

APPENDIX B

2017 AQUATIC RESOURCES DELINEATION LETTER REPORT



September 1, 2017

Daniel Gonzales
Town of Hillsborough
1320 La Honda Road
Hillsborough, California 94010

The purpose of this letter report is to provide the results of the wetland and non-wetland waters delineation conducted at the intersection of Sandra Road and Hayne Road, (APN's 030-272-010 and 030-273-010) located in Hillsborough, San Mateo County, California, (Project Area, Attachment A, Figure 1). The delineation was conducted by WRA biologists on July 31, 2017. The Project Area is approximately 0.49 acre in size and consists of existing residential streets, coast live oak woodland, and a perennial stream (Cherry Creek) and is located approximately 1 mile east of Highway 280 and 3 miles west of the San Francisco Bay.

PROJECT DESCRIPTION

The proposed Project includes a new Sandra Road tunnel and culvert that will convey flows to a new transition structure located in the lower reach (southeast of Sandra Road) of Cherry Creek, and install a new Hayne Road tributary storm drain and tributary junction structure. The Project also proposes burying a storm drain pipeline, improving the lower reach of Cherry Creek to address energy dissipation flow from the upper reach (northwest of Sandra Road) of Cherry Creek, and install new Sandra Road and Robinwood Lane storm drains.

METHODS

Prior to conducting field surveys, available reference materials were reviewed, including soil survey data for the Project Area, the U.S. Geological Survey 7.5-minute quadrangle map for San Mateo (USGS 2017), WETS precipitation data (USDA 2017), and available aerial photographs of the site (Google Earth, 2017). Following the background data search, WRA biologists performed a focused evaluation of indicators of wetlands and waters at the Project Area based on the *U.S. Army Corps of Engineers Wetlands Delineation Manual* ("Corps Manual"; Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* ("Arid West Supplement"; Corps 2008a), and *A Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States* ("OHWM Guide;" Corps 2008b). The routine method for wetland delineation described in the Corps Manual was used to identify areas potentially subject to Corps Sections 404 jurisdictions within the Project Area. Additionally, features which may be subject to Section 401 jurisdiction by the Regional Water Quality Control Board and Section 1602 jurisdiction of the California Fish and Game code (such as stream beds and riparian habitat) were also delineated.

DELINEATION RESULTS

The Project Area contains one mapped soil type: Orthents, cut and fill-Urban land complex, 5 to 75 percent slopes, (NRCS 2017). The Orthents soil map unit is composed of fill and urban land (USDA 1985), making wetland conditions very unlikely. This soil type occurs across all of the Project Area (Attachment B, Figure 2).

Wetlands

No areas within the Project Area were observed that met all three parameters outlined in the Corps Manual. Wetland hydrology was observed within the stream channel with the presence of flowing water but did not co-occur with hydrophytic vegetation or hydric soils. Therefore, this area does not meet the definition of a wetland and is instead categorized as a non-wetland waters.

Non-wetland Waters

One non-wetland waters feature, Cherry Creek, was identified within the Project. Cherry Creek is a perennial stream that flows approximately 320 linear feet throughout the entire Project Area. In the Project Area, Cherry Creek flows southeast before it is culverted approximately 250 feet underneath Sandra Road, and continues northeast to lower reaches of Cherry Creek. Within the Project Area Cherry Creek is daylighted approximately 70 linear feet. Cherry Creek contains a natural line impressed on the bank, destruction of terrestrial vegetation, and the presence of litter and debris; such characteristics are defined as OHWM and bed-and-bank; therefore, jurisdictional under section 401 and 404 of the Clean Water Act and Section 1600 of the California Fish and Game Code. Within the Project Area, Cherry Creek's OHWM ranges from approximately 4 to 23 feet wide, and top of bank ranges from approximately 7 to 25 feet wide.

The upper reach of Cherry Creek within the Project Area exhibits a moderate slope with exposed boulders and cobbles, with sparse amounts of tall flatsedge (*Cyperus eragrostis*) and California blackberry (*Rubus ursinus*) growing between them. The lower reach of Cherry Creek within the Project Area exhibits a low slope with exposed boulders and cobbles, with colonial bentgrass (*Agrostis capillaris*) and California blackberry growing between them.

Riparian Habitat

Riparian coast live oak woodland habitat occupies approximately 0.15 acre within the Project Area. This habitat is dominated by coast live oak (*Quercus agrifolia*) intermixed with arroyo willow (*Salix laeiolepis*) and contains an understory of French broom (*Genista monspessulana*) and California blackberry (*Rubus ursinus*). Approximately 250 linear feet of Cherry Creek is channelized within the Project Area, resulting in a reduction of riparian coast live oak woodland habitat within the Project Area. Riparian habitat is also subject to Section 1600 of California Fish and Game Code jurisdiction.

If you have questions or require additional information, please contact us.
Sincerely,

A handwritten signature in blue ink, appearing to read "B. Clarke".

Bianca Clarke, Associate Regulatory Permitting Specialist, WRA, Inc.

Attachments

- Attachment A: Figures
- Attachment B: Representative Photographs
- Attachment C: Plant Species Observed within the Project Area

References

California Department of Fish and Game. Fish and Game Code Sections 1600-1616 Code. 2004. Accessed: August 19, 2017. Available at: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=FGC§ionNum=1600.

Google Earth. 2017. Aerial Imagery 1993-2017. Accessed: July 30, 2017.

U.S. Army Corps of Engineers. Corps of Engineers Wetlands Delineation Manual. Wetland Research Program Technical Report. Environmental Laboratory. 1987. .

U.S. Army Corps of Engineers. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region. Arid West Supplement. Corps 2008a.

U.S. Army Corps of Engineers. A Field Guide to Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the United States. OHWM Guide. Corps 2008b.

U.S. Environmental Protection Agency. Section 404 of the Clean Water Act. Clean Water Act, Section 401 Certification. Accessed: August 18, 2017. Available at: <https://www.epa.gov/cwa-404/clean-water-act-section-401-certification>.

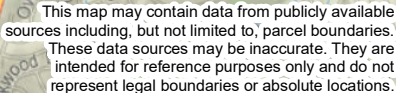
U.S. Department of Agriculture. Natural Resources Conservation Services and National Water Climate Center. Wetlands (WETS) Climate Table. Accessed: July 30, 2017. Available at: https://www.wcc.nrcs.usda.gov/climate/wets_doc.html.

Attachment A: Figures

Figure 1- Project Area Location Map

Figure 2- Soil Type Located within the Project Area

Figure 3- Preliminary Water of the U.S. and of the State Jurisdictional Map



A horizontal number line is shown with tick marks at 0, 0.5, 1, and 2. The word "Miles" is written below the line. A white rectangular bar is positioned between the 0.5 and 1 mile marks.

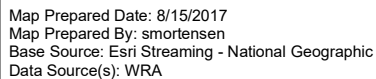





Figure 2. Soil Type Located within the Project Area

Sandra-Hayne Culvert
Replacement Project
San Mateo County, California

This map may contain data from publicly available sources including, but not limited to, parcel boundaries. These data sources may be inaccurate. They are intended for reference purposes only and do not represent legal boundaries or absolute locations.

0 25 50 100 Feet


Map Prepared Date: 8/22/2017
Map Prepared By: smortensen
Base Source: Esri Streaming - NAIP 2016
Data Source(s): WRA, SSURGO

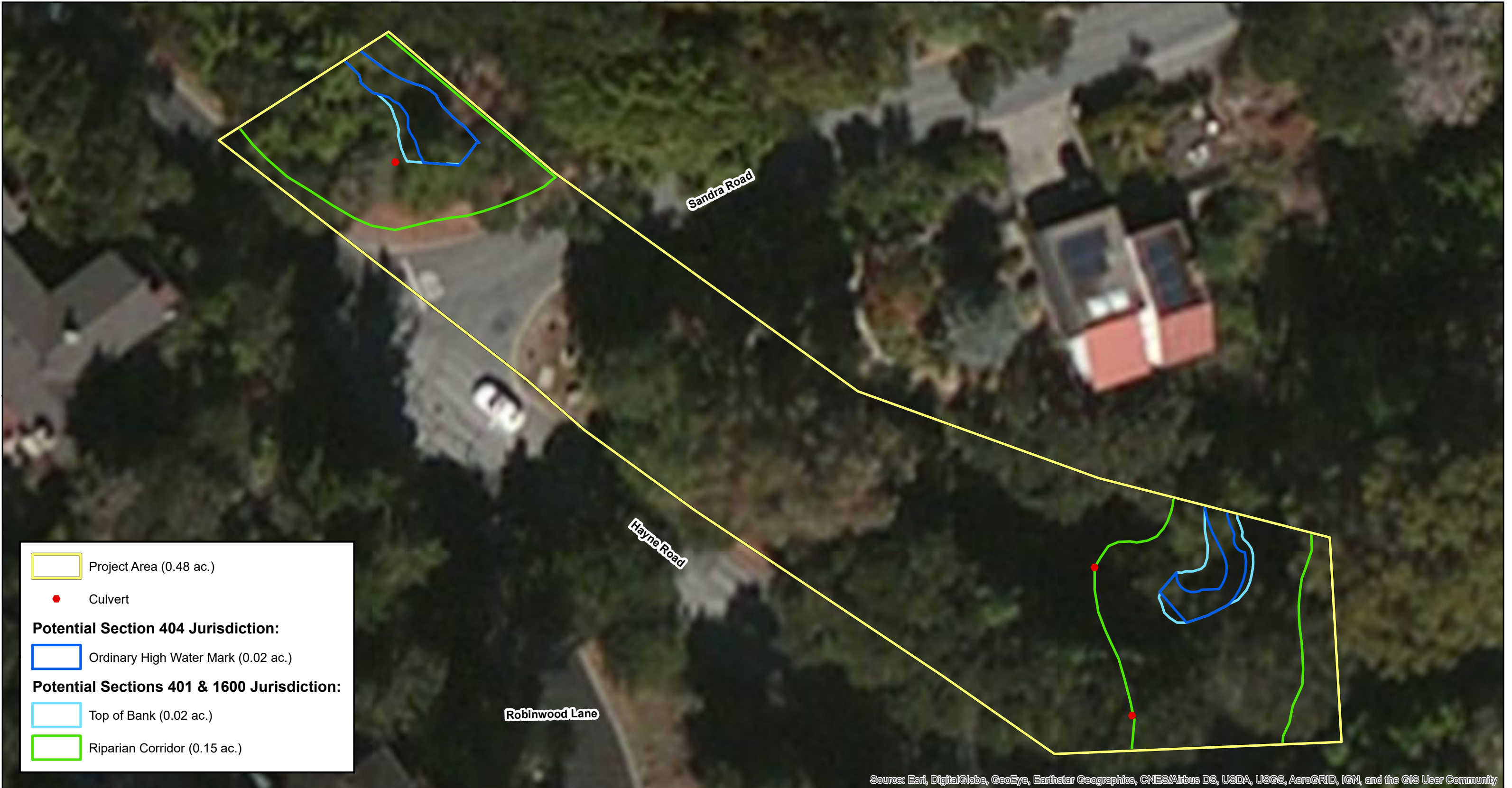


Figure 3. Preliminary Water of the U.S. and of the State Jurisdictional Map

Sandra-Hayne Culvert Replacement Project
San Mateo County, California

This map may contain data from publicly available sources including, but not limited to, parcel boundaries. These data sources may be inaccurate. They are intended for reference purposes only and do not represent legal boundaries or absolute locations.

0 25 50 100 Feet

Map Prepared Date: 8/30/2017
Map Prepared By: smortensen
Base Source: Esri Streaming - NAIP 2016
Data Source(s): WRA

wra
ENVIRONMENTAL CONSULTANTS

Attachment B:
Representative Photographs



Photograph 1. Photograph taken from lower reach (southeast of Sandra Road) of Cherry Creek within the coast live oak woodland of the Project Area, looking northwest toward Sandra Road. Photograph taken July 31, 2017.



Photograph 2. Photograph taken from Sandra Road looking northwest towards the upper reach (northwest of Sandra Road) of coast live oak woodland within the Project Area. Photograph taken July 31, 2017.



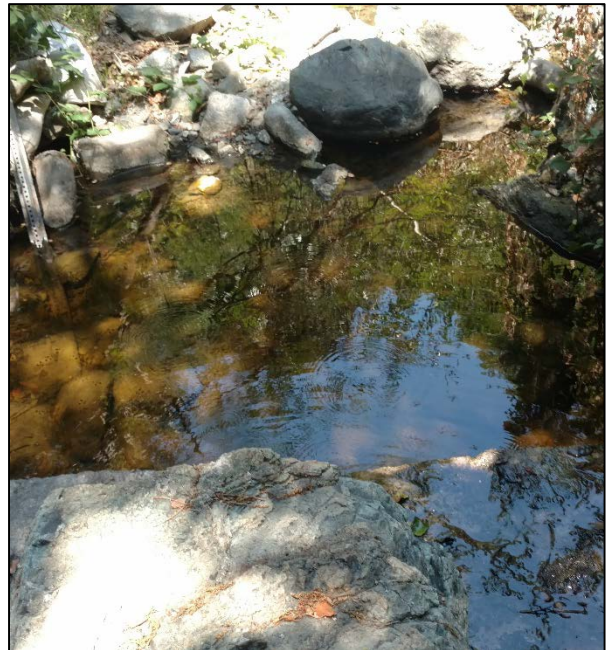
Photograph 3. Photograph taken of degrading culvert outfalls proposed for replacement in Cherry Creek. Photograph taken July 31, 2017.



Photograph 4. Photograph taken of inlet hi/low culverts northwest of Sandra Road. Photograph taken July 31, 2017.



Photograph 5. Photograph taken of inlet trash rack in Cherry Creek northwest of Sandra Road. Photograph taken August 8, 2017.



Photograph 6. Photograph taken standing on weir in Cherry Creek looking northeast, down the tributary. Photograph taken August 8, 2017.

Attachment C:
Plant Species Observed within the Project Area

Attachment C: Plant Species Observed within the Project Area

Scientific Name	Common Name	Origin	Form	Rarity Status	CAL-IPC Status	Wetland Status (AW 2016)
<i>Aesculus californica</i>	Buckeye	native	tree	-	-	-
<i>Agrostis capillaris</i>	Colonial bent grass	non-native	perennial grass	-	-	FAC
<i>Conium maculatum</i>	Poison hemlock	non-native (invasive)	perennial herb	-	Moderate	FACW
<i>Cyperus eragrostis</i>	Tall cyperus	native	perennial grasslike herb	-	-	FACW
<i>Ehrharta erecta</i>	Upright veldt grass	non-native (invasive)	perennial grass	-	Moderate	-
<i>Epipactis helleborine</i>	Helleborine	non-native	perennial herb	-	-	FACU
<i>Eucalyptus globulus</i>	Blue gum	non-native (invasive)	tree	-	Limited	-
<i>Genista monspessulana</i>	French broom	non-native (invasive)	shrub	-	High	-
<i>Hedera helix</i>	English ivy	non-native (invasive)	vine, shrub	-	-	FACU
<i>Heteromeles arbutifolia</i>	Toyon	native	shrub	-	-	-
<i>Lonicera hispidula</i>	Pink honeysuckle	native	vine, shrub	-	-	FACU
<i>Malus pumila</i>	Paradise apple	non-native	tree	-	-	-
<i>Phoenix canariensis</i>	Canary island date palm	non-native (invasive)	tree	-	Limited	-
<i>Prunus ilicifolia</i>	Holly leaf cherry	native	tree, shrub	-	-	-
<i>Quercus agrifolia</i>	Coast live oak	native	tree	-	-	-
<i>Rubus ursinus</i>	California blackberry	native	vine, shrub	-	-	FAC
<i>Salix lasiolepis</i>	Arroyo willow	native	tree, shrub	-	-	FACW
<i>Toxicodendron diversilobum</i>	Poison oak	native	vine, shrub	-	-	FACU
<i>Umbellularia californica</i>	California bay	native	tree	-	-	FAC
<i>Vinca major</i>	Vinca	non-native (invasive)	perennial herb	-	Moderate	-

Attachment C: Plant Species Observed within the Project Area

Key to Conservation Status:

FE Federal Endangered

FT Federal Threatened

SE State Endangered

ST State Threatened

Rank 1A CNPS Rank 1A: Presumed extirpated in California and either rare or extinct elsewhere

Rank 1B.1 CNPS Rank 1B.1: Rare, threatened, or endangered in California and elsewhere (seriously threatened in California)

Rank 1B.2 CNPS Rank 1B.2: Rare, threatened, or endangered in California and elsewhere (moderately threatened in California)

Rank 1B.3 CNPS Rank 1B.3: Rare, threatened, or endangered in California and elsewhere (not very threatened in California)

Rank 2A CNPS Rank 2A: Presumed extirpated in California, but more common elsewhere

Rank 2B.1 CNPS Rank 2B.1: Rare, threatened, or endangered in California, but more common elsewhere (seriously threatened in California)

Rank 2B.2 CNPS Rank 2B.2: Rare, threatened, or endangered in California, but more common elsewhere (moderately threatened in California)

Rank 2B.3 CNPS Rank 2B.3: Rare, threatened, or endangered in California, but more common elsewhere (not very threatened in California)

Rank 3.1 CNPS Rank 3.1: Plants about which more information is needed - A review list (seriously threatened in California)

Rank 3.2 CNPS Rank 3.2: Plants about which more information is needed - A review list (moderately threatened in California)

Rank 3.3 CNPS Rank 3.3: Plants about which more information is needed - A review list (not very threatened in California)

Attachment C: Plant Species Observed within the Project Area

Rank 4.1 CNPS Rank 4.1: Plants of limited distribution - A watch list (seriously threatened in California)

Rank 4.2 CNPS Rank 4.2: Plants of limited distribution - A watch list (moderately threatened in California)

Rank 4.3 CNPS Rank 4.3: Plants of limited distribution - A watch list (not very threatened in California)

Key to Cal-IPC Status (Cal-IPC 2017):

High: These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate: These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited: These species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Key to Wetland Status (Lichvar et al. 2016):

OBL Obligate plant; almost always occurs in wetlands.

FACW Facultative wetland plant; usually occurs in wetlands, but may occur in non-wetlands.

FAC Facultative plant; occurs in wetlands and nonwetlands.

FACU Facultative upland plant; usually occurs in non-wetlands, but may occur in wetlands.

UPL Upland plant; almost never occur in wetlands.

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