161-070-034BIOLOGICAL RESOURCES ASSESSMENT

CHEVRON STATION-REDWOOD MARKET

9120 AND 9200 OLD REDWOOD HIGHWAY

(APNs: 161-070-034 and 161-070-035)

WINDSOR, CA

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1.0 INTRODUCTION

1.1 SITE LOCATION

The Project Site is located on two parcels located at 9120 Old Redwood Highway (APN: 161-070-034; 0.63 acre) and 9200 Old Redwood Highway (APN: 161-070-035; 0.78 acre) (collectively the Project Site) in the Town of Windsor, Sonoma County, CA (Figure 1). There is a full-service gas station covering most of the parcel at 9120 Old Redwood Highway, and most of the parcel at 9200 Old Redwood Highway is undeveloped. Most of the surrounding lands have been developed for various uses including another full-service gas station to the south, food service and empty lot to the west, retail development to the northwest, and Redwood Highway (Highway 101) to the northwest and east (Figure 2).

1.2 PROJECT DESCRIPTION

The Project will consist of the demolition of the existing convenience store and expansion of the existing gasoline pumps, construction of a new market/restaurant, construction of a new retail building, and demolition of the existing car wash facility and construction of a new car wash facility (Figure 3).

The existing convenience store at the Project Site will be demolished and a new approximately 6,270 sq. ft. market/restaurant and associated parking and seating will be constructed on the adjacent undeveloped area to the north of the existing station and market. Two additional pumps will be added to the east of the existing pumps on part of the area where the convenience store is currently located. The existing canopy covering the pumps will be extended over the new pumps.

An approximately 3,860 sq. ft. retail building and associated parking will be constructed in the undeveloped land to the west of the existing facility.

The existing car wash building will be demolished and a new approximately 2,314 sq. ft. car wash facility constructed to the east of the existing car wash building on property owned by the Town of Windsor (Town), which is being exchanged with the Town for property that the Applicant owns to the west of the existing gas station facility.



Figure 1. Site location map.



Figure 2. Site vicinity map.

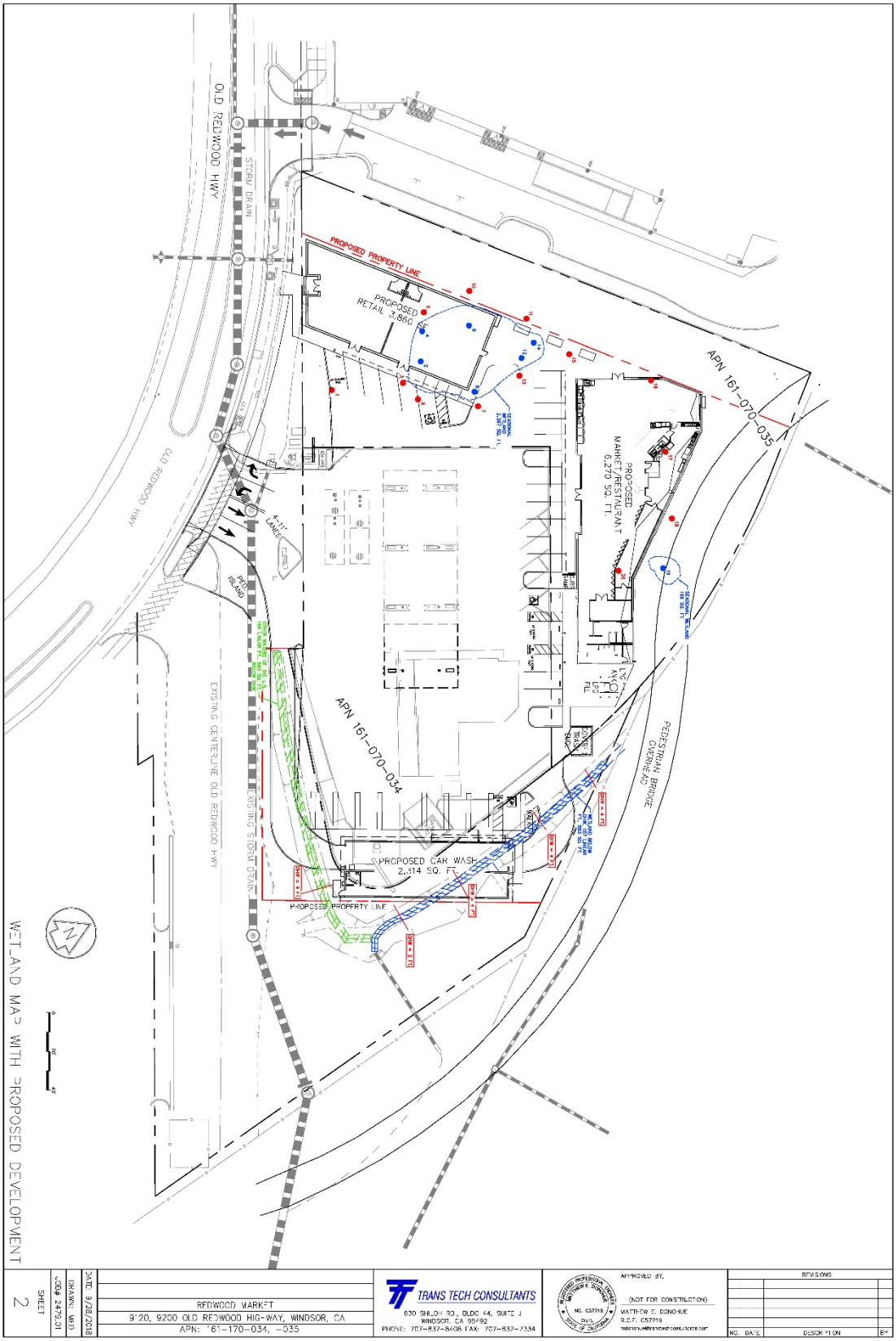


Figure 3. Project development plan.

1.3 PHYSICAL AND HYDROLOGIC CONDITIONS

1.3.1 Topography and Drainage

The undeveloped parts of the subject parcels are relatively flat with a less than one percent grade from north to south. An intermittent drainage ditch occurs along the eastern boundary of the parcel at 9120 Old Redwood Highway.

1.3.2 Soils

The soil on most of the undeveloped areas of the two parcels is mapped as Cole silty clay loam, 0 to 1 percent slopes. The soil type along the eastern part of the parcel at 9120 Old Redwood Highway along the southern part of the site is mapped as Riverwash.

Cole series soils consist of somewhat poorly drained silt loams that have a dominantly clay subsoil (Miller 1972). These soils formed in alluvium from mixed sedimentary and basic rock and are found on alluvial fans. Riverwash soil consist of very recent depositions of gravel, sand, and silt alluvium along major streams and their tributaries (Miller 1972).

2.0 BIOLOGICAL RESOURCES

2.1 Vegetation

Vegetation surveys were conducted on March 13, April 3, April 27 and May 22 in 2015 by Mr. Charlie Patterson. The 2018 vegetation surveys were conducted by Dr. Ted P. Winfield on April 4, April 17 and May 7, 2018. The surveys were conducted following the U.S. Fish and Wildlife Service protocols[1] and the California Department of Fish and Wildlife protocols[2]. The entire Project Site was walked, and plant species observed and identifiable during each survey noted in a field notebook. The seasonal wetlands were thoroughly searched for possible presence of the federally and State-listed endangered Burke's goldfields (*Lasthenia burkei*), Sonoma sunshine (*Blennosperma bakeri*) and Sebastopol meadowfoam (*Limnanthes vinculans*), and many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*).

Reference sites were visited multiple times during the survey periods. Other botanists were also consulted about flowering of the target endangered plants at other sites on the Santa Rosa Plain to confirm that the target endangered plant species were also flowering at other sites throughout the Santa Rosa Plain.

Prior to conducting the field surveys, a list of special-status plant species reported to occur in the region was generated from the California Natural Diversity Database (CNDDB), and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants for Santa Rosa, Sebastopol, Healdsburg, Two Rocks, and Cotati USGS Quadrangle maps, which defines the low-land areas of the Santa Rosa Plain.

The Project Site supports two primary vegetation types, non-native annual grassland and seasonal wetlands. Figure 4 shows the location of the seasonal wetland at the Project Site. A summary of the more common species observed in each of these vegetation types is presented below. Appendix A is a list of the plants observed during the surveys, and presents the dates that surveys were conducted at the reference sites.

[1] Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed Plants on the Santa Rosa Plain. Modified from the September 23, 1996 Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants.

[2] California Department of Fish and Wildlife (CDFW). Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities. March 20, 2018.

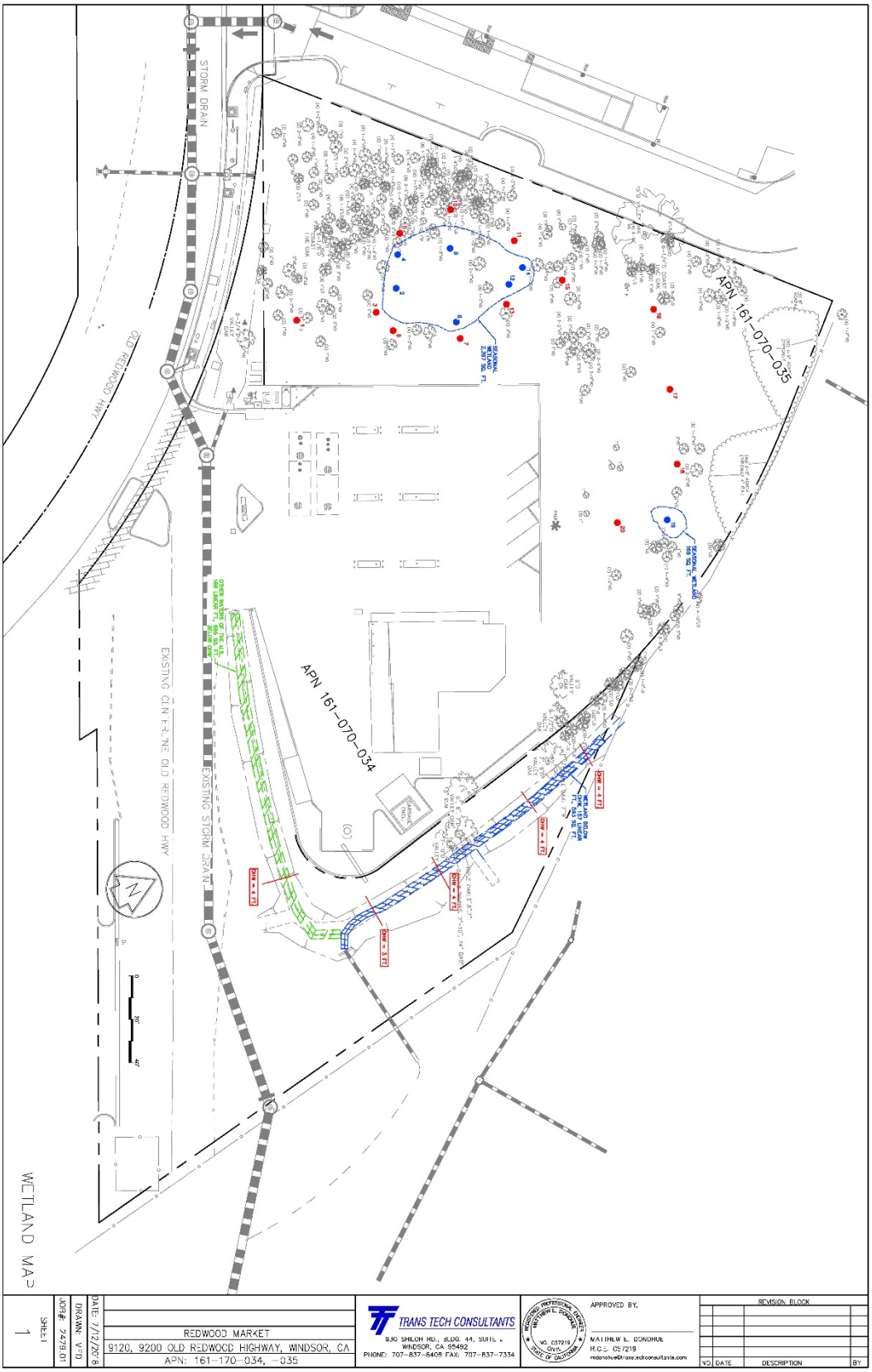


Figure 4. Location of seasonal wetlands at the Project Site.

2.1.1 Upland Habitat

The upland areas of the Project Site consisted primarily of non-native annual grasses and forbs. The common species observed in the survey included slender wild oats (*Avena barbata*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus hordeaceus*), ryegrass (*Festuca perennis*), brome fescue (*Festuca bromoides*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), annual bluegrass (*Poa annua*), rattlesnake grass (Briza maxima), hairy catsear (*Hypochaeris radicata*), subterranean clover (*Trifolium subterraneum*), spring vetch (*Vicia sativa*), field mustard (*Brassica rapa*), English plantain (*Plantago* l*anceolata*), red stemmed filaree (*Erodium cicutarium*), cut-leaf geranium (*Geranium dissectum*), and Himalayan blackberry (*Rubus armeniacus*).

Several native species also occurred throughout the upland areas, including California oatgrass (*Danthonia californica*), coyote brush (*Baccharis pilularis*), blue-eyed grass (*Sisyrinchium bellum*), and several species of oak trees (*Quercus agrifolia, Q. lobata, Q. Kelloggii and Q. wislizeni*).

2.1.2 Seasonal Wetlands

The seasonal wetlands were dominate primarily by non-native species, such as ryegrass, Mediterranean barley, little quaking grass (*Briza minor*), prickly ox-tongue (*Helminthotheca echioides*) and English plantain. The vegetation in the small isolated wetland on the east side of the survey area included several native species, including semaphore grass (*Pleuropogon californicus*), California oatgrass, slender rush (*Juncus tenuis*), and tall flatsedge (*Cyperus erogrostis*).

The unnamed drainage ditch along the frontage with Redwood Highway supports a sparse cover of plants usually found in wetlands, including pennyroyal (*Mentha pulegium*), tall flatsedge, dense sedge (*Carex densa*) along with facultative species, such as curly dock (*Rumex crispus*), and ryegrass. The other section of the ditch along the southwest side of the parcel where the gas station is located was dominated by a mixture of primarily upland and facultative species.

2.2 WILDLIFE

Wildlife species adapted to human presence and disturbance, such as broad-footed mole (*Scapanus latimanus*), shrews (*Sorex* sp.), and gophers (*Thomomys bottae*), are likely to frequent undeveloped areas of the Project Site. Other mammals, such as striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*) and opossum (*Didelphis virginiana*) may, on occasion, may also visit the Project Site.

A number of migratory song birds adapted to human disturbance may also occur at the project site, including the house finch (*Carpodacus mexicanus*), Brewer's blackbird (*Euphagus cyanocephalus*), and various sparrows.

2.3 SPECIAL-STATUS SPECIES

2.3.1 Special-status Plants

Special-status plant species are defined in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*[3] to include all plant species that meet one or more of the following criteria:

- Listed or proposed for listing as threatened or endangered under FESA or candidates for possible future listing as threatened or endangered under FESA (50 CFR §17.12).
- Listed or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 *et seq.*).
- Listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 *et seq.*). A plant is **rare** when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens (Fish and Game Code §1901).
- Meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
    - Species considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (Lists 1A, 1B and 2);
    - Species that may warrant consideration on the basis of local significance or recent biological information;
    - Some species included on the California Natural Diversity Database's (CNDDB) *Special Plants, Bryophytes, and Lichens List* (California Department of Fish and Game 2008).
- Considered a **locally significant species,** that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

The California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants database search resulted in a total of forty-nine special-status plant species as occurring in the region covered by the five USGS Quadrangle maps. Appendix B presents the list of special-status plant species reported to occur in the region and their regulatory status. Appendix C lists the habitat

[3] California Department of Fish and Wildlife (CDFW). Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities. March 20, 2018.

preference and potential for the special-status species reported to occur in the region to occur at the Site.

The known occurrence of special-status plants within two miles of the Project Site is illustrated in Figure 5.[4] Only one species of special-status plant species (narrow-anthered brodiaea, *Brodiaea leptandra*) is reported in the CNDDB to occur in the immediate vicinity of the Project Site. Other species of special-status plants reported to occur within two miles of the Project Site are shown on Figure 4 and listed along with their regulatory status in Table 1.

None of the other special-status species listed in Appendix C and reported to occur in upland grassland habitat or in marshes, swamps or other wetland habitat types in the region were observed at the Project Site during the 2015 and 2018 surveys.

Table 1. List of special-status plants and their regulatory status occurring within two miles of the Project Site based on CNDDB records.

Scientific Name	**Common Name**	**Federal Status***	**State Status***	**CNPS Rank***
Blennosperma bakeri	Sonoma sunshine	E	E	1B.1
Brodiaea leptandra	narrow-anthered brodiaea			1B2
Downingia pusilla	dwarf downingia			2B.2
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant			1B.2
Lasthenia burkei	Burke's goldfields	E	E	1B.1
Microseris paludosa	marsh microseris			1B.2
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia			1B.1
Navarretia leucocephala ssp. *plieantha*	many-flowered navarretia	E	E	1B.2

- Federal Status: E = Endangered; State Status: E = Endangered, R = Rare, T = Threatened CNPS Designations: List 1A = Species presumed extinct in California. List 1B = Species rare and endangered in California and elsewhere. List 2 = Species rare and endangered in California but more common elsewhere. List 3 = Species for which additional data are needed.

Three FESA- and CESA-listed endangered plants that were reported to occur within two miles of the Project Site:

- Burke's goldfields (*Lasthenia burkei*) – federally and state endangered; occurs in vernal pools, meadows and seeps;
- Sonoma sunshine (*Blennosperma bakeri*) – federally and state endangered; occurs in vernal pools and swales in valley and foothill grassland; and
- Many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*) -- federally and state endangered; occurs in vernal pools, meadows and seeps.

[4] CNDDB, October 2018.

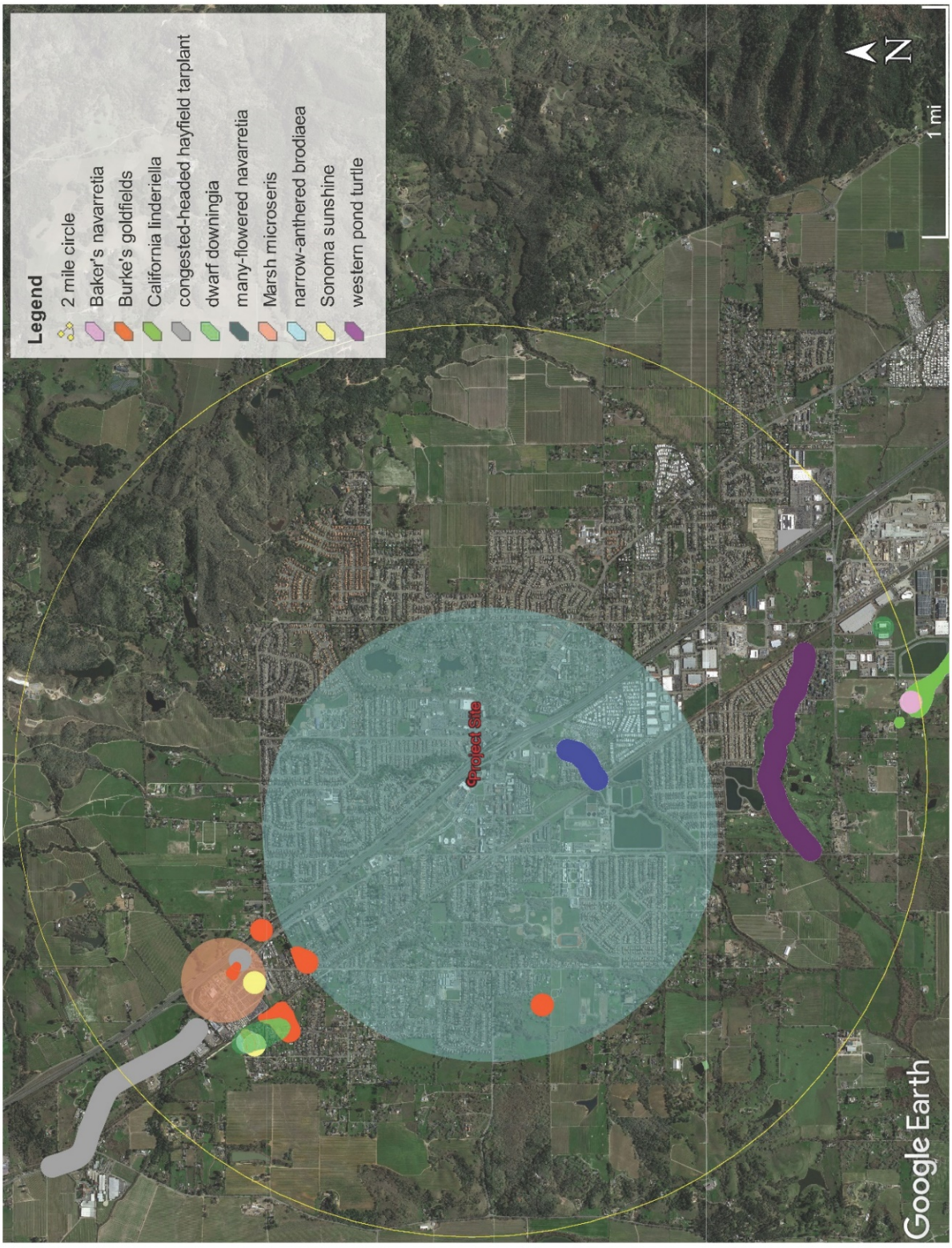


Figure 5. Occurrence of special-status species of plants and wildlife within two miles of the Project Site based on CNDDB records.

Burke's goldfields and Sonoma sunshine were observed to be flowering at reference sites during each of the survey periods in 2015 and 2018 but neither of these species were observed at the Project Site during the special-status plant surveys conducted at the site.

The known distribution of many-flowered navarretia is limited to a single site located in the vicinity of the Sonoma County Airport. Although reference sites for this species are essentially non-existent, this species is easily recognizable form and occurs in similar habitat at Burke's goldfields and Sonoma sunshine, and blooming period is the same as Burke's goldfields. No navarretia plants of any species have been observed at the Project Site during the multiple plant surveys conducted at the site.

The seasonal wetlands at the Project Site consist of shallow, slightly depressional areas north of the existing Chevron gas station, and do not provide suitable habitat for endangered plants found in seasonal wetland/vernal pool habitat on the Santa Rosa Plain. These wetland features likely pond from a few hours to a few days following rainfall events and do not provide the necessary longer-term wetland hydrology to support the endangered plants. The seasonal wetlands have been completely invaded by non-native annual grasses commonly found in disturbed and marginal seasonal wetlands in the region.

2.3.2 Special-status Wildlife

The potential occurrence of habitat for endangered or threatened animals, or fully protected animals was evaluated using data records from the most recent CNDDB. The Project Site is completely surrounded by development and, as a result, is unlikely to provide habitat for wildlife except for those species adapted to human presence and activity.

The Project Site is located north of designated Critical Habitat for the Sonoma County Distinct Population Segment of the California tiger salamander (CTS), and is designated in the Programmatic Biological Opinion as "*May adversely affect listed plants, but would not adversely affect CTS*."[5] The Project Site is surrounded by development and the nearest known CTS breeding site, located at the Alton Lane Conservation Site, is approximately 5.47 miles south of the Project Site, and well outside the reported distance of 1.37 miles that CTS have been reported to migrate (Orloff 2011)[6].

[5] US Fish and Wildlife Service. 2007. Programmatic Biological Opinion (Programmatic) for U.S. Army Corps of Engineers (Corps) Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California (Corps File Number 223420N).

[6] Orloff, S.G. 2011. Movement patterns and migration distances in an upland population of California tiger salamander (*Ambystoma californiense*). Herpetological Conservation and Biology, 6 (2): 266-276.

The special-status wildlife species reported to occur within two miles of the Project Site are shown in Figure 5. Records for two species were found in the CNDDB records, the western pond turtle (*Emys marmorata*) and California linderiella (*Linderiella occidentalis*). The western pond turtle, a California species of special concern, is reported to occur along Pool Creek where it courses through the Windsor Golf Club, approximately 1.26 miles south of the Project Site. Habitat for the western pond turtle does not occur at the Project Site. The drainages at the southern end of the Project Site are ephemeral and appear to only flow for a short time period following rainfall events, and do not provide habitat for the western pond turtle.

The California linderiella, which occurs in seasonal aquatic habitats (e.g., vernal pools, swales, intermittent/ephemeral streams), does not have any formal federal or California regulatory status or designation. The nearest known occurrence is along and adjacent to a tributary to Windsor Creek, approximately 0.5 miles south of the Project Site. The drainages and seasonal wetlands at the Project Site are unlikely to provide habitat for the California linderiella due to limited periods of ponding.

3.0 PROJECT IMPACTS AND MITIGATION MEASURES

Project impacts to biological resources and measures to mitigate these impacts are described below. The significance of the anticipated impacts of the Project was evaluated following the criteria established in Appendix G of the CEQA Guidelines (California Natural Resources Agency 2010). According to these criteria, the Project would have a significant effect on a biological resource if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or

- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

The determination of impact significance is based on whether the particular impact is “substantial,” which consists of three components: the magnitude and duration of the affect; the uniqueness of the affected resource; and the susceptibility of the affected resource to disturbance.

The following analysis of impacts addresses both direct and indirect effects to the affected biological resources resulting from the construction and operation of the proposed Project. This analysis is based on the Project plans, the current condition of the Project Site, and regulations and guidelines that cover the affected biological resources.

3.1 IMPACTS ON WETLANDS

Construction of the proposed Project could have a substantial direct and/or indirect effect on wetlands and other features subject to the regulatory authority of the U.S. Army Corps of Engineers and Regional Water Quality Control Board. This impact would be less than significant with mitigation.

Impact. The Project will directly affect approximately 0.059 acre (2,563 sq. ft.) of seasonal wetlands subject to the jurisdiction of the U.S. Army Corps of Engineers (Corps), and subject to the jurisdiction of the Regional Water Quality Control Board (Regional Board) as waters of the State. The Project will also directly or indirectly affect approximately 157 linear ft. of an ephemeral drainage located on Town of Windsor property with an area below ordinary high water (OHW) of approximately 593 sq. ft. (0.014 ac), resulting in a total of approximately 0.073 acre (3,156 sq. ft.) of wetland habitat. The is another approximately 166 ft. of drainage ditch (waters of the U.S., non-wetland) located on Town of Windsor property and the area below OHW is approximately 665 sq. ft. (0.015 ac).

Mitigation. The mitigation for impacts to wetlands and drainage ditch would be satisfied through the purchase of the requisite amount of mitigation acreage as determined by the Corps and Regional Board. The mitigation ratio for impacts to jurisdictional wetlands would be determined in consultation with the Corps and Regional Board but would be a minimum of 1:1. Wetland mitigation credits are sold in 0.05-acre increments so assuming a 1:1 mitigation ratio the applicant would purchase 0.10 acre of mitigation credits from an agency approved mitigation bank.

Mitigation for impacts to the linear ditches will also include enhancement of an existing waterway in the Town of Windsor subject to approval by the Regional Board. Enhancement could include removal of existing exotic vegetation and planting native trees and shrubs.

3.3 IMPACTS ON SPECIAL-STATUS BIRDS AND MAMMALS

Construction of the proposed Project could have a substantial direct and/or indirect effect on special-status or otherwise protected birds. This impact would be less than significant with mitigation.

Impact. In addition to regulations protecting special-status bird species (federal and state Endangered Species Acts), most birds in the United States, including non-status species, are protected by the Migratory Bird Treaty Act of 1918. Under this legislation, it is unlawful to destroy active nests, eggs, and young. Furthermore, California Fish and Game Code Section 3503.5 makes it unlawful to take, possess or destroy birds in the Falconiformes (birds of prey, vultures, eagles, falcons) and Strigiformes (owls) families, which can include nest disturbance from construction and other activities.

The Project Site provides marginal habitat for ground-nesting bird species and the trees in the undeveloped parts of the Project Site could also provide nesting habitat for birds. If birds were to nest at the Project Site during construction activities, construction-related activities, including noise, could either result in the destruction of nests or cause the birds to abandon nests with eggs or fledglings present in the nests. Such impacts to nesting birds would be considered significant, and mitigation would be required to reduce the impact to less than significant.

Mitigation. A qualified avian biologist will conduct passerine nest surveys prior to tree pruning, tree removal, ground disturbing activities, or construction activities at the Project Site within 30 days in initiation of such activities to locate any active nests on or adjacent to the Project Site. If land-clearing activities can be performed outside of the nesting season, that is, between August 16 and January 31, no preconstruction surveys for nesting birds are warranted.

Pre-construction surveys will be conducted no more than 30 days prior to the start of construction or ground disturbing activities if the activities occur during the nesting season (February 1 to August 15). Preconstruction surveys will be repeated at 15-day intervals until construction has started. Active nests will be identified, located, and described and protective measures will be implemented. Protective measures will include establishment of clearly delineated (i.e., Visi-barrier, orange construction fencing) 50-foot exclusion zones around each nest site. The active nest sites within exclusion zones will be monitored on a weekly basis throughout the nesting season to identify any signs of disturbance or nest abandonment. The barriers marking exclusion zones will remain in place until the young have left the nest and are foraging independently or if the nest is no longer active.

Construction of the proposed Project could have a substantial direct and/or indirect effect on special-status bats. This impact would be less than significant with mitigation.

Impact. The Project will result in the loss of potential roosting habitat for several special-status bat species. The special-status bat species that could occur in the area and possibly the Project Site include the pallid bat and hoary bat.

Mitigation. Prior to cutting of trees at the Project Site the Applicant will consult with a qualified bat biologist, who is defined as a bat biologist, who holds a CDFW collection permit and a Memorandum of Understanding with CDFW allowing the biologist to handle and collect bats. Depending on the proposed timing of demolition of the existing structures and removal of the trees, and the bat biologist initial survey of the site, the necessary survey protocols will be identified and implemented by the bat biologist.

APPENDIX A. LIST OF SPECIES OBSERVED DURING 2018 PLANT SURVEYS.

The following list is a combined list of species observed during surveys conducted by Mr. Charlie Patterson, Ms. Jane Valerius, and Dr. Ted P. Winfield. The following are references for the reports prepared by Mr. Patterson and Ms. Valerius.

Charles A. Patterson. 2015. Rare plant surveys for the vacant parcel at 9120 Old Redwood Highway, Windsor, Sonoma County A.P.N. 161-070-035. Letter report prepared for Mr. Matthew E. Donohue, Trans Tech Consultants, 930 Shiloh Road, Building 44, Suite J, Windsor, CA 95492, dated July 11, 2015.

Jane Valerius. 2016. Town of Windsor Study for a Downtown Pedestrian and Bicycle Crossing of U.S. 101: Phase I – Feasibility Study.

FAMILY	*SCIENTIFIC NAME*[1]	COMMON NAME
	GYMNOSPERMS	
CUPRESSACEAE – Cypress Family		
	Sequoia sempervirens	redwood
	DICOTYLEDONS	
ANACARDIACEAE – Sumac Family		
	Toxicodendron diversilobum	poison oak
APIACEAE - Carrot Family		
	*Conium maculatum**	poison hemlock
	*Daucus carota**	Queen Anne's lace
	Daucus pusullus	wild carrot
	*Foeniculum vulgare**	sweet fennel
	*Torilis arvensis**	field hedge parsley
ASTERACEAE - Sunflower Family		
	*Anthemis cotula**	dog fennel
	Baccharis pilularis	coyote brush
	*Carduus pycnocephalus**	Italian thistle
	*Cichorium intybus **	chicory
	*Cirsium arvense**	Canada thistle
	*Cirsium vulgare**	bull thistle
	*Delairea odorata**	Cape ivy
	Dittrichia graveolens	stinkwort
	*Erigeron bonariensis**	flax-leaved horseweed
	Erigeron canadensis	horseweed
	*Filago gallica**	filago
	*Helminthotheca echioides **	bristly ox-tongue
	Hypochaeris glabra	smooth cats-ear
	*Hypochaeris radicata **	hairy cat's-ear
	*Lactuca serriola**	prickly lettuce
	Matricaria discoidea	pineapple weed
	*Pseudognaphalium luteoalbum**	Jersey cudweed
	*Senecio vulgaris **	common groundsel
	*Sonchus asper**	spiny sowthistle
	*Sonchus oleraceus**	sow thistle
	*Silybum marianum**	milk thistle
	*Taraxacum officinale **	dandelion
	*Tragopogon porrifolius**	purple salsify
	Xanthium spinosum	spiny cocklebur
BERBERIDACEAE – Barberry Family		
	Bereris aquifolium	Oregon grape
BRASSICACEAE - Mustard Family		
	*Brassica nigra**	black mustard
	*Brassica rapa**	common mustard
	Lepidium nitidum	shining peppergrass
	*Raphanus sativus**	wild radish
CARYOPHYLLACEAE – Pink Family		
	*Stellaria media**	chickweed
CONVOLVULACEAE - Morning Glory Family		
	*Convolvulus arvensis**	bindweed
EUPHORBIACEAE – Spurge Family		

[1] Plant nomenclature follows The Jepson Manual: Higher Plants of California. Second Edition. B.G. Baldwin (convening editor). University of California Press, Berkeley, CA.

Note: * indicates non-native species

Reference Sites, Observation Dates and Species in Flower at time of Reference Site Survey.

DATE	REFERENCE SITE	SPECIES
April 3, 2015	"Windmill" site	BLBA, LABU
April 12, 2015	Alton Lane Mitigation Site Hale Mitigation Bank	LIVI, BLBA LIVI
April 16 2015	Hale Mitigation Bank	LIVI, LABU
April 27, 2015	Alton Lane Mitigation Site Hale Mitigation Bank "Windmill" site	LIVI, BLBA, LABU LIVI, LABU BLBA, LABU
April 4, 2018	Carinalli-Todd Road Mitigation Bank Alton Lane Mitigation Site Alton North Conservation Site	LIVI, BLBA BLBA BLBA
April 12, 2018	Alton North Conservation Bank Alton Lane Mitigation Site Hazel Mitigation Bank Woodbridge Preserve	BLBA, LABU BLBA, LABU BLBA, LIVI BLBA
April 24, 2018	Alton North Conservation Bank Alton Lane Mitigation Site	LABU LABU, BLBA
April 25, 2018	Carinalli-Todd Road Mitigation Bank	LIVI, BLBA
May 8, 2018	Carinalli-Todd Road Mitigation Bank	LIVI, BLBA

Species: LIVI – *Limnanthes vinculins* (Sebastopol meadowfoam)
BLBA – *Blennosperma bakeri* (Sonoma sunshine)
LABU – *Lasthenia burkei* (Burke's goldfields)

APPENDIX B. SPECIAL-STATUS PLANT SPECIES REPORTED TO OCCUR IN THE REGION AND THEIR REGULATORY STATUS

Scientific Name	Common Name	FESA	CESA	CNPS
DICOTS				
Amorpha californica var. napensis	Napa false indigo			1B.2
Amsinckia lunaris	bent-flowered fiddleneck			1B.2
Arctostaphylos densiflora	Vine Hill manzanita		E	1B.1
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita			1B.1
Astragalus claranus	Clara Hunt's milk-vetch	E	T	1B.1
Balsamorhiza macrolepis	big-scale balsamroot			1B.2
Blennosperma bakeri	Sonoma sunshine	E	E	1B.1
Campanula californica	swamp harebell			1B.2
Castilleja uliginosa	Pitkin Marsh paintbrush		E	1A
Ceanothus confusus	Rincon Ridge ceanothus			1B.1
Ceanothus divergens	Calistoga ceanothus			1B.2
Ceanothus foliosus var. vineatus	Vine Hill ceanothus			1B.1
Ceanothus purpureus	holly-leaved ceanothus			1B.2
Ceanothus sonomensis	Sonoma ceanothus			1B.2
Centromadia parryi ssp. parryi	pappose tarplant			1B.2
Chorizanthe valida	Sonoma spineflower	E	E	1B.1
Cordylanthus tenuis ssp. capillaris	Pennell's birds-beak	E	F	1B.2
Clarkia imbricata	Vine Hill clarkia	E	E	1B.1
Cuscuta obtusiflora var. glandulosa	Peruvian dodder			2B.2
Delphinium luteum	golden larkspur	E	R	1B.1
Downingia pusilla	dwarf downingia			2B.2
Erigeron serpentinus	serpentine daisy			1B.3
Gilia capitata ssp. tomentosa	woolly-headed gilia			1B.1
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant			1B.2
Horkelia tenuiloba	thin-lobed horkelia			1B.2
Lasthenia burkei	Burke's goldfields	E	E	1B.1
Lasthenia californica ssp. bakeri	Baker's goldfields			1B.2
Layia septentrionalis	Colusa layia			1B.2
Legenere limosa	legenere			1B.1
Leptosiphon jepsonii	Jepson's leptosiphon			1B.2
Limnanthes vinculans	Sebastopol meadowfoam	E	E	1B.1
Microseris paludosa	marsh microseris			1B.2
Navarretia leucocephala ssp. bakeri	Baker's navarretia			1B.1
Navarretia leucocephala ssp. plieantha	many-flowered navarretia	E	E	1B.2
Potentilla uliginosa	Cunningham Marsh cinquefoil			1A
Trifolium amoenum	two-fork clover	E		1B.1
Trifolium buckwestiorum	Santa Cruz clover			1B.1
Trifolium hydrophilum	saline clover			1B.2
Viburnum ellipticum	oval-leaved viburnum			2B.3
MONOCOTS				
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	E		1B.1
Brodiaea leptandra	narrow-anthered brodiaea			1B.2
Calamagrostis crassiglumis	Thurber's reed grass			2B.1
Fritillaria liliacea	fragrant fritillary			1B.2
Lilium pardalinum ssp. pitkinense	Pitkin Marsh lily	E	E	1B.1
Pleuropogon hooverianus	North Coast semaphore grass		T	1B.1
Rhynchospora alba	white beaked-rush			2B.2
Rhynchospora californica	California beaked-rush			1B.1
Rhynchospora capitellata	brownish beaked-rush			2B.2
Rhynchospora globularis	round-headed beaked-rush			2B.1

FESA - Federal Endangered Species Act; CESA - California Endangered Species Act

T - Threatened; E - Endangered; R - Rare (California only); CNPS Designations: List 1A - Species presumed extinct in California. List 1B - Species rare and endangered in California and elsew here. List 2 - Species rare and endangered in California but more common elsew here. List 3 - Species for w hich additional data are needed.

APPENDIX C. HABITAT PREFERENCE, AND POTENTIAL FOR THE SPECIAL-STATUS SPECIES TO OCCUR AT THE SITE.

Scientific Name	Common Name	Habitat	Occurrence at Project Site
DICOTS			
Amorpha californica var. napensis	Napa false indigo	Broadleafed upland forest, chaparral, cismontane woodland. Openings in forest or woodland or in chaparral	Unlikely. Habitat not present at project site.
Amsinckia lunaris	bent-flowered fiddleneck	Coastal bluff scrub; cismontane woodland; valley and foothill grassland	Unlikely. Habitat not present at project site.
Arctostaphylos densiflora	Vine Hill manzanita	Dwarf chaparral "barren" on sandy acidic soil	Unlikely. Habitat not present at project site.
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	Chaparral, cismontane woodland. Highly restricted endemic to red rhyolites in Sonoma County	Unlikely. Habitat not present at project site.
Astragalus claranus	Clara Hunt's milk-vetch	Chaparral (openings); cismontane woodland; valley and foothill grassland/serpentinite or volcanic, rocky, clay	Unlikely. Habitat not present at project site.
Balsamorhiza macrolepis	big-scale balsamroot	Chaparral; cismontane woodland; valley and foothill grassland/ sometimes serpentinite	Unlikely. Habitat not present at project site.
Blennosperma bakeri	Sonoma sunshine	Vernal pools, valley and foothill grassland. Vernal pools and swales	Unlikely. Not observed during plant surveys.
Campanula californica	swamp harebell	Bogs and fens; closed-cone coniferous forest; coastal prairie; meadows and seeps; marshes and swamps (freshwater); north coast coniferous forest	Unlikely. Habitat not present at project site.
Castilleja uliginosa	Pitkin Marsh paintbrush	Marshes and swamps (freshwater)	Unlikely. Habitat not present at project site.
Ceanothus confusus	Rincon Ridge ceanothus	Closed-cone coniferous forest, chaparral, cismontane woodland. Known from volcanic or serpentine soils, dry shrubby slopes	Unlikely. Habitat not present at project site.
Ceanothus divergens	Calistoga ceanothus	Chaparral. Rocky, serpentine or volcanic sites	Unlikely. Habitat not present at project site.
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	Sandy acidic soil	Unlikely. Habitat not present at project site.
Ceanothus purpureus	holly-leaved ceanothus	Chaparral; volcanic substrates, slopes	Unlikely. Habitat not present at project site.
Ceanothus sonomensis	Sonoma ceanothus	Chaparral; south slopes	Unlikely. Habitat not present at project site.
Centromadia parryi ssp. parryi	pappose tarplant	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernally mesic, often alkaline sites	Unlikely. Not observed during plant surveys.
Chorizanthe valida	Sonoma spineflower	Coastal prairie (sandy)	Unlikely. Habitat not present at project site.
Clarkia imbricata	Vine Hill clarkia	Chaparral; valley and foothill grassland/acidic sandy loam)	Unlikely. Habitat not present at project site.

Cordylanthus tenuis ssp. capillaris	Pennell's birds-beak	Closed-cone coniferous forest, Chaparral	Unlikely. Habitat not present at project site.
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Marshes and swamps (freshwater)	Unlikely. Habitat not present at project site.
Delphinium luteum	golden larkspur	Chaparral; coastal prairie; coastal scrub/rocky	Unlikely. Habitat not present at project site.
Downingia pusilla	dwarf downingia	Valley and foothill grassland (mesic sites), vernal pools. Vernal lake and pool margins with a variety of associates. In several types of vernal pools	Unlikely. Not observed during plant surveys.
Erigeron serpentinus	serpentine daisy	Chaparral (serpentinite, seeps)	Unlikely. Habitat not present at project site.
Gilia capitata ssp. tomentosa	woolly-headed gilia	Coastal bluff scrub, valley and foothill grasslands/serpentinite; rocky outcrops	Unlikely. Habitat not present at project site.
Hemizonia congesta ssp. congesta	congested-headed hayfield tarplant	Valley and foothill grassland. Grassy valleys and hills, often in fallow fields; sometimes along roadsides	Low. Not observed during plant surveys.
Horkelia tenuiloba	thin-lobed horkelia	Broadleaved upland forest, chaparral, valley and foothill grassland. Sandy soils; mesic openings	Unlikely. Habitat not present at project site.
Lasthenia burkei	Burke's goldfields	meadows and seeps; vernal pools	Unlikely. Not observed during plant surveys.
Lasthenia californica ssp. bakeri	Baker's goldfields	Vernal pools, meadows and seeps. Most often in vernal pools and swales	Unlikely. Habitat not present at project site.
Layia septentrionalis	Colusa layia	Chaparral, cismontane woodland, valley and foothill grassland. Scattered colonies in fields and grassy slopes in sandy or serpentine soil	Unlikely. Habitat not present at project site.
Legenere limosa	legenere	Vernal pools	Unlikely. Habitat not present at project site.
Leptosiphon jepsonii	Jepson's leptosiphon	Chaparral, cismontane woodland. Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates	Unlikely. Habitat not present at project site.
Limnanthes vinculans	Sebastopol meadowfoam	Meadows and seeps, vernal pools, valley and foothill grassland. Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam	Unlikely. Not observed during plant surveys.
Microseris paludosa	marsh microseris	Closed-cone coniferous forest,cismontane woodland, coastal scrub, valley and foothill grassland	Unlikely. Habitat not present at project site.
Navarretia leucocephala ssp. bakeri	Baker's navarretia	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils	Unlikely. Not observed during plant surveys.

Navarretia leucocephala ssp. plieantha	many-flowered navarretia	Vernal pools. Volcanic ash flow vernal pools	Unlikely. Not observed during plant surveys.
Potentilla uliginosa	Cunningham Marsh cinquefoil	Marshes and swamps/freshwater, permanent oligotrophic wetlands	Unlikely. Habitat not present at project site.
Trifolium amoenum	two-fork clover	Coastal bluff scrub; valley and foothill grassland (sometimes serpentinite)	Unlikely. Not observed during plant surveys.
Trifolium buckwestiorum	Santa Cruz clover	Coastal praire, mixed evergreen forest; grassy or disturbed areas	Unlikely. Habitat not present at project site.
Trifolium hydrophilum	saline clover	Marshes and swamps; valley and foothill grasslands (mesic, alkaline)	Unlikely. Habitat not present at project site.
Viburnum ellipticum	oval-leaved viburnum	Chaparral; cismontaine woodland; lower montane coniferous forest	Unlikely. Habitat not present at project site.
MONOCOTS			
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	Marshes and swamps (freshwater); riparian scrub	Unlikely. Not observed during plant surveys.
Brodiaea leptandra	narrow-anthered brodiaea	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland. Volcanic substrates	Unlikely. Habitat not present at project site.
Calamagrostis crassiglumis	Thurber's reed grass	Coastal scrub (mesic); marshes and swamps (freshwater)	Unlikely. Habitat not present at project site.
Fritillaria liliacea	fragrant fritillary	Cismontane woodland; coastal prairie; coastal scrub; valley and foothill grassland/often serpentinite	Unlikely. Not observed during plant surveys.
Lilium pardalinum ssp. pitkinense	Pitkin Marsh lily	Cismontane woodland; meadows and seeps, marshes and swamps (freshwater); mesic, sandy	Unlikely. Not observed during plant surveys.
Pleuropogon hooverianus	North Coast semaphore grass	Broadleafed upland forest; meadows and seeps; north coastal coniferous forest/open areas, mesic	Unlikely. Habitat not present at project site.
Rhynchospora alba	white beaked-rush	Bogs and fens; meadows and seeps; marshes and swamps (freshwater)	Unlikely. Habitat not present at project site.
Rhynchospora californica	California beaked-rush	Bogs and fens; lower mountain coniferous forest; meadows and seeps; marshes and swamps	Unlikely. Habitat not present at project site.
Rhynchospora capitellata	brownish beaked-rush	Wet meadows, fens, seeps, marshes	Unlikely. Not observed during plant surveys.
Rhynchospora globularis	round-headed beaked-rush	Marshes and swamps (freshwater)	Unlikely. Not observed during plant surveys.