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June 12, 2019
Project 1152.01

Helios Dayspring
c/o Jessica Edmondson
Kirk Consulting
8830 Morro Road
Atascadero, CA 93422

Re: Addendum to Biological Resource Assessment for 1255 Tierra Redonda, APN 080-021-052, Bradley, San Luis Obispo County

Dear Mr. Dayspring:

This report serves as an addendum to the *Biological Resource Assessment for 1255 Tierra Redonda, APN 080-021-052* (Althouse and Meade, Inc. 2018) and provides information regarding botanical resources associated with an approximately 31.1-acre Study Area located in the central portion of a 101.6-acre¹ property (Property; Figure 1). Approximate coordinates for the center of the Property are 35.777 N, 120.9689 W (WGS 84) in the Tierra Redonda Mountain USGS 7.5' topographic quadrangle in San Luis Obispo County, California. A spring floristic survey of the Study Area was conducted on May 9, 2019 in response to recommendations made in the original Biological Resource Assessment (BRA) submitted November 19, 2018. The May 2019 survey was appropriately timed to incorporate the blooming periods for the 20 special status plant species with potential to occur on the project site (refer to Table 1, Attachment D in BRA). This survey was conducted prior to the development of additional infrastructure by the proposed project (Project), a Cannabis Cultivation Minor Use Permit.

¹ The Property size of 101.6 acres is a correction to the original BRA report that stated a 34-acre Property.

Figure 1. Aerial Photograph



Legend

 Parcel  Survey Area (31.1 acres)



0 200 400 600 800 Feet

Tierra Redonda
Map Center: 120.96702°W 35.77562°N
Bradley, San Luis Obispo County

Imagery Date: 09/28/2016



ALTHOUSE AND MEADE, INC.
BIOLOGICAL AND ENVIRONMENTAL SERVICES

Map Updated:
June 11, 2019 08:01 AM by MMP

Methods

A focused survey of the Study Area for botanical resources was conducted on May 9, 2019 by Althouse and Meade, Inc. Botanist Kristen Andersen. The survey method was selected based on the known blooming periods of the 20 special status plant species reported from the region with potential to occur in the Study Area (refer to BRA, Attachment D, Table 1). The survey focused on the Project footprint as shown on the 2018 site plans that are included in the BRA (Althouse and Meade, Inc. 2018). The survey included meandering transects with an emphasis on searching for special status plant species and their preferred habitat. Transects were also utilized to compile a comprehensive list of plants occurring within the Study Area (Appendix B). Identification of botanical resources included field observations and laboratory analysis of collected material.

Botanical nomenclature used in this document follows the Jepson Flora Project (Regents of the University of California 2018).

Prior to the 2019 site visit, the California Natural Diversity Database (CNDDDB; May 2019 data) and the California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants of California were reviewed for special status species known to occur in the nine USGS 7.5-minute quadrangles surrounding the site, including: Adelaida, Bradley, Bryson, Hames Valley, Lime Mountain, Pebblestone Shut-In, Tierra Redondo Mountain, Williams Hill, and Wunpost.

Results

Potential Special Status Plant Species

The CNDDDB and CNPS On-line Inventory of Rare and Endangered Plants of California listed 68 special status plant species, subspecies, and varieties known to occur in the vicinity of the Study Area. The Study Area has potential to support 20 special status plants. Most of these were determined to have low potential to occur in the Study Area. Four species had moderate potential to occur and none were determined to have high potential to occur.

Botanical Survey Results

The May 2019 botanical survey identified 59 species and subspecies of vascular plants in the Study Area (Attachment B, Table 1) in addition to 60 plant species observed during August and October 2018 site surveys, for a total of 119 species identified in the Study Area. The May 2019 plant list includes 42 species native to California, and 17 introduced (naturalized or planted) species. A large variety of native wildflowers were identified on site, many of which are common species in the same genus as special status species. We identified two common species of *Camissoniopsis* (*C. micrantha* and *C. intermedia*) while searching for the rare *C. hardhamiae*. *C. hardhamiae* is identified through examination of pollen grains, where >70 percent of them will be 4--5-angled compared with 3-angled spores dominant (>95 percent) for *C. micrantha* (Figure 2 and Figure 3). Three common species of *Clarkia* were identified (*C. purpurea*, *C. affinis*, *C. bottae*) while searching for the rare *C. jolonensis*, which is not currently known from San Luis Obispo County but is nearby in Monterey County.

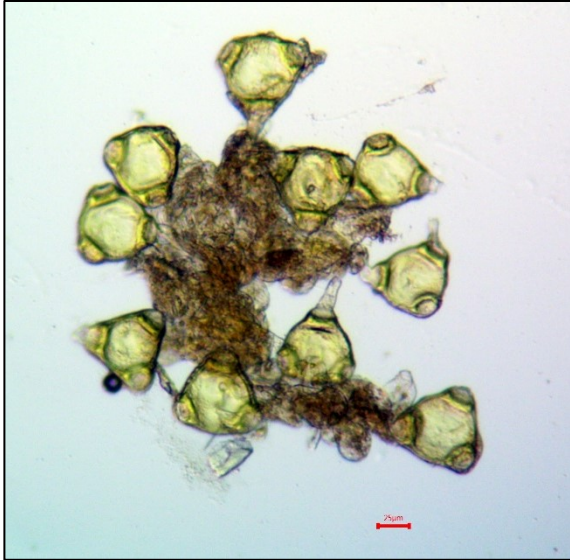


Figure 2. Microscopy photo of 3-angled pollen from miniature suncup (*Camissoniopsis micrantha*) collected from the Study Area.



Figure 3. Photo of *C. micrantha* observed in the Study Area in sandy soil. May 9, 2019.

Recommendations

Focused botanical surveys conducted in 2019 determined special status plants do not occur in the Study Area. No further surveys for special status plants are recommended.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Dart". The signature is stylized with a long, horizontal stroke extending to the right.

Jason Dart
Principal Biologist

Attachment A. References

- Althouse and Meade, Inc. 2018. Biological Resource Assessment for APN 080-021-052, Bradley, San Luis Obispo County. November.
- 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.
- California Department of Fish and Wildlife (CDFW), Natural Diversity Database (CNDDDB). 2018. Special Animals List (914 taxa). State of California, The Resources Agency. August 15, 2018.
- California Department of Fish and Wildlife (CDFW), California Natural Diversity Database. 2018. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly Publication. 127 pp. August 28, 2018.
- California Native Plant Society (CNPS). 2017. Inventory of Rare and Endangered Plants (online edition, v8-02). California Native Plant Society. Sacramento, CA. Accessed on September 1, 2018.
- Regents of the University of California. 2018. The Jepson Flora Project [Internet]. University of California, Berkeley and Jepson Herbaria. October 23, 2018. Available from: <http://ucjeps.berkeley.edu/jepsonflora/index.html>

Attachment B. Plant List

TABLE 1. PLANT LIST. Fifty-nine taxa were identified in the Study Area in May 2019. Special Status Species were not present.

Scientific Name	Special Status	Origin	Common Name
Shrubs - 2 Species			
<i>Rhus aromatica</i>	None	Native	Skunk bush
<i>Sambucus nigra</i> subsp. <i>caerulea</i>	None	Native	Blue elderberry
Forbs - 52 Species			
<i>Achyrachaena mollis</i>	None	Native	Soft blow wives
<i>Agoseris heterophylla</i>	None	Native	Mountain dandelion
<i>Allium peninsulare</i> var. <i>peninsulare</i>	None	Native	Mexicali onion
<i>Amsinckia intermedia</i>	None	Native	Common fiddleneck
<i>Amsinckia menziesii</i>	None	Native	Fiddleneck
<i>Brassica nigra</i>	None	Introduced	Black mustard
<i>Brodiaea terrestris</i> subsp. <i>terrestris</i>	None	Native	Dwarf brodiaea
<i>Calochortus venustus</i>	None	Native	Butterfly mariposa lily
<i>Camissonia contorta</i>	None	Native	Contorted sun cup
<i>Camissoniopsis intermedia</i>	None	Native	Intermediate sun cups
<i>Camissoniopsis micrantha</i>	None	Native	Spencer primrose
<i>Castilleja attenuata</i>	None	Native	Valley tassels
<i>Castilleja exserta</i> subsp. <i>exserta</i>	None	Native	Purple owl's clover
<i>Clarkia affinis</i>	None	Native	Chaparral clarkia
<i>Clarkia bottae</i>	None	Native	Punchbowl clarkia
<i>Clarkia purpurea</i>	None	Native	Winecup clarkia
<i>Collinsia heterophylla</i> var. <i>heterophylla</i>	None	Native	Chinese-houses
<i>Daucus pusillus</i>	None	Native	American wild carrot
<i>Delphinium variegatum</i>	None	Native	Royal larkspur
<i>Diplacus aurantiacus</i>	None	Native	Sticky monkeyflower
<i>Erodium brachycarpum</i>	None	Introduced	White stemmed filaree
<i>Erodium cicutarium</i>	None	Introduced	Redstem filaree
<i>Erythranthe guttatus</i>	None	Introduced	Yellow monkeflower
<i>Geranium dissectum</i>	None	Introduced	Wild geranium
<i>Hypochaeris glabra</i>	None	Introduced	Smooth cat's-ear
<i>Hypochaeris radicata</i>	None	Introduced	Rough cat's-ear
<i>Lastarriaea coriacea</i>	None	Native	Leather-spineflower
<i>Layia glandulosa</i>	None	Native	White layia

Scientific Name	Special Status	Origin	Common Name
<i>Lepidium strictum</i>	None	Native	Peppergrass
<i>Lupinus bicolor</i>	None	Native	Miniature lupine
<i>Lysimachia arvensis</i>	None	Introduced	Scarlet pimpernel
<i>Madia exigua</i>	None	Native	Small tarweed
<i>Madia gracilis</i>	None	Native	Gumweed
<i>Marrubium vulgare</i>	None	Introduced	Horehound
<i>Matricaria discoidea</i>	None	Introduced	Pineapple weed
<i>Medicago polymorpha</i>	None	Introduced	California burclover
<i>Microseris douglasii</i>	None	Native	Douglas' microseris
<i>Plagiobothrys canescens</i> var. <i>canescens</i>	None	Native	Valley popcornflower
<i>Pseudognaphalium californicum</i>	None	Native	Ladies' tobacco
<i>Psilocarphus tenellus</i>	None	Native	Slender woolly-marbles
<i>Ranunculus californicus</i>	None	Native	Common buttercup
<i>Sanicula bipinnata</i>	None	Native	Poison sanicle
<i>Sanicula bipinnatifida</i>	None	Native	Purple sanicle
<i>Silene gallica</i>	None	Introduced	Small-flower catchfly
<i>Sisymbrium orientale</i>	None	Introduced	Oriental hedge mustard
<i>Trifolium albopurpureum</i>	None	Native	Indian clover
<i>Trifolium ciliolatum</i>	None	Native	Foothill clover
<i>Trifolium microcephalum</i>	None	Native	Small headed clover
<i>Tropidocarpum gracile</i>	None	Native	Dobie pod
<i>Urtica dioica</i> subsp. <i>holosericea</i>	None	Native	Hoary nettle
<i>Vicia villosa</i> subsp. <i>villosa</i>	None	Introduced	Hairy vetch
<i>Zeltnera davyi</i>	None	Native	Davy's centaury
Grasses - 5 Species			
<i>Aira caryophyllea</i>	None	Introduced	Shiver grass
<i>Juncus bufonius</i>	None	Native	Toad rush
<i>Phalaris paradoxa</i>	None	Introduced	Hood canary grass
<i>Polypogon monspeliensis</i>	None	Introduced	Annual beard grass
<i>Stipa pulchra</i>	None	Native	Purple needle grass