



## SYCAMORE ENVIRONMENTAL CONSULTANTS, INC.

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***Subject: Biological Survey of APNs 033-300-011, -015, and Portion of 033-650-088 for Stormwater Capacity for the Mace Ranch Innovation Center Project, Yolo Co., CA.***

Dear Ms. Olson:

Sycamore Environmental Consultants, Inc., conducted a biological survey of APNs 033-300-001 and -015, and a portion of 033-650-088 (total 550.25 ac) in Yolo County, approximately 2 miles east of Davis, CA (Attachment A). The purpose of the survey was to document biological resources that could be affected by lowering the elevation of an agricultural field to increase stormwater capacity. The increased stormwater capacity is needed as a result of the proposed Mace Ranch Innovation Center Project (MRIC).

The survey was conducted by biologist/botanist Mike Bower, M.S., on 11 June 2015 by vehicle and on foot. The stormwater capacity biological survey area (BSA) consists of active agricultural fields currently planted with wheat and alfalfa. Photographs of the BSA are in Attachment B. The agricultural fields in the stormwater capacity BSA are similar to the agricultural fields at the nearby MRIC site. A biological resources evaluation (BRE) report was prepared for MRIC (Sycamore Environmental 2015). Special-status species with potential to occur at the MRIC site are identified in Table 4 of the BRE (Attachment C). The same species were evaluated in the stormwater capacity BSA.

### **SURVEY RESULTS AND DISCUSSION**

Of the species in Table 4 of the BRE, burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), and other protected raptors and migratory birds have potential to occur in the stormwater capacity BSA. No potential burrowing owl burrows were observed in the BSA, but burrows could occur or become established prior to work. The only trees in the BSA are a few willow trees (*Salix* sp.) in a dry ditch at the southeast corner of the BSA on APN 033 300 015. No raptor nests were observed in the BSA, but protected raptors including Swainson's hawk and white-tailed kite could nest in the willow trees. No elderberry shrubs (*Sambucus* sp.; host plant for federal threatened Valley elderberry longhorn beetle) were observed in or near the BSA. Tilled fields do not provide habitat for special-status plants. No sensitive natural communities or potential wetlands or waters of the U.S. were observed in the BSA. No federal designated critical habitat occurs in the BSA (USFWS 2015).

Adjacent to the stormwater capacity BSA, trees potentially suitable for raptor nests occur along the Railroad Channel to the south and along the existing detention basin located on APN 033 650 006. Protected raptors including Swainson's hawk and white-tailed kite could nest in these trees. Northern harrier (*Circus cyaneus*), tricolored blackbird (*Agelaius tricolor*), song sparrow (*Melospiza melodia*), and other protected migratory birds could nest in the undisturbed vegetation within the Railroad Channel, the existing detention basin, or the created wetlands north of the BSA. Burrows potentially suitable for burrowing owl were observed along the existing detention basin and along the edge of the Railroad Channel. No burrowing owls or their sign were observed in or near the BSA.

Potential aquatic habitat for federal threatened giant garter snake (GGS; *Thamnophis gigas*) occurs within 200 ft of the BSA in 1) the Railroad Channel to the south; 2) a channel in Willow Slough Bypass north of the levee; 3) a channel on the east side of the Yolo Bypass levee; 4) created wetlands north of Road 30; and 5) an existing detention basin on APN 033 650 006. These features are shown on the map in Attachment A. All of these features contain emergent aquatic vegetation, basking habitat, and water, or at least evidence of frequent inundation during the GGS active season (early spring through mid fall). Minor irrigation ditches occur along field edges in the BSA. These ditches were dry during fieldwork, do not contain emergent aquatic vegetation, and do not provide aquatic habitat for GGS.

Areas within 200 ft of suitable GGS aquatic habitat may provide upland habitat for GGS. The areas within the BSA that are within 200 ft of potential GGS aquatic habitat consist of farm roads and tilled agricultural fields that are unlikely to be occupied by GGS during the GGS active season. During the winter inactive season, GGS could seek refuge in burrows and cracks in the upland habitat. GGS populations are known to occur in the Willow Slough Bypass and in the Yolo Bypass, but not on the land side of (west of) the 150-200 ft wide Yolo Bypass levee on the north side of I-80 (CDFW 2015). On 11 June 2015, water was observed in the Railroad Channel south of the BSA, in portions of the created wetlands with cattails north of Road 30, and in both the Willow Slough and Yolo bypasses. No water was observed in the BSA, in any of the irrigation ditches bordering the fields or in the existing detention basin on APN 033 650 006.

#### **PROPOSED WORK AND BIOLOGICAL RESOURCE AVOIDANCE & MITIGATION**

The stormwater capacity BSA consists of disturbed, actively farmed agricultural fields. Stormwater capacity is proposed to be increased by lowering a small portion of the 550.25-acre stormwater capacity BSA by up to 2.5 ft (e.g., 80 acres lowered by 1 ft). Work would occur after crops harvest. Topsoil would be temporarily stockpiled and the soil beneath would be excavated and removed to lower the field elevation. After soil removal, topsoil would be returned and the agricultural field re-leveled. The field would return to agriculture production. Stormwater drainage would be maintained through the existing irrigation ditch networks and existing drainage ditch connections with the Railroad Channel.

The potential impacts of the proposed work are similar to the ongoing agricultural operations in the stormwater capacity BSA, which include tilling, planting, harvesting, field leveling for irrigation, road grading, and maintenance of minor irrigation ditches.

For the MRIC Draft EIR, the MRIC team has proposed avoidance and minimization measures for potential impacts to GGS, burrowing owl, Swainson's hawk, migratory birds and other protected bird species. These measures are applicable to proposed stormwater capacity increasing work and are expected to avoid or mitigate potential impacts to biological resources resulting from this work.

These measures include the following:

**For raptors and other protected birds**, work is proposed after crop harvest and is not expected to adversely affect foraging and nesting. If work is proposed within 250 ft of potential nesting habitat between 1 February and 15 September, then applicable MRIC Swainson's hawk, migratory bird and other protected bird species preconstruction surveys should be conducted. Active nests should be protected as stipulated in the MRIC mitigation measures. Potential nesting habitat occurs in trees along the Railroad Channel, along the ditch at the southeast corner of APN 033 300 015, and around the existing detention basin.

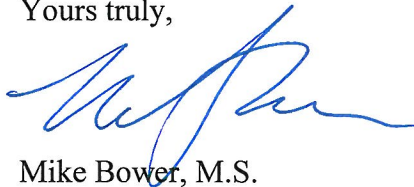
**For burrowing owl**, implement the MRIC preconstruction survey and implement construction monitoring if active burrowing owl dens are found.

**For GGS**, if work is proposed within 200 ft of potential aquatic habitat for GGS, then:

- During the active season (May 1 to October 1), the construction monitoring provision of the MRIC GGS mitigation measure should be implemented and a biological monitor should be present during work within 200 ft of aquatic habitat for GGS.
- During the inactive season (Oct 2 to April 30), no work should be conducted in areas within 200 ft of potential aquatic habitat for GGS.
- Temporary stockpiling of topsoil should not occur within 200 ft of potential aquatic habitat for GGS.

Please contact me with any questions.

Yours truly,



Mike Bower, M.S.

- Attachment A. Map of the Stormwater Capacity Biological Study Area
- Attachment B. Photographs
- Attachment C. Special-Status Species with Potential to Occur

### **Literature Cited**

California Department of Fish and Wildlife (CDFW). Accessed 12 June 2015. Biogeographic Information and Observation System: BIOS viewer. <http://www.dfg.ca.gov/biogeodata/bios/>

California Sycamore Environmental Consultants, Inc. February 2015. Biological resources evaluation for the Mace Ranch Innovation Center Project, Yolo County, CA. Prepared for The Buzz Oates Group of Companies, Contact: Alisha Olson. Sycamore Environmental, Sacramento, CA.

U.S. Fish and Wildlife Service (USFWS). Accessed 12 June 2015. Critical Habitat Portal. <http://crithab.fws.gov/>

## **ATTACHMENT A**

### Map of the Stormwater Capacity Biological Survey Area

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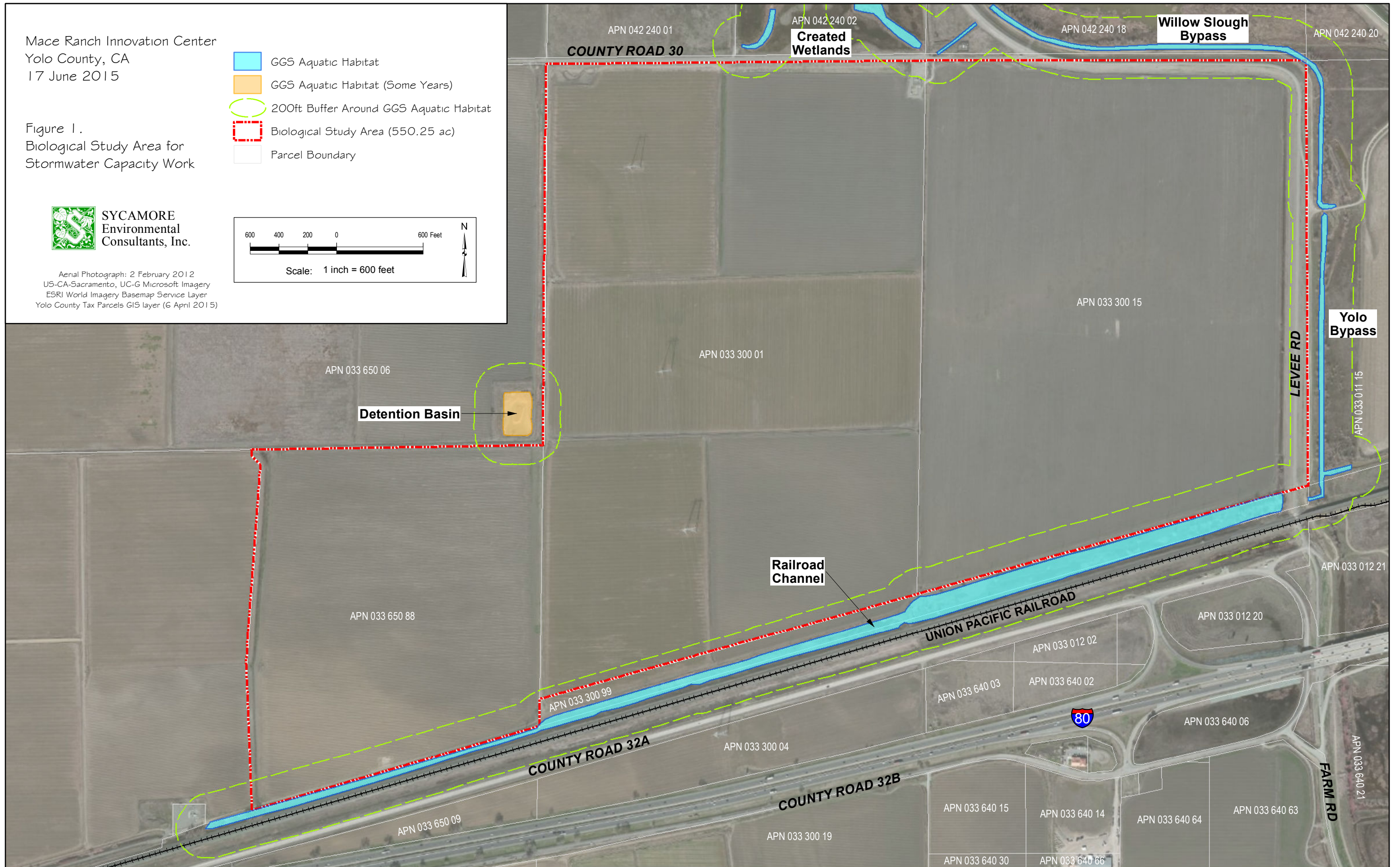
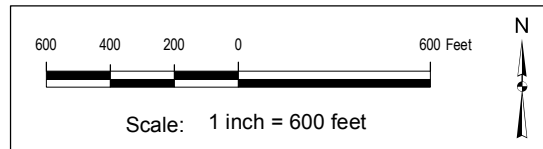
Mace Ranch Innovation Center  
 Yolo County, CA  
 17 June 2015

Figure 1.  
 Biological Study Area for  
 Stormwater Capacity Work



Aerial Photograph: 2 February 2012  
 US-CA-Sacramento, UC-G Microsoft Imagery  
 ESRI World Imagery Basemap Service Layer  
 Yolo County Tax Parcels GIS layer (6 April 2015)

- GGS Aquatic Habitat
- GGS Aquatic Habitat (Some Years)
- 200ft Buffer Around GGS Aquatic Habitat
- Biological Study Area (550.25 ac)
- Parcel Boundary



# ATTACHMENT B

## Photographs

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## Photos of the BSA



Photo 1. View south across wheat field on APN 033 300 015 from levee (recently burned). 11 June 2015.



Photo 2. View north along border between APN 033 300 001 and 033 300 015. Typical dry irrigation ditch between fields of alfalfa (left) and wheat (right). 11 June 2015.



Photo 3. View east from western edge of APN 033 300 001 looking toward alfalfa fields in the BSA. 11 June 2015.



Photo 4. View west from atop the Yolo Bypass levee looking toward southeast corner of BSA with Railroad Channel on left and wheat field on right. 11 June 2015.



Photo 5. View northwest from atop the Yolo Bypass levee (recently burned). A few willows (*Salix* spp.) occur in a dry ditch on far left. 11 June 2015.



Photo 6. View north across APN 033 300 001 in the central portion of the BSA. 11 June 2015.



## Photos Near the BSA



Photo 7. View west toward the Railroad Channel south of the BSA. Alfalfa field in BSA on far right. 11 June 2015.



Photo 8. View west toward vegetation in the Railroad Channel near the Yolo Bypass levee. 11 June 2015.



Photo 9. View of Railroad Channel south of the BSA with  $\pm 2$  inches standing water, cattails (*Typha* sp.) and bulrush (*Schoenoplectus acutus*) present. 11 June 2015.



Photo 10. View north toward cattails, bulrush, and scattered willows in the detention basin located west of the BSA. No water present. 11 June 2015.



Photo 11. View east toward created wetlands north of the BSA. A row of young willows (*Salix* sp.) occur on right. Most of the created wetland area is dry. 11 June 2015.



Photo 12. View toward channel in Willow Slough Bypass. The BSA is out of view on right, beyond levee. 11 June 2015.

## **ATTACHMENT C**

Special-Status Species with Potential to Occur  
(Excerpted from MRIC Biological Resources Evaluation)

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Table 1. Special-Status Species with the Potential to Occur in the [MRIC] BSA

Excerpted from the MRIC Biological Resources Evaluation (Sycamore Environmental 2015)

Special-Status Species	Common Name	Federal Status <sup>a</sup>	State Status <sup>a</sup> & Other Codes <sup>b</sup>	Source <sup>c</sup>
<b>Invertebrates</b>				
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	T, CH	SC	1,2
<b>Birds</b>				
<i>Agelaius tricolor</i>	Tricolored blackbird	--	EL, SC	2
<i>Athene cunicularia</i>	Burrowing owl	--	SC	2
<i>Buteo swainsoni</i>	Swainson's hawk	--	T	2
<i>Charadrius montanus</i>	Mountain plover	--	FP	2
<i>Elanus leucurus</i>	White-tailed kite	--	SC	2
<i>Melospiza melodia</i>	Song sparrow ("Modesto" population)	--	SC	2
Migratory Birds & Birds of Prey	--	--	--	4
<b>Plants</b> /CNPS Rank <sup>b</sup>				
<i>Astragalus tener</i> var. <i>ferrisiae</i>	Ferris' milk vetch	--	--/ 1B.1	2,3
<i>Astragalus tener</i> var. <i>tener</i>	Alkali milk-vetch	--	--/ 1B.2	2,3
<i>Atriplex cordulata</i> var. <i>cordulata</i>	Heartscale	--	--/ 1B.2	2,3
<i>Atriplex depressa</i>	Brittlescale	--	--/ 1B.2	2,3
<i>Atriplex joaquinana</i>	San Joaquin spearscale	--	--/ 1B.2	2,3
<i>Carex comosa</i>	Bristly sedge	--	--/ 2B.1	2,3
<i>Centromadia parryi</i> ssp. <i>rudis</i>	Parry's rough tarplant	--	--/ 4.2	3
<i>Hesperevax caulescens</i>	Hogwallow starfish	--	--/ 4.2	2,3
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i>	Woolly rose-mallow	--	--/ 1B.2	2,3
<i>Lepidium latipes</i> var. <i>heckardii</i>	Heckard's pepper-grass	--	--/ 1B.2	2,3
<i>Symphotrichum lentum</i>	Suisun Marsh aster	--	--/ 1B.2	2
<i>Trifolium hydrophilum</i>	Saline clover	--	--/ 1B.2	2,3

<sup>a</sup> **Listing Status**

E = Endangered; T = Threatened; P = Proposed; C = Candidate; CH = Critical habitat designated; R = California Rare; EL = California Emergency Listed.

<sup>b</sup> **Other Codes**

SC = CDFW Species of Special Concern; FP = CDFW Fully Protected;

CNPS Rank (plants only): 1A = Presumed Extinct in CA; 1B = Rare or Endangered (R/E) in CA and elsewhere; 2 = R/E in CA and more common elsewhere; 3 = Need more information; 4 = Plants of limited distribution.

CNPS Rank Decimal Extensions: .1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat); .2 = Fairly endangered in CA (20-80% of occurrences threatened); .3 = Not very endangered in CA (< 20% of occurrences threatened or no current threats known).

<sup>c</sup> **Sources**

1 = From USFWS letter. 2 = From CNDDDB query. 3 = From CNPS. 4 = Observed or included by Sycamore Environmental biologists.