



May 15, 2015

Claire Mooney  
Project Manager, Resource Conservation  
The Golden Gate National Parks Conservancy  
Building 201 Fort Mason  
San Francisco, CA 94123

**Re: Special-Status Plant Surveys of the Dias Ridge Connector Trail**

Dear Ms. Mooney,

The Golden Gate National Parks Conservancy (GGNPC) requested URS Corporation (now AECOM) to conduct focused surveys for sensitive plant species that could be impacted by the proposed Dias Ridge Connector Trail in Mount Tamalpais State Park. This technical memorandum describes the proposed project, methodology of the database assessment, results of the field reconnaissance, and recommendations for proceeding with the proposed project.

**Introduction**

The proposed project is located in the Redwood Creek Watershed in Mt. Tamalpais State Park. The proposed connector trail is approximately 1,100 feet in length and varies between six and ten feet wide. The assessment of sensitive botanical resources in the project area included a desktop analysis to identify species with potential to occur. In addition, URS staff conducted a special-status plant survey, including a buffer of 15 feet on each side of the proposed site of the Dias Ridge Connector Trail as shown in Figure 1.

**Desktop Review and Field Survey Methods**

Prior to field surveys, a list of special-status plant species with potential to occur in the study area was generated from queries of the California Natural Diversity Database (CNDDDB) and the California Native Plant Society (CNPS) (CDFW 2015, CNPS 2015). The list was derived from an inventory of rare and endangered plants in the nine USGS quads that are centered on the San Rafael quad. The combined queries generated a list of 96 taxa. The potential for each taxon on this list to occur within the survey area was evaluated based on the known distribution and habitat preferences of the taxon. The distribution of the taxon was assessed based on geo-referenced specimens in the Consortium of California Herbaria (CCH), observation data in Calflora (Calflora 2014), and the geographic subdivisions listed in the Jepson eFlora (Jepson eFlora 2014). The habitat and edaphic preferences of each species were assessed based on data in Calflora, the CNDDDB, and the Jepson eFlora. The Geologic Map and Map Database of Parts of Marin, San Francisco, Alameda, Contra Costa, and Sonoma Counties, California (Blake *et al.* 2000) and the Marin County Soil Survey (NRCS 2013) were consulted to determine the characteristics and distribution of the local soil types. If appropriate habitat and/or soils were not present in the survey area or the survey area was outside the documented range of the species, the species was deemed to have no reasonable potential to occur in the project area. The species

that were evaluated for their potential to occur in the project area are listed in the Special-Status Plant Species Evaluated for Potential to Occur (Attachment A).

A special-status plant survey was conducted in Mt. Tamalpais State Park on April 10, 2015 by URS botanists Gillian Levy and Julie Garren. Special-status plant surveys in the project area were conducted in grassland, northern coastal scrub, and Douglas-fir forest habitats, following the California Department of Fish and Wildlife (CDFW) protocols for evaluating impacts to special-status plants and the CNPS botanical survey guidelines (CDFG 2009; CNPS 2001). In accordance with the protocols, the surveys were floristic in nature and were timed to coincide with the blooming periods of special-status plants so that they would be evident and identifiable. The survey was conducted by thoroughly walking over the project area that was accessible. All plants encountered were identified to a level necessary to confirm if they were special-status plant species. All plant species observed in the survey area were recorded (Attachment B). Taxonomy follows the Jepson Manual (Baldwin *et al.* 2012).

The private in holding at the west end of the project site closest to Muir Woods Road was not accessible. Therefore, this area was evaluated by looking through gaps in the fence and by surveying from the adjacent property. Photo interpretation based on the aerial signature provided some additional information about this portion of the site.

### **Results**

The focused special-status plant survey found no special-status plant species. Special-status natural communities were not observed during the field visits nor during the desktop analysis.

### **Limitations That May Influence Results**

Based on the very limited accessibility of the in-holding, as well as the recent mowing of the project area within the in-holding, it is unlikely that URS botanists would be able to identify any special-status plants within the in-holding. The limited visible area behind the fence could be characterized as mixed ruderal vegetation, primarily dominated by non-native annual grasses. Due to the limited access and visibility of this portion of the project area, we cannot definitively say that the private in-holding is cleared of special-status plants.

Additionally, the special-status plant survey was conducted in April to best capture the blooming period of the majority of plants that appear on the Potential to Occur list. However, there were some plants on this list that have later blooming periods and may not have been identifiable in April.

### **Recommendation**

Based on the existing conditions and the minimal footprint of the proposed work on the Dias Connector Trail, it is anticipated that the trail construction will not impact habitat suitable for special-status plant species. No federal or state listed species were identified on the site outside of the in-holding during the April survey. The in-holding does not appear to possess suitable habitat for special-status plants, and no special-status plants could be identified from the minimal visibility to the in-holding. However, an additional mid-season plant survey and direct access to

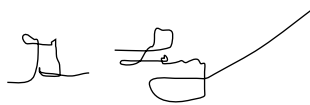
the in-holding would confirm the finding that there are no federal or state listed species within the project area.

If you have any questions regarding this technical memo, please contact Julie Garren at (510) 874-1746 or Gillian Levy at (510) 874-3009.

Sincerely,



Dina Robertson  
Project Manager  
URS Corporation



Gillian Levy  
Botanist  
URS Corporation

Figures and Attachments:

Figure 1: Project area map with inset vicinity map (proposed trail alignment)  
Attachment A: Special-Status Plant Species Evaluated for Potential to Occur  
Attachment B: Plant Species Observed During Field Surveys

## **References**

- Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, editors. 2012. The Jepson Manual: Vascular Plants of California, Second Edition. University of California Press, Berkeley.
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([http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols\\_for\\_Surveying\\_and\\_Evaluating\\_Impacts.pdf](http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/Protocols_for_Surveying_and_Evaluating_Impacts.pdf))
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## Project Area Map With Inset Vicinity Map (Proposed Trail Alignment)

URS Oakland CA 5/14/2015 USER Alexis\_Buchwald PATH L:\Projects\Golden Gate National Parks Conservancy\Dias Ridge Connector Trail\02\_Maps\02\_Map\_Production\_and\_Reports\Figure1-ProjectLocation.mxd



**AECOM**

Golden Gate National Parks Conservancy (GGNPC)

Dias Ridge Connector Trail

MAY, 2015

**FIGURE 1**

*Project Location*

**Attachment A: Dias Ridge Connector Trail Rare Plant Surveys  
Special-Status Plant Species Evaluated for Potential to Occur**

Scientific Name	Common Name	Status			Habitat Requirements	Reported Bloom Period	Potential to Occur
		Fed	State	CRPR			
<i>Amorpha californica</i> var. <i>napensis</i>	Napa false indigo			1B.2	Broadleaved upland forest   Chaparral   Cismontane woodland	April - July	Yes - target for early season survey
<i>Amsinckia lunaris</i>	bent-flowered fiddleneck			1B.2	Cismontane woodland   Valley & foothill grassland	March - June	Yes - target for early season survey
<i>Arabis blepharophylla</i>	coast rockcress			4.3	rocky   Broadleaved upland forest   Coastal bluff scrub   Coastal prairie   Coastal scrub	Feb - May	Yes - target for early season survey
<i>Arctostaphylos franciscana</i>	Franciscan manzanita			1B.1	Chaparral   Ultramafic	Feb - April	Yes - target for early season survey
<i>Arctostaphylos montana</i> ssp. <i>montana</i>	Mt. Tamalpais manzanita			1B.3	Chaparral   Ultramafic   Valley & foothill grassland	Feb - April	Yes - target for early season survey
<i>Arctostaphylos montana</i> ssp. <i>ravenii</i>	Presidio manzanita	E	E	1B.1	Chaparral   Coastal prairie   Coastal scrub   Ultramafic	Feb - March	Yes - target for early season survey
<i>Arctostaphylos virgata</i>	Marin manzanita			1B.2	Broadleaved upland forest   Chaparral   Closed-cone coniferous forest   North coast coniferous forest	Jan - March	Yes - target for early season survey
<i>Astragalus breweri</i>	Brewer's milk-vetch			4.2	often serpentinite, volcanic   Chaparral   Cismontane woodland   Meadows and seeps   Valley and foothill grassland (open, often gravelly)	April - June	Yes - target for early/mid season survey
<i>Calandrinia breweri</i>	Brewer's calandrinia			4.2	sandy or loamy, disturbed sites and burns   Chaparral   Coastal scrub	March - June	Yes - target for early season survey
<i>Calochortus umbellatus</i>	Oakland star-tulip			4.2	often serpentinite   Broadleaved upland forest   Chaparral   Cismontane woodland   Lower montane coniferous forest   Valley and foothill grassland	March - May	Yes - target for early season survey
<i>Cardamine angulata</i>	seaside bittercress			2B.1	Lower montane coniferous forest   North coast coniferous forest   Wetland	March - July	Yes - target for early season survey
<i>Carex comosa</i>	bristly sedge			2B.1	Freshwater marsh   Marsh & swamp   Wetland   Coastal Prairie	May - Sept	Yes - target for mid season survey

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<i>Ceanothus cuneatus</i> var. <i>rigidus</i>	Monterey ceanothus			4.2	sandy   Closed-cone coniferous forest   Chaparral   Coastal scrub	February-June	Yes - target for mid season survey
<i>Ceanothus gloriosus</i> var. <i>exaltatus</i>	glory brush			4.3	Chaparral	March - May	Yes - target for early season survey
<i>Ceanothus gloriosus</i> var. <i>gloriosus</i>	Point Reyes ceanothus			4.3	sandy   Coastal bluff scrub   Closed-cone coniferous forest   Coastal dunes   Coastal scrub	March - May	Yes - target for early season survey
<i>Cirsium andrewsii</i>	Franciscan thistle			1B.2	mesic, sometimes serpentinite   Broadleafed upland forest   Coastal bluff scrub   Coastal prairie   Coastal scrub	March - June	Yes - target for early season survey
<i>Cistanthe maritima</i>	seaside cistanthe			4.2	sandy   Coastal bluff scrub   Coastal scrub   Valley and foothill grassland	Feb - Aug	Yes - target for early/mid season survey
<i>Collinsia multicolor</i>	San Francisco collinsia			1B.2	Closed-cone coniferous forest   Coastal scrub	March - May	Yes - target for early/mid season survey
<i>Dirca occidentalis</i>	western leatherwood			1B.2	Broadleafed upland forest   Chaparral   Cismontane woodland   Closed-cone coniferous forest   North coast coniferous forest   Riparian forest   Riparian woodland	Jan - April	Yes - target for early/mid season survey
<i>Elymus californicus</i>	California bottle-brush grass			4.3	Broadleafed upland forest   Cismontane woodland   North Coast coniferous forest   Riparian woodland	May - Nov	Yes - target for mid/late season survey
<i>Entosthodon kochii</i>	Koch's cord moss			1B.3	Cismontane woodland (soil)   Valley & foothill grassland	n/a	Yes - target for early season survey

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<i>Fissidens pauperculus</i>	minute pocket moss			1B.2	North coast coniferous forest   Redwood	n/a	Yes - target for early season survey
<i>Fritillaria liliacea</i>	fragrant fritillary			1B.2	Coastal prairie   Coastal scrub   Ultramafic   Valley & foothill grassland	Feb - April	Yes - target for early season survey
<i>Grindelia hirsutula</i> var. <i>maritima</i>	San Francisco gumplant			3.2	Coastal bluff scrub   Coastal scrub   Ultramafic   Valley & foothill grassland	June - Sept	Yes - target for late season survey
<i>Helianthella castanea</i>	Diablo helianthella			1B.2	Broadleaved upland forest   Chaparral   Cismontane woodland   Coastal scrub   Valley & foothill grassland	March - June	Yes - target for early/ mid season survey
<i>Hemizonia congesta</i> ssp. <i>congesta</i>	white seaside tarplant			1B.2	Coastal scrub   Valley & foothill grassland   sometimes roadsides	April - Nov	Yes - target for early season survey; note: presumed extirpated from the vicinity
<i>Holocarpha macradenia</i>	Santa Cruz tarplant	T	E	1B.1	Coastal prairie   Coastal scrub   Valley & foothill grassland	June - Oct	Yes - target for early season survey; note: presumed extirpated from the vicinity
<i>Horkelia cuneata</i> var. <i>sericea</i>	Kellogg's horkelia			1B.1	Chaparral   Closed-cone coniferous forest   Coastal dunes   Coastal scrub	April - Sept	Yes - target for early season survey; note: presumed extirpated from the vicinity
<i>Horkelia tenuiloba</i>	thin-lobed horkelia			1B.2	Chaparral   Coastal scrub	May - Aug	Yes - target for mid season survey
<i>Iris longipetala</i>	coast iris			4.2	mesic   Coastal prairie   Lower montane coniferous forest   Meadows and seeps	March - May	Yes - target for early season survey
<i>Kopsiopsis hookeri</i>	small groundcone			2.3	North coast coniferous forest	April - Aug	Yes - target for mid/ late season survey
<i>Leptosiphon acicularis</i>	bristly leptosiphon			4.2	Chaparral   Cismontane woodland   Coastal prairie   Valley and foothill grassland	April - July	Yes - target for early season survey
<i>Leptosiphon</i>	coast yellow			1B.1	Coastal bluff scrub   Coastal prairie	April - May	Yes - target for early



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<i>croceus</i>	leptosiphon						season survey
<i>Leptosiphon grandiflorus</i>	large-flowered leptosiphon			4.2	usually sandy   Coastal bluff scrub   Closed-cone coniferous forest   Cismontane woodland   Coastal dunes   Coastal prairie   Coastal scrub   Valley and foothill grassland	April - Aug	Yes - target for early season survey
<i>Lessingia hololeuca</i>	woolly-headed lessingia			3	clay, serpentinite   Broadleafed upland forest   Coastal scrub   Lower montane coniferous forest   Valley and foothill grassland	June - Oct	Yes - target for late season survey
<i>Micropus amphibolus</i>	Mt. Diablo cottonweed			3.2	rocky   Broadleafed upland forest   Chaparral   Cismontane woodland   Valley and foothill grassland	March - May	Yes - target for early season survey
<i>Microseris paludosa</i>	marsh microseris			1B.2	Cismontane woodland   Closed-cone coniferous forest   Coastal scrub   Valley & foothill grassland	April - July	Yes - target for mid season survey
<i>Mielichhoferia elongata</i>	elongate copper moss			2.2	Cismontane woodland	n/a	Yes - target for early season survey
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i>	Baker's navarretia			1B.1	Mesic   Cismontane woodland   Lower montane coniferous forest   Meadows and seeps   Valley and foothill grassland   Vernal pools	April - July	Yes - target for early season survey
<i>Pentachaeta bellidiflora</i>	white-rayed pentachaeta	E	E	1B.1	Ultramafic   Valley & foothill grassland	March - May	Yes - target for early season survey
<i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Gairdner's yampah			4.2	vernally mesic   Broadleafed upland forest   Chaparral   Coastal prairie   Valley and foothill grassland   Vernal pools	June - Oct	Yes - target for late season survey
<i>Piperia michaelii</i>	Michael's rein orchid			4.2	Coastal bluff scrub  Closed-cone coniferous forest  Chaparral  Cismontane woodland  Coastal scrub  Lower montane coniferous forest	April-August	Yes - target for early season survey
<i>Plagiobothrys chorisianus</i> var. <i>chorisianus</i>	Choris' popcornflower			1B.2	Chaparral   Coastal prairie   Coastal scrub	March - June	Yes - target for early season survey
<i>Plagiobothrys diffusus</i>	San Francisco		E	1B.1	Coastal prairie   Valley & foothill grassland	March - June	Yes - target for early season survey

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	popcornflower						
<i>Pleuropogon hooverianus</i>	North Coast semaphore grass		T	1B.1	Broadleaved upland forest   Meadow & seep   North coast coniferous forest   Wetland	April - June	Yes - target for early season survey
<i>Pleuropogon refractus</i>	nodding semaphore grass			4.2	Mesic   Lower montane coniferous forest   Meadows and seeps   North Coast coniferous forest   Riparian forest	March - April	Yes - target for early season survey
<i>Polemonium carneum</i>	Oregon polemonium			2.2	Coastal prairie   Coastal scrub   Lower montane coniferous forest	April - Sept	Yes - target for early/mid season survey
<i>Quercus parvula</i> var. <i>tamalpaisensis</i>	Tamalpais oak			1B.3	Lower montane coniferous forest	March - April	Yes - target for all surveys
<i>Ranunculus lobbii</i>	Lobb's aquatic buttercup			4.2	Mesic   Cismontane woodland   North Coast coniferous forest   Valley and foothill grassland   Vernal pools	Feb - May	Yes - target for early season survey
<i>Ribes victoris</i>	Victor's gooseberry			4.3	Mesic, shady   Broadleafed upland forest   Chaparral	March - April	Yes - target for early season survey
<i>Sanicula maritima</i>	adobe sanicle		R	1B.1	Chaparral   Coastal prairie   Meadow & seep   Ultramafic   Valley & foothill grassland	Feb - May	Yes - target for early season survey
<i>Stebbinsoseris decipiens</i>	Santa Cruz microseris			1B.2	Broadleaved upland forest   Chaparral   Closed-cone coniferous forest   Coastal prairie   Coastal scrub   Ultramafic	April - May	Yes - target for early season survey
<i>Trifolium amoenum</i>	showy rancheria clover	E		1B.1	Coastal bluff scrub   Ultramafic   Valley & foothill grassland	April - June	Yes - target for early season survey
<i>Trifolium hydrophilum</i>	saline clover			1B.2	Marsh & swamp   Valley & foothill grassland   Vernal pool   Wetland	April - June	Yes - target for early season survey
<i>Triphysaria floribunda</i>	San Francisco owl's-clover			1B.2	Coastal prairie   Ultramafic   Valley & foothill grassland	April - June	Yes - target for early season survey
<i>Triquetrella</i>	coastal			1B.2	Coastal bluff scrub   Coastal scrub   Valley & foothill grassland	n/a	Yes - target for early

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<i>californica</i>	triquetrella						season survey
<i>Alopecurus aequalis</i> var. <i>sonomensis</i>	Sonoma alopecurus	E		1B.1	Freshwater marsh   Marsh & swamp   Riparian scrub   Wetland	May - July	None - species of habitats not present in the Project Area; only known from areas north of Project Area
<i>Arenaria paludicola</i>	marsh sandwort	E	E	1B.1	Freshwater marsh   Marsh & swamp   Wetland	May - Aug	None - species of substrates and habitats not found in the Project Area; species documented in San Francisco in 1899 but otherwise from Santa Cruz County and south.
<i>Aspidotis carlotta-halliae</i>	Carlotta Hall's lace fern			4.2	generally serpentine   Chaparral   Cismontane woodland	Jan - Dec	None - species of substrates and habitats not found in the Project Area.
<i>Astragalus nuttallii</i> var. <i>nuttallii</i>	ocean bluff milk-vetch			4.2	Coastal bluff scrub   Coastal dunes	Jan - Nov	None - species of habitats not present in the Project Area
<i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	coastal marsh milk-vetch			1B.2	Coastal dunes (mesic)   Marsh & swamp (coastal salt, streamsides)   Wetland	April - Oct	None - species of habitats not present in the Project Area
<i>Astragalus tener</i> var. <i>tener</i>	alkali milk-vetch			1B.2	Alkali playa   Valley & foothill grassland (adobe clay)   Vernal pool   Wetland	March - June	None - species of alkali substrates not present in the Project Area

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<i>Calamagrostis ophitidis</i>	serpentine reed grass			4.3	serpentinite, rocky   Chaparral (open, often north-facing slopes)   Lower montane coniferous forest   Meadows and seeps   Valley and foothill grassland	April - July	None - species of habitats not present in the Project Area
<i>Calochortus tiburonensis</i>	Tiburon mariposa-lily	T	T	1B.1	Ultramafic   Valley & foothill grassland	March - June	None - species of substrates and habitats not found in the Project Area; known only from the Tiburon Peninsula.
<i>Carex lyngbyei</i>	Lyngbye's sedge			2B.2	Marsh & swamp   Wetland; brackish	April - Aug	None - species of habitats not present in the Project Area
<i>Castilleja affinis</i> ssp. <i>neglecta</i>	Tiburon paintbrush	E	T	1B.2	Ultramafic   Valley & foothill grassland	April - June	None - species of substrates and habitats not found in the Project Area.
<i>Castilleja ambigua</i> var. <i>ambigua</i>	johnny-nip			4.2	Coastal bluff scrub  Coastal prairie  Coastal scrub  Marshes and swamps  Valley and foothill grassland  Vernal pools margins	March-August	None - species of substrates and habitats not found in the Project Area.
<i>Ceanothus masonii</i>	Mason's ceanothus		R	1B.2	Chaparral   Ultramafic	March - April	None - species of substrates and habitats not found in the Project Area.
<i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Point Reyes bird's-beak			1B.2	Marsh & swamp   Salt marsh   Wetland	June - Oct	None - species of habitats not present in the Project Area
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	San Francisco Bay spineflower			1B.2	Coastal bluff scrub   Coastal dunes   Coastal prairie   Coastal scrub	April - Aug	None - species of habitats not present in the Project Area

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<i>Chorizanthe valida</i>	Sonoma spineflower	FE	CE	1B.1	Coastal prairie (sandy)	June - Aug	None - species of habitats not present in the Project Area
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	Mt. Tamalpais thistle			1B.2	Broadleaved upland forest   Chaparral   Meadow & seep   Ultramafic   Wetland	May - Aug	None - species of habitats not present in the Project Area
<i>Clarkia franciscana</i>	Presidio clarkia	E	E	1B.1	Coastal scrub   Ultramafic   Valley & foothill grassland	May - July	None - species of habitats not present in the Project Area
<i>Collinsia corymbosa</i>	round-headed Chinese-houses			1B.2	Coastal dunes	April - June	None - species of habitats not present in the Project Area
<i>Eriogonum luteolum</i> var. <i>caninum</i>	Tiburon buckwheat			1B.2	Chaparral   Cismontane woodland   Coastal prairie   Ultramafic   Valley & foothill grassland	May - Sept	None - species of habitats not present in the Project Area
<i>Eriophorum gracile</i>	slender cottongrass			4.3	acidic   Bogs and fens   Meadows and seeps   Upper montane coniferous forest	May - Sept	None - species of habitats not present in the Project Area
<i>Erysimum franciscanum</i>	San Francisco wallflower			4.2	often serpentinite or granitic, sometimes roadsides   Chaparral   Coastal dunes   Coastal scrub   Valley and foothill grassland	March - June	None - species of substrates and habitats not found in the Project Area.
<i>Fritillaria lanceolata</i> var. <i>tristulis</i>	Marin checker lily			1B.1	Coastal bluff scrub   Coastal prairie   Coastal scrub   Ultramafic	Feb - May	None - species of substrates and habitats not found in the Project Area.
<i>Gilia capitata</i> ssp. <i>chamissonis</i>	blue coast gilia			1B.1	Coastal dunes   Coastal scrub	April - July	None - species of habitats not present in the Project Area
<i>Gilia capitata</i> ssp. <i>toментosa</i>	woolly-headed gilia			1B.1	Coastal bluff scrub   Ultramafic   Valley & foothill grassland	May - July	None - species of substrates and

**Attachment A: Dias Ridge Connector Trail Rare Plant Surveys  
Special-Status Plant Species Evaluated for Potential to Occur**

Scientific Name	Common Name	Status			Habitat Requirements	Reported Bloom Period	Potential to Occur
		Fed	State	CRPR			
							habitats not found in the Project Area.
<i>Gilia millefoliata</i>	dark-eyed gilia			1B.2	Coastal dunes	April - July	None - species of habitats not present in the Project Area
<i>Hesperolinon congestum</i>	Marin western flax	T	T	1B.1	Chaparral   Ultramafic   Valley & foothill grassland	April - July	None - species of substrates and habitats not found in the Project Area.
<i>Heteranthera dubia</i>	water star-grass			2B.2	Marshes and swamps	July-October	None - species of substrates and habitats not found in the Project Area.
<i>Layia carnosa</i>	beach layia	E	E	1B.1	Coastal dunes   Coastal scrub	March - July	None - species of habitats not present in the Project Area
<i>Leptosiphon rosaceus</i>	rose leptosiphon			1B.1	Coastal bluff scrub	April - July	None - species of habitats not present in the Project Area
<i>Lessingia germanorum</i>	San Francisco lessingia	E	E	1B.1	Coastal scrub (remnant dunes)	June - Nov	None - species of habitats not present in the Project Area
<i>Lessingia micradenia</i> var. <i>micradenia</i>	Tamalpais lessingia			1B.2	Chaparral   Ultramafic   Valley & foothill grassland	June - Oct	None - species of substrates and habitats not found in the Project Area.
<i>Navarretia rosulata</i>	Marin County navarretia			1B.2	Chaparral   Closed-cone coniferous forest   Ultramafic	May - July	None - species of substrates and habitats not found in the Project Area.



**Attachment A: Dias Ridge Connector Trail Rare Plant Surveys  
Special-Status Plant Species Evaluated for Potential to Occur**

Scientific Name	Common Name	Status			Habitat Requirements	Reported Bloom Period	Potential to Occur
		Fed	State	CRPR			
<i>Plagiobothrys glaber</i>	hairless popcornflower			1A	Marsh & swamp   Salt marsh   Vernal pool   Wetland	March - May	None - species of habitats not present in the Project Area; presumed extinct
<i>Polygonum marinense</i>	Marin knotweed			3.1	Brackish marsh   Marsh & swamp   Salt marsh   Wetland	April - Oct	None - species of habitats not present in the Project Area
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	Point Reyes checkerbloom			1B.2	Freshwater marsh   Marsh & swamp   Wetland	April - Sept	None - species of habitats not present in the Project Area
<i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	Marin checkerbloom			1B.3	Chaparral   Ultramafic	May - June	None - species of substrates and habitats not found in the Project Area.
<i>Silene verecunda</i> ssp. <i>verecunda</i>	San Francisco campion			1B.2	Chaparral   Coastal bluff scrub   Coastal prairie   Coastal scrub   Ultramafic   Valley & foothill grassland	March - Aug	None - species of substrates and habitats not found in the Project Area.
<i>Streptanthus batrachopus</i>	Tamalpais jewel-flower			1B.3	Chaparral   Closed-cone coniferous forest   Ultramafic	April - July	None - species of substrates and habitats not found in the Project Area.
<i>Streptanthus glandulosus</i> ssp. <i>niger</i>	Tiburon jewel-flower	E	E	1B.1	Ultramafic   Valley & foothill grassland	May - June	None - species of substrates and habitats not found in the Project Area; known from only two locations on the Tiburon Peninsula

**Attachment A: Dias Ridge Connector Trail Rare Plant Surveys  
Special-Status Plant Species Evaluated for Potential to Occur**

Scientific Name	Common Name	Status			Habitat Requirements	Reported Bloom Period	Potential to Occur
		Fed	State	CRPR			
<i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i>	Mount Tam bristly jewel-flower			1B.2	Chaparral   Ultramafic   Valley & foothill grassland	May - Aug	None - species of substrates and habitats not found in the Project Area.
<i>Symphyotrichum lentum</i>	Suisun Marsh aster			1B.2	Brackish marsh   Freshwater marsh   Marsh & swamp   Wetland	May - Nov	None - species of habitats not present in the Project Area

## Attachment B: Plant Species Observed During Surveys of Dias Ridge Connector Trail

Family	Scientific Name	Nativity
<b>Gymnosperms</b>		
Cupressaceae	<i>Hesperocyparis macrocarpa</i>	Native
Pinaceae	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Native
Pinaceae	<i>Pinus radiata</i>	Non-Native
<b>Eudicots</b>		
Adoxaceae	<i>Sambucus racemosa</i> var. <i>racemosa</i>	Native
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Native
Apiaceae	<i>Conium maculatum</i>	Native
Apiaceae	<i>Foeniculum vulgare</i>	Non-Native
Apiaceae	<i>Heracleum maximum</i>	Native
Apiaceae	<i>Sanicula bipinnatifida</i>	Native
Apiaceae	<i>Sanicula crassicaulis</i>	Native
Apiaceae	<i>Torilis arvensis</i>	Non-Native
Apocynaceae	<i>Vinca major</i>	Non-Native
Araliaceae	<i>Hedera helix</i>	Non-Native
Asteraceae	<i>Achillea millefolium</i>	Non-Native
Asteraceae	<i>Artemisia californica</i>	Native
Asteraceae	<i>Baccharis pilularis</i>	Native
Asteraceae	<i>Carduus pycnocephalus</i>	Non-Native
Asteraceae	<i>Cirsium vulgare</i>	Non-Native
Asteraceae	<i>Helminthotheca echioides</i>	Non-Native
Asteraceae	<i>Hypochaeris radicata</i>	Non-Native
Asteraceae	<i>Matricaria discoidea</i>	Non-Native
Asteraceae	<i>Pseudognaphalium californicum</i>	Native
Asteraceae	<i>Senecio vulgaris</i>	Non-Native
Asteraceae	<i>Silybum marianum</i>	Non-Native
Asteraceae	<i>Sonchus asper</i>	Non-Native
Asteraceae	<i>Taraxacum officinale</i>	Non-Native
Asteraceae	<i>Tragopogon porrifolius</i>	Non-Native

**Attachment B: Plant Species Observed During Surveys of Dias Ridge Connector Trail**

<b>Family</b>	<b>Scientific Name</b>	<b>Nativity</b>
Asteraceae	<i>Wyethia angustifolia</i>	Native
Brassicaceae	<i>Brassica rapa</i>	Non-Native
Brassicaceae	<i>Hirschfeldia incana</i>	Non-Native
Brassicaceae	<i>Raphanus sativus</i>	Non-Native
Caprifoliaceae	<i>Lonicera involucrata</i> var. <i>ledebourii</i>	Native
Caryophyllaceae	<i>Stellaria media</i>	Non-Native
Convolvulaceae	<i>Calystegia purpurata</i> ssp. <i>purpurata</i>	Native
Cucurbitaceae	<i>Marah fabacea</i>	Native
Fabaceae	<i>Genista monspessulana</i>	Non-Native
Fabaceae	<i>Medicago polymorpha</i>	Non-Native
Fabaceae	<i>Trifolium</i> sp.	
Fabaceae	<i>Vicia americana</i> ssp. <i>americana</i>	Native
Fabaceae	<i>Vicia benghalensis</i>	Non-Native
Fabaceae	<i>Vicia sativa</i> ssp. <i>nigra</i>	Non-Native
Fagaceae	<i>Quercus agrifolia</i>	Native
Geraniaceae	<i>Geranium molle</i>	Non-Native
Geraniaceae	<i>Geranium dissectum</i>	Non-Native
Geraniaceae	<i>Erodium cicutarium</i>	Non-Native
Geraniaceae	<i>Erodium moschatum</i>	Non-Native
Hydrophyllaceae	<i>Phacelia malvifolia</i>	Native
Lamiaceae	<i>Lavandula</i> sp.	Non-Native
Lamiaceae	<i>Marubium vulgare</i>	Non-Native
Lamiaceae	<i>Stachys ajugoides</i>	Native
Lauraceae	<i>Umbellularia californica</i>	Native
Linaceae	<i>Linum bienne</i>	Non-Native
Malvaceae	<i>Malva nicaeensis</i>	Non-Native
Malvaceae	<i>Sidalcea malviflora</i>	Native
Montiaceae	<i>Claytonia perfoliata</i>	Native
Oxalidaceae	<i>Oxalis oregana</i>	Native

**Attachment B: Plant Species Observed During Surveys of Dias Ridge Connector Trail**

<b>Family</b>	<b>Scientific Name</b>	<b>Nativity</b>
Oxalidaceae	<i>Oxalis pes-caprae</i>	Non-Native
Papaveraceae	<i>Eschscholzia californica</i>	Native
Phrymaceae	<i>Mimulus aurantiacus</i>	Native
Phrymaceae	<i>Mimulus guttatus</i>	Native
Plantaginaceae	<i>Plantago coronopus</i>	Non-Native
Plantaginaceae	<i>Plantago lanceolata</i>	Non-Native
Plantaginaceae	<i>Plantago major</i>	Non-Native
Polygonaceae	<i>Rumex acetosella</i>	Non-Native
Polygonaceae	<i>Rumex crispus</i>	Non-Native
Primulaceae	<i>Anagallis arvensis</i>	Non-Native
Ranunculaceae	<i>Ranunculus repens</i>	Non-Native
Ranunculaceae	<i>Ranunculus californicus</i> var. <i>californicus</i>	Native
Rhamnaceae	<i>Frangula californica</i> ssp. <i>californica</i>	Native
Rosaceae	<i>Cotoneaster</i> sp.	Non-Native
Rosaceae	<i>Prunus</i> sp.	Non-Native
Rosaceae	<i>Rosa</i> sp.	Non-Native
Rosaceae	<i>Rubus armeniacus</i>	Non-Native
Rosaceae	<i>Rubus ursinus</i>	Native
Rubiaceae	<i>Galium aparine</i>	Non-Native
Rubiaceae	<i>Galium parisiense</i>	Non-Native
Salicaceae	<i>Salix lasiolepis</i>	Native
Scrophulariaceae	<i>Scrophularia californica</i>	Native
Solanaceae	<i>Solanum laxum</i>	Non-Native
Tropaeolaceae	<i>Tropaeolum majus</i>	Non-Native
<b>Monocots</b>		
agavaceae	<i>Chlorogalum pomeridianum</i> var. <i>pomeridianum</i>	Native
Araceae	<i>Zantedeschia aethiopica</i>	Non-Native
Asphodelaceae	<i>Kniphofia uvaria</i>	Non-Native
Cyperaceae	<i>Carex harfordii</i>	Native

## Attachment B: Plant Species Observed During Surveys of Dias Ridge Connector Trail

Family	Scientific Name	Nativity
Iridaceae	<i>Iris</i> sp.	Non-Native
Iridaceae	<i>Sisyrinchium bellum</i>	Native
Juncaceae	<i>Juncus effusus</i>	Native
Juncaceae	<i>Juncus patens</i>	Native
Juncaceae	<i>Luzula comosa</i>	Native
Liliaceae	<i>Allium triquetrum</i>	Non-Native
Poaceae	<i>Avena fatua</i>	Non-Native
Poaceae	<i>Briza major</i>	Non-Native
Poaceae	<i>Briza minima</i>	Non-Native
Poaceae	<i>Bromus carinatus</i> var. <i>carinatus</i>	Native
Poaceae	<i>Bromus diandrus</i>	Non-Native
Poaceae	<i>Bromus hordeaceus</i>	Non-Native
Poaceae	<i>Bromus madritensis</i>	Non-Native
Poaceae	<i>Dactylis glomerata</i>	Non-Native
Poaceae	<i>Festuca arundinacea</i>	Non-Native
Poaceae	<i>Festuca bromoides</i>	Non-Native
Poaceae	<i>Festuca myuros</i>	Non-Native
Poaceae	<i>Festuca perennis</i>	Non-Native
Poaceae	<i>Holcus lanatus</i>	Non-Native
Poaceae	<i>Hordeum brachyantherum</i>	Non-Native
Poaceae	<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Non-Native
Poaceae	<i>Melica torreyana</i>	Native
Poaceae	<i>Phalaris aquatica</i>	Non-Native
Poaceae	<i>Pleuropogon californicus</i> ssp. <i>californicus</i>	Native
Poaceae	<i>Stipa pulchra</i>	Native
Themidaceae	<i>Dichelostemma capitatum</i> ssp. <i>capitatum</i>	Native