

**Appendix B:  
Biological Resources Supporting Information**

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## **B.1 - Special-status Species Tables**

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**Table 1: Special-status Plant Species Potentially Occurring within the Project**

Scientific Name Common Name	Status			Habitat Description <sup>4</sup>	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS <sup>1</sup>	CDFW <sup>2</sup>	CNPS <sup>3</sup>			
<i>Lasthenia burkei</i> Burke's goldfields	FE	SE	1B.1	Vernal pools, meadows and seeps. Most often in vernal pools and swales. 15–600 m.	Unlikely to Occur: no suitable habitat is present within the Project. No vernal pools on site.	No
<i>Astragalus claranus</i> Clara Hunt's milk-vetch	FE	ST	1B.1	Annual herb found in chaparral, cismontane woodland and valley and foothill grassland in serpentinite or volcanic, rocky or clay soils. Bloom period: March–May 75–275m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of chaparral or rocky/volcanic soils on site.	No
<i>Limnanthes vinculans</i> Sebastopol meadowfoam	FE	SE	1B.1	Swales, wet meadows and marshy areas in valley oak savanna; on poorly drained soils of clays and sandy loam. 15–115 m	Unlikely to Occur: no suitable habitat is present within the Project. No wet meadows or marshy area on site, lack of saturated soils	No
<i>Blennosperma bakeri</i> Sonoma sunshine	FE	SE	1B.1	Vernal pools, wet grasslands and swales. 10–290 m.	Unlikely to Occur: no suitable habitat is present within the Project. No vernal pools on site, lack of saturated soils.	No
<i>Trifolium amoenum</i> two-fork clover	FE	—	1B.1	Coastal bluff scrub, valley and foothill grassland (sometimes serpentinite) Blooming period: April–June	Unlikely to Occur: no suitable habitat is present within the Project. Lack of costal bluff scrub on site.	No
<i>Chorizanthe valida</i> Sonoma spineflower	FE	SE	1B.1	Annual and perennial grasslands, coastal sand dunes native to California. Sandy soil. 5–50 m.	Unlikely to Occur: no suitable habitat is present within the Project. High level of disturbance at site precludes species presence	No
<i>Clarkia imbricate</i> Vine Hill clarkia	FE	SE	1B.1	Chaparral, valley and foothill grassland. Acidic, sandy soil. 60–80 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of acidic, sandy soil on site.	No
<i>Cordylanthus tenuis ssp. Capillaris</i> Pennell's bird's-beak	FE	CR	1B.2	Closed-cone coniferous forest, chaparral. In open or disturbed areas on serpentine within forest or chaparral. 90–215 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of serpentine soil on site.	No

**Table 1 (cont.): Special-status Plant Species Potentially Occurring within the Project**

Scientific Name Common Name	Status			Habitat Description <sup>4</sup>	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS <sup>1</sup>	CDFW <sup>2</sup>	CNPS <sup>3</sup>			
<i>Delphinium luteum</i> golden larkspur	FE	CR	1B.1	Chaparral, coastal prairie, coastal scrub. North-facing rocky slopes. 5–100 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of coastal prairie or scrub habitat on site.	No
<i>Eryngium constancei</i> Loch Lomond buttoncelery	FE	SE	1B.1	Vernal pools. Volcanic ash flow vernal pools. 460–855 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of vernal pools on site.	No
<i>Lilium pardalinum</i> ssp. <i>Pitkinense</i> Pitkin Marsh lily	FE	SE	1B.1	Cismontane woodland, meadows and seeps, marshes and swamps. Saturated, sandy soils with grasses and shrubs. 45–65 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of saturated soils on site.	No
<i>Navarretia leucocephala</i> ssp. <i>Plieantha</i> many-flowered navarretia	FE	SE	1B.2	Vernal pools, specifically volcanic ash flow vernal pools. 30–915 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of vernal pools on site.	No
<i>Plagiobothrys strictus</i> <i>Calistoga</i> popcornflower	FE	ST	1B.1	Alkaline sites near thermal springs and on margins of vernal pools in heavy, dark, adobe-like clay. 90–125 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of vernal pools on site.	No
<i>Poa napensis</i> Napa blue grass	FE	SE	1B.1	Moist alkaline meadows fed by runoff from nearby hot springs. 100–120 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of alkaline meadows and running water on site.	No
<i>Sidalcea oregana</i> ssp. <i>Valida</i> Kenwood Marsh checkerbloom	FE	SE	1B.1	Marshes and swamps, specifically edges of freshwater marshes. 115–125 m.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of marshes, swamps, and saturated soils on site.	No

**Table 1 (cont.): Special-status Plant Species Potentially Occurring within the Project**

Scientific Name Common Name	Status			Habitat Description <sup>4</sup>	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS <sup>1</sup>	CDFW <sup>2</sup>	CNPS <sup>3</sup>			
<b>Code Designations</b>						
<sup>1</sup> <b>Federal Status: 2015 USFWS Listing</b>				<sup>2</sup> <b>State Status: 2015 CDFW Listing</b>		
<b>ESU</b> = Evolutionary Significant Unit is a distinctive population. <b>FE</b> = Listed as endangered under the FESA. <b>FT</b> = Listed as threatened under the FESA. <b>FC</b> = Candidate for listing (threatened or endangered) under FESA. <b>FD</b> = Delisted in accordance with the FESA. <b>FPD</b> = Federally Proposed to be Delisted. <b>MBTA</b> = protected by the Migratory Bird Treaty Act <b>—</b> = Not federally listed				<b>SE</b> = Listed as endangered under the CESA. <b>ST</b> = Listed as threatened under the CESA. <b>SSC</b> = Species of Special Concern as identified by the CDFW. <b>FP</b> = Listed as fully protected under FGC. <b>CFG</b> = FGC =protected by FGC 3503.5 <b>CR</b> = Rare in California. <b>—</b> = Not state listed		
<sup>3</sup> <b>Habitat description:</b> Habitat description adapted from CNDDDB (CDFW 2015a).						

**Table 2: Special-status Wildlife Species Potentially Occurring within the Project**

Scientific Name Common Name	Status		Habitat Description <sup>3</sup>	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS <sup>1</sup>	CDFW <sup>2</sup>			
<b>Reptiles</b>					
<i>Emys marmorata</i> western pond turtle	—	SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of aquatic features on site.	No
<b>Birds</b>					
<i>Coturnicops noveboracensis</i> yellow rail	—	SSC	Summer resident in eastern Sierra Nevada in Mono County. Freshwater marshlands.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of suitable nesting or foraging habitat on site.	No
<b>Amphibians</b>					
<i>Dicamptodon ensatus</i> California giant salamander	—	SSC	Usually found in cool, moist, forest habitat and associated with rocky streams and springs	Unlikely to Occur: no suitable habitat is present within the Project. Lack of aquatic features on site.	No
<i>Rana draytonii</i> California red-legged frog	FT	—	Requires 11–20 weeks of permanent water for larval development. Must have access to estivation habitat.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of aquatic features on site.	No
<i>Ambystoma californiense</i> California tiger salamander	FT	ST	Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of aquatic features on site.	No
<i>Rana boylei</i> foothill yellow-legged frog	—	SSC	Foothill yellow-legged frogs are found i Vernal pools, meadows and seeps.n or near rocky streams in a variety of habitats. Unlike most other ranid frogs in California, this species is rarely encountered (even on rainy nights) far from permanent water.	Unlikely to Occur: no suitable habitat is present within the Project. Lack of aquatic features on site.	No



**Table 2 (cont.): Special-status Wildlife Species Potentially Occurring within the Project**

Scientific Name Common Name	Status		Habitat Description <sup>3</sup>	Potential to Occur and Rationale	Included in Impact Analysis
	USFWS <sup>1</sup>	CDFW <sup>2</sup>			
<b>Code Designations</b>					
<sup>1</sup> <b>Federal Status: 2015 USFWS Listing</b>			<sup>2</sup> <b>State Status: 2015 CDFW Listing</b>		
<b>ESU</b> = Evolutionary Significant Unit is a distinctive population. <b>FE</b> = Listed as endangered under the FESA. <b>FT</b> = Listed as threatened under the FESA. <b>FC</b> = Candidate for listing (threatened or endangered) under FESA. <b>FD</b> = Delisted in accordance with the FESA. <b>FPD</b> = Federally Proposed to be Delisted. <b>MBTA</b> = protected by the Migratory Bird Treaty Act <b>—</b> = Not federally listed			<b>SE</b> = Listed as endangered under the CESA. <b>ST</b> = Listed as threatened under the CESA. <b>SSC</b> = Species of Special Concern as identified by the CDFW. <b>FP</b> = Listed as fully protected under FGC. <b>CFG</b> = FGC =protected by FGC 3503.5 <b>CR</b> = Rare in California. <b>—</b> = Not state listed		
<sup>3</sup> <b>Habitat description:</b> Habitat description adapted from CNDDDB (CDFW 2015a).					

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## **B.2 - CNNDB Database, CNPS Inventory, and Soil Database Results**

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**Selected Elements by Common Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Query Criteria: Quad IS (Santa Rosa (3812246))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>Baker's navarretia</b> <i>Navarretia leucocephala ssp. bakeri</i>	PDPLM0COE1	None	None	G4T2	S2	1B.1
<b>bent-flowered fiddleneck</b> <i>Amsinckia lunaris</i>	PDBOR01070	None	None	G3	S3	1B.2
<b>big-scale balsamroot</b> <i>Balsamorhiza macrolepis</i>	PDAST11061	None	None	G2	S2	1B.2
<b>Blennosperma vernal pool andrenid bee</b> <i>Andrena blennospermatis</i>	IIHYM35030	None	None	G2	S2	
<b>Burke's goldfields</b> <i>Lasthenia burkei</i>	PDAST5L010	Endangered	Endangered	G1	S1	1B.1
<b>California giant salamander</b> <i>Dicamptodon ensatus</i>	AAAAH01020	None	None	G3	S2S3	SSC
<b>California linderiella</b> <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
<b>California red-legged frog</b> <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
<b>California tiger salamander</b> <i>Ambystoma californiense</i>	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<b>Calistoga ceanothus</b> <i>Ceanothus divergens</i>	PDRHA04240	None	None	G2	S2	1B.2
<b>Clara Hunt's milk-vetch</b> <i>Astragalus claranus</i>	PDFAB0F240	Endangered	Threatened	G1	S1	1B.1
<b>coastal triquetrella</b> <i>Triquetrella californica</i>	NBMUS7S010	None	None	G2	S2	1B.2
<b>Colusa layia</b> <i>Layia septentrionalis</i>	PDAST5N0F0	None	None	G2	S2	1B.2
<b>congested-headed hayfield tarplant</b> <i>Hemizonia congesta ssp. congesta</i>	PDAST4R065	None	None	G5T2	S2	1B.2
<b>foothill yellow-legged frog</b> <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
<b>fragrant fritillary</b> <i>Fritillaria liliacea</i>	PMLIL0V0C0	None	None	G2	S2	1B.2
<b>holly-leaved ceanothus</b> <i>Ceanothus purpureus</i>	PDRHA04160	None	None	G2	S2	1B.2
<b>Jepson's leptosiphon</b> <i>Leptosiphon jepsonii</i>	PDPLM09140	None	None	G3	S3	1B.2
<b>Napa false indigo</b> <i>Amorpha californica var. napensis</i>	PDFAB08012	None	None	G4T2	S2	1B.2
<b>narrow-anthered brodiaea</b> <i>Brodiaea leptandra</i>	PMLIL0C022	None	None	G3?	S3?	1B.2



Selected Elements by Common Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b>obscure bumble bee</b> <i>Bombus caliginosus</i>	IIHYM24380	None	None	G4?	S1S2	
<b>Rincon Ridge ceanothus</b> <i>Ceanothus confusus</i>	PDRHA04220	None	None	G1	S1	1B.1
<b>Rincon Ridge manzanita</b> <i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i>	PDERI041G4	None	None	G3T1	S1	1B.1
<b>saline clover</b> <i>Trifolium hydrophilum</i>	PDFAB400R5	None	None	G2	S2	1B.2
<b>Santa Cruz clover</b> <i>Trifolium buckwestiorum</i>	PDFAB402W0	None	None	G2	S2	1B.1
<b>Sebastopol meadowfoam</b> <i>Limnanthes vincularis</i>	PDLIM02090	Endangered	Endangered	G1	S1	1B.1
<b>Sonoma ceanothus</b> <i>Ceanothus sonomensis</i>	PDRHA04420	None	None	G2	S2	1B.2
<b>Sonoma sunshine</b> <i>Blennosperma bakeri</i>	PDAST1A010	Endangered	Endangered	G1	S1	1B.1
<b>two-fork clover</b> <i>Trifolium amoenum</i>	PDFAB40040	Endangered	None	G1	S1	1B.1
<b>Valley Needlegrass Grassland</b> <i>Valley Needlegrass Grassland</i>	CTT42110CA	None	None	G3	S3.1	
<b>western bumble bee</b> <i>Bombus occidentalis</i>	IIHYM24250	None	None	G2G3	S1	
<b>western pond turtle</b> <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
<b>white-tailed kite</b> <i>Elanus leucurus</i>	ABNKC06010	None	None	G5	S3S4	FP
<b>yellow rail</b> <i>Coturnicops noveboracensis</i>	ABNME01010	None	None	G4	S1S2	SSC

Record Count: 34

## Plant List

### Inventory of Rare and Endangered Plants

14 matches found. [Click on scientific name for details](#)

#### Search Criteria

FESA = Endangered, CESA is one of [Endangered, Threatened, Rare], Found in Quads 3812257, 3812256, 3812255, 3812247, 3812246, 3812245, 3812237 3812236 and 3812235;

[Modify Search Criteria](#)
[Export to Excel](#)
[Modify Columns](#)
[Modify Sort](#)
[Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
<a href="#">Astragalus claranus</a>	Clara Hunt's milk-vetch	Fabaceae	annual herb	Mar-May	1B.1	S1	G1
<a href="#">Blennosperma bakeri</a>	Sonoma sunshine	Asteraceae	annual herb	Mar-May	1B.1	S1	G1
<a href="#">Chorizanthe valida</a>	Sonoma spineflower	Polygonaceae	annual herb	Jun-Aug	1B.1	S1	G1
<a href="#">Clarkia imbricata</a>	Vine Hill clarkia	Onagraceae	annual herb	Jun-Aug	1B.1	S1	G1
<a href="#">Cordylanthus tenuis ssp. capillaris</a>	Pennell's bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	1B.2	S1	G4G5T1
<a href="#">Delphinium luteum</a>	golden larkspur	Ranunculaceae	perennial herb	Mar-May	1B.1	S1	G1
<a href="#">Eryngium constancei</a>	Loch Lomond button-celery	Apiaceae	annual / perennial herb	Apr-Jun	1B.1	S1	G1
<a href="#">Lasthenia burkei</a>	Burke's goldfields	Asteraceae	annual herb	Apr-Jun	1B.1	S1	G1
<a href="#">Lilium pardalinum ssp. pitkinense</a>	Pitkin Marsh lily	Liliaceae	perennial bulbiferous herb	Jun-Jul	1B.1	S1	G5T1
<a href="#">Limnanthes vincularis</a>	Sebastopol meadowfoam	Limnanthaceae	annual herb	Apr-May	1B.1	S1	G1
<a href="#">Navarretia leucocephala ssp. plieantha</a>	many-flowered navarretia	Polemoniaceae	annual herb	May-Jun	1B.2	S1	G4T1
<a href="#">Plagiobothrys strictus</a>	Calistoga popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.1	S1	G1
<a href="#">Poa napensis</a>	Napa blue grass	Poaceae	perennial herb	May-Aug	1B.1	S1	G1
<a href="#">Sidalcea oregana ssp. valida</a>	Kenwood Marsh checkerbloom	Malvaceae	perennial rhizomatous herb	Jun-Sep	1B.1	S1	G5T1

#### Suggested Citation

California Native Plant Society, Rare Plant Program. 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website <http://www.rareplants.cnps.org> [accessed 28 August 2018].

#### Search the Inventory

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#### Information

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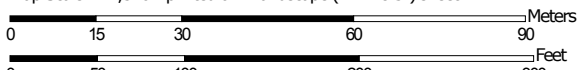
#### Contributors

[The Calflora Database](#)  
[The California Lichen Society](#)  
[California Natural Diversity Database](#)  
[The Jepson Flora Project](#)

Soil Map—Sonoma County, California



Map Scale: 1:1,320 if printed on A landscape (11" x 8.5") sheet.




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







## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Sonoma County, California

Survey Area Data: Version 11, Sep 21, 2017

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

Date(s) aerial images were photographed: Dec 31, 2009—Nov 22, 2016

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

## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
RnA	Riverwash	0.1	4.3%
YrB	Yolo gravelly loam, 0 to 8 percent slopes, MLRA 14	1.1	38.1%
YtA	Yolo clay loam, 0 to 5 percent slopes, MLRA 14	1.7	57.6%
<b>Totals for Area of Interest</b>		<b>3.0</b>	<b>100.0%</b>