

# **Hot Springs Valley Wetlands Project**

## **Alkali Mariposa Lily Site Assessment**

**Prepared for:**

**Kern River Valley Heritage Foundation**

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## **Introduction**

A transect survey was conducted for the Hot Springs Valley Wetlands Project to assess the site for presence of alkali mariposa lily (*Calochortus striatus*) and map populations if encountered. The project site is located west of Lake Isabella in eastern Kern County, California (Figure 1). The survey was conducted at the request of the Kern River Valley Heritage Foundation. This report summarizes the results of the survey conducted on May 22, 2016.

## **Project Area**

The Hot Springs Valley Wetlands Project covers approximately 186 acres located southwest corner of the junction of Highway 178 and Highway 155 immediately west of Lake Isabella in eastern Kern County, California.

## **Methods**

The field survey was conducted for the site on May 22, 2016; using belt transects to achieve 100% visual coverage within areas of suitable alkali mariposa lily habitat. Portions of the project site within inundated wetlands that could not be accessed by pedestrian transects were assessed visually using binoculars. If encountered, populations of alkali mariposa lily were mapped using a handheld GPS and/or drawn on an aerial map of the project site. Population size and percent of individuals within various stages of development (e.g. vegetative, flowering, or fruiting) was estimated for all populations observed during the survey.

## **Results and Discussion**

Based on the population estimates made during the field survey approximately 16,200 plants were observed within the Hot Valley Springs Wetlands Project area. Plants were found in varying population sizes ranging from five or fewer plants to over 5000 plants. The majority of the alkali mariposa lily observed occurred at the edges of alkali playas and wetland areas in the project area north of the extension of Erskine Creek Road. Aerial maps illustrating the locations of the recorded populations are shown in Figures 2a and 2b.

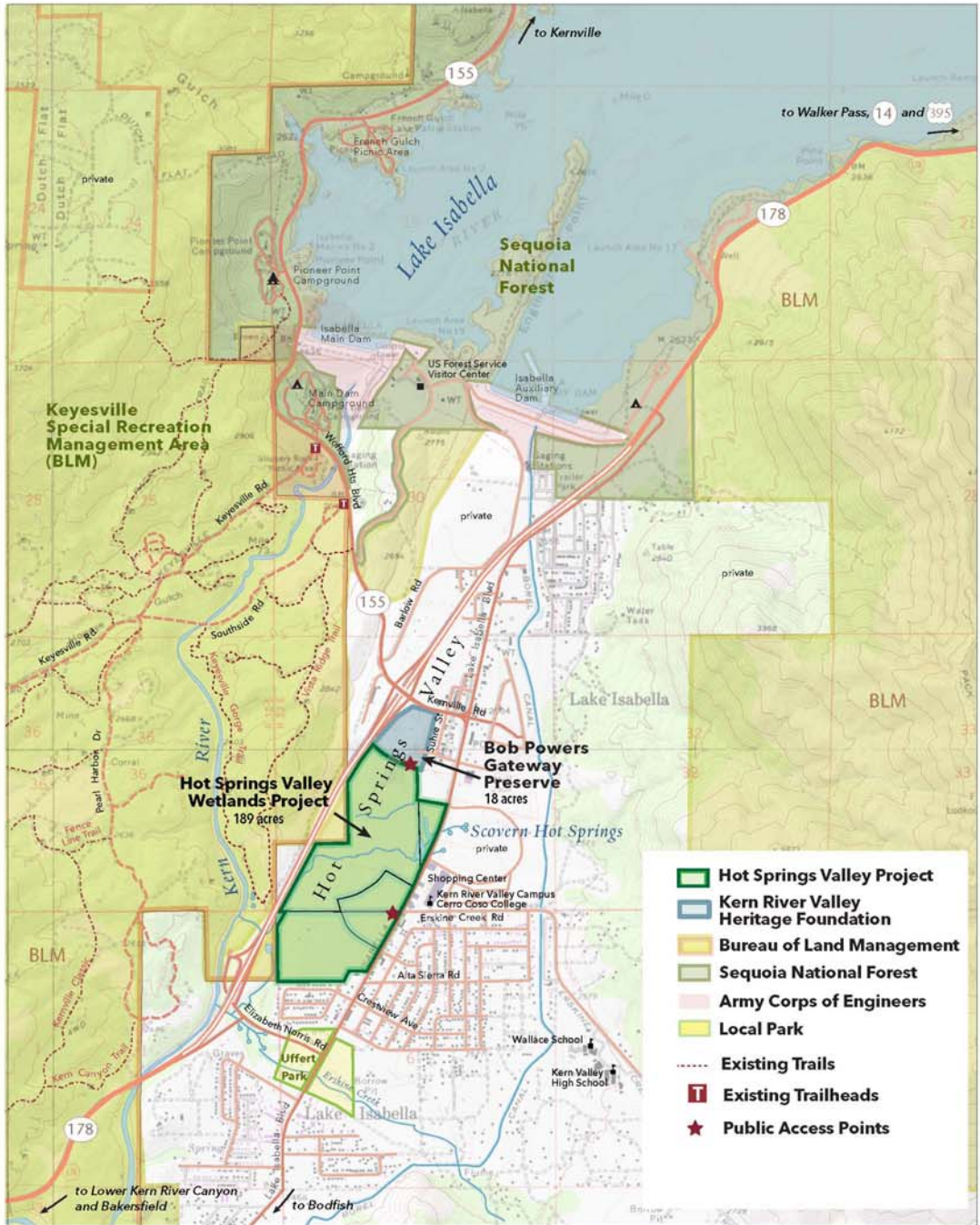
At the time of the survey, approximately 40% of the alkali mariposa lily on site was flowering while 50% was estimated to be in fruit, and 10% was still vegetative. Depending on the location of the populations in relation to wetter areas within the project site the percentage breakdown of the different life stages varied slightly from the average. In areas adjacent to wetlands and in soils that retain moisture for longer periods, the percent of vegetative and flowering individuals was higher than the average while the percent of fruiting individuals was lower. Conversely, populations observed in more upland, drier areas resulted in a higher percentage of fruiting plants observed and a lower percentage of vegetative and flowering individuals present.

Although the average rainfall between January and May 2016 was below normal, the mariposa lily populations on site and in the surrounding area appeared to have had a relatively favorable growth response. Photos of alkali mariposa lily populations taken during the site visit are shown in Figure 3.

# Hot Springs Valley Wetlands Project

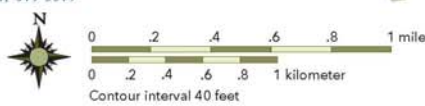
## Lake Isabella, Kern County, CA

### Location Map



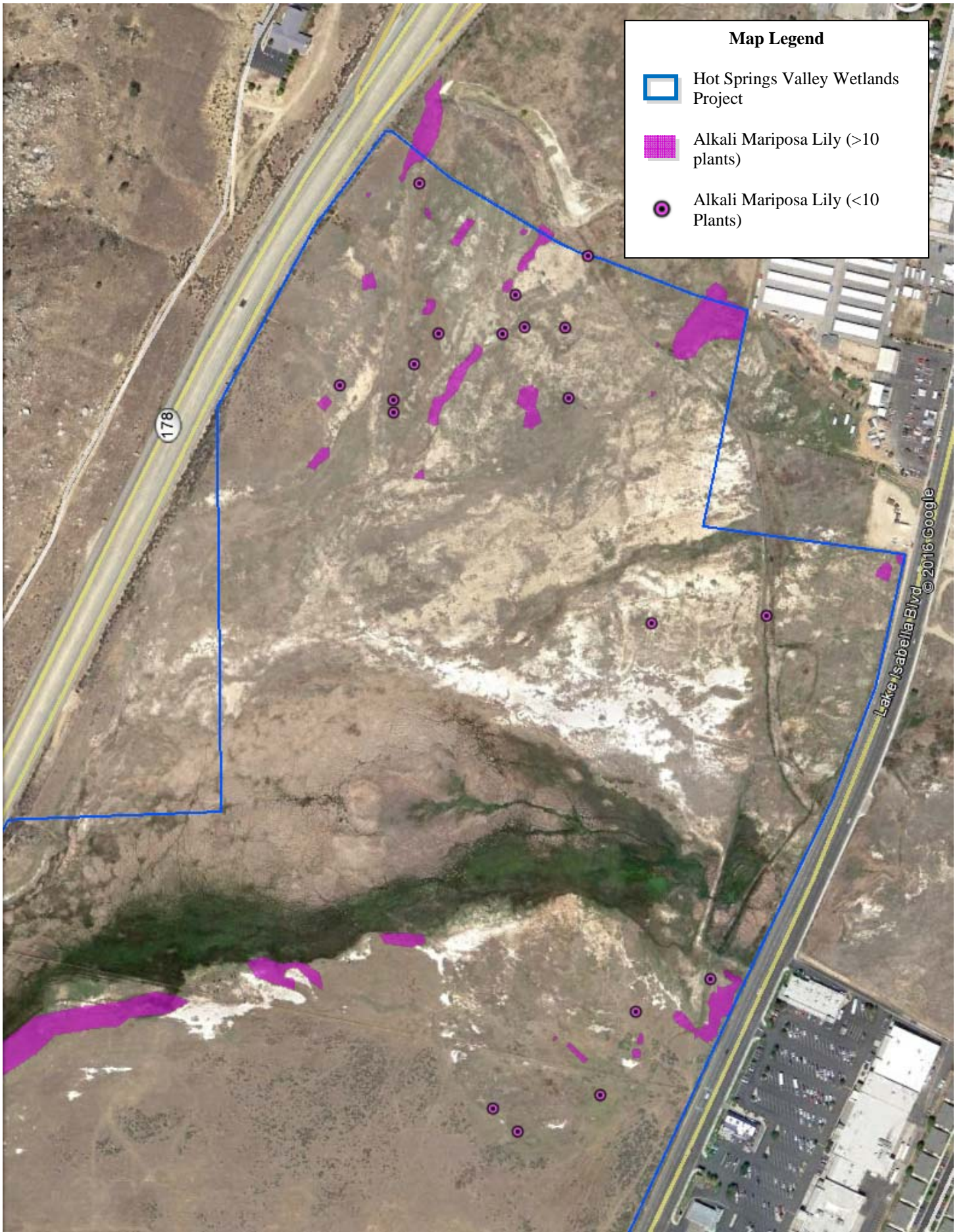
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**Figure 1.** Hot Springs Valley Wetlands Project Location





**Figure 2a.** Aerial Map of Alkali Mariposa Lily Populations



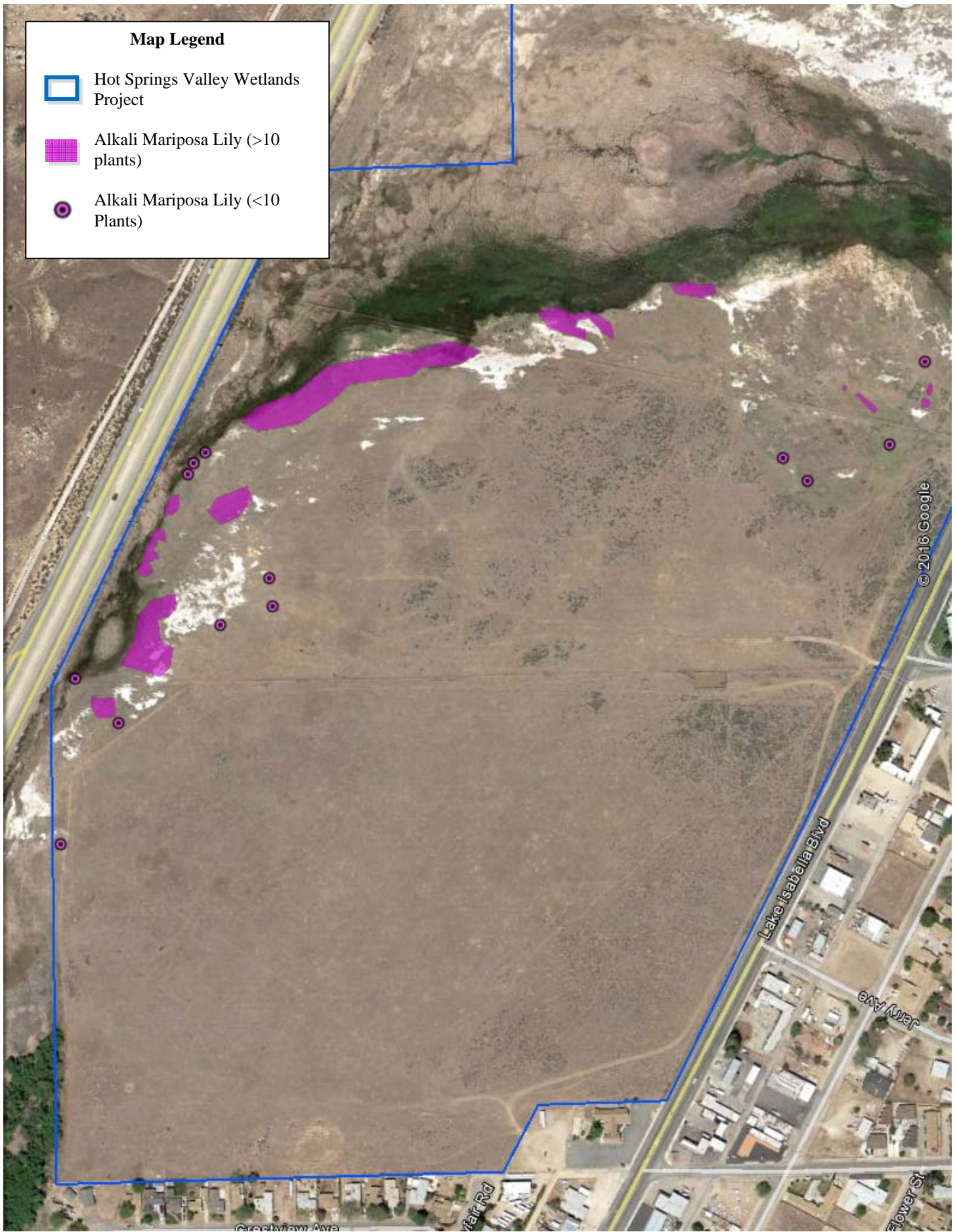


Figure 2b. Aerial Map of Alkali Mariposa Lily Populations





**Figure 3.** Photos of alkali mariposa lily populations observed during May 22, 2016 field survey