

Ted Winfield & Associates

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August 2, 2016

Mr. Jim Keegan
Keegan & Coppin
1355 North Dutton Avenue
Santa Rosa, CA 95401

Re: Results of 2016 Plant Survey at 685 Aviation Blvd. Property (APN 059-340-056)

Dear Mr. Keegan:

This letter report provides the results of a survey of the property located at 685 Aviation Boulevard (APN 059-340-056) (Site) in unincorporated Sonoma County. The survey was conducted to determine if there were seasonal wetlands that could be subject to the jurisdiction of the U.S. Army Corps of Engineer pursuant to section 404 of the Clean Water Act, and to conduct a general vegetation survey of the Site.

BACKGROUND

A prior wetland survey that included the Site was conducted in 1998¹ and approximately 0.138 acre of features potentially subject to the Corps' jurisdiction pursuant to section 404 of the Clean Water Act was found to occur on the project area, including the Site. At the time of the prior wetland survey, the Site was part of a larger 3.13-acre parcel (APN 59-340-033). This parcel was apparently split into two parcels sometime after 1998, and development occurred on one of the parcels (APN 059-340-055) and a small area of the Site. Most of the Site remained undeveloped.

According to the wetland map produced from the 1998 wetland survey, approximately 0.091 acre (3,974 sq. ft.) of potentially jurisdictional seasonal wetlands occurred on the Site, the remaining 0.047 (2,022 sq. ft.) acre of potentially jurisdictional seasonal wetlands occurred on the other part of the survey area, which has since been developed.

¹ Pre-jurisdictional Determination, Waters of the United States, Aviation Associates Site (A.P. 59-340-033), Sonoma County, California. Report prepared for Mr. Al Coppin, Keegan & Coppin by Laurence P. Stromberg, Ph.D. June 13, 1998.

A survey for special-status plants was also conducted in 1998² focusing on the potential occurrence of the endangered plants known to occur in seasonal wetlands on the Santa Rosa Plain, which include Burke's goldfields (*Lasthenia burkei*), Sonoma sunshine (*Blennosperma bakeri*) and Sebastopol meadowfoam (*Limnanthes vinculinis*). No special-status plants were observed in the seasonal wetlands or elsewhere in the survey area, which included the Site, during the 1998 special-status plant surveys.

2016 WETLAND AND SPECIAL-STATUS PLANT SURVEY

A survey of the Site was conducted on April 19, 2016, to look for evidence of the presence of wetland that could be subject to the jurisdiction of the Corps pursuant to section 404 of the Clean Water Act, and to compile a list of plant species present on the Site. The survey was conducted at a time when wetland plants would be in flower and the presence of seasonal wetlands distinguishable from upland areas.

Seasonal Wetlands. In the 1998 wetland report, the seasonal wetlands at the Site were dominated by California semaphore grass (*Pleuropogon californicus*), and the subdominant species included ryegrass (*Festuca perennis*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*) and curly dock (*Rumex crispus*), along with rabbitsfoot grass (*Polypogon monspeliensis*) and tall flat sedge (*Cyperus eragrostis*).

During the April 2016 survey, California semaphore grass was not observed at the locations where seasonal wetlands were reported to occur in 1998 or elsewhere on the Site. The 2016 survey was conducted during the reported flowering period of California semaphore grass, and this grass was observed in flower on several other sites during other surveys conducted around the same time.

A few individual plants of tall flat sedge and other species found primarily in seasonal wetlands, including blue-eyed grass (*Sisyrinchium bellum*) and slender rush (*Juncus tenuis*) occurred at the Site, but were not dominant to the extent that their occurrence constituted hydrophytic (wetland) vegetation. Ryegrass and Mediterranean barley occurred throughout the Site and as facultative species, they occur equally in wetland and upland habitat.

The areas where seasonal wetlands were mapped in 1998 did not exhibit any surface hydrology indicators, such as evidence of ponded water or presence of algal matting on the soil surface, and the vegetation was not dominated by hydrophytic (wetland) plants. Based on observations made during the April, 2016 survey the seasonal wetlands that were present in 1998 are no longer present.

² Results of Survey for Special-status Plant Species, Aviation Associates Site (A.P. 59-340-033), Sonoma County, California. Report prepared for Mr. Al Coppin, Keegan & Coppin by Laurence P. Stromberg, Ph.D. June 13, 1998.

Special-status Plant Survey. The entire Site was surveyed to characterize the vegetation present. Attachment A to this letter report presents a list of plants observed during the plant surveys. Focused surveys for endangered plants known to occur in seasonal wetlands were not deemed necessary since seasonal wetlands were not observed at the Site. A list of special-status plants reported to occur in the region and the likelihood of occurrence at the Site is appended to this letter report as Attachment B.

The vegetation cover consisted primarily of non-native species of grasses and forbs that are common on fallow lands on the Santa Rosa Plain, with a few native plant species interspersed in the matrix of non-native plants species. The common non-native plants occurring throughout the site included ryegrass, slender wild oats (*Avena barbata*), two brome grasses (*Bromus diandrus*, *B. hordeaceus*), Harding grass (*Phalaris aquatica*), bristly ox-tongue (*Helminthotheca echioides*), hairy cat's-ear (*Hypochaeris radicata*), wild radish (*Raphanus sativus*), bindweed (*Convolvulus arvensis*), bur clover (*Medicago polymorpha*), red clover (*Trifolium pratense*), subterranean clover (*Trifolium subterraneum*), spring vetch (*Vicia sativa*), red-stemmed filaree (*Erodium cicutarium*), cut-leaved geranium (*Geranium dissectum*), and English plantain (*Plantago lanceolata*).

Several native plant species occurred at the site, including coast live oak (*Quercus agrifolia*), coyote brush (*Baccharis pilularis*), tall annual willowherb (*Epilobium brachycarpum*), California poppy (*Eschscholzia californica*), blue-eyed grass, tall umbrella sedge and slender rush.

The California Natural Diversity Database (CNDDDB), and California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants were searched for information on special-status plants for Santa Rosa, Sebastopol, Healdsburg, Two Rocks, and Cotati USGS Quadrangle maps, which defines the low land areas in the region. Special-status plant species are defined in *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities*³ to include all plant species that meet one or more of the following criteria:

- Listed or proposed for listing as threatened or endangered under FESA or candidates for possible future listing as threatened or endangered under FESA (50 CFR §17.12).
- Listed or candidates for listing by the State of California as threatened or endangered under CESA (Fish and Game Code §2050 *et seq.*).
- Listed as rare under the California Native Plant Protection Act (Fish and Game Code §1900 *et seq.*). A plant is **rare** when, although not presently threatened with extinction, the species, subspecies, or variety is found in

³ California Department of Fish and Game (CDFG). *Protocols for surveying and evaluating impacts to special status native plant populations and natural communities*. November 24, 2009.

- such small numbers throughout its range that it may be endangered if its environment worsens (Fish and Game Code §1901).
- Meet the definition of rare or endangered under CEQA §15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
 - ♦ Species considered by the California Native Plant Society (CNPS) to be “rare, threatened or endangered in California” (Lists 1A, 1B and 2);
 - ♦ Species that may warrant consideration on the basis of local significance or recent biological information;
 - ♦ Some species included on the California Natural Diversity Database’s (CNDDDB) *Special Plants, Bryophytes, and Lichens List* (California Department of Fish and Game 2008).
 - Considered a **locally significant species**, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

A total of forty-three special-status plants were identified as occurring in the Project region, and the list of these special-status plant species, their habitat preference, and potential to occur at the Site is presented in Attachment 2. While marginally suitable habitat is present at the Site for several of the species that occur in grassland-like habitat, suitable habitat for most of special-status species is not present at the Site.

There are three special-status plant species found in the region that occur in grassland-type habitat, including bent-flowered fiddleneck (*Amsinckia lunaris*), seaside tarplant (*Hemizonia congesta* ssp. *congesta*), and showy rancheria clover (*Trifolium amoenum*), but the habitat at the Site is marginal for these species, and it is unlikely that these species occur at the Site.

J. Keegan

August 2, 2016

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If you have any questions, please contact me at (925) 371-6379 or by e-mail at tpw_jr@comcast.net.

Sincerely,

A handwritten signature in black ink that reads "Ted P. Winfield". The signature is written in a cursive style.

Ted P. Winfield, Ph.D.

Attachment A. List of plants observed at 685 Aviation Blvd.

Attachment B. Special-status plant species reported to occur in the region, their habitat preference and likelihood of occurring at the Site.

ATTACHMENT A

LIST OF PLANTS OBSERVED AT 685 AVIATION BLVD. SONOMA COUNTY, CA

DICOTYLEDONS

APIACEAE	Carrot Family
<i>Torilis nodosa</i> *	knotted hedge-parsley
ASTERACEAE	Sunflower Family
<i>Baccharis pilularis</i>	coyote brush
<i>Helminthotheca echioides</i> *	bristly ox-tongue
<i>Hypochaeris radicata</i> *	hairy cat's-ear
<i>Senecio vulgaris</i> *	common groundsel
<i>Sonchus asper</i> *	spiny-leaved sow-thistle
<i>Taraxacum officinale</i> *	dandelion
<i>Tragopogon porrifolius</i> *	purple salsify
BRASSICACEAE	Mustard Family
<i>Raphanus sativus</i> *	wild radish
CONVOLVULACEAE	Morning Glory Family
<i>Convolvulus arvensis</i> *	bindweed
FABACEAE	Legume Family
<i>Acmispon americanus</i>	Spanish lotus
<i>Lupinus bicolor</i>	miniature lupine
<i>Lupinus nanus</i>	sky lupine
<i>Medicago polymorpha</i> *	bur clover
<i>Trifolium pratense</i> *	red clover
<i>Trifolium subterraneum</i> *	subterranean clover
<i>Vicia sativa</i> *	spring vetch
<i>Vicia villosa</i> *	hairy vetch
FAGACEAE	Oak Family
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak
GERANIACEAE	Geranium Family
<i>Erodium cicutarium</i> *	red-stemmed filaree
<i>Geranium dissectum</i> *	cut-leaved geranium
ONAGRACEAE	Evening Primrose Family
<i>Epilobium brachycarpum</i>	tall annual willowherb
PAPAVERACEAE	Poppy Family
<i>Eschscholzia californica</i>	California poppy
PLANTAGINACEAE	Plantain Family
<i>Plantago lanceolata</i> *	English plantain
POLYGONACEAE	Buckwheat Family
<i>Rumex acetosella</i> *	sheep sorrel
<i>Rumex crispus</i> *	curly dock

PRIMULACEAE	Primrose Family
<i>Anagallis arvensis</i> *	scarlet pimpernel
ROSACEAE	Rose Family
<i>Rubus armeniacus</i> *	Himalayan blackberry
RUBIACEAE	Madder Family
<i>Galium aparine</i> *	goose-grass, cleavers
SCROPHULARIACEAE	Figwort Family
<i>Parentucellia viscosa</i> *	yellow parentucellia
MONOCOTYLEDONS	
IRIDACEAE	Iris Family
<i>Sisyrinchium bellum</i>	blue-eyed-grass
Cyperaceae	Sedge Family
<i>Cyperus eragrostis</i>	tall umbrella sedge
JUNACEAE	Rush Family
<i>Juncus tenuis</i>	slender rush
POACEAE	Grass Family
<i>Anthoxanthum odoratum</i> *	sweet vernalgrass
<i>Avena barbata</i> *	slender wild oat
<i>Briza minor</i> *	little quaking grass
<i>Bromus diandrus</i> *	ripgut brome
<i>Bromus hordeaceus</i> *	soft chess
<i>Festuca bromoides</i> *	six-weeks fescue
<i>Festuca perenne</i> *	perennial ryegrass
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i> *	Mediterranean barley
<i>Phalaris aquatica</i> *	Harding grass

Note: * indicates non-native plant species

ATTACHMENT B

SPECIAL-STATUS PLANT SPECIES REPORTED TO OCCUR IN THE REGION, THEIR HABITAT PREFERENCE AND LIKELIHOOD OF OCCURRING AT THE SITE.

Scientific Name Common Name	Habitat	Potential Occurrence at Project Site
<i>Alopecurus aequalis</i> var. <i>sonomensis</i> Sonoma alopecurus	Marshes and swamps (freshwater); riparian scrub	Unlikely. Habitats for species not present at Site.
<i>Amsinckia lunaris</i> bent-flowered fiddleneck	Coastal bluff scrub; cismontane woodland; valley and foothill grassland	Unlikely. Marginally suitable grassland habitat present, but not observed during survey; survey occurred during flowering period for this species.
<i>Arctostaphylos canescens</i> ssp. <i>sonomensis</i> Sonoma canescent manzanita	Chaparral; cismontane woodland; lower montane coniferous forest/ sometimes serpentinite	Unlikely. Habitats for species not present at Site.
<i>Arctostaphylos densiflora</i> Vine Hill manzanita	Chaparral	Unlikely. Habitats for species not present at Site.
<i>Arctostaphylos stanfordiana</i> ssp. <i>decumbens</i> Rincon Ridge manzanita	Chaparral; cismontane woodland	Unlikely. Habitats for species not present at Site.
<i>Astragalus claranus</i> Clara Hunt's milk-vetch	Chaparral (openings); cismontane woodland; valley and foothill grassland/serpentinite or volcanic, rocky, clay	Unlikely. Habitats for species not present at Site.
<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i> big-scale balsamroot	Chaparral; cismontane woodland; valley and foothill grassland/ sometimes serpentinite	Unlikely. Habitats for species not present at Site.
<i>Blennosperma bakeri</i> Sonoma sunshine	Valley and foothill grasslands (mesic); vernal pools	Unlikely. Habitats for species not present at Site.
<i>Brodiaea leptandra</i> narrow-anthered California brodiaea	Broadleafed upland forest; chaparral; cismontane woodland; lower montane coniferous forest; valley and foothill grassland (volcanic)	Unlikely. Habitats for species not present at Site.
<i>Calamagrostis crassiglumis</i> Thurber's reed grass	Coastal scrub (mesic); marshes and swamps (freshwater)	Unlikely. Habitats for species not present at Site.
<i>Campanula californica</i> swamp harebell	Bogs and fens; closed-cone coniferous forest; coastal prairie; meadows and seeps; marshes and swamps (freshwater); north coast coniferous forest	Unlikely. Habitats for species not present at Site.
<i>Castilleja uliginosa</i> Pitkin Marsh paintbrush	Marshes and swamps (freshwater)	Unlikely. Habitats for species not present at Site.
<i>Ceanothus confusus</i> Rincon Ridge ceanothus	Closed-cone coniferous forest; chaparral; cismontane woodland/ volcanic or serpentinite	Unlikely. Habitats for species not present at Site.
<i>Ceanothus divergens</i> Calistoga ceanothus	Chaparral (serpentinite or volcanic, rocky)	Unlikely. Habitats for species not present at Site.

Scientific Name Common Name	Habitat	Potential Occurrence at Project Site
<i>Ceanothus foliosus</i> var. <i>vineatus</i> Vine Hill ceanothus	Chaparral	Unlikely. Habitats for species not present at Site.
<i>Ceanothus sonomensis</i> Sonoma ceanothus	Chaparral (sandy, serpentinite or volcanic)	Unlikely. Habitats for species not present at Site.
<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	Chaparral; coastal prairie; meadows and seeps; marshes and swamps (coastal salt marshes); valley and foothill grassland (vernally mesic/often alkaline)	Unlikely. Habitats for species not present at Site.
<i>Chorizanthe valida</i> Sonoma spineflower	Coastal prairie (sandy)	Unlikely. Habitats for species not present at Site.
<i>Clarkia imbricate</i> Vine Hill clarkia	Chaparral; valley and foothill grassland/acidic sandy loam)	Unlikely. Habitats for species not present at Site.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	Marshes and swamps (freshwater)	Unlikely. Habitats for species not present at Site.
<i>Delphinium luteum</i> golden larkspur	Chaparral; coastal prairie; coastal scrub/rocky	Unlikely. Habitats for species not present at Site.
<i>Downingia pusilla</i> dwarf downingia	Valley and foothill grasslands (mesic); vernal pools	Unlikely. Habitats for species not present at Site.
<i>Fritillaria liliacea</i> fragrant fritillary	Cismontane woodland; coastal prairie; coastal scrub; valley and foothill grassland/often serpentinite	Unlikely. Habitats for species not present at Site.
<i>Gilia capitata</i> ssp. <i>tomentosa</i> wooly-headed gilia	Coastal bluff scrub, valley and foothill grasslands/serpentinite; rocky outcrops	Unlikely. Habitats for species not present at Site.
<i>Hemizonia congesta</i> ssp. <i>congesta</i> seaside tarplant	Valley and foothill grassland/ sometimes roadsides	Unlikely. Marginally suitable grassland habitat present, but not observed during plant surveys; survey occurred at beginning of flowering period, but no early growth of tarweeds observed at the Site and no remnants from previous season (standing dead) observed at the Site (Site did not appear to have been mowed or disked this year).
<i>Horkelia tenuiloba</i> thin-lobed horkelia	Broadleafed upland forest; chaparral; valley and foothill grassland/mesic openings, sandy	Unlikely. Habitats for species not present at Site.
<i>Lasthenia burkei</i> Burke's goldfields	meadows and seeps; vernal pools	Unlikely. Habitats for species not present at Site.
<i>Legenere limosa</i> legenere	Vernal pools	Unlikely. Habitats for species not present at Site.
<i>Leptosiphon jepsonii</i> Jepson's leptosiphon	Chaparral; cismontane woodland	Unlikely. Habitats for species not present at Site.

Scientific Name Common Name	Habitat	Potential Occurrence at Project Site
<i>Lilium pardalinum</i> ssp. <i>pitkinense</i> Pitkin Marsh lily	Cismontane woodland; meadows and seeps, marshes and swamps (freshwater)/mesic, sandy	Unlikely. Habitats for species not present at Site.
<i>Limnanthes vinculans</i> Sebastopol meadowfoam	Meadows and seeps, valley and foothill grassland; vernal pools/vernally mesic	Unlikely. Habitats for species not present at Site.
<i>Microseris paludosa</i> marsh microseris	Closed-cone coniferous forest; cismontane woodland; coastal scrub; valley and foothill grassland	Unlikely. Habitats for species not present at Site.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	Cismontane woodland; lower montane coniferous forest; meadows and seeps; valley and foothill grassland; vernal pools/mesic	Unlikely. Seasonal wetland habitat at Site not suitable for species.
<i>Navarretia leucocephala</i> ssp. <i>plieantha</i> many-flowered navarretia	Vernal pools (volcanic ash flow)	Unlikely. Seasonal wetland habitat at Site not suitable for species.
<i>Pleuropogon hooverianus</i> North Coast semaphore grass	Broadleafed upland forest; meadows and seeps; north coastal coniferous forest/open areas, mesic	Unlikely. Habitats for species not present at Site.
<i>Potentilla uliginosa</i> Cunningham Marsh cinquefoil	Marshes and swamps/freshwater, permanent oligotrophic wetlands	Unlikely. Habitats for species not present at Site.
<i>Rhynchospora alba</i> white beaked-rush	Bogs and fens; meadows and seeps; marshes and swamps (freshwater)	Unlikely. Habitats for species not present at Site.
<i>Rhynchospora californica</i> California beaked-rush	Bogs and fens; lower mountain coniferous forest; meadows and seeps; marshes and swamps	Unlikely. Habitats for species not present at Site.
<i>Rhynchospora globularis</i> round-headed beaked-rush	Marshes and swamps (freshwater)	Unlikely. Habitats for species not present at Site.
<i>Trifolium amoenum</i> showy rancheria clover	Coastal bluff scrub; valley and foothill grassland (sometimes serpentinite)	Unlikely. Habitats for species not present at Site.
<i>Trifolium hydrophilum</i> saline clover	Marshes and swamps; valley and foothill grasslands (mesic, alkaline)	Unlikely. Habitats for species not present at Site.
<i>Triquetrella californica</i> coastal triquetrella	Coastal bluff scrub; coastal scrub/soil	Unlikely. Habitats for species not present at Site.
<i>Viburnum ellipticum</i> oval-leaved viburnum	Chaparral; cismontaine woodland; lower montane coniferous forest	Unlikely. Habitats for species not present at Site.