,18, 18, 9. incl bark; |
|     |     |      | Interior Live Oak                |         |                     |   |
| 235 | 149 | 1535 | Quercus wislizenii<br>Valley Oak |         | 8 Major Problems    | multi stems at base; incl bark;           |
| 236 | 150 | 1536 | Quercus lobata<br>Valley Oak     |         | 10 Fair             |   |
| 237 | 151 | 1537 | Quercus lobata<br>Valley Oak     |         | 12 Major Problems   | co dom at 2'; lateral in crotvh           |
| 238 | 152 | 1538 | Quercus lobata<br>Valley Oak     |         | 23 Major Problems   | basal decay                               |
| 239 | 153 | 1539 | Quercus lobata<br>Valley Oak     |         | 19 Fair             |   |
| 240 | 154 | 1540 | Quercus lobata<br>Valley Oak     |         | 9 Major Problems    | overgrown, lean south;                    |
| 241 | 155 | 1541 | Quercus lobata<br>Valley Oak     |         | 11 Major Problems   | 2 low codoms                              |
| 242 | 156 | 1542 | Quercus lobata<br>Valley Oak     |         | 11 Major Problems   | swollen trunk;, trunk wound               |
| 243 | 158 | 1543 | Quercus lobata                   |         | 13 Major Problems   | overgrown leans east;                     |
|     |     |      | Interior Live Oak                |         |                     |   |
| 244 | 159 | 1544 | Quercus wislizenii<br>Valley Oak |         | 23 Major Problems   | multi leaders at 5'; basal decay          |
| 245 | 160 | 1545 | Quercus lobata<br>Valley Oak     |         | 9 Fair              | open growing                              |
| 246 | 161 | 1546 | Quercus lobata<br>Valley Oak     |         | 8 Fair              | open growing on mound                     |
| 247 | 162 | 1547 | Quercus lobata<br>Valley Oak     |         | 18 Fair             | open growing                              |
| 248 | 163 | 1548 | Quercus lobata                   |         | 8 Fair              | barbed wire in tree                       |



|     |     |  |                    |                                |
|-----|-----|--|--------------------|--------------------------------|
| 249 | 164 | Interior Live Oak<br>1549 Quercus wislizenii | 6 Major Problems   | basal decay                    |
| 250 | 166 | Interior Live Oak<br>1550 Quercus wislizenii | 8 Major Problems   | low lateral; lean, basal decay |
| 251 | 167 | Valley Oak<br>1551 Quercus lobata            | 8 Fair             | crowded group                  |
| 252 | 168 | Valley Oak<br>1552 Quercus lobata            | 6 Major Problems   | bowed trunk                    |
| 253 | 169 | Valley Oak<br>1553 Quercus lobata            | 12 Fair            |                                |
| 254 | 170 | Valley Oak<br>1554 Quercus lobata            | 10 Fair            |                                |
| 255 | 172 | Valley Oak<br>1555 Quercus lobata            | 14 Fair            | co dom at 6';                  |
| 256 | 173 | Valley Oak<br>1557 Quercus lobata            | 18 Fair            | co dom at 10'                  |
| 257 | 174 | Valley Oak<br>1558 Quercus lobata            | 12 Fair            |                                |
| 258 | 175 | Valley Oak<br>1559 Quercus lobata            | 8 Major Problems   | crowded 1 sided crown          |
| 259 | 176 | Valley Oak<br>1560 Quercus lobata            | 10 Fair            |                                |
| 260 | 177 | Valley Oak<br>1561 Quercus lobata            | 9 Extreme Problems | trunk wound bark falling off   |
| 261 | 178 | Valley Oak<br>1562 Quercus lobata            | 11 Major Problems  | co-dom at 1' leaning leaders   |
| 262 | 179 | Valley Oak<br>1563 Quercus lobata            | 10 Major Problems  | co dom at 1'; incl bark;       |
| 263 | 180 | Valley Oak<br>1564 Quercus lobata            | 7 Fair             | crowded                        |
| 264 | 181 | Valley Oak<br>1565 Quercus lobata            | 9 Fair             |                                |
| 265 | 182 | Interior Live Oak<br>1566 Quercus wislizenii | 7 Major Problems   | basal decay                    |
| 266 | 184 | Valley Oak<br>1567 Quercus lobata            | 8 Major Problems   | co dom at 2'; incl bark;       |

|     |     |      |                                  |                     |                                      |
|-----|-----|------|----------------------------------|---------------------|--------------------------------------|
|     |     |      | Interior Live Oak                |                     |                                      |
| 267 | 185 | 1568 | Quercus wislizenii<br>Valley Oak | 7 Major Problems    | co dom at base; 1 stem suppressed    |
| 268 | 186 | 1569 | Quercus lobata<br>Valley Oak     | 8 Major Problems    | lean, bowed trunk                    |
| 269 | 189 | 1572 | Quercus lobata<br>Valley Oak     | 8 Fair              |                                      |
| 270 | 190 | 1573 | Quercus lobata<br>Valley Oak     | 6 Major Problems    | trunk wound                          |
| 271 | 191 | 1574 | Quercus lobata<br>Valley Oak     | 9 Major Problems    | 3 leaders at base; 8,5,5; incl bark; |
| 272 | 192 | 1575 | Quercus lobata<br>Valley Oak     | 8 Fair              | crowded                              |
| 273 | 193 | 1576 | Quercus lobata<br>Valley Oak     | 10 Fair             | open growing                         |
| 274 | 194 | 1577 | Quercus lobata<br>Valley Oak     | 16 Fair             | open growing                         |
| 275 | 288 | 1578 | Quercus lobata<br>Valley Oak     | 9 Major Problems    | 1 sided crown to west; >1/3 dieback  |
| 276 | 290 | 1579 | Quercus lobata<br>Valley Oak     | 14 Fair             | symmetric crown                      |
| 277 | 291 | 1580 | Quercus lobata<br>Valley Oak     | 14 Fair             | lean se                              |
| 278 | 292 | 1581 | Quercus lobata<br>Valley Oak     | 7 Major Problems    | suppressed to south;                 |
| 279 | 293 | 1582 | Quercus lobata<br>Valley Oak     | 7 Major Problems    | crowded lean south;                  |
| 280 | 295 | 1583 | Quercus lobata                   | 14 Fair             | co dom at 5';                        |
|     |     |      | Interior Live Oak                |                     |                                      |
| 281 | 296 | 1584 | Quercus wislizenii<br>Valley Oak | 16 Major Problems   | base; basal                          |
| 282 | 297 | 1585 | Quercus lobata                   | 6 Major Problems    | suppressed by 1586                   |
|     |     |      | Interior Live Oak                |                     |                                      |
| 283 | 298 | 1586 | Quercus wislizenii               | 16 Extreme Problems | basal and trunk decay                |
|     |     |      | Interior Live Oak                |                     |                                      |
| 284 | 299 | 1587 | Quercus wislizenii               | 23 Major Problems   | basal decay co dom at 5'             |

|     |     |      |   |                     |  |
|-----|-----|------|---|---------------------|--|
| 285 | 300 | 1588 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 6 Extreme Problems  | lean, basal decay  |
| 286 | 301 | 1589 | Quercus lobata  | 16 Major Problems   | co dom at 3', low lateral; incl bark;                    |
| 287 | 302 | 1590 | Interior Live Oak<br>Quercus wislizenii               | 7 Major Problems    | co dom at base; 2nd stem 7; lean south                   |
| 288 | 303 | 1591 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 6 Extreme Problems  | co dom at base; 5" other live stem; lean south;          |
| 289 | 304 | 1592 | Quercus lobata<br>Valley Oak                          | 12 Fair             | in blackberries  |
| 290 | 305 | 1593 | Quercus lobata<br>Valley Oak                          | 16 Fair             | open growing   |
| 291 | 306 | 1594 | Quercus lobata<br>Valley Oak                          | 12 Fair             | slight lean south;                                       |
| 292 | 307 | 1595 | Quercus lobata<br>Valley Oak                          | 16 Fair             | open growing   |
| 293 | 308 | 1596 | Quercus lobata<br>Valley Oak                          | 8 Major Problems    | 3 leaders at base; 8, 8, 6; basal decay                  |
| 294 | 309 | 1597 | Quercus lobata<br>Valley Oak                          | 6 Major Problems    | crowded lean south; laterals at base;                    |
| 295 | 310 | 1598 | Quercus lobata  | 6 Major Problems    | 2 stems at base; 6,6, sprouts at base;                   |
| 296 | 311 | 1599 | Interior Live Oak<br>Quercus wislizenii               | 10 Extreme Problems | 4 stems at base; basal decay all<br>10,4,6,8lean outward |
| 297 | 312 | 1600 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 10 Extreme Problems | 8 stems at base; 10, 4,5,2,7,6,8,7,5,5;<br>basal decay   |
| 298 | 314 | 1601 | Quercus lobata<br>Valley Oak                          | 6 Fair              | twig gall  |
| 299 | 315 | 1602 | Quercus lobata<br>Valley Oak                          | 8 Extreme Problems  | 3 stems at base; 8, 8,7; basal decay                     |
| 300 | 316 | 1603 | Quercus lobata<br>Valley Oak                          | 11 Major Problems   | 3 stems at base; 11,9,9; incl bark; lean outward;        |
| 301 | 317 | 1604 | Quercus lobata  | 8 Major Problems    | 2 stems at base; 8,7; sprouts                            |

|     |     | Interior Live Oak                     |                     |   |
|-----|-----|---------------------------------------|---------------------|---|
| 302 | 318 | 1605 Quercus wislizenii<br>Valley Oak | 7 Extreme Problems  | 3 stems at base; 6, 7,4; basal decay                    |
| 303 | 319 | 1606 Quercus lobata<br>Valley Oak     | 6 Major Problems    | 3 stems at base; 6,4,4; incl bark;                      |
| 304 | 320 | 1607 Quercus lobata<br>Valley Oak     | 7 Major Problems    | 2 stems at base; 7,4                                    |
| 305 | 321 | 1608 Quercus lobata<br>Valley Oak     | 8 Major Problems    | low laterals  |
| 306 | 322 | 1609 Quercus lobata<br>Valley Oak     | 8 Major Problems    | 2 stems at base; 8,5                                    |
| 307 | 323 | 1610 Quercus lobata<br>Valley Oak     | 6 Major Problems    | 3 stems at base; 6,4,3                                  |
| 308 | 324 | 1611 Quercus lobata<br>Valley Oak     | 6 Major Problems    | 4 stems at base; 6,4,3,3                                |
| 309 | 325 | 1612 Quercus lobata<br>Valley Oak     | 7 Fair              |   |
| 310 | 326 | 1613 Quercus lobata<br>Valley Oak     | 8 Major Problems    | 2 stems at base 8,8                                     |
| 311 | 327 | 1614 Quercus lobata<br>Valley Oak     | 16 Major Problems   | co dom at base; 12,12;1 leader leans north              |
| 312 | 328 | 1615 Quercus lobata<br>Valley Oak     | 7 Major Problems    | 2 stems at base; 7,6; incl bark;                        |
| 313 | 330 | 1616 Quercus lobata<br>Valley Oak     | 14 Extreme Problems | 2 stems at base; basal and trunk decay                  |
| 314 | 331 | 1617 Quercus lobata<br>Valley Oak     | 12 Fair             |   |
| 315 | 332 | 1618 Quercus lobata<br>Valley Oak     | 9 Major Problems    | trunk wound; lean south; crowded                        |
| 316 | 333 | 1619 Quercus lobata<br>Valley Oak     | 10 Major Problems   | 2 stems at base;  |
| 317 | 334 | 1620 Quercus lobata<br>Valley Oak     | 7 Major Problems    | 4 stems at base; 7,7,4,2; incl bark;                    |
| 318 | 335 | 1621 Quercus lobata<br>Valley Oak     | 0 Fair              | co dom at 7';   |
| 319 | 336 | 1622 Quercus lobata<br>Valley Oak     | 9 Major Problems    | growing under power lines                               |
| 320 | 337 | 1623 Quercus lobata<br>Valley Oak     | 9 Fair              |   |
| 321 | 338 | 1624 Quercus lobata                   | 21 Major Problems   | 4 stems at base; 21,20,14,10; basal decay<br>incl bark; |

|     |     |      |                    |                     |   |
|-----|-----|------|--------------------|---------------------|---|
|     |     |      | Valley Oak         |                     |   |
| 322 | 339 | 1625 | Quercus lobata     | 7 Major Problems    | suppressed by 1624                                    |
|     |     |      | Valley Oak         |                     |   |
| 323 | 340 | 1626 | Quercus lobata     | 12 Major Problems   | suppressed by 1624; leans se                          |
|     |     |      | Valley Oak         |                     |   |
| 324 | 341 | 1627 | Quercus lobata     | 8 Fair              | low small lateral at base                             |
|     |     |      | Valley Oak         |                     |   |
| 325 | 342 | 1628 | Quercus lobata     | 10 Fair             | straight leader                                       |
|     |     |      | Valley Oak         |                     |   |
| 326 | 343 | 1629 | Quercus lobata     | 12 Fair             | slight lean south;                                    |
|     |     |      | Interior Live Oak  |                     |   |
| 327 | 344 | 1630 | Quercus wislizenii | 37 Extreme Problems | 4 leaders at 2'; basal decay; incl bark; branch decay |
|     |     |      | Valley Oak         |                     |   |
| 328 | 345 | 1631 | Quercus lobata     | 16 Fair             | 2 leaders at 2'; incl bark; lean west;                |
|     |     |      | Valley Oak         |                     |   |
| 329 | 346 | 1632 | Quercus lobata     | 17 Major Problems   | low laterals; incl bark; lean outward;                |
|     |     |      | Valley Oak         |                     |   |
| 330 | 347 | 1633 | Quercus lobata     | 12 Fair             | open growing  |
|     |     |      | Valley Oak         |                     |   |
| 331 | 348 | 1634 | Quercus lobata     | 14 Fair             | open growing  |
|     |     |      | Valley Oak         |                     |   |
| 332 | 349 | 1635 | Quercus lobata     | 30 Major Problems   | co dom at 5'; incl bark; lean west & south;           |
|     |     |      | Valley Oak         |                     |   |
| 333 | 351 | 1636 | Quercus lobata     | 8 Major Problems    | lean south; bowed leaders                             |
|     |     |      | Valley Oak         |                     |   |
| 334 | 352 | 1637 | Quercus lobata     | 8 Fair              | crowded   |
|     |     |      | Valley Oak         |                     |   |
| 335 | 353 | 1638 | Quercus lobata     | 14 Major Problems   | 1 sided crown to west, leans west                     |
|     |     |      | Valley Oak         |                     |   |
| 336 | 354 | 1639 | Quercus lobata     | 0 Major Problems    | suppressed to west                                    |
|     |     |      | Valley Oak         |                     |   |
| 337 | 355 | 1640 | Quercus lobata     | 14 Major Problems   | co dom at 6'; incl bark; lean south                   |
|     |     |      | Valley Oak         |                     |   |
| 338 | 356 | 1641 | Quercus lobata     | 7 Major Problems    | suppressed to west                                    |
|     |     |      | Valley Oak         |                     |   |
| 339 | 357 | 1642 | Quercus lobata     | 7 Major Problems    | crowded leans se                                      |
|     |     |      | Valley Oak         |                     |   |
| 340 | 358 | 1643 | Quercus lobata     | 13 Major Problems   | lean west; >30% dieback                               |
|     |     |      | Valley Oak         |                     |   |
| 341 | 359 | 1645 | Quercus lobata     | 14 Major Problems   | severe lean west; bowed trunk                         |

|     |     |      |   |                     |  |
|-----|-----|------|---|---------------------|--|
| 342 | 360 | 1646 | Valley Oak<br>Quercus lobata                          | 7 Major Problems    | suppressed   |
| 343 | 361 | 1647 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 7 Major Problems    | suppressed west  |
| 344 | 362 | 1648 | Valley Oak<br>Quercus lobata                          | 0 Major Problems    | dieback  |
| 345 | 363 | 1649 | Valley Oak<br>Quercus lobata                          | 9 Major Problems    | dieback  |
| 346 | 364 | 1650 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 14 Major Problems   | co dom at 1'; dieback                                  |
| 347 | 365 | 1651 | Valley Oak<br>Quercus lobata                          | 0 Major Problems    | suppressed se  |
| 348 | 366 | 1652 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 12 Extreme Problems | 2 stems at base; 12, 8; dying                          |
| 349 | 367 | 1653 | Valley Oak<br>Quercus lobata                          | 9 Major Problems    | suppressed west  |
| 350 | 368 | 1654 | Valley Oak<br>Quercus lobata                          | 12 Major Problems   | lean west;   |
| 351 | 369 | 1655 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 6 Dead              |  |
| 352 | 370 | 1656 | Valley Oak<br>Quercus lobata                          | 12 Major Problems   | suppressed to west                                     |
| 353 | 371 | 1657 | Valley Oak<br>Quercus lobata                          | 11 Major Problems   | suppressed to west                                     |
| 354 | 372 | 1658 | Valley Oak<br>Quercus lobata                          | 6 Major Problems    | crowded lean west                                      |
| 355 | 373 | 1659 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 24 Dead             |  |
| 356 | 375 | 1660 | Valley Oak<br>Quercus lobata                          | 30 Fair             | lean north; base buried by duff and broken<br>btanches |
| 357 | 376 | 1661 | Valley Oak<br>Quercus lobata                          | 24 Extreme Problems | decay, bark missing on norh trunk, bowed<br>trunk      |
| 358 | 377 | 1662 | Interior Live Oak<br>Quercus wislizenii               | 14 Extreme Problems | under power lines; 3 stems at base; 14, 9,9            |

|     |      |      |   |             |                  |  |
|-----|------|------|---|-------------|------------------|--|
| 359 | 378  | 1663 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 0           | Extreme Problems | under power lines, 2 stems at base; 12, 9  |
| 360 | 380  | 1665 | Quercus lobata<br>Valley Oak                          | 14          | Extreme Problems | under power lines ; topped   |
| 361 | 381  | 1666 | Quercus lobata<br>Valley Oak                          | 18          | Extreme Problems | under power lines, topped  |
| 362 | 382  | 1667 | Quercus lobata<br>Valley Oak                          | 22          | Major Problems   | lean west; basal decay   |
| 363 | 383  | 1668 | Quercus lobata  | 20          | Major Problems   | ivy on trunk; dieback  |
| 364 | 1670 | 1670 | Interior Live Oak<br>Quercus wislizenii               | 38          | Major Problems   | Multi-leaders at base, included bark, basal decay, low laterals, crossing branches                               |
| 365 | 1671 | 1671 | Interior Live Oak<br>Quercus wislizenii               | 10          | Fair             | co-dom, low laterals   |
| 366 | 1672 | 1672 | Interior Live Oak<br>Quercus wislizenii               | 9           | Major Problems   | suppressed, growing at base of 1673  |
| 367 | 1673 | 1673 | Valley Oak<br>Quercus lobata                          | 13,14,14,17 | Extreme Problems | 4 leaders at base, next to 1672, included bark, basal decay, ourward leaning leaders                             |
| 368 | 1674 | 1674 | Interior Live Oak<br>Quercus wislizenii<br>Valley Oak | 11          | Major Problems   | low co-dom at 1', overgrown by 1673  |
| 369 | 1675 | 1675 | Quercus lobata<br>Valley Oak                          | 5.4         | Major Problems   | Undersized, crowded, 1-sided crown   |
| 370 | 1676 | 1676 | Quercus lobata<br>Valley Oak                          | 16 at 1'    | Major Problems   | co-doms at 1', included bark   |
| 371 | 1677 | 1677 | Quercus lobata<br>Valley Oak                          | 17          | Major Problems   | co-doms at 6', heavy line clearance pruned   |
| 372 | 1678 | 1678 | Quercus lobata  | 14          | Major Problems   | Line clearance pruned, suppressed leader under power lines, smaller diameter branches and minimal line clearance |
| 373 | 1679 | 1679 | Valley Oak<br>Quercus lobata                          | 9           | Fair             | pruned, not to standard stubs  |

## **ATTACHMENT 4**

**Wetland Delineation for the 17.88 Sierra-Brace Study Area, Town of Loomis,  
Placer County, California, prepared by Salix Consulting, Inc. May 2016.**



**WETLAND DELINEATION  
FOR THE**

# **±17.88-ACRE SIERRA-BRACE STUDY AREA**

**TOWN OF LOOMIS, PLACER COUNTY, CALIFORNIA**



*Prepared for:*

**MANIKAS PROPERTIES**

1817 Maryal Drive, Suite 100

Sacramento, CA 95864

*Prepared by:*



12240 Herdal Drive, Ste. 14,

Auburn, California 95603

(530) 888-0130

**MAY 2016**

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## ATTACHMENT

|   |  |
|---|--|
| Attachment 1. USACOE Verification letter dated March 2009 |  |
|---|--|

# WETLAND DELINEATION FOR THE ±17.88-ACRE SIERRA-BRACE STUDY AREA

## INTRODUCTION

---

On behalf of Manikas Properties, Salix Consulting, Inc., is submitting this updated delineation of waters of the United States for the ±17.88-acre Sierra-Brace study area in the Town of Loomis, Placer County, California. The property was originally delineated by North Fork Associates in February 2008 and verified by the Corps March 20, 2009 (SPK-2008-00630). This document largely includes the original delineation documentation and mapping, with minor adjustments, as needed.

The study area is located north of Interstate 80, in the southeastern corner of the intersection between Sierra College Boulevard and Brace Road. The location corresponds to Section 28 of Township 11 North and Range 7 East on the 7.5 minute Rocklin, CA United States Geological Survey (USGS) quadrangle (Figure 1). The latitude and longitude of the approximate center of the site are 38°48'34" North and 121°12'16" West. The Assessor Parcel Numbers (APNs) are 045-042-011, 045-042-012, 045-042-023, 045-042-034, 045-042-035, 045-042-036, and 045-042-037.

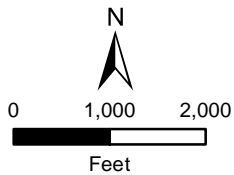
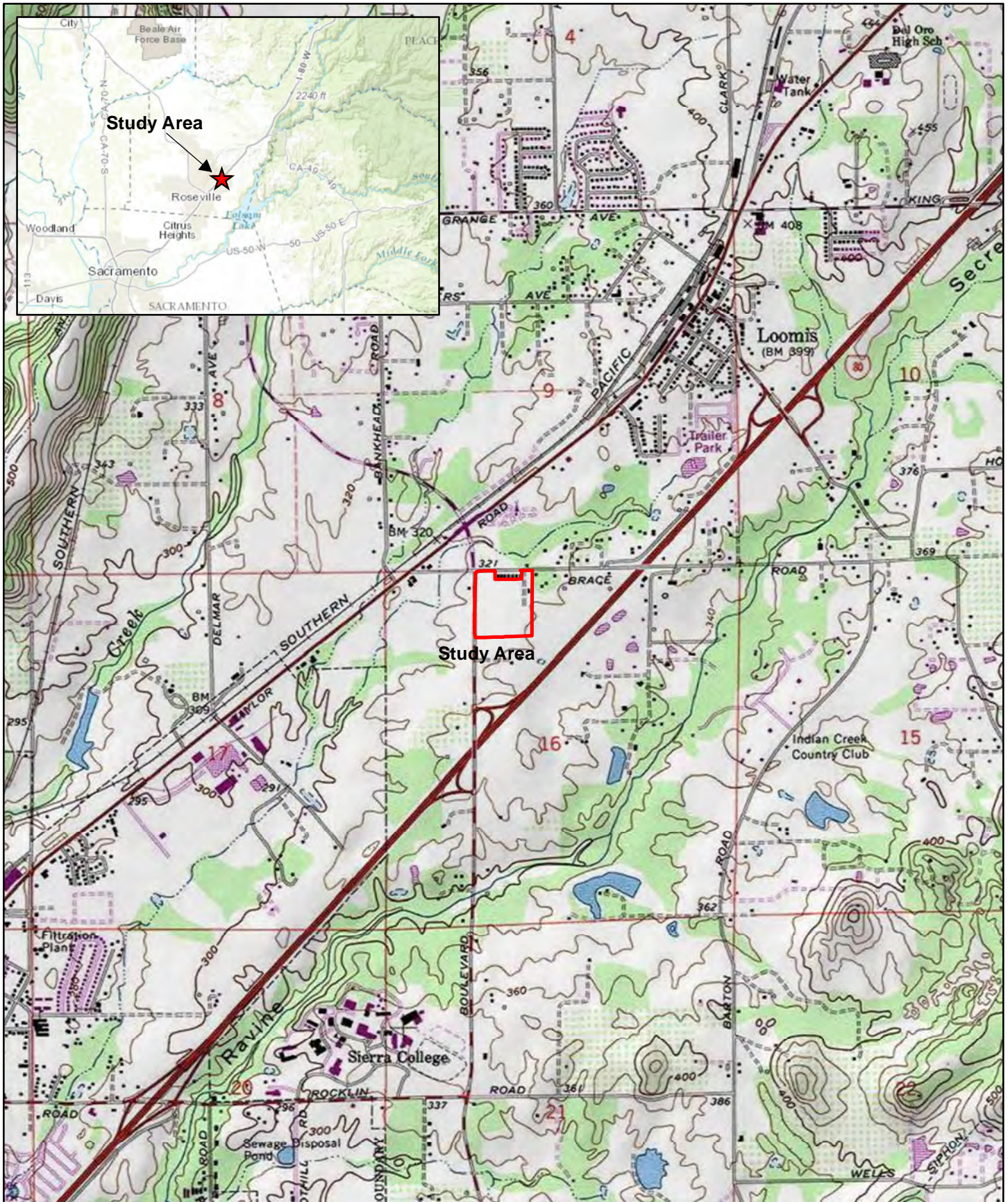
The study area is located at an elevation between approximately 320 and 340 feet. Habitats in the study area include annual grassland and foothill woodland. Adjacent land uses include a multi-family residential building along the northern boundary the Homewood Lumber complex to the north, single family residential to the east, commercial and undeveloped land to the south, and an office building and undeveloped land to the west (Figure 2). The study area is bounded by Brace Road to the north and Sierra College Boulevard to the west.

### Background

As noted above, waters of the U.S. were delineated by North Fork Associates in February 2008 and verified by the U.S. Army Corps of Engineers March 20, 2009. The verification was valid for five years from the date of the letter. The 2009 verification letter is included as Attachment 1, following the Appendices. Property ownership has changed since that time, and this report is intended to update that delineation.

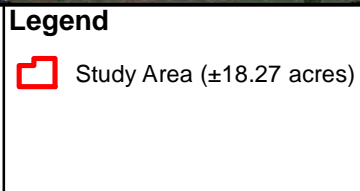
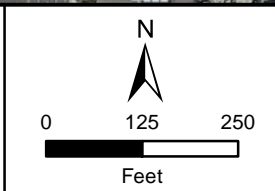
### Directions to the Site

From Sacramento, proceed east on Interstate 80. Take the Sierra College Boulevard exit and turn left after exiting the freeway. The Brace Road and Sierra College Boulevard intersection is just north of Interstate 80. The study area is located in the southeastern corner of the intersection.



Source Maps: USGS Topographic Map  
 Rocklin Quad 1:24,000  
 Section: 16  
 Township: 11N  
 Range: 7E

**Figure 1**  
**SITE AND VICINITY MAP**  
 Sierra-Brace  
 City of Rocklin, Placer County, CA



**Figure 2**

**AERIAL MAP**

Sierra-Brace

City of Rocklin, Placer County, CA

## CONTACT INFORMATION

---

Property Owner:  
Manikas Properties  
1817 Maryal Drive, Suite 100  
Sacramento, CA 95864  
(916) 847-5090  
Contact: John T. Manikas

Delineator:  
Salix Consulting, Inc.  
12240 Herdal Drive, Ste. 14  
Auburn, California 95603  
Phone: (530) 888-0130  
Contact: Jeff Glazner

## METHODS

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Waters of the United States were assessed on March 25, 2016, by Jeff Glazner and Hunter Gallant. The North Fork delineation was uploaded to the submeter GPS and field checked. Very minor adjustments were made and are reflected in the map provided in this document. The original topographic basemap was used for the revised map as new topo was not available. The original data forms are included in Appendix A. The plant list for the site is included as Appendix B.

## RESULTS

---

### Climate

The region has a Mediterranean climate with dry hot summers and mild winters. Over the course of a year, average high temperatures typically vary from 54°F in the winter to around 92°F in the summer. The warm season lasts from May through September, with an average daily high temperature above 88°F. On average, the hottest months are July and August with an average high of 92°F and low of 61°F. The coolest months are December and January, with an average daily high temperature around 54°F and average low temperature around 40°F. Precipitation occurs mostly from November through April in the form of rain, averaging around 25 inches per year. Little or no precipitation falls during June, July, and August.


Precipitation occurred 3 days prior to the March 25, 2016, field visit, amounting to one-half an inch of rainfall.

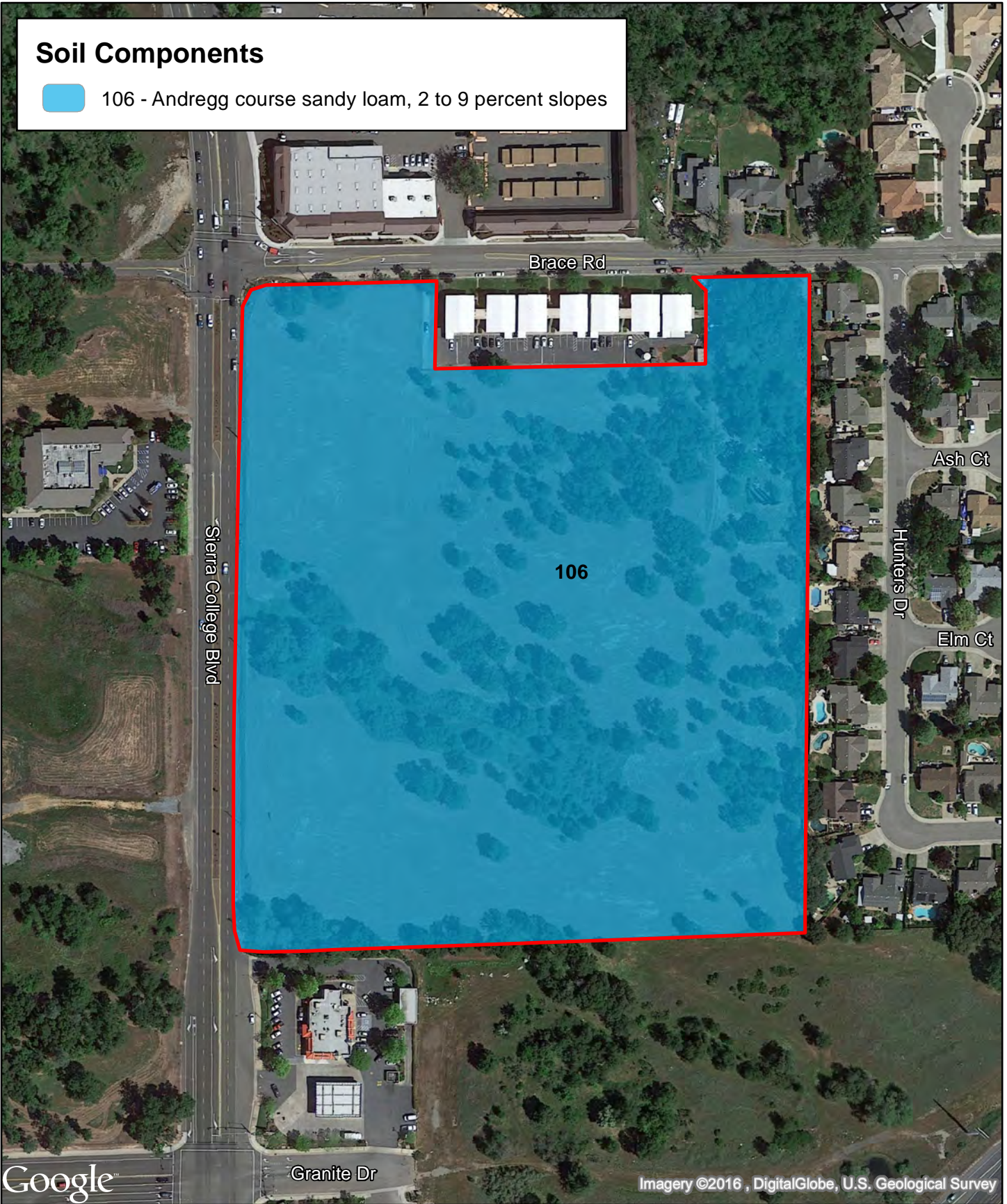
### Soils

One soil unit is mapped in the study area (Figure 3): Andregg coarse sandy loam, 2 to 9 percent slopes.

Andregg soils on-site are coarse-loamy Ultic Haploxerolls, which are Mollisols formed in a Mediterranean climate and characterized by little subsoil development. This component is on foothills, hills with slopes of 2 to 9 percent. They are derived from weathered granodiorite, and bedrock is 29 to 33 inches below the surface. The A horizon extends to about 15 inches and the BA horizon to about 24 inches. Hues range from 10YR to 2.5YR; values between 5 and 2; and chromas between 3 and 2, moist. Organic matter at the surface horizon is around 2 percent. Andregg soils are well-

# Soil Components

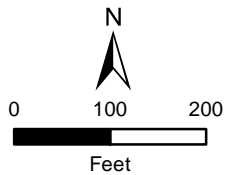
 106 - Andregg course sandy loam, 2 to 9 percent slopes



Google

Granite Dr

Imagery ©2016 , DigitalGlobe, U.S. Geological Survey



### Legend

 Study Area (±18.27 acres)

### Figure 3

## SOIL COMPONENTS MAP

Sierra-Brace

City of Rocklin, Placer County, CA

drained and have moderately rapid permeability. This soil is neither ponded nor flooded. This soil does not meet hydric criteria.

## **Hydrology**

The Sierra-Brace study area is located in the Lower American watershed (Hydrologic Unit Code 18020111). The topography of the study area gently slopes to the west. The wetland swale and drainage ditch located in the southwest corner of the site drain water westerly and convey water offsite through culverts underneath Sierra College Boulevard. Water continues to drain westerly on the adjacent property and drains into Sucker Ravine which drains into Secret Ravine. Secret Ravine is a tributary of Miners Ravine, which ultimately reaches Dry Creek and then the American River. The constructed drainage in the northeastern corner conveys storm water and urban runoff from the residential development to the east through a storm drain system.

## **Vegetation**

Two biological communities were identified within the study area: foothill woodland and annual grassland. The site wetlands are embedded in these habitats. Figures 4a and 4b. provides photos of the site taken during the March 25, 2016, site visit.

### *Foothill Woodland*

The foothill woodland varies in density throughout the site, being mostly open, and it is dominated by valley oak and interior live oak with a few scattered foothill pines. Shrubs in the understory vary from dense stands of coyote brush and Himalayan blackberry to a completely absent shrub layer. The herbaceous layer consists of a mixture of non-native grasses and forbs. Grasses include Italian ryegrass, ripgut grass, and soft chess. Forbs present include Italian thistle, California mugwort, field hedge-parsley, klamathweed, broad leaf filaree, common vetch, and crane's-bill geranium.

The wetland swale in the study area occurs within the foothill woodland habitat. A few Fremont cottonwood, narrow-leaved willow, and arroyo willow occur within the shrub understory. The herbaceous understory includes curly dock, Mexican rush, Iris-leaf rush, tall flatsedge, and prickly lettuce.

### *Annual Grassland*

The non-native grasses and forbs that occur in the foothill woodland also occur in the annual grassland in the study area. Other grasses and forbs present in the annual grassland include wild oat, hedgehog dogtail, foxtail barley, medusahead, yellow star-thistle, rose clover, smooth's cat-ear, common fiddleneck, short-podded mustard, and bindweed. The annual grassland onsite appears to be disked annually.





1. Culvert carrying flows to the west from WS-1 under Sierra College Boulevard. *Photo date: 3-25-16*



2. Looking upslope along WS-1. *Photo date: 3-25-16*



**Figure 4a**

**SITE PHOTOS**

*Sierra-Brace*

City of Rocklin, Placer County, CA



1. Looking at southwest corner of property at culvert carrying flows of WS-3 to the west under Sierra College Blvd. *Photo date: 3-25-16*



2. Looking west over outfall of WS-2. *Photo date: 3-25-16*



**Figure 4b**

**SITE PHOTOS**

*Sierra-Brace*

City of Rocklin, Placer County, CA

## Waters of the United States

One category of waters of the United States was mapped on the site: wetland swale. Table 1 provides an acreage summary of the wetland swales. The wetland delineation map is included in Figure 5. GIS data is provided on the accompanying DVD, and the Corps of Engineers Aquatic Resources spreadsheet is included as Appendix C.

**Table 1.**  
**Waters of the United States within the Sierra-Brace Study Area**

| Type                                     | Acreage      |
|--|--------------|
| <b>Wetlands:</b>                         |              |
| <b>Wetland swale</b>                     |              |
| <b>WS-1</b>                              | 0.125        |
| <b>WS-2</b>                              | 0.012        |
| <b>WS-3</b>                              | <u>0.016</u> |
| <b>Total Waters of the United States</b> | <b>0.153</b> |

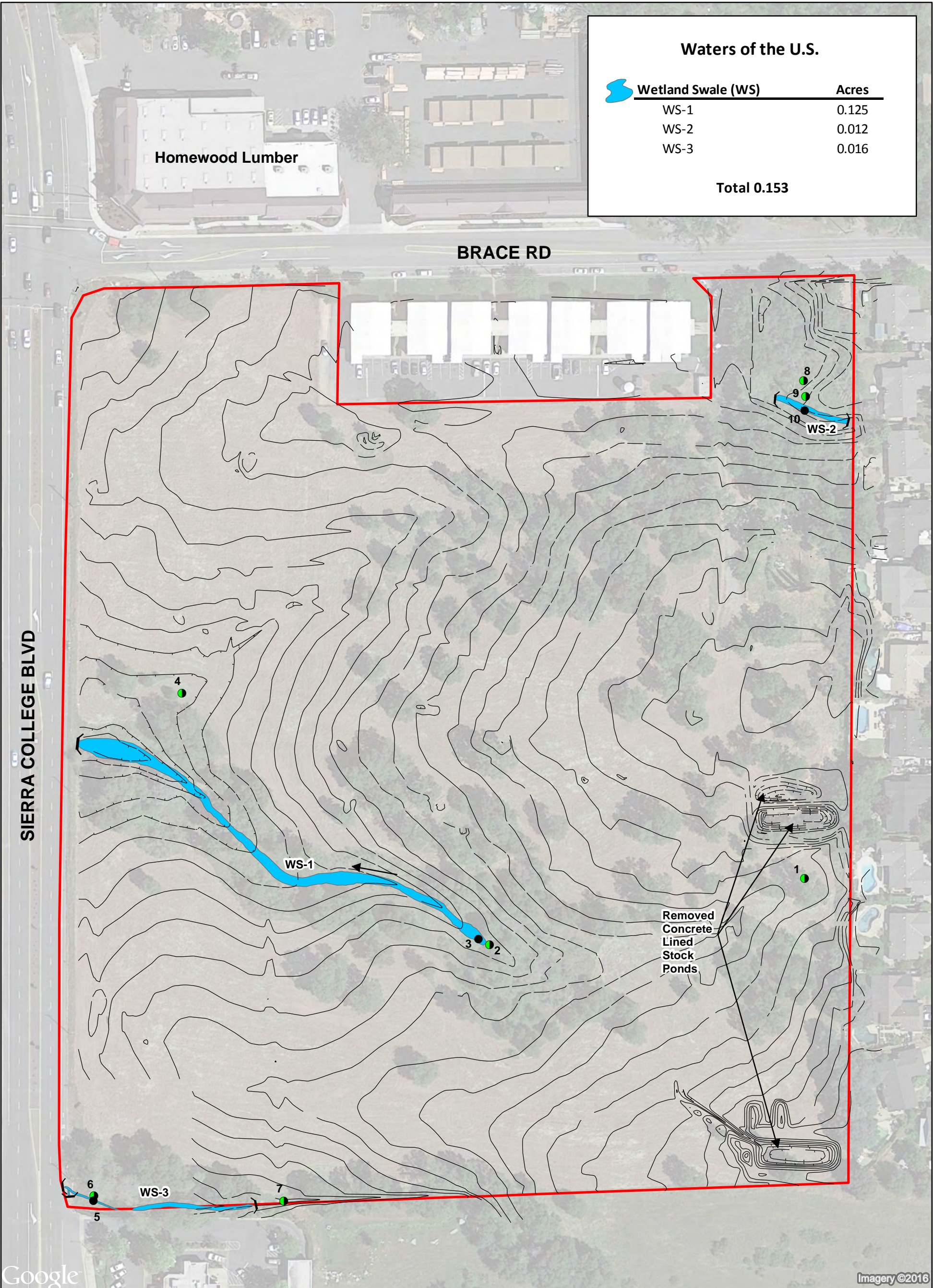
### *Wetland Swale*

One wetland swale occurs within the foothill woodland habitat (Figure 4a). This swale (WS-1) begins in the middle of the study area, where it collects surface water (in the form of sheet flow) and then drains westerly, where it then exits the study area through a culvert underneath Sierra College Boulevard. The beginning of the swale is a small open area dominated by iris leaf rush. The swale then continues west through a dense patch of coyote brush and opens up again near the culvert adjacent to Sierra College Boulevard. Wetland plant species such as hyssop loosestrife, curly dock, prickly lettuce, Italian ryegrass, and Mexican rush are present within the lower portion of the swale.

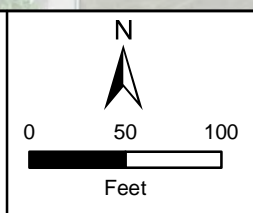
A second wetland swale (WS-2) enters the study area through a culvert along the eastern boundary in the northeast corner of the study area. The swale appears to convey stormwater runoff and urban water westerly for approximately 80 feet within the study area, and then exits the study area through a culvert underneath Starlight Lane. The swale is densely vegetated with Himalayan blackberry (Figure 4b).

A third swale (WS-3) occurs in the southwestern corner of the study area, where stormwater runoff drains onto the study area through an 18-inch PVC culvert located on the commercial development (McDonald's/Chevron) to the south. Wetland species such as water plantain, veronica, moth mullein, water cress, and curly dock are present. The swale (WS-3) continues for approximately 175 feet west until it merges with a narrower excavated ditch that drains water from a 12-inch concrete culvert located under the commercial development to the south (Figure 4b). Water exits the study area along the western boundary through a 30-inch corrugated metal pipe culvert under Sierra College Boulevard.

| Waters of the U.S. |       |
|--------------------|-------|
| Wetland Swale (WS) | Acres |
| WS-1               | 0.125 |
| WS-2               | 0.012 |
| WS-3               | 0.016 |
| <b>Total 0.153</b> |       |



Prepared By:  
  
 Prepared For:  
 Manikas Properties  
 1817 Maryal Drive, Suite 100  
 Sacramento, CA 95864



| Legend                    |                    |
|---------------------------|--------------------|
| Study Area (±18.20 acres) | Wetland Data Point |
| Culvert                   | Upland Data Point  |

**Figure 5**

**WETLAND DELINEATION**  
*Sierra-Brace*  
 Town of Loomis, Placer County, CA

USACE REGULATORY FILE#: SPK-2008-00630  
 DATE OF VERIFICATION: March 20, 2009

NOTES: Revised wetland delineation conducted March 2016.  
 Original delineation conducted by Pat Britton and Barry Anderson  
 of North Fork Associates in 2007.

April 18, 2016

### *Former Cattle Watering Holes*

According to historic information, three concrete-lined livestock ponds once existed onsite and these ponds had been directly connected to a well and pump that had been abandoned, and that they had been filled for safety reasons, utilizing a grading permit issued by the Town of Loomis (#5475). Because we are using the old topographic mapping, the concrete depressions appear on the map. These areas are now leveled ground.

## REFERENCES AND OTHER SOURCES

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- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular plants of California*, second edition. University of California Press, Berkeley.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. *Phytoneuron* 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- Munsell Color. 2000. *Munsell Soil Color Charts*. GretagMacbeth. New Windsor, NY.
- U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture, NRCS. *Web Soil Survey for Placer County Western Area, California*, Online. <http://websoilsurvey.nrcs.usda.gov>.
- Weather.com. 2016. The Weather Channel LLC. Accessed February 2016. <http://www.weather.com/weather/wxclimatology/monthly/graph/95661>.
- National Oceanic & Atmospheric Administration (NOAA) 2016. *Record of Climatological Observation, Month of March 2016*. <https://www.ncdc.noaa.gov/cdo-web/> Accessed April 25, 2016.

**Appendix A.**  
**Wetland Data Sheets**

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 1  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            |  |     |                          |    |                                     |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                                     |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status |   |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. <i>Quercus lobata</i>                    | 30                            | <input checked="" type="checkbox"/> | FAC              | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>4</u><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                | 30                            |                                     |                  |   |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  |   |
| 1. <i>Rubus discolor</i>                    | 5                             | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by:<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                | 5                             |                                     |                  |   |
| <u>Herb Stratum</u>                         |                               |                                     |                  |   |
| 1. <i>Lolium multiflorum</i>                | 40                            | <input checked="" type="checkbox"/> | FAC              | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Unknown grass</i>                     | 20                            | <input checked="" type="checkbox"/> | FAC              |   |
| 3. <i>Rumex crispus</i>                     | 10                            | <input type="checkbox"/>            | FACW-            |   |
| 4. <i>Vicia sativa</i>                      | 5                             | <input type="checkbox"/>            | FACU             |   |
| 5. <i>Galium aparine</i>                    | 5                             | <input type="checkbox"/>            | FACU             |   |
| 6. <i>Geranium molle</i>                    | 5                             | <input type="checkbox"/>            | -                |   |
| 7. <i>Cyperus eragrostis</i>                | 1                             | <input type="checkbox"/>            | FACW             |   |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                | 86                            |                                     |                  |   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |   |
| Remarks:                                    |                               |                                     |                  |   |



**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-4               | 7.5 YR 4/2    | 100 |                |    |                   |                  | Coarse sandy loam |         |
| 4-5               | 10 YR 4/2     | 100 |                |    |                   |                  | Coarse sandy loam |         |
| 5-9               | 10 YR 3/1     | 90  | 7.5 YR 3/3     | 10 | C                 | M                | Coarse sandy loam |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)                   | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)               | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)           | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)           | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)               | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7)         |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)             |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)                  |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks:  
 At 6 inches deep within the soil profile, there appears to be a red band.

**HYDROLOGY**

| Wetland Hydrology Indicators:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  |  |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ **Wetland Hydrology Present** Yes  No   
 (includes capillary fringe)

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

Remarks:  
 Lacks evidence of wetland hydrology indicators.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 2  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?                                  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Wetland Hydrology Present?                            | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Remarks:<br>Upland comparison point to data point #3. |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|-------------------------------|-------------------------------------|------------------|--|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>2</u>   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (B)   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | Total Cover: _____   |
| Total Cover: _____                          |                               |                                     |                  | <b>Prevalence Index worksheet</b>  |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  | Total % Cover of: _____ Multiply by: _____   |
| 1.. _____                                   |                               | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  | UPL species _____ x5= _____  |
| Total Cover: _____                          |                               |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| <u>Herb Stratum</u>                         |                               |                                     |                  | Prevalence Index = B/A = _____   |
| 1. <i>Bromus hordeaceus</i>                 | 40                            | <input checked="" type="checkbox"/> | FACU-            | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Bromus diandrus</i>                   | 40                            | <input checked="" type="checkbox"/> | -                |  |
| 3. <i>Geranium molle</i>                    | 15                            | <input type="checkbox"/>            | -                |  |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 6. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>95</u>                      |                               |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |  |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          |                               |                                     |                  |  |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |  |
| Remarks:                                    |                               |                                     |                  |  |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-2               | 7.5 YR 2/2    | 100 |                |   |                   |                  | Coarse sandy loam |         |
| 2-14              | 10 YR 3/1     | 100 |                |   |                   |                  | Coarse sandy loam |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 3  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| Hydic Soil Present?             | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Wetland Hydrology Present?      | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Remarks:<br>Wetland swale.      |     |                                     |    |                          |  |     |                                     |    |                          |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.)                                     | Absolute % Cover | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____  |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  |
| 2. _____  |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>1</u>   |
| 3. _____  |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 4. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____  |                  |                                     |                  |  |
| <u>Sapling/Shrub Stratum</u>  |                  |                                     |                  | <b>Prevalence Index worksheet</b>  |
| 1.. _____   |                  | <input type="checkbox"/>            |                  | Total % Cover of: _____ Multiply by:   |
| 2. _____  |                  | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 3. _____  |                  | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 4. _____  |                  | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 5. _____  |                  | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| Total Cover: _____  |                  |                                     |                  | UPL species _____ x5= _____  |
| <u>Herb Stratum</u>   |                  |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| 1. <i>Juncus xiphioides</i>   | 90               | <input checked="" type="checkbox"/> | OBL              | Prevalence Index = B/A = _____   |
| 2. <i>Geranium molle</i>  | 10               | <input type="checkbox"/>            | -                |  |
| 3. <i>Rumex crispus</i>   | 5                | <input type="checkbox"/>            | FACW-            |  |
| 4. _____  |                  | <input type="checkbox"/>            |                  |  |
| 5. _____  |                  | <input type="checkbox"/>            |                  |  |
| 6. _____  |                  | <input type="checkbox"/>            |                  |  |
| 7. _____  |                  | <input type="checkbox"/>            |                  |  |
| 8. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>105</u>   |                  |                                     |                  |  |
| <u>Woody Vine Stratum</u>   |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b>  |
| 1. _____  |                  | <input type="checkbox"/>            |                  | <input checked="" type="checkbox"/> Dominance Test is >50%   |
| 2. _____  |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup>   |
| Total Cover: _____  |                  |                                     |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet) |
| <u>% Bare Ground in Herb Stratum</u> _____ <u>% Cover of Biotic Crust</u> _____ |                  |                                     |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)   |
| Remarks:  |                  |                                     |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present   |
|   |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>                 |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-2               | 10 YR 2/2     | 100 |                |   |                   |                  | Coarse sandy loam |         |
| 2-14              | 10 YR 4/1     | 100 |                |   |                   |                  | Coarse sandy loam |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) | Indicators for Problematic Hydric Soils <sup>3</sup> : |
|---|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Reduced Vertic (F18)          |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Red Parent Material (TF2)     |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Other (Explain in Remarks)    |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |  |
| <input type="checkbox"/> Sandy Redox (S5)                                 |  |
| <input type="checkbox"/> Stripped Matrix (S6)                             |  |
| <input type="checkbox"/> Loamy Mucky Mineral (F1)                         |  |
| <input type="checkbox"/> Loamy Gleyed Matrix (F2)                         |  |
| <input checked="" type="checkbox"/> Depleted Matrix (F3)                  |  |
| <input type="checkbox"/> Redox Dark Surface (F6)                          |  |
| <input type="checkbox"/> Depleted Dark Surface (F7)                       |  |
| <input type="checkbox"/> Redox Depressions (F8)                           |  |
| <input type="checkbox"/> Vernal Pools (F9)                                |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes  No

Remarks:  
 Low chroma, soils are hydric based on the Corps 1987 Manual.

**HYDROLOGY**

| Wetland Hydrology Indicators:  | Secondary Indicators (2 or more required)                          |
|--|--|
| Primary Indicators (any one indicator is sufficient)                   |  |
| <input type="checkbox"/> Surface Water (A1)                            | <input type="checkbox"/> Water Marks (B1) (Riverine)               |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |
| <input checked="" type="checkbox"/> Saturation (A3)                    | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)                | <input type="checkbox"/> Drainage Patterns (B10)                   |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)          | <input type="checkbox"/> Dry-Season Water Table (C2)               |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)             | <input type="checkbox"/> Thin Muck Surface (C7)                    |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Crayfish Burrows (C8)                     |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     | <input type="checkbox"/> Shallow Aquitard (D3)                     |
| <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> FAC-Neutral Test (D5)                     |
| <input type="checkbox"/> Biotic Crust (B12)                            |  |
| <input type="checkbox"/> Aquatic Invertebrates (B13)                   |  |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |  |
| <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |  |
| <input type="checkbox"/> Presence of Reduced Iron (C4)                 |  |
| <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |  |
| <input type="checkbox"/> Other (Explain in Remarks)                    |  |

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): **17 in** 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 Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 4  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Wetland Hydrology Present?      | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Remarks:                        |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.)                                     | Absolute % Cover | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____  |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  |
| 2. _____  |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>3</u>   |
| 3. _____  |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)   |
| 4. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____  |                  |                                     |                  |  |
| <u>Sapling/Shrub Stratum</u>  |                  |                                     |                  | <b>Prevalence Index worksheet</b>  |
| 1.. _____   |                  | <input type="checkbox"/>            |                  | Total % Cover of: _____ Multiply by: _____   |
| 2. _____  |                  | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 3. _____  |                  | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 4. _____  |                  | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 5. _____  |                  | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| Total Cover: _____  |                  |                                     |                  | UPL species _____ x5= _____  |
| <u>Herb Stratum</u>   |                  |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| 1. <i>Bromus hordeaceus</i>   | 30               | <input checked="" type="checkbox"/> | FACU-            | Prevalence Index = B/A = _____   |
| 2. <i>Hordeum murinum</i>   | 30               | <input checked="" type="checkbox"/> | -                |  |
| 3. <i>Trifolium hirtum</i>  | 20               | <input checked="" type="checkbox"/> | -                |  |
| 4. <i>Lolium multiflorum</i>  | 10               | <input type="checkbox"/>            | FAC              |  |
| 5. <i>Geranium molle</i>  | 5                | <input type="checkbox"/>            | -                |  |
| 6. _____  |                  | <input type="checkbox"/>            |                  |  |
| 7. _____  |                  | <input type="checkbox"/>            |                  |  |
| 8. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>95</u>  |                  |                                     |                  |  |
| <u>Woody Vine Stratum</u>   |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b>  |
| 1. _____  |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Dominance Test is >50%  |
| 2. _____  |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup>   |
| Total Cover: _____  |                  |                                     |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet) |
| <u>% Bare Ground in Herb Stratum</u> _____ <u>% Cover of Biotic Crust</u> _____ |                  |                                     |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)   |
| Remarks:  |                  |                                     |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present   |
| Recently plowed.  |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>                 |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-12              | 10 YR 3/2     | 100 |                |   |                   |                  | Coarse sandy loam |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present Yes  No

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

Remarks:  
Lacks evidence of prolonged seasonal saturation.

## WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 5  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?  | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                          |    |                                     |
| Wetland Hydrology Present?  | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:<br><u>Ditch</u> that drains storm water runoff. Drains for a short distance on the site and leaves via a 30 inch culvert under Sierra College Boulevard. |     |                                     |    |                          |  |     |                          |    |                                     |

### VEGETATION

| Tree Stratum (Use scientific names.)    | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|---|------------------|-------------------------------------|------------------|---|
| 1. _____                                |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)   |
| 2. _____                                |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>2</u>  |
| 3. _____                                |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 4. _____                                |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                      |                  |                                     |                  |   |
| <b>Sapling/Shrub Stratum</b>            |                  |                                     |                  |   |
| 1. _____                                |                  | <input type="checkbox"/>            |                  | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by: _____   |
| 2. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 3. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 4. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 5. _____                                |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                      |                  |                                     |                  | OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)   |
| <b>Herb Stratum</b>                     |                  |                                     |                  |   |
| 1. <i>Juncus xiphioides</i>             | 20               | <input checked="" type="checkbox"/> | OBL              | Prevalence Index = B/A = _____<br><br><b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Juncus mexicanus</i>              | 10               | <input checked="" type="checkbox"/> | FACW             |   |
| 3. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 4. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 5. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 6. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 7. _____                                |                  | <input type="checkbox"/>            |                  |   |
| 8. _____                                |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: <u>30</u>                  |                  |                                     |                  |   |
| <b>Woody Vine Stratum</b>               |                  |                                     |                  |   |
| 1. _____                                |                  | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                                |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                      |                  |                                     |                  |   |
| % Bare Ground in Herb Stratum <u>70</u> |                  | % Cover of Biotic Crust _____       |                  |   |

Remarks:  
 Recently cleared.



**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-4               | 7.5 YR 2.5/1  | 100 |                |    |                   |                  | Coarse sandy loam |         |
| 4-12              | 10 YR 4/1     | 90  | 7.5 YR 4/6     | 10 | C                 | M                | Clayey            |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |  | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|--|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)                | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)            | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)        | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)         |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7)      |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)          |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)               |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |  |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9)      |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**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 Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 6  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?                                  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Wetland Hydrology Present?                            | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Remarks:<br>Upland comparison point to data point #5. |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____                                    |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  |
| 2. _____                                    |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>3</u>   |
| 3. _____                                    |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)   |
| 4. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          |                  |                                     |                  |  |
| <u>Sapling/Shrub Stratum</u>                |                  |                                     |                  | <b>Prevalence Index worksheet</b>  |
| 1.. <u>Rubus discolor</u>                   | 20               | <input checked="" type="checkbox"/> | FACW             | Total % Cover of: _____ Multiply by:   |
| 2. _____                                    |                  | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 3. _____                                    |                  | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 4. _____                                    |                  | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 5. _____                                    |                  | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| Total Cover: _____                          | 20               | <input type="checkbox"/>            |                  | UPL species _____ x5= _____  |
|   |                  |                                     |                  | Column Totals: _____ (A) _____ (B)   |
|   |                  |                                     |                  | Prevalence Index = B/A = _____   |
| <u>Herb Stratum</u>                         |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b>  |
| 1. <u>Geranium molle</u>                    | 15               | <input checked="" type="checkbox"/> | -                | <input type="checkbox"/> Dominance Test is >50%  |
| 2. <u>Bromus hordeaceus</u>                 | 10               | <input checked="" type="checkbox"/> | -                | <input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup>   |
| 3. _____                                    |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet) |
| 4. _____                                    |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)   |
| 5. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| 6. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| 7. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| 8. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          | 25               |                                     |                  |  |
| <u>Woody Vine Stratum</u>                   |                  |                                     |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present   |
| 1. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| 2. _____                                    |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          |                  |                                     |                  |  |
| % Bare Ground in Herb Stratum <u>20</u>     |                  | % Cover of Biotic Crust _____       |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>                 |
| Remarks:                                    |                  |                                     |                  |  |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-4               | 10 YR 3/2     | 100 |                |   |                   |                  | Coarse sandy loam |         |
| 4-12              | 10 YR 3/2     | 98  | 10 YR 3/3      | 2 | C                 | M                | Loamy             |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 7  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5%  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?             | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Wetland Hydrology Present?       | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Remarks:<br><b>Upland swale.</b> |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|-------------------------------|-------------------------------------|------------------|--|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>2</u>   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (B)   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | Total Cover: _____   |
| Total Cover: _____                          |                               |                                     |                  | <b>Prevalence Index worksheet</b>  |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  | Total % Cover of: _____ Multiply by:   |
| 1.. _____                                   |                               | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  | UPL species _____ x5= _____  |
| Total Cover: _____                          |                               |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| <u>Herb Stratum</u>                         |                               |                                     |                  | Prevalence Index = B/A = _____   |
| 1. <i>Bromus diandrus</i>                   | 40                            | <input checked="" type="checkbox"/> | -                | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Bromus hordeaceus</i>                 | 40                            | <input checked="" type="checkbox"/> | FACU-            |  |
| 3. <i>Epilobium brachycarpum</i>            | 20                            | <input type="checkbox"/>            | -                |  |
| 4. <i>Veronica sp.</i>                      | 10                            | <input type="checkbox"/>            | Varies           |  |
| 5. <i>Vicia sativa</i>                      | 5                             | <input type="checkbox"/>            | FACU             |  |
| 6. <i>Torilis arvensis</i>                  | 5                             | <input type="checkbox"/>            | -                |  |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>120</u>                     |                               |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |  |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          |                               |                                     |                  |  |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |  |
| Remarks:                                    |                               |                                     |                  |  |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture | Remarks                             |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|-------------------------------------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |         |                                     |
| 0-8               | 10 YR 3/2     | 100 |                |   |                   |                  | Loam    |                                     |
| 8-12              | 7.5 YR 4/2    | 100 |                |   |                   |                  | Sandy   | Sand mixed with soil, multi-colored |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  |  |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/27/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 8  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            |  |     |                          |    |                                     |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                                     |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status |   |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  |   |
| 1. <u>Rubus discolor</u>                    | 100                           | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: 100                            |                               | <input type="checkbox"/>            |                  |   |
| <u>Herb Stratum</u>                         |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 6. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| Remarks:                                    |                               |                                     |                  |   |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture     | Remarks                                    |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-------------|--|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |             |  |
| 0-6               | 7.5 YR 3/2    | 100 |                |    |                   |                  | Loamy       |  |
| 6-12              | 7.5 YR 3/2    | 50  | 10 YR 4/3      | 50 |                   |                  | Coarse loam | Chunks of decomposed granite mixed in soil |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks:  
 Soil profile may consist of mixed soil.

**HYDROLOGY**

| Wetland Hydrology Indicators:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/27/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 9  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                                     |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>  |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>1</u>  |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <b><u>Sapling/Shrub Stratum</u></b>         |                               |                                     |                  |   |
| 1.. <u>Rubus discolor</u>                   | 100                           | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b>   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total % Cover of: _____ Multiply by: _____  |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | OBL species _____ x1= _____   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | FACW species _____ x2= _____  |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  | FAC species _____ x3= _____   |
| Total Cover: 100                            |                               | <input type="checkbox"/>            |                  | FACU species _____ x4= _____  |
|   |                               |                                     |                  | UPL species _____ x5= _____   |
|   |                               |                                     |                  | Column Totals: _____ (A) _____ (B)  |
|   |                               |                                     |                  | Prevalence Index = B/A = _____  |
| <b><u>Herb Stratum</u></b>                  |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 6. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <b><u>Woody Vine Stratum</u></b>            |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |   |
| Remarks:                                    |                               |                                     |                  |   |



**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture     | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |             |         |
| 0-12              | 10 YR 3/2     | 100 |                |   |                   |                  | Coarse loam |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ **Wetland Hydrology Present** Yes  No

(includes capillary fringe)

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/27/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 10  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| Hydric Soil Present?              | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Wetland Hydrology Present?        | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Remarks:<br><u>Drainage ditch</u> |     |                                     |    |                          |  |     |                                     |    |                          |

**VEGETATION**

| Tree Stratum (Use scientific names.) | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|--------------------------------------|------------------|-------------------------------------|------------------|---|
| 1. _____                             |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)   |
| 2. _____                             |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>1</u>  |
| 3. _____                             |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 4. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                   |                  |                                     |                  |   |
| <b>Sapling/Shrub Stratum</b>         |                  |                                     |                  |   |
| 1.. <u>Rubus discolor</u>            | 100              | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____  |
| 2. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 3. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 4. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 5. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: 100                     |                  | <input type="checkbox"/>            |                  |   |
| <b>Herb Stratum</b>                  |                  |                                     |                  |   |
| 1. _____                             |                  | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 3. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 4. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 5. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 6. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 7. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 8. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                   |                  |                                     |                  |   |
| <b>Woody Vine Stratum</b>            |                  |                                     |                  |   |
| 1. _____                             |                  | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                   |                  |                                     |                  |   |
| % Bare Ground in Herb Stratum _____  |                  | % Cover of Biotic Crust _____       |                  |   |

Remarks:  
Rubus over ditch/stream.

**SOIL**

Sampling Point:

10

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture    | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |            |         |
| 0-4               | 10 YR 3/1     | 100 |                |   |                   |                  | Sandy loam |         |
| 4-12              | 2.5 Y 5/3     | 90  | 2.5 Y 5.5/1    |   |                   |                  | Sandy loam |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)         | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): 1"

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): 0 **Wetland Hydrology Present** Yes  No

(includes capillary fringe)

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

Remarks:

**Appendix B.**  
**Wetland Status of Plant Species Observed in the Sierra-Brace Study Area**

## Appendix B. Wetland Status of Plant Species Observed

| Taxon   | Common Name               | Wetland Status |
|---|---------------------------|----------------|
| <i>Acacia baileyana</i>                       | Cootamundra wattle        | UPL            |
| <i>Acmispon americanus var. americanus</i>    | Spanish-clover            | UPL            |
| <i>Alisma triviale</i>                        | California water plantain | OBL            |
| <i>Amsinckia menziesii</i>                    | Rancher's fireweed        | UPL            |
| <i>Artemisia douglasiana</i>                  | California mugwort        | FAC            |
| <i>Arundo donax</i>                           | Giant reed                | FACW           |
| <i>Avena fatua</i>                            | Wild oat                  | UPL            |
| <i>Baccharis pilularis</i>                    | Coyote brush              | UPL            |
| <i>Briza minor</i>                            | Small quaking grass       | FAC            |
| <i>Bromus diandrus</i>                        | Ripgut grass              | UPL            |
| <i>Bromus hordeaceus</i>                      | Soft chess                | FACU           |
| <i>Carduus pycnocephalus</i>                  | Italian thistle           | UPL            |
| <i>Centaurea solstitialis</i>                 | Yellow starthistle        | UPL            |
| <i>Cichorium intybus</i>                      | Chicory                   | FACU           |
| <i>Cirsium arvense</i>                        | Canada thistle            | FACU           |
| <i>Clarkia sp.</i>                            | Clarkia                   | UPL            |
| <i>Claytonia perfoliata</i>                   | Common miner's lettuce    | FAC            |
| <i>Convolvulus arvensis</i>                   | Bindweed                  | UPL            |
| <i>Cynodon dactylon</i>                       | Bermudagrass              | FACU           |
| <i>Cynosurus echinatus</i>                    | Hedgehog dogtail          | UPL            |
| <i>Cyperus eragrostis</i>                     | Tall flatsedge            | FACW           |
| <i>Cytisus scoparius</i>                      | Scotch broom              | UPL            |
| <i>Elymus caput-medusae</i>                   | Medusahead                | UPL            |
| <i>Epilobium brachycarpum</i>                 | Summer cottonweed         | UPL            |
| <i>Erigeron canadensis</i>                    | Canadian horseweed        | FACU           |
| <i>Erodium botrys</i>                         | Broad-leaf filaree        | FACU           |
| <i>Erodium cicutarium</i>                     | Red-stem filaree          | UPL            |
| <i>Eschscholzia californica</i>               | California poppy          | UPL            |
| <i>Festuca perennis</i>                       | Italian ryegrass          | FAC            |
| <i>Galium aparine</i>                         | Goose grass               | FACU           |
| <i>Geranium dissectum</i>                     | Cut-leaf geranium         | UPL            |
| <i>Geranium molle</i>                         | Dove's-foot geranium      | UPL            |
| <i>Hirschfeldia incana</i>                    | Short-podded mustard      | UPL            |
| <i>Hordeum marinum subsp. gussoneanum</i>     | Mediterranean barley      | FAC            |
| <i>Hordeum murinum</i>                        | Wall barley               | FACU           |
| <i>Hypericum perforatum subsp. perforatum</i> | Klamathweed               | FACU           |
| <i>Hypochaeris glabra</i>                     | Smooth cat's-ear          | UPL            |
| <i>Juncus mexicanus</i>                       | Mexican rush              | FACW           |

| <b>Taxon</b>                              | <b>Common Name</b>   | <b>Wetland Status</b> |
|---|----------------------|-----------------------|
| <i>Juncus xiphioides</i>                  | Iris-leaved rush     | OBL                   |
| <i>Lactuca serriola</i>                   | Prickly lettuce      | FACU                  |
| <i>Lamium amplexicaule</i>                | Deadnettle           | UPL                   |
| <i>Lupinus bicolor</i>                    | Miniature lupine     | UPL                   |
| <i>Lythrum hyssopifolia</i>               | Hyssop loosestrife   | OBL                   |
| <i>Melilotus sp.</i>                      | Melilotus            | UPL                   |
| <i>Nasturtium officinale</i>              | Watercress           | OBL                   |
| <i>Olea europaea</i>                      | Olive                | UPL                   |
| <i>Paspalum dilatatum</i>                 | Dallis grass         | FAC                   |
| <i>Pinus sabiniana</i>                    | Gray pine            | UPL                   |
| <i>Plantago lanceolata</i>                | English plantain     | FAC                   |
| <i>Polypogon monspeliensis</i>            | Annual beard grass   | FACW                  |
| <i>Populus fremontii subsp. fremontii</i> | Fremont cottonwood   | FAC                   |
| <i>Prunus dulcis</i>                      | Almond tree          | UPL                   |
| <i>Pyracantha sp.</i>                     | Pyracantha           | UPL                   |
| <i>Pyrus sp.</i>                          | Pear                 | UPL                   |
| <i>Quercus douglasii</i>                  | Blue oak             | UPL                   |
| <i>Quercus lobata</i>                     | Valley oak           | FACU                  |
| <i>Quercus wislizeni</i>                  | Interior live oak    | UPL                   |
| <i>Rubus armeniacus</i>                   | Himalayan blackberry | FACU                  |
| <i>Rumex crispus</i>                      | Curly dock           | FAC                   |
| <i>Salix exigua var. exigua</i>           | Narrowleaf willow    | FACW                  |
| <i>Salix lasiolepis</i>                   | Arroyo willow        | FACW                  |
| <i>Silybum marianum</i>                   | Milk thistle         | UPL                   |
| <i>Sonchus asper subsp. asper</i>         | Prickly sow-thistle  | FAC                   |
| <i>Spartium junceum</i>                   | Spanish broom        | UPL                   |
| <i>Torilis arvensis</i>                   | Field hedgeparsley   | UPL                   |
| <i>Toxicodendron diversilobum</i>         | Western poison-oak   | FACU                  |
| <i>Trifolium hirtum</i>                   | Rose clover          | UPL                   |
| <i>Verbascum blattaria</i>                | Moth mullein         | UPL                   |
| <i>Verbascum thapsus</i>                  | Woolly mullein       | FACU                  |
| <i>Veronica sp.</i>                       | Speedwell            | VARIES                |
| <i>Vicia sativa</i>                       | Common vetch         | FACU                  |
| <i>Vicia villosa</i>                      | Winter vetch         | UPL                   |
| <i>Vinca major</i>                        | Periwinkle           | UPL                   |

**Appendix C.**  
**USACOE Aquatic Resources Spreadsheet**

| Waters_Name     | State      | Cowardin_Code | HGM_Code | Meas_Type | Amount | Units | Waters_Type | Latitude    | Longitude    | Local_Waterway |
|-----------------|------------|---------------|----------|-----------|--------|-------|-------------|-------------|--------------|----------------|
| Wetland Swale-1 | CALIFORNIA | PEM2          | SLOPE    | Area      | 0.125  | ACRE  | DELINEATE   | 38.80860477 | -121.2046204 | Sucker Ravine  |
| Wetland Swale-2 | CALIFORNIA | PEM1          | SLOPE    | Area      | 0.012  | ACRE  | DELINEATE   | 38.80984881 | -121.2025173 | Sucker Ravine  |
| Wetland Swale-3 | CALIFORNIA | PEM2          | SLOPE    | Area      | 0.016  | ACRE  | DELINEATE   | 38.80752123 | -121.2052995 | Sucker Ravine  |



**Attachment 1.**  
**USACOE Verification Letter, March 2009**



**DEPARTMENT OF THE ARMY**  
**U.S. ARMY ENGINEER DISTRICT, SACRAMENTO**  
**CORPS OF ENGINEERS**  
**1325 J STREET**  
**SACRAMENTO CA 95814-2922**

**RECEIVED**  
**MAR 26 2009**

REPLY TO  
ATTENTION OF

BY:.....

March 20, 2009

Regulatory Division (SPK-2008-00630)

Stephen Patterson  
 Patterson Properties  
 2270 Douglas Boulevard, Suite 111  
 Roseville, California 95661

Dear Mr. Patterson:

We are responding to your consultant's request for an approved jurisdictional determination for the Sierra-Brace Property. This approximately 17.88-acre site is located in Section 28, Township 11 North, Range 7 East, MDB&M, Latitude 38.808793° North, Longitude 121.203869° West, near the City of Rocklin and Town of Loomis, Placer County, California.

Based on available information, we concur with the estimate of waters of the United States, as depicted on the February 28, 2008, *Appendix C, Wetland Delineation Map, Sierra-Brace Study Area, Town of Loomis, Placer County, CA*, drawing prepared by North Fork Associates. Approximately 0.14 acre of waters of the United States, including wetlands, is present within the survey area. These waters are regulated under Section 404 of the Clean Water Act, since they are tributary to an unnamed intermittent stream, which is tributary to Secret Ravine, which is tributary to Miner's Ravine, which is tributary to Dry Creek, which is tributary to the Natomas East Main Drainage Canal, which is tributary to the Sacramento River, a navigable water of the United States.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331.

A Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 1455 Market Street, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 60 days from the date of this letter. It is

not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please complete our customer survey at [http://www.spk.usace.army.mil/customer\\_survey.html](http://www.spk.usace.army.mil/customer_survey.html). Your passcode is "conigliaro".

Please refer to identification number SPK-2008-00630 in any correspondence concerning this project. If you have any questions, please contact (b) (6) at our California North Branch, 1325 J Street, Room 1480, Sacramento, California, 95814-2922, email (b) (6)@usace.army.mil, or telephone (916) 557-6740. You may also use our website: [www.spk.usace.army.mil/regulatory.html](http://www.spk.usace.army.mil/regulatory.html).

Sincerely,

**ORIGINAL SIGNED**

(b) (6)

Chief, California North Branch

Enclosure(s)

Copy furnished without enclosure(s)

- ✓ Pat Britton, North Fork Associates, 110 Maple Street, Auburn, California 95603
- William Marshall, Storm Water and Water Quality Certification Unit, California Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
- Kent Smith, California Department of Fish and Game, Region 2, 1701 Nimbus Drive, Rancho Cordova, California 95670-4599
- U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
- Robert Leidy, Environmental Protection Agency, WRT-8, 75 Hawthorne Street, San Francisco, California 94105
- Rodney R. McInnis, Acting Regional Administrator, National Marine Fisheries Service, 650 Capital Mall, Suite 8-300, Sacramento, California 95814-4706

**ATTACHMENT 5**

**USACE Wetland Determination Verification Letter, June 14, 2016**



DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT  
1325 J STREET  
SACRAMENTO CA 95814-2922

June 14, 2016

Regulatory Division (SPK-2008-00630)

Manikas Properties  
Attn: Mr. John Manikas  
1817 Maryal Drive, Suite 100  
Sacramento, California 95864

Dear Mr. Manikas:

We are responding to your May 11, 2016, request for a preliminary jurisdictional determination (JD), in accordance with our Regulatory Guidance Letter (RGL) 08-02, for the Sierra-Brace Property site. The approximately 17.88-acre project site is located in Section 16, Township 11 North, Range 7 East, Mount Diablo Meridian, Latitude 38.80879°, Longitude -121.20387°, Loomis, Placer County, California.

Based on available information, **we concur with the amount and location of wetlands and/or other water bodies on the site as depicted on the enclosed April 18, 2016, Figure 5 Wetland Delineation Sierra Brace drawing prepared by Salix Consulting, Inc. (enclosure 1).** The approximately 0.153 acres of wetland swales present within the survey area are potential waters of the United States regulated under Section 404 of the Clean Water Act.

We have enclosed a copy of the *Preliminary Jurisdictional Determination Form* for this site (enclosure 2). Please sign and return a copy of the completed form to this office. Once we receive a copy of the form with your signature we can accept and process a Pre-Construction Notification or permit application for your proposed project.

You should not start any work in potentially jurisdictional waters of the United States unless you have Department of the Army permit authorization for the activity. You may request an approved JD for this site at any time prior to starting work within waters. In certain circumstances, as described in RGL 08-02, an approved JD may later be necessary.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This preliminary determination has been conducted to identify the potential limits of wetlands and other water bodies which may be subject to Corps of Engineers' jurisdiction for the particular site identified in this request. A Notification of Appeal Process and Request for Appeal form is enclosed to notify you of your options with this determination (enclosure 3). This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are U.S. Department of Agriculture (USDA) program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2008-00630 in any correspondence concerning this project. If you have any questions, please contact (b) (6) at our California North Branch Office, Regulatory Division, Sacramento District, U.S. Army Corps of Engineers, 1325 J Street Room 1350, Sacramento, California 95814-2922, by email at (b) (6)@usace.army.mil, or telephone at 916-557-7759. For more information regarding our program, please visit our website at [www.spk.usace.army.mil/Missions/Regulatory.aspx](http://www.spk.usace.army.mil/Missions/Regulatory.aspx).

Sincerely,

(b) (6)

Senior Regulatory Project Manager  
California North Branch  
Regulatory Division

Enclosures

cc: (w/o encls)

Mr. Jeff Glazner, Salix Consulting, Inc., [jglazner@salixinc.com](mailto:jglazner@salixinc.com)

# Biological Resource Report Plants





**BIOLOGICAL RESOURCES REPORT  
COSTCO WHOLESALE PROJECT  
TOWN OF LOOMIS, PLACER COUNTY, CALIFORNIA**



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**June 2017**

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## LIST OF ATTACHMENTS

### **ATTACHMENT 1. Figures**

- Figure 1. Project Location
- Figure 2. U.S.G.S Map of the Project Site
- Figure 3. Aerial Photo of the Project Site
- Figure 4. Costco Wholesale Project Conceptual Plan
- Figure 5. Preliminary Grading and Drainage Plan
- Figure 6. Soil Map of the Project Site
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### **ATTACHMENT 2. Supplemental Biological Information**

- Table 1. Plant List for Property
- Table 2. Animal Species Observed on the Project Site or Expected to Utilize the Project Site
- Table 3. Special Status Plants Known to Occur in the Vicinity of the Project Area, Placer County, California
- Table 4. Special Status Animal Species that have been Reported in the Vicinity of the Project Area, Placer County, California.

### **ATTACHMENT 3. Wetland Delineation for the 17.88 Sierra-Brace Study Area, Town of Loomis, Placer County, California, prepared by Salix Consulting, Inc. May 2016.**

This report should be cited as: *Draft Biological Resources Report, Costco Wholesale Project, Town of Loomis, Placer County, California*. June 2017. San Rafael, California 37 pp. plus attachments. Prepared for Costco Wholesale.

## **1.0 INTRODUCTION**

On behalf of Costco Wholesale, Huffman-Broadway Group, Inc. (HBG) has prepared a Biological Resources Report for the Costco Wholesale Project in The Town of Loomis, Placer County, California. It is expected that this Biological Resources Report will be incorporated into an environmental document prepared by Placer County to satisfy requirements of the California Environmental Quality Act (CEQA). This report describes biological resources and ecological constraints present on the 17.88-acre Project Site, including the presence of sensitive habitats and an evaluation of the potential for rare, threatened, or endangered species of flora and/or fauna to occur at the site or in the project vicinity. The report also includes a preliminary review of biological impacts associated with implementation of the project and recommended mitigation measures, as needed.

Our analysis included a review of pertinent literature on habitat characteristics of the site, species of plants and animals expected to utilize the site, a review of planning documents referencing ecological aspects of the site, and field site surveys. The Biological Resources Report also incorporates the results of a wetland jurisdictional determination prepared for the site by Salix Consulting Inc., in May of 2016. This report was a detailed delineation of wetlands and waters of the United States at the property, conducted per criteria of the U.S. Army Corps of Engineers, and the results of the wetland delineation are summarized herein. Also considered is an Arborist's Report prepared by Mann Made Resources. The wetland delineation is included as an attachment herein, and the Arborist's Report is available at the City of Loomis under separate cover. The California Natural Diversity Data Base (CNDDDB) was consulted to determine if any populations of endangered, threatened, or rare species have occurred historically or currently are known to exist near the project. The study site was surveyed by HBG biologists between February and June of 2017.

## **2.0 PROJECT DESCRIPTION**

### **2.1 Location of Project Site**

The Project Site is in the Town of Loomis in Placer County, California. The site is north of Interstate 80, in the southeastern corner of the intersection between Sierra College Boulevard and Brace Road. The location corresponds to Section 28 of Township 11 North and Range 7 East on the 7.5 minute Rocklin, CA United States Geological Survey (USGS) quadrangle (Figure 1). The latitude and longitude of the approximate center of the site are 38°48'34" North and 121°12'16" West. The Assessor Parcel Numbers (APNs) are 045-042-011, 045-042-012, 045-042-023, 045-042-034, 045-042-035, 045-042-036, and 045-042-037. The property is located on the Loomis 7.5-minute U.S. Geographic (USGS) topographic quadrangle map.

Refer to Exhibit 1, Figure 1 for the project site location map, Figure 2 for the location of the project on the Loomis USGS 7.5-minute quadrangle map, and Figure 3 for an aerial photograph of the project site.

### **2.2 Project Description**

Costco Wholesale is proposing to construct a Costco facility at the site as shown in the conceptual plan in Figure 4. The Preliminary Grading and Drainage Plan is shown in Figure 5. The facility includes the Costco warehouse and associated parking and other planned infrastructure. The proposed project would cover the entire site.

## 3.0 EXISTING SETTING

### 3.1 Site Description

The Project Site is in the Town of Loomis in Placer County, California. The site is north of Interstate 80, in the southeastern corner of the intersection between Sierra College Boulevard and Brace Road. Adjacent land uses include a multi-family residential building along the northern boundary the Homewood Lumber complex to the north, single family residential to the east, commercial and undeveloped land to the south, and an office building and undeveloped land to the west (Figure 3). The study area is bounded by Brace Road to the north and Sierra College Boulevard to the west.

General features of the project site are as follows:

- **Soils and Topography.** One soil unit is mapped in the study area (Figure 6): Andregg coarse sandy loam, 2 to 9 percent slopes. Andregg soils are well drained and have moderately rapid permeability. This soil is neither ponded nor flooded. This soil does not meet hydric criteria. The study area is located at an elevation between approximately 320 and 340 feet. The topography of the study area gently slopes to the west.
- **Hydrology.** The Project Site is in the Dry Creek watershed (Hydrologic Unit Code 1802011101), as shown in the watershed map of Figure 7. A wetland swale and drainage ditch located in the southwest corner of the site drain water westerly and convey water offsite through culverts underneath Sierra College Boulevard. Water continues to drain westerly on the adjacent property and drains into Sucker Ravine which drains into Secret Ravine. Secret Ravine is a tributary of Miners Ravine, which ultimately reaches Dry Creek and then the American River. The constructed drainage in the northeastern corner conveys storm water and urban runoff from the residential development to the east through a storm drain system.
- **Vegetation.** Based on field reconnaissance by HBG conducted in February 2017 and review of the wetland jurisdictional report (Salix 2016), the Project Site is made up of Valley Oak Woodland, Annual Grassland and Valley Freshwater Marsh. Details of vegetation are provided below in Section 3.2.
- **Climate.** Loomis has a temperate Mediterranean climate with dry hot summers and mild winters. Average high temperature typically varies from 54 degrees F in the winter to approximately 92 degrees in the summer. Average rainfall for the area is approximately 25 inches per year, most occurring between November and April.

## 3.2 Biological Setting

### 3.2.1 Plant Communities

An HBG biologist conducted field reconnaissance of the Project Site on February 11 and April 22, 2017, and the HBG botanist surveyed the site for special status plants on March 27 and June 23, 2017. All habitats on the Project Site were surveyed on foot and assessed for similarity to sites known to support special status species within the area. Qualitative information on the composition and distribution of plant species on the sites was obtained during the site visits. Plant communities were identified on aerial photographs of the site.

Vegetation communities are assemblages of plant species growing in an area of similar biological and environmental factors. Vegetation communities and habitats at the project site were identified based on the currently accepted List of Vegetation Alliances and Associations (or Natural Communities List) (CDFW 2010). The list is based on A Manual of California Vegetation, Second Edition (Sawyer and Keeler-Wolf 2009), which is the National Vegetation Classification applied to California. The project site contains three habitat types per this classification: Valley Oak Woodland (7.96 acres), Annual Grassland (10.16 acres), and Valley Freshwater Marsh (0.15 acres). Figure 8 shows the extent and distribution of vegetation types on the property. A list of plant species identified on the property during surveys is included in Attachment 2, Table 1. The main source for the plant list in Table 1 was the wetland delineation report prepared by Salix (2016), which was augmented with additional species noted during surveys by HBG.

Wetland habitats on-site were further classified using the U.S. Fish and Wildlife's Service's "Classification System for Wetland and Deepwater Habitats" (Cowardin et al. 1979); the wetlands at the property are defined as palustrine emergent seasonal wetlands, palustrine emergent vernal pools, and palustrine scrub-shrub wetlands per the Cowardin et al criteria.

#### Annual Grassland

Annual grassland is the predominant habitat type on site, comprising 10.16 acres, or approximately 56% of the land area. The Annual Grassland found on the property is comprised largely of non-native grasses and forage species. Grasses included Italian ryegrass (*Festuca perennis*), ripgut grass (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), wild oat (*Avena fatua*), hedgehog dogtail (*Cynosurus echinatus*), foxtail barley (*Hordeum jubatum*), and medusahead (*Elymus caput-medusae*). Forbs present include Italian thistle (*Carduus pycnocephalus*), California mugwort (*Artemisia douglasiana*), field hedge parsley (*Torilis arvensis*), klamathweed (*Hypericum perforatum*), broad-leaf filaree (*Erodium botrys*), common vetch (*Vicia sativa*), and cut-leaf geranium (*Geranium dissectum*), yellow starthistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), smooth's cat-ear (*Hypochaeris glabra*), common fiddleneck (*Amsinckia menziesii*), short-podded mustard (*Hirschfeldia incana*), and bindweed (*Convolvulus arvensis*). The annual grassland onsite appears to be disked annually.

#### Valley Oak Woodland

Valley Oak Woodland comprises 7.96 acres or approximately 44% of the site. The foothill

woodland varies in density throughout the site, being mostly open, and it is dominated by valley oak (*Quercus lobata*) and interior live oak (*Quercus wislizeni*), with a small number of blue oak (*Quercus douglasii*), and a few scattered foothill pines (*Pinus sabiniana*). Shrubs in the understory include thickets of coyote brush (*Baccharis pilularis*) and Himalayan berry (*Rubus armeniacus*). Groundcover is mostly the non-native herbaceous plants and grasses that are noted as occurring in the Annual Grassland above.

A tree survey conducted on the site by Mann Made Resources (Mann Made Resources 2016) found 372 trees that were determined to be of protected size. The Tree Preservation Ordinance of the Town of Loomis provided the requirements for data collection; blue oaks 4 inches in diameter and greater and valley and interior live oaks 6 inches in diameter and greater are considered Protected Trees. The 372 trees of protected size consisted of 284 valley oaks, 86 Interior live oaks, and two blue oaks. Of these, 162 trees were found to be in good or fair condition and 210 trees were found to be in poor, very poor, or dead condition. The 210 trees included 170 trees in poor condition, 36 trees in very poor condition, and four trees that were dead. Detailed information regarding all trees on the property is included in the Tree Report (Mann Made Resources 2016), including information on species, size, condition, suitability for preservation.

The California Oak Woodlands Conservation Program recognizes oak woodlands as a vital statewide resource providing benefits including wildlife habitat, monetary and ecological value, and an ability to reduce soil erosion, enhance water quality and moderate temperatures.

### **Valley Freshwater Marsh**

Valley Freshwater Marsh habitat occurs within three separate swales occurring on the property. The marsh habitats total 0.15 acres. The three separate wetland swales are shown in Figure 8 and are described in detail in Section 3.2.3 (Wetland and Other Waters of the U.S. Delineation).

One of three swales flows westerly through the oak woodland into a culvert under Sierra College Boulevard. The eastern end of the swale is a small open area dominated by iris leaf rush (*Juncus xiphioides*). The swale flows through a patch of coyote brush, and the lower portion of the swale includes wetland plant species such as hyssop loosestrife (*Lythrum hyssopifolia*), curly dock (*Rumex crispus*), prickly lettuce (*Lactuca serriola*), Italian ryegrass, and Mexican rush (*Juncus mexicanus*). A short swale in the northeast corner of the site is vegetated with Himalayan blackberry and flows under Starlight Lane. The third swale in the southwestern corner of the study area is an area where stormwater runoff drains onto the Project Site from nearby commercial development and travels about 175 feet before exiting the site through a culvert under Sierra College Boulevard. Wetland species such as water plantain (*Alisma triviale*), speedwell (*Veronica* sp.), moth mullein (*Verbascum blattaria*), water cress (*Nasturtium officinale*), and curly dock are present.

### **3.2.2 Animal Populations**

The species discussed in this study are based on review of available literature, visits to the area by HBG wildlife biologist for many years, and habitat observations made during qualitative



surveys conducted by HBG wildlife biologist Gary Deghi on February 11 and April 22, 2017. A complete listing of the references from which information was compiled on the flora and fauna inhabiting the region is contained in the References section. Table 1 (Attachment 2) provides species lists based on these reconnaissance level observations for reptiles, amphibians, birds and mammals. The table lists all wildlife species observed or expected on the project sites and in the site vicinity and includes the scientific names of all species mentioned in the text.

The wetland habitats and the disturbed annual grassland and oak woodland habitats onsite support a variety of wildlife species. The complex of habitats includes the presence of small streams that can accommodate wildlife adapted to aquatic areas, and upland vegetation that provides potential foraging areas for species of mammals, reptiles, amphibians and birds. Native trees and shrubs are present along with native and non-native herbaceous plants and grasses that provide a mix of habitats suitable to support nesting by a variety of both passerine and non-passerine avian species.

Much of the wildlife observed at the site during the February 11 field reconnaissance included resident and wintering species of birds that are adapted to the mix of wetland and upland habitats found at the site. Resident bird species observed during the field review included red-shouldered hawk, Anna's hummingbird, mourning dove, Northern flicker, acorn woodpecker, Nuttall's woodpecker, black phoebe, western bluebird, California scrub-jay, European starling, Northern mockingbird, oak titmouse, bushtit, white-breasted nuthatch, Bewick's wren, California towhee, white-crowned sparrow, song sparrow, purple finch and house finch. Species observed that are expected only during the winter include red-breasted sapsucker, American robin, hermit thrush, ruby-crowned kinglet, yellow-rumped warbler, and golden crowned sparrow. Despite looking under logs and boards, no reptiles were observed and the only amphibian recorded was Pacific treefrog. No mammals were documented at the site.

The April 22 site visit was timed to provide information about patterns of wildlife use during the spring nesting season of many avian species. Many of the resident species noted during the February 17 reconnaissance were observed including red-shouldered hawk, Anna's hummingbird, mourning dove, acorn woodpecker, Nuttall's woodpecker, black phoebe, California scrub-jay, European starling, Northern mockingbird, oak titmouse, bushtit, white-breasted nuthatch, Bewick's wren, California towhee, white-crowned sparrow, and house finch. Other resident species noted during the April survey included band-tailed pigeon, common raven, orange-crowned warbler, lark sparrow, savannah sparrow, American goldfinch, lesser goldfinch and Brewer's blackbird. Cedar waxwing and golden-crowned sparrow were observed, and these species would be considered migrants passing through as the project site is not within the nesting range of these species. Neotropical migrants that breed in the area were also observed including Western kingbird and Bullock's oriole. Any of the resident species or breeding neotropical migrants could nest on the Project Site, and evidence of nesting (observation of birds either on a nest or carrying nesting material) was observed during the field review for Northern mockingbird, bushtit, oak titmouse, Western kingbird and Bullock's oriole. A pair of red-shouldered hawks were on territory on the western portion of the site and likely have a nest either on the project site or the immediate vicinity. Other raptors observed

flying over the site included red-tailed hawk, Swainson's hawk and turkey vulture.

Amphibians noted at the site during the spring survey included Pacific treefrog (tadpoles in the wetlands) and reptiles included Western fence lizard and Southern alligator lizard. Additional amphibians likely include western toad, and common reptiles likely include western skink, ringneck snake, gopher snake and common garter snake. Although no mammals were documented at the site, it is expected that mammals adapted to urban environments would be found on the property including Botta's pocket gopher, striped skunk, raccoon, Virginia opossum, deer mouse and mule deer.

### **3.2.3 Wetland and Other Waters of the U.S. Delineation**

#### **Definitions of Wetlands and Other Waters of the U.S.**

The Department of the Army, acting through the U.S. Army Corps of Engineers (Corps), has the authority to permit the discharge of dredge or fill material in waters of the U.S. under Section 404 of the Clean Water Act (CWA), and permit work and placement of structures in navigable waters of the U.S. under Section 10 of the Rivers and Harbors Act of 1899 (RHA).

EPA and the Corps define wetlands as: "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" (EPA regulations at 40 CFR § 230.3(t); Corps regulations at 33 CFR § 328.3(b)). The term "*under normal circumstances*" refers to situations in which the vegetation has not been substantially altered by man's activities as defined in Appendix A of the Corps' 1987 *Wetlands Delineation Manual*. Clarification of the term, as it pertains to farmed wetlands, was further defined in Regulatory Guidance Letter 90-7 dated September 26, 1990, as "the soil and hydrologic conditions that are normally present, without regard to whether the vegetation has been removed."

Under Section 10 of the Rivers and Harbors Act of 1899, the Corps also regulates the construction of structures in, over, or under; excavation of material from; or deposition of material into navigable waters. As described by Corps' regulation 33 CFR § 329.4, the general definition of "navigable waters" includes those waters subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or might be susceptible for use to transport interstate or foreign commerce. Several factors must be examined when making a determination whether a waterbody is a navigable water. These factors include (a) past, present, or potential presence of interstate or foreign commerce; (b) physical capabilities for use by commerce and (c) defined geographic limits of the waterbody. A determination of navigability, once made by the Corps, applies laterally over the entire surface of the water body, and is not extinguished by later actions or events which impeded or destroy navigable capacity. Based on this provision, the Corps also has the discretion to regulate activities in historically navigable waters. Historically navigable waters are areas that were navigable in the past, but are no longer navigable because of artificial modifications, such as levees, dikes, and dams.

Furthermore, waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. §328.3(e)).

### **Detailed Wetland and Other Waters of the U.S. Delineation-Methodology**

Salix Consulting, Inc. conducted a preliminary wetland delineation of the property in May of 2016 (Salix Consulting 2016, see Attachment 3) in accordance with Code of Federal Regulations (CFR) definitions of jurisdictional waters, the Corps’ 1987 *Wetlands Delineation Manual* (1987 Manual), the Corps’ 2008 *Regional Supplement to Corps of Engineers Wetland Delineation Manual: Arid Wes, Version 2.0* (Arid West Regional Supplement) and supporting guidance documents. The 1987 Manual provides technical guidance and procedures, from a national perspective, for identifying and delineation of wetlands that may be subject to Section 404 of the CWA. Pursuant to the 1987 Manual, key criteria for determining the presence of wetlands are: (a) the presence of inundated or saturated soil conditions resulting from permanent or periodic inundation by groundwater or surface water; and (b) a prevalence of vegetation typically adapted for life in saturated soil conditions (i.e., hydrophytic vegetation). Explicit in the definition is the consideration of three environmental parameters: hydrology, soil, and vegetation. The Arid West Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. The combined use of the 1987 Manual and Arid West Regional Supplement enhances the technical accuracy, consistency, and credibility of wetland determinations.

### **Detailed Wetland Delineation-Results**

A total of 0.15 acres of vegetated palustrine emergent wetlands were found within the project site as shown in Figure 9. This finding is based on the collective presence of hydric soil, wetland hydrology, and wetland vegetation indicators. The identified palustrine emergent wetlands contained low chroma soils, evidence of wetland hydrology and vegetation adapted for life in saturated soil conditions. The 0.15 acres of vegetated wetlands on the project site are palustrine emergent seasonal wetlands and palustrine scrub-shrub wetlands per Cowardin et al. (1979) criteria. The wetlands mapped on site consist of areas located within the three drainages found on the property. The 0.15 acres of jurisdictional waters of the US serve the functions of flood flow alteration, groundwater recharge, sediment reconstruction, sediment/toxicant retention, nutrient removal/ transformation, production export, and wildlife habitat.

Aquatic resources within the Study Area and adjacent to the Study Area were examined with respect to the *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001) exclusion from Clean Water Act regulation. No areas were found that could either potentially be exempted or excluded from regulation in accordance with SWANCC. HBG has also reviewed the wetlands with respect to the *Rapanos v. United States* and *Carabell v. United States* 547 U.S. 715 (2006) and found the areas in question to be jurisdictional pursuant to the Corps criteria.

The wetland map was verified by the Sacramento District of the Corps of Engineers on June 14, 2016 (see wetland determination letter from the Corps in Attachment 3). Three areas of jurisdictional wetland have been verified on the property. These are noted in Figure 8 as Wetland Swale (WS)-1, WS-2 and WS-3 and are described below with information contained the wetland delineation report (Salix Consulting 2016).

- WS-1 (0.12 acres) occurs within the foothill woodland habitat. The swale begins in the middle of the study area, where it collects surface water (in the form of sheet flow) and then drains westerly, where it then exits the study area through a culvert underneath Sierra College Boulevard. The swale then continues west to culvert adjacent to Sierra College Boulevard.
- WS-2 (0.01 acres) enters the study area through a culvert along the eastern boundary in the northeast corner of the study area. The swale appears to convey stormwater runoff and urban water westerly for approximately 80 feet within the study area, and then exits the study area through a culvert underneath Starlight Lane.
- WS-3 (0.02 acres) occurs in the southwestern corner of the study area, where stormwater runoff drains onto the study area through an 18-inch PVC culvert located on the commercial development (McDonald's/Chevron) to the south. The swale continues for approximately 175 feet west until it merges with a narrower excavated ditch that drains water from a 12-inch concrete culvert located under the commercial development to the south. Water exits the study area along the western boundary through a 30-inch corrugated metal pipe culvert under Sierra College Boulevard.

### **3.2.4 Special Status Species**

Sensitive species include those species listed by the federal and state governments as endangered, threatened, or rare or candidate species for these lists. Endangered or threatened species are protected by the federal Endangered Species Act of 1973 as amended, the California Native Plant Protection Act of 1977, and the California Endangered Species Act of 1970. The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in Title 14, California Code of Regulations, Section 15380.

The CDFW maintains records for the distribution and known occurrences of sensitive species and habitats in the California Natural Diversity Database (CNDDDB). The CNDDDB is organized into map areas based on 7.5 minute topographic maps produced by the U.S. Geological Survey (USGS). All known occurrences of sensitive species and important natural communities are mapped onto the quadrangle map. The database gives further detailed information on each occurrence, including specific location of the individual, population, or habitat (if possible) and the presumed current state of the population or habitat. The Project Site is in the Rocklin 7.5-minute USGS topographic quadrangle map. The relevant adjacent quads within the search area are the Roseville, Lincoln, Gold Hill, Auburn, Pilot Hill, Folsom, and Citrus Heights quadrangles.

HBG collected all information contained within the CNDDDB regarding special status species within a 10-mile radius of the Project Site.

A search of the CNDDDB records of occurrence for special status animals and plants and natural communities within these quadrangles indicated that none have been documented as occurring on the Project Site itself, but that a number of special status animal species have been known to occur in the project vicinity. The absence of a special animal, plant, or natural community from the report does not necessarily mean they are absent from the area in question, but only that no occurrence data have been entered for that species or natural community in the CNDDDB inventory. The occurrence of special status plant and animal species near the project area may be an indication that they also could occur at the Project Site, depending on habitat conditions at the site. Therefore, occurrences of special status species throughout the quadrangles mentioned above were noted in considering the potential presence of these species on the Project Site.

An evaluation of all special status plant species reported near the Project Site is presented in Table 3 (Attachment 2). Table 4 presents an evaluation of special status animal species that have been reported near the project.

### **Special Status Plant Species**

Special status plant species include: (i) species that are listed or proposed for listing as threatened or endangered under the federal Endangered Species Act; (ii) species that are listed, or proposed for listing by the state of California as threatened or endangered under the California Endangered Species Act; (iii) plants considered by the California Native Plant Society (CNPS) to be rare, threatened, or endangered in California and elsewhere; and (iv) plant species that meet the definition of rare or endangered under CEQA.

A target list of special status plants found within 10 miles of the site is shown in Table 3 that includes all species mentioned in the CNDDDB occurring within 10 miles of the project site. Many of the species mentioned in the CNDDDB as occurring within 10 miles of the project require habitats that are not found on the Project (e.g., vernal pools, chaparral, coniferous forest) or microhabitat conditions such as soils that do not occur on the property (gabbro or serpentine). Based on field review of the habitats and conditions occurring on the site, HBG determined that Project Site habitats are potentially suitable to support several species of special status plant. These species are listed below along with their flowering periods (Munz and Keck 1973).

- Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) a CNPS List 1B.2 plant, that is sometimes, but not always found in serpentine. Flowering period from March to June.
- Brandegees' clarkia (*Clarkia biloba* ssp. *brandegeae*), a CNPS List 4.2 plant. Flowering period from May to July.
- Stinkbells (*Fritillaria agrestis*), a CNPS List 4.2 plant, that is sometimes, but not always found in serpentine. Flowering period from March to June.

Protocol surveys of the site for special status plant species were conducted by HBG botanist, Dr. Terry Huffman during the spring and summer of 2017. The systematic surveys were conducted both early and late in the flowering period of target species (field surveys were conducted on March 27 and June 23, 2017). Special status plant surveys were conducted pursuant to *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009) that require systematic search techniques in all habitats of the site to ensure thorough coverage of potential impact areas. All vascular plant species were identified using keys and descriptions in the Jepson Manual (Baldwin et al 2012). Specimens of target species were reviewed in the Jepson Herbarium prior to trips to the field.

None of the target species or any other special status plant species were found on the site during the spring/summer 2017 protocol surveys of the property.

### **Special Status Animal Species**

The special status animal species evaluated in Table 4 (Attachment 2) include those noted in the CNDDDB as occurring within 10 miles of the site and those that are known to occur in the general vicinity based on the knowledge of HBG biologists. Key species are either known to occur in the vicinity of the property or with a potential to occur at the site, or that require specific study to determine presence/absence, are discussed below.

HBG has consulted the CDFW California Natural Diversity Data Base (CNDDDB) to ascertain the potential for special status animal species occurring within the 7.5-minute quadrangle map areas in the project site vicinity. The CNDDDB indicates that seven special status species deserve note as having occurred within the 10-mile radius of the site: vernal pool fairy shrimp (*Branchinecta lynchi*), California linderiella (*Linderiella occidentalis*), Steelhead-Central Valley DPS (*Oncorhynchus mykiss irideus*), Western spadefoot toad (*Spea hammondi*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*) and tricolored blackbird (*Agelaius tricolor*). These species are discussed below. Other species found to occur within the general CNDDDB search area, or determined to be potentially present based on the knowledge of the investigators, are evaluated in Table 4.

HBG wildlife biologist Gary Deghi conducted a variety of special status species surveys and habitat assessments on the project site during a field visit conducted on February 11 and April 22, 2017. The field work included an evaluation of wetlands swales areas for suitability to support the vernal pool fairy shrimp, vernal pool tadpole shrimp and western spadefoot toad. Gary Deghi of HBG also conducted habitat evaluations related to other special status species including possible use of the site by special status raptors (including Swainson's hawk, burrowing owl, white-tailed kite and others) and other special status species such as Western pond turtle, tricolored blackbird and loggerhead shrike.

### **Listed Vernal Pool Large Branchiopods**

The two most common of the large branchiopods occurring in the Central Valley, that are listed under the federal Endangered Species Act, are the threatened vernal pool fairy shrimp (VPFS, *Branchinecta lynchi*) and endangered vernal pool tadpole shrimp (VPTS, *Lepidurus packardii*).

These large branchiopods are ephemeral creatures. When the temporary water bodies that they inhabit dry up, the population remains in the dry basin as cysts (embryonic eggs). These cysts can withstand harsh conditions (i.e., freezing and desiccation) while they await the return of rain to fill their pools. After the appropriate environmental conditions (i.e., water temperature, pH, oxygen concentration, etc.) prevail, the young hatch, quickly mature, and then mate to ensure the next generation.

Potential habitat for listed large branchiopods is considered any seasonally-inundated depression that on average ponds water at a sufficient depth and duration for a listed branchiopod to complete its lifecycle. Potential habitat for the VPFS and VPTS are defined as any seasonal inundated depression that on average ponds water 2.0 inches or greater in depth for 14 or more consecutive days and 30 or more consecutive days, respectively. Generally, these habitats occur within the California Floristic Province at elevations below 5,600 feet in Coast Range and below 3,000 feet elevations for the rest of the State and Oregon. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages) or semi-to-permanently inundated areas that support perennial population of predators (e.g. bullfrogs, fish, and crayfish) are generally not considered suitable habitat for federally listed large branchiopods.

The records search of the CNDDDB (CDFW 2017) revealed occurrences of the VPFS or VPTS within vernal pool landscapes as close as about 3 miles to the south and west of the Project Site. The seasonal swales at the Project Site do not have inundation characteristics that would support listed large branchiopods as these areas are flowing water systems that were inundated at depths of up to 6 to 8 inches even in late-April. It was determined that the seasonal swales at the Project Site do not exhibit the characteristics that would accommodate use of the site by either of these listed species of vernal pool crustacean.

#### California Linderiella

The California linderiella (*Linderiella occidentalis*), also known as the California fairy shrimp, is not listed by the federal ESA or CESA, but was at one time a federal species of concern and is listed by the International Union for the Conservation of Nature (IUCN) as a species threatened with extinction. It is generally found in the same types of aquatic habitats as vernal pool fairy shrimp and frequently co-occurs with this species. This species tends to live in large, fairly clear vernal pools and lakes. However, they can survive in clear to turbid water with a pH from 6.1 to 8.5, and they have also been found in very small pools. They are tolerant of water temperatures from 41 degrees to 85 degrees F, making them the most heat tolerant fairy shrimp in California. The California fairy shrimp is the most common fairy shrimp in the Central Valley. It has been documented in most land forms, geologic formations and soil types supporting vernal pools in California, at altitudes as high as 3800 feet above sea level. The range extends from Shasta County south to Fresno County and across the valley to the coast and Transverse Ranges from Willits in Mendocino County south to near Sulfur Mountain in Ventura County.

The CNDDDB documents that California linderiella have occurred in vernal pool landscapes as near as two miles south of the Project Site. None of the seasonal wetlands found on the Project

Site have inundation characteristics making them suitable to support California linderiella.

### Steelhead- Central Valley DPS

Central Valley steelhead was originally listed in 1998 as a threatened species and the listing was reconfirmed in January of 2005. The Central Valley Distinct Population Segment (DPS) includes all naturally spawned populations of steelhead (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco Bay and San Pablo Bays and their tributaries. Central Valley steelhead spawn and rear, or have the potential to spawn and rear, in western Placer County streams, including Coon Creek, Doty Ravine, Auburn Ravine, Secret Ravine, and Miners Ravine. In the project area, Central Valley steelhead are found in Dry Creek and its tributaries in Secret Ravine and Miners Ravine, located about four miles southwest of the Project Site.

Steelhead are anadromous, but some individuals may complete their life cycle within a given river reach. Historical records indicate that adult steelhead enter the mainstem of the Sacramento River in July, peak in abundance in September and October, and continue migrating through February or March. Most steelhead spawn from December through April, with the most spawning occurring from January through March. Unlike Pacific salmon, some steelhead may survive to spawn more than once, returning to the ocean between spawning migrations. Juvenile migration to the ocean generally occurs from December through August. Most Sacramento River steelhead migrate in spring and early summer. After 2 to 3 years of ocean residence, adult steelhead return to their natal stream to spawn as 3- or 4-year-olds.

Local populations of Central Valley steelhead are found in Dry Creek and its tributaries, most notably in Secret Ravine and Miners Ravine. The CNDDDB (CDFW 2017) reports that the mainstem of Dry Creek is used by the fish as a migratory corridor as the water quality and substrate are too degraded so support spawning. Spawning and rearing habitat is found in tributaries upstream from Dry Creek, including both Secret Ravine and Miners Ravine, which are located about four miles southwest of the Project Site. Electrofishing surveys conducted in 2004 caught 136 steelhead in Secret Ravine and evidence of spawning was also reported in 2007. Cottonwood Dam was a barrier to fish passage in Miners Ravine until the dam's collapse in 2009.

### Western Spadefoot Toad

The western spadefoot toad (*Scaphiopus hammondi*) is a state-designated species of special concern that is known from the Central Valley and adjacent foothills, and from the interior coast ranges south of San Francisco Bay to Baja California. Western spadefoot toads require presence of an aquatic habitat for breeding and a terrestrial habitat for feeding and aestivation. Western spadefoot toads are mostly terrestrial, using upland habitats to feed and burrow in for their long dry-season dormancy. The species primarily occurs in grasslands habitat, typically near extensive areas of friable soils (but usually not sandy), but can occur in valley-foothill woodlands, coastal scrub and chaparral communities below 3,000 ft. elevation.

The western spadefoot toad requires seasonally-inundated wetlands for reproduction and



metamorphosis, but have been known to utilize slow-moving waters and pools within washes, river floodplains, alluvial fans, alkali lakes and playas. They mate during the rainy season (generally from January to March), usually after heavy rains. Potential western spadefoot toad breeding habitat includes any seasonally to semi-permanently inundated depression that on average ponds water at a sufficient depth and duration for a toad to complete its lifecycle (eggs to metamorphosis) which occurs in the known range of the species. Habitats that swiftly flow water (e.g., creeks, streams, and ephemeral drainages) or support populations of predators (e.g. bullfrogs, fish, crayfish) are generally not considered suitable habitat for western spadefoot toad larvae.

The CNDDDB reports occurrences of western spadefoot toad in suitable habitat approximately 3.5 miles southwest of the Project Site. The Project Site is within the range of western spadefoot toad, and a review of habitat conditions during field studies conducted on February 11 and April 22, 2017 found seasonal swales within woodland situations (riparian situations or oak woodland) that are potentially suitable but not optimal habitat conditions for the species. Water depths of up to 6 to 8 inches were present in wetland WS-1 within the foothill woodland during field inspection conducted in late-April, and Pacific treefrog tadpoles were observed in this wetland during the field survey. No tadpoles for western spadefoot toad were observed. Even though wetland WS-1 is not an optimal situation in which to find western spadefoot toad and no larvae were observed during the April 22, 2017 survey, there is a remote chance that western spadefoot toad could occur at the site.

#### Swainson's Hawk

The Swainson's hawk (*Buteo swainsoni*) is a medium-sized hawk that is state-listed in California as threatened species and designated by the USFWS as a Bird Species of Conservation Concern. Most Swainson's hawk territories in the Central Valley are in riparian systems adjacent to suitable foraging habitats. Valley oak, Fremont cottonwood, walnut and large willows with an average height of about 58 feet, and ranging from 41 to 82 feet, are the most commonly used nest trees in the Central Valley (CDFG 2007), but eucalyptus is also commonly used. Swainson's hawks often nest peripherally to riparian systems of the valley as well as utilizing lone trees or groves of trees in agricultural fields. Suitable foraging areas include grasslands, pastures, alfalfa and other hay crops, and certain grain and row croplands. In the Central Valley, Swainson's hawks find suitable foraging habitat in such agricultural areas near suitable nest sites, however, nesting habitat is in decline due primarily to flood control projects, agricultural practices, and urban development. The current population of Swainson's hawk in California's Central Valley is estimated at 1,948 breeding pairs (CDFW 2007), with most of this population occurring in the area from Stanislaus County north to Butte County.

The nearest documentation of nesting Swainson's hawk is about 7 miles west of the Project Site, according to the CNDDDB. Swainson's hawk is much more likely to nest in trees near riparian habitats or agricultural fields on the Valley floor rather than in oak woodland in the foothills, such as found at the Project Site. Use of the Project Site by this species is probably limited to occasional visits while foraging, as evidenced by the observation of a single Swainson's hawk flying over the site during the April 22, 2017 site survey. No evidence of

nesting by Swainson's was observed at the Project Site or anywhere in the immediate vicinity during the nesting season survey in late April.

### Burrowing Owl

Burrowing owl (*Athene cunicularia*) is a state species of special concern and designated by the USFWS as a Bird Species of Conservation Concern. Burrowing owls are small terrestrial owls commonly found in open grassland topography ranging from western Canada to portions of South America. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. In California, burrowing owls most commonly use ground squirrel burrows, but they also may use man-made structures, such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls may use a site for breeding, wintering, foraging, and/or migration stopovers during migration. Occupancy of suitable burrowing owl habitat can be verified at a site by an observation of at least one burrowing owl, or, alternatively, its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance.

The nearest report of burrowing owl in the CNDDDB is more than eight miles west of the site. A survey of the project area was conducted by HBG wildlife biologist Gary Deghi during the February 11, 2017 site visit and again during a survey of the site on April 22, 2017, and no burrowing owls were observed. The site is also lacking in colonies of California ground squirrels that are the most common burrow occupied by burrowing owl. In addition, habitat at the Project Site was found to be unsuitable to support burrowing owl, as heights of herbaceous plants and grasses throughout the on-site uplands were too high to support foraging by this species. Based on these findings, it is very unlikely that burrowing owl occurs on the Project Site. In addition, no California ground squirrels or their burrows were observed anywhere on the site during field review, indicating that presence of burrowing owl on the property is extremely unlikely.

### Tricolored Blackbird

Tricolored blackbird (*Agelaius tricolor*) is a Candidate for listing as Endangered under CESA and is also designated by the USFWS as a Bird Species of Conservation Concern. Commencing on December 29, 2014, tricolored blackbird nesting colonies were given a six-month emergency listing as an endangered species under the California Endangered Species Act. Tricolored blackbird is a highly colonial nesting species that breeds near freshwater, preferably in emergent wetlands with tall, dense growth of cattails or tules. Even when the preferred nesting substrates are available, other vegetation may be used for nesting including sedges, nettles, willows, thistles, mustard, blackberry, wild rose, foxtail grass or barley. Since the 1970s with declines in populations, nesting in cereal crops and dairy silage has been documented. Tricolored blackbird foraging areas include rangeland, fields of alfalfa or cut hay, or irrigated pastures with an abundance of insects. No areas of the Project Site provide suitable habitat for a nesting colony of tricolored blackbird, nor do onsite habitats provide foraging habitat for the species.

*Special Status Raptor Species*- Six raptor species designated with special status by the State of California have a small potential to nest at the site. These species include ground-nesting species: burrowing owl (State Species of Special Concern and Federal Bird Species of Conservation Concern), and Northern harrier (State Species of Special Concern and Federal Bird Species of Conservation Concern); and tree nesting species: white-tailed kite (California Fully Protected), Cooper's hawk (California Watch List Species), Sharp-shinned hawk (California Watch List Species) and Swainson's hawk (state-listed threatened).

Three raptor species that could occur are designated as state species of special concern based on presence of wintering habitat (ferruginous hawk, golden eagle, and merlin). These species are wide-ranging species often wintering over a broad area, and incidental use of the site by any these species in winter is certainly possible. The site, however, contains no unique habitat features that would highlight the importance of the site as a wintering location for any of these species.

### **3.2.5 Essential Fish Habitat**

The Magnuson-Stevens Fishery Conservation and Management Act conserves and manages the fishery resources found off the coasts of the United States, the anadromous species, and the Continental Shelf fishery resources of the United States, including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The National Marine Fisheries Service (NMFS) enforces the Magnuson-Stevens Fishery Conservation and Management Act and regulates commercial and recreational fishing and the management of fisheries resources. Consultation with NOAA Fisheries is required for all projects with the potential to affect EFH for any MSA species. Central Valley fall/late fall–run Chinook salmon is a Magnuson-Stevens Fishery Conservation and Management Act managed species.

In the Central Valley, fall/late fall–run Chinook historically spawned in all major streams draining the Sierra Nevada, but fish passage has since been blocked by dams. Currently, fall/late fall–run Chinook salmon compose about 80% of the total Chinook salmon produced in the Sacramento and San Joaquin drainages. Fall/late fall–run Chinook salmon spawn in the Sacramento and San Joaquin Rivers and most of their tributaries. Central Valley fall/late fall–run Chinook salmon spawn and rear, or have the potential to spawn and rear, in western Placer County streams including Bear River, Coon Creek, Doty Ravine, Auburn Ravine, Dry Creek, Antelope Creek, Secret Ravine, and Miners Ravine (Jones and Stokes 2005). Antelope Creek, Secret Ravine and Miners Ravine may be considered as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of Central Valley fall/late fall–run Chinook salmon.

## 4.0 REGULATORY AGENCIES AND POLICIES

The following is a description of federal, state, and local environmental laws and policies that are relevant to the California Environmental Quality Act (CEQA) review process.

### FEDERAL

#### ***Clean Water Act-Section 404***

The U.S. Army Corps of Engineers regulates discharges of dredged or fill material into Waters of the United States under Section 404 of the Clean Water Act (CWA). “Discharge of fill material” is defined as the addition of fill material into Waters of the U.S., including but not limited to the following: placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and sub-aqueous utility lines (33 C.F.R. §328.2(f)). In addition, Section 401 of the CWA (33 U.S.C. 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency are responsible for implementing the Section 404 program. Section 404(a) authorizes the Corps to issue permits, after notice and opportunity for comment, for discharges of dredged or fill material into waters of United States. Section 404(b) requires that the Corps issue permits in compliance with EPA guidelines, which are known as the Section 404(b)(1) Guidelines. Specifically, the Section 404(b) (1) guidelines require that the Corps only authorize the “least environmentally damaging practicable alternative” (LEDPA) and include all practicable measures to avoid and minimize impacts to the aquatic ecosystem. The guidelines also prohibit discharges that would cause significant degradation of the aquatic environment or violate state water quality standards.

Waters of the U.S. include a range of wet environments such as lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 C.F.R. §328.3(b)).

Furthermore, Jurisdictional Waters of the U.S. can be defined by exhibiting a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the Corps as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 C.F.R. §328.3(e)).

Tidal waters are also under the jurisdiction of the Corps. The landward limits of jurisdiction in tidal waters extend to the high tide line...“or, when adjacent non-tidal waters of the United States are present, to the limits of jurisdiction for such non-tidal waters” (33 C.F.R. §328.4(b)) High tide is further defined to include the line reached by spring high tides and other high tides that occur with periodic frequency (33 C.F.R. §328.3(d)).

All wetlands at the Project Site were reviewed to determine if they could be disclaimed from Corps jurisdiction as isolated wetlands following two recent US Supreme Court decisions. In *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers (SWANCC)*, No. 99-1178 (2001), some isolated wetlands may be excluded from the Corps’ Section 404 jurisdiction because they are (1) non-tidal, (2) non-navigable, (3) not hydrologically connected to navigable waters or adjacent to such waters, and (4) not subject to foreign or interstate commerce.

Subsequent to SWANCC, the U.S. Supreme Court decided on *Rapanos v. United States* and *Carabell v. United States*, 126 U.S. 2208 (2006) (herein referred to as Rapanos). In 2007, guidance was given to EPA regions and Corps districts to implement the Supreme Court’s decision which addresses the jurisdiction over waters of the U.S. under the Clean Water Act. The Rapanos guidance requires the Corps to conduct detailed analysis of the functions and values of wetlands and other waters of the U.S. potentially onsite and in some cases offsite, determine if there is a nexus to traditional navigable waters and the significance of the nexus to the traditional navigable water. Neither the Court nor the recently-issued guidance draw a clear line regarding the geographic reach of jurisdiction, particularly in drainages where flows are ephemeral and where wetlands are adjacent to but not directly abutting relatively permanent water, such as the wetlands delineated on the study site.

The guidance includes requirements for additional documentation, particularly regarding whether there is a “significant nexus” to a traditionally-navigable water (TNW). For water bodies that are traditionally navigable (and their adjacent wetlands), and for tributaries that are “relatively permanent waters” (RPW’s: streams that are not perennial but that flow for 3 months or more annually, and their adjacent wetlands that directly abut the RPW’s), the Corps and EPA will assert jurisdiction under the Clean Water Act, without the need for any exhaustive documentation of “significant nexus.” There is no dispute that Clean Water Act jurisdiction encompasses traditionally-navigable waters and their perennial and relatively-permanent tributaries. Activities that result in discharges of pollutants into these waters can adversely affect the physical, chemical, and biological integrity of navigable waters.

For wetlands adjacent to but not directly abutting a RPW, jurisdiction may be asserted under the Clean Water Act if there is a “significant nexus” and for tributaries that typically do not flow more 3 months or more annually, and if there are adjacent wetlands associated with these non-relatively permanent waters (non-RPW’s), jurisdiction may be asserted under the Clean Water Act if there is a “significant nexus.” A significant nexus analysis, using the Corps’ approved jurisdictional determination form, “will assess the flow characteristics and functions of the

tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW.” These factors include (a) the capacity to carry pollutants or flood water into a TNW; (b) the capacity to provide habitat for species that are present in the downstream TNW; (c) the capacity of transferring nutrients and organic carbon to a TNW; or (d) other “relationships to the physical, chemical, or biological integrity of the TNW.

### ***Clean Water Act-NPDES Requirements***

In 1972, the Clean Water Act was amended to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollution Discharge Elimination System (NPDES) permit. The 1987 amendments established a framework for regulating municipal, industrial, and construction-related storm water discharges under the NPDES Program. On November 16, 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish storm water permit application requirements for specified categories of industries. The regulations provide that discharges of storm water from construction projects that encompass one or more acres of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES Permit. The California State Water Resource Control Board has developed a general construction storm water permit to implement this requirement.

### ***Federal Endangered Species Act***

The United States Congress passed the Federal Endangered Species Act (FESA) in 1973 to protect those species that are endangered or threatened with extinction. The FESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend. The FESA establishes an official listing process for plants and animals considered to be in danger of extinction; requires development of specific plans of action for the recovery of listed species; and restricts activities perceived to harm or kill listed species or affect critical habitat (16 USC 1532, 1536).

The FESA prohibits the “take” of endangered or threatened wildlife species. “Take” is defined as harassing, harming (including significantly modifying or degrading habitat), pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species, or any attempt to engage in such conduct (16 USC 1532, 50 CFR 17.3) Taking can result in civil or criminal penalties. Federal regulation 50 CFR 17.3 further defines the term harm in the take definition to mean any act that kills or injures a federally listed species, including significant habitat modification or degradation. Additionally, FESA prohibits the destruction or adverse modification of designated critical habitat. In the Service’s regulations at 50 CFR 402.2, destruction or adverse modification is defined as a “direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species.

The ESA also requires federal agencies to ensure that their actions do not jeopardize the continued existence of listed species or adversely modify critical habitat (16 USC 1536). Therefore, the ESA is invoked when the property contains a federally listed threatened or

endangered species that may be affected by a permit decision. In the event that listed species are involved and a Corps permit is required for impacts to jurisdictional waters, the Corps must initiate consultation with USFWS (or the National Marine Fisheries Service, NMFS) pursuant to Section 7 of the ESA (16 USC 1536; 40 CFR § 402). If formal consultation is required, USFWS or NMFS will issue a biological opinion stating whether the permit action is likely to jeopardize the continued existence of the listed species, recommending reasonable and prudent measures to ensure the continued existence of the species, establishing terms and conditions under which the project may proceed, and authorizing incidental take of the species.

### ***Magnuson-Stevens Fishery Conservation and Management Act***

The Magnuson-Stevens Fishery Conservation and Management Act (MSFA) conserves and manages the fishery resources found off the coasts of the United States, the anadromous species, and the Continental Shelf fishery resources of the United States, including the conservation and management of highly migratory species through the implementation and enforcement of international fishery agreements. The NMFS enforces the MSFA and regulates commercial and recreational fishing and the management of fisheries resources. The Sustainable Fisheries Act of 1996 amended the MSFA to include new fisheries conservation provisions by emphasizing the importance of fish habitat in regards to the overall productivity and sustainability of U.S. marine fisheries (Public Law 104-267). The revised MSFA mandates the identification and protection of Essential Fish Habitat (EFH) for managed species during the review of projects conducted under federal permits that have the potential to affect such habitat. Federal agencies are required to consult with NMFS on all actions or proposed actions authorized, funded, or undertaken by the agency, which may adversely affect EFH (MSFA 305.b.2).

Under the MSFA, NMFS identifies, conserves, and enhances EFH for those species regulated under a federal fisheries management plan (FMP). EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity and includes all associated physical, chemical and biological properties of aquatic habitat that are used by fish. Projects that have the potential to adversely affect EFH must initiate consultation with NMFS. Adverse effects are any impacts that reduce the quality and/or quantity of EFH and can include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey or reduction in species fecundity), site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). There are four FMPs in California, Oregon, and Washington that identify EFH for groundfish, coastal pelagic species, Pacific salmon, and Pacific highly migratory fisheries.

Central Valley fall/late fall–run Chinook salmon is a Magnuson-Stevens Fishery Conservation and Management Act managed species. This species either spawns or has the potential to spawn in western Placer County streams, that near the project include Antelope Creek, Secret Ravine, and Miners Ravine, which would be considered as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of Central Valley fall/late fall–run Chinook salmon.

### ***Migratory Bird Treaty Act***

The federal Migratory Bird Treaty Act is administered by the USFWS. The Act provides that it is unlawful to: pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product unless permitted by regulations. Most bird species within California fall under the provisions of the Act. Excluded species include nonnative species such as house sparrow, starling, and ring-necked pheasant and native game species such as quail.

### ***Fish and Wildlife Coordination Act***

The USFWS also has responsibility for project review under the Fish and Wildlife Coordination Act. This statute requires that all federal agencies consult with USFWS, NMFS, and the state's wildlife agency (California Department of Fish and Wildlife, CDFW) for activities that affect, control, or modify streams and other water bodies. Under the authority of the Fish and Wildlife Coordination Act, USFWS, NMFS, and CDFW review applications for permits issued under Section 404 and provide comments to the Corps about potential environmental impacts.

## **STATE**

### ***California Endangered Species Act***

The State of California enacted the California Endangered Species Act (CESA) in 1984. The CESA is similar to the FESA but pertains to state-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW) when preparing California Environmental Quality Act (CEQA) documents to ensure that the state lead agency actions do not jeopardize the existence of listed species. CESA directs agencies to consult with CDFW on projects or actions that could affect listed species, directs CDFW to determine whether jeopardy would occur, and allows CDFW to identify "reasonable and prudent alternatives" to the project consistent with conserving the species. Agencies can approve a project that affects a listed species if they determine that "overriding considerations" exist; however, the agencies are prohibited from approving projects that would result in the extinction of a listed species.

The CESA prohibits the taking of state-listed endangered or threatened plant and wildlife species. CDFW exercises authority over mitigation projects involving state-listed species, including those resulting from CEQA mitigation requirements. CDFW may authorize taking if an approved habitat management plan or management agreement that avoids or compensates for possible jeopardy is implemented. CDFW requires preparation of mitigation plans in accordance with published guidelines.

### ***Section 401 of the Federal Clean Water Act/Porter Cologne Water Quality Act***

Pursuant to section 401 of the Federal Clean Water Act, projects that require a Corps permit for the discharge of dredge or fill material must obtain water quality certification that confirms a project complies with state water quality standards before the Corps permit is valid. State



water quality is regulated/administered by the State Water Resources Control Board and its nine Regional Water Quality Control Boards (RWQCB). The state also maintains independent regulatory authority over the placement of waste, including fill, into waters of the State under the Porter-Cologne Act.

The California State Water Resource Control Board has developed a general construction storm water permit to implement the requirements for the federal National Pollution Discharge Elimination System (NPDES) permit. The permit requires submittal of a Notice of Intent to comply, fees, and the implementation of a Storm Water Pollution Prevention Plan.

### ***CDFW Species of Special Concern***

CDFW tracks species in California whose numbers, reproductive success, or habitat may be threatened. Even though not formally listed under FESA or CESA, such plant and wildlife species receive additional consideration during the CEQA process. Species that may be considered for review are included on a list of “Species of Special Concern” developed by the CDFW. CDFW has also designated special-status natural communities which are considered rare in the region, support special status species or otherwise receive some form of regulatory protection. Documentation pertaining to these communities, as well as special status species (including species of special concern), is kept by CDFW as part of the CNDDDB.

### ***Natural Community Conservation Planning Act***

The Natural Communities Conservation Planning Act (NCCP) program, which began in 1991 under the California Natural Community Conservation Planning Act, is broader in its orientation and objectives than CESA and ESA; these laws are designed to identify and protect individual species that are already listed as threatened or endangered and their habitats. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land use.

Placer County is currently involved in efforts to prepare the Placer County Conservation Plan, a Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) that may eventually be applicable to projects in the Loomis area. A draft of the HCP/NCCP has not been developed as of the date of this report.

### ***California Department of Fish and Wildlife-Streambed Alteration Agreement***

Section 1602 of the California Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the bed, channel or bank of any river, stream, or lake, or proposing to use any material from a streambed, to first notify CDFW of such proposed activity. CDFW may propose reasonable modifications, based on the information contained in the notification form and a possible field inspection, CDFW may propose reasonable modifications in the proposed construction as would allow for the protection of fish and wildlife resources. Upon request, the parties may meet to discuss the modifications. If the parties cannot agree and execute a Lake and Streambed Alteration Agreement, then the matter may be referred to arbitration.

**California Department of Fish and Wildlife Fish and Game Code 3503 and 3503.5**

Section 3503 of the Fish and Game Code makes it unlawful to take, possess, or needlessly destroy the nests or eggs of any bird. Section 3503.5 makes it unlawful to take or possess birds of prey (hawks, eagles, vultures, owls) or destroy their nests or eggs.

**California Department of Fish and Wildlife Fully Protected Animal Species**

The classification of Fully Protected was an effort by the State of California in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Most Fully-Protected species have also been listed as threatened or endangered species under state endangered species laws and regulations. Species classified as Fully Protected Species by the CDFW may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock (as per California Fish and Game Code Section 3511(a)(1)).

**Public Resources Code Section 21084.4 for Oak Woodlands Conservation**

As of January 2005, Public Resources Code Section 21083.4 requires California Counties acting as Lead Agencies under CEQA to determine whether a project “may result in a conversion of oak woodlands that will have a significant effect on the environment.” If individual or cumulative impacts to oak woodlands are identified, the law requires that the impacts be mitigated. Acceptable mitigation measures include, but are not limited to, conservation of other oak woodlands through the use of conservation easements, planting replacement trees which must be maintained for seven years, contribution to the Oak Woodland Conservation Fund established under Section 1363(a) of the Fish and Game Code, or other measures.

**LOCAL**

**Placer County General Plan**

In addition to federal and state regulations, the development of the property must be accomplished consistent with the land use designations and natural resource and other policies of the Placer County General Plan.

**OTHER STATUTES, CODES, AND POLICIES AFFORDING LIMITED PROTECTION**

**California Native Plant Society**

The California Native Plant Society (CNPS) maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Plants of California (CNPS 2014: <https://www.cnps.org/cnps/rareplants/inventory/>). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review. The following identifies the definitions of the CNPS listings: <https://www.cnps.org/cnps/rareplants/ranking.php>

California Rare Plant Rank 1A:           Plants presumed extirpated in California and either rare or extinct elsewhere.

California Rare Plant Rank1B: Plants rare, threatened, or endangered in California and elsewhere.

California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.

California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.

California Rare Plant Rank 3: Plants about which more information is needed – a review list.

California Rare Plant Rank 4: Plants of limited distribution – a watch list.

## 5.0 IMPACTS AND MITIGATION MEASURES

### 5.1 Standards of Significance

According to the Environmental Checklist in Appendix G of the CEQA Guidelines (Title 14, California Code of Regulations, 15000 et seq.), the project would be considered to have a significant impact on biological resources if it would:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Wildlife and Game or U.S. Fish and Wildlife Service.
- b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service.
- c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

### 5.2 Relevant Project Characteristics

Costco Wholesale is proposing to construct Costco warehouse facility on the property. A plan view of conceptual design for the configuration of proposed project can be seen in Figure 4. The Preliminary Grading and Drainage Plan is shown in Figure 5. The facility includes the Costco warehouse and associated parking and other infrastructure. The proposed project would cover the entire site.

### 5.3 *Impacts and Mitigation Measures*

#### 5.3.1 *Plant Communities and Vegetation*

Impacts to biological resources will result from vegetation removal due to the conversion of upland areas composed of Annual Grassland, Valley Oak Woodland and Valley Freshwater

Marsh to accommodate the proposed Costco facility. The acreage of each of the vegetation communities found on the property, and impacts resulting from site development as planned are shown in Table A. Figure 10 shows the development footprint as an overlay of the vegetation communities found on the project site. The footprint for the proposed project would cover 100% of the site.

**TABLE A. IMPACTS TO VEGETATION COMMUNITIES**

| Habitat Type            | Existing Acreage in Overall Study Area (acres) | Impacted Acreage (acres) |
|-------------------------|--|--------------------------|
| Annual Grassland        | 10.16  | 10.16                    |
| Valley Freshwater Marsh | 0.15   | 0.15                     |
| Valley Oak Woodland     | 7.96   | 7.96                     |
| <b>TOTAL</b>            | <b>18.27</b>                                   | <b>18.27</b>             |

**Wetlands and Waters of the U.S.**

Wetlands and waters of the U.S. are regulated by state and federal agencies and would be considered sensitive natural communities as defined by CEQA. Impacts to waters of the U.S. would be potentially significant if appropriate mitigation was not implemented for all regulated wetlands as required by state and federal regulations.

The ecological constraints to development at the site include approximately 0.15 acres of wetlands and waters of the U.S. potentially subject to Corps jurisdiction pursuant to Section 404 of the Federal Clean Water Act as shown in Figure 9. As the palustrine emergent wetlands are located in various portions of the site, complete avoidance of jurisdictional wetlands would not be possible. Impacts to wetlands and waters of the U.S. potentially subject to Corps jurisdiction are shown in Figure 11. The development plan for the site would permanently impact 0.15 acres of palustrine emergent wetlands located on the site that are potentially under the jurisdiction of the Corps under Clean Water Act Section 404. Without mitigation, project impacts to wetlands or waters of the U.S. would be significant.

**Impact 1:** Direct (fill) impacts to 0.15 acres of waters of the U.S. would result from implementation of the proposed Costco warehouse facility.

**Mitigation Measure 1:** The developer will submit applications for a Nationwide permit from the Corps of Engineers (see Section 4.5, Permit Requirements), and Section 401 water quality certification from the Central Valley Regional Water Quality Control Board (RWQCB), required for the Corps permit to be valid. Appropriate wetland mitigation would be required by the Corps and RWQCB for impacts to the 0.15 acres of seasonal wetlands located at the site, and a wetland mitigation plan to mitigate impacts to

jurisdictional areas would need to be developed as part of the Corps and RWQCB permit process. Corps jurisdictional areas must be replaced at a minimum 1:1 ratio through wetland creation (preferably on-site) to ensure that no net loss of acreage or functions and values to these areas occurs. Options for providing mitigation include creation of wetlands on site or contributions to an agency-approved wetland mitigation bank. As the footprint of the proposed project requires use of most, if not all, of the site, the preferred method of mitigation is through contributions to an agency-approved mitigation bank.

### **Oak Woodlands**

Project construction would result in the loss of approximately 7.96 acres of Valley Oak Woodland habitat on the site (see Figure 10). Tree removal and impact to oak woodland habitat was assumed within the graded footprint of the project, and included all trees on the property.

Mann Made Resources (see Attachment 3) determined that the project would result in the removal of 372 trees determined to be of protected size. Of these 372 trees, 162 were found to be in good and fair condition and would require mitigation pursuant to the Town of Loomis Tree Ordinance. The arborist considered the condition of each of these 162 and species of tree in calculating a total mitigation planting requirement of potentially 290 #15 container trees. It should be possible to plant these trees on the property as part of the project landscape design and parking lot shade.

Oaks woodlands provide significant wildlife habitat value. Oak woodlands are protected by the California Department of Fish and Game, State of California regulations including Public Resources Code Section 21083.4, and policies of the Town of Loomis. Public Resources Code Section 21083.4 directs Counties to mitigate significant effects of oak woodland conversion, and would not apply to a project reviewed by the Town of Loomis as a CEQA Lead Agency.

**Impact 2:** The project would require construction within 7.96 acres of Valley Oak Woodland habitat and the direct removal of 372 mature trees determined to be of protected size.

**Mitigation Measure 2:** The applicant shall prepare an Oak Woodland Tree Replacement and Protection Plan including: (i) planting of 290 #15 container trees as recommended by the arborist to attain tree replacement ratios prescribed by the Town of Loomis; (ii) the specific location of the tree planting, (including a map and planting plan); (iii) schedules and methodologies for maintaining and monitoring the success of the Plan; and (iv) performance standards.

### **Landscaping/Invasive Species**

Invasive, exotic weeds compete with native vegetation and can degrade the quality of wildlife habitats. Project landscaping and construction activity has the potential to introduce invasive, exotic, non-native vegetation, some of which may not now exist in the area. Also, highways and various construction projects provide a pathway for dispersal of invasive plants. Invasive

plant species include those designated as noxious weeds by the U.S. Department of Agriculture, problem species listed by the California Department of Food and Agriculture, and other invasive plants designated by the California Invasive Plant Council. Where appropriate, vegetation removed because of project activities should be replaced with native species which are of value to local wildlife. Native plants generally are more valuable as wildlife food sources and require less irrigation, fertilizers, and pesticides than exotic species.

**Impact 3:** Project landscaping is expected to introduce exotic, non-native vegetation, some of which may not exist in the area.

**Mitigation Measure 3:** Landscaping shall be designed to enhance the wildlife value and aesthetic quality of undeveloped portions of the project site. Where appropriate, vegetation removed because of project activities shall be replaced with native species which are of value to local wildlife, and native vegetation shall be retained. Weed management practices may be warranted, including identification and removal of infestations of noxious weeds prior to construction, use of construction equipment and materials such as fill and erosion control devices that are known to be weed-free, power-washing of construction vehicles to remove mud, dirt and vegetative material before working in relatively weed-free areas, and removal of invasive species from undeveloped areas within the project boundary.

### **5.3.2 Animal Species**

Loss of vegetation associated with the habitats on site will disrupt and displace existing wildlife. Some bird roosting, nesting, and foraging areas will be eliminated. Reptiles, amphibians, and small mammals that utilize these areas will be displaced to remaining undisturbed areas. Open space areas near the project area should be capable of accommodating these species. Animal species that have adapted to living in close association with human disturbance can be expected to increase after the proposed project. These species include mammals such as raccoon, California ground squirrel, deer mouse, and house mouse, and birds such as rock pigeon, Eurasian-collared dove, American robin, European starling, house sparrow, Brewer's blackbird and brown-headed cowbird.

#### **Nesting Birds**

Nesting bird species protected by the federal Migratory Bird Treaty Act could be impacted during project construction. Evidence of nesting by bird species protected by the MBTA was observed at the Project Site during the April 22, 2017 field survey. The removal of trees and shrubs during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present. Therefore, preconstruction surveys should be conducted of the development area to determine if nesting is occurring. If nests are found, a construction plan would need to be developed that would allow successful nesting (fledging of young birds).

Many species of raptors (birds of prey) are sensitive to human incursion and construction activities. Field surveys conducted by HBG in April of 2017 revealed that red-shouldered hawk

may nest at the site or in the immediate project vicinity. Therefore, to ensure that nesting raptor species are not present near the construction site, preconstruction surveys should include a thorough search for nesting raptor species, including raptor species of special status such as Swainson's hawk and burrowing owl, among others (see Mitigation Measure #7 below). Even though the Project Site does not contain suitable habitats for nesting by special status bird species such as tricolored blackbird and loggerhead shrike, preconstruction surveys should include searches for these species to ensure nests of these species, if they were to be found at the site, are not harmed.

**Impact 4:** The removal of vegetation during the February 1 to August 31 breeding season could result in mortality of nesting avian species if they are present.

**Mitigation Measure 4:** If feasible, construction work should take place outside of the February 1 to August 31 breeding window for nesting birds. If construction is to be conducted during the breeding season, a qualified biologist shall conduct a pre-construction breeding bird survey in areas of suitable habitat within 15 days prior to the onset of construction activity. If bird nests are found, appropriate buffer zones shall be established around all active nests to protect nesting adults and their young from construction disturbance. Size of buffer zones shall be determined in consultation with wildlife agency staff based on site conditions and species involved. Buffer zones shall be maintained until it can be documented that either the nest has failed or the young have fledged. Preconstruction surveys shall include appropriate survey for nesting species of raptor, including special status raptor species (see Mitigation Measure #7) and other avian species with special status and with a small chance of occurring on the Project Site, such as tricolored blackbird and loggerhead shrike.

### **Water Quality**

Construction activities on the project site would involve disturbance and exposure of soils through grading and removal of vegetative cover, installation of infrastructure, and other activities. These activities would result in exposure of soil to runoff, potentially causing erosion and entrainment of sediment in the runoff. If not managed properly, the runoff could cause increased sedimentation and turbidity in surface waters outside of the Project Site, resulting in degradation of water quality. Water from the Project Site drains west toward the adjacent property and then into Sucker Ravine, which drains into Secret Ravine. Secret Ravine is a tributary of Miners Ravine, which ultimately reaches Dry Creek and then the American River.

Ground-disturbing activities could promote erosion and allow elevated levels of sediment to wash into downstream creeks, where potential impacts to fish and wildlife species would be possible. In the absence of water quality controls, indirect impacts to animal populations in wetlands and other aquatic habitats could result from the proposed project due to elevated contaminants in stormwater runoff. However, the requirement for the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with identification of proper construction techniques and Best Management Practices (BMPs) will minimize adverse effects associated with these activities. Furthermore, standard techniques to control contaminants in stormwater



such as oil and grease traps will be employed to mitigate water quality concerns.

**Impact 5:** Placement of fill and other ground disturbing activities could promote erosion and allow elevated levels of sediment to wash into downstream aquatic areas, potentially affecting fish and wildlife resources.

**Mitigation Measure 5:** Best Management Practices and all requirements as detailed in the Stormwater Pollution Prevention Plan shall be implemented to control erosion and migration of sediments off-site. Implementation of water quality controls shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook-Construction. In addition, vegetation shall only be cleared from the permitted construction footprint. Areas cleared of vegetation, pavement, or other substrates shall be stabilized as quickly as possible to prevent erosion and runoff.

### **Essential Fish Habitat**

Antelope Creek, Secret Ravine and Miners Ravine would be considered as Essential Fish Habitat (EFH) under the Magnuson-Stevens Fishery Conservation and Management Act for various life stages of Central Valley fall/late fall–run Chinook salmon. Secret Ravine and Miners Ravine are located about four miles southwest of the Project Site; runoff from the site drains over the adjacent property to the west and then into Sucker Ravine which drains into Secret Ravine. Portions of Antelope Creek run approximately 0.7 miles to the northwest of the Project Site, but drainage flow is not in the direction of the creek. An unnamed drainage located just north of the property is a tributary to Antelope Creek.

In the absence of water quality controls, indirect impacts to EFH for Central Valley fall/late fall–run Chinook salmon could result from the proposed project due to elevated contaminants in stormwater runoff that eventually flow into Secret Ravine. However, the requirement for the implementation of a Stormwater Pollution Prevention Plan (SWPPP), with identification of proper construction techniques and Best Management Practices (BMPs) will minimize adverse effects associated with these activities (see Mitigation Measure 5). Furthermore, standard techniques to control contaminants in stormwater such as oil and grease traps will be employed to mitigate water quality concerns.

### **5.3.3 Special Status Species**

A review of habitat requirements of sensitive animal species documented by the CNDDDB as occurring in the project vicinity, and sensitive animal species known to occur in the general vicinity, was conducted by HBG. Animal species of special concern are present or possible as described below.

### **Special Status Plants**

Habitat conditions at the Project Site are potentially suitable to support several species of special status plant, but no special status plants were found during protocol rare plant surveys

of the property conducted by a qualified botanist during the spring/summer 2017 flowering period of target species. No impacts to special status plant species would result from construction of the proposed project.

### **Special Status Animals**

Vernal Pool Crustaceans -The seasonal wetland swales within the several drainages on the property do not provide suitable habitat for listed species of vernal pool crustaceans. The swales are flowing systems lacking the inundation characteristics that would support VPFS or VPTS. The drainages are also not suitable habitat for the California linderiella. No impacts to vernal pool fairy shrimp, vernal pool tadpole shrimp, or California linderiella would result from project development.

Steelhead Central Valley DPS- In the project area, Central Valley steelhead are found in Dry Creek and its tributaries in Secret Ravine and Miners Ravine, located as close as about 4 miles from the Project Site. No direct impacts would occur to steelhead habitat as no spawning or rearing habitat or occupied tributary streams are found on the Project Site. However, uncontrolled erosion from the developed site could result in consequent downstream sedimentation that could adversely affect spawning areas in Secret Ravine or Miners Ravine, and untreated stormwater runoff from onsite impervious surfaces could introduce contaminants that could adversely affect water quality that currently supports the life cycle of steelhead in these tributaries. Implementation of Mitigation Measure 5, with requirements to implement Best Management Practices as part of a Stormwater Pollution Prevention Plan to control erosion and migration of sediments off-site and other water quality control practices, will ensure that impacts to local steelhead populations do not occur.

Western Spadefoot Toad- The project site is within the range of western spadefoot toad and wetland WS-1 is marginally suitable to support the species. No western spadefoot toad adults or larvae were observed during April 2017 field studies. As there is a remote possibility that western spadefoot toad could be present on the site, a preconstruction survey for this species is warranted.

**Impact 6:** Construction could impact western spadefoot toad if individuals of the species were present on the property.

**Mitigation Measure 6:** Preconstruction surveys of all ponded habitats shall be conducted for western spadefoot toad, and any western spadefoot toad encountered within the construction footprint shall be allowed to move out of harm's way of its own volition or a qualified biologist will relocate it to a burrow outside of the construction impact area. For work conducted during the western spadefoot toad migration and breeding season (November 1 to May 31), a qualified biologist will survey active work areas in mornings following measurable precipitation events, with construction commencing only once the biologist has confirmed that no spadefoot toads are in the work area.

Swainson's Hawk- Swainson's hawk is much more likely to nest in trees near riparian habitats or agricultural fields on the Valley floor rather than in oak woodland in the foothills, such as found at the Project Site. Although a single Swainson's hawk was observed flying over the Project Site during the April 22, 2017 field review, nesting by Swainson's hawk at the Project Site is unlikely. Use of the Project Site by this species is probably limited to occasional visits while foraging or during migration. No impacts to Swainson's hawk breeding or foraging habitat is anticipated due to project development. Mitigation measures for preconstruction surveys of nesting birds include inclusion of this species in the surveys.

Burrowing Owl- No burrowing owls, California ground squirrel colonies or California ground squirrels were observed during field reviews conducted in either February or April or 2017. In addition, heights of grasses within the onsite grassland are too tall to provide habitat for burrowing owl, which prefers grasslands with low profile vegetation. No impacts to burrowing owl breeding or wintering habitat is anticipated due to project development. Nevertheless, mitigation measures for preconstruction surveys of nesting birds are recommended to include of this species in the surveys.

Tricolored Blackbird- Vegetation within the onsite wetland swales is not of a type that would be preferred to support a nesting colony of tricolored blackbird. Surveys of the site by an HBG wildlife biologist in April 2017 found no evidence of use of the site by tricolored blackbird. No impacts to tricolored blackbird would result from project development. Mitigation measures for preconstruction surveys of nesting birds are recommended to include this species in the surveys.

Special Status Raptor Species- Six raptor species designated with special status by the State of California have a potential to nest at the site. These species include burrowing owl (State Species of Special Concern and Federal Bird Species of Conservation Concern), Northern harrier (State Species of Special Concern and Federal Bird Species of Conservation Concern), white-tailed kite (California Fully Protected), Cooper's hawk (California Watch List Species), Sharp-shinned hawk (California Watch List Species) and Swainson's hawk (state-listed threatened). Preconstruction surveys for tree-nesting special status raptor species (e.g., white-tailed kite, Cooper's hawk, sharp-shinned hawk, Swainson's hawk) will be necessary if tree removal occurs during the February 1 to August 31 nesting season. Preconstruction surveys for ground-nesting special status raptor species (Northern harrier and burrowing owl) would be necessary prior to any ground disturbance in grasslands.

**Impact 7:** Construction during the nesting season could impact any of six raptor species designated with special status by the State of California: burrowing owl, Northern harrier, white-tailed kite, Cooper's hawk, sharp-shinned hawk, and Swainson's hawk.

**Mitigation Measure 7:** Preconstruction surveys conducted for nesting birds pursuant to the MBTA shall include specific preconstruction surveys for special status species of raptors. Preconstruction surveys for special status tree-nesting raptor species (white-tailed kite, Cooper's hawk, sharp-shinned hawk, Swainson's hawk) will be necessary if

tree removal occurs during the February 1 to August 31 nesting season. A preconstruction survey for ground-nesting special status raptor species (Northern harrier and burrowing owl) shall be conducted to ensure impacts to ground-nesting species do not occur. Preconstruction surveys shall be conducted within 15 days of initiation of construction activity. If an active raptor nest is identified, appropriate mitigation measures shall be developed and implemented in consultation with CDFW. Mitigation will include development of a construction plan that establishes buffer zones around active nests during construction activity and/or until young have fledged.

## 6.0 AGENCY PERMIT REQUIREMENTS

Any potential impacts to jurisdictional wetlands or waters of the U.S. at the site will require authorization from the Army Corps of Engineers pursuant to Section 404 of the Clean Water Act. NWP 39 authorizes “discharges of dredged or fill material into non-tidal waters of the U.S., excluding non-tidal wetlands adjacent to tidal waters, for the construction or expansion of residential, commercial, and institutional building foundations and building pads and attendant features that are necessary for the use and maintenance of the structures” provided the activities meet the following criteria:

- The discharge does not cause the loss of greater than 0.5-acre of non-tidal waters of the U.S.;
- The discharge does not cause the loss of greater than 300 linear feet of a stream bed (unless the criterion is waived by the District Engineer);
- The discharge is part of a single and complete project;
- The permittee avoids and minimizes discharges into waters of the U.S. to the maximum extent practicable;
- The discharge does not cause more than minimal degradation of water quality or more than minimal changes to stream flow characteristics; and
- The permittee establishes and maintains vegetated buffers next to open water to the maximum extent practicable.

As the 0.15 acres of seasonal wetlands are scattered throughout the site and avoidance of these wetlands would be problematic with any layout of land uses, a permit from the Corps is a certainty for development at this site. Wetland impacts would not exceed the 0.5-acre limit of Nationwide Permit 39; therefore, the Corps would determine that the proposed project would qualify for a Nationwide Permit 39 and an Individual Permit would not be required. A wetland mitigation plan describing procedures to mitigate impacts to jurisdictional areas would need to be developed as part of the Corps permit process. The applicant would need to demonstrate that wetlands have been avoided to the extent possible and provide documentation of how the project has been minimized to reduce onsite impacts.

The requirement for a Clean Water Act Section 404 Nationwide permit means that any development project at this site will also require Section 401 water quality certification from the Central Valley Regional Water Quality Control Board (RWQCB) for the Corps permit to be valid. Prior to issuance of the water quality certification, RWQCB will require the applicant to demonstrate that requirements of the County of Placer pursuant to the California Environmental Quality Act (CEQA) have been satisfied. Mitigation of wetlands will be required to obtain Corps and RWQCB approval. It does not appear as though A Section 7 consultation with USFWS or NOAA Fisheries/NMFS would be warranted as neither federally-listed species nor their habitats would not be adversely affected by project development. An Essential Fish Habitat evaluation conducted in conjunction with NMFS is also not likely warranted.

## 7.0 REFERENCES

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, and T.J. Rosatti, editors. 2012. *The Jepson Manual. Vascular Plants of California, Second Edition, Thoroughly Revised and Expanded*. University of California Press, Berkeley, California.
- California Department of Fish and Wildlife. 2007. Final Report, California Swainson's Hawk Inventory 2005-2007. U.C. Davis Wildlife Health Center, Department of Fish and Game Resource Assessment Program, Final Report. May 31, 2007.
- California Department of Fish and Wildlife. 2009. *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009). State of California, California Natural Resources Agency, Department of Fish and Game. November 24, 2009.
- California Department of Fish and Wildlife. 2010. List of Vegetation Alliances and Associations. Vegetation Classification and Mapping Program. September.  
[http://www.dfg.ca.gov/biogeodata/vegcamp/natural\\_comm\\_list.asp](http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp).
- California Department of Fish and Wildlife. 2016. Special Animals List For State of California produced by Biogeographic Data Branch, California Natural Diversity Database, California Department of Fish and Wildlife. List dated July 2016. Current as of July 2016.
- California Department of Fish and Wildlife. 2013. State and Federally Listed Endangered, Threatened, and Rare Plants of California. April.  
<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEPlants.pdf>.
- California Department of Fish and Wildlife. 2017. Natural Heritage Division, Natural Diversity Data Base for the Rocklin Quadrangle Map and surrounding areas, February 2017.
- California Native Plant Society, Rare Plant Program. 2014. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website <http://www.rareplants.cnps.org> [accessed 04 April 2014].
- Cowardin, Lewis M., Virginia Carter, Francis C. Golet and Edward T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*, for Office of Biological Services, Fish and Wildlife Service, U.S. Department of the Interior.
- Jones and Stokes. 2005. Assessment of Habitat Conditions for Chinook Salmon and Steelhead in Western Placer County, California. Prepared for Placer County Planning Department. May 2005.

Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 Wetlands Ratings*. Phytoneuron 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.

Mann Made Resources. 2016. Arborists Report for Costco Site, Loomis, California. December 9, 2016.

Munz, Philip A. and David D. Keck 1973. *A California Flora and Supplement*. University of California Press.

National Geographic Society. 2011. *Field Guide to North American Birds*. Sixth edition. National Geographic Society. Washington, D.C.

Reid, Fiona A. 2006. *Mammals of North America*. Peterson Field Guides. Fourth Edition. Houghton Mifflin Co., Boston.

Salix Consulting, Inc. 2016. Wetland Delineation for the 17.88-acre Sierra-Brace Study Area, Town of Loomis, Placer County, California. Prepared Manikas Properties. May 2016.

Sawyer, J. O., and T. Keeler-Wolf. 2009. *A Manual of California Vegetation*. Second Edition. In cooperation with The Nature Conservancy and the California Department of Fish and Game. California Native Plant Society. Sacramento, California.

Sibley, David A. 2014. *The Sibley Guide to Birds*. Second Edition. National Audubon Society. Chanticleer Press, Inc. New York, N.Y. 624 pp.

Stebbins, R.C. 2003. *Western Reptiles and Amphibians*. Peterson Field Guides. Houghton Mifflin Co., Boston. Third edition.

U.S. Army Corps of Engineers. 1987. *Corps of Engineers Wetland Delineation Manual*, Technical Report Y-87-1. Prepared by the Environmental Laboratory, Department of the Army, Waterways Experiment Station, Vicksburg, MS.

U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of Agriculture, Natural Resources Conservation Service [NRCS]. 2017. Web Soil Survey, Placer County. Natural Cooperative Soil Survey. February 2017.

US Fish and Wildlife Service. 2014. Listings and occurrences for California. Federally-listed threatened and endangered plant and animal species in California.  
[http://ecos.fws.gov/tess\\_public/pub/stateListingAndOccurrenceIndividual.jsp?state=CA](http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=CA)

US Fish and Wildlife Service. 2014. Species proposed for listing in California based on published population data.

[http://ecos.fws.gov/tess\\_public/pub/stateListingIndividual.jsp?state=CA&status=proposed](http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=CA&status=proposed).

US Fish and Wildlife Service. 2014. Candidate species in California based on published population data.

[http://ecos.fws.gov/tess\\_public/pub/stateListingIndividual.jsp?state=CA&status=candidate](http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=CA&status=candidate).

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990a. *California's Wildlife, Volume I. Amphibians and Reptiles*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990b. *California's Wildlife, Volume II: Birds*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.

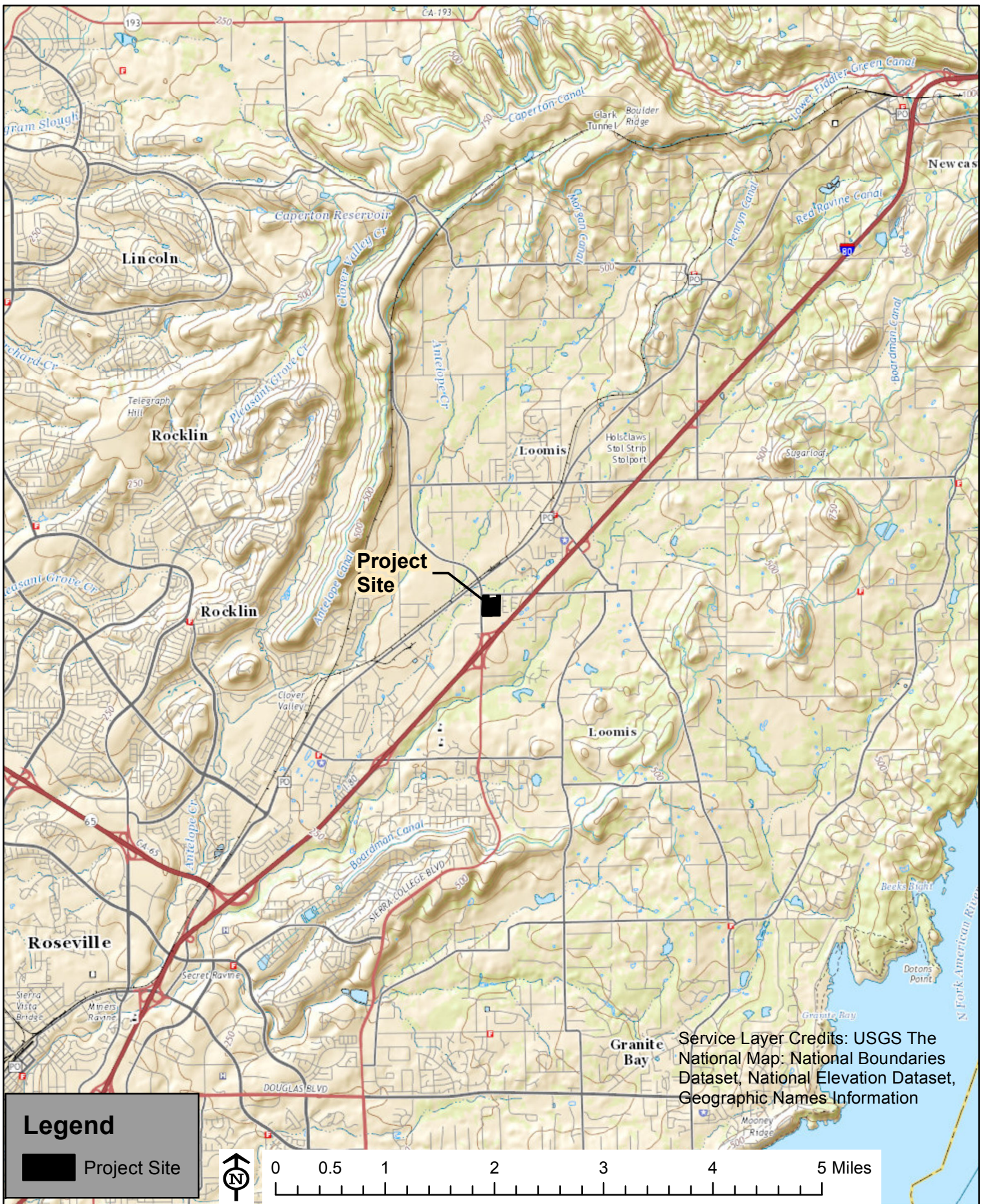
Zeiner, D.C., W.F. Laudenslayer, Jr., K.E. Mayer, and M. White. 1990c. *California's Wildlife, Volume III: Mammals*. State of California, the Resources Agency, Department of Fish and Game, Sacramento, California.



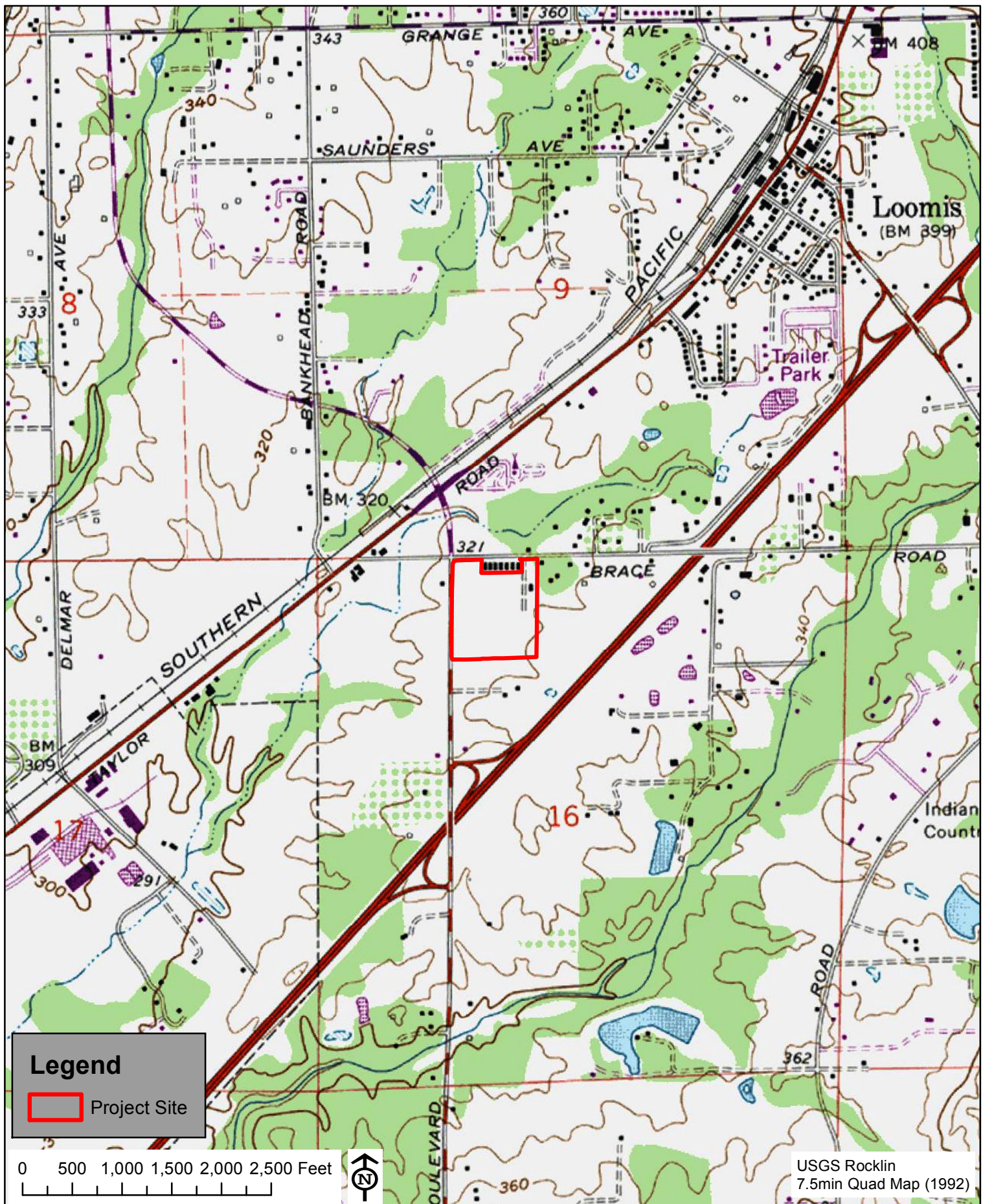
## **ATTACHMENT 1**

### **Figures**

- Figure 1. Project Location
- Figure 2. U.S.G.S Map of the Project Site
- Figure 3. Aerial Photo of the Project Site
- Figure 4. Costco Wholesale Project Conceptual Plan
- Figure 5. Preliminary Grading and Drainage Plan
- Figure 6. Soil Map of the Project Area
- Figure 7. Watershed Map of the Project Area
- Figure 8. Map of Vegetation Communities at the Project Site
- Figure 9. Wetlands and Waters of the U.S. Potentially Subject to Corps Jurisdiction
- Figure 10. Impacts to Vegetation Communities Occurring on the Project Site
- Figure 11. Impacts to Wetlands and Waters of the U.S. Potentially Subject to Corps Jurisdiction



**Figure 1. Project Location**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California



**Figure 2. U.S.G.S Map of the Project Site**

Costco Wholesale Project  
 Town of Loomis, Placer County, California

**Huffman-Broadway Group, Inc.**  
 ENVIRONMENTAL REGULATORY CONSULTANTS



**Figure 3. Aerial Photo of the Project Site**  
Costco Wholesale Project  
Town of Loomis, Placer County, California



**Figure 4. Costco Wholesale Project Conceptual Plan**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

**Project Data**

Client: Costco Wholesale  
 999 Lake Drive  
 Issaquah, WA 98027

Project Address: Sierra College Blvd.,  
 Loomis, CA  
 Town of Loomis

**Site Data**

Costco Site Area: ±17.2 AC (±750,120 s.f.)  
 Total:

Jurisdiction: Town of Loomis, CA

Zoning: GC - General Commercial  
 RM - 5 Medium Density Residential

Boundary Information: This plan has been prepared using record information from Assessor's Parcel Maps and is for Preliminary use only. All dimensions and acreages are approximate only.

**Building Data**

Total: +- 152,101 s.f.

No Gas Expansion

**Parking Data**

10' wide stalls: 774 stalls

Accessible stalls: 16 stalls

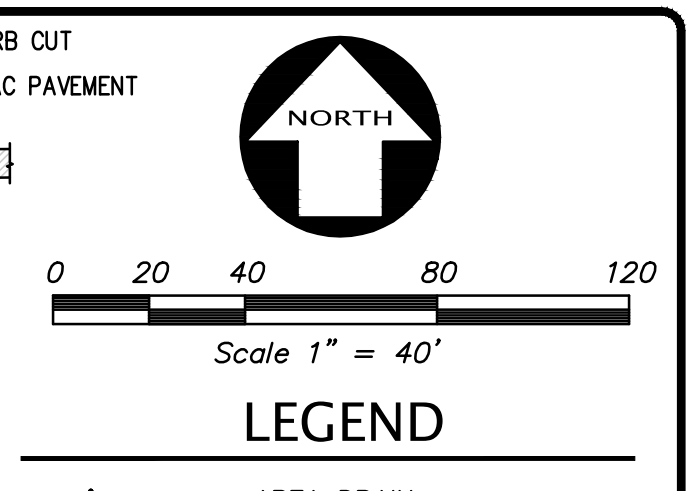
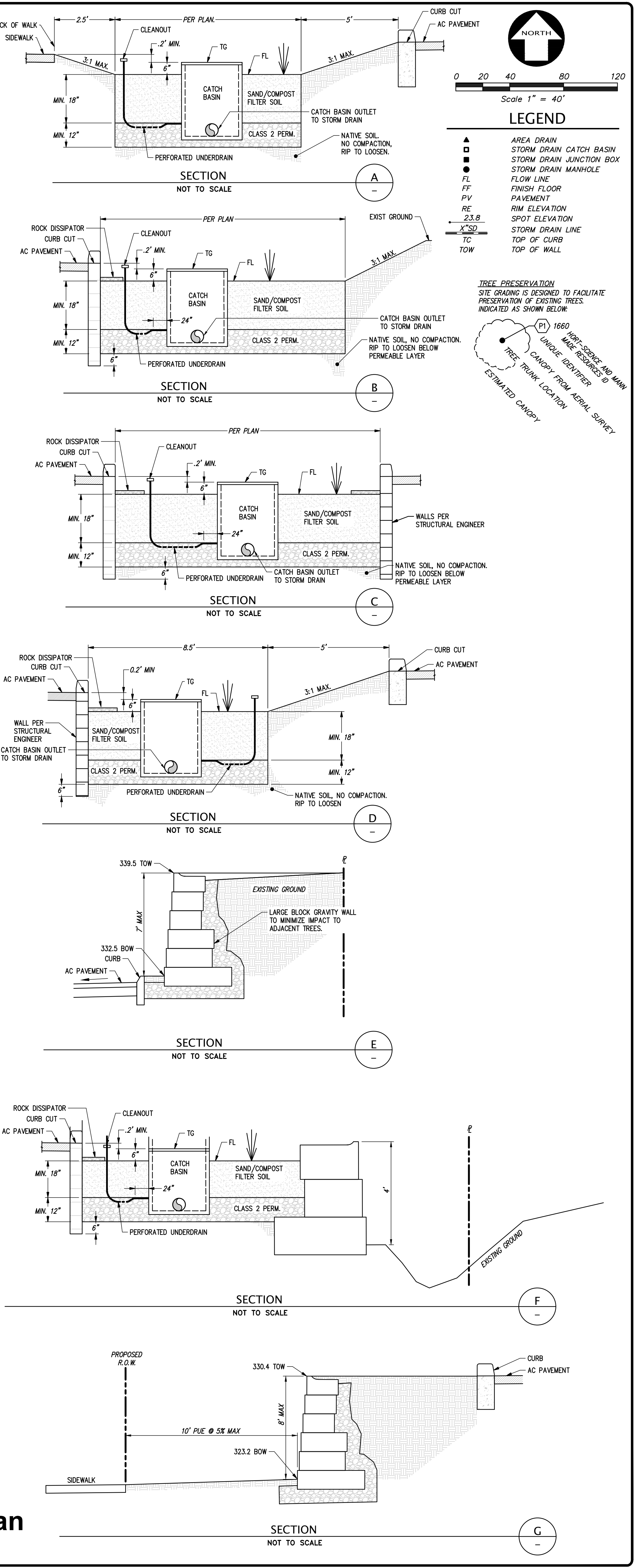
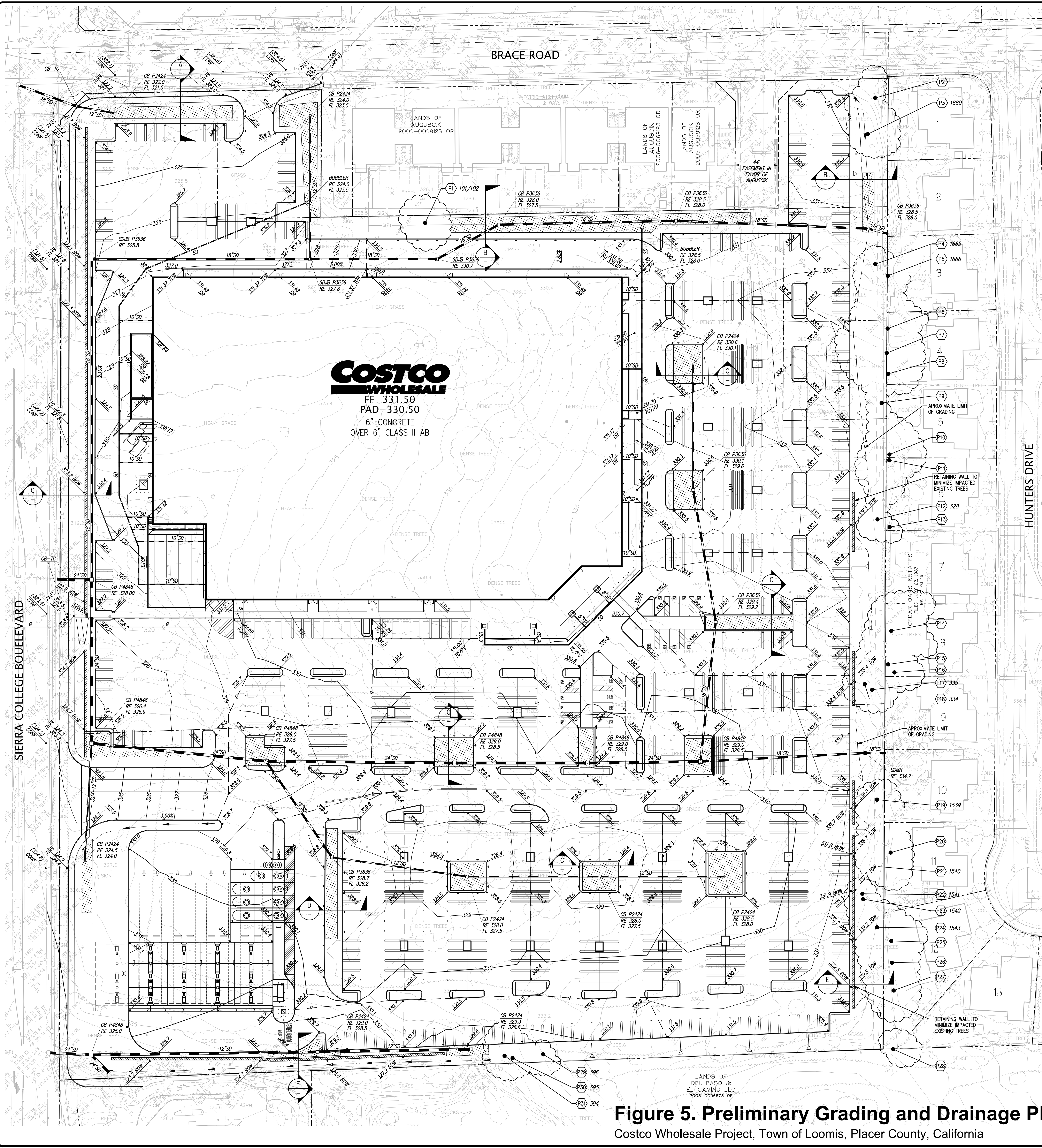
Total Parking: 790 Stalls  
 (5.2 / 1,000)

Required Parking 760  
 (5.0 / 1,000)

DBA# P.256

**DB+A**

DAVID BABCOCK + ASSOCIATES  
 ARCHITECTURE LANDSCAPE PLANNING  
 3581 MT. DIABLO BLVD., SUITE 235  
 LAFAYETTE, CALIFORNIA 94549  
 T: 925.283.5070



- LEGEND**
- ▲ AREA DRAIN
  - CATCH BASIN
  - STORM DRAIN JUNCTION BOX
  - STORM DRAIN MANHOLE
  - FLOW LINE
  - FINISH FLOOR
  - PAVEMENT
  - RIM ELEVATION
  - 23.8 SPOT ELEVATION
  - STORM DRAIN LINE
  - TOP OF CURB
  - TC TOP OF WALL

**TREE PRESERVATION**  
 SITE GRADING IS DESIGNED TO FACILITATE PRESERVATION OF EXISTING TREES. INDICATED AS SHOWN BELOW:

- P1 1660 UNIQUE IDENTIFIER
- P1 1660 TREE CHANGING FROM AERIAL SURVEY ESTIMATED CANOPY

|          |            |  |  |  |  |
|----------|------------|--|--|--|--|
| BY       |            |  |  |  |  |
| REVISION |            |  |  |  |  |
| NO.      |            |  |  |  |  |
| DATE     | 04/14/2017 |  |  |  |  |
| SCALE    | 1" = 40'   |  |  |  |  |
| DESIGNER | SIH        |  |  |  |  |
| JOB NO.  | A16658     |  |  |  |  |
| SHEET    | C4         |  |  |  |  |
| OF       | 6          |  |  |  |  |

**PRELIMINARY GRADING AND DRAINAGE PLAN**  
 OF  
**SIERRA COLLEGE BOULEVARD AND BRACE ROAD**  
 FOR  
**COSTCO WHOLESALE CORP.**  
 LOOMIS, CALIFORNIA

**KIER & WRIGHT**  
 CIVIL ENGINEERS & SURVEYORS, INC.  
 2850 Collier Canyon Road  
 Livermore, California 94551  
 Phone (925) 445-8788  
 Fax (925) 445-8796

**Figure 5. Preliminary Grading and Drainage Plan**  
 Costco Wholesale Project, Town of Loomis, Placer County, California

Z:\2016\A16658\A16658-PG.dwg 4/28/2017 10:00:17 AM shunr.11



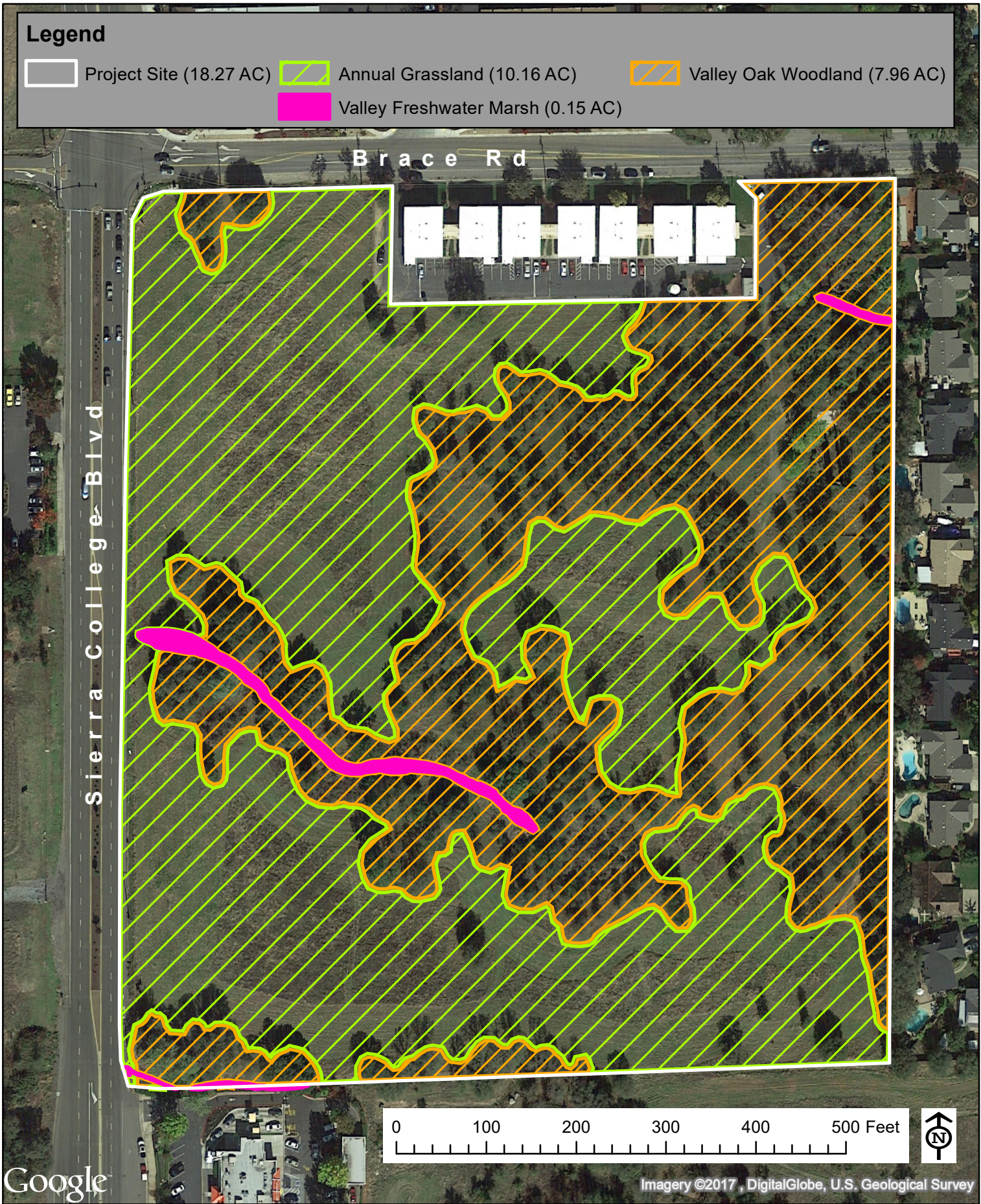
**Figure 6. Soil Map of the Project Site**  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California



**Figure 7. Watershed Map of the Project Area**

Costco Wholesale Project  
Town of Loomis, Placer County, California

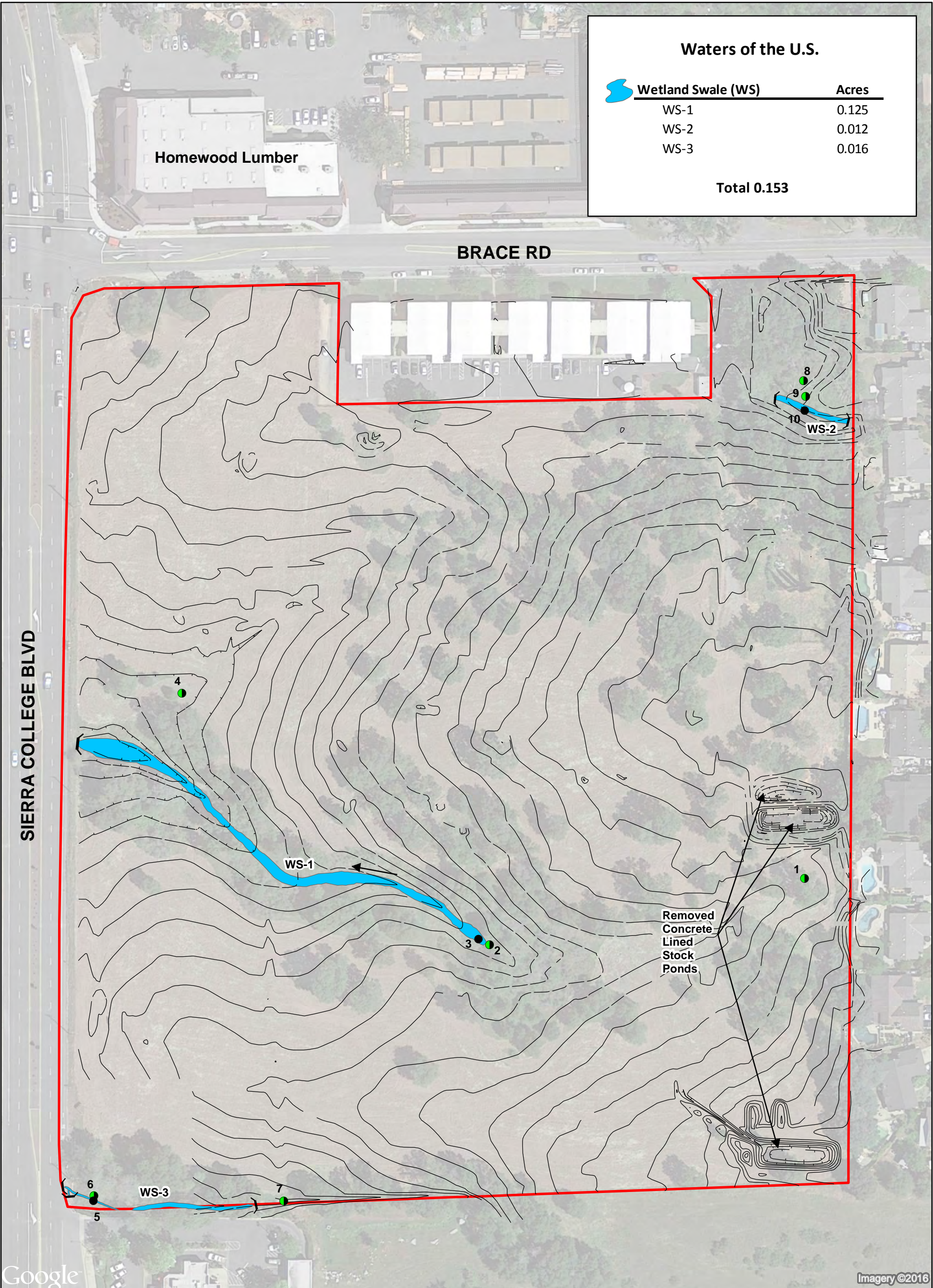




**Figure 8. Map of Vegetation Communities at the Project Site**

Costco Wholesale Project  
 Town of Loomis, Placer County, California

**Huffman-Broadway Group, Inc.**  
 ENVIRONMENTAL REGULATORY CONSULTANTS



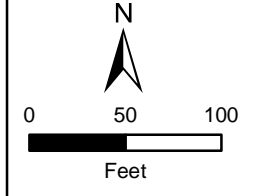
**Waters of the U.S.**

| Wetland Swale (WS) | Acres |
|--------------------|-------|
| WS-1               | 0.125 |
| WS-2               | 0.012 |
| WS-3               | 0.016 |
| <b>Total 0.153</b> |       |

Google

Imagery ©2016

Prepared By:  
  
 Prepared For:  
 Manikas Properties  
 1817 Maryal Drive, Suite 100  
 Sacramento, CA 95864



**Legend**

|                           |                    |
|---------------------------|--------------------|
| Study Area (±18.20 acres) | Wetland Data Point |
| Culvert                   | Upland Data Point  |

**Figure 5**

**WETLAND DELINEATION**

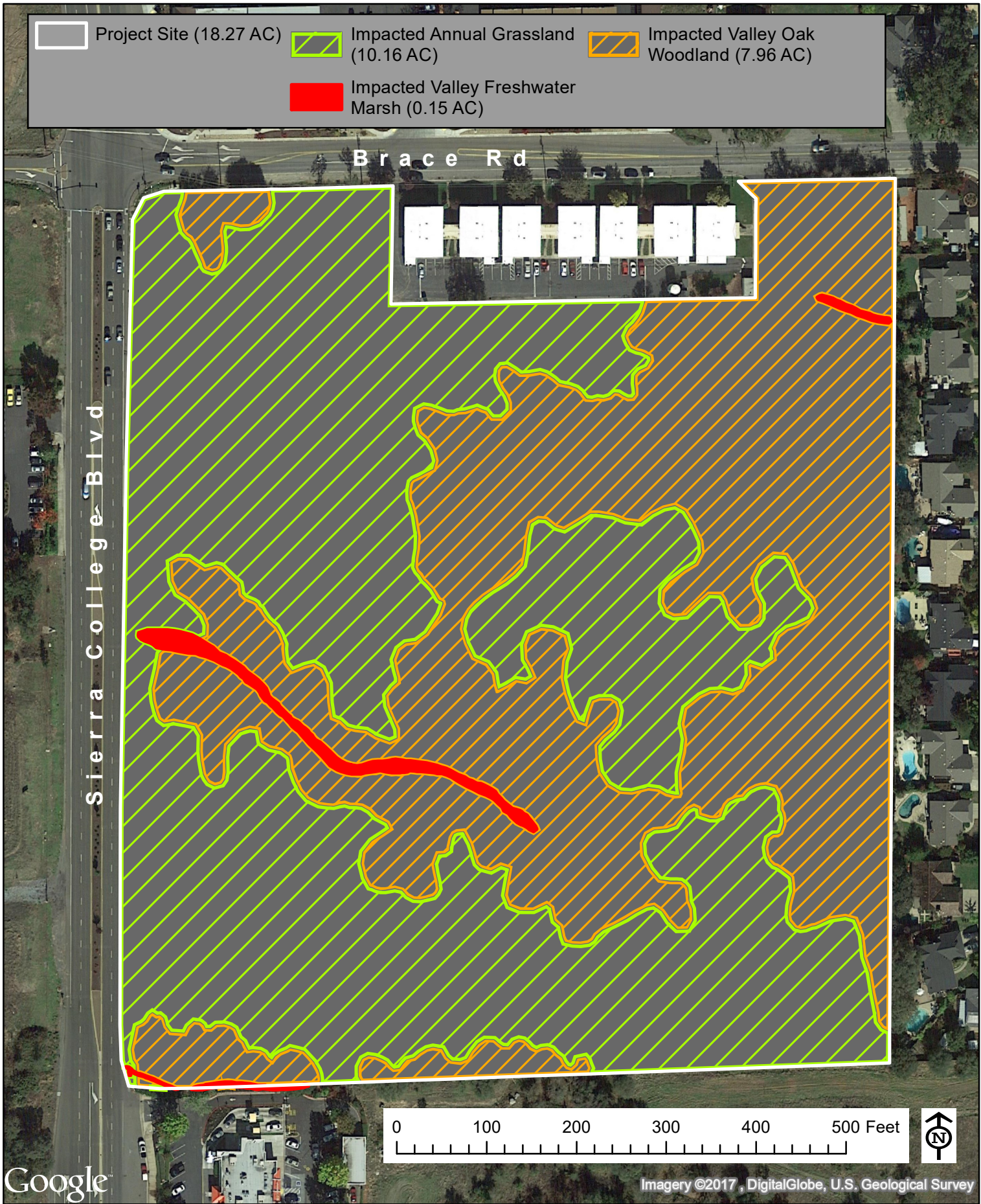
*Sierra-Brace*

Town of Loomis, Placer County, CA

Figure 9. Wetlands and Waters of the U.S. Potentially Subject to Corps Jurisdiction  
 Costco Wholesale Project  
 Town of Loomis, Placer County, California

NOTES: Revised wetland delineation conducted March 2016. Original delineation conducted by Pat Britton and Barry Anderson of North Fork Associates in 2007.

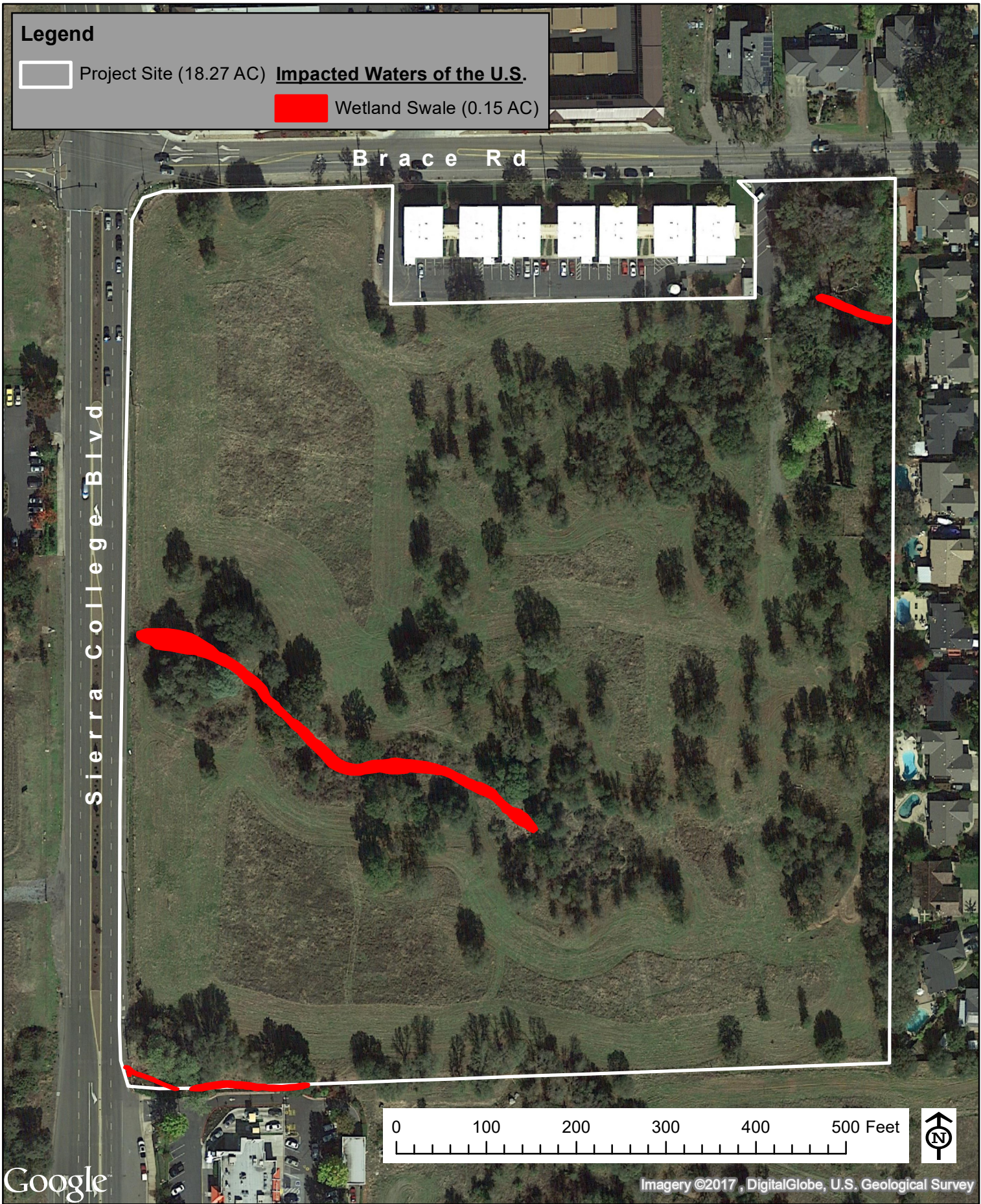
April 18, 2016



**Figure 10. Impacts to Vegetation Communities Occurring on the Project Site**

Costco Wholesale Project  
 Town of Loomis, Placer County, California

**Huffman-Broadway Group, Inc.**  
 ENVIRONMENTAL REGULATORY CONSULTANTS



**Legend**

- Project Site (18.27 AC) **Impacted Waters of the U.S.**
- Wetland Swale (0.15 AC)

Sierra College Blvd

Brace Rd

0 100 200 300 400 500 Feet



Google

Imagery ©2017, DigitalGlobe, U.S. Geological Survey

**Figure 11. Impacts to Wetlands and Waters of the U.S. Potentially Subject to Corps Jurisdiction**

**Huffman-Broadway Group, Inc.**  
ENVIRONMENTAL REGULATORY CONSULTANTS

Costco Wholesale Project  
Town of Loomis, Placer County, California

## **ATTACHMENT 2**

### **SUPPLEMENTAL BIOLOGICAL INFORMATION**

- |          |  |
|----------|--|
| Table 1. | Plant List for Property  |
| Table 2. | Animal Species Observed on the Project Site or Expected to Utilize the Project Site                                  |
| Table 3. | Special Status Plants Known to Occur in the Vicinity of the Project Area, Placer County, California                  |
| Table 4. | Special Status Animal Species that have been Reported in the Vicinity of the Project Area, Placer County, California |

**TABLE 1. PLANT LIST FOR THE PROPERTY**

| <b>Scientific Name</b>                        | <b>Common Name</b>        | <b>Wetland Status</b> |
|---|---------------------------|-----------------------|
| <i>Acacia baileyana</i>                       | Cootamundra wattle        | UPL                   |
| <i>Acmispon americanus var. americanus</i>    | Spanish-clover            | UPL                   |
| <i>Alisma triviale</i>                        | California water plantain | OBL                   |
| <i>Amsinckia menziesii</i>                    | common fiddleneck         | UPL                   |
| <i>Artemisia douglasiana</i>                  | California mugwort        | FAC                   |
| <i>Arundo donax</i>                           | Giant reed                | FACW                  |
| <i>Avena fatua</i>                            | Wild oat                  | UPL                   |
| <i>Baccharis pilularis</i>                    | Coyote brush              | UPL                   |
| <i>Briza minor</i>                            | Small quaking grass       | FAC                   |
| <i>Bromus diandrus</i>                        | Ripgut grass              | UPL                   |
| <i>Bromus hordeaceus</i>                      | Soft chess                | FACU                  |
| <i>Carduus pycnocephalus</i>                  | Italian thistle           | UPL                   |
| <i>Castilleja attenuata</i>                   | Valley tassles            | UPL                   |
| <i>Centaurea solstitialis</i>                 | Yellow starthistle        | UPL                   |
| <i>Cichorium intybus</i>                      | Chicory                   | FACU                  |
| <i>Cirsium arvense</i>                        | Canada thistle            | FACU                  |
| <i>Clarkia sp.</i>                            | Clarkia                   | UPL                   |
| <i>Claytonia perfoliata</i>                   | Common miner's lettuce    | FAC                   |
| <i>Convolvulus arvensis</i>                   | Bindweed                  | UPL                   |
| <i>Cynodon dactylon</i>                       | Bermudagrass              | FACU                  |
| <i>Cynosurus echinatus</i>                    | Hedgehog dogtail          | UPL                   |
| <i>Cyperus eragrostis</i>                     | Tall flatsedge            | FACW                  |
| <i>Cytisus scoparius</i>                      | Scotch broom              | UPL                   |
| <i>Elymus caput-medusae</i>                   | Medusahead                | UPL                   |
| <i>Epilobium brachycarpum</i>                 | Summer cottonweed         | UPL                   |
| <i>Erigeron canadensis</i>                    | Canadian horseweed        | FACU                  |
| <i>Erodium botrys</i>                         | Broad-leaf filaree        | FACU                  |
| <i>Erodium cicutarium</i>                     | Red-stem filaree          | UPL                   |
| <i>Eschscholzia californica</i>               | California poppy          | UPL                   |
| <i>Festuca perennis</i>                       | Italian ryegrass          | FAC                   |
| <i>Galium aparine</i>                         | Goose grass               | FACU                  |
| <i>Geranium dissectum</i>                     | Cut-leaf geranium         | UPL                   |
| <i>Geranium molle</i>                         | Dove's-foot geranium      | UPL                   |
| <i>Hirschfeldia incana</i>                    | Short-podded mustard      | UPL                   |
| <i>Hordeum jubatum</i>                        | Foxtail barley            | UPL                   |
| <i>Hordeum marinum subsp. gussoneanum</i>     | Mediterranean barley      | FAC                   |
| <i>Hordeum murinum</i>                        | Wall barley               | FACU                  |
| <i>Hypericum perforatum subsp. perforatum</i> | Klamathweed               | FACU                  |
| <i>Hypochaeris glabra</i>                     | Smooth cat's-ear          | UPL                   |
| <i>Juncus mexicanus</i>                       | Mexican rush              | FACW                  |
| <i>Juncus xiphioides</i>                      | Iris-leaved rush          | OBL                   |

|   |                      |        |
|---|----------------------|--------|
| <i>Lactuca serriola</i>                   | Prickly lettuce      | FACU   |
| <i>Lamium amplexicaule</i>                | Deadnettle           | UPL    |
| <i>Lupinus bicolor</i>                    | Miniature lupine     | UPL    |
| <i>Lythrum hyssopifolia</i>               | Hyssop loosestrife   | OBL    |
| <i>Melilotus sp.</i>                      | Melilotus            | UPL    |
| <i>Nasturtium officinale</i>              | Watercress           | OBL    |
| <i>Olea europaea</i>                      | Olive                | UPL    |
| <i>Paspalum dilatatum</i>                 | Dallis grass         | FAC    |
| <i>Pinus sabiniana</i>                    | Gray pine            | UPL    |
| <i>Plantago lanceolata</i>                | English plantain     | FAC    |
| <i>Polypogon monspeliensis</i>            | Annual beard grass   | FACW   |
| <i>Populus fremontii subsp. fremontii</i> | Fremont cottonwood   | FAC    |
| <i>Prunus dulcis</i>                      | Almond tree          | UPL    |
| <i>Pyracantha sp.</i>                     | Pyracantha           | UPL    |
| <i>Pyrus sp.</i>                          | Pear                 | UPL    |
| <i>Quercus douglasii</i>                  | Blue oak             | UPL    |
| <i>Quercus lobata</i>                     | Valley oak           | FACU   |
| <i>Quercus wislizeni</i>                  | Interior live oak    | UPL    |
| <i>Rubus armeniacus</i>                   | Himalayan blackberry | FACU   |
| <i>Rumex crispus</i>                      | Curly dock           | FAC    |
| <i>Salix exigua var. exigua</i>           | Narrowleaf willow    | FACW   |
| <i>Salix lasiolepis</i>                   | Arroyo willow        | FACW   |
| <i>Silybum marianum</i>                   | Milk thistle         | UPL    |
| <i>Sonchus asper subsp. asper</i>         | Prickly sow-thistle  | FAC    |
| <i>Spartium junceum</i>                   | Spanish broom        | UPL    |
| <i>Torilis arvensis</i>                   | Field hedgeparsley   | UPL    |
| <i>Toxicodendron diversilobum</i>         | Western poison-oak   | FACU   |
| <i>Trifolium hirtum</i>                   | Rose clover          | UPL    |
| <i>Verbascum blattaria</i>                | Moth mullein         | UPL    |
| <i>Verbascum thapsus</i>                  | Woolly mullein       | FACU   |
| <i>Veronica sp.</i>                       | Speedwell            | VARIES |
| <i>Vicia sativa</i>                       | Common vetch         | FACU   |
| <i>Vicia villosa</i>                      | Winter vetch         | UPL    |
| <i>Vinca major</i>                        | Periwinkle           | UPL    |

Sources: Salix Consulting, Inc. 2016 and HBG field observations between March and June of 2017.

**TABLE 2. ANIMAL SPECIES OBSERVED ON THE PROJECT SITE OR EXPECTED TO UTILIZE THE PROJECT SITE**

**MAMMALS**

|                            |                                  |
|----------------------------|----------------------------------|
| Virginia Opossum           | <i>Didelphis virginiana</i>      |
| Broad-footed Mole          | <i>Scapanus latimanus</i>        |
| California Myotis          | <i>Myotis californicus</i>       |
| Yuma Myotis                | <i>Myotis yumanensis</i>         |
| Western Pipistrelle        | <i>Pipistrellus hesperus</i>     |
| Big Brown Bat              | <i>Eptesicus fuscus</i>          |
| Hoary Bat                  | <i>Lasiurus cinereus</i>         |
| Red Bat                    | <i>Lasiurus borealis</i>         |
| Pallid Bat                 | <i>Antrozous pallidus</i>        |
| Brazilian Free-tailed Bat  | <i>Tadarida brasiliensis</i>     |
| Black-tailed Hare          | <i>Lepus californicus</i>        |
| Desert Cottontail          | <i>Sylvilagus audubonii</i>      |
| California Ground Squirrel | <i>Spermophilus beecheyi</i>     |
| Botta's Pocket Gopher      | <i>Thomomys bottae</i>           |
| Western Harvest Mouse      | <i>Reithrodontomys megalotis</i> |
| Deer Mouse                 | <i>Peromyscus maniculatus</i>    |
| Dusky-footed Woodrat       | <i>Neotoma fuscipes</i>          |
| California Vole            | <i>Microtus californicus</i>     |
| Black Rat                  | <i>Rattus rattus</i>             |
| Norway Rat                 | <i>Rattus norvegicus</i>         |
| House Mouse                | <i>Mus musculus</i>              |
| Coyote                     | <i>Canis latrans</i>             |
| Gray Fox                   | <i>Urocyon cinereoargenteus</i>  |
| Raccoon                    | <i>Procyon lotor</i>             |
| Long-tailed Weasel         | <i>Mustela frenata</i>           |
| Striped Skunk              | <i>Mephitis mephitis</i>         |
| Mule Deer                  | <i>Odocoileus hemionus</i>       |

**REPTILES AND AMPHIBIANS**

|                           |                                   |
|---------------------------|-----------------------------------|
| Pacific Treefrog          | <i>Pseudacris regilla</i>         |
| Western Toad              | <i>Bufo boreas</i>                |
| Western Fence Lizard      | <i>Sceloporus occidentalis</i>    |
| Coast Horned Lizard       | <i>Phrynosoma coronatum</i>       |
| Western Skink             | <i>Eumeces skiltonianus</i>       |
| Gilbert's Skink           | <i>Eumeces gilberti</i>           |
| Western Whiptail          | <i>Cnemidophorus tigris</i>       |
| Southern Alligator Lizard | <i>Gerrhonotus multicarinatus</i> |



Ringneck Snake  
Sharp-tailed Snake  
Racer  
California Whipsnake  
Coachwhip  
Gopher Snake  
Common Kingsnake  
Common Garter Snake  
Western Terrestrial Garter Snake  
Night Snake  
Western Rattlesnake

*Diadophis punctatus*  
*Contia tenuis*  
*Coluber constrictor*  
*Masticophis lateralis*  
*Masticophis flagellum*  
*Pituophis melanoleucus*  
*Lampropeltis getulus*  
*Thamnophis sirtalis*  
*Thamnophis elegans*  
*Hopsiglena torquata*  
*Crotalis viridis*

### **BIRDS**

Turkey Vulture  
White-tailed Kite  
Northern Harrier  
Sharp-shinned Hawk  
Cooper's Hawk  
Red-tailed Hawk  
Red-shouldered Hawk  
Golden Eagle  
Bald Eagle  
American Kestrel  
Prairie Falcon  
Peregrine Falcon  
Merlin  
California Quail  
Killdeer  
Wilson's Snipe  
Ring-billed Gull  
California Gull  
Herring Gull  
Rock Dove  
Mourning Dove  
Barn Owl  
Great Horned Owl  
Western Screech-Owl  
Vaux's Swift  
Anna's Hummingbird  
Northern Flicker  
Acorn Woodpecker  
Lewis's Woodpecker  
Red-breasted Sapsucker

*Cathartes aura*  
*Elanus caeruleus*  
*Circus cyaneus*  
*Accipiter striatus*  
*Accipiter cooperi*  
*Buteo jamaicensis*  
*Buteo lineatus*  
*Aquila chrysaetos*  
*Haliaeetus leucocephalus*  
*Falco sparverius*  
*Falco mexicanus*  
*Falco peregrinus*  
*Falco columbarius*  
*Callipepla californica*  
*Charadrius vociferous*  
*Gallinago delicata*  
*Larus delawarensis*  
*Larus californicus*  
*Larus argentatus*  
*Columba livia*  
*Zenaida macroura*  
*Tyto alba*  
*Bubo virginianus*  
*Otus kennicottii*  
*Chaetura vauxi*  
*Calypte annas*  
*Colaptes auratus*  
*Melanerpes formicivorus*  
*Melanerpes lewis*  
*Sphyrapicus ruber*

Nuttall's Woodpecker  
Downy Woodpecker  
Black Phoebe  
Say's Phoebe  
Pacific-slope Flycatcher  
Ash-throated Flycatcher  
Western Kingbird  
Barn Swallow  
Cliff Swallow  
Tree Swallow  
Violet-green swallow  
Northern Rough-winged Swallow  
California Scrub-jay  
American Crow  
Common Bushtit  
Oak Titmouse  
White-breasted Nuthatch  
Bewick's Wren  
House Wren  
American Robin  
Hermit Thrush  
Western Bluebird  
Ruby-crowned Kinglet  
Northern Mockingbird  
Cedar Waxwing  
Loggerhead Shrike  
Hutton's Vireo  
Orange-crowned Warbler  
Yellow Warbler  
Yellow-rumped Warbler  
Townsend's Warbler  
Common Yellowthroat  
Western Tanager  
Black-headed Grosbeak  
Lazuli Bunting  
Spotted Towhee  
California Towhee  
Savannah Sparrow  
Lark Sparrow  
White-crowned Sparrow  
Golden-crowned Sparrow  
Fox Sparrow  
Song Sparrow  
Lincoln's Sparrow

*Picoides nuttallii*  
*Dendrocopos pubescens*  
*Sayornis nigricans*  
*Sayornis saya*  
*Empidonax difficilus*  
*Myiarchus cinerascens*  
*Tyrannus verticalis*  
*Hirundo rustica*  
*Petrochelidon pyrrhonota*  
*Tachycineta bicolor*  
*Tachycineta thalassina*  
*Stelgidopteryx serripennis*  
*Aphelocoma californica*  
*Corvus brachyrhynchos*  
*Psaltriparus minimus*  
*Parus inornatus*  
*Sitta carolinensis*  
*Thryomanes bewickii*  
*Troglodytes aedon*  
*Turdus migratorius*  
*Hylocichla guttata*  
*Sialia mexicana*  
*Regulus calendula*  
*Mimus polyglottos*  
*Bombycilla cedrorum*  
*Lanius ludovicianus*  
*Vireo huttoni*  
*Orethlypis celata*  
*Setophaga petechia*  
*Setophaga coronata*  
*Setophaga townsendi*  
*Geothlypis trichas*  
*Piranga ludoviciana*  
*Pheucticus melanocephalus*  
*Passerina amoena*  
*Pipilo maculatus*  
*Pipilo crissalis*  
*Passerculus sandwichensis*  
*Chondestes grammacus*  
*Zonotrichia leucophrys*  
*Zonotrichia atricapilla*  
*Passerella iliaca*  
*Melospiza melodia maxillaris*  
*Melospiza lincolni*

Dark-eyed Junco  
Western Meadowlark  
Red-winged Blackbird  
Brewer's Blackbird  
Brown-headed Cowbird  
Bullock's Oriole  
Purple Finch  
House Finch  
Pine Siskin  
American Goldfinch  
Lesser Goldfinch  
House Sparrow

*Junco hyemalis*  
*Sturnella neglecta*  
*Agelaius phoeniceus*  
*Euphagus cyanocephalus*  
*Molothrus ater*  
*Icterus bullockii*  
*Haemorhous purpureus*  
*Carpodacus mexicanus*  
*Spinus pinus*  
*Spinus tristis*  
*Spinus psaltria*  
*Passer domesticus*

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Mayer and Laudenslayer (1988)  
National Geographic Society (2011)  
Reid (2006)  
Sibley (2014)  
Stebbins (2003)  
Zeiner et al. (1990a, 1990b, 1990c)

**TABLE 3. SPECIAL STATUS PLANTS KNOWN TO OCCUR IN THE VICINITY OF THE PROJECT AREA, PLACER COUNTY, CALIFORNIA <sup>1</sup>**

| SCIENTIFIC NAME  | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE  |
|--|---------------------|---|---|
| Big-scale (California) balsamroot<br>( <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> ) | --/--/1B.2          | Chaparral, cismontane woodland, valley and foothill grassland/sometimes serpentinite; 90-1400m.   | Not present. No individuals of this species were found during protocol surveys conducted in spring/summer 2017. |
| Stebbins morning-glory<br>( <i>Calystegia stebbinsii</i> )                                     | FE/CE/1B1           | Found in chaparral, cismontane woodland. Occurs on red clay soils of the pine-hill formation, on gabbro or serpentinite. Prefers open areas. 300-725 M.   | Not present. Suitable habitat not present at the site.  |
| Pine Hill ceanothus<br>( <i>Ceanothus roderickii</i> )   | FE/Rare/1B.2        | Found in chaparral and cismontane woodland. In gabbroic soils, often in disturbed area with other rare plants. 260-630 m.   | Not present. Suitable habitat not present at the site.  |
| Brandegee's clarkia<br>( <i>Clarkia biloba</i> ssp. <i>brandegeae</i> )                        | --/--/4.2           | Found in chaparral, cismontane woodland, and lower montane coniferous forest. Often in roadcuts. 75-915 m.  | Not present. No individuals of this species were found during protocol surveys conducted in spring/summer 2017. |
| Red Hill soaproot<br>( <i>Chlorogalum grandiflorum</i> )                                       | --/--/1B.2          | Found in cismontane woodland, chaparral, and lower montane coniferous forest. Occurs frequently on serpentinite or gabbro, but also on non-ultramafic substrates and often on disturbed sites. 240-760 m. | Not present. Suitable habitat not present at the site.  |
| Hispid salty bird's beak<br>( <i>Chloropyron molle</i> ssp. <i>hispidum</i> )                  | --/--1B/1           | Found in damp alkaline soils in meadows, seeps, playas, valley and foothill grassland. Especially in alkaline meadows and alkali sins with <i>Distichlis</i> . 1-155 M.                                   | Not present. Suitable habitat not present at the site.  |
| Dwarf downingia<br>( <i>Downingia pusilla</i> )  | --/--/2B.2          | Found vernal pools and mesic sites within valley and foothill grassland. Found along margins of several types of vernal pools. 1-445 m.   | Not present. Suitable habitat not present at the site.  |

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE  | OCCURRENCE  |
|---|---------------------|--|---|
| Stinkbells<br>( <i>Fritillaria agrestis</i> )                                 | --/--/4.2           | Found in cismontane woodland, chaparral, and valley and foothill grassland. Sometimes found on serpentine, mostly found in non-native grassland or in grassy openings in clay soil. 10-1555 m. | Not present. No individuals of this species were found during protocol surveys conducted in spring/summer 2017. |
| El Dorado bedstraw<br>( <i>Galium californicum ssp. sierra</i> )              | FE/Rare/1B.2        | Found in cismontane woodland, chaparral, and lower montane coniferous forest. Occurs in pine-oak woodland or chaparral. Restricted to gabbroic or serpentine soils. 130-585 M.                 | Not present. Suitable habitat not present at the site.  |
| Bogg's Lake hedge hyssop<br>( <i>Gratiola heterosepala</i> )                  | --/CE/1B.2          | Inhabits vernal pools and freshwater swamps and marshes. In clay soils and usually in vernal pools, sometime on lake margins. 10-2375 m.   | Not present. Suitable habitat not present at the site.  |
| Bisbee Peak rush-rose<br>( <i>Helianthemum suffrutescens</i> )                | --/--/3.2           | Found in openings in chaparral, often on serpentine, gabbroic, or lone formation soils. 45-840 m.  | Not present. Suitable habitat not present at the site.  |
| Ahart's dwarf rush<br>( <i>Juncus leiospermus</i> var. <i>ahartii</i> )       | --/--/ 1B.2         | Restricted to the edge of vernal pools. Vernal pools and grasslands. 30-229 m.   | Not present. Suitable habitat not present at the site.  |
| Red Bluff dwarf rush<br>( <i>Juncus leiospermus</i> var. <i>leiospermus</i> ) | --/--/1B.1          | Found in vernal mesic sites, sometimes on edges of vernal pools within chaparral, valley and foothill grassland, cismontane woodland, vernal pools, meadows and seeps. 30-1025 M.              | Not present. Suitable habitat not present at the site.  |
| Legenere<br>( <i>Legenere limosa</i> )  | --/--/1B.1          | Found in the beds of vernal pools. Many historical occurrences are extirpated. 1-880 m.  | Not present. Suitable habitat not present at the site.  |
| Pincushion navarretia<br>( <i>Navarretia myersii</i> ssp. <i>myersii</i> )    | --/--/1B.1          | Found in vernal pools, in clay soils within non-native grassland. 20-330 m.  | Not present. Suitable habitat not present at the site.  |
| Sacramento Orcutt grass<br>( <i>Orcuttia viscida</i> )                        | FE/CE/1B.1          | Found in vernal pools. 30-100 m.   | Not present. Suitable habitat not present at the site.  |

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE   |
|---|---------------------|---|--|
| Layne's ragwort<br>( <i>Packera layneae</i> )               | FT/Rare/1B.2        | Found in ultramafic soil, occasionally along streams in chaparral and cismontane woodland. 200-1000 m.  | Not present. Suitable habitat not present at the site. |
| Sanford's arrowhead<br>( <i>Sagittaria sanfordii</i> )      | --/--/1B.2          | Found in marshes and swamps. In standing or slow-moving freshwater ponds, marshes and ditches. 0-650 m.   | Not present. Suitable habitat not present at the site. |
| El Dorado County mule ears<br>( <i>Wyethia reticulata</i> ) | --/--/1B.2          | Found in chaparral, cismontane woodland, and lower montane coniferous forest. Found in stony red clay and gabbroic soils, often in openings in gabbro chaparral. 185-630 m. | Not present. Suitable habitat not present at the site. |

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Rocklin 7.5-Minute Quadrangle Map and surrounding areas, information dated February 2017.

2. Status Codes:

FE Federal-listed Endangered  
 FT Federal-listed Threatened  
 FPE Federal Proposed Endangered  
 FPT Federal Proposed Threatened  
 CE California State-listed Endangered  
 CT California State-listed Threatened  
 CR California Rare  
 FP California Fully Protected  
 CSC California Species of Special Concern

California Rare Plant Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere.  
 California Rare Plant Rank 1B: Plants rare, threatened, or endangered in California and elsewhere.  
 California Rare Plant Rank 2A: Plants presumed extirpated in California, but more common elsewhere.  
 California Rare Plant Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere.  
 California Rare Plant Rank 3: Plants about which more information is needed – a review list.  
 California Rare Plant Rank 4: Plants of limited distribution – a watch list.

CNPS Threat Ranks

0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

0.3-Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

**TABLE 4. SPECIAL STATUS ANIMAL SPECIES THAT HAVE BEEN REPORTED IN THE VICINITY OF THE PROJECT AREA, PLACER COUNTY, CALIFORNIA**

| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE   |
|---|---------------------|---|--|
| <b>Invertebrates</b>  |                     |   |  |
| Vernal Pool Fairy Shrimp<br>( <i>Branchinecta lynchi</i> )                        | FT/--               | Inhabits vernal pools; occurs throughout the Delta and Central Valley.  | Not present. Suitable habitat is not present on site.  |
| Vernal Pool Tadpole Shrimp<br>( <i>Lepidurus packardi</i> )                       | FE/--               | Inhabits vernal pools; known from scattered locations in the Delta and Central Valley.  | Not present. Suitable habitat is not present on site.  |
| California Linderiella<br>( <i>Linderiella occidentalis</i> )                     | --/--               | Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.   | Not present. Suitable habitat is not present on site.  |
| Valley Elderberry Longhorn Beetle<br>( <i>Desmocerus californicus dimorphus</i> ) | FT/--               | Inhabits blue elderberry bushes (host plant); restricted to the Central Valley and adjacent foothills.  | Not present. No elderberries were observed at the site during site surveys, therefore no potential habitat exists at the site for this species |
| Ricksecker's Water Scavenger Beetle<br>( <i>Hydrochara rickseckeri</i> )          | --/--               | Aquatic beetle that lives in weedy shallow, open water associated freshwater seeps, springs, farm ponds, vernal pools (playa type pools) and slow-moving stream habitats. | Not present. Suitable habitat is not present on site.  |
| Alabaster Cave harvestman<br><i>Banksula californica</i>                          | --/--               | Known only from the type locality, Alabaster Cave in El Dorado County. The type locality has been partly destroyed by mining and the species may be extinct.              | Not present. Suitable habitat is not present on site.  |



| SCIENTIFIC NAME   | STATUS <sup>2</sup> | HABITAT/RANGE   | OCCURRENCE  |
|---|---------------------|---|---|
| <b>Fish</b>   |                     |   |   |
| Conumnes stripetail<br>( <i>Cosumnoperla hypocrena</i> )                | --/--               | Found in intermittent streams on the western slope of the Central Sierra Foothill in the American and Cosumnes River Basins.  | Not present. Suitable habitat is not present on site.   |
| Steelhead- Central Valley DPS<br>( <i>Oncorhynchus mykiss irideus</i> ) | FT/--               | Population occur in the Sacramento and San Joaquin Rivers and their tributaries. In the project area found in Dry Creek and its tributaries in Secret Ravine and Miners Ravine. | Not present. Suitable habitat is not present onsite; no large river systems or suitable spawning streams. Suitable spawning habitat located about 4 miles southwest of the site in Secret Ravine and Miners Ravine. Best Management Practices are necessary to control contaminants in stormwater runoff. |
| <b>Amphibians</b>   |                     |   |   |
| Western Spadefoot Toad<br>( <i>Spea hammondi</i> )                      | --/CSC              | Breeds in vernal pools/seasonal stock ponds in the Central Valley and southern coast.   | Not likely. The site is in the range of the species. Habitat is less than optimal but marginally suitable. Preconstruction surveys are recommended.   |
| California Red-legged Frog<br>( <i>Rana draytonii</i> )                 | FT/CSC              | Inhabits freshwater creeks and ponds in the scattered areas along the Coast Rangers from northern California down to northern Baja.   | Not present. No CNDDDB records in immediate vicinity of the property. The study site is considered to be outside of the current range of this species. Additionally, non-tidal wetlands onsite are seasonal and do not provide the perennial waters typically required for California Red-legged Frog.    |

| Reptiles  |                           |   |  |
|---|---------------------------|---|--|
| Western Pond Turtle<br>( <i>Emys marmorata</i> )                | --/CSC                    | Inhabits freshwater ponds and sluggish streams; occurs from WA to Baja, mostly west of the Sierra crest.  | Not present. Suitable habitat is not present on site.  |
| Birds   |                           |   |  |
| Great Blue Heron (rookery site)<br>( <i>Ardea herodias</i> )    | --/--                     | Forms rookeries in large tree stands; occurs throughout California and elsewhere.   | Rookery not present. Rookeries unlikely on the study site due to a lack of suitable trees.   |
| Prairie Falcon<br>( <i>Falco mexicanus</i> )(Nesting)           | BCC/WL                    | Associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields and desert scrub. Permanent resident and migrant along inner coast and ranges. | Nesting unlikely. Appropriate nest sites not present. This species may forage on the site in winter, though none were observed in February 2017. |
| Peregrine Falcon<br>( <i>Falco peregrinus anatum</i> )(Nesting) | Delisted,BCC /Delisted,FP | Inhabits open wetlands near cliffs, also occurs in some cities where nests on buildings and bridges.  | Nesting unlikely. Appropriate nest sites not present.  |
| Merlin<br>( <i>Falco columbarius</i> ) [wintering]              | -/WL                      | Breeds in Canada, winters in a variety of California habitats, including grasslands, savannahs, wetlands, etc.  | Wintering possible. The species may sporadically utilize the site as a winter foraging habitat.  |

|   |         |   |   |
|---|---------|---|---|
| Sharp-shinned Hawk<br>( <i>Accipiter striatus</i> ) [nesting] | -/WL    | Breeds in ponderosa pine, black oak, riparian deciduous, mixed conifer, and Jeffrey pine habitats. Prefers, but not restricted to, riparian habitats. North facing slopes, with plucking perches are critical requirements. All habitats except alpine, open prairie, and bare desert used in winter. | Nesting unlikely. Appropriate nesting habitat not present on site. Species likely forages on or near the site, especially in winter. Preconstruction bird nesting surveys will include this species.  |
| Cooper's Hawk<br>( <i>Accipiter cooperii</i> ) [nesting]      | -/WL    | Nests primarily in deciduous riparian forests; forages in open woodlands.   | Nesting unlikely. Appropriate nesting habitat not present on site. Species likely forages on or near the site, especially in winter. Preconstruction bird nesting surveys will include this species.  |
| Osprey<br>( <i>Pandion haliaetus</i> ) [Nesting]              | --/WL   | Breeds in northern California from the Cascade Ranges south to Lake Tahoe, and along the coast south to Marin County. Associated strictly with large, fish-bearing waters, primarily in Ponderosa pine through mixed conifer habitats.  | Nesting unlikely. Suitable nesting habitat not present on site.   |
| Ferruginous Hawk<br>( <i>Buteo regalis</i> )<br>(wintering)   | BCC/CSC | Inhabits open country. Winters in small numbers along California coast and inland valleys.  | Wintering possible. The site is considered suitable wintering foraging habitat, though none were observed in February 2017 field studies.   |
| Swainson's Hawk (nesting)<br>( <i>Buteo swainsoni</i> )       | BCC/CT  | Nests in trees and riparian stands; summer migrant to Central Valley. Suitable foraging areas include grasslands, pastures, alfalfa and other hay crops, and certain grain and row croplands.   | Nesting unlikely. CNDDDB records indicate this species nests within seven miles of the site. Nests unlikely on the property. The site may provide marginally suitable foraging habitat for this species, and one was observed flying over the site on April 22, 2017. Preconstruction bird nesting surveys will include this species. |

|  |                        |  |  |
|--|------------------------|--|--|
| Northern Harrier<br>( <i>Circus cyaneus</i> )<br>(nesting)                   | --/CSC                 | Forages and nests in grasslands, marshes, and agricultural fields; occurs throughout California, concentrated in the Central Valley and coastal valleys.   | Nesting unlikely. Suitable nesting habitat not present on site. Preconstruction bird nesting surveys will include this species.  |
| White-tailed Kite<br>( <i>Elanus leucurus</i> )<br>(nesting)                 | --/FP                  | Nests in dense oaks, willows, other trees; occurs in the Central Valley and adjacent low foothills.  | Nesting unlikely. No CNDDDB nesting records in vicinity. Nests unlikely on the study site due to a lack of suitable trees. Preconstruction bird nesting surveys will include this species. |
| Bald Eagle<br>( <i>Haliaeetus leucocephalus</i> )<br>(nesting and wintering) | Delisted,BCC<br>/CE,FP | In winter, maybe be found throughout most of California at lakes, reservoirs, rivers and some rangelands and coastal wetlands. California's breeding habitats are mainly located in mountains and foothill forests near permanent water sources. | Nesting unlikely. Suitable nesting habitat not present on site.  |
| Golden Eagle<br>( <i>Aquila chrysaetos</i> )<br>[nesting and wintering]      | BCC/WL,FP              | Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.  | Wintering possible. The site likely receives sporadic use by the species in winter.  |
| California black rail<br>( <i>Laterallus jamaicensis coturniculus</i> )      | --/CT,FP               | Mainly inhabits salt-marshes bordering larger bays. Occurs in tidal salt marsh with dense growths of pickleweed; also occurs in freshwater and brackish marshes.   | Not present. Suitable habitat is not present at the site.  |
| Short-eared Owl (nest site)<br>( <i>Asio flammeus</i> )                      | --/CSC                 | Forages and nests in perennial marsh and grassland habitat; occurs in the Central Valley, coast, and east Sierra regions.  | Nesting unlikely. Suitable nesting habitat not present on site.  |

|  |             |  |  |
|--|-------------|--|--|
| Western Burrowing Owl<br>( <i>Athene cunicularia hypugea</i> )<br>(burrow sites) | BCC/CSC     | Nests in mammal burrows, rock cavities in grassland and scrub; occurs throughout much of mid and lower California.   | Not present. Although CNDDDB documents nesting records in the project, suitable habitat is not present at the site due to tall heights of upland grasses and general lack of California ground squirrels and ground squirrel burrows. No individuals were observed during surveys in February or late April of 2017. Preconstruction bird nesting surveys will include this species. |
| Purple Martin<br>( <i>Progne subis</i> )   | --/CSC      | Uses a variety of wooded, low-elevation habitats throughout California. Uses hardwood and hardwood-conifer habitats as well as riparian habitats. Now a rare and local breeder on the coast and in interior mountain ranges. | Nesting unlikely. Suitable nesting habitat not present on site.  |
| Loggerhead Shrike<br>( <i>Lanius ludovicianus</i> )<br>(nesting)                 | BCC/CSC     | Habitat includes open areas such as desert, grasslands, and savannah. Nests in thickly foliated trees or tall shrubs. Forages in open habitat which contains trees, fence posts, utility poles and other perches.            | Unlikely. Although not recorded for the project area in the CNDDDB, trees and shrubs provide suitable nesting habitat. Not observed during surveys conducted in February or April of 2017. Preconstruction bird nesting surveys will include this species.   |
| Grasshopper Sparrow<br>( <i>Ammodramus savannarum</i> )                          | --/CSC      | Found in dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches.   | Nesting unlikely. Suitable nesting habitat not present on site.  |
| Yellow Warbler<br>( <i>Setophaga petechia</i> )<br>[nesting]                     | BCC/CSC     | Breeds in deciduous riparian woodlands, widespread during fall migration.  | Nesting not present. May occur on site during fall migration, but suitable nesting habitat is not present at the site.   |
| Tricolored Blackbird<br>( <i>Agelaius tricolor</i> )<br>(nesting colony)         | BCC/CE, CSC | Nests in cattails, riparian scrub, and other dense marsh vegetation; occurs in SF Bay, Delta, and Central Valley basin.  | Nesting not present. Appropriate nest sites not present. Preconstruction bird nesting surveys will include this species.   |

| <b>Mammals</b>   |            |   |   |
|--|------------|---|---|
| Silver-haired bat<br>( <i>Lasionycteris noctivagans</i> )      | --/--      | Coastal and montane forests. Feeds over streams, ponds and open bushy areas, roosts in hollow trees.                                  | Not present. Suitable habitat is not present at the site. |
| Pallid bat<br>( <i>Antrozous pallidus</i> )                    | -/CSC      | Roosts primarily in oak woodland and ponderosa pine habitats; forages in open areas.  | Not present. Suitable habitat is not present at the site. |
| Townsend's Big-eared Bat<br>( <i>Corynorhinus townsendii</i> ) | --/CCT,CSC | Found in desert scrub and coniferous forests. Roost in caves or abandoned mines and occasionally are found to roost in buildings.     | Not present. Suitable habitat is not present at the site. |
| American badger<br>( <i>Taxidea taxus</i> )                    | -/CSC      | Drier open stages of most shrub, forest, and herbaceous habitats; needs sufficient food, friable soils and open, uncultivated ground. | Not present. Suitable habitat is not present at the site. |

1. Source: California Natural Diversity Data Base, Natural Heritage Division, California Department of Fish and Wildlife for the Rocklin 7.5-Minute Quadrangle Map and surrounding areas, information dated February 2017.

2. Status Codes:

FE Federal-listed Endangered

FT Federal-listed Threatened

FPE Federally Proposed Endangered

FPT Federally Proposed Threatened

BCC USFWS Bird Species of Conservation Concern

CE California State-listed Endangered

CT California State-listed Threatened

CR California Rare

FP California Fully Protected

CSC CDFW Species of Special Concern

WL CDFW Watch List Species

## **ATTACHMENT 3**

**Wetland Delineation for the 17.88 Sierra-Brace Study Area, Town of Loomis,  
Placer County, California, prepared by Salix Consulting, Inc. May 2016.**

**WETLAND DELINEATION  
FOR THE**

# **±17.88-ACRE SIERRA-BRACE STUDY AREA**

**TOWN OF LOOMIS, PLACER COUNTY, CALIFORNIA**



*Prepared for:*

**MANIKAS PROPERTIES**

1817 Maryal Drive, Suite 100

Sacramento, CA 95864

*Prepared by:*



12240 Herdal Drive, Ste. 14,

Auburn, California 95603

(530) 888-0130

**MAY 2016**



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## ATTACHMENT

|   |  |
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| Attachment 1. USACOE Verification letter dated March 2009 |  |
|---|--|

# WETLAND DELINEATION FOR THE ±17.88-ACRE SIERRA-BRACE STUDY AREA

## INTRODUCTION

---

On behalf of Manikas Properties, Salix Consulting, Inc., is submitting this updated delineation of waters of the United States for the ±17.88-acre Sierra-Brace study area in the Town of Loomis, Placer County, California. The property was originally delineated by North Fork Associates in February 2008 and verified by the Corps March 20, 2009 (SPK-2008-00630). This document largely includes the original delineation documentation and mapping, with minor adjustments, as needed.

The study area is located north of Interstate 80, in the southeastern corner of the intersection between Sierra College Boulevard and Brace Road. The location corresponds to Section 28 of Township 11 North and Range 7 East on the 7.5 minute Rocklin, CA United States Geological Survey (USGS) quadrangle (Figure 1). The latitude and longitude of the approximate center of the site are 38°48'34" North and 121°12'16" West. The Assessor Parcel Numbers (APNs) are 045-042-011, 045-042-012, 045-042-023, 045-042-034, 045-042-035, 045-042-036, and 045-042-037.

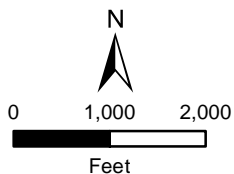
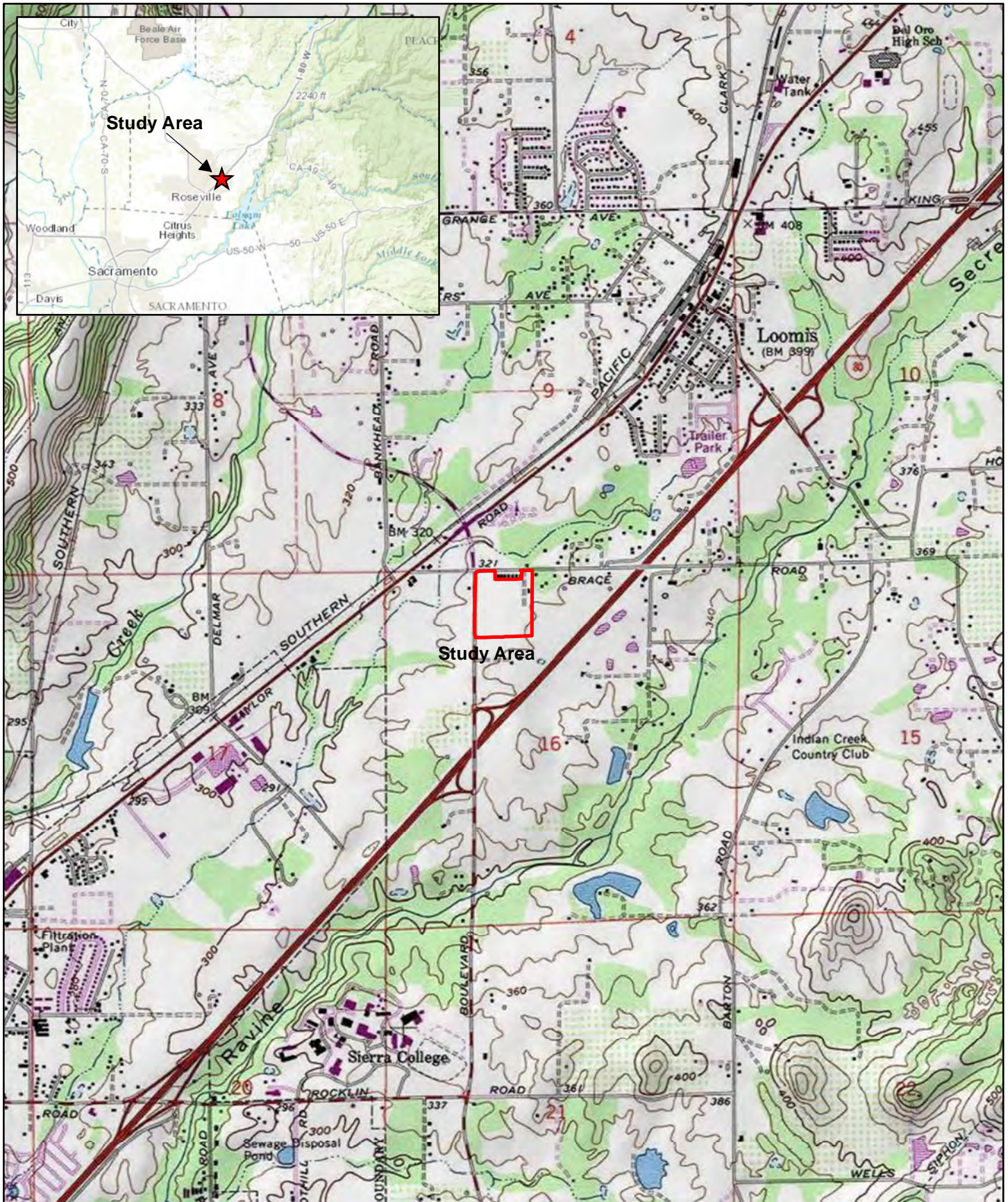
The study area is located at an elevation between approximately 320 and 340 feet. Habitats in the study area include annual grassland and foothill woodland. Adjacent land uses include a multi-family residential building along the northern boundary the Homewood Lumber complex to the north, single family residential to the east, commercial and undeveloped land to the south, and an office building and undeveloped land to the west (Figure 2). The study area is bounded by Brace Road to the north and Sierra College Boulevard to the west.

### Background

As noted above, waters of the U.S. were delineated by North Fork Associates in February 2008 and verified by the U.S. Army Corps of Engineers March 20, 2009. The verification was valid for five years from the date of the letter. The 2009 verification letter is included as Attachment 1, following the Appendices. Property ownership has changed since that time, and this report is intended to update that delineation.

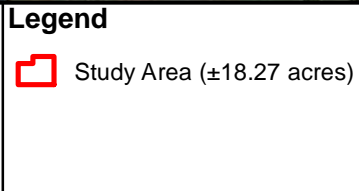
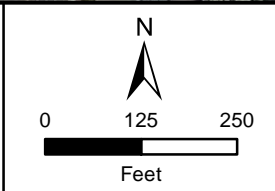
### Directions to the Site

From Sacramento, proceed east on Interstate 80. Take the Sierra College Boulevard exit and turn left after exiting the freeway. The Brace Road and Sierra College Boulevard intersection is just north of Interstate 80. The study area is located in the southeastern corner of the intersection.



Source Maps: USGS Topographic Map  
 Rocklin Quad 1:24,000  
 Section: 16  
 Township: 11N  
 Range: 7E

**Figure 1**  
**SITE AND VICINITY MAP**  
 Sierra-Brace  
 City of Rocklin, Placer County, CA



**Figure 2**

**AERIAL MAP**

Sierra-Brace

City of Rocklin, Placer County, CA

## CONTACT INFORMATION

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Property Owner:  
Manikas Properties  
1817 Maryal Drive, Suite 100  
Sacramento, CA 95864  
(916) 847-5090  
Contact: John T. Manikas

Delineator:  
Salix Consulting, Inc.  
12240 Herdal Drive, Ste. 14  
Auburn, California 95603  
Phone: (530) 888-0130  
Contact: Jeff Glazner

## METHODS

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Waters of the United States were assessed on March 25, 2016, by Jeff Glazner and Hunter Gallant. The North Fork delineation was uploaded to the submeter GPS and field checked. Very minor adjustments were made and are reflected in the map provided in this document. The original topographic basemap was used for the revised map as new topo was not available. The original data forms are included in Appendix A. The plant list for the site is included as Appendix B.

## RESULTS

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### Climate

The region has a Mediterranean climate with dry hot summers and mild winters. Over the course of a year, average high temperatures typically vary from 54°F in the winter to around 92°F in the summer. The warm season lasts from May through September, with an average daily high temperature above 88°F. On average, the hottest months are July and August with an average high of 92°F and low of 61°F. The coolest months are December and January, with an average daily high temperature around 54°F and average low temperature around 40°F. Precipitation occurs mostly from November through April in the form of rain, averaging around 25 inches per year. Little or no precipitation falls during June, July, and August.


Precipitation occurred 3 days prior to the March 25, 2016, field visit, amounting to one-half an inch of rainfall.

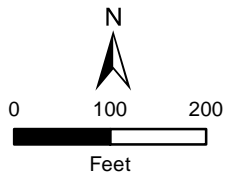
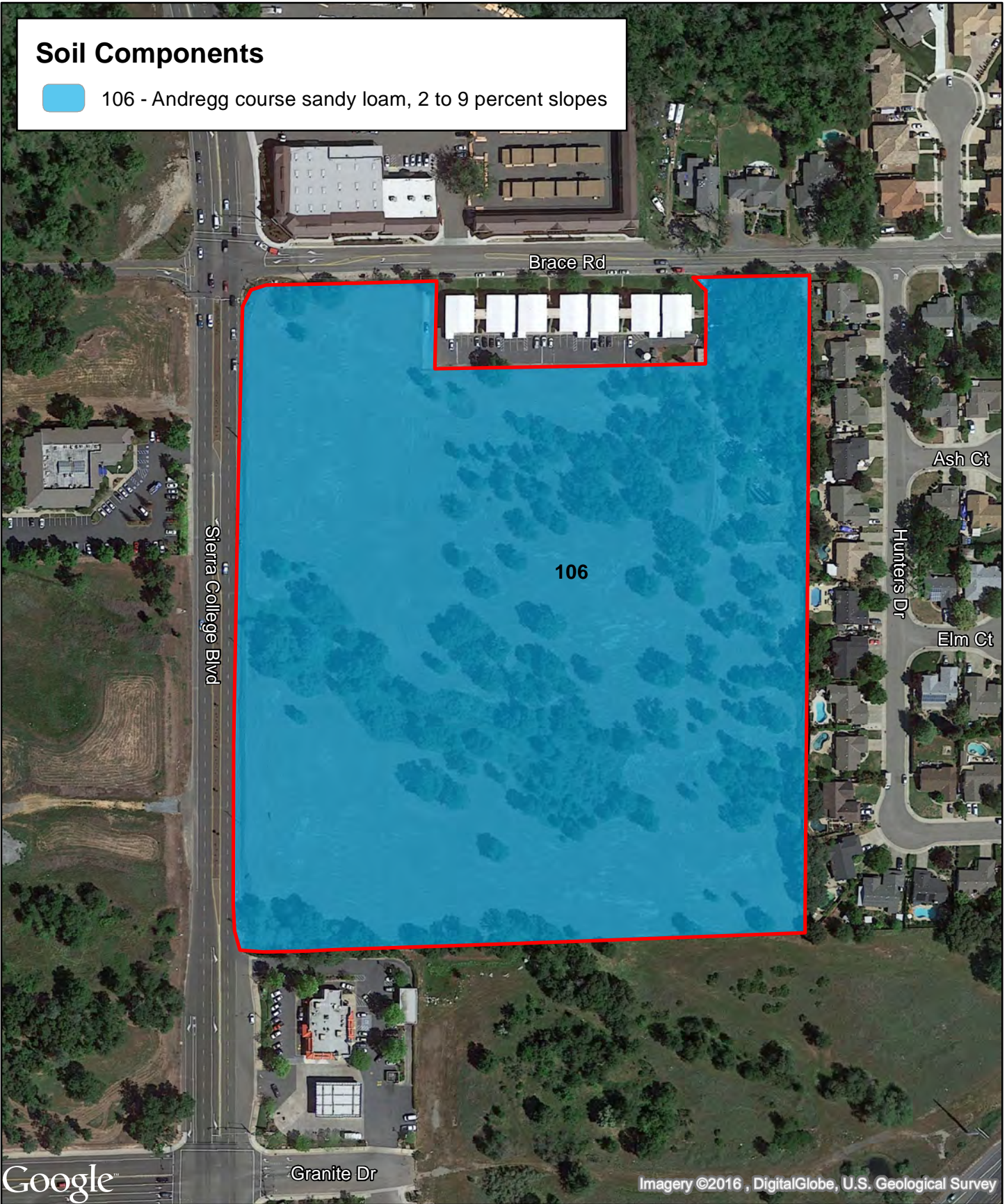
### Soils

One soil unit is mapped in the study area (Figure 3): Andregg coarse sandy loam, 2 to 9 percent slopes.


Andregg soils on-site are coarse-loamy Ultic Haploxerolls, which are Mollisols formed in a Mediterranean climate and characterized by little subsoil development. This component is on foothills, hills with slopes of 2 to 9 percent. They are derived from weathered granodiorite, and bedrock is 29 to 33 inches below the surface. The A horizon extends to about 15 inches and the BA horizon to about 24 inches. Hues range from 10YR to 2.5YR; values between 5 and 2; and chromas between 3 and 2, moist. Organic matter at the surface horizon is around 2 percent. Andregg soils are well-

# Soil Components

 106 - Andregg course sandy loam, 2 to 9 percent slopes



### Legend

 Study Area (±18.27 acres)

### Figure 3

## SOIL COMPONENTS MAP

Sierra-Brace

City of Rocklin, Placer County, CA

drained and have moderately rapid permeability. This soil is neither ponded nor flooded. This soil does not meet hydric criteria.

## **Hydrology**

The Sierra-Brace study area is located in the Lower American watershed (Hydrologic Unit Code 18020111). The topography of the study area gently slopes to the west. The wetland swale and drainage ditch located in the southwest corner of the site drain water westerly and convey water offsite through culverts underneath Sierra College Boulevard. Water continues to drain westerly on the adjacent property and drains into Sucker Ravine which drains into Secret Ravine. Secret Ravine is a tributary of Miners Ravine, which ultimately reaches Dry Creek and then the American River. The constructed drainage in the northeastern corner conveys storm water and urban runoff from the residential development to the east through a storm drain system.

## **Vegetation**

Two biological communities were identified within the study area: foothill woodland and annual grassland. The site wetlands are embedded in these habitats. Figures 4a and 4b. provides photos of the site taken during the March 25, 2016, site visit.

### *Foothill Woodland*

The foothill woodland varies in density throughout the site, being mostly open, and it is dominated by valley oak and interior live oak with a few scattered foothill pines. Shrubs in the understory vary from dense stands of coyote brush and Himalayan blackberry to a completely absent shrub layer. The herbaceous layer consists of a mixture of non-native grasses and forbs. Grasses include Italian ryegrass, ripgut grass, and soft chess. Forbs present include Italian thistle, California mugwort, field hedge-parsley, klamathweed, broad leaf filaree, common vetch, and crane's-bill geranium.

The wetland swale in the study area occurs within the foothill woodland habitat. A few Fremont cottonwood, narrow-leaved willow, and arroyo willow occur within the shrub understory. The herbaceous understory includes curly dock, Mexican rush, Iris-leaf rush, tall flatsedge, and prickly lettuce.

### *Annual Grassland*

The non-native grasses and forbs that occur in the foothill woodland also occur in the annual grassland in the study area. Other grasses and forbs present in the annual grassland include wild oat, hedgehog dogtail, foxtail barley, medusahead, yellow star-thistle, rose clover, smooth's cat-ear, common fiddleneck, short-podded mustard, and bindweed. The annual grassland onsite appears to be disked annually.



1. Culvert carrying flows to the west from WS-1 under Sierra College Boulevard. *Photo date: 3-25-16*



2. Looking upslope along WS-1. *Photo date: 3-25-16*



**Figure 4a**

**SITE PHOTOS**

*Sierra-Brace*

City of Rocklin, Placer County, CA





1. Looking at southwest corner of property at culvert carrying flows of WS-3 to the west under Sierra College Blvd. *Photo date: 3-25-16*



2. Looking west over outfall of WS-2. *Photo date: 3-25-16*



**Figure 4b**

**SITE PHOTOS**

*Sierra-Brace*

City of Rocklin, Placer County, CA

## Waters of the United States

One category of waters of the United States was mapped on the site: wetland swale. Table 1 provides an acreage summary of the wetland swales. The wetland delineation map is included in Figure 5. GIS data is provided on the accompanying DVD, and the Corps of Engineers Aquatic Resources spreadsheet is included as Appendix C.

**Table 1.**  
**Waters of the United States within the Sierra-Brace Study Area**

| Type                                     | Acreage      |
|--|--------------|
| <b>Wetlands:</b>                         |              |
| <b>Wetland swale</b>                     |              |
| <b>WS-1</b>                              | 0.125        |
| <b>WS-2</b>                              | 0.012        |
| <b>WS-3</b>                              | <u>0.016</u> |
| <b>Total Waters of the United States</b> | <b>0.153</b> |

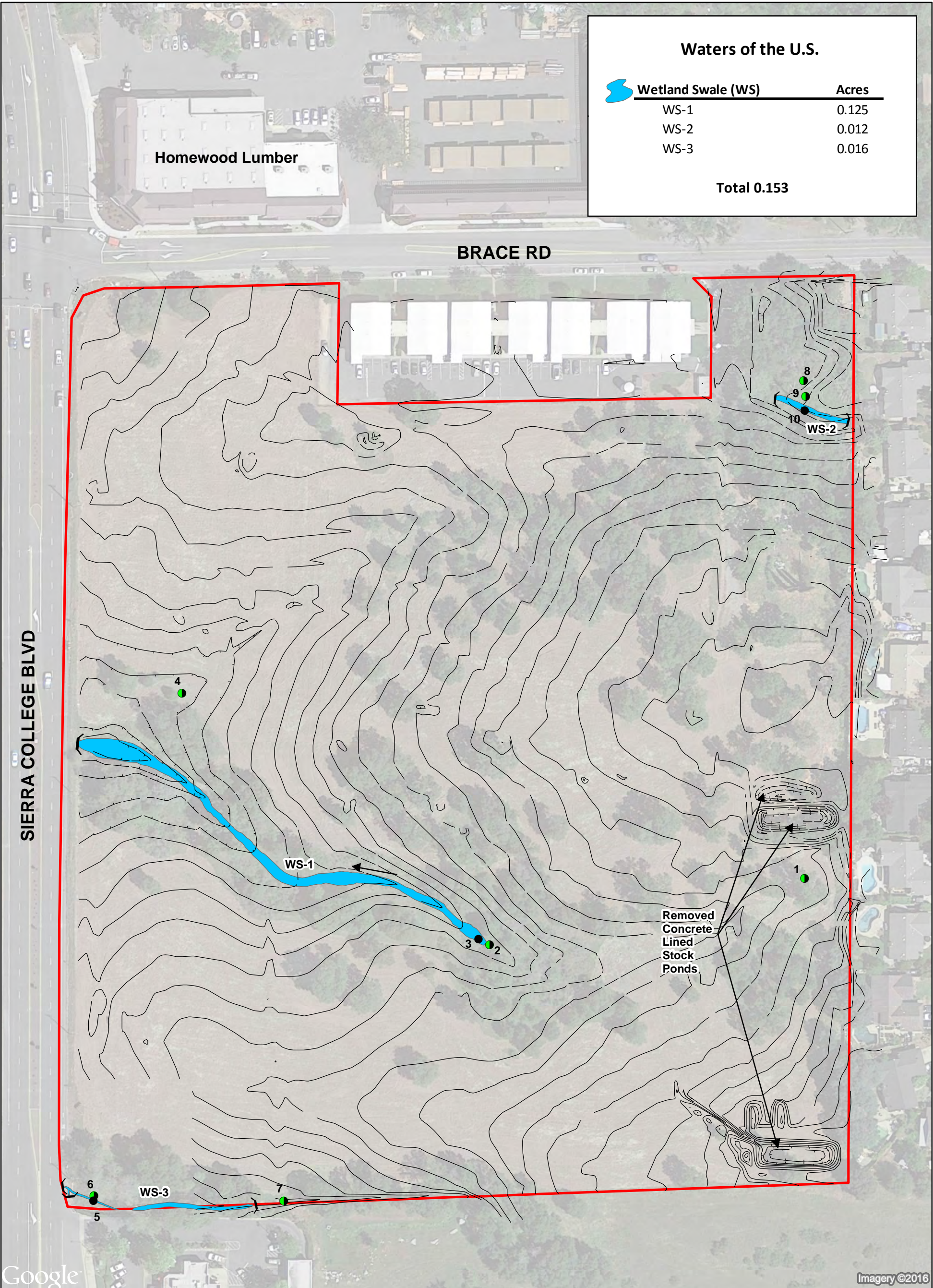
### *Wetland Swale*

One wetland swale occurs within the foothill woodland habitat (Figure 4a). This swale (WS-1) begins in the middle of the study area, where it collects surface water (in the form of sheet flow) and then drains westerly, where it then exits the study area through a culvert underneath Sierra College Boulevard. The beginning of the swale is a small open area dominated by iris leaf rush. The swale then continues west through a dense patch of coyote brush and opens up again near the culvert adjacent to Sierra College Boulevard. Wetland plant species such as hyssop loosestrife, curly dock, prickly lettuce, Italian ryegrass, and Mexican rush are present within the lower portion of the swale.

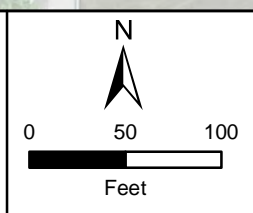
A second wetland swale (WS-2) enters the study area through a culvert along the eastern boundary in the northeast corner of the study area. The swale appears to convey stormwater runoff and urban water westerly for approximately 80 feet within the study area, and then exits the study area through a culvert underneath Starlight Lane. The swale is densely vegetated with Himalayan blackberry (Figure 4b).

A third swale (WS-3) occurs in the southwestern corner of the study area, where stormwater runoff drains onto the study area through an 18-inch PVC culvert located on the commercial development (McDonald's/Chevron) to the south. Wetland species such as water plantain, veronica, moth mullein, water cress, and curly dock are present. The swale (WS-3) continues for approximately 175 feet west until it merges with a narrower excavated ditch that drains water from a 12-inch concrete culvert located under the commercial development to the south (Figure 4b). Water exits the study area along the western boundary through a 30-inch corrugated metal pipe culvert under Sierra College Boulevard.

| Waters of the U.S. |       |
|--------------------|-------|
| Wetland Swale (WS) | Acres |
| WS-1               | 0.125 |
| WS-2               | 0.012 |
| WS-3               | 0.016 |
| <b>Total 0.153</b> |       |



Prepared By:  
  
 Prepared For:  
 Manikas Properties  
 1817 Maryal Drive, Suite 100  
 Sacramento, CA 95864



| Legend                    |                    |
|---------------------------|--------------------|
| Study Area (±18.20 acres) | Wetland Data Point |
| Culvert                   | Upland Data Point  |

**Figure 5**  
**WETLAND DELINEATION**  
*Sierra-Brace*  
 Town of Loomis, Placer County, CA

USACE REGULATORY FILE#: SPK-2008-00630  
 DATE OF VERIFICATION: March 20, 2009

NOTES: Revised wetland delineation conducted March 2016.  
 Original delineation conducted by Pat Britton and Barry Anderson  
 of North Fork Associates in 2007.

April 18, 2016

### *Former Cattle Watering Holes*

According to historic information, three concrete-lined livestock ponds once existed onsite and these ponds had been directly connected to a well and pump that had been abandoned, and that they had been filled for safety reasons, utilizing a grading permit issued by the Town of Loomis (#5475). Because we are using the old topographic mapping, the concrete depressions appear on the map. These areas are now leveled ground.

## REFERENCES AND OTHER SOURCES

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- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. *The Jepson Manual: Vascular plants of California*, second edition. University of California Press, Berkeley.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1.
- Lichvar, R.W., D.L. Banks, W.N. Kirchner, and N.C. Melvin. 2016. *The National Wetland Plant List: 2016 wetland ratings*. *Phytoneuron* 2016-30: 1-17. Published 28 April 2016. ISSN 2153 733X.
- Munsell Color. 2000. *Munsell Soil Color Charts*. GretagMacbeth. New Windsor, NY.
- U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Department of Agriculture, NRCS. *Web Soil Survey for Placer County Western Area, California*, Online. <http://websoilsurvey.nrcs.usda.gov>.
- Weather.com. 2016. The Weather Channel LLC. Accessed February 2016. <http://www.weather.com/weather/wxclimatology/monthly/graph/95661>.
- National Oceanic & Atmospheric Administration (NOAA) 2016. *Record of Climatological Observation, Month of March 2016*. <https://www.ncdc.noaa.gov/cdo-web/> Accessed April 25, 2016.

**Appendix A.**  
**Wetland Data Sheets**

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 1  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): Plain Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            |  |     |                          |    |                                     |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                                     |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status |   |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. <i>Quercus lobata</i>                    | 30                            | <input checked="" type="checkbox"/> | FAC              | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>4</u><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                | 30                            |                                     |                  |   |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  |   |
| 1. <i>Rubus discolor</i>                    | 5                             | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by:<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br>Prevalence Index = B/A = _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                | 5                             |                                     |                  |   |
| <u>Herb Stratum</u>                         |                               |                                     |                  |   |
| 1. <i>Lolium multiflorum</i>                | 40                            | <input checked="" type="checkbox"/> | FAC              | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) |
| 2. <i>Unknown grass</i>                     | 20                            | <input checked="" type="checkbox"/> | FAC              |   |
| 3. <i>Rumex crispus</i>                     | 10                            | <input type="checkbox"/>            | FACW-            |   |
| 4. <i>Vicia sativa</i>                      | 5                             | <input type="checkbox"/>            | FACU             |   |
| 5. <i>Galium aparine</i>                    | 5                             | <input type="checkbox"/>            | FACU             |   |
| 6. <i>Geranium molle</i>                    | 5                             | <input type="checkbox"/>            | -                |   |
| 7. <i>Cyperus eragrostis</i>                | 1                             | <input type="checkbox"/>            | FACW             |   |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                | 86                            |                                     |                  |   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover:                                |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| Remarks:                                    |                               |                                     |                  |   |

**SOIL**

Sampling Point:

1

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |     |                |    |                   |                  |                   |         |
|---|---------------|-----|----------------|----|-------------------|------------------|-------------------|---------|
| Depth<br>(inches)   | Matrix        |     | Redox Features |    |                   |                  | Texture           | Remarks |
|   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-4   | 7.5 YR 4/2    | 100 |                |    |                   |                  | Coarse sandy loam |         |
| 4-5   | 10 YR 4/2     | 100 |                |    |                   |                  | Coarse sandy loam |         |
| 5-9   | 10 YR 3/1     | 90  | 7.5 YR 3/3     | 10 | C                 | M                | Coarse sandy loam |         |
|   |               |     |                |    |                   |                  |                   |         |
|   |               |     |                |    |                   |                  |                   |         |
|   |               |     |                |    |                   |                  |                   |         |
|   |               |     |                |    |                   |                  |                   |         |
|   |               |     |                |    |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)                   | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)               | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)           | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)           | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)               | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input checked="" type="checkbox"/> Redox Dark Surface (F6) |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7)         |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)             |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)                  |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks:  
 At 6 inches deep within the soil profile, there appears to be a red band.

**HYDROLOGY**

| Wetland Hydrology Indicators:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  |  |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**  
 Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_  
 Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ **Wetland Hydrology Present** Yes  No   
 (includes capillary fringe)

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

Remarks:  
 Lacks evidence of wetland hydrology indicators.



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 2  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?                                  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Wetland Hydrology Present?                            | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Remarks:<br>Upland comparison point to data point #3. |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|-------------------------------|-------------------------------------|------------------|--|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>2</u>   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (B)   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | Total Cover: _____   |
| Total Cover: _____                          |                               |                                     |                  | <b>Prevalence Index worksheet</b>  |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  | Total % Cover of: _____ Multiply by:   |
| 1.. _____                                   |                               | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  | UPL species _____ x5= _____  |
| Total Cover: _____                          |                               |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| <u>Herb Stratum</u>                         |                               |                                     |                  | Prevalence Index = B/A = _____   |
| 1. <i>Bromus hordeaceus</i>                 | 40                            | <input checked="" type="checkbox"/> | FACU-            | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Bromus diandrus</i>                   | 40                            | <input checked="" type="checkbox"/> | -                |  |
| 3. <i>Geranium molle</i>                    | 15                            | <input type="checkbox"/>            | -                |  |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 6. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>95</u>                      |                               |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |  |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          |                               |                                     |                  |  |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |  |
| Remarks:                                    |                               |                                     |                  |  |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-2               | 7.5 YR 2/2    | 100 |                |   |                   |                  | Coarse sandy loam |         |
| 2-14              | 10 YR 3/1     | 100 |                |   |                   |                  | Coarse sandy loam |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 3  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| Hydric Soil Present?            | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Wetland Hydrology Present?      | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Remarks:<br>Wetland swale.      |     |                                     |    |                          |  |     |                                     |    |                          |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.)                       | Absolute % Cover | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____  |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  |
| 2. _____  |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>1</u>   |
| 3. _____  |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 4. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____  |                  |                                     |                  |  |
| <u>Sapling/Shrub Stratum</u>                                      |                  |                                     |                  | <b>Prevalence Index worksheet</b>  |
| 1.. _____   |                  | <input type="checkbox"/>            |                  | Total % Cover of: _____ Multiply by: _____   |
| 2. _____  |                  | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 3. _____  |                  | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 4. _____  |                  | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 5. _____  |                  | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| Total Cover: _____  |                  |                                     |                  | UPL species _____ x5= _____  |
| <u>Herb Stratum</u>   |                  |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| 1. <i>Juncus xiphioides</i>                                       | 90               | <input checked="" type="checkbox"/> | OBL              | Prevalence Index = B/A = _____   |
| 2. <i>Geranium molle</i>  | 10               | <input type="checkbox"/>            | -                |  |
| 3. <i>Rumex crispus</i>   | 5                | <input type="checkbox"/>            | FACW-            |  |
| 4. _____  |                  | <input type="checkbox"/>            |                  |  |
| 5. _____  |                  | <input type="checkbox"/>            |                  |  |
| 6. _____  |                  | <input type="checkbox"/>            |                  |  |
| 7. _____  |                  | <input type="checkbox"/>            |                  |  |
| 8. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>105</u>   |                  |                                     |                  |  |
| <u>Woody Vine Stratum</u>   |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b>  |
| 1. _____  |                  | <input type="checkbox"/>            |                  | <input checked="" type="checkbox"/> Dominance Test is >50%   |
| 2. _____  |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup>   |
| Total Cover: _____  |                  |                                     |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet) |
| % Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____ |                  |                                     |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)   |
| Remarks:  |                  |                                     |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present   |
|   |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>                 |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-2               | 10 YR 2/2     | 100 |                |   |                   |                  | Coarse sandy loam |         |
| 2-14              | 10 YR 4/1     | 100 |                |   |                   |                  | Coarse sandy loam |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

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

|  |  |   |
|--|--|---|
| <input type="checkbox"/> Histosol (A1)                           | <input type="checkbox"/> Sandy Redox (S5)                | <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR C</b> )  |
| <input type="checkbox"/> Histic Epipedon (A2)                    | <input type="checkbox"/> Stripped Matrix (S6)            | <input type="checkbox"/> 2 cm Muck (A10) ( <b>LRR B</b> ) |
| <input type="checkbox"/> Black Histic (A3)                       | <input type="checkbox"/> Loamy Mucky Mineral (F1)        | <input type="checkbox"/> Reduced Vertic (F18)             |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        | <input type="checkbox"/> Red Parent Material (TF2)        |
| <input type="checkbox"/> Stratified Layers (A5) ( <b>LRR C</b> ) | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks)       |
| <input type="checkbox"/> 1 cm Muck (A9) ( <b>LRR D</b> )         | <input type="checkbox"/> Redox Dark Surface (F6)         |   |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)       | <input type="checkbox"/> Depleted Dark Surface (F7)      |   |
| <input type="checkbox"/> Thick Dark Surface (A12)                | <input type="checkbox"/> Redox Depressions (F8)          |   |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                | <input type="checkbox"/> Vernal Pools (F9)               |   |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                |  |   |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks:  
 Low chroma, soils are hydric based on the Corps 1987 Manual.

**HYDROLOGY**

|  |   |
|--|---|
| <b>Wetland Hydrology Indicators:</b>                                   | <b>Secondary Indicators (2 or more required)</b>                    |
| Primary Indicators (any one indicator is sufficient)                   |   |
| <input type="checkbox"/> Surface Water (A1)                            | <input type="checkbox"/> Water Marks (B1) ( <b>Riverine</b> )       |
| <input type="checkbox"/> High Water Table (A2)                         | <input type="checkbox"/> Sediment Deposits (B2) ( <b>Riverine</b> ) |
| <input checked="" type="checkbox"/> Saturation (A3)                    | <input type="checkbox"/> Drift Deposits (B3) ( <b>Riverine</b> )    |
| <input type="checkbox"/> Water Marks (B1) ( <b>Nonriverine</b> )       | <input type="checkbox"/> Drainage Patterns (B10)                    |
| <input type="checkbox"/> Sediment Deposits (B2) ( <b>Nonriverine</b> ) | <input type="checkbox"/> Dry-Season Water Table (C2)                |
| <input type="checkbox"/> Drift Deposits (B3) ( <b>Nonriverine</b> )    | <input type="checkbox"/> Thin Muck Surface (C7)                     |
| <input type="checkbox"/> Surface Soil Cracks (B6)                      | <input type="checkbox"/> Crayfish Burrows (C8)                      |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)     | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                     | <input type="checkbox"/> Shallow Aquitard (D3)                      |
| <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> FAC-Neutral Test (D5)                      |
| <input type="checkbox"/> Biotic Crust (B12)                            |   |
| <input type="checkbox"/> Aquatic Invertebrates (B13)                   |   |
| <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    |   |
| <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) |   |
| <input type="checkbox"/> Presence of Reduced Iron (C4)                 |   |
| <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    |   |
| <input type="checkbox"/> Other (Explain in Remarks)                    |   |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): **17 in** **Wetland Hydrology Present** Yes  No

(includes capillary fringe)

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

Remarks:

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 4  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydic Soil Present?             | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                          |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.)  | Absolute % Cover | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>                                       |
|--|------------------|-------------------------------------|------------------|--|
| 1. _____   |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)    |
| 2. _____   |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>3</u>           |
| 3. _____   |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B) |
| 4. _____   |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____   |                  |                                     |                  |  |
| <b><u>Sapling/Shrub Stratum</u></b>  |                  |                                     |                  |  |
| 1. _____   |                  | <input type="checkbox"/>            |                  | <b>Prevalence Index worksheet</b>                                      |
| 2. _____   |                  | <input type="checkbox"/>            |                  |  |
| 3. _____   |                  | <input type="checkbox"/>            |                  |  |
| 4. _____   |                  | <input type="checkbox"/>            |                  |  |
| 5. _____   |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____   |                  |                                     |                  | Total % Cover of: _____ Multiply by: _____                             |
| <b><u>Herb Stratum</u></b>   |                  |                                     |                  |  |
| 1. <i>Bromus hordeaceus</i>  | 30               | <input checked="" type="checkbox"/> | FACU-            | OBL species _____ x1= _____  |
| 2. <i>Hordeum murinum</i>  | 30               | <input checked="" type="checkbox"/> | -                | FACW species _____ x2= _____   |
| 3. <i>Trifolium hirtum</i>   | 20               | <input checked="" type="checkbox"/> | -                | FAC species _____ x3= _____  |
| 4. <i>Lolium multiflorum</i>   | 10               | <input type="checkbox"/>            | FAC              | FACU species _____ x4= _____   |
| 5. <i>Geranium molle</i>   | 5                | <input type="checkbox"/>            | -                | UPL species _____ x5= _____  |
| 6. _____   |                  | <input type="checkbox"/>            |                  | Column Totals: _____ (A) _____ (B)                                     |
| 7. _____   |                  | <input type="checkbox"/>            |                  |  |
| 8. _____   |                  | <input type="checkbox"/>            |                  | Prevalence Index = B/A = _____   |
| Total Cover: <u>95</u>   |                  |                                     |                  |  |
| <b><u>Woody Vine Stratum</u></b>   |                  |                                     |                  |  |
| 1. _____   |                  | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Indicators:</b>                              |
| 2. _____   |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____   |                  |                                     |                  | <input type="checkbox"/> Dominance Test is >50%                        |
| <b>% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____</b>   |                  |                                     |                  |  |
| <input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup>   |                  |                                     |                  |  |
| <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet) |                  |                                     |                  |  |
| <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)   |                  |                                     |                  |  |
| <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present   |                  |                                     |                  |  |
| <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>                 |                  |                                     |                  |  |

Remarks:  
Recently plowed.

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-12              | 10 YR 3/2     | 100 |                |   |                   |                  | Coarse sandy loam |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present Yes  No

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

Remarks:  
Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 5  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 2  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?  | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                          |    |                                     |
| Wetland Hydrology Present?  | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:<br><u>Ditch</u> that drains storm water runoff. Drains for a short distance on the site and leaves via a 30 inch culvert under Sierra College Boulevard. |     |                                     |    |                          |  |     |                          |    |                                     |

**VEGETATION**

| Tree Stratum (Use scientific names.)    | Absolute % Cover              | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. _____                                |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)   |
| 2. _____                                |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>2</u>  |
| 3. _____                                |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 4. _____                                |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                      |                               |                                     |                  |   |
| <b>Sapling/Shrub Stratum</b>            |                               |                                     |                  |   |
| 1. _____                                |                               | <input type="checkbox"/>            |                  | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____  |
| 2. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                      |                               |                                     |                  |   |
| <b>Herb Stratum</b>                     |                               |                                     |                  |   |
| 1. <i>Juncus xiphioides</i>             | 20                            | <input checked="" type="checkbox"/> | OBL              | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Juncus mexicanus</i>              | 10                            | <input checked="" type="checkbox"/> | FACW             |   |
| 3. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 6. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 7. _____                                |                               | <input type="checkbox"/>            |                  |   |
| 8. _____                                |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: <u>30</u>                  |                               |                                     |                  |   |
| <b>Woody Vine Stratum</b>               |                               |                                     |                  |   |
| 1. _____                                |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                                |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                      |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum <u>70</u> | % Cover of Biotic Crust _____ |                                     |                  |   |

Remarks:  
 Recently cleared.

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-4               | 7.5 YR 2.5/1  | 100 |                |    |                   |                  | Coarse sandy loam |         |
| 4-12              | 10 YR 4/1     | 90  | 7.5 YR 4/6     | 10 | C                 | M                | Clayey            |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |
|                   |               |     |                |    |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |  | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|--|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)                | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)            | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)        | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)         |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7)      |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)          |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)               |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |  |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input checked="" type="checkbox"/> Water-Stained Leaves (B9)      |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**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 Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: \_\_\_\_\_ State: CA Sampling Point: 6  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?                                  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Wetland Hydrology Present?                            | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Remarks:<br>Upland comparison point to data point #5. |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.)                           | Absolute % Cover | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|------------------|-------------------------------------|------------------|--|
| 1. _____  |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  |
| 2. _____  |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>3</u>   |
| 3. _____  |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (B/A)   |
| 4. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____  |                  |                                     |                  |  |
| <u>Sapling/Shrub Stratum</u>  |                  |                                     |                  | <b>Prevalence Index worksheet</b>  |
| 1.. <u>Rubus discolor</u>   | 20               | <input checked="" type="checkbox"/> | FACW             | Total % Cover of: _____ Multiply by:   |
| 2. _____  |                  | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 3. _____  |                  | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 4. _____  |                  | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 5. _____  |                  | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| Total Cover: 20   |                  | <input type="checkbox"/>            |                  | UPL species _____ x5= _____  |
|   |                  |                                     |                  | Column Totals: _____ (A) _____ (B)   |
|   |                  |                                     |                  | Prevalence Index = B/A = _____   |
| <u>Herb Stratum</u>   |                  |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b>  |
| 1. <u>Geranium molle</u>  | 15               | <input checked="" type="checkbox"/> | -                | <input type="checkbox"/> Dominance Test is >50%  |
| 2. <u>Bromus hordeaceus</u>   | 10               | <input checked="" type="checkbox"/> | -                | <input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup>   |
| 3. _____  |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet) |
| 4. _____  |                  | <input type="checkbox"/>            |                  | <input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)   |
| 5. _____  |                  | <input type="checkbox"/>            |                  |  |
| 6. _____  |                  | <input type="checkbox"/>            |                  |  |
| 7. _____  |                  | <input type="checkbox"/>            |                  |  |
| 8. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: 25   |                  |                                     |                  |  |
| <u>Woody Vine Stratum</u>   |                  |                                     |                  | <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present   |
| 1. _____  |                  | <input type="checkbox"/>            |                  |  |
| 2. _____  |                  | <input type="checkbox"/>            |                  |  |
| Total Cover: _____  |                  |                                     |                  |  |
| % Bare Ground in Herb Stratum <u>20</u> % Cover of Biotic Crust _____ |                  |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>                 |
| Remarks:  |                  |                                     |                  |  |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture           | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |                   |         |
| 0-4               | 10 YR 3/2     | 100 |                |   |                   |                  | Coarse sandy loam |         |
| 4-12              | 10 YR 3/2     | 98  | 10 YR 3/3      | 2 | C                 | M                | Loamy             |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |
|                   |               |     |                |   |                   |                  |                   |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

Wetland Hydrology Present Yes  No

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/13/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 7  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5%  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 <input type="checkbox"/> | No <input checked="" type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| Hydric Soil Present?             | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Wetland Hydrology Present?       | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |  |                              |  |
| Remarks:<br><b>Upland swale.</b> |                              |  |  |                              |  |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>   |
|---|-------------------------------|-------------------------------------|------------------|--|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>2</u>   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (B)   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | Total Cover: _____   |
| Total Cover: _____                          |                               |                                     |                  | <b>Prevalence Index worksheet</b>  |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  | Total % Cover of: _____ Multiply by:   |
| 1.. _____                                   |                               | <input type="checkbox"/>            |                  | OBL species _____ x1= _____  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | FACW species _____ x2= _____   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | FAC species _____ x3= _____  |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | FACU species _____ x4= _____   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  | UPL species _____ x5= _____  |
| Total Cover: _____                          |                               |                                     |                  | Column Totals: _____ (A) _____ (B)   |
| <u>Herb Stratum</u>                         |                               |                                     |                  | Prevalence Index = B/A = _____   |
| 1. <i>Bromus diandrus</i>                   | 40                            | <input checked="" type="checkbox"/> | -                | <b>Hydrophytic Vegetation Indicators:</b><br><input type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. <i>Bromus hordeaceus</i>                 | 40                            | <input checked="" type="checkbox"/> | FACU-            |  |
| 3. <i>Epilobium brachycarpum</i>            | 20                            | <input type="checkbox"/>            | -                |  |
| 4. <i>Veronica sp.</i>                      | 10                            | <input type="checkbox"/>            | Varies           |  |
| 5. <i>Vicia sativa</i>                      | 5                             | <input type="checkbox"/>            | FACU             |  |
| 6. <i>Torilis arvensis</i>                  | 5                             | <input type="checkbox"/>            | -                |  |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: <u>120</u>                     |                               |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  |  |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |  |
| Total Cover: _____                          |                               |                                     |                  |  |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |  |
| Remarks:                                    |                               |                                     |                  |  |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture | Remarks                             |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|---------|-------------------------------------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |         |                                     |
| 0-8               | 10 YR 3/2     | 100 |                |   |                   |                  | Loam    |                                     |
| 8-12              | 7.5 YR 4/2    | 100 |                |   |                   |                  | Sandy   | Sand mixed with soil, multi-colored |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |
|                   |               |     |                |   |                   |                  |         |                                     |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  |  |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
|  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/27/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 8  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydic Soil Present?             | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            |  |     |                          |    |                                     |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                                     |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status |   |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Dominance Test worksheet:</b><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____  |
| <u>Sapling/Shrub Stratum</u>                |                               |                                     |                  |   |
| 1.. <i>Rubus discolor</i>                   | 100                           | <input checked="" type="checkbox"/> | FACW             |   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: 100                            |                               | <input type="checkbox"/>            |                  |   |
| <u>Herb Stratum</u>                         |                               |                                     |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 6. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <u>Woody Vine Stratum</u>                   |                               |                                     |                  | <sup>1</sup> Indicators of hydic soil and wetland hydrology must be present   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| Remarks:                                    |                               |                                     |                  |   |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |    |                   |                  | Texture     | Remarks                                    |
|-------------------|---------------|-----|----------------|----|-------------------|------------------|-------------|--|
|                   | Color (moist) | %   | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |             |  |
| 0-6               | 7.5 YR 3/2    | 100 |                |    |                   |                  | Loamy       |  |
| 6-12              | 7.5 YR 3/2    | 50  | 10 YR 4/3      | 50 |                   |                  | Coarse loam | Chunks of decomposed granite mixed in soil |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |
|                   |               |     |                |    |                   |                  |             |  |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present.

**Restrictive Layer (if present):**  
 Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes  No

Remarks:  
 Soil profile may consist of mixed soil.

**HYDROLOGY**

| Wetland Hydrology Indicators:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_

(includes capillary fringe)

**Wetland Hydrology Present** Yes  No

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.

**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/27/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 9  
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 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
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 Are climatic / hydrologic conditions on the site typical for this time of year? Yes  No  (If no, explain in Remarks.)  
 Are Vegetation N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/>            | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Hydric Soil Present?            | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  | Yes | <input type="checkbox"/> | No | <input checked="" type="checkbox"/> |
| Wetland Hydrology Present?      | Yes | <input type="checkbox"/>            | No | <input checked="" type="checkbox"/> |  |     |                          |    |                                     |
| Remarks:                        |     |                                     |    |                                     |  |     |                          |    |                                     |

**VEGETATION**

| <u>Tree Stratum</u> (Use scientific names.) | Absolute % Cover              | Dominant Species?                   | Indicator Status | <b>Dominance Test worksheet:</b>  |
|---|-------------------------------|-------------------------------------|------------------|---|
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>1</u>  |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <b><u>Sapling/Shrub Stratum</u></b>         |                               |                                     |                  |   |
| 1.. <u>Rubus discolor</u>                   | 100                           | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b>   |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  | Total % Cover of: _____ Multiply by: _____  |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  | OBL species _____ x1= _____   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  | FACW species _____ x2= _____  |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  | FAC species _____ x3= _____   |
| Total Cover: 100                            |                               | <input type="checkbox"/>            |                  | FACU species _____ x4= _____  |
|   |                               |                                     |                  | UPL species _____ x5= _____   |
|   |                               |                                     |                  | Column Totals: _____ (A) _____ (B)  |
|   |                               |                                     |                  | Prevalence Index = B/A = _____  |
| <b><u>Herb Stratum</u></b>                  |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 3. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 4. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 5. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 6. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 7. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| 8. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| <b><u>Woody Vine Stratum</u></b>            |                               |                                     |                  |   |
| 1. _____                                    |                               | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                                    |                               | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                          |                               |                                     |                  |   |
| % Bare Ground in Herb Stratum _____         | % Cover of Biotic Crust _____ |                                     |                  |   |
| Remarks:                                    |                               |                                     |                  |   |

**SOIL**

Sampling Point:

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture     | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|-------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |             |         |
| 0-12              | 10 YR 3/2     | 100 |                |   |                   |                  | Coarse loam |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |
|                   |               |     |                |   |                   |                  |             |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input type="checkbox"/> Surface Water (A1)                        | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input type="checkbox"/> Saturation (A3)                           | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                    | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): \_\_\_\_\_

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): \_\_\_\_\_ **Wetland Hydrology Present** Yes  No

(includes capillary fringe)

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

Remarks:  
 Lacks evidence of prolonged seasonal saturation.



**WETLAND DETERMINATION DATA FORM – Arid West Region**

Project/Site Sierra-Brace City/County: Town of Loomis, Placer County Sampling Date: 12/27/2007  
 Applicant/Owner: Patterson Properties State: CA Sampling Point: 10  
 Investigator(s): Pat Britton and Melissa Perretti Section, Township, Range: Section 16, Township 11N, Range 7E  
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): Concave Slope (%): 5  
 Subregion (LRR): C Lat: 38°48'34"North Long: 121°12'16" West Datum: NAD 83  
 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 N, Soil N, or Hydrology N significantly disturbed? Are "Normal Circumstances" present? Yes  No   
 Are Vegetation N, Soil N, or Hydrology N 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 | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> | <b>Is the Sampled Area within a Wetland?</b> | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |
| Hydric Soil Present?              | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Wetland Hydrology Present?        | Yes | <input checked="" type="checkbox"/> | No | <input type="checkbox"/> |  |     |                                     |    |                          |
| Remarks:<br><u>Drainage ditch</u> |     |                                     |    |                          |  |     |                                     |    |                          |

**VEGETATION**

| Tree Stratum (Use scientific names.) | Absolute % Cover | Dominant Species?                   | Indicator Status | Dominance Test worksheet:   |
|--------------------------------------|------------------|-------------------------------------|------------------|---|
| 1. _____                             |                  | <input type="checkbox"/>            |                  | Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)   |
| 2. _____                             |                  | <input type="checkbox"/>            |                  | Total Number of Dominant Species Across All Strata: <u>1</u>  |
| 3. _____                             |                  | <input type="checkbox"/>            |                  | Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)   |
| 4. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                   |                  |                                     |                  |   |
| <b>Sapling/Shrub Stratum</b>         |                  |                                     |                  |   |
| 1.. <u>Rubus discolor</u>            | 100              | <input checked="" type="checkbox"/> | FACW             | <b>Prevalence Index worksheet</b><br>Total % Cover of: _____ Multiply by: _____<br>OBL species _____ x1= _____<br>FACW species _____ x2= _____<br>FAC species _____ x3= _____<br>FACU species _____ x4= _____<br>UPL species _____ x5= _____<br>Column Totals: _____ (A) _____ (B)<br><br>Prevalence Index = B/A = _____  |
| 2. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 3. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 4. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 5. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: 100                     |                  | <input type="checkbox"/>            |                  |   |
| <b>Herb Stratum</b>                  |                  |                                     |                  |   |
| 1. _____                             |                  | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Indicators:</b><br><input checked="" type="checkbox"/> Dominance Test is >50%<br><input type="checkbox"/> Prevalence Index is ≥3.0 <sup>1</sup><br><input type="checkbox"/> Morphological Adaptations <sup>1</sup> (Provides supporting data in Remarks or on a separate sheet)<br><input type="checkbox"/> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present |
| 2. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 3. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 4. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 5. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 6. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 7. _____                             |                  | <input type="checkbox"/>            |                  |   |
| 8. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                   |                  |                                     |                  |   |
| <b>Woody Vine Stratum</b>            |                  |                                     |                  |   |
| 1. _____                             |                  | <input type="checkbox"/>            |                  | <b>Hydrophytic Vegetation Present?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>  |
| 2. _____                             |                  | <input type="checkbox"/>            |                  |   |
| Total Cover: _____                   |                  |                                     |                  |   |
| % Bare Ground in Herb Stratum _____  |                  | % Cover of Biotic Crust _____       |                  |   |

Remarks:  
Rubus over ditch/stream.

**SOIL**

Sampling Point:

10

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

| Depth<br>(inches) | Matrix        |     | Redox Features |   |                   |                  | Texture    | Remarks |
|-------------------|---------------|-----|----------------|---|-------------------|------------------|------------|---------|
|                   | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |            |         |
| 0-4               | 10 YR 3/1     | 100 |                |   |                   |                  | Sandy loam |         |
| 4-12              | 2.5 Y 5/3     | 90  | 2.5 Y 5.5/1    |   |                   |                  | Sandy loam |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |
|                   |               |     |                |   |                   |                  |            |         |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix. <sup>2</sup>Location: PL=Pore Lining, RC=Root Channel, M=Matrix

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |   | Indicators for Problematic Hydric Soils <sup>3</sup> : |  |
|---|---|--|--|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Redox (S5)           | <input type="checkbox"/> 1 cm Muck (A9) (LRR C)        |  |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Stripped Matrix (S6)       | <input type="checkbox"/> 2 cm Muck (A10) (LRR B)       |  |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Loamy Mucky Mineral (F1)   | <input type="checkbox"/> Reduced Vertic (F18)          |  |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Gleyed Matrix (F2)   | <input type="checkbox"/> Red Parent Material (TF2)     |  |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C)                   | <input type="checkbox"/> Depleted Matrix (F3)       | <input type="checkbox"/> Other (Explain in Remarks)    |  |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D)                           | <input type="checkbox"/> Redox Dark Surface (F6)    |  |  |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Depleted Dark Surface (F7) |  |  |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Redox Depressions (F8)     |  |  |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Vernal Pools (F9)          |  |  |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4)                         |   |  |  |

<sup>3</sup>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:                                      |  | Secondary Indicators (2 or more required)                          |  |
|--|--|--|--|
| Primary Indicators (any one indicator is sufficient)               |  | <input type="checkbox"/> Water Marks (B1) (Riverine)               |  |
| <input checked="" type="checkbox"/> Surface Water (A1)             | <input type="checkbox"/> Salt Crust (B11)                              | <input type="checkbox"/> Sediment Deposits (B2) (Riverine)         |  |
| <input type="checkbox"/> High Water Table (A2)                     | <input type="checkbox"/> Biotic Crust (B12)                            | <input type="checkbox"/> Drift Deposits (B3) (Riverine)            |  |
| <input checked="" type="checkbox"/> Saturation (A3)                | <input type="checkbox"/> Aquatic Invertebrates (B13)                   | <input type="checkbox"/> Drainage Patterns (B10)                   |  |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine)            | <input checked="" type="checkbox"/> Hydrogen Sulfide Odor (C1)         | <input type="checkbox"/> Dry-Season Water Table (C2)               |  |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)      | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Thin Muck Surface (C7)                    |  |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine)         | <input type="checkbox"/> Presence of Reduced Iron (C4)                 | <input type="checkbox"/> Crayfish Burrows (C8)                     |  |
| <input type="checkbox"/> Surface Soil Cracks (B6)                  | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6)    | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks)                    | <input type="checkbox"/> Shallow Aquitard (D3)                     |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                 |  | <input type="checkbox"/> FAC-Neutral Test (D5)                     |  |

**Field Observations:**

Surface Water Present? Yes  No  Depth (inches): 1"

Water Table Present? Yes  No  Depth (inches): \_\_\_\_\_

Saturation Present? Yes  No  Depth (inches): 0 **Wetland Hydrology Present** Yes  No

(includes capillary fringe)

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

Remarks:

**Appendix B.**  
**Wetland Status of Plant Species Observed in the Sierra-Brace Study Area**

## Appendix B. Wetland Status of Plant Species Observed

| Taxon   | Common Name               | Wetland Status |
|---|---------------------------|----------------|
| <i>Acacia baileyana</i>                       | Cootamundra wattle        | UPL            |
| <i>Acmispon americanus var. americanus</i>    | Spanish-clover            | UPL            |
| <i>Alisma triviale</i>                        | California water plantain | OBL            |
| <i>Amsinckia menziesii</i>                    | Rancher's fireweed        | UPL            |
| <i>Artemisia douglasiana</i>                  | California mugwort        | FAC            |
| <i>Arundo donax</i>                           | Giant reed                | FACW           |
| <i>Avena fatua</i>                            | Wild oat                  | UPL            |
| <i>Baccharis pilularis</i>                    | Coyote brush              | UPL            |
| <i>Briza minor</i>                            | Small quaking grass       | FAC            |
| <i>Bromus diandrus</i>                        | Ripgut grass              | UPL            |
| <i>Bromus hordeaceus</i>                      | Soft chess                | FACU           |
| <i>Carduus pycnocephalus</i>                  | Italian thistle           | UPL            |
| <i>Centaurea solstitialis</i>                 | Yellow starthistle        | UPL            |
| <i>Cichorium intybus</i>                      | Chicory                   | FACU           |
| <i>Cirsium arvense</i>                        | Canada thistle            | FACU           |
| <i>Clarkia sp.</i>                            | Clarkia                   | UPL            |
| <i>Claytonia perfoliata</i>                   | Common miner's lettuce    | FAC            |
| <i>Convolvulus arvensis</i>                   | Bindweed                  | UPL            |
| <i>Cynodon dactylon</i>                       | Bermudagrass              | FACU           |
| <i>Cynosurus echinatus</i>                    | Hedgehog dogtail          | UPL            |
| <i>Cyperus eragrostis</i>                     | Tall flatsedge            | FACW           |
| <i>Cytisus scoparius</i>                      | Scotch broom              | UPL            |
| <i>Elymus caput-medusae</i>                   | Medusahead                | UPL            |
| <i>Epilobium brachycarpum</i>                 | Summer cottonweed         | UPL            |
| <i>Erigeron canadensis</i>                    | Canadian horseweed        | FACU           |
| <i>Erodium botrys</i>                         | Broad-leaf filaree        | FACU           |
| <i>Erodium cicutarium</i>                     | Red-stem filaree          | UPL            |
| <i>Eschscholzia californica</i>               | California poppy          | UPL            |
| <i>Festuca perennis</i>                       | Italian ryegrass          | FAC            |
| <i>Galium aparine</i>                         | Goose grass               | FACU           |
| <i>Geranium dissectum</i>                     | Cut-leaf geranium         | UPL            |
| <i>Geranium molle</i>                         | Dove's-foot geranium      | UPL            |
| <i>Hirschfeldia incana</i>                    | Short-podded mustard      | UPL            |
| <i>Hordeum marinum subsp. gussoneanum</i>     | Mediterranean barley      | FAC            |
| <i>Hordeum murinum</i>                        | Wall barley               | FACU           |
| <i>Hypericum perforatum subsp. perforatum</i> | Klamathweed               | FACU           |
| <i>Hypochaeris glabra</i>                     | Smooth cat's-ear          | UPL            |
| <i>Juncus mexicanus</i>                       | Mexican rush              | FACW           |

| <b>Taxon</b>                              | <b>Common Name</b>   | <b>Wetland Status</b> |
|---|----------------------|-----------------------|
| <i>Juncus xiphioides</i>                  | Iris-leaved rush     | OBL                   |
| <i>Lactuca serriola</i>                   | Prickly lettuce      | FACU                  |
| <i>Lamium amplexicaule</i>                | Deadnettle           | UPL                   |
| <i>Lupinus bicolor</i>                    | Miniature lupine     | UPL                   |
| <i>Lythrum hyssopifolia</i>               | Hyssop loosestrife   | OBL                   |
| <i>Melilotus sp.</i>                      | Melilotus            | UPL                   |
| <i>Nasturtium officinale</i>              | Watercress           | OBL                   |
| <i>Olea europaea</i>                      | Olive                | UPL                   |
| <i>Paspalum dilatatum</i>                 | Dallis grass         | FAC                   |
| <i>Pinus sabiniana</i>                    | Gray pine            | UPL                   |
| <i>Plantago lanceolata</i>                | English plantain     | FAC                   |
| <i>Polypogon monspeliensis</i>            | Annual beard grass   | FACW                  |
| <i>Populus fremontii subsp. fremontii</i> | Fremont cottonwood   | FAC                   |
| <i>Prunus dulcis</i>                      | Almond tree          | UPL                   |
| <i>Pyracantha sp.</i>                     | Pyracantha           | UPL                   |
| <i>Pyrus sp.</i>                          | Pear                 | UPL                   |
| <i>Quercus douglasii</i>                  | Blue oak             | UPL                   |
| <i>Quercus lobata</i>                     | Valley oak           | FACU                  |
| <i>Quercus wislizeni</i>                  | Interior live oak    | UPL                   |
| <i>Rubus armeniacus</i>                   | Himalayan blackberry | FACU                  |
| <i>Rumex crispus</i>                      | Curly dock           | FAC                   |
| <i>Salix exigua var. exigua</i>           | Narrowleaf willow    | FACW                  |
| <i>Salix lasiolepis</i>                   | Arroyo willow        | FACW                  |
| <i>Silybum marianum</i>                   | Milk thistle         | UPL                   |
| <i>Sonchus asper subsp. asper</i>         | Prickly sow-thistle  | FAC                   |
| <i>Spartium junceum</i>                   | Spanish broom        | UPL                   |
| <i>Torilis arvensis</i>                   | Field hedgeparsley   | UPL                   |
| <i>Toxicodendron diversilobum</i>         | Western poison-oak   | FACU                  |
| <i>Trifolium hirtum</i>                   | Rose clover          | UPL                   |
| <i>Verbascum blattaria</i>                | Moth mullein         | UPL                   |
| <i>Verbascum thapsus</i>                  | Woolly mullein       | FACU                  |
| <i>Veronica sp.</i>                       | Speedwell            | VARIES                |
| <i>Vicia sativa</i>                       | Common vetch         | FACU                  |
| <i>Vicia villosa</i>                      | Winter vetch         | UPL                   |
| <i>Vinca major</i>                        | Periwinkle           | UPL                   |

**Appendix C.**  
**USACOE Aquatic Resources Spreadsheet**

| Waters_Name     | State      | Cowardin_Code | HGM_Code | Meas_Type | Amount | Units | Waters_Type | Latitude    | Longitude    | Local_Waterway |
|-----------------|------------|---------------|----------|-----------|--------|-------|-------------|-------------|--------------|----------------|
| Wetland Swale-1 | CALIFORNIA | PEM2          | SLOPE    | Area      | 0.125  | ACRE  | DELINEATE   | 38.80860477 | -121.2046204 | Sucker Ravine  |
| Wetland Swale-2 | CALIFORNIA | PEM1          | SLOPE    | Area      | 0.012  | ACRE  | DELINEATE   | 38.80984881 | -121.2025173 | Sucker Ravine  |
| Wetland Swale-3 | CALIFORNIA | PEM2          | SLOPE    | Area      | 0.016  | ACRE  | DELINEATE   | 38.80752123 | -121.2052995 | Sucker Ravine  |

**Attachment 1.**  
**USACOE Verification Letter, March 2009**





DEPARTMENT OF THE ARMY  
 U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
 CORPS OF ENGINEERS  
 1325 J STREET  
 SACRAMENTO CA 95814-2922

RECEIVED  
 MAR 26 2009

REPLY TO  
 ATTENTION OF

BY:.....

March 20, 2009

Regulatory Division (SPK-2008-00630)

Stephen Patterson  
 Patterson Properties  
 2270 Douglas Boulevard, Suite 111  
 Roseville, California 95661

Dear Mr. Patterson:

We are responding to your consultant's request for an approved jurisdictional determination for the Sierra-Brace Property. This approximately 17.88-acre site is located in Section 28, Township 11 North, Range 7 East, MDB&M, Latitude 38.808793° North, Longitude 121.203869° West, near the City of Rocklin and Town of Loomis, Placer County, California.

Based on available information, we concur with the estimate of waters of the United States, as depicted on the February 28, 2008, *Appendix C, Wetland Delineation Map, Sierra-Brace Study Area, Town of Loomis, Placer County, CA*, drawing prepared by North Fork Associates. Approximately 0.14 acre of waters of the United States, including wetlands, is present within the survey area. These waters are regulated under Section 404 of the Clean Water Act, since they are tributary to an unnamed intermittent stream, which is tributary to Secret Ravine, which is tributary to Miner's Ravine, which is tributary to Dry Creek, which is tributary to the Natomas East Main Drainage Canal, which is tributary to the Sacramento River, a navigable water of the United States.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331.

A Notification of Appeal Process (NAP) fact sheet and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 1455 Market Street, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must be received at the above address by 60 days from the date of this letter. It is

not necessary to submit an RFA form to the Division Office if you do not object to the determination in this letter.

You should provide a copy of this letter and notice to all other affected parties, including any individual who has an identifiable and substantial legal interest in the property.

This determination has been conducted to identify the limits of Corps of Engineers' Clean Water Act jurisdiction for the particular site identified in this request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

We appreciate your feedback. At your earliest convenience, please complete our customer survey at [http://www.spk.usace.army.mil/customer\\_survey.html](http://www.spk.usace.army.mil/customer_survey.html). Your passcode is "conigliaro".

Please refer to identification number SPK-2008-00630 in any correspondence concerning this project. If you have any questions, please contact (b) (6) at our California North Branch, 1325 J Street, Room 1480, Sacramento, California, 95814-2922, email (b) (6)@usace.army.mil, or telephone (916) 557-6740. You may also use our website: [www.spk.usace.army.mil/regulatory.html](http://www.spk.usace.army.mil/regulatory.html).

Sincerely,

**ORIGINAL SIGNED**

(b) (6)

Chief, California North Branch

Enclosure(s)

Copy furnished without enclosure(s)

- ✓ Pat Britton, North Fork Associates, 110 Maple Street, Auburn, California 95603
- William Marshall, Storm Water and Water Quality Certification Unit, California Regional Water Quality Control Board, Central Valley Region, 11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
- Kent Smith, California Department of Fish and Game, Region 2, 1701 Nimbus Drive, Rancho Cordova, California 95670-4599
- U.S. Fish and Wildlife Service, Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California 95825-3901
- Robert Leidy, Environmental Protection Agency, WRT-8, 75 Hawthorne Street, San Francisco, California 94105
- Rodney R. McInnis, Acting Regional Administrator, National Marine Fisheries Service, 650 Capital Mall, Suite 8-300, Sacramento, California 95814-4706

# Arborist Report





# Mann Made Resources

Arborist Consulting and Tree Conservation Products

December 9, 2016

Mr. Steve Calcagno  
Kier & Wright Civil Engineers & Surveyors  
2850 Collier Canyon Road  
Livermore, CA 94551

**SUBJECT: ARBORISTS REPORT FOR COSTCO SITE, LOOMIS, CA**

Dear Mr. Calcagno,

Thank you for the opportunity to provide Arborist Consulting Services. The trees on the subject property were inspected on Friday, Saturday, and Sunday, November 18, 19, and 20, and December 9, 2016, and this report provides the findings from the inspections.

**Assignment and Background:** You contacted my office on October 30<sup>th</sup> to request an arborist inspection of the trees located within the construction site in Loomis on Sierra College Boulevard and Brace Road for a proposed Costco. I provided a proposal, and you provided the site image to work from. The assignment was to list all Blue Oak trees 4 inches diameter and greater, and all Live Oak and Valley Oak trees 6 inches diameter and greater. You also asked for an estimate of the mitigation required for the removal of the trees on the property.

**Observations:** The site was inspected on Friday, Saturday, and Sunday, November 18, 19, and 20, with a re-visit on Friday, December 9, 2016 to capture 9 trees that were not completed during the previous site visits. The site is an open area surrounded by fencing, bordered by Sierra College Boulevard top the west, Brace Road to the north, and the Rocklin Border to the south. An apartment complex is adjacent to the property on Brace Road, and the entry gate to the property was behind the driveway into the apartment complex. There is a piece of excess property to the east of the apartment complex that was included in the survey. Twenty eight trees were found to be in the excess property.

Prior to beginning the survey, I reviewed the Loomis Tree Preservation Ordinance to assure the data collected meets their requirements. A Trimble Geo7X unit was used to capture the data and tree locations. A tree ID number was listed on the map image, and the tree tag number was listed for each tree, and the data spreadsheet lists both numbers for easier field identification. The Tree ID number is shown on the KMZ file except for the last 9 trees along Brace Road that were captured using Google Earth, and the Tree ID number and the tag number are the same for those trees.

Each Oak tree was visited and measured. Undersized trees were not listed. Most of the trees had 1 or two previous tag numbers, and a new number was given to each tree for this inspection. Three trees were double numbered with 301, 302, and 303, before I caught that the same numbers were already used. The double number trees are differentiated by the Tree ID numbers. The tag I installed has the nail head tilted downward so the tag falls away from the tree. Tree tags are typically good for at least three years. After three years, tags may need to be replaced as the tree can grow over the tag which makes the tag number unable to be read. Each tree ID number is the number shown on the KMZ file aerial image.

The required data to be collected was:

- i. Tree number
- ii. Tree species/common name
- iii. Diameter at 4.5' above grade, or the best measurement for diameter if 4.5 was not a good representation of the trunk diameter.
- iv. Condition determined by combining vigor, structure, and ability to grow on the site, rated from Excellent, Good, Fair, Major Problems, Extreme Problems, or Dead. Condition ratings are used to calculate mitigation requirements.
- v. Comments supporting the condition rating.

All of the trees were viewed while standing on the ground. The diameter was measured using a diameter tape. A probe was used to learn the depth of cavities. A mallet was used to sound the wood and listen for hollow spots.

Three Hundred Seventy Two (372) trees were listed as being of protected size. One hundred sixty two (162) trees were found to be in good or fair condition. Two hundred ten (210) trees were found to be in poor, very poor, or dead condition. The inspection data is shown on the attached 20 page spreadsheet.

**Other testing or examination:** No other testing or examination was agreed to as part of the inspection assignment.

**Discussion:** The Town's Tree Preservation Ordinance provided the requirements for data collection. Blue Oaks 4 inches diameter and greater, and Valley and Live Oaks 6 inches diameter and greater are considered Protected Trees.

A total of 372 trees were listed found to be of protected size. Of the 372 total trees, 210 trees were found to be in condition rating 2, 1, and 0, and do not require mitigation. Of the 210 trees, 168 trees were found to be in poor condition, a numerical 2 rating, considered major problems. Thirty eight (38) trees were found to be in very poor condition a 1 rating, considered extreme problems. Four (4) trees were found to be dead, a zero rating.

One hundred sixty two (162) trees were found to be in good and fair condition. Eight (8) trees were found to be in good condition, a 4 rating. Fifteen (15) #15 container size trees are required for mitigation. One hundred fifty four (154) trees were found to be in fair condition, a 3 rating. Two Hundred Seventy Five (275) #15 container size trees are required for mitigation. Per the Town's ordinance, a total of 290 #15 container size trees may be required to be planted on the site for mitigation.

Two (2) of the existing trees in good and fair condition were found to be blue oaks, and require higher mitigation planting. Eighty six (86) of the existing trees were found to be Live Oaks. Two hundred eighty four trees were found to be Valle Oaks.

The spreadsheet includes the tree map ID number, the tree tag number, common name, species, diameter at 4.5 measurement or other appropriate location, tree condition using the Town of Loomis 0-5 rating system, and comments with notes supporting the condition rating. The spreadsheet is sorted 3 ways, by tree tag number, tree condition to calculate mitigation planting, and by species.

**Conclusion:** Three hundred seventy two (372) trees were found to be of protected size. Of those trees, 162 were found to be in good and fair condition for a total mitigation planting requirement of potentially 290 #15 container trees. It should be possible to plant these trees on the property as part of the project landscape design and parking lot shade.

**Certification:** I certify that all the statements in this report are true, complete and correct to the best of my knowledge, and that all statements were made in good faith.

Please contact me at 650-740-3461 or at [gordon@mannandtrees.com](mailto:gordon@mannandtrees.com) if you have any questions about this report or if additional services are desired.

Respectfully submitted,



Gordon Mann, Consulting Arborist  
2011 ISA True Professional of Arboriculture  
Registered Consulting Arborist #480  
Certified Arborist #WE-0151AM  
Certified Urban Forester #127  
ISA TRAQ Qualified Tree Risk Assessor

Mann Made Resources  
12661 Torrey Pines Drive  
Auburn, CA 95602  
650-740-3461  
[www.mannandtrees.com](http://www.mannandtrees.com)

Attachments: Site image with tree ID numbers  
Spreadsheet of trees sorted by tree number, species, and condition  
KMZ file for aerial image with GPS coordinates

**Assumptions and Limitations:** This report provides information about the subject trees at the time of the inspection. Trees and conditions may change over time. This report is only valid for the conditions present at the time of the inspection. All observations were made while standing on the ground. The inspection consisted of visual observations. No further examinations were requested or performed.

Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the options and recommendations of the arborist, or seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that can fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed.

Treatments, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, landlord-tenant matters, etc. Arborists cannot take such issues into account unless complete and accurate information is given to the arborist. The person hiring the arborist accepts full responsibility for authorizing the treatment options or remedial measures.

Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks associated with trees is to eliminate all trees.

