APPENDIX A
BIOLOGICAL RESOURCES REPORTS

APPENDIX A-1
SPECIAL-STATUS PLANT SURVEY

July 24, 2017

Mike Campbell
David J. Powers & Associates
1871 The Alameda, Suite 200
San Jose, California 95126

RE: Special-status Plant Survey, Roseland Creek Community Park, Santa Rosa, CA

Dear Mr. Campbell,

This letter summarizes the findings of a late-season special-status plant survey conducted on July 19, 2017 at the site of the proposed Roseland Creek Community Park Project (Project), located southeast of the intersection of Hughes Avenue and Burbank Avenue (APN #'s: 125-331-001, 125-252-002, -003, and -004; Project Area) in the southwest quadrant of the City of Santa Rosa, Sonoma County, California. The following sections provide background, methods and results of the survey.

Background

On May 2, 2017, WRA conducted a biological reconnaissance survey[1]. within the Project Area and determined that two special-status plants had high or moderate potential to occur within the Project Area:

- Sonoma alopecurus (*Alopecurus aequalis* var. *sonomensis*), Federal Endangered, CNPS Rank 1B;
- Congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*), CNPS Rank 1B.

All listed plant species covered by the Santa Rosa Plain Programmatic Biological Opinion[2], Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam are unlikely to occur within the Project Area due to a lack of vernal pool habitat, lack of suitable hydrology (i.e. extended ponding), and/or prior disturbance (i.e. agricultural conversion, annual mowing). Moreover, the biological reconnaissance site visit was conducted during the documented bloom period of all

[1] WRA, Inc. (WRA). 2017. Biological Reconnaissance Roseland Creek Community Park, Santa Rosa, California. May 26.

[2] United States Fish and Wildlife Service (USFWS). 2007. Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California (Corps File No. 223420N).

three listed species. No special-status plants were observed during the May site visit, while Burke's goldfields, and Sebastapol meadowfoam were observed in bloom at a documented reference site just five days after the site visit, confirming their phenology would have been identifiable during the time of the site visit.

Due to the timing of the May 2 site visit, outside of the documented bloom period of Sonoma alopecurus and congested-headed hayfield tarplant, WRA recommended that a follow-up, targeted, protocol-level rare plant survey be conducted to determine presence or absence of these species. The two species bloom periods overlap during the month of July, and a survey was recommended to take place in early July to determine the presence or absence of these species.

Methods

A protocol-level special status plant survey was conducted in the Project Area on July 20, 2017 to determine the presence or absence of Sonoma alopecurus, and congested-headed hayfield tarplant. A reference site for congested-headed hayfield tarplant was visited prior to the survey to confirm the appropriate timing of the survey. Congested-headed hayfield tarplant was observed in bloom at a documented reference site along Tomales Road in Petaluma, approximately 11.5 miles south of the Project Area during the day of the survey. A WRA botanist familiar with the flora of Sonoma and surrounding counties conducted the field survey. The survey followed the protocol for plant surveys described by resource agency guidelines[3][4][5], and entailed walking meandering transects within the Project Area with disproportionate attention to areas determined to provide potential habitat for the target species. Plants were identified using *The Jepson Manual, 2nd Edition*[6] and Jepson eFlora[7], to the taxonomic level necessary to determine whether or not they were rare. Plant names follow the most current nomenclature, Jepson eFlora. The plant surveys were floristic in nature with all observed species recorded and included as a species list provided in Attachment A.

Results

The May 2 site visit resulted in negative findings for special-status plant species, including the three Santa Rosa Plain covered species. A follow-up protocol-level rare plant survey was conducted for Sonoma alopecurus and congested-headed hayfield tarplant on July 19, 2017. The surveys resulted in negative findings for special-status plant species within the Project Area.

Should you have any questions or concerns, please feel free to contact me.

Sincerely,

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[3] California Native Plant Society (CNPS). 2001. Botanical Survey Guidelines. June 2.
[4] California Department of Fish and Game. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. November 24.
[5] U.S. Fish and Wildlife Service (USFWS). 1996. Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants. September 23.
[6] Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken (eds.). 2012. The Jepson Manual: Vascular Plants of California, 2nd edition. University of California Press, Berkeley, CA.
[7] Jepson Flora Project (eds.). 2017. Jepson eFlora. Online at: http://ucjeps.berkeley.edu/IJM.html.

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ATTACHMENTS

Attachment A: List of Observed Plant Species within the Project Area

Attachment A. Plant Species Observed in the Study Area on May 2, and July 10, 2017.

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Alismataceae	*Alisma triviale*	Northern water plantain	native	perennial herb (aquatic)	-	-
Alliaceae	*Allium triquetrum*	White flowered onion	non-native (invasive)	perennial herb (bulb)	-	-
Anacardiaceae	*Toxicodendron diversilobum*	Poison oak	native	vine, shrub	-	-
Apiaceae	*Conium maculatum*	Poison hemlock	non-native (invasive)	perennial herb	-	Moderate
Apiaceae	*Daucus carota*	Carrot	non-native (invasive)	perennial herb	-	-
Apiaceae	*Foeniculum vulgare*	Fennel	non-native (invasive)	perennial herb	-	High
Apocynaceae	*Vinca major*	Vinca	non-native (invasive)	perennial herb	-	Moderate
Araceae	*Arum italicum*	Italian lords and ladies	non-native	perennial herb	-	-
Araliaceae	*Hedera helix*	English ivy	non-native (invasive)	vine, shrub	-	-
Asteraceae	*Artemisia douglasiana*	California mugwort	native	perennial herb	-	-
Asteraceae	*Carduus pycnocephalus* ssp. *pycnocephalus*	Italian thistle	non-native (invasive)	annual herb	-	Moderate

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Asteraceae	*Cichorium intybus*	Chicory	non-native	perennial herb	-	-
Asteraceae	*Helminthotheca echioides*	Bristly ox-tongue	non-native (invasive)	annual, perennial herb	-	Limited
Asteraceae	*Hypochaeris radicata*	Hairy cats ear	non-native (invasive)	perennial herb	-	Moderate
Asteraceae	*Lactuca saligna*	Willow lettuce	non-native	annual herb	-	-
Asteraceae	*Lactuca serriola*	Prickly lettuce	non-native (invasive)	annual herb	-	-
Asteraceae	*Matricaria discoidea*	Pineapple weed	native	annual herb	-	-
Asteraceae	*Taraxacum officinale*	Red seeded dandelion	non-native (invasive)	perennial herb	-	-
Asteraceae	*Tragopogon porrifolius*	Salsify	non-native	perennial herb	-	-
Brassicaceae	*Raphanus sativus*	Wild radish	non-native (invasive)	annual, biennial herb	-	Limited
Caprifoliaceae	*Symphoricarpos albus* var. *laevigatus*	Snowberry	native	shrub	-	-
Convolvulaceae	*Convolvulus arvensis*	Field bindweed	non-native (invasive)	perennial herb, vine	-	-
Chenopodiaceae	*Atriplex prostrata*	Fat-hen	non-native	annual herb	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Cyperaceae	*Carex barbarae*	Valley sedge	native	perennial grasslike herb	-	-
Cyperaceae	*Carex praegracilis*	Field sedge	native	perennial grasslike herb	-	-
Cyperaceae	*Cyperus eragrostis*	Tall cyperus	native	perennial grasslike herb	-	-
Dipsacaceae	*Dipsacus sativus*	Indian teasel	non-native (invasive)	biennial herb	-	Moderate
Dryopteridaceae	*Dryopteris arguta*	Wood fern	native	fern	-	-
Fabaceae	*Acacia melanoxylon*	Blackwood acacia	non-native (invasive)	tree	-	Limited
Fabaceae	*Acmispon americanus* var. *americanus*	Spanish lotus	native	annual herb	-	-
Fabaceae	*Genista monspessulana*	French broom	non-native (invasive)	shrub	-	High
Fabaceae	*Trifolium dubium*	Shamrock	non-native	annual herb	-	-
Fabaceae	*Trifolium glomeratum*	Clustered clover	non-native	annual herb	-	-
Fabaceae	*Trifolium hirtum*	Rose clover	non-native (invasive)	annual herb	-	Limited
Fabaceae	*Vicia sativa*	Spring vetch	non-native	annual herb, vine	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Fagaceae	*Quercus agrifolia*	Coast live oak	native	tree	-	-
Fagaceae	*Quercus lobata*	Valley oak	native	tree	-	-
Geraniaceae	*Geranium dissectum*	Wild geranium	non-native (invasive)	annual herb	-	Limited
Juglandaceae	*Juglans hindsii*	Northern California black walnut	native	tree	Rank 1B.1*	-
Juncaceae	*Juncus bufonius*	Common toad rush	native	annual grasslike herb	-	-
Juncaceae	*Juncus patens*	Rush	native	perennial grasslike herb	-	-
Lamiaceae	*Stachys sp.*	-	-	-	-	-
Lythraceae	*Lythrum hyssopifolia*	Hyssop loosestrife	non-native	annual, perennial herb	-	-
Malvaceae	*Malva sp.*	-	-	-	-	-
Myrtaceae	*Eucalyptus camaldulensis*	Red gum	non-native (invasive)	tree	-	Limited
Myrtaceae	*Eucalyptus globulus*	Blue gum	non-native (invasive)	tree	-	Limited
Oleaceae	*Fraxinus latifolia*	Oregon ash	native	tree	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Oleaceae	*Fraxinus velutina* 'Modesto'	Modesto ash	non-native	tree	-	-
Oleaceae	*Ligustrum lucidum*	Glossy privet	non-native (invasive)	tree, shrub	-	-
Orobanchaceae	*Parentucellia viscosa*	Yellow parentucellia	non-native (invasive)	annual herb	-	Limited
Papaveraceae	*Eschscholzia californica*	California poppy	native	annual, perennial herb	-	-
Papaveraceae	*Fumaria sp.*	-	-	-	-	-
Pinaceae	*Cedrus deodara*	Deodar cedar	non-native	tree	-	-
Pinaceae	*Pinus radiata*	Monterey pine	native	tree	Rank 1B.1*	-
Plantaginaceae	*Kickxia elatine*	Sharp point fluellin	non-native	perennial herb	-	-
Plantaginaceae	*Plantago lanceolata*	Ribwort	non-native (invasive)	perennial herb	-	Limited
Poaceae	*Avena barbata*	Slim oat	non-native (invasive)	annual, perennial grass	-	Moderate
Poaceae	*Briza maxima*	Rattlesnake grass	non-native (invasive)	annual grass	-	Limited
Poaceae	*Briza minor*	Little rattlesnake grass	non-native	annual grass	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Poaceae	*Bromus catharticus*	Rescue grass	non-native	annual, perennial grass	-	-
Poaceae	*Bromus diandrus*	Ripgut brome	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Bromus hordeaceus*	Soft chess	non-native (invasive)	annual grass	-	Limited
Poaceae	*Bromus racemosus*	Smooth brome	non-native	perennial grass	-	-
Poaceae	*Cynodon dactylon*	Bermuda grass	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Danthonia californica*	California oatgrass	native	perennial grass	-	-
Poaceae	*Elymus glaucus*	Blue wildrye	native	perennial grass	-	-
Poaceae	*Festuca arundinacea*	Reed fescue	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Festuca bromoides*	Brome fescue	non-native	annual grass	-	-
Poaceae	*Festuca myuros*	Rattail sixweeks grass	non-native (invasive)	annual grass	-	-
Poaceae	*Festuca perennis*	Italian rye grass	non-native	annual, perennial grass	-	-
Poaceae	*Hordeum brachyantherum*	Meadow barley	native	perennial grass	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Poaceae	*Hordeum marinum* ssp. *gussoneanum*	Barley	non-native (invasive)	annual grass	-	Moderate
Poaceae	*Paspalum dilatatum*	Dallis grass	non-native	perennial grass	-	-
Poaceae	*Phalaris aquatica*	Harding grass	non-native (invasive)	perennial grass	-	Moderate
Poaceae	*Poa annua*	Annual blue grass	non-native	annual grass	-	-
Poaceae	*Poa pratensis* ssp. *pratensis*	Kentucky blue grass	non-native (invasive)	perennial grass	-	-
Poaceae	*Stipa pulchra*	Purple needle grass	native	perennial grass	-	-
Polygonaceae	*Rumex crispus*	Curly dock	non-native (invasive)	perennial herb	-	Limited
Ranunculaceae	*Ranunculus muricatus*	Buttercup	non-native	annual, perennial herb	-	-
Rosaceae	*Cotoneaster pannosus*	Woolly cotoneaster	non-native (invasive)	shrub	-	Moderate
Rosaceae	*Crataegus monogyna*	Hawthorn	non-native (invasive)	shrub	-	Limited
Rosaceae	*Prunus cerasifera*	Cherry plum	non-native (invasive)	tree	-	Limited
Rosaceae	*Rosa californica*	California wild rose	native	shrub	-	-

Family	Scientific Name	Common Name	Origin	Form	Rarity Status[1]	CAL-IPC Status[2]
Rosaceae	*Rosa sp.*	-	-	-	-	-
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	non-native (invasive)	shrub	-	High
Rubiaceae	*Galium aparine*	Cleavers	native	annual herb	-	-
Salicaceae	*Populus nigra*	Lombardy poplar	non-native	tree	-	-
Salicaceae	*Populus alba*	White poplar	non-native	tree	-	-
Salicaceae	*Salix lasiolepis*	Arroyo willow	native	tree, shrub	-	-
Sapindaceae	*Acer macrophyllum*	Bigleaf maple	native	tree	-	-
Sapindaceae	*Aesculus californica*	Buckeye	native	tree	-	-
Ulmaceae	*Ulmus minor*	English elm	non-native	tree	-	-

*****Monterey pine, and Northern California black walnut are not native to the Project Area. Both species has been widely planted and naturalized outside of their native ranges. CNPS rarity status only applies to native occurrences which are not found in the Project Area (CNPS 2017).

All species identified using the *Jepson Manual II: Vascular Plants of California* (Baldwin et al. 2012), *A Flora of Sonoma County* (Best et al. 1996) and *Jepson eFlora* (Jepson Flora Project [eds.] 2017); Nomenclature follows *Jepson eFlora*.

[1]Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2017)

FE:	Federal Endangered
FT:	Federal Threatened
SE:	State Endangered
ST:	State Threatened
SR:	State Rare
Rank 1A:	Plants presumed extirpated in California and either rare or extinct elsewhere
Rank 1B:	Plants rare, threatened, or endangered in California and elsewhere

Rank 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3: Plants about which we need more information – a review list
Rank 4: Plants of limited distribution – a watch list

[2]Invasive Status: California Invasive Plant Inventory (Cal-IPC 2017)
High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
Assessed: Assessed by Cal-IPC and determined to not be an existing current threat