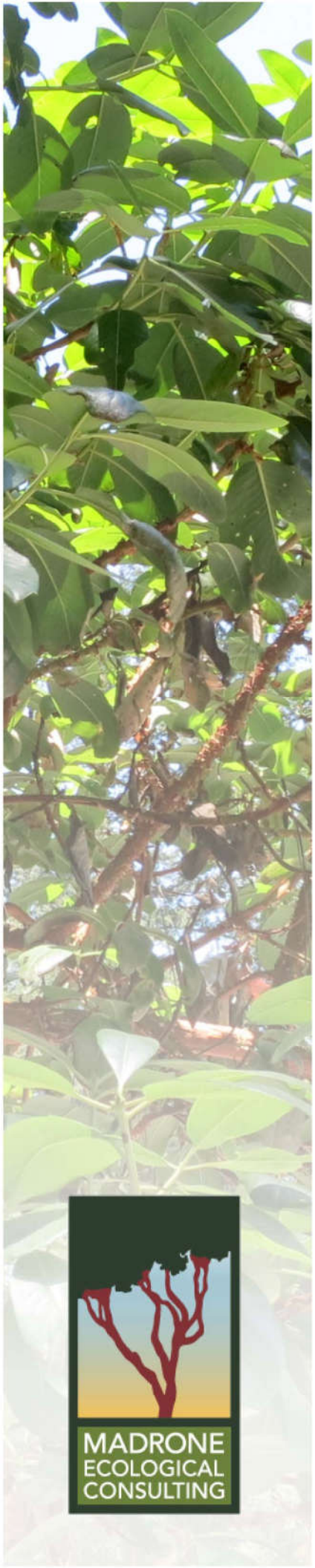

Biological Inventory Report

Hazel Ridge

Sacramento County, California
19 August 2022

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1.0 INTRODUCTION

This report presents the results of a Biological Inventory Report conducted for the Hazel Ridge project (Study Area). The approximately 4.63-acre Study Area is generally located east of Hazel Avenue, north of Calvert Avenue, south of Coan Lane, and west of Augustine Court in northeastern Sacramento County, California. The Study Area is located within Sections 32 and 33, Township 10 North, Range 7 East (MDB&M) of the "*Folsom, California*" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2022) (**Figure 1**). The Study Area is within the Lower American Watershed HUC 18020111 (USGS 1978). This document includes information regarding the biological resources present within the Study Area, an assessment of special-status species that may occur or be affected by the project, as well as a summary of the laws and regulations that may apply to the project in order to facilitate biological and California Environmental Quality Act (CEQA) review by the lead agency (Sacramento County).

1.1 Project Description

The Proposed Project is a residential development of 29 single family homes. This project will require a rezone of the current zoning for the parcel. There will be a 5,350 square foot bio-retention and detention pond located within the southeastern corner of the Study Area. This pond will serve to accept, retain, and treat onsite storm water. In the event that the basin fills it will flow into the existing storm water system. The existing upland swale will be piped in a 24" pipe and will be rerouted underground and tied into an existing 24" storm drain. The current Tentative Map is included as **Attachment A**.

2.0 REGULATORY SETTING

This section describes federal, state and local laws and policies that are relevant to this assessment of biological resources.

2.1 Federal Regulations

2.1.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) of 1973 protects species that are federally listed as endangered or threatened with extinction. FESA prohibits the unauthorized "take" of listed wildlife species. Take includes harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such activities. Harm includes significant modifications or degradations of habitats that may cause death or injury to protected species by impairing their behavioral patterns. Harassment includes disruption of normal behavior patterns that may result in injury to or mortality of protected species. Civil or criminal penalties can be levied against persons convicted of unauthorized "take." In addition, FESA prohibits malicious damage or destruction of listed plant species on federal lands or in association with federal actions, and the removal, cutting, digging up, damage, or destruction of listed plant species in violation of state law. FESA does not afford any protections to federally listed plant species that are not also included on a state endangered species list on private lands with no associated federal action.

2.1.2 Clean Water Act, Section 404

Section 404 of the Federal Clean Water Act requires that a Department of the Army permit be issued prior to the discharge of any dredged or fill material into waters of the United States, including wetlands. The U.S. Army Corps of Engineers (USACE) administers this program, with oversight from the U. S. Environmental Protection Agency. Waters of the United States include all navigable waters; interstate waters and wetlands; all intrastate waters and wetlands that could affect interstate or foreign commerce; impoundments of the above; tributaries of the above; territorial seas; and wetlands adjacent to the above.

2.1.3 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any native migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11.). Likewise, Section 3513 of the California Fish & Game Code prohibits the "take or possession" of any migratory non-game bird identified under the MBTA. Therefore, activities that may result in the injury or mortality of native migratory birds, including eggs and nestlings, would be prohibited under the MBTA.

2.1.4 Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act of 1940 (as amended) provides for the protection of bald eagle and golden eagle by prohibiting the take, possession, sale, purchase, barter, offer to sell, purchase or barter, transport, export or import, of any bald or golden eagle, alive or dead, including any part, nest, or egg, unless allowed by permit [16 USC 668(a); 50 CFR 22]. The USFWS may authorize take of bald eagles and golden eagles for activities where the take is associated with, but not the purpose of, the activity and cannot practicably be avoided (50 CFR 22.26).

2.2 State Regulations

2.2.1 California Environmental Quality Act

The California Environmental Quality Act requires evaluations of project effects on biological resources. Determining the significance of those effects is guided by Appendix G of the CEQA guidelines. These evaluations must consider direct effects on a biological resource within the project site itself, indirect effects on adjacent resources, and cumulative effects within a larger area or region. Effects can be locally important but not significant according to CEQA if they would not substantially affect the regional population of the biological resource. Significant adverse impacts on biological resources would include the following:

- Substantial adverse effects on any species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife (CDFW) or the U.S. Fish and Wildlife Service (USFWS) (these effects could be either direct or via habitat modification);

- Substantial adverse impacts to species designated by the California Department of Fish and Game (2009) as Species of Special Concern;
- Substantial adverse effects on riparian habitat or other sensitive habitat identified in local or regional plans, policies, or regulations or by CDFW and USFWS;
- Substantial adverse effects on federally protected wetlands defined under Section 404 of the Clean Water Act (these effects include direct removal, filling, or hydrologic interruption of marshes, vernal pools, coastal wetlands, or other wetland types);
- Substantial interference with movements of native resident or migratory fish or wildlife species population, or with use of native wildlife nursery sites;
- Conflicts with local policies or ordinances protecting biological resources (e.g. tree preservation policies); and
- Conflict with provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan.

2.2.2 State Endangered Species Act

With limited exceptions, the California Endangered Species Act (CESA) of 1984 protects state-designated endangered and threatened species in a way similar to FESA. For projects on private property (i.e. that for which a state agency is not a lead agency), CESA enables CDFW to authorize take of a listed species that is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code Section 2081).

2.2.3 California Fully Protected Species

The State of California first began to designate species as "fully protected" prior to the creation of the federal and California ESAs. Lists of fully protected species were initially developed to provide protection to those animals that were rare or faced possible extinction and included fish, amphibians and reptiles, birds, and mammals. Most fully protected species have since been listed as threatened or endangered under the federal and/or California ESAs. The regulations that implement the Fully Protected Species Statute (California Fish and Game Code, § 4700 for mammals, § 3511 for birds, § 5050 for reptiles and amphibians, and § 5515 for fish) provide that fully protected species may not be taken or possessed at any time. Furthermore, CDFW prohibits any state agency from issuing incidental take permits for fully protected species. CDFW will issue licenses or permits for take of these species for necessary scientific research or live capture and relocation pursuant to the permit.

2.2.4 California Species of Special Concern

The Species of Special Concern (SSC) are defined by CDFW as a species, subspecies, or distinct population of an animal native to California that are not legally protected under the federal or California ESAs or the California Fish and Game Code, but currently satisfies one or more of the following criteria:

- The species has been completely extirpated from the state or, as in the case of birds, it has been extirpated from its primary seasonal or breeding role.
- The species is listed as federally (but not state) threatened or endangered, or meets the state definition of threatened or endangered but has not formally been listed.
- The species has or is experiencing serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for state threatened or endangered status.
- The species has naturally small populations that exhibit high susceptibility to risk from any factor that if realized, could lead to declines that would qualify it for state threatened or endangered status.

SSC are typically associated with habitats that are threatened. Project-related impacts to SSC, state-threatened or endangered species are considered "significant" under CEQA.

2.2.5 Native Plant Protection Act

The Native Plant Protection Act (NPPA) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations.

2.2.6 Clean Water Act, Section 401

Section 401 of the Clean Water Act requires any applicant for a 404 permit in support of activities that may result in any discharge into waters of the United States to obtain a water quality certification with the Regional Water Quality Control Board (RWQCB). This program is meant to protect these waters and wetlands by ensuring that waste discharged into them meets state water quality standards. Because the water quality certification program is triggered by the need for a Section 404 permit (and both programs are a part of the Clean Water Act), the definition of waters of the United States under Section 401 is the same as that used by the USACE under Section 404.

2.2.7 California Water Code, Porter-Cologne Act

The Porter Cologne Act, from Division 7 of the California Water Code, requires any person discharging waste or proposing to discharge waste that could affect the quality of waters of the state to file a report of waste discharge (RWD) with the RWQCB. The RWQCB can waive the filing of a report, but once a report is filed, the RWQCB must either waive or adopt water discharge requirements (WDRs). "Waters of the state" are defined as any surface water or groundwater, including saline waters, within the boundaries of the state.

2.2.8 California Fish and Game Code, Section 1600 – Lake and Streambed Alteration Agreement

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, the Fish and Game Code, Section 1602, requires notification to CDFW of any proposed activity that may substantially modify a river, stream, or lake. Notification is required by any person, business, state or local government agency, or public utility that proposes an activity that will:

- substantially divert or obstruct the natural flow of any river, stream or lake;
- substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or
- deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

For the purposes of Section 1602, rivers, streams and lakes must flow at least intermittently through a bed or channel. If notification is required and CDFW believes the proposed activity is likely to result in adverse harm to the natural environment, it will require that the parties enter into a Lake or Streambed Alteration Agreement (LSAA).

2.2.9 California Fish and Game Code, Section 3503.5 - Raptor Nests

Section 3503.5 of the Fish and Game Code makes it unlawful to take, possess, or destroy hawks or owls, unless permitted to do so, or to destroy the nest or eggs of any hawk or owl.

2.3 Local Regulations

2.3.1 Sacramento County Tree Ordinance

All native oak trees and specified non-oak native trees that are four inches in diameter at breast height (dbh) (or 10-inch aggregate dbh for multi-trunk oaks and native walnut trees) including California sycamore (*Platanus racemosa*), northern California black walnut (*Juglans californica* v. *hindsii*), Oregon ash (*Fraxinus latifolia*), Goodding's black willow (*Salix gooddingii*), box elder (*Acer negundo* v. *californicum*), white alder (*Alnus rhombifolia*), and California buckeye (*Aesculus californica*) are protected under the Sacramento County tree ordinance (County of Sacramento 2011). Prior to acquiring a permit from Sacramento County to remove any covered trees, a report from an International Society of Arboriculture certified arborist must be prepared according to Sacramento County's Arborist Report Submittal Requirements.

3.0 METHODOLOGY

3.1 Literature Review

A list of special-status species with potential to occur within the Study Area was developed by conducting a query of the following databases:

- California Natural Diversity Database (CNDDB) (CNDDB 2022) query of the Study Area and all areas within 5 miles of the Study Area (**Figure 2**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2022) query for the Study Area (**Attachment B**);
- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2022) query of the "*Folsom, California*" USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment C**); and
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2022).

In addition, any special-status species that are known to occur in the region, but that were not identified in any of the above database searches were also analyzed for their potential to occur within the Study Area.

For the purposes of this Biological Inventory Report, special-status species is defined as those species that are:

- listed as threatened or endangered, or proposed or candidates for listing by the USFWS or National Marine Fisheries Service;
- listed as threatened or endangered and candidates for listing by CDFW;
- identified as Fully Protected species or species of special concern by CDFW;
- identified as Medium or High priority species by the WBWG (WBWG 2022); and
- plant species considered to be rare, threatened, or endangered in California by the CNPS and CDFW [California Rare Plant Rank (CRPR) 1, 2, and 3]:
  - CRPR 1A: Plants presumed extinct.
  - CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere.
  - CRPR 2A: Plants extirpated in California, but common elsewhere.
  - CRPR 2B: Plants rare, threatened, or endangered in California, but more common elsewhere.
  - CRPR 3: Plants about which the CNPS needs more information – a review list.

3.2 Field Survey

Madrone senior biologist Dustin Brown conducted a field survey of the Study Area on 30 June 2022. During this site visit, Mr. Brown conducted an aquatic resources delineation and assessed the suitability of habitats on-site to support special-status species. Meandering pedestrian surveys were performed on foot throughout the Study Area. Vegetation communities were classified in accordance with *The Manual of California Vegetation, Second Edition* (Sawyer, Keeler-Wolf and Evens 2009), and plant taxonomy was based on the nomenclature in the *Jepson eFlora* (Jepson Flora Project 2022). A list of all wildlife species observed during field surveys is included as **Attachment D**.

4.0 EXISTING CONDITIONS

The Study Area is located within the unincorporated Orangevale community of northeastern Sacramento County. The Study Area is bounded to the west by Hazel Avenue, a major arterial road, to the east by medium-density residences built in the 1990s, to the north by low-density residences, and to the south by

medium-density residences. The Study Area contains a residence and associated cultivated trees and shrubs along Hazel Avenue. The majority of the Study Area to the east of the residence has intermittently been used for horse pasture but is now fallow. The northern, eastern, and southern boundaries are fenced with a mixture of chain link and redwood good-neighbor fences and the Study Area is regularly mowed for fire prevention. The topography on-site is generally flat at an elevation of 235 to 245 feet above mean sea level.

4.1 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2022), two soil mapping units occur within the Study Area (**Figure 2**): (183) Orangevale coarse sandy loam, 2 to 5 percent slopes and (240) Xerants-Urban land-San Joaquin complex, 0 to 5 percent slopes (NRCS 2022). None of these soils are gabbro in nature or contain serpentinite or alkaline qualities.

4.2 Vegetation Communities

The majority of the Study Area to the east of the onsite residence consists of ruderal grassland that had been recently mowed at the time of the survey. Dominant plant species observed within this vegetation community includes wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), filaree (*Erodium botrys*), yellow star thistle (*Centaurea solstitalis*), and spring vetch (*Vicia sativa*). Other species observed in this vegetation community included black mustard (*Brassica nigra*) and field bindweed (*Convolvulus arvensis*). There are several trees located within this community including a patch of native interior live oak (*Quercus wislizeni*) located in the northeastern portion of the Study Area, several old olive trees (*Olea europea*) located along the northern boundary, scattered Valley oak (*Quercus lobata*) and interior live oak trees along the southern and southeastern portion of the Study Area, and some non-native English walnut (*Juglans regia*) and other non-native nut and fruit trees located within the western portion of the Study Area near the residence. See **Figure 3** for a map of terrestrial vegetation communities.

The western portion of the Study Area including Hazel Avenue and associated road shoulder and the residence consists of developed vegetation community. This area, where vegetated, consists of non-native ornamental and cultivar tree and shrub species (**Figure 3**)

There is an upland (non-wetland) swale located within the eastern half of the Study Area. This feature conveys storm water from northwest to southeast during large rain events and exits the Study Area through a County-maintained storm water drainage inlet. This feature is topographically lower than the rest of the Study Area and appears to have been enlarged and straightened in the past. The upland swale is approximately two feet below grade and ten feet in width.

4.3 Trees

A total of 119 trees with a single trunk diameter at breast height (DBH) of 4 inches or greater were inventoried within or overhanging the Study Area. These 119 trees totaled 1,616 aggregate DBH. Of these

trees, 67 were native. **Attachments E and F** contain the arborist report and a map of all trees including the locations of trees slated for removal as part of this project.

5.0 SPECIAL-STATUS SPECIES

Table 1 provides a list of special-status species that were evaluated, including their listing status, habitat associations, and their potential to occur in the Study Area. The following set of criteria was used to determine each species' potential for occurrence on the site:

- Present: Species occurs on the site based on CNDDB records, and/or was observed on the site during field surveys.
- High: The site is within the known range of the species and suitable habitat exists.
- Moderate: The site is within the known range of the species and very limited suitable habitat exists.
- Low: The site is within the known range of the species and there is marginally suitable habitat or the species was not observed during protocol-level surveys conducted on-site.
- Absent/No Habitat Present: The site does not contain suitable habitat for the species, the species was not observed during protocol-level floristic surveys conducted on-site, or the site is outside the known range of the species.

Figure 4 exhibits CNDDB occurrences within five miles of the Study Area. Below is a discussion of all special-status plant and animal species with potential to occur on the site.

5.1 Birds

5.1.1 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species that is not federally listed, but is listed as threatened under the California Endangered Species Act. Breeding pairs typically nest in tall trees associated with riparian corridors, and forage in grassland, irrigated pasture, and cropland with a high density of rodents (Shuford and Gardali 2008). The Central Valley populations breed and nest in the late spring through early summer before migrating to Central and South America for the winter (Shuford and Gardali 2008). There is one documented occurrence of Swainson's hawk within five miles of the Study Area (CNDDB 2022). This occurrence (CNDDB Occurrence Number 2262) is approximately 3 miles east of the Study Area and consisted of a nest documented in 1962. There is no specific location of the nest and it has not been observed since 1962 (CNDDB 2022).

The large trees within the Study Area represent suitable nesting habitat. However, the Study Area is not near any large rivers or streams or high-quality foraging habitat for the species. The Study Area contains low potential foraging habitat for the species.

Table 2. Special-Status Species with Potential to Occur within the Hazel Ridge Study Area

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Plants				
Balsamorhiza macrolepis Big-scale balsamroot	--	CRPR 1B.2	Prefers chaparral, cismontane woodland, and valley and foothill grasslands. Often associated with serpentine soils.	**No Habitat Present.** There is no chaparral, woodland, or suitable grassland habitat and no serpentine or gabberonic soils located within the Study Area.
Calystegia stebbinsii Stebbin's morning-glory	FE	CE, CRPR 1B.1	Gabberonic or serpentine soils within chaparral openings or cismontaine woodland.	**No Habitat Present.** No serpentine or gabberonic soils located within the Study Area.
Carex xerophila Chaparral sedge	--	CRPR 1B.2	Chaparral, cismontane woodland, or lower montane coniferous forests within gabberonic or serpentine soils.	**No Habitat Present.** No serpentine or gabberonic soils located within the Study Area.
Ceanothus roderrickii Pine Hill ceanothus	FE	CR, CRPR 1B.1	Chaparral or cismontane woodland within gabberonic soils.	**No Habitat Present.** No serpentine or gabberonic soils located within the Study Area.
Chlorogalum grandiflorum Red Hills soaproot	--	CRPR 1B.2	Chaparral, cismontane woodland, or lower montane coniferous forests within gabberonic or serpentine soils.	**No Habitat Present.** No serpentine or gabberonic soils located within the Study Area.
Chloropyron molle ssp. *hispidum* Hispid bird's-beak	--	CRPR 1B.1	Prefers seasonally flooded , saline-alkali soils at elevations below 500 feet.	**No Habitat Present.** No saline-alkali soils are present within the Study Area.
Clarkia biloba Brandegee's clarkia	--	CRPR 4.2	Yellow pine forest, foothill woodland, and chaparral.	**No Habitat Present.** There is no yellow pine forest, foothill woodland, or chaparral located within the Study Area.
Crocanthemum suffrutescens Bisbee Peak rush-rose	--	CRPR 3.2	Preferers chaparral, often on serpentine, gabbroic, or Ione formation soils; in openings in chaparral. 45-840 m.	**No Habitat Present.** There is no chaparral or serpentine or gabberonic soils located within the Study Area.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Downingia pusilla Dwarf downingia	--	CRPR 2B.2	Vernal pools and other depressional wetlands	**No Habitat Present.** There are no vernal pools or other mesic areas within the Study Area.
Eryngium pinnatisectum Tuolumne button-celery	--	CRPR 1B.2	Found in vernal pools and other mesic areas in cismontane woodland and lower montane coniferous forests between 230 and 3,000 ft.	**No Habitat Present.** There are no vernal pools or other mesic areas within the Study Area.
Fremontodendron decumbens Pine Hill flannelbush	FE	CR, CRPR 1B.2	Foothill chaparral and cismontane woodland. Rocky ridges; gabbro or serpentine endemic; often among rocks and boulders. 425-770 m.	**No Habitat Present.** There is no chaparral, woodland, or suitable grassland habitat and no serpentine or gabberonic soils located within the Study Area.
Galium californicum ssp. *sierrae* El Dorado bedstraw	FE	CR, CRPR 1B.2	Chaparral, cismontane woodland, or lower montane coniferous forests within gabberonic soils.	**No Habitat Present.** No serpentine or gabberonic soils located within the Study Area.
Gratiola heterosepala Bogg's Lake hedge-hyssop	--	CE, CRPR 1B.2	Vernal pools and margins of lakes/ponds	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Juncus leiospermus var. *ahartii* Ahart's dwarf rush	--	CRPR 1B.2	Edges of vernal pools and other seasonally ponded features.	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Juncus leiospermus var. *leiospermus* Red Bluff dwarf rush	--	CRPR 1B.1	Occurs in vernal mesic areas in chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools between 100' and 4,100' elevation.	**No Habitat Present.** There are no vernal pools or other mesic areas within the Study Area.
Legenere limosa Legenere	--	CRPR 1B.1	Vernal pools	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Navarretia myersii ssp. *myersii* Pincushion navarretia	--	CRPR 1B.1	Vernal pools	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Orcuttia tenius Slender Orcutt grass	FT	CE	Vernal pools	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Orcuttia viscida Sacramento Orcutt grass	FE	CE	Vernal pools	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Packera layneae Layne's ragwort	FT	CR, CRPR 1B.2	Chaparral or cismontane woodland within rocky serpentine or gabberonic soils.	**No Habitat Present.** No serpentine or gabberonic soils located within the Study Area.
Sagittaria sanfordii Sanford's arrowhead	--	CRPR 1B.2	Emergent marsh habitat, typically associated with drainages, canals, or irrigation ditches.	**No Habitat Present.** There are no marsh, canal, ditch, or drainage habitat within the Study Area. The upland swale within the Study Area does not support wetland plant species.
Wyethia reticulata El Dorado County mule ears	--	CRPR 1B.2	Clay or gabberonic soils within chaparral, cismontane woodland, or lower montane coniferous forests	**No Habitat Present.** No gabberonic clay soils are present within the Study Area.
Invertebrates				
Branchinecta conservatio *Conservancy* fairy shrimp	FE	--	Large playa vernal pools.	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Branchinecta lynchi Vernal pool fairy shrimp	FT	--	Vernal pools.	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Danaus plexippus Monarch Butterfly	FC	--	During the breeding season Monarch's lay their eggs on their obligate milkweed host plant (primarily *Asclepias spp.*)	**No Habitat Present.** The Study Area lacks host plants (Milkweed) and overwintering groves of eucalyptus trees.
Desmocerus californicus dimorphus Valley elderberry longhorn beetle	FT	--	Dependent upon elderberry *(Sambucus* species) shrubs as primary host species.	**No Habitat Present.** No elderberry shrubs are located within the Study Area.
Lepidurus packardi Vernal pool tadpole shrimp	FE	--	Vernal pools.	**No Habitat Present.** There are no vernal pools or depressional wetlands within the Study Area.
Fish				
Hypomesus transpacificus Delta smelt	FT	CE	Adults are found in the brackish open surface waters of the Delta and Suisun Bay. Though spawning has never been observed, it is believed to occur in tidally influenced sloughs and drainages on the freshwater side of the mixing zone.	**No Habitat Present.** No tidally influenced sloughs or drainages are present within the Study Area.
Oncorhynchus mykiss irideus Central Valley steelhead	FE	--	Anadromous species requiring freshwater water courses with gravelly substrates for breeding. The young remain in freshwater areas before migrating to estuarine and marine environments.	**No Habitat Present.** There are no streams or rivers located within the Study Area.
Amphibians				
Spea hammondii Western spadefoot	--	CSC	Breeds in vernal pools, seasonal ponds, seasonal wetlands and associated swales. Forages and aestivates in adjacent grasslands and oak woodlands.	**No Habitat Present.** There are no vernal pools, seasonal wetlands, or other potential breeding habitat located within the Study Area or within the vicinity of the Study Area.
Ambystoma californiense California tiger salamander	FT	CT, CSC	Breeds in ponds or other deeply ponded wetlands, and uses gopher holes and ground squirrel burrows in adjacent grasslands for upland refugia/foraging.	**No Habitat Present.** There are no vernal pools, seasonal wetlands, or other potential breeding habitat located within the Study Area or within the vicinity of the Study Area.

Scientific Name (Common Name)	Federal Status	State Status	Habitat Requirements	Potential for Occurrence
Reptiles				
Actinemys marmorata Western pond turtle	--	CSC	Ponds, rivers, streams, wetlands, and irrigation ditches with associated marsh habitat.	**No Habitat Present.** There is no suitable aquatic habitat for this species within the Study Area.
Birds				
Colonial nesting water birds	None	None	Water birds such as great blue heron (*Ardea herodias*), great egret (*Ardea alba*), and double-crested cormorant (*Phalacrocorax auritus*) nest colonially in large groups known as "rookeries". Some of these species nest in large trees near perennial water, while others prefer to nest in or adjacent to dense emergent marsh.	**No Habitat Present.** There are no perennial water sources or marsh habitat within the vicinity of the Study Area.
Agelaius tricolor Tricolored blackbird	--	CT, CSC	Colonial nester in cattails, bulrush, or blackberries associated with marsh habitats.	**No Habitat Present.** There is no march or bramble nesting habitat within the the Study Area.
Athene cunicularia Burrowing owl	--	CSC	Nests in abandoned ground squirrel burrows associated with open grassland habitats.	**No Habitat Present.** No suitable burrows for the species were observed within the Study Area. Additionally there is not sufficient open grassland within the Study Area to provice suitable habitat.
Buteo swainsoni Swainson's hawk	--	CT	Nests in large trees, preferably in riparian areas. Forages in fields, cropland, irrigated pasture, and grassland near large riparian corridors.	**Low.** The large trees within the Study Area represent suitable nesting habtiat. However, the Study Area is not near any large rivers or streams or high quality foraging habitat for the species. The Study Area contains low potential foraging habitat for the species.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Elanus leucurus White-tailed kite	--	CFP	Open grasslands, fields, and meadows are used for foraging. Isolated trees in close proximity to foraging habitat are used for perching and nesting.	**Low.** The trees within the Study Area represent potential nesting habtiat for white-tailed kite. However, there is very little suitable foraging habtiat for the species (open fields) within the vicinity of the Study Area. This species has been observed flying overhead nea to the Study Area by the Madrone biologist.
Riparia riparia Bank swallow	None	CT	Colonial nester preferring vertical cliffs and banks with fine textured/sandy soils associated with riparian zones along streams, rivers, and lakes.	**No Habitat Present.** There are no river banks with sandy soil located within the Study Area.
Mammals				
Antrozous pallidus Pallid bat	--	CSC, WBWG H	Roosts in crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating bark, deciduous trees in riparian areas, and fruit trees in orchards), bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG 2022).	**No Habitat Present.** No caves or cave analogues present on-site. No large hollows were observed within the trees within the Study Area.
Corynorhinus townsendii townsendii Townsend's big-eared bat	--	CC, WBWG H	Roosts in caves and cave analogues, such as abandoned mines, buildings, bridges, rock crevices and large basal hollows of coast redwoods and giant sequoias. Extremely sensitive to human disturbance. (WBWG 2022)	**No Habitat Present.** No caves or cave analogues present on-site. No large hollows were observed within the trees within the Study Area.

Scientific Name **(Common Name)**	**Federal Status**	**State Status**	**Habitat Requirements**	**Potential for Occurrence**
Lasionycteris noctivagans Silver-haired bat	--	WBWG M	Roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. It forages in open wooded areas near water features. (WBWG 2022)	**Low.** Trees within the Study Area represent potential roosting habtiat for this species. The only areas of ponded water within the vicinity of the Study Area are residential backyard pools, which are low quality sources of water. Thus, there is a low potential for roosting silver-haired bats to be present within the Study Area.
Lasiurus blossevillii Western red bat	--	CSC, WBWG H	Roosts primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat. (WBWG 2022)	**Low.** Trees within the Study Area represent potential roosting habtiat for this species. The only areas of ponded water within the vicinity of the Study Area are residential backyard pools, which are low quality sources of water. Thus, there is a low potential for roosting western red bats to be present within the Study Area.
Taxidea taxus American badger	--	CSC	Drier open areas with shrub, forest, and herbaceous habitats with friable soils.	**No Habitat Present.** The Study Area lacks the open spaces needed to support this species.

Status Codes:

CC - CDFW Candidate for Listing
CE - CDFW Endangered
CFP - CDFW Fully Protected
CRPR - California Rare Plant Rank
CSC - CDFW Species of Concern
CR - California Rare
CT - CDFW Threatened
FE - Federally Endangered
FT - Federally Threatened
FC - Candidate for Federal Listing
WBWG M - Western Bat Working Group Medium Threat Rank
WBWG H - Western Bat Working Group High Threat Rank

5.1.2 White-Tailed Kite

White-tailed kite (*Elanus leucurus*) is not federally or state listed, but is a CDFW fully protected species. This species is a yearlong resident in the Central Valley and is primarily found in or near foraging areas such as open grasslands, meadows, farmlands, savannahs, and emergent wetlands (Shuford and Gardali 2008). White-tailed kites typically nest from March through June in trees within riparian, oak woodland, and savannah habitats of the Central Valley and Coast Range (Shuford and Gardali 2008). There are five documented occurrences of white-tailed kites nesting within five miles of the Study Area (CNDDB 2022). Four of these occurrences are located along the American River and the nearest is located approximately 2.5 miles northwest of the Study Area (CNDDB Occurrence 31) near the Placer County line.

The ruderal grassland within the eastern portion of the Study Area represents low quality foraging habitat for white-tailed kite, and the trees within the Study Area provide suitable nesting habitat. This species has been observed flying over the vicinity of the Study Area (Madrone biologist personal observation).

5.2 Mammals

5.2.1 Silver-Haired Bat

Silver-haired bat (*Lasionycteris noctivagans*) is not federally or state listed but is classified by the WBWG as a Medium priority species. Primarily considered a coastal and montane forest species, the silver-haired bat occurs in more xeric environments during winter and seasonal migrations (WBWG 2022). It roosts in abandoned woodpecker holes, under bark, and occasionally in rock crevices. This insectivore's favored foraging sites include open wooded areas near water features (WBWG 2022). The CNDDB contains two occurrences of this species within five miles of the Study Area (CNDDB 2022).

Suitable roosting habitat for silver-haired bat is present in tree hollows and under exfoliating bark on trees throughout the Study Area. This species requires nearby open water bodies to drink from. The only areas of ponded water within the vicinity of the Study Area are residential backyard pools, which are low quality sources of water. Thus, there is a low potential for silver-haired bats to be present within the Study Area.

5.2.2 Western Red Bat

Western red bat (*Lasiurus blossevillii*) is not federally or state listed, but is considered a CDFW species of special concern, and is classified by the WBWG as a High priority species. Western red bat is typically solitary, roosting primarily in the foliage of trees or shrubs (WBWG 2022). Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. There may be an association with intact riparian habitat (particularly willows, cottonwoods, and sycamores) (WBWG 2022). Western red bat has not been documented in the CNDDB within 5 miles of the Study Area (CNDDB 2022).

Suitable roosting habitat for western red bat is present in tree throughout the Study Area. This species requires nearby open water bodies to drink from. The only areas of ponded water within the vicinity of the

Study Area are residential backyard pools, which are low quality sources of water. Thus, there is a low potential for western red bats to be present within the Study Area.

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details potential impacts to the biological resources discussed above associated with construction of the Project, as discussed in **Section 1.1** and shown in **Attachment A and F**.

6.1 Nesting Raptors and Songbirds

Swainson's hawk and white-tailed kite have the potential to nest within the Study Area, as do other more common raptor and songbird species protected by the MBTA. If they were nesting on-site, removal of the nests would impact these species. Furthermore, birds nesting in adjacent properties could be disturbed by construction, which could result in nest abandonment.

6.2 Foraging Raptors and Songbirds

The ruderal grassland within the Study Area provides low quality foraging habitat for Swainson's hawk, white-tailed kite, and other more common raptors and songbirds. The Study Area represents a small patch size and is isolated from high-quality foraging habitat for the species. Approximately 3.87 acres of ruderal grassland will be impacted during Project construction (**Figure 3**).

6.3 Roosting Bats

The trees throughout the Study Area are habitat for special-status bats species. If special-status bats were roosting in trees to be removed by construction, they could be injured or killed during the removal.

6.4 Native Oak Trees

Impacts to individual native trees are to be assessed and mitigated under the provisions of the Sacramento County Tree Ordinance. Of the 119 trees that were inventoried within the Study Area or overhanging the Study Area, 85 will be removed and 34 will remain. Of the 85 trees to be removed 29 are native oaks that will be impacted by the Project (**Attachments E and F**). Seven native oak trees have poor to fair structure and health and are not considered protected trees. The remaining 22 trees are protected trees that will be impacted by the Project. These 22 trees have a combined diameter at breast height (DBH) of 267 inches (as summarized below in **Table 2**).

Table 2. Summary of Native Oak Tree Impacts

Tree Tag #	Common Name	Scientific Name	DBH	Structure
1	Interior Live Oak	*Quercus wislizenii*	11	Poor to Fair
7	Blue Oak	*Quercus douglasii*	17	Fair
12	Valley Oak	*Quercus lobata*	10	Fair
13	Valley Oak	*Quercus lobata*	9*	Poor to Fair
15	Interior Live Oak	*Quercus wislizenii*	14*	Poor to Fair
25	Interior Live Oak	*Quercus wislizenii*	10	Fair
28	Interior Live Oak	*Quercus wislizenii*	7	Fair
29	Valley Oak	*Quercus lobata*	13	Fair
30	Valley Oak	*Quercus lobata*	14	Fair
38	Valley Oak	*Quercus lobata*	15*	Poor to Fair
39	Valley Oak	*Quercus lobata*	32	Fair
40	Valley Oak	*Quercus lobata*	17*	Poor to Fair
41	Interior Live Oak	*Quercus wislizenii*	9	Fair
42	Interior Live Oak	*Quercus wislizenii*	15	Fair
47	Valley Oak	*Quercus lobata*	6	Fair
48	Valley Oak	*Quercus lobata*	11	Fair
61	Valley Oak	*Quercus lobata*	8	Fair
65	Valley Oak	*Quercus lobata*	9*	Poor to Fair
73	Valley Oak	*Quercus lobata*	12	Fair
75	Interior Live Oak	*Quercus wislizenii*	16	Fair
79	Valley Oak	*Quercus lobata*	12	Fair
81	Valley Oak	*Quercus lobata*	7	Fair
98	Valley Oak	*Quercus lobata*	11	Fair
99	Interior Live Oak	*Quercus wislizenii*	15	Fair
100	Interior Live Oak	*Quercus wislizenii*	15	Fair
101	Valley Oak	*Quercus lobata*	8	Fair
103	Interior Live Oak	*Quercus wislizenii*	26*	Poor to Fair
109	Valley Oak	*Quercus lobata*	10	Fair
112	Interior Live Oak	*Quercus wislizenii*	15	Fair
		Total	**267**	

*Trees of poor structure not included in total

7.0 MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The following are mitigation measures that are often required by CEQA lead agencies for impacts to sensitive biological resources that may be associated with construction of the Project. Implementation of these (or similar) mitigation measures would reduce or eliminate impacts to biological resources.

7.1 Nesting Raptors and Other Birds

The following nest survey requirements apply if construction activities take place during the typical bird breeding/nesting season (typically February 15 through September 1).

7.1.1 Swainson's Hawk

A targeted Swainson's hawk nest survey shall be conducted throughout all accessible areas within ¼ mile of the proposed construction area no later than 14 days prior to construction activities. If active Swainson's hawk nests are found within ¼ mile of a construction area, construction shall cease within ¼ mile of the nest until a qualified biologist (Project Biologist) determines that the young have fledged or it is determined that the nesting attempt has failed. If the applicant desires to work within ¼ mile of the nest, the applicant shall consult with CDFW and the County to determine if the nest buffer can be reduced. The Project applicant, the Project biologist, the County, and CDFW shall collectively determine the nest avoidance buffer, and what (if any) nest monitoring is necessary. If an active Swainson's hawk nest is found within the Project site prior to construction and is in a tree that is proposed for removal, then the Project applicant shall implement additional mitigation recommended by a qualified biologist based on CDFW guidelines and obtain any required permits from CDFW.

7.1.2 Other Birds

A pre-construction nesting bird survey shall be conducted by a qualified biologist on the project site and within a 300-foot radius of proposed construction areas, where access is available, no more than three (3) days prior to the initiation of construction. If construction is delayed then subsequent surveys shall be conducted such that a survey is conducted within 3 days of start of construction.

If active raptor nests are found, no construction activities shall take place within 300 feet of the nest until the young have fledged. If active songbird nests are found, a 100-foot no disturbance buffer will be established. These no-disturbance buffers may be reduced if a smaller buffer is proposed by the Project Biologist and approved by the County after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, habituation to existing or ongoing activity, and nest concealment (are there visual or acoustic barriers between the proposed activity and the nest). A qualified biologist can visit the nest as needed to determine when the young have fledged the nest and are independent of the site or the nest can be left undisturbed until the end of the nesting season.

7.1.3 Survey Report

A report summarizing the survey(s), including those for Swainson's hawk and other nesting birds, shall be provided to the County within 30 days of the completed survey and is valid for one construction season. If no nests are found, no further mitigation is required.

7.2 Loss of Swainson's Hawk Foraging Habitat

Swainson's hawk foraging habitat mitigation will not be required for the Project. The current zoning of the property (RD-5) retains 0 percent remaining habitat value according to the Sacramento County Planning and Environmental Review Division (Sacramento County 2013).

7.3 Roosting Bats

Pre-construction roosting bat surveys shall be conducted by a qualified biologist within 14 days prior to any tree removal that will occur during the breeding season (April through August). If pre-construction surveys indicate that no roosts of special-status bats are present, or that roosts are inactive or potential habitat is unoccupied, no further mitigation is required. If roosting bats are found, exclusion shall be conducted as recommended by the qualified biologist. Methods may include acoustic monitoring, evening emergence surveys, and the utilization of two-step tree removal supervised by the qualified biologist. Two-step tree removal involves removal of all branches that do not provide roosting habitat on the first day, and then the next day cutting down the remaining portion of the tree.

7.4 Protected Trees

The Project would require the removal of 29 native oak trees. Of these 29 trees, 22 are of fair structure and require mitigation for the removal of 267 DBH. To mitigate for the loss of these trees, the Project Applicant shall obtain a Tree Permit from Sacramento County prior to plan approval. The Department of Planning and Environmental Review shall review the Tree Permit application as well as the final site improvement plans and determine the precise mitigation requirement at that time.

Efforts should be made to save trees where feasible and incorporate them into the landscaping. This may include the use of retaining walls, planter islands, pavers, or other techniques commonly associated with tree preservation. The Improvement Plans shall include a note and show placement of temporary construction fencing around trees to be saved: The applicant shall install a four foot tall, brightly colored (typically orange), synthetic mesh material fence (or an equivalent approved by the County at the following locations prior to any construction equipment being moved on-site or any construction activities taking place: at the limits of construction; outside the Protected Zone of all single-trunk trees six inches DBH or greater, or 10 inches DBH aggregate for multi-trunk trees; within 50 feet of any grading, road improvements, underground utilities, or other development activity; or as otherwise shown on the Tentative Subdivision Map.

8.0 REFERENCES

Acorn Arboricultural Services, Inc. 2022. *Arborist Report and Tree Inventory Summary for 6416 Hazel Avenue, Assessor's Parcel #223-0012-053, 060, and 061, Orangevale, County of Sacramento, California.* Dated January 20, 2022.

California Native Plant Society (CNPS). 2022. *Inventory of Rare and Endangered Plants* (online edition, v8-02). California Native Plant Society, Sacramento, CA. Website http://www.rareplants.cnps.org [accessed August 2022].

California Natural Diversity Database (CNDDB). 2022. *RareFind 5*. California Department of Fish and Wildlife. Accessed July and August 2022.

County of Sacramento. 2011. General Plan Conservation Element. Amended 9 November 2011. First adopted 15 December 1993. Available at http://www.per.s accounty.net/PlansandProjectsIn-Progress/Documents/General%20Plan%2020 30/GP%20Elements/Conservation%20Element.pdf. Accessed 17 August 2022.

Jepson Flora Project (eds.) 2022. *Jepson eFlora*, http://ucjeps.berkeley.edu/eflora/ [accessed in June through August 2022]

Madrone Ecological Consulting, LLC (Madrone). 2022. *Aquatic Resources Delineation Report for Hazel Ridge*. Prepared for JFL Developments. Published on 17 August 2022.

Sacramento County. 2013 Swainson's Hawk: Environmental Impacts and Issues – A Guide for the Unincorporated Areas of Sacramento County. Revised 6/26/13. Available online: http://www.per.saccounty.net/ EnvironmentalDocuments/Documents/Swainsons-Hawk/Swainson%27s%20Info%208_3_16.pdf

Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. *A Manual of California Vegetation, Second Edition*. California Native Plant Society, Sacramento, CA. 1300 pp.

Shuford, W. D., and Gardali, T., editors. 2008. *California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California*. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture (NRCS). 2022. *Web Soil Survey*. Available online at http://websoilsurvey.nrcs.usda.gov/.

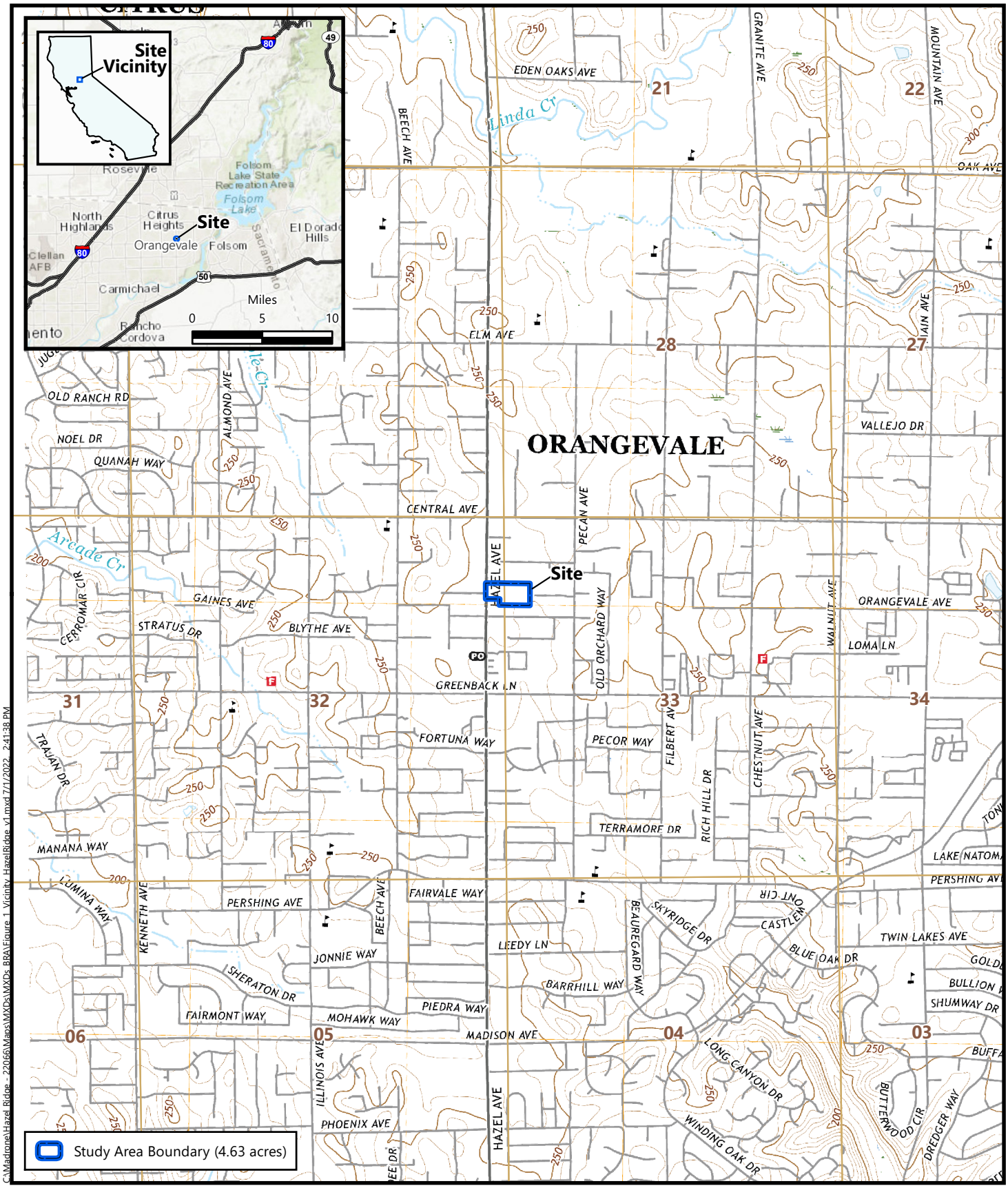
U.S. Department of the Interior, Fish and Wildlife Service (USFWS). 2022. *IPaC Trust Resource Report for the Study Area.* Generated from http://ecos.fws.gov/ipac/ on 18 August 2022.

U.S. Geological Survey (USGS). 2022. *"Folsom, California"* 7.5-Minute Series Topographic Quadrangle Map. U. S. Geological Survey. Denver, Colorado.

U.S. Department of the Interior, Geological Survey (USGS). 1978. *Hydrologic Unit Map, State of California*. Geological Survey. Reston, Virginia.

Western Bat Working Group (WBWG). 2022. *Species Matrix and Species Accounts*. Accessed on-line at http://wbwg.org/ August 2022.

Figures



C:\Madrone\Hazel Ridge - 22066\Maps\MXDs\MXDs BRA\Figure 1 Vicinity HazelRidge_v1.mxd 7/1/2022 2:41:38 PM

Source: United States Geologic Survey, 2022
Sections 32-33, Township 10 North, Range 7 East, MDB&M
"Folsom, California" 7.5-Minute Topographic Quadrangle
Longitude -121.224319, Latitude 38.682594

Figure 1
Site and Vicinity

Hazel Ridge
Orangevale, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

N

Feet
0 50 100

Soil Survey Source: *USDA, Soil Conservation Service. Soil Survey Geographic (SSURGO) database for Sacramento County, California*
Aerial Source: Maxar, 4 March 2021.

Figure 2
Natural Resources Conservation Service Soils

Hazel Ridge
Orangevale, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

C:\Madrone\Hazel Ridge - 22066\Maps\MXDs\MXDs_BRA\Figure 3_VegetationCommunities_HazelRidge_v1.mxd 7/1/2022 2:40:29 PM

Figure 3
Vegetation Communities

Hazel Ridge
Orangevale, Sacramento County, California

Note: Rounding may result in small summation errors.
Aerial Source: Maxar, 4 March 2021.

MADRONE ECOLOGICAL CONSULTING

Study Area Boundary (4.63 acres)
5-Mile Radius
Known Active Bald Eagle Nest

CNBBD Species

Amphibians

1 - Western Spadefoot

Birds

2 - Bank Swallow
3 - Cooper's Hawk
4 - Double-Crested Cormorant
5 - Great Blue Heron
6 - Great Egret
7 - Merlin
8 - Swainson's Hawk
9 - Tricolored Blackbird
10 - White-Tailed Kite

Fish

11 - Steelhead - Central Valley DPS

Invertebrates

12 - Valley Elderberry Longhorn Beetle
13 - Vernal Pool Fairy Shrimp
14 - Vernal Pool Tadpole Shrimp

Mammals

15 - American Badger
16 - Pallid Bat
17 - Silver-Haired Bat

Plants

18 - Brandegee's Clarkia
19 - Dwarf Downingia
20 - Pincushion Navarretia
21 - Sacramento Orcutt Grass
22 - Sanford's Arrowhead

Reptiles

23 - Western Pond Turtle

Site
Bald Eagle Nest

N

0 1.25 2.5 Miles

Source: *California Department of Fish and Wildlife*, June 2022.
Basemap Source: *National Geographic* and *ESRI*

Figure 4
California Natural Diversity Database Occurrences of Species

Hazel Ridge
Orangevale, Sacramento County, California

MADRONE ECOLOGICAL CONSULTING

C:\Madrone\Hazel Ridge - 22066\Maps\MXDs\MXDs BRA\Figure 4 CNDDB HazelRidge_v1.mxd 7/8/2022 10:37:26 AM

Attachments

Attachment A. Hazel Ridge Tentative Map

Attachment B. IPaC Trust Resource Report for the Study Area

Attachment C. CNPS Inventory of Rare and Endangered Plants Query for the "Folsom, California" USGS Quadrangle and Eight Surrounding Quadrangles

Attachment D. Wildlife List

Attachment E. Tree Inventory Report

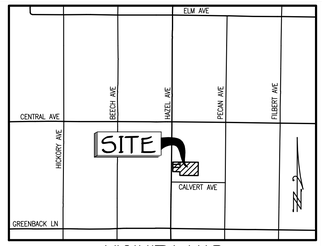
Attachment F. Tree Inventory Map

Attachment G. Representative Site Photographs

Attachment H. Hazel Ridge Plant List

Attachment A

Hazel Ridge Tentative Map



VICINITY MAP
NO SCALE

PROJECT DATA:

OWNER:
JAMES E. and NANCY C. LUSE REVOCABLE TRUST and McVEY REVOCABLE TRUST

DEVELOPER:
JIM LUSE
6912 THAYER WAY
ORANGEVALE CA 95662
PH. (916)224-9314

ENGINEER:
BAKER-WILLIAMS ENGINEERING GROUP
6020 RUTLAND DRIVE, SUITE 19
CARMICHAEL CA 95608
PH. (916) 331-4336
FAX (916) 331-4430

ASSESSOR'S PARCEL NUMBER:
223-0012-053, 060, 061

ACREAGE:
4.63± ACRES GROSS
4.37± ACRES NET

EXISTING USE:
SINGLE FAMILY, VACANT

PROPOSED USE:
29 LOT SINGLE FAMILY SUBDIVISION

EXISTING ZONE:
RD-5

PROPOSED ZONE:
RD-7

SEWER:
SASD

WATER SUPPLY:
ORANGEVALE WATER COMPANY

DRAINAGE:
SACRAMENTO COUNTY WATER RESOURCES

FIRE PROTECTION:
SAC METRO

ELECTRIC SERVICE:
SMUD

TELEPHONE SERVICE:
AT&T

GAS SUPPLY
PG&E

SCHOOL DISTRICT:
SAN JUAN UNIFIED

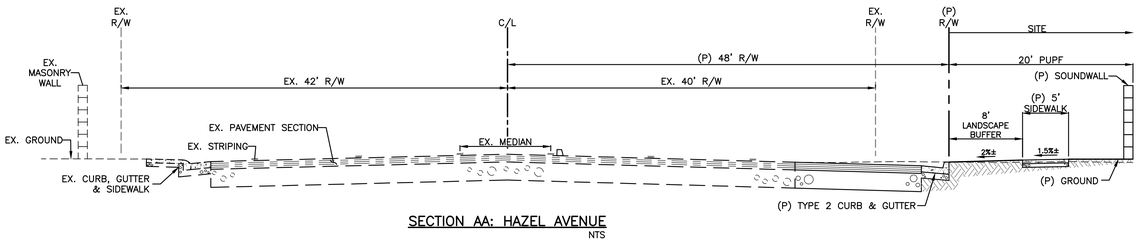
PARK DISTRICT:
ORANGEVALE

LOT SIZE:
MIN. 4,050 SF
MAX. 7,631 SF
AVERAGE 4,750 SF

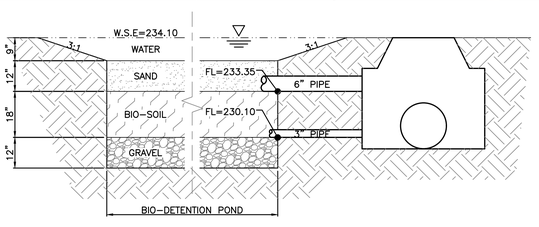
PROPOSED IMPROVEMENTS:
SACRAMENTO COUNTY

LEGEND:

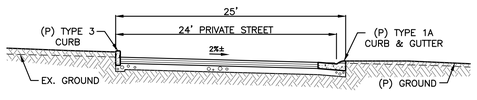
EXISTING		PROPOSED
12"SD	STORM DRAIN	12"SD
	DRAIN INLET	
	MANHOLE	
8"W	WATER MAIN	W
6"SS	SEWER MAIN	6"SS
	STREET LIGHT	
	OVERHEAD LINE	
	GAS MAIN	
	ELECTRIC LINE	
	FENCE	
	LOT LINES	
	RIGHT OF WAY	
	BUILDING	
	C/G AND SIDEWALK	
	SITE BOUNDARY	
	PAD GRADE	238.7
	MASONRY SOUND WALL	
	RETAINING WALL TOP RETAINING WALL BOTTOM RETAINING WALL	TRW=244.00 BRW=240.50
	SLOPE BANK	
	EX. TREE TO REMAIN	
	EX. TREE TO REMOVE	
240.4	SPOT ELEVATION	241.0
	TOPOGRAPHIC CONTOUR	
	EDGE OF PAVEMENT	
	DIRT ROAD	



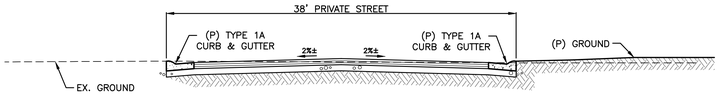
SECTION AA: HAZEL AVENUE
NTS



BIO-RETENTION & DETENTION POND
NTS



SECTION BB: PRIVATE 25' WIDE STREET (TYP.)
NTS



SECTION CC: PRIVATE 38' WIDE STREET (TYP.)
NTS

TENTATIVE MAP
HAZEL RIDGE
ORANGEVALE
SACRAMENTO COUNTY, CA
FEBRUARY, 2022

NOTE:
I HEREBY STATE THAT ALL EASEMENTS AS INDICATED IN STEWART TITLE REPORT NO. SU-02054232-DC DATED DECEMBER 20, 2021 HAVE BEEN SHOWN HEREON AND/OR HAVE BEEN ACCOUNTED FOR IN NOTE(S) PLACED HEREON. ALL EASEMENTS PROPOSED TO BE ABANDONED OR QUITCLAIMED AND/OR ALL EASEMENTS THAT CANNOT BE LOCATED ARE NOTED HEREON.

JOHN K. JEFFRIES L.S. 7820
LICENSE EXPIRES 12/31/2023

LICENSED LAND SURVEYOR
JOHN KARL JEFFRIES
No. 7820
EXPIRES 12/31/2023
STATE OF CALIFORNIA

BAKER WILLIAMS ENGINEERING GROUP
6020 RUTLAND DRIVE, SUITE 19
CARMICHAEL, CA 95608-0515
Phone (916)331-4336•Fax (916)331-4430
EMAIL: office@bwengineers.com

JOB NO. 21-10-037

210037-TENT-MAP

Attachment B

IPaC Trust Resource Report for the Study Area

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2022-0076205
Project Name: Hazel Ridge

August 18, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2022-0076205
Project Name: Hazel Ridge
Project Type: New Constr - Above Ground
Project Description: Residential Development
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@38.6825513,-121.2243592216087,14z

Counties: Sacramento County, California

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Amphibians

NAME	STATUS
California Tiger Salamander *Ambystoma californiense* Population: U.S.A. (Central CA DPS) There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp *Lepidurus packardi* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Sacramento Orcutt Grass *Orcuttia viscida* There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/5507	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: Madrone Ecological Consulting
Name: Dustin Brown
Address: 8421 Auburn Boulevard, Suite 248
City: Citrus Heights
State: CA
Zip: 95610
Email dbrown@madroneeco.com
Phone: 9168223230

Attachment C

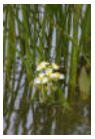
CNPS Inventory of Rare and Endangered Plants Query for the "Folsom, California" USGS Quadrangle and Eight Surrounding Quadrangles Area

Search Results

21 matches found. Click on scientific name for details

Search Criteria: CRPR is one of [1A:1B:2A:2B:3] , 9-Quad include [3812151:3812162:3812161:3812163:3812173:3812171:3812172:3812153:3812152]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	 ©1998 Dean Wm. Taylor
Calystegia stebbinsii	Stebbins' morning-glory	Convolvulaceae	perennial rhizomatous herb	Apr-Jul	FE	CE	G1	S1	1B.1	No Photo Available
Carex xerophila	chaparral sedge	Cyperaceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	No Photo Available
Ceanothus roderickii	Pine Hill ceanothus	Rhamnaceae	perennial evergreen shrub	Apr-Jun	FE	CR	G1	S1	1B.1	No Photo Available
Chlorogalum grandiflorum	Red Hills soaproot	Agavaceae	perennial bulbiferous herb	May-Jun	None	None	G3	S3	1B.2	No Photo Available
Chloropyron molle ssp. *hispidum*	hispid salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	None	None	G2T1	S1	1B.1	No Photo Available
Crocanthemum suffrutescens	Bisbee Peak rush-rose	Cistaceae	perennial evergreen shrub	Apr-Aug	None	None	G2?Q	S2?	3.2	No Photo Available
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	None	None	GU	S2	2B.2	No Photo Available
Eryngium pinnatisectum	Tuolumne button-celery	Apiaceae	annual/perennial herb	May-Aug	None	None	G2	S2	1B.2	 © 2007 Robert E. Preston, Ph.D.
Fremontodendron decumbens	Pine Hill flannelbush	Malvaceae	perennial evergreen shrub	Apr-Jul	FE	CR	G1	S1	1B.2	No Photo Available
Galium californicum ssp. *sierrae*	El Dorado bedstraw	Rubiaceae	perennial herb	May-Jun	FE	CR	G5T1	S1	1B.2	

										© 2019 John Doyen
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	G2	S2	1B.2	 ©2004 Carol W. Witham
Juncus leiospermus var. *ahartii*	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	None	None	G2T1	S1	1B.2	 © 2004 Carol W. Witham
Juncus leiospermus var. *leiospermus*	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	None	None	G2T2	S2	1B.1	 ©2016 Dylan Neubauer
Legenere limosa	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	G2	S2	1B.1	 ©2000 John Game
Navarretia myersii ssp. *myersii*	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	None	None	G2T2	S2	1B.1	 © 2020 Leigh Johnson
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	G2	S2	1B.1	 © 2013 Justy Leppert
Orcuttia viscida	Sacramento Orcutt grass	Poaceae	annual herb	Apr-Jul(Sep)	FE	CE	G1	S1	1B.1	No Photo Available
Packera layneae	Layne's ragwort	Asteraceae	perennial herb	Apr-Aug	FT	CR	G2	S2	1B.2	No Photo Available
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	G3	S3	1B.2	 ©2013 Debra L.

										Cook
Wyethia reticulata	El Dorado County mule ears	Asteraceae	perennial herb	Apr-Aug	None	None	G2	S2	1B.2	No Photo Available

Showing 1 to 21 of 21 entries

Suggested Citation:
California Native Plant Society, Rare Plant Program. 2022. Rare Plant Inventory (online edition, v9-01 1.5). Website https://www.rareplants.cnps.org [accessed 18 August 2022].

Attachment D

Wildlife List

Wildlife Species Observed within the Hazel Ridge Study Area on 30 June 2022

Species Name	Common name
Birds	
Zenaida macroura	Mourning dove
Corvus brachyrhynchos	American crow
Psaltriparus minimus	Bushtit
Pica nutalli	Yellow-billed magpie
Buteo lineatus	Red-shouldered hawk
Sayornis nigricans	Black phoebe
Aphelocoma californica	California scrub jay
Baeolophus inornatus	Oak titmouse
Sitta carolinensis	White-breasted nuthatch
Mimus polyglottos	Northern mockingbird
Sturnus vulgaris	European starling
Melozone crissalis	California towhee
Zonotrichia leucophrys	White-crowned sparrow
Junco hyemalis	Dark-eyed junco
Haemorhous mexicanus	House finch
Gallus domesticus	Domestic chicken
Mammals	
Sciurus niger	Eastern fox squirrel
Sciurus griseus	Western gray squirrel
Thomomys bottae	Botta's pocket gopher
Felis catus	Domestic cat
Canis familiaris	Domestic dog
Reptiles	
Sceloporus occidentalis	Western fence lizard

Attachment E

Tree Inventory Report

ARBORIST REPORT
AND
TREE INVENTORY SUMMARY

6416 Hazel Avenue
Assessor's Parcel # 223-0012-053, 060,061
Orangevale, County of Sacramento, California

Prepared for:

Jim Luce
JEL Development
2912 Thayer Way
Orangevale, California 95662

Prepared by:

Wayne McKee
ISA Certified Arborist WE 0959A, 1992
ISA Tree Risk Assessment Qualified, 2017
B S Forestry, Humboldt State University

Acorn Arboricultural Services, Inc.
631 Commerce Drive, Suite 200
Roseville, California 95678

January 20, 2022

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COPYRIGHT STATEMENT

QUALIFICATION STATEMENT

Acorn Arboricultural Services, Inc.is a fully insured, Roseville, California-based, professional arboricultural services company which was founded in 2010 following a parent corporation restructuring. The principals are Delinda and Jay Bate. Wayne McKee is an ISA Certified Arborist and is Tree Risk Assessment Qualified. He graduated from Humboldt State University with a B.S. in Forestry. Wayne has more than 38 years' experience in the horticulture, forestry, and arboricultural fields. He has a background working as a consulting arborist compiling tree value assessments, tree inventories, and tree risk assessments, as well as acting as a project arborist on many commercial and residential development projects.

INTRODUCTION

Acorn Arboricultural Services, Inc. is pleased to present this Arborist Report and Tree Inventory Summary for the trees located within and/or overhanging the property at 6416 Hazel Avenue Project Site, located in Orangevale, in the County of Sacramento, California. This Arborist Report and Tree Inventory Summary documents tree data obtained by Wayne McKee, ISA Certified Arborist WE-0959A, at the time of field reconnaissance and inventory efforts on January 17, 2022.

SCOPE OF INVENTORY EFFORT

The County of Sacramento Tree Preservation Ordinance (Sacramento County Code Title 19, Chapter 19.12) regulates both the removal of protected trees and the encroachment of construction activities within their driplines. The Ordinance defines a "tree" as "any living native oak tree having at least one trunk of six inches or more in diameter measured four and one-half feet above the ground, or a multi-trunked native oak tree having an aggregate diameter of ten inches or more, measured four and one-half feet above the ground." In addition, all native oak and specified non-oak native trees which measure four inches in diameter and larger (or 10-inch aggregate diameter for multi-trunk native oak and Northern California Black Walnut trees). Although not required for inclusion in the report all trees 4-inch diameter are included so they can be mapped for the Tree Location Exhibit. These separate requirements are not based solely on the Sacramento County Tree Preservation Ordinance. Tree inventories and arborist reports submitted to the Sacramento County Office of Planning and Environmental Review (OPER) are used, among other things, to evaluate project impacts and create appropriate mitigation pursuant to the Sacramento County General Plan policies and CEQA. To that end, OPER developed a separate set of criteria to be utilized when preparing tree inventories and arborist reports for a proposed development site.

This Arborist Report and Tree Inventory Summary presents information concerning the species, size, and current condition of the trees within or overhanging the proposed project area, along with pre-development recommendations on a tree-by-tree basis which logically follow the characteristics noted within the trees at the time of field inventory efforts. Information concerning the nature and extent of root system and canopy impacts which will be sustained by the trees from proposed development activities, along with specific tree-by-tree mitigation recommendations for the trees which will sustain encroachment into their protected root zones can be provided in a Supplemental Arborist Report and Construction Impact Assessment once development plans have been refined and finalized for the proposed project area.

METHODOLOGY

During field reconnaissance and inventory efforts Wayne Mckee of Acorn Arboricultural Services conducted a visual review from ground level of the trees within and/or overhanging the proposed project area as depicted on the Tentative Parcel Map. The trees 4-inch DBH were identified in the field by affixing to the tree's trunk, or fence for some offsite trees, a round numbering tag with blue flagging for visibility. The tree numbers utilized in this report and accompanying Tree Inventory Summary correspond to the tree tag which is affixed to the tree in the field, and those tree numbers or grouping of numbers have been rough plotted on the Tentative Parcel Map provided. The precise vertical and horizontal location of the trees should be surveyed in the field by a licensed land surveyor and data for the trees (i.e., tree number, diameter, and dripline) may be properly depicted the development plans and Tree Location Exhibit as requested by OPER.

At the time of field identification and inventory efforts specific data was gathered for each tagged tree including the tree's species, DBH, and dripline radius (DLR). In addition, for the trees which met the criteria of the OPER Requirements and/or County of Sacramento Tree Preservation Ordinance an assessment was made of the tree's root crown/collar, trunk, limbs, and foliage. Utilizing this data, the trees' overall structural condition and vigor were assessed ranging from poor to good based upon the observed characteristics noted within the tree and the Arborist's best professional judgment. Ratings are subjective and are dependent upon both the structure and vigor of the tree. The vigor rating considers factors such as the size, color and density of the foliage; the amount of deadwood within the canopy; bud viability; evidence of wound closure; and the presence or evidence of stress, disease, nutrient deficiency and insect infestation. The structural rating reflects the root crown/collar, trunk and branch configurations; canopy balance; the presence of included bark, weak crotches and other structural defects and decay and the potential for structural failure. The numerical ratings are 0) dead, 1) severe decline, 2) declining, 3) fair, 4) good and 5) excellent. Protected county trees are highlighted in green. Finally, notable characteristics were documented and recommendations on a tree-by-tree basis were made which logically followed the observed characteristics noted within the trees at the time of the field inventory effort.

SUMMARY OF INVENTORY EFFORT

Field reconnaissance and inventory efforts found 119 trees 4-inch DBH and larger within or overhanging the proposed project area. Composition of the 119 inventoried trees includes the following species and accompanying aggregate diameter inches:

SPECIES DIVERSIFICATION			
Black Walnut	=	4 tree	(42 aggregate diameter inches)
Blue Oak	=	2 trees	(22 aggregate diameter inches)
Interior Live Oak	=	21 trees	(252 aggregate diameter inches)
Valley Oak	=	37 trees	(376 aggregate diameter inches)
Blue Gum	=	10 trees	(221 aggregate diameter inches)

Almond	=	9 trees	(111 aggregate diameter inches)
Privet	=	8 trees	(112 aggregate diameter inches)
Plum	=	7 trees	(94 aggregate diameter inches)
Pecan	=	4 trees	(39 aggregate diameter inches)
Olive	=	4 trees	(114 aggregate diameter inches)
Incense cedar	=	2 trees	(51 aggregate diameter inches)
Mulberry	=	2 trees	(17 aggregate diameter inches)
English Walnut	=	1 tree	(22 aggregate diameter inches)
Chinese Pistache	=	1 tree	(24 aggregate diameter inches)
Silk Tree	=	1 tree	(20 aggregate diameter inches)
Persimmon	=	1 tree	(20 aggregate diameter inches)
Fremont Cottonwood	=	1 tree	(10 diameter inches)
Southern Magnolia	=	1 tree	(22 diameter inches)
Silver Maple	=	1 tree	(28 diameter inches)
Grapefruit	=	1 tree	(7 diameter inches)
Tangerine	=	1 tree	(7 diameter inches)
TOTAL	=	**119trees**	**(1616 aggregate diameter inches)**

Recommended Removals

At this time, 5 trees have been recommended for removal from the proposed project area due to the nature and extent of defects, compromised health, and/or structural instability noted at the time of field inventory efforts. If these trees were retained within the proposed project area, it is our opinion that it may be hazardous depending upon their proximity to planned development activities. For reference, the trees which have been recommended for removal due to the severity of noted defects, compromised health, and/or structural instability are highlighted in yellow within the accompanying inventory summaries and are briefly summarized as follows:

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITIONAL ASSESSMENT	
						STRUCTURE	VIGOR
5	Silver Maple	*Acer saccharinum*		28	16	Poor	Fair
16	Plum	*Prunus* spp.		9	8	Poor	Poor
102	Plum	*Prunus* spp.	7,8,9	24	20	Poor	Poor to fair
111	Fig	*Ficus carica*	3,3,4	10	10	Poor	Poor
119	Plum	*Prunus*		10	15	Poor	Poor to fair

It should also be noted that some of the trees within the proposed project area are trees which may be undesirable on residential lots, or are trees which will require periodic/seasonal monitoring to assess the trees' ongoing structural integrity. At this early stage of the project Acorn Arboricultural Services, Inc. has not recommended the removal of these trees since development plans, including proposed home site and building footprint, have not yet been finalized and the precise location of these trees in proximity to planned improvement activities is not known. At this time it is recommended that these trees be monitored and thoroughly inspected by a qualified ISA Certified Arborist on at least an annual basis to keep abreast of the trees' changing condition(s) and to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

CONSTRUCTION IMPACT ASSESSMENT

This Arborist Report and Tree Inventory Summary is intended to provide to Larry Fritz, the County of Sacramento, and other members of the development team a detailed *pre-development review* of the species, size, and current structure and vigor of the trees within 50 feet of the proposed construction. It is not an exhaustive review of the impacts which will be sustained from project implementation. At this early stage of the project specific root system and canopy impacts on a tree-by-tree basis cannot be definitively assessed until the site development, grading, and other improvement plans have been refined and finalized and data from the accompanying inventory summary (i.e., tree numbers and dripline radius) is properly depicted on the plans.

Since trees are living organisms whose condition may change at any time a complete assessment of construction impacts and specific recommendations to help mitigate for the adverse impacts which may be sustained by the trees from contemplated construction activities cannot be made until the development plans have been refined and finalized. Once final plans have been developed for the site a qualified ISA Certified Arborist with special expertise and demonstrated experience with construction projects in and among native and non-native trees should review those plans and provide a more detailed assessment of impacts, including identification of trees which may require removal to facilitate home construction and other contemplated site development activities. This review will be particularly important if structures and/or residential activities will fall within or near the fall zone of a tree which has been noted as exhibiting structural defects, questionable long-term longevity and/or a conditional rating which is less than "fair", and for trees which measure 16 inches and greater in diameter which will be retained within close proximity to development as trees of this size may pose a more significant hazard if a sudden limb shed and/or catastrophic failure should occur. In addition, the review should include an assessment of root system and canopy impacts which will be sustained by the trees which will be retained within the proposed development area, along with specific recommendations on a tree-by-tree basis to help reduce adverse impacts of construction on the retained trees. In the meantime, this report provides some pre-development recommendations which logically follow the observed characteristics noted in the trees at the time of the field inventory efforts,

as well as General Protection Measures which should be utilized as a guideline for the protection of trees which may be retained within the development area. These recommendations will require modification and/or augmentation as development plans are refined and finalized.

GENERAL COMMENTS AND ARBORISTS' DISCLAIMER

The County of Sacramento regulates both the removal of "protected trees" and the encroachment of construction activities within their driplines. Therefore, a tree permit and/or additional development authorization should be obtained from the County of Sacramento prior to the removal of any trees within the proposed project area. All terms and conditions of the tree permit and/or other Conditions of Approval are the sole and exclusive responsibility of the project applicant. It should be noted that prior to final inspection written verification from an ISA Certified Arborist may be required certifying the approved removal activities and/or implementation of other Conditions of Approval outlined for the retained trees on the site. ***Acorn Arboricultural Services, Inc. will not provide written Certification of Compliance unless we have been provided with a copy of the approved site development plans, applicable permits and/or Conditions of Approval, and are on site to monitor and observe regulated activities during the course of construction.*** Therefore, it will be necessary for the project applicant to notify Acorn Arboricultural Services, Inc. well in advance (at least 72 hours prior notice) of any regulated activities which are scheduled to occur on site so that those activities can be properly monitored and documented for compliance certification.

Please bear in mind that implementation of the recommendations provided within this report will help to reduce adverse impacts of construction on the retained trees; however, implementation of any recommendations should not be viewed as a guarantee or warranty against the trees' ultimate demise and/or failure in the future. Arborists are tree specialists who use their education, knowledge, training and experience to examine trees, recommend measures to enhance the beauty and health of the trees and ***attempt to reduce the risk of living near trees***. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. There are some inherent risks with trees that cannot be predicted with any degree of certainty, even by a skilled and experienced arborist. Entities who choose to construct homes on wooded property are accepting a certain level of risk from unpredictable tree related hazards such as toppling in storms, limbs falling and fires that may damage property at some time in the future. Since trees are living organisms their structure and vigor constantly change over time, and they are not immune to changes in site conditions or seasonal variations in the weather. Further, conditions are often hidden within the tree and/or below ground. Arborists and other tree care professionals cannot guarantee that a tree will be healthy and/or safe under all circumstances or for a specific period of time. Likewise remedial treatments cannot be guaranteed. Trees can be managed but they cannot be controlled. To develop land and live near trees is to accept some degree of risk and the only way to eliminate all risk associated with trees would be to eliminate all of the trees. ***An entity who develops land and builds a home with a tree in the vicinity should be aware of and***

inform their future residents of this Arborists' Disclaimer, and be further advised that the developer and the future residents assume the risk that a tree could at any time suffer a branch and/or limb failure, blow over in a storm and/or fail for no apparent reason which may cause bodily injury or property damage. Acorn Arboricultural Services, Inc. cannot predict acts of nature including, without limitation, storms of sufficient strength which can even take down a tree with a structurally sound and vigorous appearance.

Finally, the trees preserved within and/or overhanging the proposed project area will experience a physical environment different from the pre-development environment. As a result, tree health and structural stability should be regularly monitored. Occasional pruning, fertilization, mulch, pest management, replanting and/or irrigation may be required. In addition, ***provisions for monitoring both tree health and structural stability following construction must be made a priority***. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, ***the future management plan must include an annual inspection*** by a qualified ISA Certified Arborist to keep abreast of the trees' changing condition(s) and to assess the trees' ongoing structural integrity and potential for hazard in a developed environment.

Thank you for allowing Acorn Arboricultural Services, Inc. to assist you with this review. Please feel free to give me a call if you have any questions or require additional information and/or clarification.

Sincerely,

Wayne Mckee
ISA Certified Arborist WE 0959A, 1992
ISA Tree Risk Assessment Qualified, 2017
B S Forestry, Humboldt State University

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided to the consultant is assumed to be correct. Any titles and ownership to any property are assumed to be good and marketable. No responsibility is assumed for matters legal in character. Any and all property is appraised or evaluated as though free and clear, under responsible ownership and competent management.

2. It is assumed that any property is not in violation of any applicable codes, ordinances, statutes, or other governmental regulations.

3. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

4. The consultant shall not be required to give a deposition and/or attend court by reason of this report unless subsequent contractual arrangements are made for in advance, including payment of an additional fee for such services according to our standard fee schedule, adjusted yearly, and terms of the subsequent contract of engagement.

5. Loss or alteration of any part of this report invalidates the entire report. Ownership of any documents produced passes to the Client only when all fess have been paid.

6. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.

7. Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed written or verbal consent of the consultant, particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant as stated in his qualifications.

8. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.

9. Sketches, diagrams, graphs, drawings and photographs within this report are intended as visual aids and are not necessarily to scale and should not be construed as engineering or architectural reports or surveys. The reproduction of information generated by other consultants is for coordination and ease of

reference. Inclusion of such information does not constitute a representation by the consultant as to the sufficiency or accuracy of the information.

10. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without laboratory analysis, dissection, excavation, probing or coring, unless otherwise stated.

11. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the plants or property in question may not arise in the future.

12. This report is based on the observations and opinions of Edwin E. Stirtz, and does not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described herein. Neither this author nor Acorn Arboricultural Services, Inc. has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.

13. The information contained within this report is true to the best of the author's knowledge and experience as of the date it was prepared; however, certain conditions may exist which only a comprehensive, scientific, investigation might reveal which should be performed by other consulting professionals.

14. The legal description, dimensions, and areas herein are assumed to be correct. No responsibility is assumed for matters that are legal in nature.

15. Any changes to an established tree's environment can cause its decline, death and/or structural failure.

DEFINITIONS

Tree Number:	Corresponds to aluminum tag attached to the tree.
Species Identification:	Scientific and common species name.
Diameter (DBH):	This is the trunk diameter measured at breast height (industry standard 4.5 feet above ground level).
Dripline radius (DLR):	A radius equal to the horizontal distance from the trunk of the tree to the end of the farthest most branch tip prior to any cutting.
Root Protection Zone:	A circle equal to the largest radius of a protected tree's dripline.
Root Crown:	Assessment of the root crown/collar area located at the base of the trunk of the tree at soil level.
Trunk:	Assessment of the tree's main trunk from ground level generally to the point of the primary crotch structure.
Limbs:	Assessment of both smaller and larger branching, generally from primary crotch structure to branch tips.
Foliage:	Tree's leaves.
Overall Condition:	Describes overall condition of the tree in terms of structure and vigor.
Recommendation:	Pre-development recommendations based upon observed characteristics noted at the time of the field inventory effort.
Obscured:	Occasionally some portion of the tree may be obscured from visual inspection due to the presence of dense vegetation which, during the course of inspection for the arborist report, prevented a complete evaluation of the tree. In these cases, if the tree is to be retained on site the vegetation should be removed to allow for a complete assessment of the tree prior to making final decisions regarding the suitability for retention.

TREE CONDITION RATING CRITERIA

RATING TERM	ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR
Good	No apparent injuries, decay, cavities or evidence of hollowing; no anchoring roots exposed; no indications of infestation or disease	No apparent injuries, decay, cavities or evidence of hollowing; no codominant attachments or multiple trunk attachments are observed; no indications of infestation or disease	No apparent injuries, decay, cavities or evidence of hollowing; below average amount of dead limbs or twigs; no major limb failures or included bark; callus growth is vigorous	Leaf size, color and density are typical for the species; buds are normal in size, viable, abundant and uniform throughout the canopy; annual seasonal growth increments are average or above average; no insect or disease infestations/ infections evident	No apparent structural defects; no weak crotches; no excessively weighted branches and no significant cavities or decay	Tree appears healthy and has little or no significant deadwood; foliage is normal and healthy
Fair	Small to moderate injuries, decay, cavities or hollowing may be evident but are not currently affecting the overall structure; some evidence of infestation or disease may be present but is not currently affecting the tree's structure	Small to moderate injuries, decay, cavities or hollowing may be evident; codominant branching or multiple trunk attachments or minor bark inclusion may be observed; some infestation or disease may be present but not currently affecting the tree's structure	Small to moderate injuries, decay or cavities may be present; average or above average dead limbs or twigs may be present; some limb failures or bark inclusion observed; callus growth is average	Leaf size, color and density are typical or slightly below typical for the species; buds are normal or slightly sparse with potentially varied viability, abundance and distribution throughout the canopy; annual seasonal growth increments are average or slightly below average; minor insect or disease infestation/infection may be present	Minor structural problems such as weak crotches, minor wounds and/or cavities or moderate amount of excessive weight; non-critical structural defects which can be mitigated through pruning, cabling or bracing	Tree appears stressed or partially damaged; minimal vegetative growth since previous season; moderate amount of deadwood, abnormal foliage and minor lesions or cambium dieback
Poor	Moderate to severe injuries, decay, cavities or hollowing may be evident and are affecting the overall structure; presence of infestation or disease may be significant and affecting the tree's structure	Moderate to severe injuries, decay, cavities or hollowing may be evident and are affecting the tree's structure; presence of infestation or disease may be significant and affecting the tree's structure	Severe injuries, decay or cavities may be present; major deadwood, twig dieback, limb failures or bark inclusion observed; callus growth is below average	Leaf size, color and density are obviously abnormal; buds are obviously abnormal or absent; annual seasonal growth is well below average for the species; insect or disease problems may be severe	Obvious major structural problems which cannot be corrected with mitigation; potential for major limb, trunk or root system failure is high; significant decay or dieback may be present	Tree health is declining; no new vegetative growth; large amounts of deadwood; foliage is severely abnormal

The ratings "Poor to fair" and "fair to good" are used to describe trees that fall between the described major categories and have elements of both

GENERAL PROTECTION GUIDELINES FOR TREES PLANNED FOR PRESERVATION

Great care must be exercised when work is conducted upon or around protected trees. The purpose of these General Protection Measures is to provide guidelines to protect the health of the affected protected trees. These guidelines apply to all encroachments into the protected zone of a protected tree, and may be incorporated into tree permits and/or other Conditions of Approval as deemed appropriate by the applicable governing body.

A circle with a radius measurement from the trunk of the tree to the tip of its longest limb, shall constitute the root protection zone area of each protected tree. Limbs must not be cut back in order to change the dripline. The area beneath the dripline is a critical portion of the root zone and defines the minimum protected area of each protected tree. Removing limbs that make up the dripline does not change the protected area.

Any protected trees on site which require pruning shall be pruned by an ISA Certified Arborist prior to the start of construction work. All pruning shall be in accordance with the American National Standards Institute (ANSI) A300 pruning standards, ANSI Standard 2133.1-2000 regarding safety practices, and the International Society of Arboriculture (ISA) "Tree Pruning Guidelines" and Best Management Practices.

Prior to initiating construction, temporary protective fencing shall be installed at least one foot outside the root protection zone of the protected trees in order to avoid damage to the tree canopies and root systems. Fencing shall be installed in accordance with the approved fencing plan prior to the commencement of any grading operations or such other time as determined by the review body. The developer shall contact the Project Arborist and the OPER for an inspection of the fencing prior to commencing construction activities on site.

Signs shall be installed on the protective fence in four (4) equidistant locations around each individual protected tree. The size of each sign must be a minimum of two (2) feet by two (2) feet and must contain the following language:

WARNING: THIS FENCE SHALL NOT BE REMOVED OR RELOCATED WITHOUT WRITTEN AUTHORIZATION FROM THE COUNTY OF SACRAMENTO

Once approval has been obtained by the County of Sacramento Municipal Services Agency protective fencing shall remain in place throughout the entire construction period and shall not be removed, relocated, taken down or otherwise modified in whole or in part without prior written authorization from the Agency, or as deemed necessary by the Project Arborist to facilitate approved activities within the root protection zone.

Any removal of paving or structures (i.e. demolition) that occurs within the dripline of a protected tree shall be done under the direct supervision of the Project Arborist. To the maximum extent feasible, demolition work within the dripline protection area of the protected tree shall be performed by hand. If the Project Arborist determines that it is not feasible to perform some portion(s) of this work by hand, then the smallest/lightest weight equipment that will adequately perform the demolition work shall be used.

No signs, ropes, cables (except those which may be installed by an ISA Certified Arborist to provide limb support) or any other items shall be attached to the protected trees. Small metallic numbering tags for the purpose of identification in preparing tree reports and inventories shall be allowed.

No vehicles, construction equipment, mobile homes/office, supplies, materials or facilities shall be driven, parked, stockpiled or located within the driplines of protected trees.

Drainage patterns on the site shall not be modified so that water collects, stands or is diverted across the dripline of any protected tree.

No trenching shall be allowed within the driplines of protected trees, except as specifically approved by the OPER as set forth in the project's Conditions of Approval and/or approved tree permit. If it is absolutely necessary to install underground utilities within the dripline of a protected tree the utility line within the protected zone shall be "bored and jacked" or performed utilizing hand tools to avoid root injury under the direct supervision of the Project Arborist.

Grading within the protected zone of a protected tree shall be minimized. Cuts within the protected zone shall be maintained at less than 20% of the root protection zone area. Grade cuts shall be monitored by the Project Arborist. Any damaged roots encountered shall be root pruned and properly treated as deemed necessary by the Project Arborist.

Minor roots less than one (1) inch in diameter encountered during approved excavation and/or grading activities may be cut, but damaged roots shall be traced back and cleanly cut behind any split, cracked or damaged area as deemed necessary by the Project Arborist.

Major roots greater than one (1) inch in diameter encountered during approved excavation and/or grading activities may not be cut without approval of the Project Arborist. Depending upon the type of improvement being proposed, bridging techniques or a new site design may need to be employed to protect the roots and the tree.

Cut faces, which will be exposed for more than 2-3 days, shall be covered with dense burlap fabric and watered to maintain soil moisture at least on a daily basis (or possibly more frequently during summer months). If any native ground surface fabric within the protected zone must be removed for any reason, it shall be replaced within forty-eight (48) hours.

If fills exceed 1 foot in depth up to 20% of the critical root zone area, aeration systems may serve to mitigate the presence of the fill materials as determined by the Project Arborist.

When fill materials are deemed necessary on two or three sides of a tree it is critical to provide for drainage away from the critical root zone area of the tree (particularly when considering heavy winter rainfalls). Overland releases and subterranean drains dug outside the root protection zone area and tied directly to the main storm drain system are two options.

In cases where a permit has been approved for construction of a retaining wall(s) within the protected zone of a protected tree the applicant will be required to provide for immediate protection of exposed roots from moisture loss during the time prior to completion of the wall. The retaining wall within the root protected zone of the protected tree shall be constructed within seventy-two (72) hours after completion of grading within the root protection zone.

The construction of impervious surfaces within the root protection zone of a protected tree shall be minimized. When necessary, a piped aeration system shall be installed under the direct supervision of the Project Arborist.

Preservation devices such as aeration systems, tree wells, drains, special paving and cabling systems must be installed in conformance with approved plans and certified by the Project Arborist.

No sprinkler or irrigation system shall be installed in such a manner that sprays water or requires trenching within the root protection zone of a protected tree. An above ground drip irrigation system is recommended. An independent low-flow drip irrigation system may be used for establishing drought-tolerant plants within the root protection zone of a protected tree. Irrigation shall be gradually reduced and discontinued after a two (2) year period.

All portions of permanent fencing that will encroach into the root protection zone of a protected tree shall be constructed using posts set no closer than ten (10) feet on center. Posts shall be spaced in such a manner as to maximize the separation between the tree trunks and the posts in order to reduce impacts to the tree(s).

JEL DEVELOPMENT
6416 Hazel Avenue Project Site
Orangevale, County of Sacramento, California
TREE INVENTORY SUMMARY

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITION		Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
						STRUCTURE	VIGOR				
1	Interior live oak	*Quercus wislizenii*		11	19	Fair	Fair	3	yes	grasses	Trunk leans east, callusing trunk wound south side 1 ' above grade. - None at this time
2	Plum	*Prunus* spp.	2,3,4	9	5	Poor to fair	Fair	3	no	grasses	Weak attachments, above average amount of deadwood.- None at this time.
3	Silk tree	*Albizia julibrissin*	9,11	20	23	Poor to fair	Fair	3	no	grasses / roadway	Callusing trunk wounds west side. - None at this time.
4	Persimmon	*Diospyros* spp.	9,11	20	8	Poor to fair	Fair	3	no	grasses	Old heading cuts and resulting sprout growth. - None at this time
5	Silver maple	*Acer saccharinum*		28	16	Poor	Fair	1	no	grasses	Old heading cuts and resulting sprout growth at 15' above grade, fungal fruiting bodies from grade to 15' with suspected significan interior decay. - **Remove**
6	Southern magnolia	*Magnolia grandifloria*		22	17	Fair	Fair	3	no	grasses	None at this time.
7	Blue oak	*Quercus douglasii*		17	16	Poor to fair	Fair	3	yes	gravel driveway	Pruned for utility line clearance, old heading cuts and resulting sprout growth. - None at this time. **Offsite 2 feet north of property fence alignment.**
8	Fremont cottonwood	*Populus fremontii*		10	12	Fair	Fair	3	no	grasses	None at this time. **Offsite 2 feet north of property fence.**
9	California black walnut	*Juglans hindsii*	9,10	19	14	Fair	Fair	3	yes	grasses	None at this time. **Offsite 3 feet north of property fence, tag on fence.**
10	Almond	*Prunus dulcis*		10	15	Poor to fair	Poor to fair	3	no	grasses	Crown 1-sided east suppressed, above average amount of deadwood. - None at this time. **Offsite 1 foot north of property fence.**
11	English walnut	*Juglans regia*	4,5,6,7	22	19	Poor to fair	Fair	3	no	grasses	Stems are stump sprouts. - None at this time.
12	Valley oak	*Quercus lobata*		10	16	Fair	Fair	3	yes	grasses /shed	None at this time. **Offsite just north of the property fence.**
13	Valley oak	*Quercus lobata*		9	19	Poor to fair	Fair	3	yes	grasses / shed	Embedded wire lower trunk, crown 1-sided south. - None at this time
14	Interior live oak	*Quercus wislizenii*	9,10	19	22	Fair	Fair	3	yes	grasses / shed	None at this time. **Offsite 3 feet north of property fence, tag on fence.**
15	Interior live oak	*Quercus wislizenii*		14	23	Poor to fair	Fair	3	yes	grasses	Trunk leans south then bends upright.- None at this time.
16	Plum	*Prunus* spp.		9	8	Poor	Poor	1	no	dirt	Callusing trunk wounds various locations with fungal fruiting bodies. **Remove**
17	Privet	*Ligustrum lucidum*		8	10	Poor to fair	Fair	3	no	dirt	Callusing trunk wounds south side. - None at this time

JEL DEVELOPMENT
6416 Hazel Avenue Project Site
Orangevale, County of Sacramento, California
TREE INVENTORY SUMMARY

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITION		Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
						STRUCTURE	VIGOR				
18	Privet	*Ligustrum lucidum*	6,7	13	14	Poor to fair	Fair	3	no	dirt	Callusing trunk wounds south side with minor decay. - None at this time
19	Tangerine	*Citrus reticulata*		7	16	Fair	Fair	3	no	dirt	Crown 1-sided north. - None at this time.
20	Grapefruit	*Citrus x paradisi*		7	13	Fair	Fair	3	no	dirt / shed	None at this time.
21	Incense cedar	*Calocedrus decurrens*		31	14	Fair	Fair	3	no	dirt	None at this time
22	Incense cedar	*Calocedrus decurrens*		20	18	Poor to fair	Fair	3	no	dirt	Trunk leans south. - None at this time.
23	Pecan	*Carya illinoinensis*		10	15	Fair	Fair	3	no	grasses / shed	None at this time.
24	Almond	*Prunis dulcis*	6,7	13	12	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds east side 2 to 4' above grade. - None at this time.
25	Valley oak	*Quercus lobata*		10	16	Fair	Fair	3	yes	grasses	None at this time.
26	Valley oak	*Quercus lobata*	4,5	9	8	Fair	Fair	3	no	grasses	None at this time.
27	Valley oak	*Quercus lobata*		4	4	Fair	Fair	3	no	grasses	None at this time.
28	Valley oak	*Quercus lobata*		7	11	Fair	Fair	3	yes	grasses	None at this time.
29	Valley oak	*Quercus lobata*		13	15	Fair	Fair	3	yes	grasses	Callusing basal wound west side. - None at this time.
30	Valley oak	*Quercus lobata*		14	17	Fair	Fair	3	yes	grasses	None at this time.
31	Privet	*Ligustrum lucidum*	7,8	15	13	Poor to fair	Fair	3	no	grasses	Weak attachments.- None at this time.
32	Privet	*Ligustrum lucidum*	6,7,7	20	14	Poor to fair	Fair	3	no	grasses	Weak attachments.- None at this time.
33	Privet	*Ligustrum lucidum*		7	10	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations, branch failures. - None at this time.
34	Privet	*Ligustrum lucidum*	7,9	16	13	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations, branch failures. - None at this time.
35	Privet	*Ligustrum lucidum*	5,6,6	17	15	Poor to Fair	Fair	3	no	grasses	Weak attachments. None at this time.
36	Privet	*Ligustrum lucidum*	3,4,7	14	12	Poor to fair	Fair	3	no	grasses	Callusing trunks wounds various locations. - None at this time

JEL DEVELOPMENT
6416 Hazel Avenue Project Site
Orangevale, County of Sacramento, California
TREE INVENTORY SUMMARY

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITION		Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
						STRUCTURE	VIGOR				
55	Blue gum	*Eucalyptus globulus*		22	20	Poor to fair	Fair	3	no	grasses	Past large limb failures. - None at this time. **Offsite 4 north of property fence, tag on fence.**
56	Blue gum	*Eucalyptus globulus*		18	22	Fair	Fair	3	no	grasses	None at this time. **Offsite 5 feet north of property fence, tag on fence.**
57	Blue gum	*Eucalyptus globulus*		7	20	Poor to fair	Fair	3	no	grasses	Trunk leans significantly to the south. - None at this time. **Offiste 4 feet north of property fence.**
58	Blue gum	*Eucalyptus globulus*	6,7,8,8, 10	39	18	Poor to fair	Fair	3	no	grasses	Trunks grow in a convoluted fashion. - None at this time. **Offsite 5 feet north of property fence.**
59	Blue gum	*Eucalyptus globulus*		5	15	Poor	Fair	2	no	grasses	Trunk grows parallel to grade then leans south. - None at this time. **Offsite 4 feet norht of property fence.**
60	Blue oak	*Quercus douglasii*	2,3	5	4	Fair	Fair	3	no	grassees	None at this time.
61	Valley oak	*Quercus lobata*		8	6	Fair	Fair	3	yes	grasses	None at this time.
62	Valley oak	*Quercus lobata*		4	5	Fair	Fair	3	no	grasses	None at this time.
63	Plum	*Prunus* spp.	4,6	10	7	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations. - None at this time.
64	Interior live oak	*Quercus wislizenii*	2,2,5	9	12	Fair	Fair	3	no	grasses	None at this time.
65	Valley oak	*Quercus lobata*		9	12	Poor to fair	Fair	3	yes	grasses	Callusing trunk wounds various locations, extensive sapsucker damage. - None at this time.
66	Valley oak	*Quercus lobata*		4	4	Fair	Fair	3	no	grasses	None at this time.
67	Interior live oak	*Quercus wislizenii*	3,3	6	7	Fair	Fair	3	no	grasses	None at this time.
68	Interior live oak	*Quercus wislizenii*	2,4	6	10	Poor to fair	Fair	3	no	grasses	Trunk leans significantly to the south.-None at this time.
69	Almond	*Prunus dulcis*	5,6	11	15	Fair	Fair	3	no	grasses	Crown 1-sided north. - None at this time.
70	Almond	*Prunus dulcis*	3,3	6	10	Fair	Fair	3	no	grasses	None at this time.
71	Almond	*Prunus dulcis*		8	15	Fair	Fair	3	no	grasses	None at this time.
72	Almond	*Prunus dulcis*	3,4,6	13	15	Fair	Fair	3	no	grasses	None at this time.
73	Valley oak	*Quercus lobata*		12	17	Fair	Fair	3	yes	grasses / shed	None at this time

JEL DEVELOPMENT
6416 Hazel Avenue Project Site
Orangevale, County of Sacramento, California
TREE INVENTORY SUMMARY

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						STRUCTURE	VIGOR				
74	Valley oak	*Quercus lobata*		4	7	Poor to fair	Fair	3	no	grasses	Trunk leans east suppressed. - None at this time.
75	Interior live oak	*Quercus wislizenii*	5,5,6	16	14	Fair	Fair	3	yes	grasses	None at this time.
76	Almond	*Prunus dulcis*		4	6	Fair	Fair	3	no	grasses	None at this time.
77	Interior live oak	*Quercus wislizenii*	3,4	7	8	Fair	Fair	3	no	grasses	None at this time.
78	Valley oak	*Quercus lobata*	3,4	7	5	Fair	Fair	3	no	grasses	None at this time.
79	Valley oak	*Quercus lobata*	6,6	12	7	Fair	Fair	3	yes	grasses	None at this time.
80	Almond	*Prunus dulcis*	6,6,8,9	29	15	Fair	Fair	3	no	grasses	None at this time.
81	Valley oak	*Quercus lobata*		7	8	Fair	Fair	3	yes	grasses	None at this time.
82	Valley oak	*Quercus lobata*	2,6	8	6	Fair	Fair	3	no	grasses	None at this time.
83	Valley oak	*Quercus lobata*		7	8	Fair	Fair	3	yes	grasses	None at this time.
84	Valley oak	*Quercus lobata*		5	4	Fair	Fair	3	no	grasses	None at this time.
85	Chinese pistache	*Pistacia chinensis*	7,8,9	24	14	Poor to fair	Fair	2	no	grasses / car port	Measured at 3' above grade, cut at 4' above grade with resulting significant sprout growth. - None at this time.
86	Interior live oak	*Quercus wislizenii*	3,3,3	9	12	Fair	Fair	3	no	grasses / shed	None at this time.
87	Interior live oak	*Quercus wislizenii*		4	7	Fair	Fair	3	no	grasses	None at this time.
88	Interior live oak	*Quercus wislizenii*	4,7,8	19	15	Fair	Fair	3	yes	grasses	None at this time.
89	Valley oak	*Quercus lobata*	4,5,6	14	14	Poor to fair	Fair	3	yes	grasses	Forks at 1 and 3' above grade with bark inclusions. - None at this time.
90	Interior live oak	*Quercus wislizenii*	2,5	7	11	Fair	Fair	3	no	grasses	None at this time.
91	Valley oak	*Quercus lobata*		25	30	Fair	Fair	3	yes	grasses	None at this time.
92	Interior live oak	*Quercus wislizenii*		15	20	Fair	Fair	3	yes	grasses	None at this time.

JEL DEVELOPMENT
6416 Hazel Avenue Project Site
Orangevale, County of Sacramento, California
TREE INVENTORY SUMMARY

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITION		Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
						STRUCTURE	VIGOR				
93	Valley oak	*Quercus lobata*		4	10	Fair	Fair	3	no	grasses	Crown 1-sided west. - None at this time.
94	Valley oak	*Quercus lobata*		5	10	Fair	Fair	3	no	grasses	Crown 1-sided north. - None at this time.
95	Plum	*Prunus spp.*	10 x 2	20	15	Poor to fair	Fair	2	no	grasses / drainage	Weak attachments, erosion exposing supporting roots. - None at this time.
96	Pecan	*Carya illinoinensis*	3,3,3,4	13	12	Poor to fair	Fair	3	no	grasses	Embedded chain link in lower trunk. - None at this time.
97	Pecan	*Carya illinoinensis*	4,5	9	16	Poor to fair	Fair	3	no	grasses	Trunks lean north, weak attachment. - None at this time.
98	Valley oak	*Quercus lobata*		11	14	Fair	Fair	3	yes	grasses	None at this time.
99	Interior live oak	*Quercus wislizenii*	6,9	15	16	Fair	Fair	3	yes	grasses	Forks at 1and 5' above grade. - None at this time.
100	Interior live oak	*Quercus wislizenii*	7,8	15	15	Fair	Fair	3	yes	grasses	None at this time.
101	Valley oak	*Quercus lobata*		8	14	Fair	Fair	3	yes	berry bushes	None at this time.
102	Plum	*Prunus* spp.	7,8,9	24	20	Poor	Poor to fair	1	no	grasses	9" stem failed lying prone on grade exposing decay in the root crown of the remaining stems, above average amount of deadwood. - **Remove**
103	Interior live oak	*Quercus wislizenii*		26	36	Poor to fair	Poor to fair	2	yes	grasses	Embedded wire girdling the lower trunk, above aberage amount od deadwood. - Inspect annually.
104	Interior live oak	*Quercus wislizenii*	4,4	8	15	Poor to fair	Poor to fair	2	no	grasses	Callusing trunk wounds various locations with minor to moderate decay, crown 1-sided north. - None at this time.
105	Almond	*Prunus dulcis*	8,9	17	15	Fair	Poor to fair	3	no	grasses	Above average amount of deadwood.- None at this time. **Offsite 2 feet south of property fence.**
106	Valley oak	*Quercus lobata*		10	16	Fair	Fair	3	yes	grasses	None at this time. **Offsite 3 feet south of property fence, tag on fence.**
107	Valley oak	*Quercus lobata*		14	21	Fair	Fair	3	yes	grasses	None at this time. **Offsite 2 feet south of property fence, tag on fence.**
108	California black walnut	*Junglans hindsii*		4	11	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations, leans east. - None at this time.
109	Valley oak	*Quercus lobata*	3,7	10	13	Fair	Fair	3	yes	grasses	None at this time.
110	Plum	*Prunus spp.*	2,2,2,3,3	12	12	Poor to fair	Fair	2	no	grasses	Callusing trunk wounds all sides 1 to 4' above grade. - None at this time
111	Fig	*Ficus carica*	3,3,4	10	10	Poor	Poor	1	no	grasses	Several stems have died. - **Remove**

JEL DEVELOPMENT
6416 Hazel Avenue Project Site
Orangevale, County of Sacramento, California
TREE INVENTORY SUMMARY

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (inches)	TOTAL DBH (inches)	DLR (feet)	CONDITION		Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
						STRUCTURE	VIGOR				
112	Interior live oak	*Quercus wislizenii*	3,3,4,5	15	14	Fair	Fair	3	yes	grasses	None at this time.
113	Mulberry	*Morus alba*		8	20	Poor to fair	Fair	3	no	grasses	Past limb failures. - None at this time.
114	Valley oak	*Quercus lobata*		17	27	Fair	Fair	3	yes	grasses	Embedded wire lower trunk, crown 1-sided north. - None at this time.
115	Pecan	*Carya illinoinensis*		7	20	Fair	Fair	3	no	grasses	Crown 1-sided north. - None at this time.
116	Almond	*Prunus dulcis*	6,8,10	14	14	Poor to fair	Poor to fair	2	no	grasses	Past partial root system failure, trunk leans significantly to the north, above average amount of deadwood. - None at this time
117	California black walnut	*Juglans hindsii*		19	30	Poor to fair	Poor to fair	2	yes	grasses	Trunk leans significantly to the north, callusing basal lower trunk wound south side minor to moderate decay, embedded wire lower trunk. - Inspect annually
118	Interior live oak	*Quercus wislizenii*		5	10	Poor to fair	Fair	3	no	grasses	Trunk leans and bends north. - None at this time.
119	Plum	*Prunus spp.*		10	15	Poor	Poor to fair	1	no	grasses	Trunk failed and is parallel to grade with significant interior decay. - **Remove**

TOTAL INVENTORIED TREES = 119trees (1616 aggregate diameter inches)
TOTAL RECOMMENDED REMOVALS = 5 trees (81 aggregate diameter inches)
Rating (0-5, where 0 is dead) 1=5 trees; 2=9 trees; 3=105 trees; 4=0 trees; 5=0 trees; 6=0 trees
County Protected Trees = 41 trees (561 aggregate diameter inches)
All Other Inventoried Trees = 78 Trees (1055 aggregate diameter inches)

Attachment F

Tree Inventory Map

PROJECT DATA:

OWNER:
JAMES E. and NANCY C. LUSE
REVOCABLE TRUST and
McVEY REVOCABLE TRUST

DEVELOPER:
JIM LUSE
6912 THAYER WAY
ORANGEVALE CA 95662
PH. (916)224-9314

ENGINEER:
BAKER-WILLIAMS ENGINEERING GROUP
6020 RUTLAND DRIVE, SUITE 19
CARMICHAEL CA 95608
PH. (916) 331-4336
FAX (916) 331-4430

ASSESSOR'S PARCEL NUMBER:
223-0012-053, 060, 061

ACREAGE:
4.63± ACRES GROSS
4.37± ACRES NET

EXISTING USE:
SINGLE FAMILY, VACANT

PROPOSED USE:
23 LOT SINGLE FAMILY SUBDIVISION
6 HALF-PLEX LOTS
1 PRIVATE STREET LOT
1 DRAINAGE LOT

EXISTING ZONE:
RD-5

PROPOSED ZONE:
RD-10

SEWER:
SASD

WATER SUPPLY:
ORANGEVALE WATER COMPANY

DRAINAGE:
SACRAMENTO COUNTY WATER RESOURCES

FIRE PROTECTION:
SAC METRO

ELECTRIC SERVICE:
SMUD

TELEPHONE SERVICE:
AT&T

GAS SUPPLY
PG&E

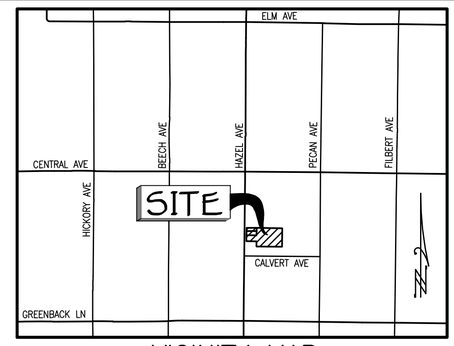
SCHOOL DISTRICT:
SAN JUAN UNIFIED

PARK DISTRICT:
ORANGEVALE

LOT SIZE:
MIN. 3,825 SF
MAX. 7,492 SF
AVERAGE 4,781 SF

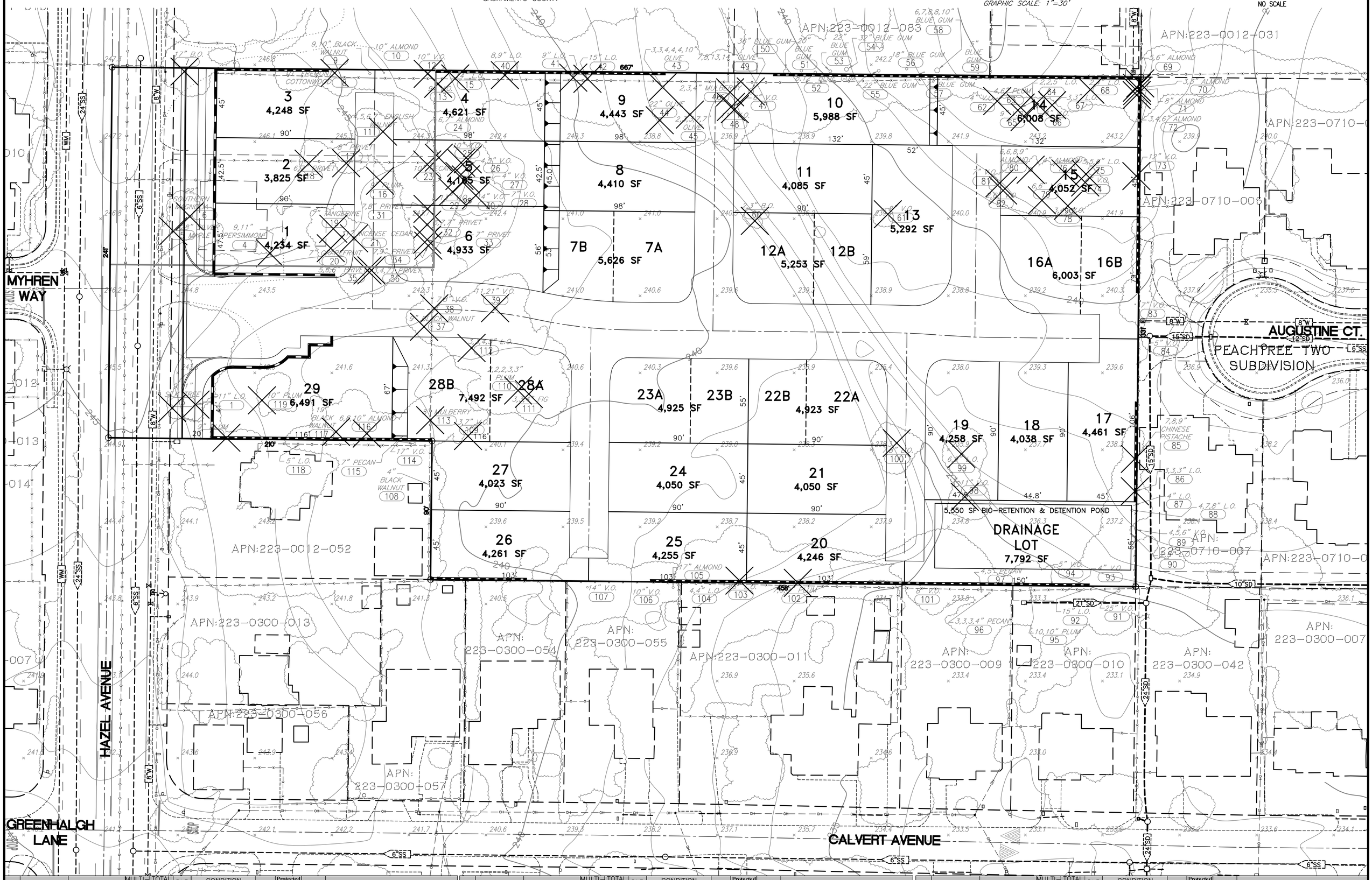
PROPOSED IMPROVEMENTS:
SACRAMENTO COUNTY

SCALE: 1"=30'



VICINITY MAP
NO SCALE

30' 0' 30' 60' 90'
GRAPHIC SCALE: 1"=30'



TREE #	COMMON NAME	SPECIES	MULTI-STEMS (INCHES)	TOTAL DBH (INCHES)	DLR (FEET)	CONDITION STRUCTURE	CONDITION VIGOR	Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
1	Interior live oak	*Quercus wislizenii*		11	19	Fair	Fair	3	yes	grasses	Trunk leans east, callusing trunk wound south side 1 ' above grade. - None at this time
2	Plum	*Prunus* spp.	2,3,4	9	5	Poor to fair	Fair	3	no	grasses	Weak attachments, above average amount of deadwood.- None at this time.
3	Silk tree	*Albizia julibrissin*	9,11	20	23	Poor to fair	Fair	3	no	grasses / roadway	Callusing trunk wounds west side. - None at this time.
4	Persimmon	*Diospyros* spp.	9,11	20	8	Poor to fair	Fair	3	no	grasses	Old heading cuts and resulting sprout growth. - None at this time
5	Silver maple	*Acer saccharinum*		28	16	Poor	Fair	1	no	grasses	Old heading cuts and resulting sprout growth at 15' above grade, fungal fruiting bodies from grade to 15' with suspected significan interior decay. **- Remove**
6	Southern magnolia	*Magnolia grandifloria*		22	17	Fair	Fair	3	no	grasses	None at this time.
7	Blue oak	*Quercus douglasii*		17	16	Poor to fair	Fair	3	yes	gravel driveway	Pruned for utility line clearance, old heading cuts and resulting sprout growth. - None at this time. **Offsite 2 feet north of property fence alignment.**
8	Fremont cottonwood	*Populus fremontii*		10	12	Fair	Fair	3	no	grasses	None at this time. **Offsite 2 feet north of property fence.**
9	California black walnut	*Juglans hindsii*	9,10	19	14	Fair	Fair	3	yes	grasses	None at this time. **Offsite 3 feet north of property fence, tag on fence.**
10	Almond	*Prunus dulcis*		10	15	Poor to fair	Poor to fair	3	no	grasses	Crown 1-sided east suppressed, above average amount of deadwood. - None at this time. **Offsite 1 foot north of property fence.**
11	English walnut	*Juglans regia*	4,5,6,7	22	19	Poor to fair	Fair	3	no	grasses	Stems are stump sprouts. - None at this time.
12	Valley oak	*Quercus lobata*		10	16	Fair	Fair	3	yes	grasses /shed	None at this time. **Offsite just north of the property fence.**
13	Valley oak	*Quercus lobata*		9	19	Poor to fair	Fair	3	yes	grasses / shed	Embedded wire lower trunk, crown 1-sided south. - None at this time
14	Interior live oak	*Quercus wislizenii*	9,10	19	22	Fair	Fair	3	yes	grasses / shed	None at this time. **Offsite 3 feet north of property fence, tag on fence.**
15	Interior live oak	*Quercus wislizenii*		14	23	Poor to fair	Fair	3	yes	grasses	Trunk leans south then bends upright.- None at this time.
16	Plum	*Prunus* spp.		9	8	Poor	Poor	1	no	dirt	Callusing trunk wounds various locations with fungal fruiting bodies. **Remove**
17	Privet	*Ligustrum lucidum*		8	10	Poor to fair	Fair	3	no	dirt	Callusing trunk wounds south side. - None at this time
18	Privet	*Ligustrum lucidum*	6,7	13	14	Poor to fair	Fair	3	no	dirt	Callusing trunk wounds south side with minor decay. - None at this time
19	Tangerine	*Citrus reticulata*		7	16	Fair	Fair	3	no	dirt	Crown 1-sided north. - None at this time.
20	Grapefruit	*Citrus x paradisi*		7	13	Fair	Fair	3	no	dirt / shed	None at this time.
21	Incense cedar	*Calocedrus decurrens*		31	14	Fair	Fair	3	no	dirt	None at this time
22	Incense cedar	*Calocedrus decurrens*		20	18	Poor to fair	Fair	3	no	dirt	Trunk leans south. - None at this time.
23	Pecan	*Carya illinoinensis*		10	15	Fair	Fair	3	no	grasses / shed	None at this time.
24	Almond	*Prunis dulcis*	6,7	13	12	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds east side 2 to 4' above grade. - None at this time.
25	Valley oak	*Quercus lobata*		10	16	Fair	Fair	3	yes	grasses	None at this time.
26	Valley oak	*Quercus lobata*	4,5	9	8	Fair	Fair	3	no	grasses	None at this time.
27	Valley oak	*Quercus lobata*		4	4	Fair	Fair	3	no	grasses	None at this time.
28	Valley oak	*Quercus lobata*		7	11	Fair	Fair	3	yes	grasses	None at this time.
29	Valley oak	*Quercus lobata*		13	15	Fair	Fair	3	yes	grasses	Callusing basal wound west side. - None at this time.
30	Valley oak	*Quercus lobata*		14	17	Fair	Fair	3	yes	grasses	None at this time.
31	Privet	*Ligustrum lucidum*	7,8	15	13	Poor to fair	Fair	3	no	grasses	Weak attachments.- None at this time.
32	Privet	*Ligustrum lucidum*	6,7,7	20	14	Poor to fair	Fair	3	no	grasses	Weak attachments.- None at this time.
33	Privet	*Ligustrum lucidum*		7	10	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations, branch failures. - None at this time.
34	Privet	*Ligustrum lucidum*	7,9	16	13	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations, branch failures. - None at this time.
35	Privet	*Ligustrum lucidum*	5,6,6	17	15	Poor to Fair	Fair	3	no	grasses	Weak attachments. None at this time.
36	Privet	*Ligustrum lucidum*	3,4,7	14	12	Poor to fair	Fair	3	no	grasses	Callusing trunks wounds various locations. - None at this time
37	California black walnut	*Juglands hindsii*		9	12	Poor to fair	Fair	3	yes	grasses	Trunk failed in the past at 5' above grade with resulting sprouts comprising the canopy. - None at this time.
38	Valley oak	*Quercus lobata*	7,8	15	16	Poor to fair	Fair	3	yes	grasses	Forks at 2' above grade with bark inclusion. - None at this time
39	Valley oak	*Quercus lobata*	11,21	32	24	Fair	Fair	3	yes	grasses	Root crown callused over a boulder on the north side. - None at this time.
40	Valley oak	*Quercus lobata*	8,9	17	16	Poor to fair	Fair	3	yes	grasses	Forks at 2' above grade with bark inclusion. - None at this time. **Offsite just north of the property fence.**
41	Interior live oak	*Quercus wislizenii*		9	20	Fair	Fair	3	yes	grasses	Trunk leans northeast. - None at this time. **Offsite 1 foot north of property fence, tag on post.**
42	Interior live oak	*Quercus wislizenii*		15	24	Fair	Fair	3	yes	grasses	Trunk leans south. - None at this time.
43	Olive	*Olea europaea*	3,3,,4,4,4 ,10	28	20	Poor to fair	Fair	3	no	grasses / dirt	Callusing trunk wounds various locations.-None at this time.
44	Olive	*Olea europaea*		22	22	Poor to fair	Fair	3	no	grasses / dirt	Callusing trunk wounds various locations. - None at this time.
45	Olive	*Olea europaea*	2,3,3,7,7	22	16	Poor to fair	Poor to fair	3	no	grasses / dirt	Callusing trunk wounds various locations, above average amount od deadwood. - None at this time.
46	Mulberry	*Morus alba*	2,3,4	9	20	Poor to fair	Fair	2	no	grasses	Callusing trunk wounds various locations, crown 1-sided west. - None at this time
47	Valley oak	*Quercus lobata*		6	15	Fair	Fair	3	yes	grasses	Trunk leans west. - None at this time.
48	Valley oak	*Quercus lobata*		11	21	Fair	Fair	3	yes	grasses	None at this time.
49	Olive	*Olea europaea*	7,8,13,14	42	20	Poor to fair	Poor to fair	2	no	grasses	Callusing trunk wounds various locations, old heading cuts, several branch failures. - None at this time.

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (INCHES)	TOTAL DBH (INCHES)	DLR (FEET)	CONDITION STRUCTURE	CONDITION VIGOR	Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
50	Blue gum	*Eucalyptus globulus*		36	26	Fair	Poor to fair	3	no	grasses	Above average amount of deadwood. - None at this time. **Offsite 4 feet north of property fence, tag on**
51	Blue gum	*Eucalyptus globulus*		20	20	Poor	Poor to fair	2	no	grasses	Large past failure 20' above grade with resulting large trunk wound. - Inspect annually. **Offsite 4 feet north of property fence, tag on fence.**
52	Blue gum	*Eucalyptus globulus*	8,12	20	16	Poor to fair	Fair	3	no	grasses	Stems lean significantly to the south. - None at this time. **Offsite 4 feet north of property fence, tag on fence.**
53	Blue gum	*Eucalyptus globulus*		22	20	Poor to fair	Fair	3	no	grasses	Several past large limb failures. - None at this time. **Offsite 4 feet north of property fence, tag on fence.**
54	Blue gum	*Eucalyptus globulus*		32	23	Fair	Poor to fair	3	no	grasses	Above average amount of deadwood. - None at this time. **Offsite 4 feet north of property fence, tag on**
55	Blue gum	*Eucalyptus globulus*		22	20	Poor to fair	Fair	3	no	grasses	Past large limb failures. - None at this time. **Offsite 4 north of property fence, tag on fence.**
56	Blue gum	*Eucalyptus globulus*		18	22	Fair	Fair	3	no	grasses	None at this time. **Offsite 5 feet north of property fence, tag on fence.**
57	Blue gum	*Eucalyptus globulus*		7	20	Poor to fair	Fair	3	no	grasses	Trunk leans significantly to the south. - None at this time. **Offsite 4 feet north of property fence.**
58	Blue gum	*Eucalyptus globulus*	6,7,8,8, 10	39	18	Poor to fair	Fair	3	no	grasses	Trunks grow in a convoluted fashion. - None at this time. **Offsite 5 feet north of property fence.**
59	Blue gum	*Eucalyptus globulus*		5	15	Poor	Fair	2	no	grasses	Trunk grows parallel to grade then leans south. - None at this time. **Offsite 4 feet norht of property fence.**
60	Blue oak	*Quercus douglasii*	2,3	5	4	Fair	Fair	3	no	grassees	None at this time.
61	Valley oak	*Quercus lobata*		8	6	Fair	Fair	3	yes	grasses	None at this time.
62	Valley oak	*Quercus lobata*		4	5	Fair	Fair	3	no	grasses	None at this time.
63	Plum	*Prunus* spp.	4,6	10	7	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations. - None at this time.
64	Interior live oak	*Quercus wislizenii*	2,2,5	9	12	Fair	Fair	3	no	grasses	None at this time.
65	Valley oak	*Quercus lobata*		9	12	Poor to fair	Fair	3	yes	grasses	Callusing trunk wounds various locations, extensive sapsucker damage. - None at this time.
66	Valley oak	*Quercus lobata*		4	4	Fair	Fair	3	no	grasses	None at this time.
67	Interior live oak	*Quercus wislizenii*	3,3	6	7	Fair	Fair	3	no	grasses	None at this time.
68	Interior live oak	*Quercus wislizenii*	2,4	6	10	Poor to fair	Fair	3	no	grasses	Trunk leans significantly to the south.-None at this time.
69	Almond	*Prunus dulcis*	5,6	11	15	Fair	Fair	3	no	grasses	Crown 1-sided north. - None at this time.
70	Almond	*Prunus dulcis*	3,3	6	10	Fair	Fair	3	no	grasses	None at this time.
71	Almond	*Prunus dulcis*		8	15	Fair	Fair	3	no	grasses	None at this time.
72	Almond	*Prunus dulcis*	3,4,6	13	15	Fair	Fair	3	no	grasses	None at this time.
73	Valley oak	*Quercus lobata*		12	17	Fair	Fair	3	yes	grasses / shed	None at this time
74	Valley oak	*Quercus lobata*		4	7	Poor to fair	Fair	3	no	grasses	Trunk leans east suppressed. - None at this time.
75	Interior live oak	*Quercus wislizenii*	5,5,6	16	14	Fair	Fair	3	yes	grasses	None at this time.
76	Almond	*Prunus dulcis*		4	6	Fair	Fair	3	no	grasses	None at this time.
77	Interior live oak	*Quercus wislizenii*	3,4	7	8	Fair	Fair	3	no	grasses	None at this time.
78	Valley oak	*Quercus lobata*	3,4	7	5	Fair	Fair	3	no	grasses	None at this time.
79	Valley oak	*Quercus lobata*	6,6	12	7	Fair	Fair	3	yes	grasses	None at this time.
80	Almond	*Prunus dulcis*	6,6,8,9	29	15	Fair	Fair	3	no	grasses	None at this time.
81	Valley oak	*Quercus lobata*		7	8	Fair	Fair	3	yes	grasses	None at this time.
82	Valley oak	*Quercus lobata*	2,6	8	6	Fair	Fair	3	no	grasses	None at this time.
83	Valley oak	*Quercus lobata*		7	8	Fair	Fair	3	yes	grasses	None at this time.
84	Valley oak	*Quercus lobata*		5	4	Fair	Fair	3	no	grasses	None at this time.
85	Chinese pistache	*Pistacia chinensis*	7,8,9	24	14	Poor to fair	Fair	2	no	grasses / car port	Measured at 3' above grade, cut at 4' above grade with resulting significant sprout growth. - None at this time.
86	Interior live oak	*Quercus wislizenii*	3,3,3	9	12	Fair	Fair	3	no	grasses / shed	None at this time.
87	Interior live oak	*Quercus wislizenii*		4	7	Fair	Fair	3	no	grasses	None at this time.
88	Interior live oak	*Quercus wislizenii*	4,7,8	19	15	Fair	Fair	3	yes	grasses	None at this time.
89	Valley oak	*Quercus lobata*	4,5,6	14	14	Poor to fair	Fair	3	yes	grasses	Forks at 1 and 3' above grade with bark inclusions. - None at this time.
90	Interior live oak	*Quercus wislizenii*	2,5	7	11	Fair	Fair	3	no	grasses	None at this time.
91	Valley oak	*Quercus lobata*		25	30	Fair	Fair	3	yes	grasses	None at this time.
92	Interior live oak	*Quercus wislizenii*		15	20	Fair	Fair	3	yes	grasses	None at this time.
93	Valley oak	*Quercus lobata*		4	10	Fair	Fair	3	no	grasses	Crown 1-sided west. - None at this time.
94	Valley oak	*Quercus lobata*		5	10	Fair	Fair	3	no	grasses	Crown 1-sided north. - None at this time.
95	Plum	*Prunus spp.*	10 x 2	20	15	Poor to fair	Fair	2	no	grasses / drainage	Weak attachments, erosion exposing supporting roots. - None at this time.
96	Pecan	*Carya illinoinensis*	3,3,3,4	13	12	Poor to fair	Fair	3	no	grasses	Embedded chain link in lower trunk. - None at this time.
97	Pecan	*Carya illinoinensis*	4,5	9	16	Poor to fair	Fair	3	no	grasses	Trunks lean north, weak attachment. - None at this time.
98	Valley oak	*Quercus lobata*		11	14	Fair	Fair	3	yes	grasses	None at this time.
99	Interior live oak	*Quercus wislizenii*	6,9	15	16	Fair	Fair	3	yes	grasses	Forks at 1and 5' above grade. - None at this time.

TREE #	COMMON NAME	SPECIES	MULTI-STEMS (INCHES)	TOTAL DBH (INCHES)	DLR (FEET)	CONDITION STRUCTURE	CONDITION VIGOR	Rating (0-5)	Protected County Tree	Dripline Enviro.	NOTABLE CHARACTERISTICS - MAINTENANCE RECOMMENDATIONS
100	Interior live oak	*Quercus wislizenii*	7,8	15	15	Fair	Fair	3	yes	grasses	None at this time.
101	Valley oak	*Quercus lobata*		8	14	Fair	Fair	3	yes	berry bushes	None at this time.
102	Plum	*Prunus spp.*	7,8,9	24	20	Poor	Poor to fair	1	no	grasses	9" stem failed lying prone on grade exposing decay in the root crown of the remaining stems, above average amount of deadwood.- **Remove**
103	Interior live oak	*Quercus wislizenii*		26	36	Poor to fair	Poor to fair	2	yes	grasses	Embedded wire girdling the lower trunk, above aberage amount od deadwood. - Inspect annually.
104	Interior live oak	*Quercus wislizenii*	4,4	8	15	Poor to fair	Poor to fair	2	no	grasses	Callusing trunk wounds various locations with minor to moderate decay, crown 1-sided north. - None at this time.
105	Almond	*Prunus dulcis*	8,9	17	15	Fair	Poor to fair	3	no	grasses	Above average amount of deadwood.- None at this time. **Offsite 2 feet south of property fence.**
106	Valley oak	*Quercus lobata*		10	16	Fair	Fair	3	yes	grasses	None at this time. **Offsite 3 feet south of property fence, tag on fence.**
107	Valley oak	*Quercus lobata*		14	21	Fair	Fair	3	yes	grasses	None at this time. **Offsite 2 feet south of property fence, tag on fence.**
108	California black walnut	*Junglans hindsii*		4	11	Poor to fair	Fair	3	no	grasses	Callusing trunk wounds various locations, leans east. - None at this time.
109	Valley oak	*Quercus lobata*	3,7	10	13	Fair	Fair	3	yes	grasses	None at this time.
110	Plum	*Prunus spp.*	2,2,2,3,3	12	12	Poor to fair	Fair	2	no	grasses	Callusing trunk wounds all sides 1 to 4' above grade. - None at this time
111	Fig	*Ficus carica*	3,3,4	10	10	Poor	Poor	1	no	grasses	Several stems have died. - **Remove**
112	Interior live oak	*Quercus wislizenii*	3,3,4,5	15	14	Fair	Fair	3	yes	grasses	None at this time.
113	Mulberry	*Morus alba*		8	20	Poor to fair	Fair	3	no	grasses	Past limb failures. - None at this time.
114	Valley oak	*Quercus lobata*		17	27	Fair	Fair	3	yes	grasses	Embedded wire lower trunk, crown 1-sided north. - None at this time.
115	Pecan	*Carya illinoinensis*		7	20	Fair	Fair	3	no	grasses	Crown 1-sided north. - None at this time.
116	Almond	*Prunus dulcis*	6,8,10	14	14	Poor to fair	Poor to fair	2	no	grasses	Past partial root system failure, trunk leans significantly to the north, above average amount of deadwood. - None at this time
117	California black walnut	*Juglans hindsii*		19	30	Poor to fair	Poor to fair	2	yes	grasses	Trunk leans significantly to the north, callusing basal lower trunk wound south side minor to moderate decay, embedded wire lower trunk. - Inspect annually
118	Interior live oak	*Quercus wislizenii*		5	10	Poor to fair	Fair	3	no	grasses	Trunk leans and bends north. - None at this time.
119	Plum	*Prunus spp.*		10	15	Poor	Poor to fair	1	no	grasses	Trunk failed and is parallel to grade with significant interior decay. - **Remove**

TOTAL INVENTORIED TREES = 119trees (1616 aggregate diameter inches)
TOTAL RECOMMENDED REMOVALS = 5 trees (81 aggregate diameter inches)
Rating (0-5, where 0 is dead) 1=5 trees; 2=9 trees; 3=105 trees; 4=0 trees; 5=0 trees;
County Protected Trees = 41 trees (561 aggregate diameter inches)
All Other Inventoried Trees = 78 Trees (1055 aggregate diameter inches)

TREE EXHIBIT FOR
HAZEL RIDGE
ORANGEVALE
SACRAMENTO COUNTY, CA
JULY, 2022

BAKER WILLIAMS ENGINEERING GROUP
6020 RUTLAND DRIVE, SUITE 19
CARMICHAEL, CA 95608-0515
Phone (916)331-4336~Fax (916)331-4430
EMAIL: office@bwengineers.com

JOB NO. 21-10-037

Attachment G

Representative Site Photographs

Facing east along the southern Study Area boundary. Taken from proposed Lot 26.

Facing north along the western Study Area boundary at tree 107. Taken from proposed Lot 27.

Facing north northwest at the upland swale and trees 98, 99, and 100. Taken from proposed Drainage Lot.

Facing north northwest at the upland swale. Taken from proposed Lot 22.

Facing west from the eastern portion of the Study Area Lot 18.

Facing southeast at the onsite residence along Hazel Avenue. Lot 3 in foreground.

Facing east from the northwestern corner of the Study Area.

Facing south from the southwestern corner of the Study Area. Non-native silk tree (#3) and native interior live oak (#1).

Attachment H

Hazel Ridge Plant List

Plant Species Observed within the Hazel Ridge Study Area
30 June 2022

Family / Species Name	Common Name	Native / Non-Native
APIACEAE		
Torilis arvensis	Tall sock-destroyer	Non-Native
APOCYNACEAE		
Nerium oleander	Common oleander	Non-Native
ARALACEAE		
Hedera helix	English ivy	Non-Native
ASTERACEAE		
Carduus pycnocephalus subsp. pycnocephalus	Italian thistle	Non-Native
Centaurea solstitialis	Yellow star-thistle	Non-Native
Cichorium intybus	Chicory	Non-Native
Chondrilla juncea	Skeleton weed	Non-Native
Lactuca serriola	Prickly lettuce	Non-Native
Leontodon saxatilis	Hairy hawkbit	Non-Native
Matricaria discoidea	Pineapple weed	Native
Tragopogon porrifolius	Salsify	Non-Native
BRASSICACEAE		
Barssica nigra	Black mustard	Non-Native
Raphanus sativus	Wild radish	Non-Native
CACTACEAE		
Opuntia ficus-indica	Mission prickly-pear	Non-Native
CARYOPHYLLACEAE		
Cerastium glomeratum	Sticky mouse-ear chickweed	Non-Native
CONVOLVULACEAE		
Convolvulus arvensis	Bindweed	Non-Native
CYPERACEAE		
Cyperus eragrostis	Tall nutsedge	Native
CUPRESSACEAE		
Calocedrus decurrens	Incense cedar	Native

Plant Species Observed within the Hazel Ridge Study Area
30 June 2022

Family / Species Name	Common Name	Native / Non-Native
EBENACEAE		
Diospyros virginiana	Common persimmon	Non-Native
EUPHORBIACEAE		
Croton setiger	Turkey-mullein	Native
FABACEAE		
Acmispon americanus var. americanus	Spanish lotus	Native
Acmispon wrangelianus	Chilean trefoil	Native
Medicago polymorpha	California burclover	Non-Native
Trifolium hirtum	Rose clover	Non-Native
Vicia sativa	Spring vetch	Non-Native
FAGACEAE		
Quercus douglasii	Blue Oak	Native
Quercus lobata	Valley oak	Native
Quercus wislizeni	Interior live oak	Native
GERANIACEAE		
Erodium botrys	Filaree	Non-Native
Geranium dissectum	Cut-leaf geranium	Non-Native
JUGLANDACEAE		
Carya illinoinensis	Pecan	Non-Native
Juglans hindsii	Northern California black walnut	Native
Juglans regia	English walnut	Non-Native
MALVACEAE		
Malva neglecta	Common mallow	Non-Native
MAGNOLIACEAE		
Magnolia grandiflora	Southern magnolia	Non-Native
MORACEAE		
Ficus carica	Purple fig	Non-Native
Morus alba	White mulberry	Non-Native
OLEACEAE		
Ligustrum lucidum	Glossy privet	Non-Native

Plant Species Observed within the Hazel Ridge Study Area
30 June 2022

Family / Species Name	Common Name	Native / Non-Native
Olea europaea	Olive	Non-Native
ONAGRACEAE		
Epilobium brachycarpum	Willowherb	Native
PHYTOLACCACEAE		
Phytolacca americana var. americana	Pokeweed	Non-Native
PLANTAGINACEAE		
Callitriche marginata	Winged water starwort	Native
Plantago lanceolata	English plantain	Non-Native
POACEAE		
Avena fatua	Wild oat	Non-Native
Bromus diandrus	Ripgut grass	Non-Native
Cynodon dactylon	Bermuda grass	Non-Native
Festuca perennis	Rye grass	Non-Native
Hordeum murinum	Wall barley	Non-Native
Paspalum dilatatum	Dallis grass	Non-Native
Phyllostachys sp.	Bamboo species	Non-Native
Rumex conglomeratus	Green dock	Non-Native
Rumex crispus	Curly dock	Non-Native
PORTULACACEAE		
Portulaca oleracea	Purslane	Non-Native
ROSACEAE		
Rosa sp.	Cultivated rose	Non-Native
Photinia serratifolia	Taiwanese photinia	Non-Native
Prunus armeniaca	Apricot	Non-Native
Prunus cerasifera	Cherry plum	Non-Native
Prunus dulcis	Almond	Non-Native
Pyracantha coccinea	Scarlet firethorn	Non-Native
Rubus armeniacus	Armenian blackberry	Non-Native
RUBIACEAE		
Galium aparine	Goose grass	Native
RUTACEAE		

Plant Species Observed within the Hazel Ridge Study Area
30 June 2022

Family / Species Name	Common Name	Native / Non-Native
Citrus limon	Lemon	Non-Native
SAPINDACEAE		
Acer saccharinum	Silver maple	Non-Native
VITACEAE		
Vitis californica	California wild grape	Native