



May 19, 2020

Mr. Matt Quaglino
Quaglino Properties
815 Fiero Lane
San Luis Obispo, California 93401

RE: Botanical Survey Results Memorandum for a Proposed Project at 862 Aerovista Place, San Luis Obispo, California

Dear Mr. Quaglino,

Terra Verde Environmental Consulting, LLC (Terra Verde) has prepared this memorandum to document the results of a spring botanical survey completed for the property located at 862 Aerovista Place, San Luis Obispo, California (APN 053-412-015; see Attachment A – Project Location and Survey Area Map). The purpose of the survey was to identify and map the location of any special-status botanical species present within the proposed development area, focusing on adobe sanicle (*Sanicula maritima*), a species for which low suitability habitat was identified on site. Previous surveys of the site included a formal delineation of waters and wetlands, completed by Terra Verde botanist Kristen Nelson and Storrer Environmental Services (SES) botanist Jessica Peak on July 18, 2019 (refer to Wetland Delineation and Jurisdictional Determination Report, SES 2019). In addition, Ms. Nelson and Terra Verde biologist Sara Snyder conducted a follow-up survey on January 06, 2020, which included an assessment of site conditions and the potential for special-status species to occur; and Terra Verde principal biologist Brooke Langle has been to the site twice during site meetings with the owner, project engineer, and Regional Water Quality Control Board staff. During these initial surveys, Terra Verde identified low suitability habitat within the survey area for the following special-status botanical species:

- Congdon's tarplant (*Centromadia parryi* subsp. *congdonii*), California Rare Plant Rank (CRPR) 1B.1
- Hoover's button-celery (*Eryngium aristulatum* var. *hooveri*), CRPR 1B.1
- Adobe sanicle (*Sanicula maritima*), State Rare / CRPR 1B.1



Congdon's tarplant and Hoover's button-celery were not observed on site during appropriately timed surveys in July 2019. However, these surveys were completed outside the typical blooming period for adobe sanicle. As such, a focused spring botanical survey was completed on April 13, 2020. The methods and results of this survey are described below. Refer to the *Biological Survey Results Memorandum* (Terra Verde 2020) for a discussion of the habitat conditions present on site.

Methodology

A focused botanical survey was completed by Terra Verde botanist Kristen Nelson April 13, 2020. The entire proposed development area and an immediate buffer was surveyed on foot to ensure complete visual coverage of the survey area. The survey included an inventory of all botanical species observed. Prior to completing the survey, a nearby reference population of adobe sanicle was visited and confirmed to be in identifiable condition.

Botanical species identifications and taxonomic nomenclature followed *The Jepson Manual: Vascular Plants of California*, 2nd edition (Baldwin et al. 2012) as well as taxonomic updates provided in the Jepson eFlora (Jepson Flora Project 2020). A complete list of botanical species observed during all site surveys is included as Attachment B.

Results

No special-status species were identified within the survey area and no unknown or unidentifiable plants were observed on site. The habitat consists of annual grassland dominated by wild oats (*Avena* spp.) in the upland portions of the site. The ephemeral drainage supports mix of native and non-native forbs dominated by spike rush (*Eleocharis macrostachya*), bristly ox-tongue (*Helminthotheca echioides*), and tall cyperus (*Cyperus eragrostis*), with an isolated patch of cattails (*Typha latifolia*) and arroyo willow (*Salix lasiolepis*) at the eastern property boundary. Representative site photographs are included as Attachment C.

Conclusion

No special-status botanical species were documented on site during appropriately-timed spring and summer surveys. As such, it is assumed that no special-status botanical species currently exist on site, and no impacts to special-status plant populations will occur as a result of the proposed development.



If you should have any questions or require additional information, please contact me at (702) 596-5038 or knelson@terraverdeweb.com.

Sincerely,

A handwritten signature in black ink that reads "Kristen Nelson".

Kristen Nelson
Botanist

Attachments:

- A – Project Location and Survey Area Map
- B – List of Botanical Species Observed
- C – Representative Site Photographs



REFERENCES

- Baldwin, Bruce G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken. 2012. *The Jepson Manual: Vascular Plants of California*, Second Edition. University of California Press. Berkeley, California.
- Jepson Flora Project (eds.). 2019. Regents of the University of California. Available online at: <http://ucjeps.berkeley.edu/eflora/>. Accessed January 2020.
- Storrer Environmental Services. 2019. Wetland Delineation and Jurisdictional Determination Report for 862 Aerovista Place (APN 053-412-015), San Luis Obispo, California. Consultant Report, August 2019.
- Terra Verde Environmental Consulting, LLC. 2020. Biological Survey Results Memorandum for a Proposed Project at 862 Aerovista Place, San Luis Obispo, California. Consultant Report, February 2020.



**ATTACHMENT A -
Project Location and Survey Area Map**

09 Jan 2020



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Quaglino Biological Survey Results
Figure 1: Project Location and Survey Area Map

-  Site Location
-  Survey Area
-  Property Boundary





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**ATTACHMENT B -
List of Botanical Species Observed**



List of Botanical Species Observed at the Aerovista Place Project Site
Observed by Terra Verde on July 18, 2019 and January 06 and April 13, 2020

Family	Scientific Name	Common Name	Status ¹	Origin
Agavaceae, Century Plant Family	<i>Agave americana</i>	American century plant	--	Naturalized (Ornamental)
Amaranthaceae, Amaranth Family	<i>Amaranthus albus</i>	Tumbleweed	--	Naturalized
Apiaceae, Carrot Family	<i>Conium maculatum</i>	Poison hemlock	FACW	Naturalized
	<i>Foeniculum vulgare</i>	Fennel	--	Naturalized
Apocynaceae, Dogbane Family	<i>Asclepias fascicularis</i>	Narrow-leaf milkweed	FAC	Native
Arecaceae, Palm Family	<i>Washingtonia robusta</i>	Mexican fan palm	--	Naturalized (Ornamental)
Asphodelaceae, Asphodel Family	<i>Asphodelus fistulosus</i>	Onionweed	--	Naturalized
Asteraceae, Sunflower Family	<i>Baccharis pilularis</i>	Coyote brush	--	Native
	<i>Erigeron bonariensis</i>	Flax-leaved horseweed	--	Naturalized
	<i>Helminthotheca echioides</i>	Bristly ox-tongue	FAC	Naturalized
	<i>Lactuca serriola</i>	Prickly lettuce	--	Naturalized
	<i>Pseudognaphalium californicum</i>	Ladies' tobacco	--	Native
	<i>Sonchus asper</i>	Prickly sow thistle	FAC	Naturalized
	<i>Sonchus oleraceus</i>	Common sow thistle	--	Naturalized
	<i>Tragopogon porrifolius</i>	Salsify	--	Naturalized
Brassicaceae, Mustard Family	<i>Brassica nigra</i>	Black mustard	--	Naturalized
	<i>Hirschfeldia incana</i>	Mediterranean hoary mustard	--	Naturalized
	<i>Raphanus sativus</i>	Radish	--	Naturalized
	<i>Sinapis arvensis</i>	Charlock	--	Naturalized
Convolvulaceae, Morning-glory Family	<i>Convolvulus arvensis</i>	Bindweed	--	Naturalized
Cyperaceae, Sedge Family	<i>Cyperus eragrostis</i>	Tall cyperus	FACW	Native
	<i>Eleocharis macrostachya</i>	Spike rush	OBL	Native
Fabaceae, Legume Family	<i>Lotus corniculatus</i>	Bird's-foot trefoil	FAC	Naturalized
	<i>Lupinus succulentus</i>	Arroyo lupine	--	Native
	<i>Medicago polymorpha</i>	California burclover	--	Naturalized
	<i>Trifolium hirtum</i>	Rose clover	--	Naturalized

Family	Scientific Name	Common Name	Status ¹	Origin
	<i>Vicia benghalensis</i>	Purple vetch	--	Naturalized
	<i>Vicia sativa</i>	Spring vetch	--	Naturalized
	<i>Vicia villosa</i>	Hairy vetch	--	Naturalized
Geraniaceae, Geranium Family	<i>Erodium botrys</i>	Big heron bill	--	Naturalized
	<i>Erodium cicutarium</i>	Redstem filaree	--	Naturalized
	<i>Geranium molle</i>	Crane's bill geranium	--	Naturalized
Juncaceae, Rush Family	<i>Juncus patens</i>	Spreading rush	FACW	Native
	<i>Juncus phaeocephalus</i>	Brown headed rush	FACW	Native
Lythraceae, Loosestrife Family	<i>Lythrum hyssopifolia</i>	Hyssop loosestrife	OBL	Naturalized
Malvaceae, Mallow Family	<i>Malva parviflora</i>	Cheeseweed	--	Naturalized
	<i>Malvella leprosa</i>	Alkali-mallow	--	Native
Myrsinaceae, Myrsine Family	<i>Lysimachia arvensis</i>	Scarlet pimpernel	FAC	Naturalized
Myrtaceae, Myrtle Family	<i>Eucalyptus camaldulensis</i>	River red gum	--	Naturalized (Ornamental)
Onagraceae, Evening-primrose Family	<i>Epilobium brachycarpum</i>	Willow herb	--	Native
	<i>Epilobium ciliatum</i>	Slender willow herb	FACW	Native
Poaceae, Grass Family	<i>Agrostis capillaris</i>	Colonial bent	FAC	Naturalized
	<i>Avena barbata</i>	Slender wild oat	--	Naturalized
	<i>Avena fatua</i>	Wild oat	--	Naturalized
	<i>Briza minor</i>	Annual quaking grass	FAC	Naturalized
	<i>Bromus catharticus</i>	Rescue grass	--	Naturalized
	<i>Bromus diandrus</i>	Ripgut brome	--	Naturalized
	<i>Bromus hordeaceus</i>	Soft chess	--	Naturalized
	<i>Elymus triticoides</i>	Beardless wild-rye	FAC	Native
	<i>Festuca perennis</i>	Rye grass	FAC	Naturalized
	<i>Hordeum vulgare</i>	Barley	--	Naturalized/ Waif
	<i>Phalaris aquatica</i>	Harding grass	--	Naturalized
	<i>Polypogon monspeliensis</i>	Annual beard grass	FACW	Naturalized
	<i>Stipa miliacea</i>	Smilo grass	--	Naturalized
Polygonaceae, Buckwheat Family	<i>Polygonum aviculare</i>	Knotweed	FAC	Naturalized
	<i>Rumex crispus</i>	Curly dock	FAC	Naturalized



Family	Scientific Name	Common Name	Status ¹	Origin
Salicaceae, Willow Family	<i>Salix lasiolepis</i>	Arroyo willow	FACW	Native
Typhaceae, Cattail Family	<i>Typha latifolia</i>	Broad-leaved cattail	OBL	Native

¹**Listing Status:** Indicates listing status for taxa that are included on the National Wetland Plant List (NWPL) for the Arid West region (USFWS 2016), which are assigned one of the following wetland indicator statuses; species with a wetland indicator status of OBL, FACW, or FAC are indicated in the list above:

- **Obligate (OBL):** plants that almost always occur in wetlands.
- **Facultative Wetland (FACW):** plants that usually occur in wetlands, but may occur in non-wetlands.
- **Facultative (FAC):** plants that are equally likely to occur in wetlands and non-wetlands.
- **Facultative Upland (FACU):** plants that usually occur in non-wetlands, but may occur in wetlands.
- **Upland:** plants that almost never occur in wetlands.



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**ATTACHMENT C –
Representative Site Photographs**



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Photo 1. View northwest along the ephemeral drainage (04-13-20).



Photo 2. View east of the ephemeral drainage at the northern property boundary (04-13-20).



Photo 3. View east across the site, consisting of annual grassland (04-13-20).



Photo 4. View southeast across the ephemeral drainage (04-13-20).