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RE: Special status plant surveys for 2021 for 2149 West Hearn Avenue, Santa Rosa Hearn Veterans Village.

This letter report presents my findings of protocol plant surveys for 2021 for the Hearn Veterans Village project site located at 2149 West Hearn Avenue in Santa Rosa, Sonoma County, CA. Plant surveys were also conducted in 2020 so that the 2021 surveys comprise the second year of surveys as requested by the California Department of Fish & Wildlife (CDFW). Please refer to the *Biological Resource Assessment Hearn Veterans Village, 2149 West Hearn Avenue, Santa Rosa* prepared by Wildlife Research Associates and Jane Valerius Environmental Consulting dated December 7, 2020 for additional details about the project and previous studies.

METHODS

Jane Valerius, botanist, conducted a second year of surveys for special status plants. Surveys for special status plants were conducted per CDFW and U.S. Fish & Wildlife Service (USFWS) protocols for projects located on the Santa Rosa Plain (SRP). The protocols require that the floristic surveys be conducted at the time when special status species were in flower and identifiable and a list of all species identifiable at the time of the surveys was recorded. A list of plant species observed during the 2020 and 2021 surveys is provided as Attachment A.

Surveys for special status plants were conducted on April 16, April 22, and May 6, 2021 and on March 17, April 8, and April 27, 2020. The project area had been mowed prior to the May 6, 2021 site visit for fire control purposes.

The surveys were timed so that at least one or more of the three listed vernal pool plants known to occur on the Santa Rosa Plain were in flower. These three species are Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), and Sebastopol meadowfoam (*Limnanthes vinculans*). Prior to conducting surveys at the project site, a site visit to an established reference site was conducted at the Alton Lane Preserve for the three listed vernal pool plants known to occur on the SRP. The purpose of the reference site visits was to establish that one or more of the three listed vernal pool plants known to occur on the SRP were in flower at the time of the site survey. All three of the vernal pool plants were in flower and identifiable

during the April 16 and April 22, 2021 site visits, although the Sonoma sunshine was approximately 50 to 70% in seed with 50 to 30% in flower. For the May 6, 2021 reference site visit the Sonoma sunshine and Sebastopol meadowfoam were 100% past flowering and had gone to seed. The Burke's goldfields was approximately 50% in flower and 50% gone to seed.

As required by the USFWS protocol, a minimum of three surveys were conducted in both 2020 and 2021. Due to the dry conditions in 2020 and 2021 the three surveys were conducted relatively close together as the plant flowering season advanced quickly.

The entire site was surveyed by conducting wandering transects across the project area. Special attention was given to the two small wetland areas mapped for the site during the October 15, 2009 delineation which was verified by the U.S. Army Corps of Engineers in 2010.

RESULTS

Three vegetation communities have been described for the site and are described below:

Non-Native Grassland: Non-native grassland is the main vegetation type on the site and is composed of mostly non-native grasses such as wild oats (*Avena barbata*, *A. fatua*), tall fescue (*Festuca arundinacea*), Harding grass (*Phalaris aquatica*), annual ryegrass (*Festuca perennis*), Bermuda grass (*Cynodon dactylon*), and hare barley (*Hordeum murinum* ssp. *leporinum*). Forb species include teasel (*Dipsacus fullonum*), fennel (*Foeniculum vulgare*), bristly ox-tongue (*Picris echioides*), wild radish (*Raphanus sativus*), bindweed (*Convolvulus arvensis*), and knotweed (*Polygonum aviculare*). Two native grass species were also observed: meadow barley (*Hordeum brachyantherum*) and creeping wildrye (*Elymus triticoides*). These occur as small patches and not as separate community types. Native forb species observed include California poppy (*Eschscholzia californica*), lupines (*Lupinus nanus*, *L. bicolor*), and bedstraw (*Galium aparine*).

Individual Trees and Shrubs: The western and northern portion of the property is undeveloped and consists primarily of non-native grassland with some native valley oak (*Quercus lobata*) and coast live oak (*Quercus agrifolia*) trees. A small stand of arroyo willow with oaks along occurs in the undeveloped portion as well as a thicket of Himalayan blackberry (*Rubus discolor*). Native shrubs noted include poison oak (*Toxicodendron diversilobum*), toyon (*Heteromeles arbutifolia*), and coyote brush (*Baccharis pilularis*). Other trees and shrubs on the site are primarily planted ornamentals and include fruit trees, magnolia, palm, and walnut.

Seasonal Wetlands: Two small seasonal wetland areas were mapped for the project area. The dominant plant species observed in 2009 and 2020 was common lippia (*Phyla nodiflora*) which is a facultative wetland (FACW) plant species. The wetland in the northwest corner also has a lot of creeping wildrye, a FAC species. Both areas are marginal wetlands and were dry during the 2020 and 2021 surveys. Although these areas met the three criteria to qualify as wetlands based on the 2009 delineation, the plant species that occur on the project site wetlands are not typically associated with vernal pools and these areas would not be considered as potential suitable habitat for any of the listed vernal pool plants.

Special Status Plants

No special status plants were observed during the 2020 and 2021 plant surveys. The 2020 and 2021 rainfall amounts were below normal; however, all three of the listed vernal pool plants were observed in flower at the reference site, so if those species were present, they would have been identifiable on the project site. Wetland A, located along the south boundary parallel to West Hearn Avenue, is dominated by common lippia as described above. Wetland B, located in the northwest corner, is a depression that is dominated by creeping wildrye, a rhizomatous grass species, which is not a vernal pool species.

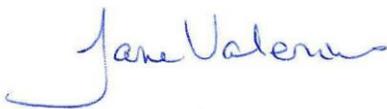
As stated above, the wetlands on the site are not potential suitable habitat for the listed vernal pool plants primarily due to the lack of suitable wetland hydrology. No standing water was observed in the wetlands during the 2020 and 2021 plant surveys. In addition, no standing water was observed at the time of the 2009 wetland delineation. Sample data points were collected for the delineation on October 15, 2009 and in the data sheets it was noted that prior to the site visit it had rained +/- 3 inches in the first storm of the year, which began on October 12, 2009. Despite this amount of rainfall there was no standing water at either of the two wetland areas or anywhere on the project site. Evidence of wetland hydrology was based on the presence of oxidized rhizospheres in the top 12 inches of soil. There was no saturated soils or standing water observed. Wetland A is almost flat with little to no perceptible depression that would hold water long enough for any of the vernal pool plants to develop. Wetland B, despite having the topographic shape to allow for water to pond, also did not support ponding.

SUMMARY AND CONCLUSION

Two years of protocol plant surveys were conducted for the 2149 West Hearn Avenue site in Santa Rosa in 2020 and in 2021. No special status plants were observed during the appropriately timed surveys. Despite the lack of rain in 2020 and 2021, special status plants were observed at the reference site on Alton Lane. The two small seasonal wetlands mapped for the site as part of the 2009 wetland delineation do not provide potential suitable habitat for any of the listed vernal pools plants as they lack sufficient hydrology to support these species.

I hope this information was helpful.

Sincerely,



Jane Valerius
Botanist

ATTACHMENT A

Plant species observed on March 17, April 8 and April 27, 2020 and April 16, April 22 and May 6, 2021.

Scientific Name	Common Name
<i>Avena barbata</i>	Wild oats
<i>Avena fatua</i>	Oats*
<i>Baccharis pilularis</i>	Coyote brush
<i>Brassica nigra</i>	Black mustard*
<i>Brassica rapa</i>	Field mustard*
<i>Bromus catharticus</i>	Brome*
<i>Bromus diandrus</i>	Ripgut brome*
<i>Bromus hordaeceus</i>	Soft chess*
<i>Cichorium intybus</i>	Chicory*
<i>Convolvulus arvensis</i>	Bindweed*
<i>Cottoneaster</i> sp.	Cotoneaster*
<i>Cyperus eragrostis</i>	Tall flat sedge
<i>Daucus carota</i>	Queen Anne's lace*
<i>Dipsacus fullonum</i>	Teasel*
<i>Elymus triticoides</i>	Creeping wildrye
<i>Erodium</i> spp.	Filarees*
<i>Eschscholzia californica</i>	California poppy
<i>Festuca arundinacea</i>	Tall fescue*
<i>Festuca perennis</i>	Ryegrass*
<i>Foeniculum vulgare</i>	Fennel*
<i>Gallium aparine</i>	Bedstraw
<i>Geranium dissectum</i>	Cut-leaf geranium*
<i>Glyceria x iccudebtakus</i>	Western manna grass*
<i>Helminthotheca echioides</i>	Bristly ox-tongue*
<i>Heteromeles arbutifolia</i>	Toyon
<i>Hordeum brachyantherum</i>	Meadow barley
<i>Hordeum marninum</i> ssp. <i>gussoneanum</i>	Mediterranean barley*
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley*
<i>Juglans hindsii</i>	Northern California black walnut
<i>Lactuca serriola</i>	Prickly lettuce*
<i>Lupinus bicolor</i>	Dwarf lupine
<i>Lupinus nanus</i>	Sky lupine
<i>Magnolia</i> sp.	Magnolia*

Scientific Name	Common Name
<i>Malva parviflora</i>	Mallow*
<i>Marrubium vulgare</i>	White horehound*
<i>Medicago polymorpha</i>	Bur clover*
<i>Phalaris aquatica</i>	Harding grass*
<i>Phyla nodiflora</i>	Common lippia
<i>Plantago lanceolata</i>	English plantain*
<i>Polygonum aviculare</i>	Knotweed*
<i>Populus alba</i>	White poplar*
<i>Prunus</i> spp.	Fruit trees*
<i>Quercus agrifolia</i>	Coast live oak
<i>Quercus lobata</i>	Valley oak
<i>Raphanus sativus</i>	Wild radish*
<i>Rubus armeniacus</i>	Himalayan blackberry*
<i>Rumex crispus</i>	Curly dock*
<i>Rumex pulcher</i>	Fiddle dock*
<i>Salix lasiolepis</i>	Arroyo willow
<i>Senecio vulgaris</i>	Common groundsel*
<i>Sonchus asper</i>	Sowthistle*
<i>Taraxacum officinale</i>	Dandelion*
<i>Toxicodendron diversilobum</i>	Poison oak
<i>Tragopogon porrifolius</i>	Salsify*
Unknown palm	Palm*
<i>Vicia sativa</i>	Spring vetch*
<i>Vicia villosa</i>	Hairy vetch*

*Species with an * are non-native.*