

Appendix A

Biological Resources Assessment, College Park (updated August 2022)



Biological Resources Assessment

College Park

Rocklin, Placer County, California

August 2022



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Recommended Citation:

Madrone Ecological Consulting, LLC (Madrone). 2022. *Biological Resources Assessment for College Park*. Prepared for Evergreen Sierra East, LLC and Cresleigh Homes Corporation. Published on 12 August 2022.

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1.0 INTRODUCTION

This report presents the results of a Biological Resources Assessment (BRA) conducted for the College Park properties (Study Areas). There are two properties that comprise the Study Areas: The approximately 36-acre Western Study Area is located south of Rocklin Road, east and north of El Don Road, and west of Havenhurst Circle in Rocklin, Placer County, California. The Western Study Area is located in a portion of Section 20, Township 12 North, Range 7 East (MDB&M) of the "Rocklin, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2015) (**Figure 1**). The approximately 74-acre Eastern Study Area is located north of Rocklin Road and east of Sierra College Boulevard in Rocklin, Placer County, California). The Eastern Study Area is located in a portion of Section 21, Township 12 North, Range 7 East (MDB&M) of the "Rocklin, California" 7.5-Minute Series USGS Topographic Quadrangle (USGS 2015) (**Figure 1**).

1.1 Project Description

The College Park Project (Project) is a planned development featuring parks, open space and trails surrounded by residential and mixed use (retail, office, medical, institutional, residential uses) villages. The Project area is comprised of two sites – the North Village on the northeast corner of Rocklin Road and Sierra College Boulevard and the South Village on the southeast corner of Rocklin Road and El Don Drive.

In both villages, opportunities are available to design small residential enclaves adjacent to park and open space amenities. In the North Village, deeper lots would be included on the east side of the site as a transition to adjacent rural residential uses east of the site. Densities will be higher on the west side of the North Village, adjacent to Sierra College Boulevard, as well as toward the middle of the Project area and along Rocklin Road. In the South Village, residential densities will be compatible with existing residential development to the south.

For the purposes of this document, the "North Village" is referred to as the "Eastern Study Area", and the "South Village" is referred to as the "Western Study Area".

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. The definition of Waters of the United States has changed several times in recent years. The current definition of Waters of the United States (Waters) is based on the 2020 Navigable Waters Protection Rule (NWPR), and includes the territorial seas, and waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters which are subject to the ebb and flow of the tide; perennial and intermittent tributaries to the above; lakes, ponds, and impoundments that contribute surface flow to the above in a typical year; and wetlands “adjacent” to the above. The NWPR expressly excludes certain categories of aquatic resources from USACE jurisdiction, including ephemeral drainages and a variety of different types of aquatic resources constructed in uplands. In addition, wetlands with no surface water connection to otherwise jurisdictional waters in a typical year are not USACE jurisdictional.

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.

2.2 State Regulations

2.2.1 California Environmental Quality Act

The California Environmental Quality Act (CEQA) 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 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.

2.2.4 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.

2.2.5 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.

It should be noted that some of the aquatic resources within the Study Areas are not USACE jurisdictional under the current definition of Waters of the U.S. However, nearly all of the aquatic resources are considered Waters of the State and are subject to regulation by the State through the California Water Code Porter-Cologne Act. Roadside ditches are often excluded from Waters of the State, and are thus not subject to either USACE or RWQCB jurisdiction.

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

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).

2.2.7 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 City of Rocklin Tree Ordinance

The City of Rocklin (City) Oak Tree Preservation Ordinance (Chapter 17.77 of the City of Rocklin Code) (Tree Ordinance) regulates the removal and preservation of oak trees within the City. "Trees" under the Tree Ordinance includes all oak trees native to the Rocklin area with at least one trunk with a diameter at breast height (DBH) of six inches or more. The Tree Ordinance requires a permit for any activity that results in the physical removal of a Tree from the ground or the willful injury, trimming, disfiguring or other harmful action which leads directly to physical removal or creates such a condition that makes disease likely or results in a significant risk of injury to persons or property. The *City of Rocklin Oak Tree Preservation Guidelines* (dated April 2006) provides additional detail regarding mitigation requirements.

2.3.2 City of Rocklin Riparian Policy

Action Step OCRA-11 of the *City of Rocklin Draft General Plan* requires that an open space easement be recorded over all areas within 50 feet of the edge of the bank of all perennial and intermittent streams and creeks providing natural drainage. In addition, where riparian habitat extends further than 50 feet from the edge of bank, the easement must be extended to include that area as well. The City may designate an easement greater than 50 feet for perennial streams when it is determined such a buffer is necessary to adequately protect drainage and habitat areas. Features "that may be considered acceptable within the 50-foot setback, buffer area and/or open space easements include, but are not limited to, de-minimis encroachments of a public throughfare, bridges, trails, drainage facilities, utilities, and fencing intended to delineate or protect a specific resource." (City of Rocklin 2011). Such exceptions are allowed as it is infeasible to limit all activities in these areas. For example, never allowing crossings of creeks or drainages within the City would limit public infrastructure and access to first responders during emergencies. Installation and maintenance of those features shall minimize impacts to resources to the extent feasible. The above setbacks and buffers apply to residential and non-residential development unless the landowner can demonstrate that literal application of this Action Plan item would preclude all economically viable use of the land under existing zoning.

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 (CNDDDB) (CNDDDB 2021) query of the Study Areas and all areas within 5 miles of the Study Areas (**Figures 2 and 3**);
- USFWS Information for Planning and Conservation (IPaC) (USFWS 2021) query for the Study Area (**Attachment A**);

- California Native Plant Society (CNPS) Rare and Endangered Plant Inventory (CNPS 2021) query¹ of the “Rocklin, California” USGS topo quadrangle, and the eight surrounding quadrangles (**Attachment B**); and
- Western Bat Working Group (WBWG) Species Matrix (WBWG 2021).

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 Project area.

The following documents were reviewed and the results incorporated into this document (digital copies of each of these documents are available upon request):

- *Aquatic Resources Delineation Report Sierra College – Rocklin Road* (Madrone 2017a) and *Aquatic Resources Delineation Report Sierra Villages Site C* (Madrone 2017b) (collectively, these covered all of the Western Study Area);
- *Preliminary Jurisdictional Determination for Sierra Villages Rocklin Road*, dated April 13, 2017 (USACE 2017a) and *Preliminary Jurisdictional Determination for Sierra Villages Site C*, dated April 18, 2017 (USACE 2017b) (collectively, these covered all of the Western Study Area);
- *Memorandum regarding Final Riparian Zone on the Sierra Villages Site C and Sierra College Rocklin Road Properties* (Madrone 2017c) (Western Study Area);
- *Special-Status Plant Survey Report Sierra College – Rocklin Road* (Madrone 2017d) and *Special-Status Plant Survey Report Sierra Villages Site C* (Madrone 2017e) (collectively, these covered all of the Western Study Area);
- *Valley Elderberry Longhorn Beetle Habitat Survey Report Sierra College – Rocklin Road* (Madrone 2017f) and *Valley Elderberry Longhorn Beetle Habitat Survey Report Sierra Villages Site C* (Madrone 2017g) (collectively, these covered all of the Western Study Area);
- *Aquatic Resources Delineation Report Sierra Villages Site A and B* (Madrone 2017h) and subsequent associated correspondence (Eastern Study Area);
- *Preliminary Jurisdictional Determination and Approved Jurisdictional Determination for Sierra Villages Site A and B*, dated May 1, 2018 (USACE 2018) (Eastern Study Area);
- *Nesting Bird Survey and Monitoring Report for the Sierra College 72 Property, Placer County, CA* (Madrone 2019) (Eastern Study Area);
- *Special-Status Plant Survey Report Sierra Villages Sites A and B* (Madrone 2017i) (Eastern Study Area);
- *Valley Elderberry Longhorn Beetle Habitat Survey Report Sierra Villages Sites A and B* (Madrone 2017j) (Eastern Study Area); and
- *2019-20 Dry-Season & Wet-Season Branchiopod Survey 90-Day Report, College Park, Site A (2020-TA-0438)* (Madrone 2021a) and *2019-20 Dry-Season & Wet-Season Branchiopod Survey 90-Day Report, College Park, Site B (2020-TA-0438)* (Madrone 2021b) (collectively, these covered all of the Eastern Study Area).

¹ Note that the CNPS Inventory website has not been updated since May 2019; this query also involved a review of the excel spreadsheet that contains changes to the CNPS Inventory since that date for any changes that could be relevant to the Study Areas.

In addition, the protocol level rare plant survey and elderberry surveys were repeated in 2020 (survey dates provided in Section 3.2).

For the purposes of this Biological Resources Assessment, 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 2021); 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 Surveys

Madrone Ecological Consulting, LLC (Madrone) biologists Daria Snider, Bonnie Peterson, Dustin Brown, and Sarah VonderOhe conducted field surveys of various portions of the Study Areas concurrent with the surveys listed in Section 3.1. These surveys occurred on 28 April, 18, 25, and 26 May, and 2 June 2016; 22 February, 31 October, and 6 December 2017; 1 and 2 May, 11 and 12 June, and 26 November, 11 and 24 December 2019; and 8 and 22 January, 5 and 19 February, and 4 and 18 March, and 14 October 2020. During those surveys, the suitability of habitats on-site to support special-status species was assessed. Meandering pedestrian surveys were performed on foot throughout the Study Areas. 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 2020). A list of all wildlife species observed during the field surveys is included as **Attachment C**.

4.0 EXISTING CONDITIONS

4.1 Western Study Area

The Western Study Area is occupied by a matrix of non-native annual grassland, oak woodlands, and riparian wetlands at elevations of roughly 295 to 320 feet above Mean Seal Level (MSL) (**Figure 4**). A perennial creek runs from east to west through the Western Study Area and is bordered on both sides by a broad riparian wetland that occupies the creek's floodplain. The riparian wetland is constrained by two berms that appear to contain and provide access to sewer pipelines, and that support a riparian woodland. A smaller perennial drainage flows north from the center of the southern boundary to the perennial creek through a riparian woodland that is flanked by an oak woodland. Another similar perennial drainage flows north to the

perennial creek through a riparian woodland from the southeastern corner. A broad riparian wetland flows into the perennial creek from the north. Two large seasonal wetlands occur in the Western Study Area; one in a historic constructed basin along the west side of the Western Study Area, and one in a very shallow natural basin on the east side of the Western Study Area. The area between the eastern seasonal wetland and the creek is elevated and supports a stand of oak savannah and oak woodland. The northwestern corner of the Western Study Area is barren and is used as an overflow parking lot for Sierra College. The area between the constructed basin and El Don Drive is a developed community park called Monte Verde Park. In the southwestern portion of the Western Study Area is a large seep. The majority of the areas outside of those detailed above are occupied by annual brome grassland.

4.2 Eastern Study Area

The Eastern Study Area is occupied primarily by annual brome grassland on gently rolling terrain at elevations of 320 to 380 feet above MSL (Figure 5). The grassland portion of the site was historically an orchard. A small rural residential parcel occurs in the approximate center of the western edge of this Study Area. An oak woodland and oak savannah occupies the northern portion, which was historically mined. The oaks were also harvested multiple times historically, presumably for firewood. As a result of the historic mining, the terrain in this area is uneven, with small pits and mounds scattered throughout. Two drainages and associated wetlands run from south to north through this area; however, they are discontinuous, potentially as a result of the historic mining activity. Several seeps and depressional seasonal wetlands occur within the non-native annual grassland as well. Surrounding properties to the north and east are large, rural residential properties with similar vegetation (oak woodland to the north and annual grassland to the east). Sierra College is just to the west, and an apartment complex is present just south of the Eastern Study Area.

4.3 Terrestrial Plant Communities

4.3.1 Annual Brome Grassland

Annual brome grassland occurs within both Study Areas. This vegetation community is dominated by soft brome (*Bromus hordeaceus*), ripgut brome (*B. diandrus*), yellow star-thistle (*Centaurea solstitialis*), elegant clarkia (*Clarkia unguiculata*), winter vetch (*Vicia villosa*), and smooth cat's ear (*Hypochaeris glabra*). Other species commonly occurring in this community include filaree (*Erodium botrys*), hairy hawkbit (*Leontodon saxatilis*), wild oat (*Avena fatua*), perennial ryegrass (*Festuca perennis*), wall bedstraw (*Galium parisiense*), and rose clover (*Trifolium hirtum*). A few trees are scattered within this community as well.

4.3.2 Oak Woodland and Oak Savannah

Oak woodland or savannah comprises significant portions of the Study Area. These oak woodlands are dominated by interior live oak (*Quercus wislizenii*), blue oak (*Q. douglasii*), and Valley oak (*Q. lobata*). A number of shrubs and other perennials occur in the understory, including poison-oak (*Toxicodendron diversilobum*), hoary coffeeberry (*Frangula californica* ssp. *tomentella*), blue elderberry (*Sambucus nigra* ssp.

caerulea), chaparral honeysuckle (*Lonicera interrupta*), morning-glory (*Calystegia occidentalis*), Himalayan blackberry (*Rubus armeniacus*), and periwinkle (*Vinca major*). The oak woodlands typically have a relatively closed canopy which results in little to no herbaceous vegetation in the understory.

Oak savannahs were mapped where the oak canopy was estimated to be between 10% and 50%. The oak savannahs have very few shrubs in the understory, but as a result of the more open canopy, the herbaceous understory is well developed, and largely similar to the annual brome grassland described above.

4.3.3 Riparian Woodland

The City of Rocklin's Riparian Zone Policy requires that an applicant identify the extent of their "Riparian Zone". This exercise was completed for the Western Study Area in 2017, during the Project design phase, and in consultation with City staff. Below is an explanation of how the Riparian Zone was determined and what it is comprised of (from the memorandum prepared to that effect) (Madrone 2017c). We have depicted the portions of the Riparian Zone that are outside of the creek boundaries and the riparian wetlands as Riparian Woodlands on **Figure 4**. The majority of these areas are indeed Riparian Woodlands, and the remainder have been included in this category for clarity and simplicity.

"The riparian zone is generally considered to be the area adjacent to a drainage that is hydrologically influenced by the water flowing through that drainage. The most common way to approximate this hydrologic influence is the extent of hydrophytic (water-loving) vegetation growing in what would otherwise be an upland area.

Accordingly, during the field surveys, Madrone mapped the extent of perennial hydrophytic vegetation along the drainages within the Study Area. In some areas, the extent of the riparian zone correlated with the edge of the mapped riparian wetlands. Areas where the riparian zone exceeds the extent of the riparian wetlands are areas in which the riparian hydrologic influence does not occur within the top 12 inches of the soil (and thus, wetland hydrology and hydric soil indicators are lacking). These areas often support riparian trees and shrubs (which have deep root systems), but may not support more shallowly-rooted herbaceous hydrophytes. In most cases where the riparian zone exceeded the extent of the riparian wetlands, the edge was the outer extent of the willows (*Salix* species), Fremont cottonwood (*Populus fremontii*), and Valley oak (*Quercus lobata*) trees along the drainages, but in some areas where adjacent woody vegetation was lacking, deeper-rooted herbaceous perennials such as curly dock (*Rumex crispus*) were used as an indicator of the extent of the riparian zone. Some areas were challenging, especially along the northern edge of the perennial drainage, where isolated large willow trees were interspersed with upland blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizenii*) trees. We assumed that at some time in the past, additional hydrology allowed the willows to establish, but that the current condition may be drier, and as a result, now supports the upland oak trees. Therefore, in this area, we mapped the extent of the riparian zone at the

edge of where willows and cottonwood trees were dominant as opposed to scattered. This also corresponded to the extent of herbaceous hydrophytic vegetation.

The riparian boundaries that Madrone generated for the Study Area were provided to the City of Rocklin (City) for review, and project principal and biologist Sarah VonderOhe conducted a site visit with City staff on 6 December 2017 to review the boundary in the field. City staff generally accepted Madrone's mapping, with the exception of the two locations mentioned above to the north of the perennial drainage where hydrophytic trees and shrubs are scattered within a matrix of more upland trees. City staff requested that these areas of scattered hydrophytes be included in the riparian zone."

4.3.4 Ruderal

Two narrow strips of vegetation within the Western Study Area have been mapped as ruderal. These areas are dominated by non-native forbs, including Italian thistle (*Cardus pycnocephalus*), bull thistle (*Cirsium vulgare*), black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), and yellow star-thistle. Non-native grasses typical of the annual brome grassland community are also scattered within this community.

4.3.5 Park

The irrigated landscaping, playground, lawns, and associated infrastructure within Monte Verde Park have been mapped as Park. A narrow strip of land on the adjacent church property along the north edge of the Western Study Area boundary has also been mapped as Park.

4.3.6 Developed

Paved and gravel roadways and the maintained dirt parking lot in the Western Study Area have been mapped as Developed, as has a residence area in the Eastern Study Area. This area is comprised of a residence, a number of associated outbuildings, paved courtyards and driveways, a pool, and primarily irrigated landscaping. The majority of the landscaping trees and shrubs are non-native, although a number of native interior live oaks (*Quercus wislizenii*) are present. Some of the trees are quite large including several Italian stone pines (*Pinus pinea*) and mulberries (*Morus alba*).

4.4 Aquatic Resources

The aquatic resources mapping provided in **Figures 6 and 7** have been verified by the USACE under Preliminary and Approved Jurisdictional Determinations. Two Preliminary Jurisdictional Determinations were issued by the USACE on 13 and 18 April 2017 for two areas that combined comprise the Western Study Area, and a Preliminary Jurisdictional Determination and an Approved Jurisdictional Determination were issued on 1 May 2018 for two areas that combined comprise the Eastern Study Area. Since then, the NWPR has been enacted. It appears that all of the aquatic resources in the Western Study Area would remain jurisdictional under the NWPR. It appears that all of the aquatic resources in the Eastern Study Area

are no longer subject to USACE jurisdiction. Any changes to USACE jurisdiction would require verification by the USACE; jurisdictional changes do not affect the extent of mapped aquatic resources. A total of 9.065 acres of aquatic resources were mapped and verified within the Study Areas (Table 1). A description of each of the aquatic resources types is included below.

Table 1. Aquatic Resources Mapped within the Study Areas

Resource Type	Western Study Area Acreage	Eastern Study Area Acreage	Total Acreage
<i>Wetlands</i>			
Seasonal Wetland	2.595	0.107	2.702
Seasonal Wetland Swale	0.133	0.341	0.474
Seep	0.105	0.119	0.224
Riparian Wetland	5.075	0.082	5.157
<i>Other Waters</i>			
Perennial Creek	0.405	--	0.405
Ephemeral Drainage	--	0.077	0.077
Ditch	0.020	0.006	0.026
Total	8.333	0.732	9.065

4.4.1 Seasonal Wetlands

Seasonal wetlands are depressional wetlands that pond water seasonally. The western seasonal wetland in the Western Study Area is located in what appears to be a historic constructed detention basin, while the eastern seasonal wetland in the Western Study Area is in a more natural, broad shallow basin. Wetland plant species commonly observed in these seasonal wetlands include perennial ryegrass, Baltic rush (*Juncus balticus*), brown-headed rush (*J. phaeocephalus*), clustered dock (*Rumex conglomeratus*), fiddle dock (*R. pulcher*), curly dock (*R. crispus*), Bermuda grass (*Cynodon dactylon*), Mediterranean barley (*Hordeum marinum*), little quaking grass (*Briza minor*), goose grass (*Galium aparine*), least spikerush (*Eleocharis acicularis*), soft chess, brome fescue (*Festuca bromoides*), reed fescue (*F. arundinacea*), clustered sedge (*Carex praegracilis*), fringed willow-herb (*Epilobium ciliatum*), and cut-leaf geranium (*Geranium dissectum*).

Within the Eastern Study Area, the seasonal wetlands range from relatively shallow features that are occupied by a mix of wetland and upland species to deeper features with long-duration inundation that are occupied almost exclusively by wetland plant species. Wetland plant species commonly observed in seasonal wetlands within the Eastern Study Area include perennial ryegrass, toad rush (*Juncus bufonius*), hyssop loosestrife (*Lythrum hyssopifolium*), Mediterranean barley, small quaking grass, creeping spikerush (*Eleocharis macrostachya*), Carter's buttercup (*Ranunculus bonariensis*), maritime rabbit's-foot grass (*Polypogon maritimus*), and clustered dock (*Rumex conglomeratus*).

4.4.2 Seasonal Wetland Swale

One seasonal wetland swale was delineated within the Western Study Area. Seasonal wetland swales are sloping, linear seasonal wetlands that convey water, and may detain it for short periods of time. The seasonal wetland swale within the Western Study Area is almost entirely occupied by perennial ryegrass.

Five seasonal wetland swales occur within the Eastern Study Area. Dominant plant species within these seasonal wetland swales include perennial ryegrass, annual rabbit's foot grass (*Polypogon monspeliensis*), velvet grass (*Holcus lanatus*), and clustered dock. Other species commonly observed in these features within the Study Area include goldenrod (*Euthamia occidentalis*), tall nut sedge (*Cyperus eragrostis*), cattail (*Typha* species), Italian thistle (*Carduus pycnocephalus*), and Himalayan blackberry (*Rubus armeniacus*).

4.4.3 Seep

One seep was delineated within the Western Study Area. Seeps are wetlands that occur on slopes and receive hydrology almost exclusively from groundwater. The seep in the southwestern portion of the Western Study Area is surrounded by an impenetrable Himalayan blackberry patch. A data point taken some distance into the blackberry patch revealed that much of the area supporting blackberry in this location is not a wetland, but due to the impenetrable nature of the thicket, the boundaries of this seep were delineated approximately 10 feet inside the edge of the blackberry. Other plant species observed in the seep within the Study Area include arroyo willow (*Salix lasiolepis*), black willow (*S. gooddingii*), coyote brush (*Baccharis pilularis*), velvet grass (*Holcus lanatus*), creeping spikerush, clustered dock, ripgut brome, soft chess, and rattail fescue (*Festuca myuros*).

Two seeps occur within the Eastern Study Area. Dominant plant species in the seeps within the Eastern Study Area include soft rush (*Juncus effusus*), narrow-leaved cattail (*Typha angustifolia*), mugwort (*Artemisia douglasiana*), Himalayan blackberry, goldenrod, and velvet grass. Other species commonly observed in this community include marsh cudweed (*Pseudognaphalium luteo-album*), tall nutsedge, and ciliate willow-herb (*Epilobium ciliatum*).

4.4.4 Riparian Wetlands

Six riparian wetlands were delineated within the Western Study Area. Three of the riparian wetlands occur in the floodplain of the main perennial creek running through the Western Study Area, two occur in the floodplain of the small perennial creek in the southern portion of the Western Study Area, and the last is a broad wetland that extends from the main creek up to the northern boundary of the Western Study Area. It appears that an intermittent drainage flows through this large riparian wetland as well; however, there are numerous disconnected channels that run through this feature, and a current, consistent flow path could not be identified. The five riparian wetlands bordering the perennial creeks are largely comprised of annual and perennial herbaceous vegetation, while the large northern riparian wetland also supports a prominent tree and shrub layer. Dominant herbaceous species in the riparian wetlands include cattail, bulrush (*Schoenoplectus acutus*), spotted lady's thumb (*Persicaria punctata*), least spikerush, tall nutsedge, clustered dock, spearmint (*Mentha spicata*), Baltic rush, soft rush, goldenrod, and velvet grass. Dominant tree and shrub species in the riparian wetlands include Himalayan blackberry, arroyo willow, black willow, red willow (*Salix laevigata*), Fremont's cottonwood (*Populus fremontii*), and black ash (*Fraxinus nigra*).

One riparian wetland occurs within the northern portion of the Eastern Study Area. This feature is a depressional wetland that is dominated by woody riparian species. Dominant tree and shrub species in the

riparian wetland in the Eastern Study Area include red willow, arroyo willow, Fremont's cottonwood, and Himalayan blackberry. Dominant herbaceous species in this feature include velvet grass and least spikerush.

4.4.5 Perennial Creeks

Three perennial creeks were delineated within the Western Study Area. The main perennial creek flows from east to west across the Western Study Area and is a tributary to Secret Ravine. This feature ranges from 10 to 20 feet wide through the Western Study Area. The second perennial creek is much narrower (approximately 5 feet wide) and is a tributary of the main creek. The flow in the second creek drops very low in the summertime when it apparently conveys only irrigation runoff from the residential development to the south. The third creek is also a tributary of the main creek; the western fork is similarly narrow in the summer and apparently only conveys irrigation runoff at that time. The eastern fork is wider and may also convey some groundwater flows. The perennial creek channels were almost completely unvegetated due to the scouring effects of water but were densely vegetated on their banks with riparian wetland vegetation.

4.4.6 Ephemeral Drainage

Four ephemeral drainages occur in the historic mining area in the northern portion of the Eastern Study Area. The ephemeral drainages are fragmented and discontinuous, apparently as a result of the historic mining activities. The ephemeral drainages were completely unvegetated within the channel, due to the scouring effects of water. Adjacent vegetation was that typical of the surrounding oak woodland.

4.4.7 Ditches

Two ditches were delineated within the Western Study Area. The largest ditch occurs along the south edge of the western seasonal wetland and may have been built to assist in drainage of the constructed basin. This feature is largely unvegetated, but due to its low gradient, some vegetation has established in portions of this ditch. The second ditch occurs in the northern portion of the Western Study Area and appears to have been constructed to convey flow from a stormwater outfall for an offsite parking lot into the large riparian wetland. This feature has a relatively steep gradient and is entirely unvegetated.

One roadside ditch occurs in the southern portion of the Eastern Study Area. This feature is largely unvegetated, but due to its low gradient, some upland and facultative vegetation has established in portions of this ditch.

4.5 Soils

According to the Natural Resources Conservation Service (NRCS) Soil Survey Database (NRCS 2020), three soil mapping units occur within the Study Area (**Figure 8**): (106) Andregg coarse sandy loam, 2 to 9% slopes; (107) Andregg coarse sandy loam, 9 to 15% slopes; and (194) Xerofluvents, frequently flooded. None of the mapping units are derived from serpentine or gabbroic rock (NRCS 2020).

5.0 RESULTS

Table 2 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 CNDDDB 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 recent protocol-level floristic surveys conducted on-site, or the site is outside the known range of the species.

Figures 2 and 3 are exhibits displaying CNDDDB 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 Plants

5.1.1 *Big-Scale Balsamroot*

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It is a perennial herbaceous species that occurs in chaparral, cismontane woodland and valley and foothill grasslands between 295 and 4,600 feet (CNPS 2021). Big-scale balsamroot blooms from March through June and may be found on serpentine soils, though it is known to grow on other soil types as well (CNPS 2021).

The annual brome grasslands, oak woodland, and oak savannah throughout the Study Areas represent marginally suitable habitat for this species. The closest documented occurrences of big-scale balsamroot are two occurrences in the CNDDDB, both approximately five miles from the Study Areas. Occurrence #9 is approximately five miles to the west; this historical sighting (1957) occurred along an uncultivated strip adjacent to the railroad (CNDDDB 2021). Occurrence #14 is located approximately five miles to the east, and is an undated historical sighting along the American River that is presumed to have been inundated by Folsom Lake (CNDDDB 2021). This species was not observed during the 2016 or 2020 protocol-level special status plant surveys of the site (Madrone 2017d, 2017e, and 2017i).

5.1.2 *Dwarf Downingia*

Dwarf downingia (*Downingia pusilla*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It is a diminutive annual herb that is strongly associated with vernal pools and other seasonally inundated features at elevations ranging from sea level to approximately 1,500 feet (CNPS 2021). Dwarf

downingia is typically associated with areas that experience a moderate degree of disturbance, and it blooms from March to May.

The seasonal wetlands and seasonal wetland swales within the Study Areas represent marginally suitable habitat for this species. Dwarf downingia has been documented in four locations within five miles of the site (CNDDDB 2021). The nearest of these (Occurrence No. 36) is located approximately three miles southwest of the Study Areas near the intersection of Roseville Parkway and Reserve Drive, and is most likely extirpated by the development in that area (CNDDDB 2021). This species was not observed during the 2016 or 2020 protocol-level special status plant surveys of the site (Madrone 2017d, 2017e, and 2017i).

5.1.3 Bogg's Lake Hedge-Hyssop

Bogg's Lake hedge-hyssop (*Gratiola heterosepala*) is not federally listed, but it is a California endangered species and a CRPR List 1B.2 plant. Bogg's Lake hedge-hyssop grows in vernal pools and around the perimeter of lakes and ponds between 30 and 7,800 feet (CNPS 2021). This small annual herb favors clay soils, and blooms from April to August (CNPS 2021).

The seasonal wetlands in the northern portion of the Eastern Study Area represent marginally suitable habitat for this species. Two occurrences of Bogg's Lake hedge-hyssop are reported in the CNDDDB within five miles of the site, both of which are extirpated (CNDDDB 2021). No extant populations of this species within five miles of the Study Areas are documented in the CNDDDB (CNDDDB 2021). This species was not observed during the 2016 or 2020 protocol-level special status plant surveys of the site (Madrone 2017d, 2017e, and 2017i).

5.1.4 Ahart's Dwarf Rush

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. Ahart's dwarf rush grows along the edges of seasonal wet habitats such as vernal pools and swales within valley and foothill grasslands between elevations of approximately 100 feet and 750 feet (CNPS 2021). This annual herb blooms from March to May (CNPS 2021).

The seasonal wetlands in the northern portion of the Eastern Study Area represent marginally suitable habitat for this species. This species has not been documented within five miles of the Study Area in the CNDDDB (CNDDDB 2021). This species was not observed during the 2016 or 2020 protocol-level special status plant surveys of the site (Madrone 2017d, 2017e, and 2017i).

5.1.5 Sanford's Arrowhead

Sanford's arrowhead (*Sagittaria sanfordii*) is not federally or state listed, but it is classified as a CRPR List 1B.2 plant. It generally occurs in shallow freshwater habitats associated with drainages, canals, and larger ditches that sustain inundation and/or slow-moving water into early summer. This perennial rhizomatous species blooms from May to October, and occurs from sea level to approximately 2,000 feet (CNPS 2021).

Suitable habitat for this species is present in and adjacent to the main perennial creek in the Western Study Area. This species has not been documented within five miles of the Study Area in the CNDDDB (CNDDDB 2021). This species was not observed during the 2016 protocol-level special status plant surveys of the site (Madrone 2017d, 2017e, and 2017i) or during the 2020 protocol-level surveys of the portion of this feature proposed for impact.

5.2 Invertebrates

5.2.1 Vernal Pool Fairy Shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) is listed as threatened pursuant to the federal Endangered Species Act. Historically, the range of vernal pool fairy shrimp extended throughout the Central Valley of California. Vernal pool fairy shrimp populations have been found in several locations throughout California, with habitat extending from Stillwater Plain in Shasta County through the Central Valley to Pixley in Tulare County, and along the Central Coast range from northern Solano County to Pinnacles National Monument in San Benito County (Eng *et al.* 1990, Fugate 1992). Additional populations occur in San Luis Obispo, Santa Barbara, and Riverside counties. The historic and current ranges of vernal pool fairy shrimp are very similar in extent; however, the remaining populations are more fragmented and isolated than during historical times (USFWS 2005). The life cycle of vernal pool fairy shrimp is adapted to seasonally inundated features such as vernal pools, seasonal wetlands, and seasonal wetland swales. Fairy shrimp embryos survive the dry season in cyst form. Cysts “hatch” soon after pools become inundated during the wet season. Fairy shrimp complete their life cycle quickly and feed on small particles of detritus, algae, and bacteria (Eriksen and Belk 1999).

There are seven depressional wetlands within the Eastern Study Area (**Figure 7**). The five northern-most wetlands are in an area that was disturbed by placer mining, and the depressional wetlands are located in old placer mining pits. The two southern wetlands are located in an area that was historically planted as an orchard and irrigated. All seven of the wetlands are located in habitats that have historically experienced significant topographic and hydrologic manipulation. Some were created by that manipulation. No depressional wetlands occur within the Western Study Area.

The closest documented occurrence of vernal pool fairy shrimp (CNDDDB Occurrence #229) is located approximately 2.6 miles to the southwest. That location was extirpated by residential development back in 2002. The nearest potentially extant occurrences are located approximately 3.5 miles to the southwest and northwest of the Study Area (CNDDDB Occurrences #230 and 733). All three of these occurrences are in vernal pools underlain by a volcanic hardpan or clay duripan and occur in a vernal pool grassland setting.

The depressional wetlands within the Study Area occur within a disturbed mixed oak woodland setting, the soil has historically been highly manipulated, and the underlying soils are not appropriate to support vernal pool branchiopods (no clay duripan or volcanic hardpan, but rather weathered granite typical of the lower foothills of the Sierra Nevada). In summary, despite the fact that vernal pool fairy shrimp have been

documented within 5 miles of the Study Area, it is our professional opinion that the depressional seasonal wetlands within the Study Area do not represent suitable habitat for vernal pool fairy shrimp.

To bolster this conclusion, Madrone conducted protocol-level dry-season and wet-season surveys for vernal pool branchiopods in all of the depressional seasonal wetlands. Both of these surveys have been completed with negative results (Madrone 2021).

As suitable habitat is absent, and protocol-level surveys for the species are negative, we have concluded that vernal pool fairy shrimp are absent from the Study Areas.

5.2.2 Valley Elderberry Longhorn Beetle

The Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*, VELB) is associated exclusively with elderberry (*Sambucus* species) shrubs in the Central Valley and foothills up to approximately 500 feet above MSL during its entire 2-year life cycle. Following egg-laying, larvae bore into the elderberry stems and feed upon the pith. They emerge through a round exit or emergence hole upon completion of this life stage. They occupy elderberry stems and trunks that are greater than one inch in diameter at ground level. The U.S. Fish and Wildlife Service (USFWS) considers all elderberry shrubs containing stems greater than one inch in diameter at ground level within the range of the VELB as potential VELB habitat. The USFWS has not clearly defined the range of the VELB, but the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (*Desmocerus californicus dimorphus*) (USFWS 2017) states that the “majority of VELB have been documented below 152 meters (500 feet) in elevation”, and Sam Sosa (USFWS Biologist) stated that range is still considered accurate (personal communication, 20 August 2021). VELB most commonly occur in areas within, or near, some type of riparian corridor containing other woody plant species such as willow (*Salix* spp.), cottonwood (*Populus fremontii* ssp. *fremontii*), wild grape (*Vitis californica*), and box elder (*Acer negundo*). Population densities of the VELB are probably naturally low (USFWS 1984), and it has been suggested based on the spatial distribution of occupied shrubs, that the VELB has limited dispersal capabilities. Talley et al. (2007) found that much of the time, distances between stems with exit holes averaged 25-50 meters (65-165 feet) apart. At larger scales, average distances between these occupied clumps ranged from 200 meters (656 feet) up to 800 meters (2,625 feet). Isolated, non-riparian elderberry clumps are less likely to be occupied or become colonized by VELB and those beyond 800 meters (2,526 feet) from the nearest elderberry clump become increasingly less likely to be occupied (USFWS 2017).

It should be noted that there are two subspecies of elderberry longhorn beetles: the VELB, and the California elderberry longhorn beetle (*Desmocerus californicus californicus*, CELB). CELB are more common and widely distributed than VELB (USFWS 2014). CELB exit holes and adult female beetles are indistinguishable from those of VELB; only adult male beetles can be used to distinguish between the two (USFWS 2019).

The VELB is federally listed as threatened. Critical habitat was designated by the USFWS on 8 August 1980 (45 Federal Register [FR] 52803). On 22 October 2012 the USFWS issued a proposed rule to remove the

designation of the VELB as a threatened species; however, on 29 August 2014 the USFWS formally withdrew the proposed rule (79 FR 55879). The Project is not located within critical habitat for the VELB (USFWS 1980).

Madrone biologists surveyed the entire Study Area for elderberry shrubs on 18, 25, and 26 May 2016; 2 June 2016; 22 February and 31 October 2017. Twenty-four elderberry shrubs were found and surveyed for evidence of VELB presence. Only one of the shrubs exhibited the characteristic exit holes of the CELB/VELB. The sites were resurveyed for elderberry shrubs and VELB evidence on 14 October 2020. The survey results were largely consistent with the results of the prior surveys. No additional shrubs were found, and no exit holes were found. One shrub in the Eastern Area could not be relocated, but there was a substantial amount of vegetation in the area, and due to the timing of the survey, it could not be conclusively determined to be dead. The elderberry shrubs in the Eastern Area are generally smaller and less vigorous than those in the Western Area. We presume this is due to the generally more arid nature of the Eastern Area. The Western Area has perennial and intermittent drainages that may contribute to a higher groundwater table.

A review of the CNDDDB indicates that the nearest documented occurrence of VELB in the CNDDDB (Occurrence #86) is within 800 meters (**Figure 3**); however, this occurrence documents only exit holes, which are indistinguishable from those of CELB (CNDDDB 2020). Seven additional CNDDDB occurrences of VELB are within 10 miles of the Action Area, but all are documentation of exit holes only. The nearest verifiable VELB occurrences (CNDDDB Occurrences 295 and 296) are located approximately 10.2 miles away, along the American River (CNDDDB 2020). Given the distance to the nearest verified occurrence of VELB, the fact that, as noted above, VELB are poor fliers and are unlikely to colonize shrubs greater than 800 meters from an occupied shrub, and the lack of any evidence of elderberry longhorn beetle use of the shrubs within the Study Area during the most recent survey, the elderberry shrubs on-site appear to be currently unoccupied by VELB.

The Eastern Study Area does not contain any aquatic resources subject to USACE jurisdiction, and as a result, work within this area will not require a permit from the USACE. It follows then, that for work within this area there is no federal nexus for federal ESA Section 7 consultation with USFWS regarding VELB. As a result, if the applicant were to consider whether to obtain an incidental take permit for VELB, the applicant would be required to confer with the USFWS under Section 10 of the federal ESA. The threshold the USFWS uses for issuing an incidental take permit under Section 10 is much higher than that for consultation under Section 7; one must demonstrate that the action (i.e., the Project) is "likely" or "reasonably certain" to result in take of a fish or wildlife species. In contrast, under Section 7, biological opinions providing incidental take coverage are provided to the consulting federal agency when the Project "may affect" or "is likely to adversely affect" listed species or critical habitat.

After several calls with USFWS regarding the Eastern Study Area, Madrone prepared a letter to the USFWS summarizing how this Project is "not likely" or "reasonably certain not" to result in take of a fish or wildlife species. This letter is provided in **Attachment D**.

5.3 Reptiles

5.3.1 Western Pond Turtle

The western pond turtle (*Emys marmorata*) is not federally or state listed but is a CDFW species of special concern. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites (Jennings and Hayes 1994). Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks (Jennings and Hayes 1994).

The main perennial creek in the Western Study Area provides suitable habitat for western pond turtle. The closest documented occurrences of western pond turtle are four occurrences in both the CNDDDB and iNaturalist approximately 5 miles east of the Study Areas, all very close to Folsom Lake (CNDDDB 2021, iNaturalist 2020).

5.4 Birds

5.4.1 Tricolored Blackbird

Tricolored blackbirds (*Agelaius tricolor*) are not federally listed but are state listed as threatened. In addition, tricolored blackbird is listed by CDFW as a species of special concern. They are colonial nesters preferring to nest in dense stands of cattails, bulrush, or blackberry thickets associated with perennial water (Shuford and Gardali 2008). Most tricolored blackbirds forage within 3.1 miles of their colony sites (Shuford and Gardali 2008). Proximity to suitable foraging habitat appears to be extremely important for the establishment of colony sites, as tricolored blackbirds usually forage, at least initially, in the field containing the colony site (Shuford and Gardali 2008).

Cattails, tules, and blackberry brambles in the Western Study Area represent suitable nesting habitat, and the isolated blackberry brambles in the Eastern Study Area represent marginally suitable nesting habitat. The blackberry brambles in the Eastern Study Area are only marginally suitable due to the small patch size and more importantly, lack of perennial water. The nesting habitat in the Western Study Area is much higher quality, but the adjacent foraging habitat is comprised of only small, disjunct patches. Furthermore, there is very little foraging habitat available within 3 miles of the Study Area due to the urban setting, and nesting colonies of this species have not been documented within three miles of the Study Areas historically (CNDDDB 2021, TCB Portal 2020, eBird 2020). As noted above, most tricolored blackbirds forage within approximately 3 miles of their nesting colony site. Therefore, if a nesting colony established within 3 miles of the Study Areas, then the annual grasslands could provide foraging habitat for those birds. The nearest documented nesting colony of tricolored blackbird is CNDDDB Occurrence #330, which is located approximately 3.6 miles south of the Study Area, along Wellington Way just north of East Roseville Parkway

(CNDDDB 2021). This nesting location was last documented occupied by a tricolored blackbird colony in 1999; surveys of the location in 2011 and 2014 were both negative. As this location has not been utilized by tricolored blackbirds in more than 10 years, this is not considered an active nesting location.

5.4.2 Swainson's Hawk

Swainson's hawk (*Buteo swainsoni*) is a raptor species that is not federally listed, but is listed as threatened by CDFW. 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).

The larger expanses of annual brome grasslands within the Study Areas represent potential foraging habitat for Swainson's hawk, and the larger trees within the Study Areas provide suitable nesting habitat. Swainson's hawks were observed nesting in a Fremont's cottonwood tree in the Eastern Study Area in 2019 (Figure 7) (Madrone 2019), and they have been observed soaring over the Eastern Study Area during field surveys. The annual brome grasslands within the Eastern Study Area are large patches of habitat with adjacent (to the east) similar habitat that are almost certainly utilized for foraging by the pair nesting in that area. Therefore, the annual brome grasslands in the Eastern Study Area are considered suitable foraging habitat. The annual brome grasslands in the Western Study Area are of much lower quality. They are comprised of five small patches (each 2-3 acres or less) disjunct from one another due to oak and riparian woodland corridors, and further disjunct from any other larger, more suitable habitat. The Western Study Area is almost entirely surrounded by urban development. This habitat would normally be considered unsuitable, but with the presence of a Swainson's hawk nest just 0.5 mile to the northeast, there is a chance that the habitat could be used for foraging, and we are considering the annual brome grasslands within the Western Study Area to be marginally suitable foraging habitat for Swainson's hawk.

5.4.3 Northern Harrier

The northern harrier (*Circus cyaneus*) is not listed pursuant to either the California or federal Endangered Species Acts; however, it is considered to be a species of special concern by the CDFW. This species is known to nest within the Central Valley, along the Pacific Coast, and in northeastern California (Shuford and Gardali 2008). The northern harrier is a ground nesting species, and typically nests in emergent wetland/marsh, open grasslands, or savannah habitats. Foraging occurs within a variety of open habitats such as marshes, agricultural fields, and grasslands (Shuford and Gardali 2008).

The larger expanses of annual brome grasslands throughout the Study Areas are suitable nesting and foraging habitat for this species. Northern harrier has not been documented in the CNDDDB within 5 miles of the Study Area (CNDDDB 2021).

5.4.4 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).

The annual brome grasslands throughout the Study Areas represent suitable foraging habitat for white-tailed kite, and the trees within the Study Areas provide suitable nesting habitat. This species was observed foraging, mating, and exhibiting courtship behavior in both Study Areas during field surveys. The nearest documented occurrence of white-tailed kite in the CNDDDB is Occurrence #74, which is located approximately 3.75 miles north of the Study Area, just west of Penryn (CNDDDB 2021).

5.4.5 Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is not listed and protected pursuant to either the California or federal Endangered Species Acts; but is a CDFW species of special concern. Loggerhead shrikes nest in small trees and shrubs in woodland and savannah vegetation communities, and forage in open habitats throughout California (Shuford and Gardali 2008). The nesting season ranges from March through June.

The trees and annual brome grassland within the Study Area provide suitable habitat for loggerhead shrike. Loggerhead shrike has not been documented in the CNDDDB within 5 miles of the Study Area (CNDDDB 2021).

5.4.6 California Black Rail

The California black rail (*Laterallus jamaicensis coturniculus*) is listed as threatened by CDFW and is also a CDFW Fully Protected species. This sparrow-sized bird is the smallest rail species in North America. California black rails historically occupied saltwater, brackishwater, and freshwater marshes from the coast of Baja Mexico north to San Francisco and inland throughout the San Joaquin and Sacramento Valleys into eastern Oregon wetlands. Today the species is found in the San Francisco Bay area, at several locations in the Sacramento-San Joaquin River delta, Morro Bay, Tomales Bay, and Bolinas Lagoon. Several populations have been identified in the Sierra Nevada foothills in Placer, Nevada, Butte, and Yuba Counties (Richmond, Tecklin, and Beissinger 2008).

In the Sierra Nevada foothills, California black rail occupy a very specific habitat type. The generally are associated with shallow portions of permanent or semi-permanent wetlands with dense emergent vegetation. Due to their highly secretive behavior, Black Rails rarely venture out into the open but instead prefer to remain hidden beneath a canopy of thick cattails, rushes, sedges or wetland grasses. A steady flow of shallow water also seems to be important to Black Rails in the foothills, hence their association with artificial wetlands that form, either deliberately or accidentally, near irrigation canals. Black Rails can occupy wetlands as small as 40 feet by 40 feet but are usually found in wetlands that are a quarter of an acre or

larger. California black rail nesting habitat is characterized by water depths of about one inch that do not fluctuate during the year (Richmond, Tecklin, and Beissinger 2008).

Portions of the riparian wetlands and seasonal wetlands within the Western Study Area represent marginal habitat for the species. California black rail has been documented approximately 3 miles north of the Study Area in a large freshwater marsh along Clover Valley Creek (CNDDDB 2021).

5.5 Mammals

5.5.1 Pallid Bat

Pallid bat (*Antrozous pallidus*) 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. It favors roosting sites in crevices in rock outcrops, caves, abandoned mines, hollow trees, and human-made structures such as barns, attics, and sheds (WBWG 2021). Though pallid bats are gregarious, they tend to group in smaller colonies of 10 to 100 individuals. It is a nocturnal hunter and captures prey in flight, but unlike most American bats, the species has been observed foraging for flightless insects, which it seizes after landing (WBWG 2021).

Tree hollows and exfoliating bark on trees throughout the Study Areas represent suitable roosting habitat for pallid bat. Pallid bat has not been documented in the CNDDDB within 5 miles of the Study Area (CNDDDB 2021).

5.5.2 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 2021). 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 2021).

Tree hollows and exfoliating bark on trees throughout the Study Areas represent suitable roosting habitat for silver-haired bat. Silver-haired bat has not been documented in the CNDDDB within 5 miles of the Study Area (CNDDDB 2021).

5.5.3 Western Red Bat

Western red bat (*Lasiurus blossevillei*) 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 2021). 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 2021).

Trees within the riparian woodlands and riparian wetlands represent suitable roosting habitat for western red bat. Western red bat has not been documented in the CNDDDB within 5 miles of the Study Area (CNDDDB 2021).

5.5.4 Hoary Bat

The hoary bat (*Lasiurus cinereus*) is not federally or state listed, but is classified by the WBWG as a Medium priority species. It is considered to be one of the most widespread of all American bats with a range extending from Canada to central Chile and Argentina as well as Hawaii (WBWG 2021). Hoary bats are solitary and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches at the edge of a clearing (WBWG 2021). This species may also occasionally roost in caves, beneath a rock ledge, in a woodpecker hole, in a grey squirrel nest, under a wood plank, or clinging to the side of a building (WBWG 2021). Trees throughout the Study Areas represent suitable roosting habitat for hoary bat. Hoary bat has not been documented in the CNDDDB within 5 miles of the Study Area (CNDDDB 2021).

6.0 IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

This section details potential impacts to the sensitive biological resources discussed above associated with construction of the Project, as discussed in Section 1.1. When construction-level engineering plans are developed upon project approval, standard construction measures may be taken along the interface between development (i.e., the impact area) and open space, such as the use of rip-rap at outfalls or to protect bridge footings, which may have the potential to result in minor impacts to sensitive biological resources. In this scenario, any minor additional impacts would be subject to the same mitigation measures and permitting requirements identified below in Section 7. Compliance with this mitigation and regulatory requirements will ensure that any such minor impacts will be less than significant.

6.1 Aquatic Resources

Of the approximately 9.065 acres of aquatic resources mapped within the Study Areas, 0.971 acre will be impacted by the Projects, and 8.094 acres will be avoided (Table 3) (Figure 9 and 10).

Table 3. Aquatic Resource Impacts within the Study Areas

Resource Type	Impacted Acreage	Avoided Acreage	Total Acreage
<i>Wetlands</i>			
Seasonal Wetland	0.502	2.200	2.702
Seasonal Wetland Swale	0.089	0.385	0.474
Seep	0.188	0.036	0.224
Riparian Wetland	0.143	5.014	5.157
<i>Other Waters</i>			
Perennial Creek	0.008	0.397	0.405
Ephemeral Drainage	0.035	0.042	0.077
Ditch	0.006	0.020	0.026
Total	0.971	8.094	9.065

6.2 Special-Status Plant Species

The vegetation communities proposed for impact represent suitable habitat for big-scale balsamroot, dwarf downingia, Bogg's Lake hedge hyssop, Ahart's dwarf rush, and Sanford's arrowhead, but protocol-level special-status plant surveys were conducted throughout the Study Area in 2017 and 2020 with negative results. Therefore, these species are known to be currently absent from the Study Areas; however, plant species can become established in new locations given enough time. In accordance with USFWS protocols, which recommend resurvey after three years (USFWS 1996), we would recommend that additional special-status plant surveys be conducted prior to construction if construction does not commence by 1 April 2023 to confirm absence of (and no impact to) these species.

6.3 Valley Elderberry Longhorn Beetle

A total of 18 elderberry shrubs that represent potential habitat, but are not currently occupied by VELB are proposed for impact. Three of the elderberry shrubs are located in riparian wetland or riparian woodland, and the remaining 15 shrubs are located in upland oak woodland and oak savannah communities. As these shrubs are not currently occupied by VELB, the removal of the shrubs would not have any effect on VELB. USFWS staff have provided guidance regarding the need for an incidental take permit for removal of the elderberry shrubs within the Eastern Study Area resulting in the preparation of the letter found in **Attachment D**.

Regardless, out of an abundance of caution, the elderberry shrubs will be transplanted into appropriate open space area(s) on-site prior to site grading.

6.4 Western Pond Turtle

The main perennial creek running through the Western Study Area represents suitable habitat for western pond turtle, and the adjacent riparian wetlands and riparian woodlands provide suitable nesting habitat. Portions of the riparian wetland and riparian woodlands south of the creek will be impacted during Project construction (**Figure 11**). If western pond turtles or their nests were present in those areas during construction, individual turtles could be injured or killed, or nests could be destroyed.

6.5 Nesting Raptors and Songbirds

California black rail, Swainson's hawk, white-tailed kite, northern harrier, tricolored blackbird, and loggerhead shrike have the potential to nest within the Study Areas, as do other more common bird species protected by the MBTA. If they were nesting on-site, removal of the nests would impact these species. Furthermore, birds nesting in avoided areas adjacent to construction could be disturbed by construction, which could result in nest abandonment.

6.6 Foraging Raptors

The annual brome grassland within the Study Areas provides suitable foraging habitat for Swainson’s hawk, white-tailed kite, northern harrier, and other more common raptors. Approximately 49.0 acres of suitable foraging habitat within the Eastern Study Area will be impacted during Project implementation (Figure 12), and 10.4 acres of marginally suitable foraging habitat within the Western Study Area will be impacted (Figure 11).

6.7 Roosting Bats

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

6.8 Native Oak Trees

Native oak trees occur within oak woodlands, oak savannah, and riparian woodlands throughout the Study Areas. The *College Park Oak Tree Mitigation Plan* (Oak Mitigation Plan) (Attachment E) quantifies impacts and avoidance of oak trees, total DBH inches of oaks, and oak canopy acreage; these are summarized in Table 4. Note that the oak canopy acreage is smaller than the acreage of native oak vegetation communities presented in Figures 4 and 5, as oak trees are only one component of each of these communities.

Table 4. Native Oak Tree Impacts and Avoidance

Measurement	Impacts	Avoidance ¹	Total
Number of all oak trees	1,580 (72%)	605 (28%)	2,185
Number of healthy oak trees ¹	1,021		
All oak trees DBH (inches)	14,634 (71%)	6,023 (29%)	20,657
Healthy oak trees DBH (inches) ¹	9,229		
Oak canopy (acres)	16.6 (67%)	8.1 (33%)	24.7

¹ The health of trees was not assessed in the avoidance areas.

In summary, implementation of the Proposed Project will directly impact 1,580 (72%) of the native oak trees within the Study Area, 1,021 of which are healthy and require mitigation under the City Tree Ordinance.

6.9 Riparian Zone

The riparian zone within the Western Study Area has largely been avoided by the proposed development plan (Figure 11). The only exceptions are five road, trail, and utility crossings, which are allowed by the City’s Riparian Policy. There is no riparian zone within the Eastern Study Area. Therefore, there are no exceptions to the riparian policy.

7.0 MITIGATION FOR IMPACTS TO SENSITIVE BIOLOGICAL RESOURCES

The following are suggested mitigation measures for impacts to sensitive biological resources that may be associated with construction of the Project.

7.1 Aquatic Resources

1. The Project applicant shall apply for a Section 404 permit from the U.S. Army Corps of Engineers for impacts to aquatic resources verified by the USACE as subject to their jurisdiction. Waters of the U.S. that will be impacted shall be replaced or rehabilitated on a “no-net-loss” basis. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods acceptable to the USACE.
2. The applicant shall apply for a Section 401 water quality certification or WDR, as appropriate, from the RWQCB, and adhere to the conditions.
3. For project applications with impacts to drainages or riparian vegetation, the applicant shall apply for a Section 1600 Lake or Streambed Alteration Agreement from CDFW. Impacts will be outlined in the application and are expected to be substantially similar to the impacts to biological resources outlined in this document. Information regarding Project-specific drainage and hydrology changes resulting from Project implementation will be provided as well as a description of storm water treatment methods. Minimization and avoidance measures will be proposed as appropriate and may include: preconstruction species surveys and reporting, protective fencing around avoided biological resources, worker environmental awareness training, seeding disturbed areas adjacent to open space areas with native seed, and installation of project-specific storm water BMPs. Mitigation will result in “no-net-loss” of riparian woodland and may include restoration or enhancement of resources on- or off-site, purchase of habitat credits from an agency-approved mitigation/conservation bank, working with a local land trust to preserve land, or any other method acceptable to CDFW.

7.2 Special-Status Plant Species

Special-status plant surveys conducted throughout the Study Area in 2017 and 2020 were negative within the proposed impact area, but given enough time, plants may become established in areas where suitable habitat exists. Therefore, we recommend special-status plant surveys be conducted in areas proposed for impact no more than three years prior to commencement of construction. If construction commences prior to 1 April 2023, these surveys will not be required. Surveys shall be conducted in accordance with the *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000), the *Botanical Survey Guidelines of the California Native Plant Society* (CNPS 2001), and *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2018) or more recent protocols at that time. If no special-status plant species are found, no further mitigation would be required. If special-status plants are found and will be impacted, mitigation for those impacts will be determined during consultation with the City. If the plant found is a perennial such as Sanford’s arrowhead or big-scale balsamroot, then mitigation will consist of digging up the plant and transplanting into a suitable avoided area on-site prior to construction. If the plant found is

an annual such as dwarf downingia, then mitigation will consist of collecting seed-bearing soil and spreading it into a suitable constructed wetland at a mitigation site (as placing soil into an avoided wetland on-site would be considered fill). If rare plants will be impacted, a mitigation plan will be developed and approved by the City. Mitigation for the transplantation/establishment of rare plants will result in no net loss of individual plants after a five (5) year monitoring period. The two species most likely to be present in the vicinity are dwarf downingia and Sanford's arrowhead. The author is personally aware of mitigation sites where these two species have been successfully relocated.

7.3 Valley Elderberry Longhorn Beetle

VELB were not present within the on-site elderberry shrubs during the most recent survey in October 2020, but given enough time, VELB could occupy the elderberry shrubs, or shrubs may become established in new areas or may die of natural causes. Therefore, we recommend comprehensive VELB surveys be conducted in areas proposed for impact no more than three years prior to commencement of construction. If construction commences prior to October 2023, these surveys will not be required. Surveys shall be conducted in accordance with the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017), or the most recent USFWS VELB guidance at the time. If VELB are located prior to construction, then:

- 1) All occupied elderberry shrubs (which are defined for the purposes of this section as those with stems greater than 1 inch in diameter at ground level) shall be avoided completely during Project construction with a buffer of at least 20 feet, except as permitted under paragraph 2 below, and the following avoidance and minimization measures during construction [as outlined in the *Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle* (USFWS 2017)] shall be implemented for all work within 165 feet of a shrub:
 - All areas to be avoided during construction activities will be fenced and/or flagged as close to construction limits as feasible.
 - Activities that could damage or kill an elderberry shrub (e.g., trenching, paving, etc.) shall receive an avoidance area of at least 20 feet from the drip-line.
 - A qualified biologist will provide training for all contractors, work crews, and any onsite personnel on the status of the VELB, its host plant and habitat, the need to avoid damaging the elderberry shrubs, and the possible penalties for noncompliance.
 - A qualified biologist will monitor the work area at project appropriate intervals to assure that all avoidance and minimization measures are implemented.
 - As much as feasible, all activities within 165 feet of an elderberry shrub will be conducted between August and February.
 - Elderberry shrubs will not be trimmed.
 - Herbicides will not be used within the drip-line of the shrub. Insecticides will not be used within 100 feet of an elderberry shrub.
 - Mechanical weed removal within the drip-line of the shrub will be limited to the season when adults are not active (August - February) and will avoid damaging the elderberry.
- 2) If an elderberry shrub occupied with VELB must be removed to accommodate construction because surveys conducted in October 2023 or later find VELB in areas within the development footprint of the

College Park Project as approved, then the applicant shall notify the City and consult with USFWS. At a minimum, the removal of elderberry shrubs found to be occupied with VELB shall be mitigated through the purchase of one (1) VELB mitigation credit from an agency-approved mitigation bank for each occupied shrub removed or through the planting of five (5) elderberry seedlings and five (5) native California trees or shrubs at a USFWS-approved location for each shrub removed. If the latter option is selected then the seedlings and associated natives shall achieve an 80% survival rate measured at the end of a five (5) year monitoring period.

7.4 Western Pond Turtle

A western pond turtle survey shall be conducted in all areas within 150 feet of the main (east-west) perennial creek in the Western Study Area within 48 hours prior to construction in that area. If no western pond turtles or nests are found, no further mitigation is necessary. If a western pond turtle is observed within the proposed impact area, a qualified biologist shall relocate the individual to habitat of equivalent or greater value (e.g., riparian wetlands or riparian woodlands) outside of the proposed impact area prior to construction. If a western pond turtle nest is observed within the proposed impact area, the nest shall be fenced off and avoided until the eggs hatch. The exclusion fencing shall be placed no less than 25 feet from the nest. A qualified biologist shall monitor the nest daily during construction to ensure that hatchlings do not disperse into the construction area. Relocation of hatchlings will occur as stipulated above, if necessary.

7.5 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 1 through September 1).

7.5.1 Swainson's Hawk

A targeted Swainson's hawk nest survey shall be conducted throughout the Project Area and all accessible areas within a ¼ mile radius of the proposed construction area no more 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. The ¼-mile buffer may be reduced if a smaller sufficiently protective buffer is proposed by the Project Biologist and approved by the City in consultation with CDFW after taking into consideration the natural history of the Swainson's hawk, the proposed activity level adjacent to the nest, the nest occupants' habituation to existing or ongoing activity, nest concealment (i.e., whether there are visual or acoustic barriers between the proposed activity and the nest), and what (if any) nest monitoring is proposed.

7.5.2 Other Birds

A pre-construction nesting bird survey shall be conducted by the Project Biologist throughout the Project Area and all accessible areas within a 500-foot radius of proposed construction areas, no more than 14 days

prior to the initiation of construction. If there is a break in construction activity of more than 14 days, then subsequent surveys shall be conducted.

If active raptor, California black rail nest, or a tricolored blackbird nesting colony are found, no construction activities shall take place within 500 feet of the nest/colony 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 sufficiently protective buffer is proposed by the Project Biologist and approved by the City (and CDFW if it is a California black rail nest or tricolored blackbird nesting colony) after taking into consideration the natural history of the species of bird nesting, the proposed activity level adjacent to the nest, the nest occupants' habituation to existing or ongoing activity, and nest concealment (i.e., whether there are visual or acoustic barriers between the proposed activity and the nest). The Project 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.

7.5.3 Survey Report

A report summarizing the survey(s), shall be provided to the City within 14 days of the completed survey and is valid for one construction season or until there is a gap in construction activity of 14 days or more. If no nests are found, no further mitigation is required.

7.5.4 Increases to Buffers and Completion of Nesting

Should construction activities cause a nesting bird do any of the following in a way that would be considered a result of construction activities: vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop this agitated behavior. The exclusionary buffer will remain in place until the chicks have fledged or as otherwise determined by the Project Biologist in consultation with the City.

Construction activities may only resume within the buffer zone after a follow-up survey by the Project Biologist has been conducted and a report has been prepared indicating that the nest (or nests) are no longer active, and that no new nests have been identified.

7.6 Loss of Foraging Habitat

7.6.1 Swainson's Hawk

Approximately 49.0 acres of highly suitable foraging habitat and 10.4 acres of marginally suitable foraging habitat for Swainson's hawks will be impacted during construction of the proposed Project. We would recommend the following mitigation for these impacts:

- One acre of suitable foraging habitat shall be protected for each acre of highly suitable foraging habitat impacted. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.

- 0.5 acre of suitable foraging habitat shall be protected for each acre of marginally suitable foraging habitat impacted. Protection shall be via purchase of mitigation bank credits or other land protection mechanism acceptable to the City.

Based on these ratios and the current development plan, a total of 54.15 acres of Swainson's hawk foraging habitat would be protected to compensate for impacts within the Study Area.

7.6.2 Other Birds

Approximately 59.4 acres of annual brome grassland within the Project Area that represents potential foraging habitat for northern harrier, white-tailed kite, and loggerhead shrike will be impacted by construction of the proposed Project. Though mitigation for impacts to foraging habitat for these species is not required pursuant to CEQA, the protection of Swainson's hawk foraging habitat as described above in **Section 7.5.1** will offset the loss of foraging habitat for these and other birds.

7.7 Roosting Bats

Pre-construction roosting bat surveys shall be conducted by a qualified biologist within 14 days prior to any tree or building 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. Once the bats have been excluded from buildings or allowed to fly off from trees and roost elsewhere, the building or tree removal may occur.

7.8 Native Oak Trees

7.8.1 Permit Application

As impacts to "Trees" will occur for the development of the Project, the Project applicant must apply for a *Tree Preservation Plan Permit*, as required by the City Tree Ordinance. We have summarized the mitigation for oak impacts proposed in the *College Park Oak Tree Mitigation Plan* below in **Sections 7.7.2** and **7.7.3**, but the City will have ultimate discretion to determine what mitigation will be required prior to permit approval.

7.8.2 Mitigation for Impacted Native Oak Communities

As summarized in **Table 4**, above, 1,021 healthy native oak trees with a cumulative DBH of 9,229 inches and an approximate canopy of 16.6 acres are proposed for impact during Project construction. The *City of*

Rocklin Oak Tree Preservation Guidelines (Guidelines) state that “on-site mitigation in the form of planting replacement trees is preferred,” and then include express requirements that are specific to on-site replacement. However, as the majority of the avoided habitats will already be woodlands or wetlands, planting replacement trees on-site is not a feasible alternative.

The Guidelines go on to state mitigation alternatives to on-site replacement, that “Off-site tree replacement, contributions to the Rocklin Oak Tree Preservation Fund, and dedication of land instead of paying mitigation fees shall also be considered” (see also City of Rocklin Code Section 17.77.080.B). Both off-site tree replacement and contributing to the Rocklin Oak Tree Preservation Fund, however, would result in substantial temporal loss of habitat; therefore, the applicant, in coordination with the City, has proposed to mitigate for loss of native oak communities through protection and long-term management of existing native oak communities. The Project Applicant’s certified arborist consultant has prepared the *College Park Oak Tree Mitigation Plan* (Oak Mitigation Plan), which is included as **Attachment E**. The Oak Mitigation Plan details the Project mitigation requirements of the Guidelines, as summarized below:

Total DBH (TDBH) of oak trees on Project site	20,657
TDBH of healthy oak trees proposed for impact	9,229
Subtract 20% of TDBH of all healthy trees (9,230 x 0.20)	<u>-1,845</u>
TDBH of mitigation required	7,384

Under the Oak Mitigation Plan, a Conservation Area would be set aside as mitigation for these impacts. This Conservation Area is located along Secret Ravine Creek, and as a result, supports both a diverse, high quality riparian corridor, and oak woodlands further from the creek. The Conservation Area contains 563 native oak trees with a cumulative DBH of 7,526 inches. As stated in the Oak Mitigation Plan, the City has agreed that due to the quality of trees within the Conservation Area, trees within the riparian area would receive a 50% credit toward TDBH inches and trees outside of the riparian area would receive a 150% credit. As a result, of the 7,534 TDBH inches of existing trees, there are 3,900 TDBH inches within the riparian area that provide 1,950 TDBH inches of credit (3,900 x 50% credit) and 3,626 TDBH inches outside the riparian boundary that provide 5,439 TDBH inches of credit (3,626 x 150%). This provides a total mitigation credit of 7,389 DBH inches, which is slightly more than the 7,384 TDBH inches required to conserve.

As noted in the Oak Mitigation Plan, the Conservation Area provides greater species diversity and a more mature and established woodland than the woodland impacted by the project. There are four native oak species of trees on the Conservation Area, whereas the project impact area includes only three oak species, with a modest number of California buckeye and fewer gray pines. The Conservation Area’s diverse woodland will preserve interior live oak and other essential oak species. The woodland impacted by the project does not have the same valuable ecological diversity as the creek corridor in the Conservation Area.

The Oak Mitigation Plan notes that the average oak tree size is larger in the Conservation Area (13-inch TDBH) than on the project site (9.44-inch TDBH), with fewer multi-trunk trees than the project site (27% versus 53%), reflecting a woodland comprised of larger trees with fewer defects and a reduced propensity for failures than the live oak forest on the project site. The Conservation Area woodland has fewer multi-

trunked oak trees and is characterized by taller trees with a higher canopy and expansive understory. In addition to the oak trees that were field surveyed, it is estimated that there are another 400 oak trees in the Conservation Area that did not meet the criteria for the inventory (less than 6 TDBH inches). Although these trees are smaller than the size threshold for the survey, they make a significant contribution to the quality of the woodland, showing age diversity and natural regeneration on the site. In addition, another 275 non-oak native trees that met the size criteria are also present (although as they are not oaks, they are not included in the tables or calculations).

The Oak Mitigation Plan notes that unlike the physical conditions that would be created by replacement oak tree plantings, the Conservation Area is an established woodland area that would not require years of establishment or costs associated with an unpredictable planting replacement program, such as the installation of complex irrigation systems and heightened levels of monitoring and maintenance. Replacement oak tree plantings also are land and water consumptive and have significant attrition rates and result in less diverse habitat that ultimately may impact special-status species. Conversely, established oaks, like those in the Conservation Area, require little to no maintenance and are drought tolerant—in fact they contribute to water conservation during drought cycles—and, provide great species diversity. The Conservation Area woodland along Secret Ravine Creek, in the creek corridor, contains diverse flora and wildlife, of significant ecological value, including more valley oak and blue oak trees than on the project sites. Thus, conserving oak woodland is generally considered more favorable than oak tree replacement,

Upon City approval, the Project applicant shall implement the Oak Mitigation Plan, which shall include preparation of a long-term management plan for the proposed oak conservation area and protection of the native oak habitat in perpetuity through the use of a real estate instrument such as a deed restriction or conservation easement that runs with the land. A funding mechanism will be in place to implement the management plan.

7.8.3 Protection of Oak Trees During Construction

The following additional measures are required by the Oak Tree Preservation Guidelines:

“A bond or other security instrument in a form approved by the City Attorney in the minimum amount of \$10,000 (or greater as deemed necessary by the approving body) shall be posted and maintained to insure the preservation of the trees during construction. The security shall be posted prior to any grading or movement of heavy equipment onto the site or issuance of a permit. Any violation of any term or condition of the tree preservation plan permit or these Guidelines may result in forfeiture of all or a portion of the bond. Other violation penalties are contained in the Oak Tree Preservation Ordinance.

...the developer is required to fence the trees to be preserved during construction. The tree preservation ordinance requires fencing and signage to be installed by the developer around trees which could be damaged during construction. The sign shall be a minimum of two feet by two feet in size and shall state the bond amount which protects the tree and that damage will result in forfeiture of all or part of the bond. Fencing shall be located three

feet outside the dripline of the tree, shall be no less than 4 feet high, and shall be installed prior to any grading on the site. City staff will verify installation of the fencing. It is the responsibility of the property owner and workers on the site to assure that the fence remains in its proper location and at its proper height during construction.”

7.9 Worker Environmental Awareness Training

Prior to any ground-disturbing or vegetation-removal activities, a Worker Environmental Awareness Training (WEAT) shall be prepared and administered to the construction crews. The WEAT will include the following: discussion of the state and federal Endangered Species Act, the Clean Water Act, the Porter-Cologne Act and Waste Discharge Requirements, the Project’s permits and CEQA documentation, and associated mitigation measures; consequences and penalties for violation or noncompliance with these laws and regulations; identification of special-status wildlife, location of any avoided Waters of the U.S; hazardous substance spill prevention and containment measures; and the contact person in the event of the discovery of a special-status wildlife species. The WEAT will also discuss the different habitats used by the species' different life stages and the annual timing of these life stages. A handout summarizing the WEAT information shall be provided to workers to keep on-site for future reference. Upon completion of the WEAT training, workers will sign a form stating that they attended the training, understand the information presented and will comply with the regulations discussed. Workers will be shown designated “avoidance areas” during the WEAT training; worker access should be restricted to outside of those areas to minimize the potential for inadvertent environmental impacts. Fencing and signage around the boundary of avoidance areas may be helpful.

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Figures

Figure 1. Vicinity Map

Figure 2. California Natural Diversity Database Occurrences of Plant Species

Figure 3. California Natural Diversity Database Occurrences of Wildlife Species and Critical Habitat

Figure 4. Vegetation Communities – Western Area

Figure 5. Vegetation Communities – Eastern Area

Figure 6. Aquatic Resources, Sanford's Arrowhead, and Elderberry Shrub Location Map - Western Area

Figure 7. Aquatic Resources, Sanford's Arrowhead, and Elderberry Shrub Location Map - Eastern Area

Figure 8. NRCS Soils Map

Figure 9. Aquatic Resources and Elderberry Shrub Impacts– Western Area

Figure 10. Aquatic Resources and Elderberry Shrub Impacts– Eastern Area

Figure 11. Land Cover and Elderberry Shrub Impacts – Western Area

Figure 12. Land Cover and Elderberry Shrub Impacts – Eastern Area

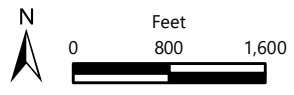
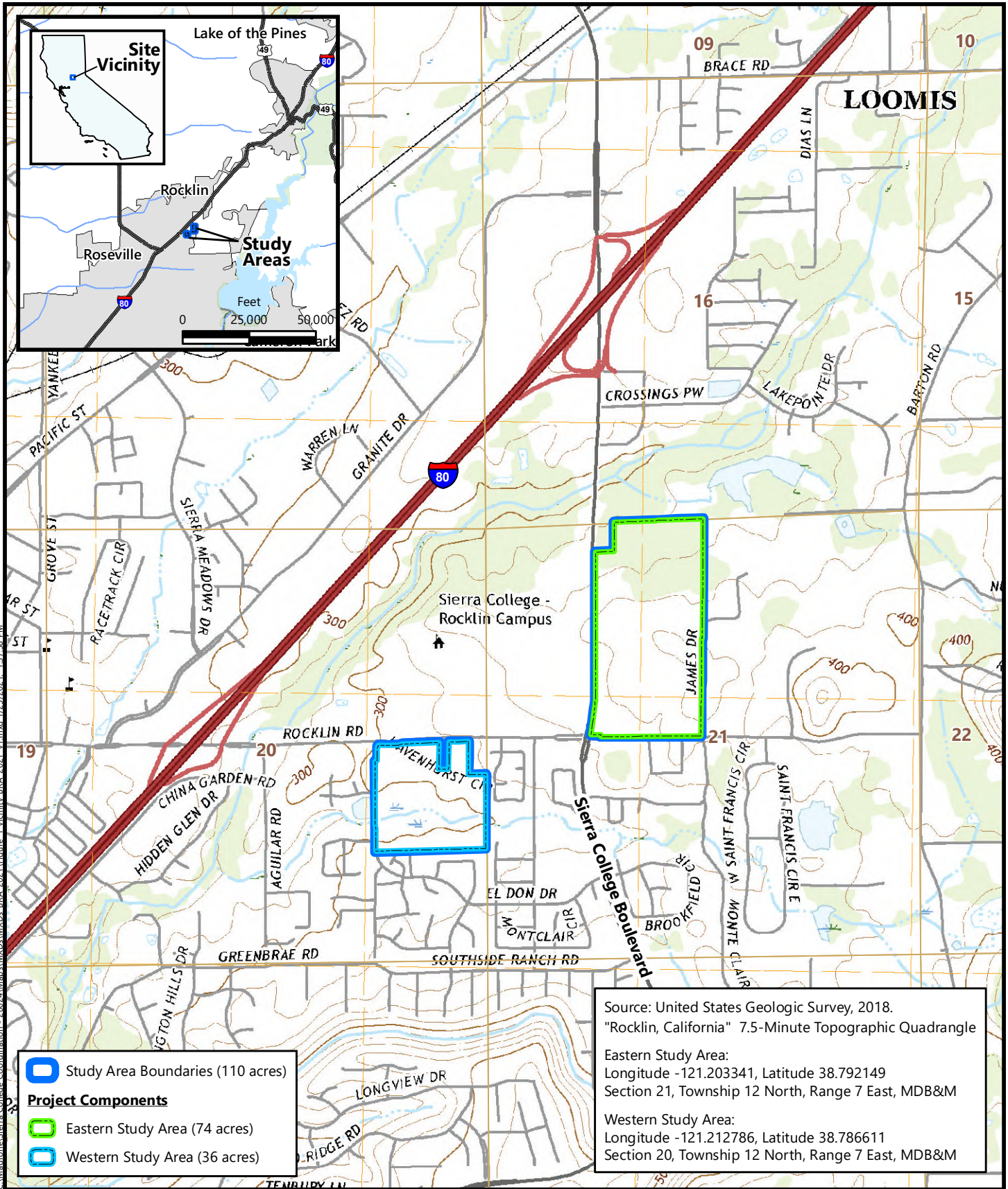
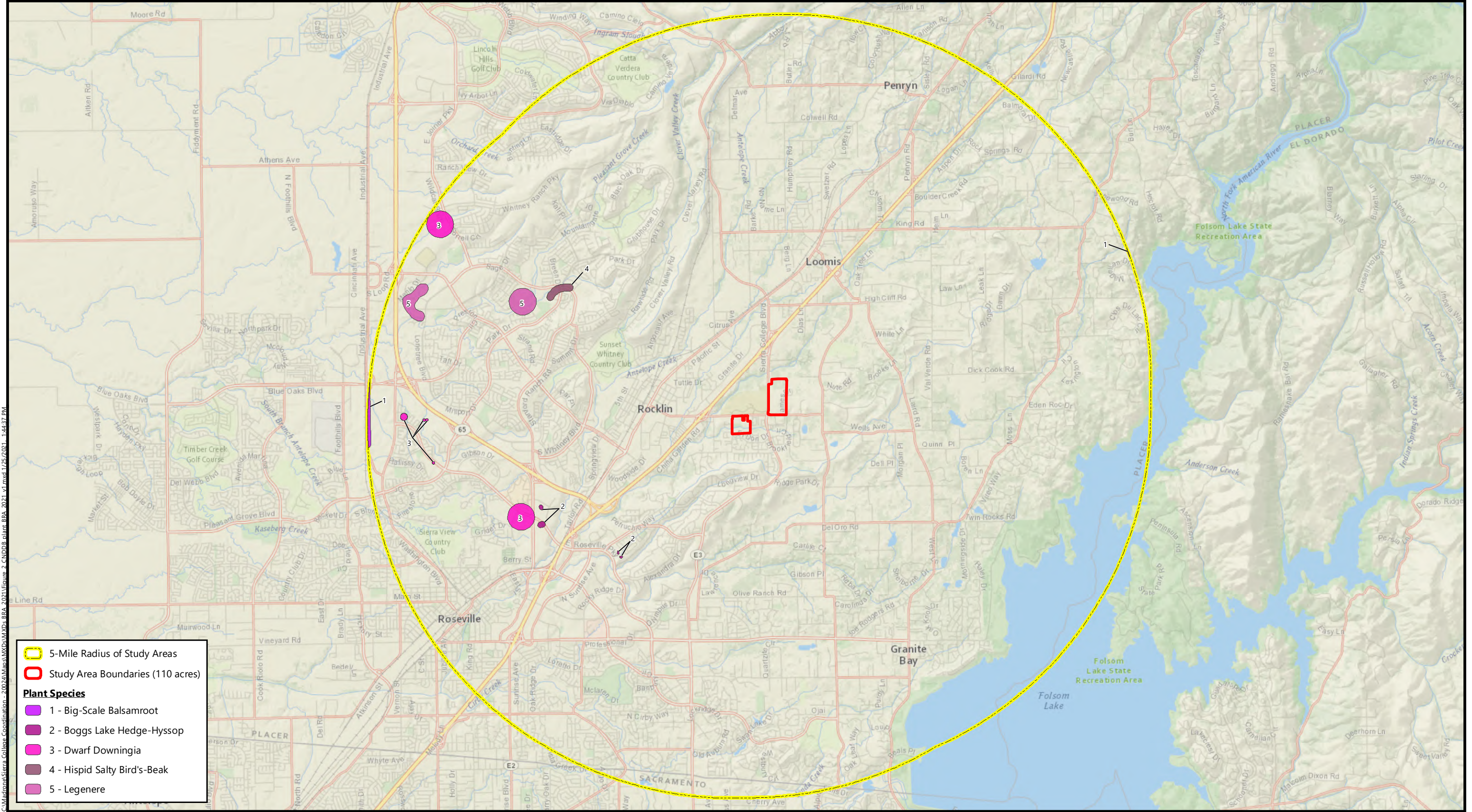


Figure 1
Site and Vicinity

Basemap Source: United States Geologic Survey, 2018.





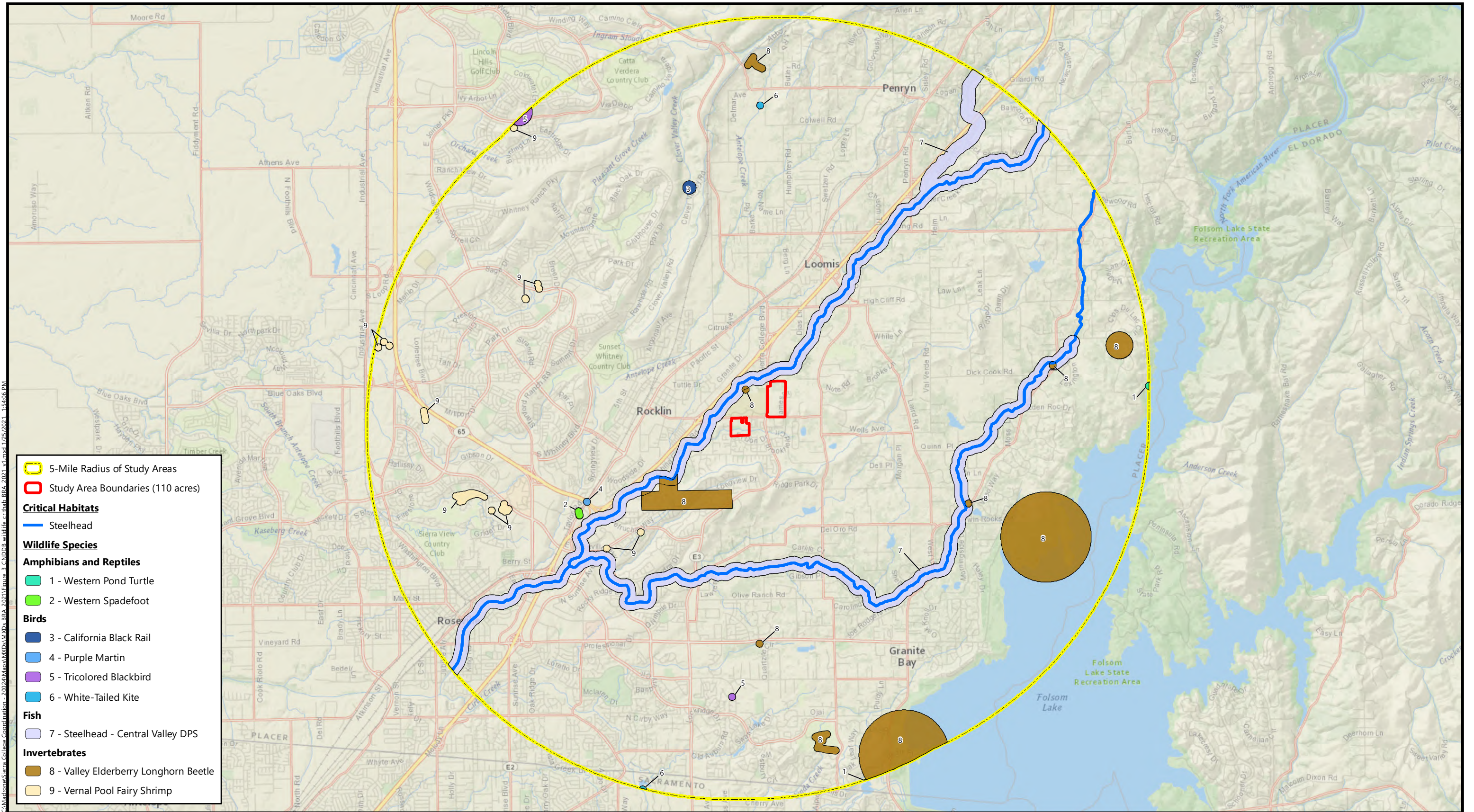
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Figure 2
California Natural Diversity Database
Occurrences of Special-Status
Plant Species
 College Park
 Rocklin, Placer County, California



Source: California Department of Fish and Wildlife, January 2021.
 Basemap Source: National Geographic and ESRI



5-Mile Radius of Study Areas

Study Area Boundaries (110 acres)

Critical Habitats

- Steelhead

Wildlife Species

Amphibians and Reptiles

- 1 - Western Pond Turtle
- 2 - Western Spadefoot

Birds

- 3 - California Black Rail
- 4 - Purple Martin
- 5 - Tricolored Blackbird
- 6 - White-Tailed Kite

Fish

- 7 - Steelhead - Central Valley DPS

Invertebrates

- 8 - Valley Elderberry Longhorn Beetle
- 9 - Vernal Pool Fairy Shrimp

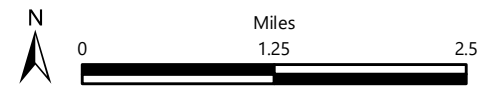
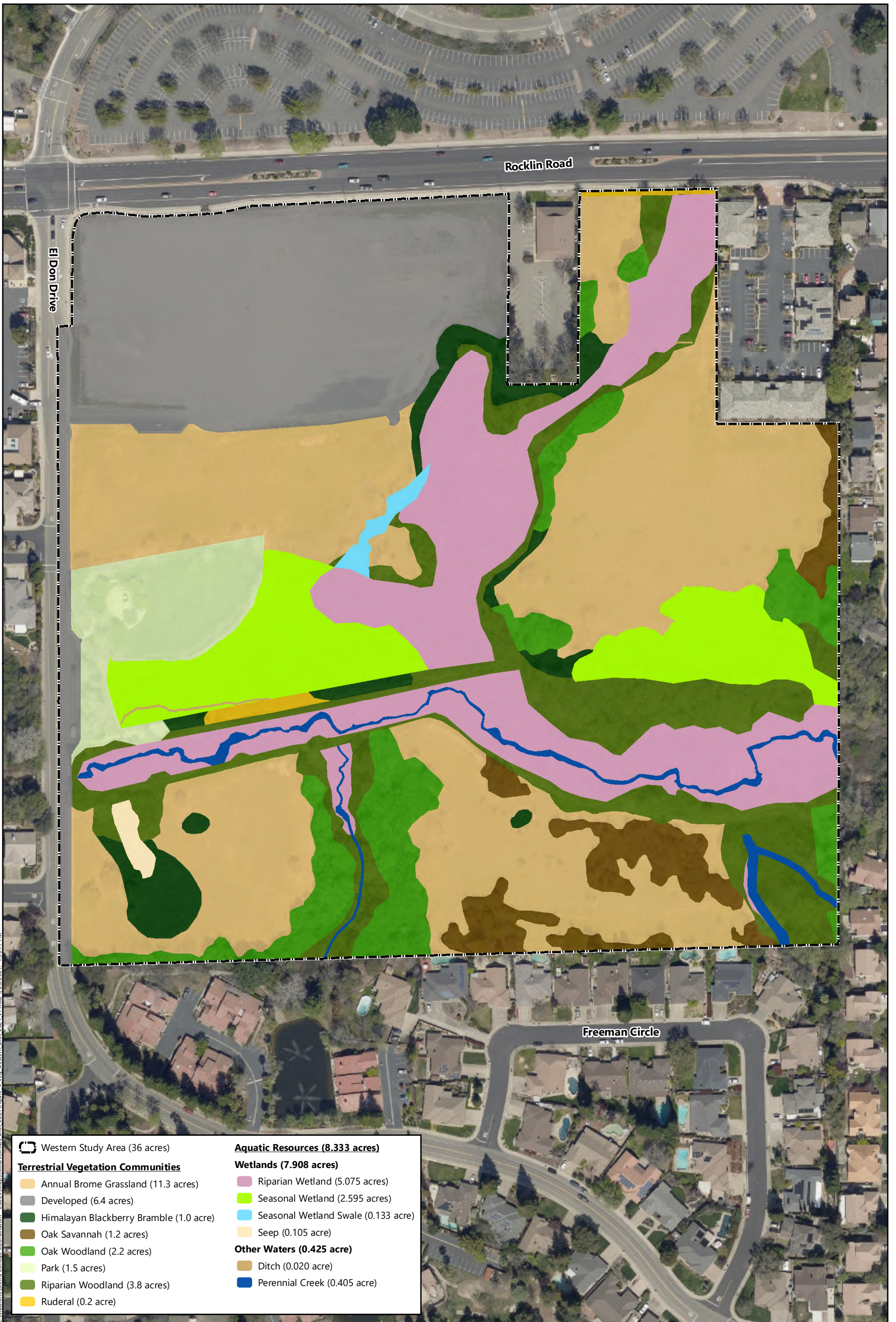


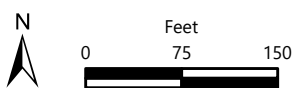
Figure 3
California Natural Diversity Database
Occurrences of Special-Status
Wildlife Species and Critical Habitats
 College Park
 Rocklin, Placer County, California



Source: California Department of Fish and Wildlife, January 2021.
 Basemap Source: National Geographic and ESRI



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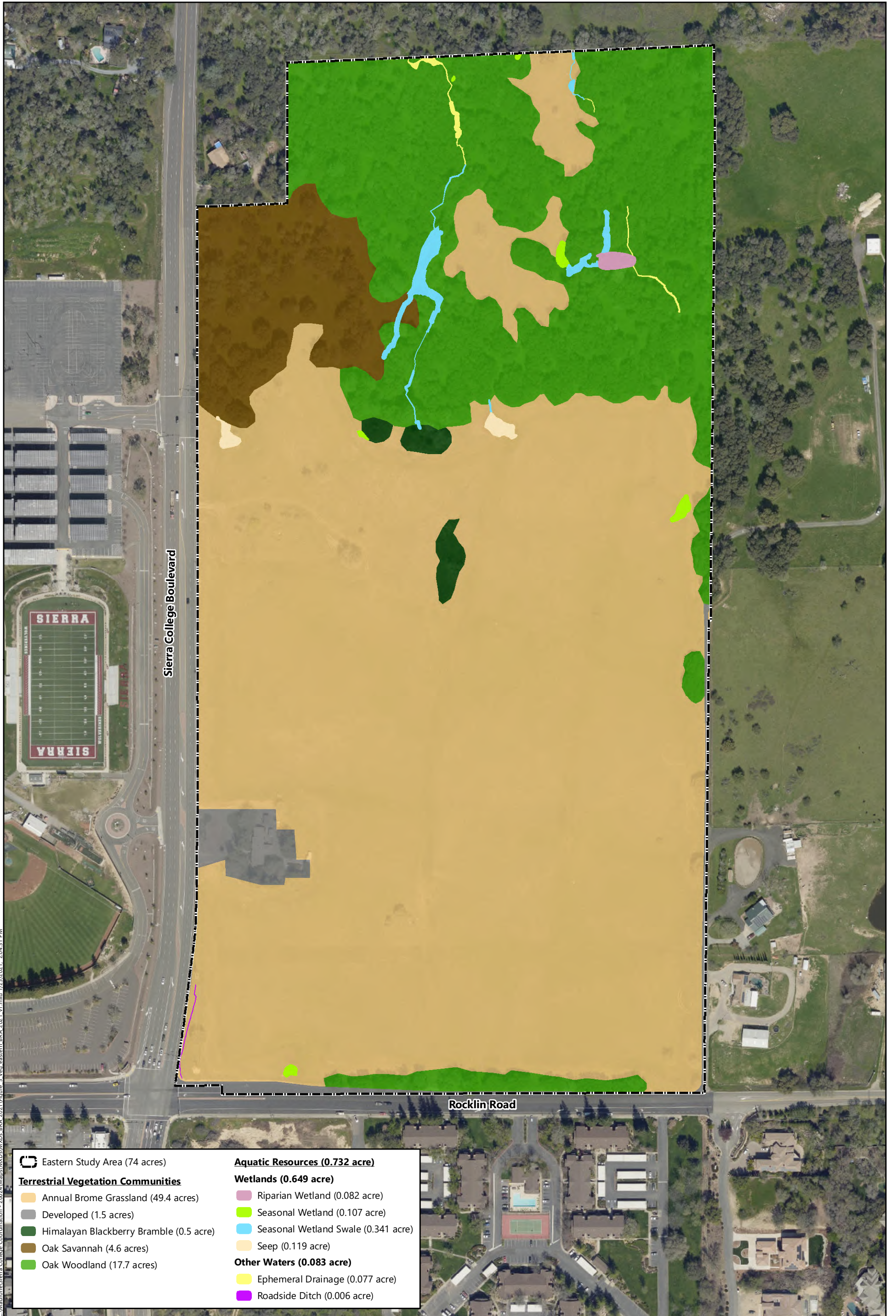


Aerial Base: City of Rocklin, 19 April 2018

Figure 4
Vegetation Communities and
Aquatic Resources
Western Study Area

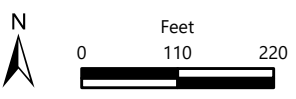
College Park
 Rocklin, Placer County, California





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- | | |
|--|-------------------------------------|
| <p> Eastern Study Area (74 acres)</p> | |
| <p>Terrestrial Vegetation Communities</p> | |
| Annual Brome Grassland (49.4 acres) | Riparian Wetland (0.082 acre) |
| Developed (1.5 acres) | Seasonal Wetland (0.107 acre) |
| Himalayan Blackberry Bramble (0.5 acre) | Seasonal Wetland Swale (0.341 acre) |
| Oak Savannah (4.6 acres) | Seep (0.119 acre) |
| Oak Woodland (17.7 acres) | Other Waters (0.083 acre) |
| | Ephemeral Drainage (0.077 acre) |
| | Roadside Ditch (0.006 acre) |

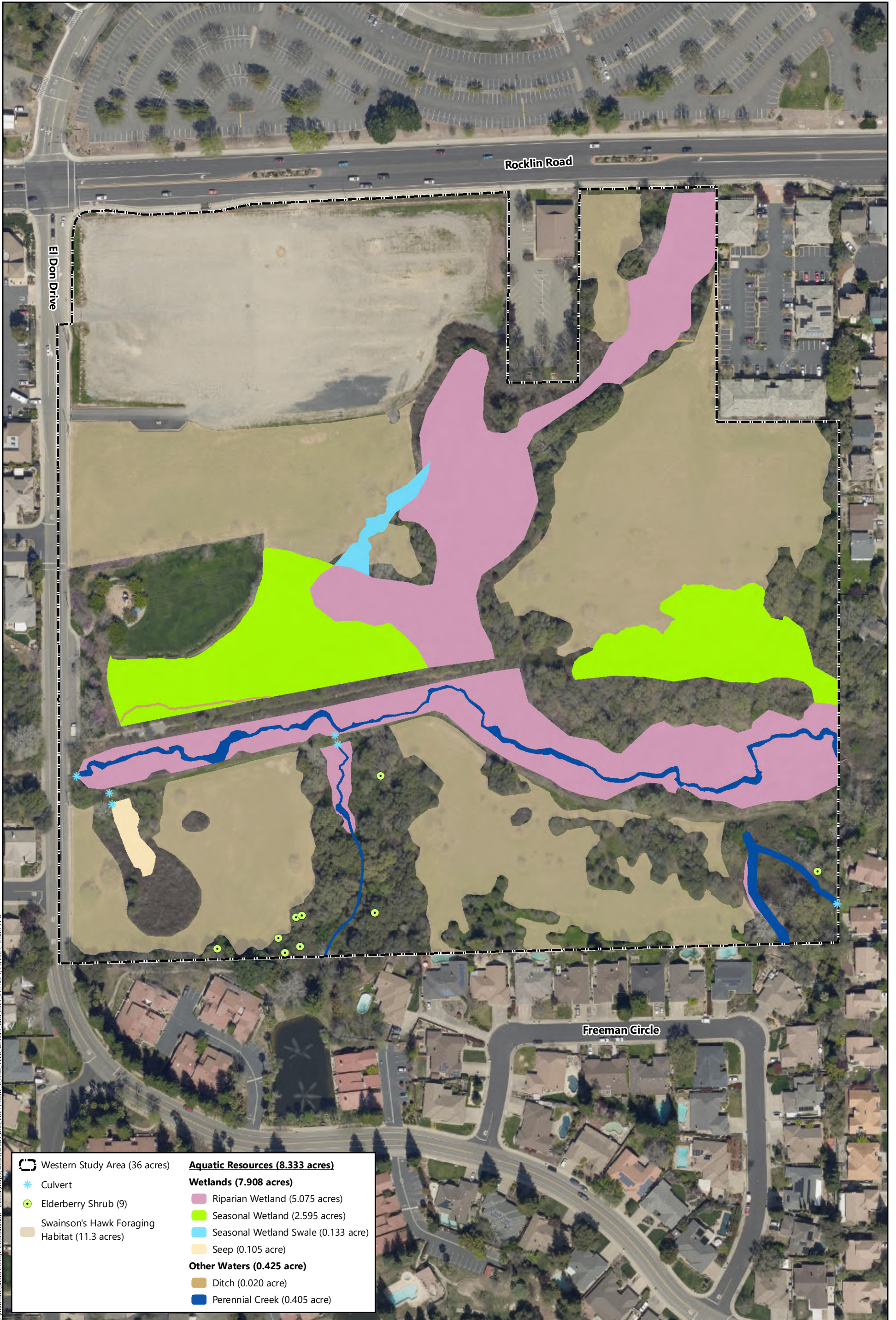


Aerial Base: City of Rocklin, 19 April 2018

Figure 5
Vegetation Communities and
Aquatic Resources
Eastern Study Area

College Park
 Rocklin, Placer County, California





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- | | |
|---|--|
| Western Study Area (36 acres) | Aquatic Resources (8.333 acres) |
| Culvert | Wetlands (7.908 acres) |
| Elderberry Shrub (9) | Riparian Wetland (5.075 acres) |
| Swainson's Hawk Foraging Habitat (11.3 acres) | Seasonal Wetland (2.595 acres) |
| | Seasonal Wetland Swale (0.133 acre) |
| | Seep (0.105 acre) |
| | Other Waters (0.425 acre) |
| | Ditch (0.020 acre) |
| | Perennial Creek (0.405 acre) |

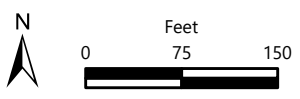


Figure 6
Aquatic Resources, Elderberry Shrub Locations,
and Swainson's Hawk Foraging Habitat
Western Study Area

College Park
 Rocklin, Placer County, California





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- | | |
|---|---------------------------------------|
| Eastern Study Area (74 acres) | Aquatic Resources (0.732 acre) |
| Swainson's Hawk Nest Tree | Wetlands (0.649 acre) |
| Elderberry Shrub (15) | Riparian Wetland (0.082 acre) |
| Swainson's Hawk Foraging Habitat (49.4 acres) | Seasonal Wetland (0.107 acre) |
| | Seasonal Wetland Swale (0.341 acre) |
| | Seep (0.119 acre) |
| | Other Waters (0.083 acre) |
| | Ephemeral Drainage (0.077 acre) |
| | Roadside Ditch (0.006 acre) |

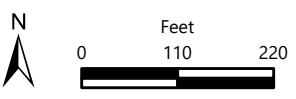
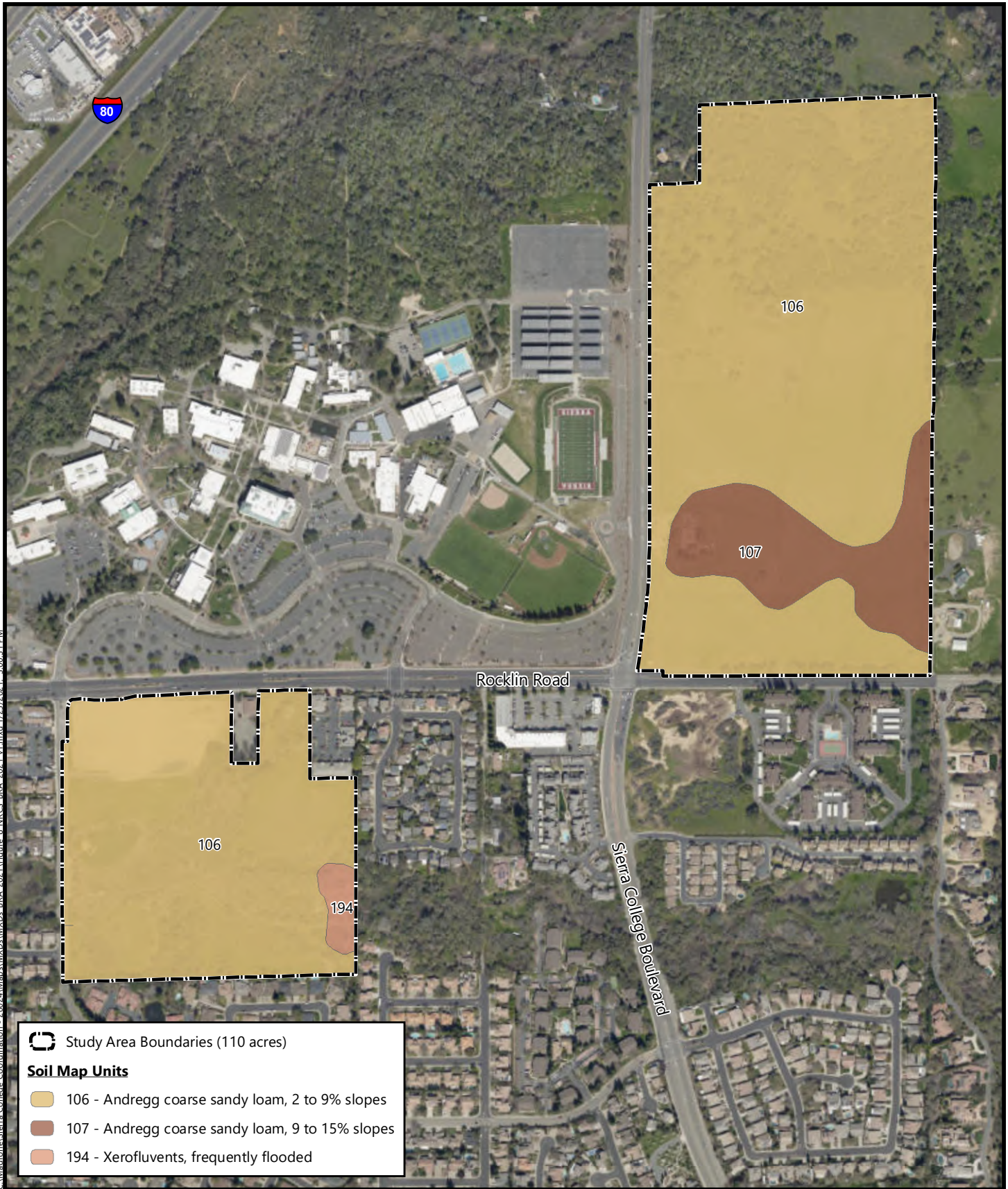


Figure 7
Aquatic Resources, Swainson's Hawk Nest Tree and Foraging Habitat, and Elderberry Shrub Locations Eastern Study Area

College Park
 Rocklin, Placer County, California



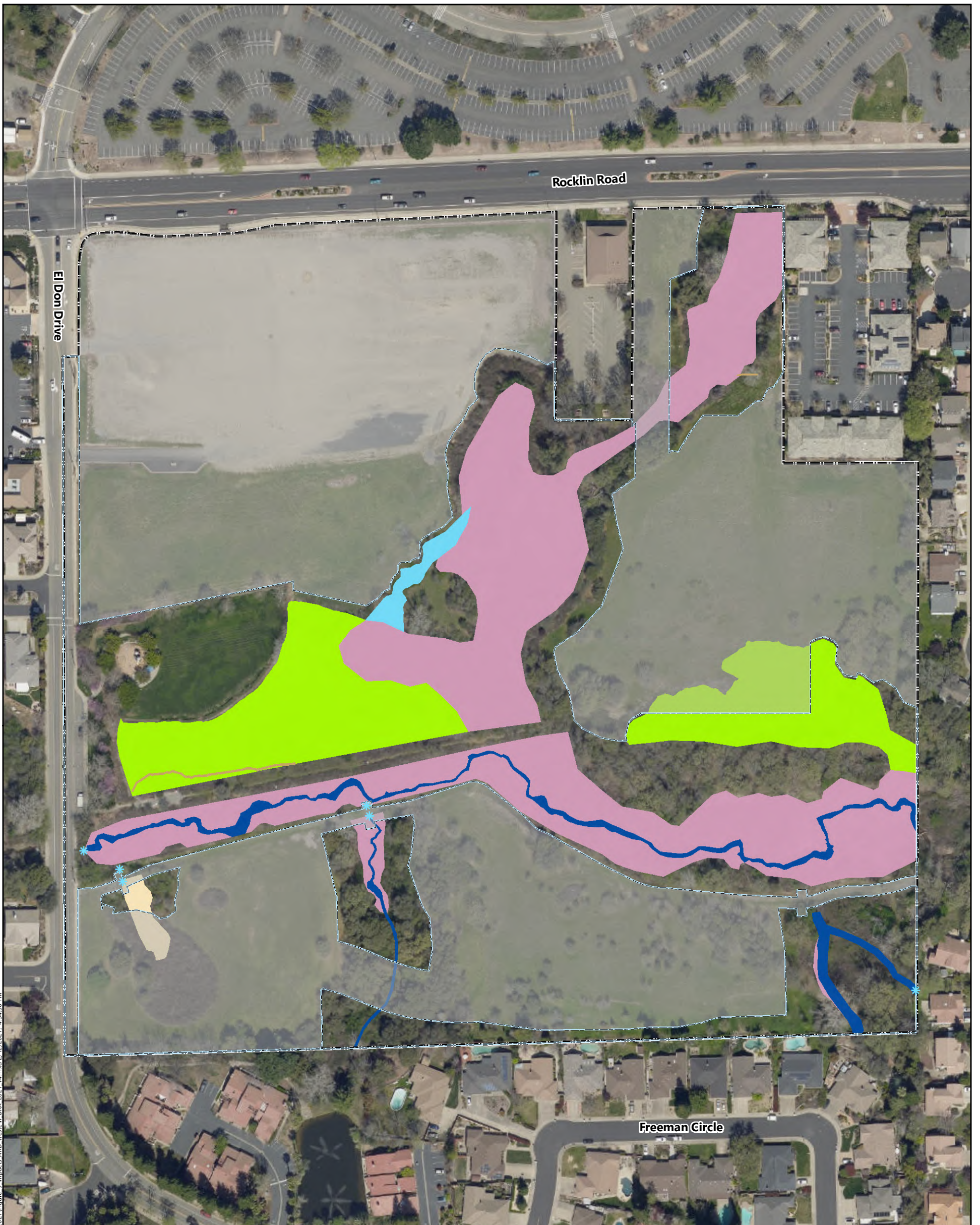


Soil Survey Source: *USDA, Soil Conservation Service.*
Soil Survey Geographic (SSURGO) database for Placer County, California, Western Part
 Aerial Source: City of Rocklin, 19 April 2018

Figure 8
Natural Resources Conservation
Service Soils

College Park
 Rocklin, Placer County, California





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- Western Study Area (36 acres)
- Culvert
- Impacts and Avoidance**
- Impacted
- Avoided
- Aquatic Resources (8.333 acres)**
- Wetlands (7.908 acres)**
- Riparian Wetland (5.075 acres)
- Seasonal Wetland (2.595 acres)
- Seasonal Wetland Swale (0.133 acre)
- Seep (0.105 acre)
- Other Waters (0.425 acre)**
- Ditch (0.020 acre)
- Perennial Creek (0.405 acre)

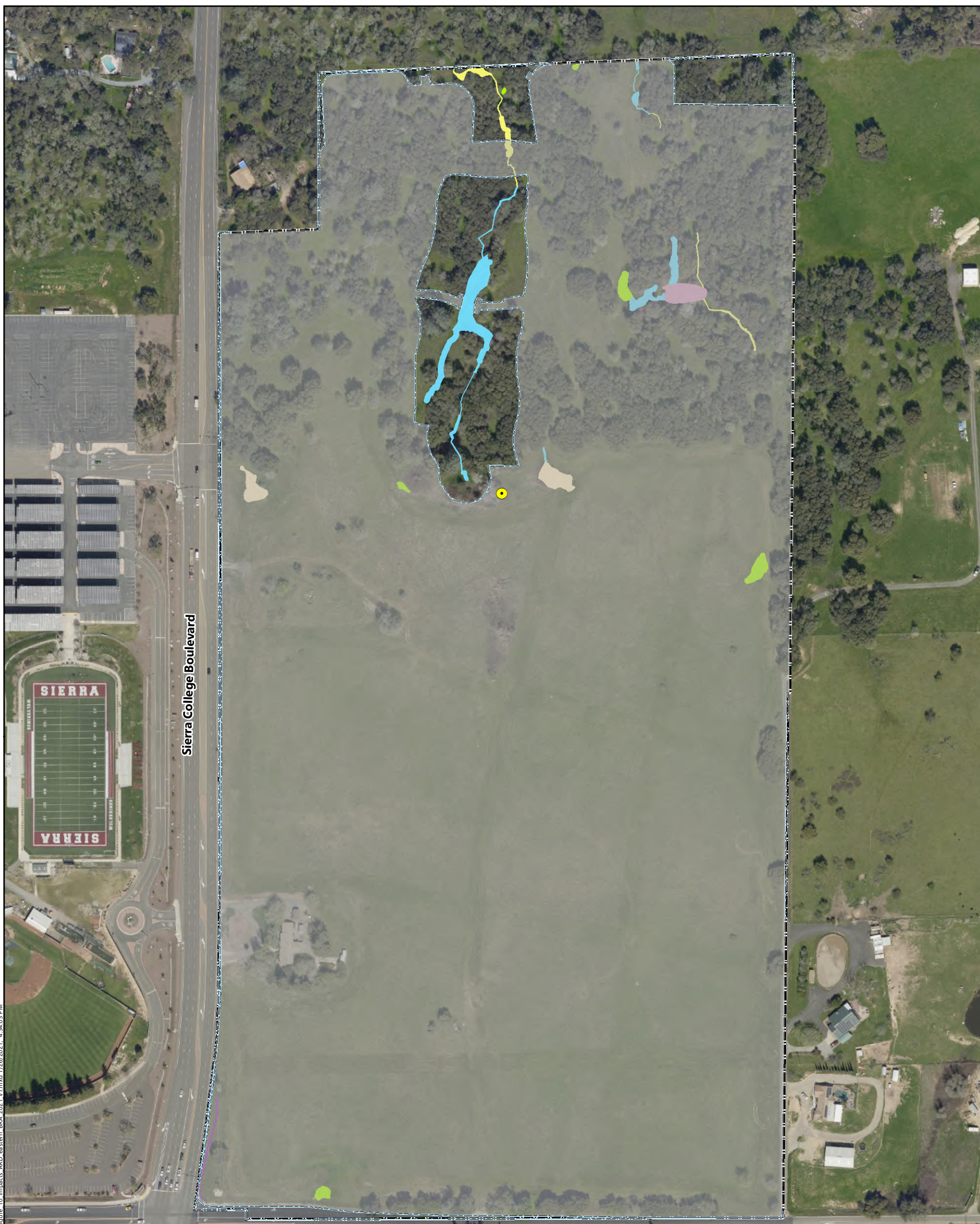
IMPACTS TO AQUATIC RESOURCES						
Aquatic Resources	Impacted		Avoided		Total Acreage	Total Linear Feet
	(acres)	(linear feet)	(acres)	(linear feet)		
Riparian Wetland	0.061	-	5.014	-	5.075	-
Seasonal Wetland	0.398	-	2.197	-	2.595	-
Seasonal Wetland Swale	0.000	-	0.133	-	0.133	-
Seep	0.069	-	0.036	-	0.105	-
Ditch	0.000	0	0.020	307	0.020	307
Perennial Creek	0.008	78	0.396	2,392	0.405	2,470
Total:	0.536	78	7.797	2699	8.333	2,777



Figure 9
Aquatic Resources Impacts
Western Study Area



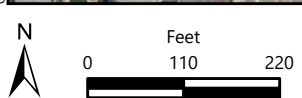
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Rocklin Road

- Eastern Study Area (74 acres)
- Swainson's Hawk Nest Tree
- Impacts and Avoidance**
- Impacted
- Avoided
- Aquatic Resources (0.732 acre)**
- Wetlands (0.649 acre)**
- Riparian Wetland (0.082 acre)
- Seasonal Wetland (0.107 acre)
- Seasonal Wetland Swale (0.341 acre)
- Seep (0.119 acre)
- Other Waters (0.083 acre)**
- Ephemeral Drainage (0.077 acre)
- Roadside Ditch (0.006 acre)

IMPACTS TO AQUATIC RESOURCES						
Aquatic Resources	Impacted		Avoided		Total Acreage	Total Linear Feet
	(acres)	(linear feet)	(acres)	(linear feet)		
Riparian Wetland	0.082	-	0.000	-	0.082	-
Seasonal Wetland	0.104	-	0.003	-	0.107	-
Seasonal Wetland Swale	0.089	-	0.252	-	0.341	-
Seep	0.119	-	0.000	-	0.119	-
Ephemeral Drainage	0.035	456	0.042	201	0.077	657
Roadside Ditch	0.006	240	0.000	0	0.006	240
Total:	0.435	696	0.297	201	0.732	897

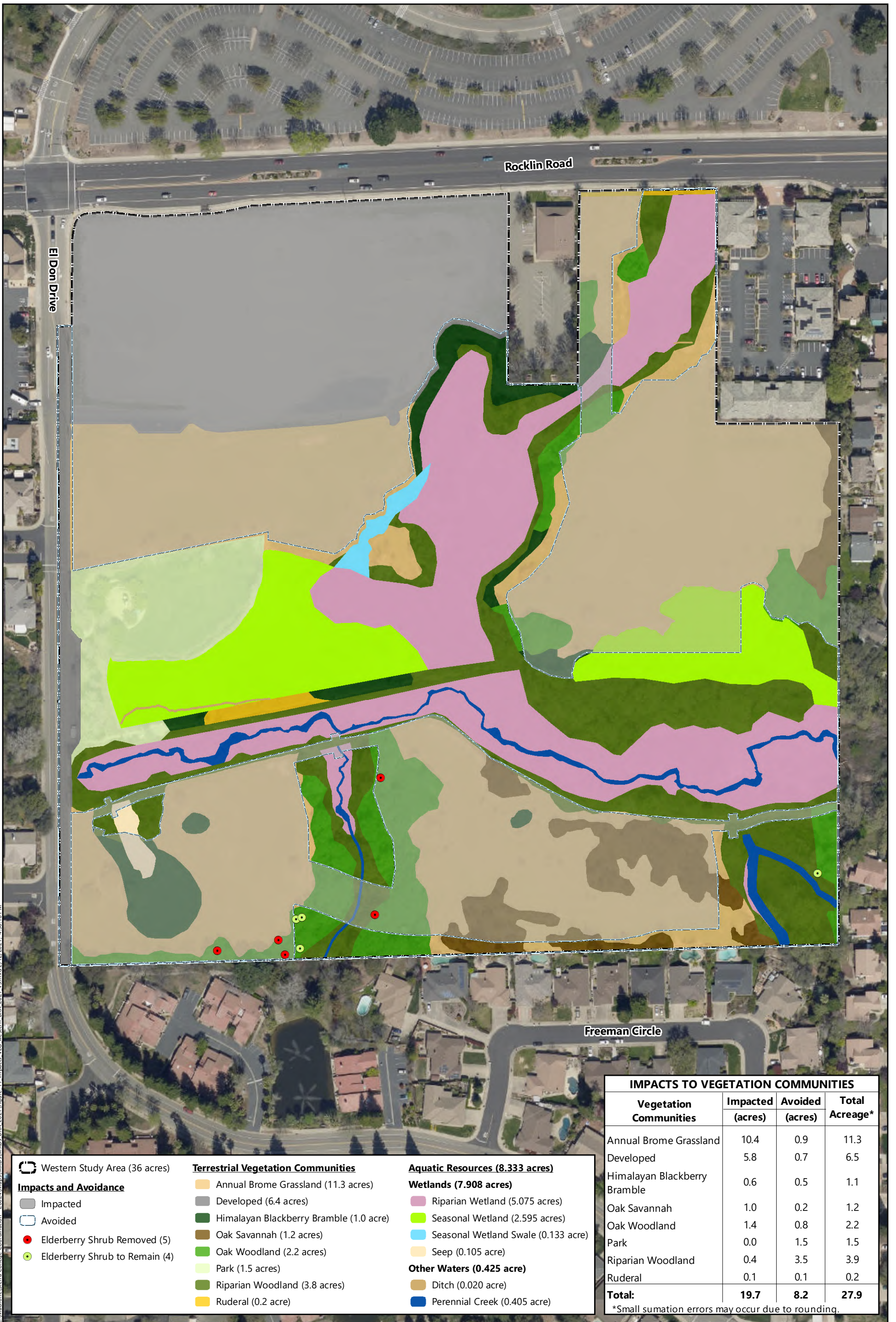


Aerial Base: City of Rocklin, 19 April 2018

Figure 10
Aquatic Resources Impacts
Eastern Study Area

College Park
Rocklin, Placer County, California





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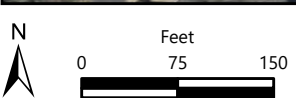
- Western Study Area (36 acres)**
- Impacts and Avoidance**
- Impacted
 - Avoided
 - Elderberry Shrub Removed (5)
 - Elderberry Shrub to Remain (4)

- Terrestrial Vegetation Communities**
- Annual Brome Grassland (11.3 acres)
 - Developed (6.4 acres)
 - Himalayan Blackberry Bramble (1.0 acre)
 - Oak Savannah (1.2 acres)
 - Oak Woodland (2.2 acres)
 - Park (1.5 acres)
 - Riparian Woodland (3.8 acres)
 - Ruderal (0.2 acre)

- Aquatic Resources (8.333 acres)**
- Wetlands (7.908 acres)**
- Riparian Wetland (5.075 acres)
 - Seasonal Wetland (2.595 acres)
 - Seasonal Wetland Swale (0.133 acre)
 - Seep (0.105 acre)
- Other Waters (0.425 acre)**
- Ditch (0.020 acre)
 - Perennial Creek (0.405 acre)

IMPACTS TO VEGETATION COMMUNITIES			
Vegetation Communities	Impacted (acres)	Avoided (acres)	Total Acreage*
Annual Brome Grassland	10.4	0.9	11.3
Developed	5.8	0.7	6.5
Himalayan Blackberry Bramble	0.6	0.5	1.1
Oak Savannah	1.0	0.2	1.2
Oak Woodland	1.4	0.8	2.2
Park	0.0	1.5	1.5
Riparian Woodland	0.4	3.5	3.9
Ruderal	0.1	0.1	0.2
Total:	19.7	8.2	27.9

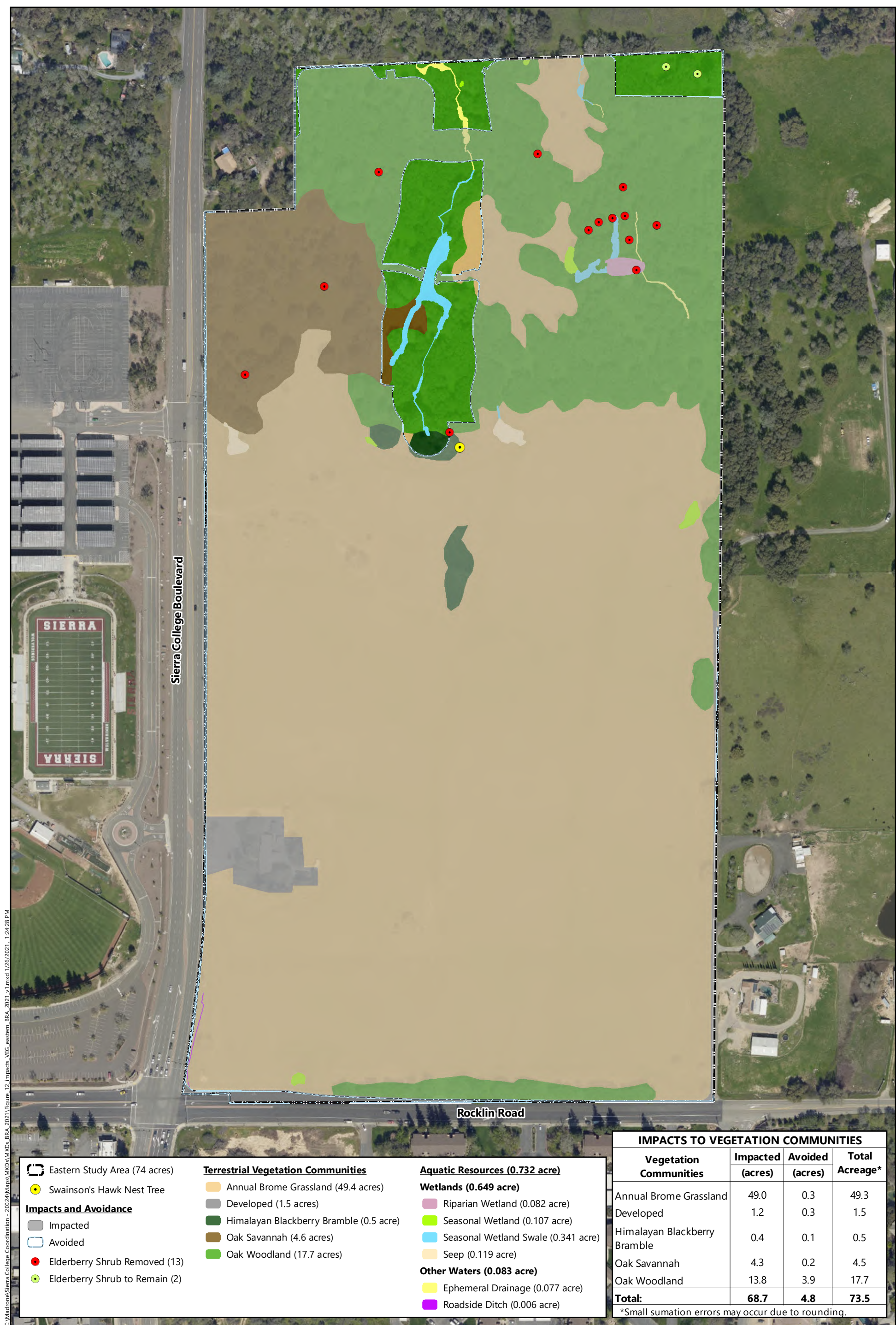
*Small summation errors may occur due to rounding.



Aerial Base: City of Rocklin, 19 April 2018

Figure 11
Land Cover Impacts
Western Study Area

College Park
 Rocklin, Placer County, California



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- Eastern Study Area (74 acres)
- Swainson's Hawk Nest Tree
- Impacts and Avoidance**
- Impacted
- Avoided
- Elderberry Shrub Removed (13)
- Elderberry Shrub to Remain (2)

- Terrestrial Vegetation Communities**
- Annual Brome Grassland (49.4 acres)
 - Developed (1.5 acres)
 - Himalayan Blackberry Bramble (0.5 acre)
 - Oak Savannah (4.6 acres)
 - Oak Woodland (17.7 acres)

- Aquatic Resources (0.732 acre)**
- Wetlands (0.649 acre)**
- Riparian Wetland (0.082 acre)
 - Seasonal Wetland (0.107 acre)
 - Seasonal Wetland Swale (0.341 acre)
 - Seep (0.119 acre)
- Other Waters (0.083 acre)**
- Ephemeral Drainage (0.077 acre)
 - Roadside Ditch (0.006 acre)

IMPACTS TO VEGETATION COMMUNITIES			
Vegetation Communities	Impacted (acres)	Avoided (acres)	Total Acreage*
Annual Brome Grassland	49.0	0.3	49.3
Developed	1.2	0.3	1.5
Himalayan Blackberry Bramble	0.4	0.1	0.5
Oak Savannah	4.3	0.2	4.5
Oak Woodland	13.8	3.9	17.7
Total:	68.7	4.8	73.5

*Small summation errors may occur due to rounding.

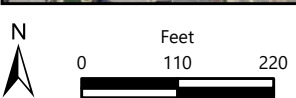


Figure 12
Land Cover Impacts
Eastern Study Area

College Park
Rocklin, Placer County, California



Attachments

Attachment A. IPaC Trust Resource Report for the Study Areas

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

Attachment C. Wildlife List

Attachment D. Letter to USFWS Regarding College Park Site A Section 10 Assessment

Attachment E. College Park Oak Tree Mitigation Plan