

## **APPENDIX I**

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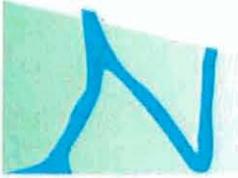
Special Status Plant Survey Report for the  
Mariposa Lakes Project

**SPECIAL STATUS PLANT SURVEY REPORT  
FOR THE  
MARIPOSA LAKES PROJECT**  
**City of Stockton, San Joaquin County, California**

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# SPECIAL STATUS PLANT SURVEY REPORT FOR THE MARIPOSA LAKES PROJECT

## INTRODUCTION

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North Fork Associates conducted floristic and rare plant surveys on September 1, 2006 within selected survey areas of the 3794-acre Mariposa Lakes project site in San Joaquin County, California. The property is located east of Highway 99 near the city of Stockton. The project area is bounded by Highway 4 to the north, Kaiser Road to the east, Mariposa Road and a railroad line to the southwest, and Mariposa Road to the south (Figure 1). Three creeks flow generally from east to west through the property: Duck Creek, Branch Creek, and North Little John Creek (Figure 2). Elevations range from approximately 30 feet above sea level in the west to 50 feet in the east. The site is actively used for crop production, and an extensive network of unpaved roads exists. The surrounding land uses are predominantly agricultural.

### Objectives

- Research the special status plants with potential to occur within the project region as well as the habitat requirements of each of these species.
- Survey the creeks and corresponding riparian areas and the seasonal wetland habitat and record each observed plant to the extent necessary to determine its rarity and listing status.
- Determine special status plant species potential for occurrence within the survey area.
- If special status plants are found within the survey area during field surveys, map them on the property using GPS technology.

## METHODS

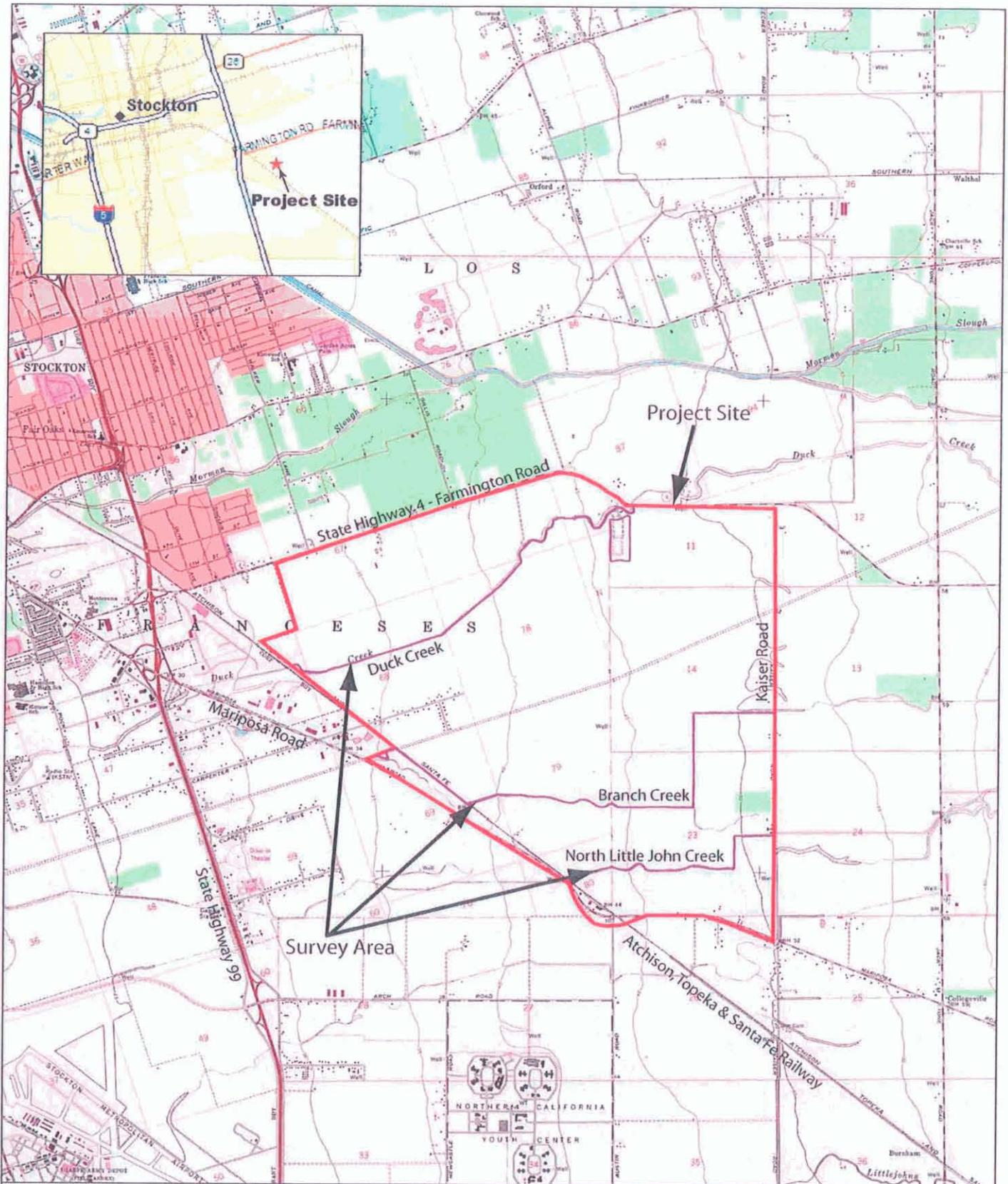
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### Background Review and Research

North Fork Associates queried the California Natural Diversity Data Base for location records for special status plant species known to occur in the region surrounding the project site. Quadrangles included in the query were Stockton East, Waterloo, Linden, Stockton West, Lathrop, Lodi South, Peters, Manteca, and Avena. The California Native Plant Society Inventory was checked for special status plants occurring in the area.

For the purposes of this report, special status species are those that fall into one or more of the following categories, including those:

- listed as endangered or threatened under the federal Endangered Species Act (including candidates and species proposed for listing),
- listed as endangered or threatened under the California Endangered Species Act (including candidates and species proposed for listing),
- designated as rare, protected, or fully protected pursuant to California Fish and Game Code,
- designated a Species of Concern by the California Department of Fish and Game,



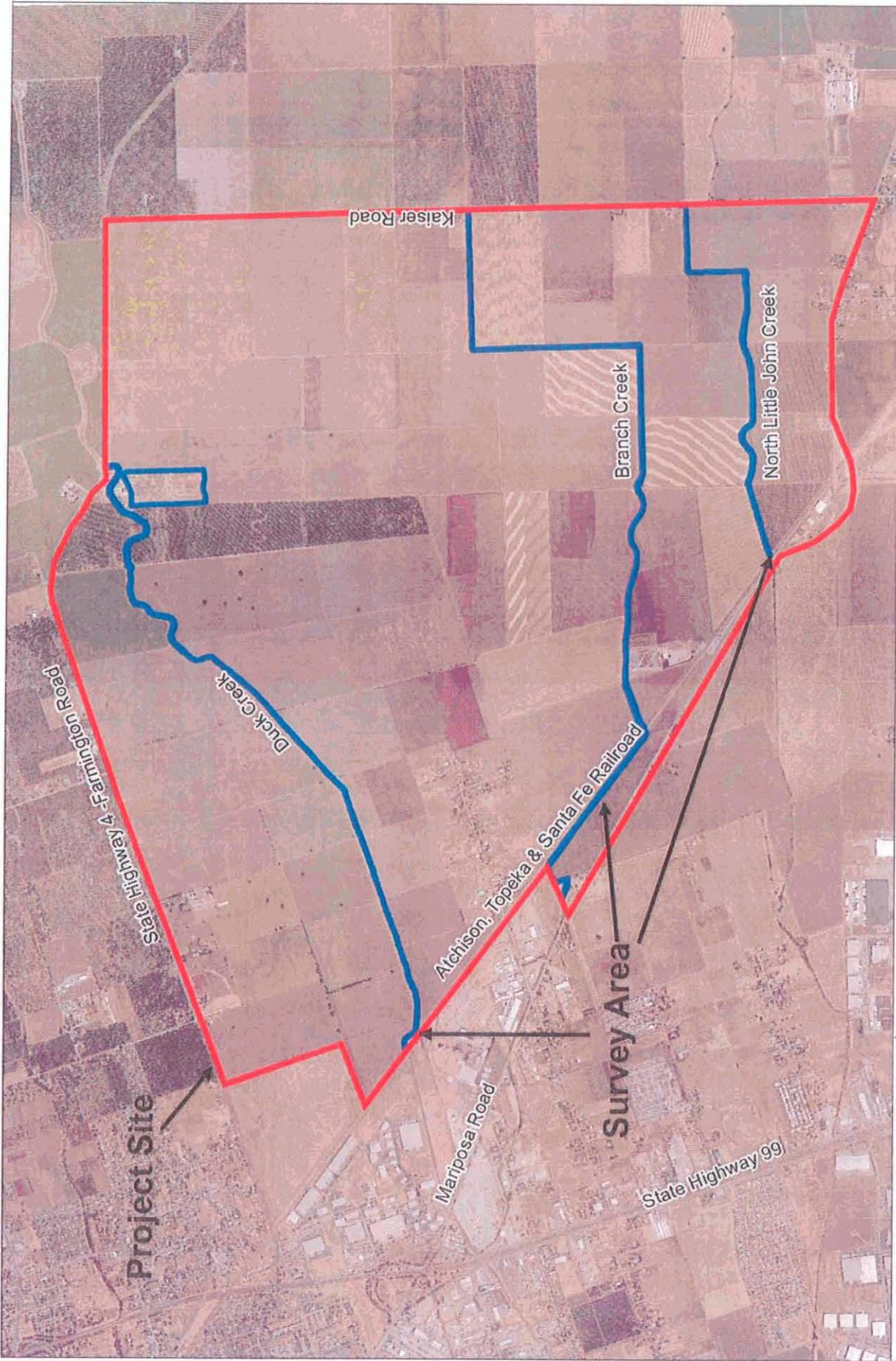
NOTES:  
 Base map: Stockton East, CA, USGS  
 7.5 minute topographic quadrangle

- Survey Area
- Project Site

**Figure 1**

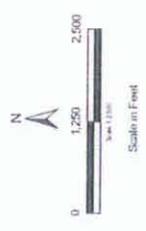
**SITE & VICINITY MAP**  
*Mariposa Lakes*  
 San Joaquin County, California





**Figure 2**  
**AERIAL MAP**  
 Mariposa Lakes  
 San Joaquin County, California

NOTES: Photo date: May 9, 2002



**Project Site**

**Survey Area**

State Highway 4 - Farmington Road

Duck Creek

Kaiser Road

Branch Creek

North Little John Creek

Atchison, Topeka & Santa Fe Railroad

Mariposa Road

State Highway 99

- designated U.S. Forest Services species of management concern,
- defined as rare or endangered under Section 15380 of the California Environmental Quality Act (CEQA), or
- occurring on List 1, 2, 3 or 4 maintained by the California Native Plant Society.

Plant common names are used in this document, and Appendix A contains a list of plants observed. Scientific names follow *The Jepson Manual* as updated by the Jepson Interchange, an online database maintained by the University of California and Jepson Herbaria.

### Field Survey

North Fork Associates botanist Rebecca Wayman conducted a floristic and rare plant survey on September 1, 2006. The survey was limited to Duck Creek, Branch Creek, North Little John Creek and their associated habitat, and the seasonal wetland habitat near the northern project site boundary. Refer to Figures 1 and 2 for survey area locations. The survey consisted of walking the selected areas, recording notes of plant species observed, and assessing habitats present for the potential occurrence of special status plant species. In accordance with California Department of Fish and Game guidelines, the plant surveys were floristic in nature and each plant species observed was identified to the extent necessary for determining its rarity status. Appendix A contains a list of the plants observed in the survey areas. Representative photographs of the area are included in Figure 3.

## RESULTS

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### Vegetation

#### *Creeks*

Duck Creek, Branch Creek, and North Little John Creek are channelized earthen drainages that flow generally from east to west through the project area. All three creek channels appear to be substantially altered from their original natural courses. Duck Creek is the largest of the three creeks and has the most visible open water (Figure 3b). Vegetation along Duck Creek is concentrated along the shoreline and in upland portions of the creek corridor except for numerous patches of water-primrose. Other common species include dotted smartweed, artichoke thistle, summer cottonweed, poison hemlock, prickly lettuce, and curly dock. Branch Creek and North Little John Creek are densely vegetated within their channels with cattail, dotted smartweed, and jungle grass (Figure 3a and 3c). Other common species are similar to those found along Duck Creek. Occasional valley oaks are scattered along all three creeks.

#### *Seasonal Wetland*

An area of seasonal wetland (approximately 1.39 acres) occurs south of where Duck Creek enters the project site. Refer to Figures 1 and 2 for location of seasonal wetland. This area is highly disturbed and appears to have been used for livestock corrals (Figure 3d). At the time of the survey no standing or flowing water was observed on the ground or in any of the raised concrete channels in the seasonal wetland survey area. Dominant plant species include curly dock, Mediterranean barley, and artichoke thistle. Scattered Goodding's black willow and one individual fig tree also occur.



3a. Branch Creek looking east.

3b. Duck Creek looking west.



3c. North Little John Creek looking west.

3d. Seasonal wetland area looking northeast.



Photo Date: September 1, 2006

### Figure 3

SITE PHOTOS  
*Mariposa Lakes*  
San Joaquin County, California

## Special Status Species

Appendix B is a list of potentially occurring special status plant species. Species requiring habitats not occurring in or around the survey area and species occurring far outside the survey area are not considered in Appendix B. Field surveys and the best professional judgment of North Fork Associates biologists were used to further refine the table in Appendix B. Table 1 is a list of special status plant species that are rated unlikely, possible, or likely to occur, and they are discussed in more detail in the paragraphs following the table.

**Table 1**  
**Special Status Species That Could Occur on the Project Site**

Species	Federal	State	CNPS	Habitat	Potential for Occurrence
<b>Delta tule pea</b> <i>Lathyrus jepsonii jepsonii</i>	-	-	List 1B.2	Marshes and swamps (freshwater and brackish)	Unlikely. Known occurrences are limited to tidally influenced areas of the Delta.
<b>Rose-mallow</b> <i>Hibiscus lasiocarpus</i>	-	-	List 2.2	Marshes and swamps (freshwater).	Unlikely. Known occurrences are limited to large sloughs and river floodplains.
<b>Sanford's arrowhead</b> <i>Sagittaria sanfordii</i>	-	-	List 1B.2	Marshes and swamps (assorted shallow freshwater)	Possible. Marginal habitat occurs within survey area.
<b>Slough thistle</b> <i>Cirsium crassicaule</i>			List 1B.1	Chenopod scrub; marshes and swamps (sloughs); riparian scrub	Unlikely. Minimal highly disturbed riparian scrub habitat occurs within survey area.

### Status Codes:

CNPS (California Native Plant Society) List 1B Rare or Endangered in California  
 List 2 R and E in California, more common elsewhere  
 .1 Seriously endangered in California  
 .2 Fairly endangered in California

### Definitions for the potential to occur:

- **None.** Habitat does not occur on the site.
- **Unlikely.** Some habitat may occur on the site, but disturbance or other activities may restrict or eliminate the possibility of the species occurring. Habitat may be very marginal, or the site may be outside the range of the species.
- **Possible.** Marginal to suitable habitat occurs on the site, and the site occurs within the range of the species.
- **Likely.** Good habitat occurs, but the species was not observed during surveys.
- **Occurs:** Species was observed during surveys.

**Delta tule pea** (*Lathyrus jepsonii* var. *jepsonii*) is an herbaceous perennial member of the pea family (Fabaceae). It is endemic to California and is on the CNPS List 1B.2. It is known to occur in freshwater or brackish marshes associated with the Delta. This species is a robust climbing plant (up to 2.5 meters tall) with pink-purple to white or yellow flowers and coiled tendrils. Delta tule pea blooms from May to September. This species is unlikely to occur within the survey area because known occurrences are limited to tidally influenced areas of the Delta. Delta tule pea was not observed during the floristic survey.

**Rose mallow** (*Hibiscus lasiocarpus*) is a clonal perennial member of the mallow family (Malvaceae) that can grow to three to six feet tall. It has no state or federal status. The CNPS puts rose mallow on its List 2.2, meaning that it is rare in California but more common elsewhere. This species is an obligate wetland plant that is found along rivers and sloughs in the Delta and Central Valley. Rose mallow has large white flowers and blooms in August and September. Rose mallow is unlikely to occur within the survey area because known occurrences are limited to large sloughs and river floodplains. This species was not observed during the floristic survey.

**Sanford's arrowhead** (*Sagittaria sanfordii*) is an herbaceous perennial member of the waterplantain family (Alismataceae). It is on the CNPS List 1B.2. Sanford's arrowhead lacks the arrow shaped (sagittate) leaves of other members of the genus. It has sharply triangular petioles (leaf stems) that distinguish it in the vegetative state from *Alisma*, in which the back of the petioles are rounded. Its preferred habitat is marshes associated with slow-moving water in sloughs and ditches; however, it is known to occur in concrete lined channels with only a few inches of soil. It has a long blooming period, starting as early as May and sometimes lasting until August. It is possible for Sanford's arrowhead to occur; marginal habitat occurs within the survey area. This species was not observed during the floristic survey.

**Slough thistle** (*Cirsium crassicaule*) is an annual or biennial member of the sunflower family (Asteraceae) that is on the CNPS List 1B.1. It has no state or federal status. Although it is a short thistle, it differs from other similar species by being taller rather than prostrate. Slough thistle grows in freshwater marshes and other wet habitats and blooms from May to August. It is unlikely that this species would occur within the survey area because the site contains minimal highly disturbed riparian scrub habitat. This species was not observed during the floristic survey.

## **SUMMARY AND CONCLUSIONS**

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On September 1, 2006, a North Fork Associates botanist conducted floristic and rare plant surveys along three channelized creeks (Duck Creek, Branch Creek, and North Little John Creek) and in the seasonal wetland within the Mariposa Lakes project site. No special status plant species were observed during the field survey. All four of the special status plant species with potential to occur onsite should have been identifiable at the time of the survey. No further surveys are recommended.

**APPENDIX A**

**Plant Species Occurring on the Mariposa Lakes Property**

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## Appendix A

### Plant Species Occurring on the Mariposa Lakes Project Site Survey Areas

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#### Angiosperms - Dicots

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##### Amaranthaceae

- |                           |                 |
|---------------------------|-----------------|
| * <i>Amaranthus albus</i> | Tumble pigweed  |
| * <i>Salsola tragus</i>   | Russian thistle |

##### Apiaceae

- |                           |                |
|---------------------------|----------------|
| * <i>Conium maculatum</i> | Poison hemlock |
|---------------------------|----------------|

##### Asteraceae

- |                                  |                        |
|----------------------------------|------------------------|
| * <i>Carduus pycnocephalus</i>   | Italian thistle        |
| * <i>Centaurea solstitialis</i>  | Yellow star-thistle    |
| * <i>Cirsium vulgare</i>         | Bull thistle           |
| <i>Conyza canadensis</i>         | Horseweed              |
| * <i>Cynara cardunculus</i>      | Artichoke thistle      |
| <i>Helianthus annuus</i>         | Sunflower              |
| * <i>Lactuca serriola</i>        | Prickly lettuce        |
| * <i>Pieris echinoides</i>       | Bristly ox-tongue      |
| <i>Symphotrichum divaricatum</i> | Annual saltmarsh aster |
| <i>Xanthium strumarium</i>       | Cocklebur              |

##### Brassicaceae

- |                         |               |
|-------------------------|---------------|
| * <i>Brassica nigra</i> | Black mustard |
|-------------------------|---------------|

##### Convolvulaceae

- |                               |          |
|-------------------------------|----------|
| * <i>Convolvulus arvensis</i> | Bindweed |
|-------------------------------|----------|

##### Fagaceae

- |                       |            |
|-----------------------|------------|
| <i>Quercus lobata</i> | Valley oak |
|-----------------------|------------|

##### Lamiaceae

- |                      |                 |
|----------------------|-----------------|
| <i>Lycopus asper</i> | Rough bugleweed |
|----------------------|-----------------|

##### Moraceae

- |                       |     |
|-----------------------|-----|
| * <i>Ficus carica</i> | Fig |
|-----------------------|-----|

##### Onagraceae

- |                               |                   |
|-------------------------------|-------------------|
| <i>Epilobium brachycarpum</i> | Summer cottonweed |
| <i>Ludwigia peploides</i>     | Water-primrose    |

##### Polygonaceae

- |                            |                  |
|----------------------------|------------------|
| <i>Persicaria punctata</i> | Dotted smartweed |
| * <i>Rumex crispus</i>     | Curly dock       |

##### Salicaceae

- |                         |                         |
|-------------------------|-------------------------|
| <i>Salix exigua</i>     | Narrow-leaved willow    |
| <i>Salix gooddingii</i> | Goodding's black willow |

#### Angiosperms -Monocots

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## Cyperaceae

*Cyperus eragrostis*

Tall flatsedge

## Juncaceae

*Juncus effusus*

Soft rush

## Poaceae

\**Avena sativa*

Cultivated oat

\**Bromus diandrus*

Ripgut grass

\**Bromus hordeaceus*

Soft chess

\**Cynodon dactylon*

Bermuda grass

\**Echinochloa colona*

Jungle grass

\**Hordeum marinum subsp. gussoneanum*

Mediterranean barley

*Leptochloa fascicularis*

Bearded spangletop

\**Paspalum dilatatum*

Dallis grass

\**Phalaris aquatica*

Harding grass

\**Setaria pumila*

Yellow bristle grass

*Triticum sp.*

Wheat

## Typhaceae

*Typha sp.*

Cattail

**APPENDIX B**

**Potentially Occurring Special Status Plant Species**

**Appendix B**  
**Potentially Occurring Special Status Plant Species in the Mariposa Lakes Project Region**

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
<b>Alismataceae</b> <i>Sagittaria sanfordii</i> Sanford's arrowhead	Fed: - State: - CNPS: List 1B.2	May-August	Marshes and swamps (assorted shallow freshwater).	Possible. Marginal habitat occurs onsite.
<b>Amaranthaceae</b> <i>Atriplex joaquiniana</i> San Joaquin saltbush	Fed: - State: - CNPS: List 1B.2	April-September	Chenopod scrub; meadows; valley and foothill grassland; [alkaline].	None: no suitable habitat occurs onsite.
<b>Apiaceae</b> <i>Eryngium racemosum</i> Delta button-celery	Fed: - State: CE CNPS: List 1B.1	June-August	Riparian scrub (vernally mesic clay depressions).	None: no suitable habitat occurs onsite.
<b>Lilaeopsis masonii</b> Mason's lilaeopsis	Fed: - State: CR CNPS: List 1B.1	April-October	Marshes and swamps (brackish or freshwater); riparian scrub.	None: no suitable habitat occurs onsite.
<b>Asteraceae</b> <i>Cirsium crassicaule</i> Slough thistle	Fed: - State: - CNPS: List 1B.1	May-August	Chenopod scrub; marshes and swamps (sloughs); riparian scrub.	Unlikely: Minimal highly disturbed riparian scrub habitat exists
<b>Symphoricarichum lentum</b> Suisun Marsh aster	Fed: - State: - CNPS: List 1B.2	August-November	Marshes and swamps (brackish and fresh water)	None: no suitable habitat occurs onsite.

## Appendix B

### Potentially Occurring Special Status Plant Species in the Mariposa Lakes Project Region

Family Taxon Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
<i>Trichocoronis wrightii wrightii</i> Wright's triehocoronis	Fed: - State: - CNPS: List 2.1	May-September	Meadows; marshes and swamps; riparian forest; vernal pools; [alkaline].	None; no suitable habitat occurs onsite.
<b>Fabaceae</b> <i>Astragalus tener tener</i> Alkali milkvetch	Fed: - State: - CNPS: List 1B.2	March-June	Playas; valley and foothill grassland (adobe clay), vernal pools (alkaline).	None; no suitable habitat occurs onsite.
<i>Lathyrus jepsonii jepsonii</i> Delta tulle pea	Fed: - State: - CNPS: List 1B.2	May-September	Marshes and swamps (freshwater and brackish).	Unlikely. Known occurrences are limited tidally influenced areas of the Delta.
<b>Geraniaceae</b> <i>California macrophyllum</i> Large-leaf storksbill	Fed: - State: - CNPS: List 2.1	March-May	Cismontane woodland; valley and foothill grassland/clay.	None; no suitable habitat occurs onsite.
<b>Malvaceae</b> <i>Hibiscus lasiocarpus</i> Rose-mallow	Fed: - State: - CNPS: List 2.2	August-September	Marshes and swamps (freshwater).	Unlikely. Known occurrences are limited to large sloughs and river floodplains.
<b>Poaceae</b> <i>Tuctoria greenei</i> Greene's tuctoria	Fed: FE State: CR CNPS: List 1B.1	May-July	Vernal pools	None; no suitable habitat occurs onsite.

**Appendix B**  
**Potentially Occurring Special Status Plant Species in the Mariposa Lakes Project Region**

Family	Taxon	Common Name	Status*	Flowering Period	Habitat	Probability on Project Site
<b>Ranunculaceae</b>	<i>Delphinium recurvatum</i>	Recurved larkspur	Fed: - State: - CNPS: List 1B.2	March-May	Chenopod scrub; cismontane woodland; valley and foothill grassland; [alkaline].	None; no suitable habitat occurs onsite.
<b>Scrophulariaceae</b>	<i>Cordylanthus palmatus</i>	Palmate bird's-beak	Fed: FE State: CE CNPS: List 1B.1	May-October	Chenopod scrub; valley and foothill grassland; (alkaline).	None; no suitable habitat occurs onsite.
	<i>Limosella subulata</i>	Southern mudwort	Fed: - State: - CNPS: List 2.1	May-August	Marshes and swamps; intertidal mudflats.	None; no suitable habitat occurs onsite.

**\*Status**

Federal:  
FE - Federal Endangered  
FT - Federal Threatened  
FPE - Federal Proposed Endangered  
FPT - Federal Proposed Threatened  
FC - Federal Candidate

State:  
CE - California Endangered  
CT - California Threatened  
CR - California Rare  
CSC - California Species of Special Concern

CNPS (California Native Plant Society - List RED Code):  
List 1A - Extinct  
List 1B - Plants rare, threatened, or endangered in California and elsewhere  
List 2 - Plants rare, threatened, or endangered in California, more common elsewhere  
List 3 - Plants about which more information is needed, a review list  
List 4 - Plants of limited distribution, a watch list  
RED Code  
1 - Seriously endangered (>80% of occurrences threatened)  
2 - Fairly endangered (20 to 80% of occurrences threatened)  
3 - Not very endangered (<20% of occurrences threatened)