

Hot Springs Valley Wetlands Project

Alkali Mariposa Lily Site Assessment

Prepared for:

Kern River Valley Heritage Foundation

P.O. Box 1249

Lake Isabella, California 93240

Report Prepared by:

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Introduction

During 2017, a single survey was conducted for the Hot Springs Valley Wetlands Project to estimate the population size and distribution of alkali mariposa lily (*Calochortus striatus*) (AML). This survey targeted populations found during baseline surveys conducted by McCormick Biological, Inc. (MBI) during 2016, with less effort expended in areas with no AML observed during that effort. 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 17, 2017.

Project Area

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

Methods

The field survey was conducted for the site on May 17, 2017; using belt transects within and adjacent to known occupied areas to achieve 100% visual coverage within these areas of suitable alkali mariposa lily habitat. Upland areas that were not found to be occupied in 2016 were walked using meandering transects but not at 100% coverage. Portions of the project site within inundated wetlands that could not be accessed by pedestrian transects were assessed visually using binoculars. Populations of alkali mariposa lily were mapped using a handheld GPS and/or drawn on an aerial map of the project site. The size of each population and percent of individuals within various stages of development (e.g. vegetative, flowering, or fruiting) were estimated for all populations observed during the survey.

Results and Discussion

Based on the population estimates made during the field survey approximately 9,400 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 4500 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.

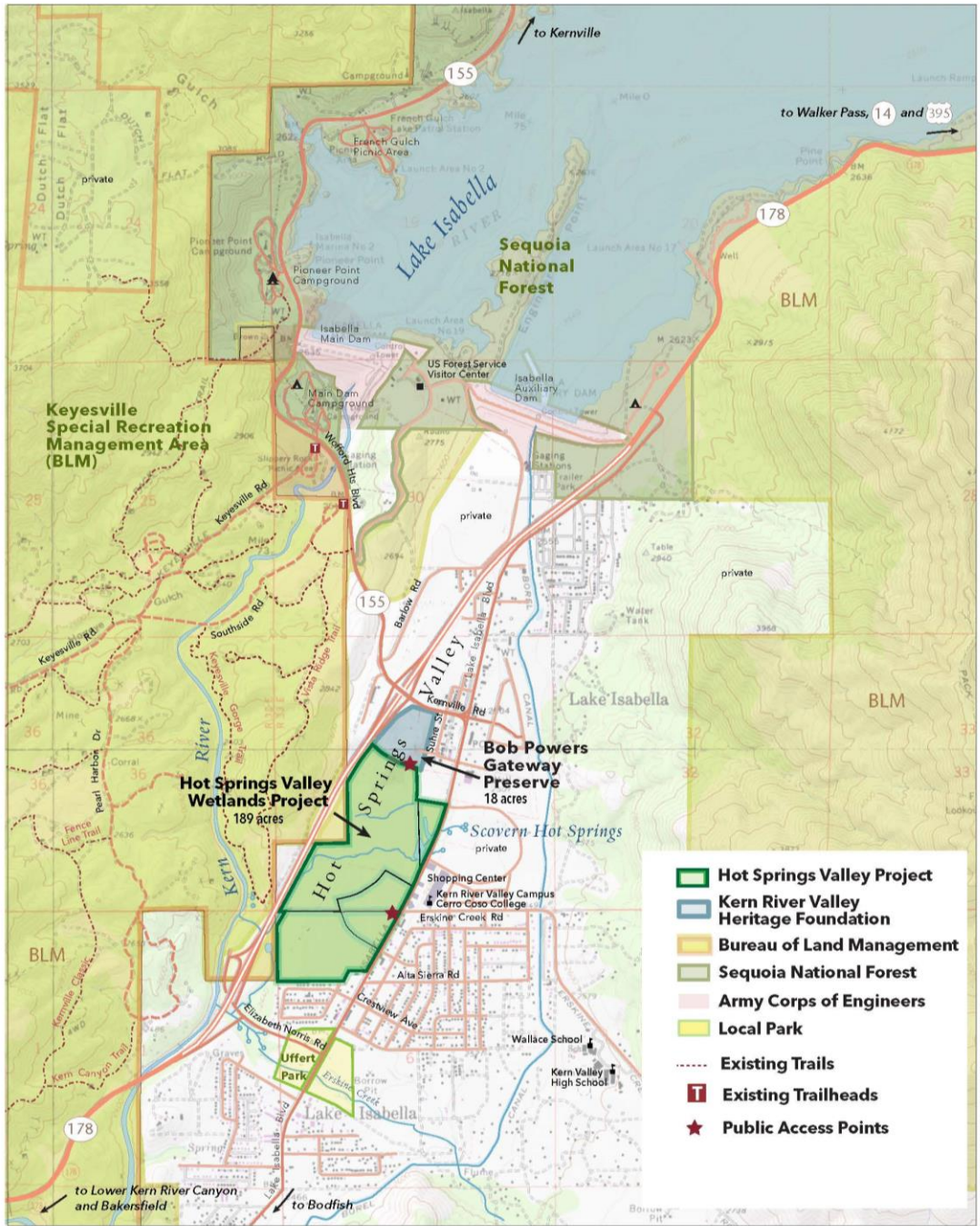
At the time of the survey, approximately 65% of the alkali mariposa lily on site was flowering while 18% was estimated to be in fruit, and 17% was still vegetative. The percent of the various life stages was relatively consistent throughout the observed populations. Given this distribution of phenology, the visibility of plants for the purpose of estimating individuals was excellent.

Although the overall numbers of plants observed within the HSVWP site were lower than those observed during the 2016 surveys (9,400 compared to 16,200 in 2016) the occupied polygons observed during 2017 were more extensive in aerial coverage overall, but less dense. Based on observations during the site visit, the mariposa lily populations onsite 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



USGS 1:24,000 scale quads and shaded relief, with Federal ownership from BLM Keyesville SRMA maps and Open Street Map 8/24/2015 v24

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0 .2 .4 .6 .8 1 mile
0 .2 .4 .6 .8 1 kilometer
Contour interval 40 feet

Figure 1. Hot Springs Valley Wetlands Project Location

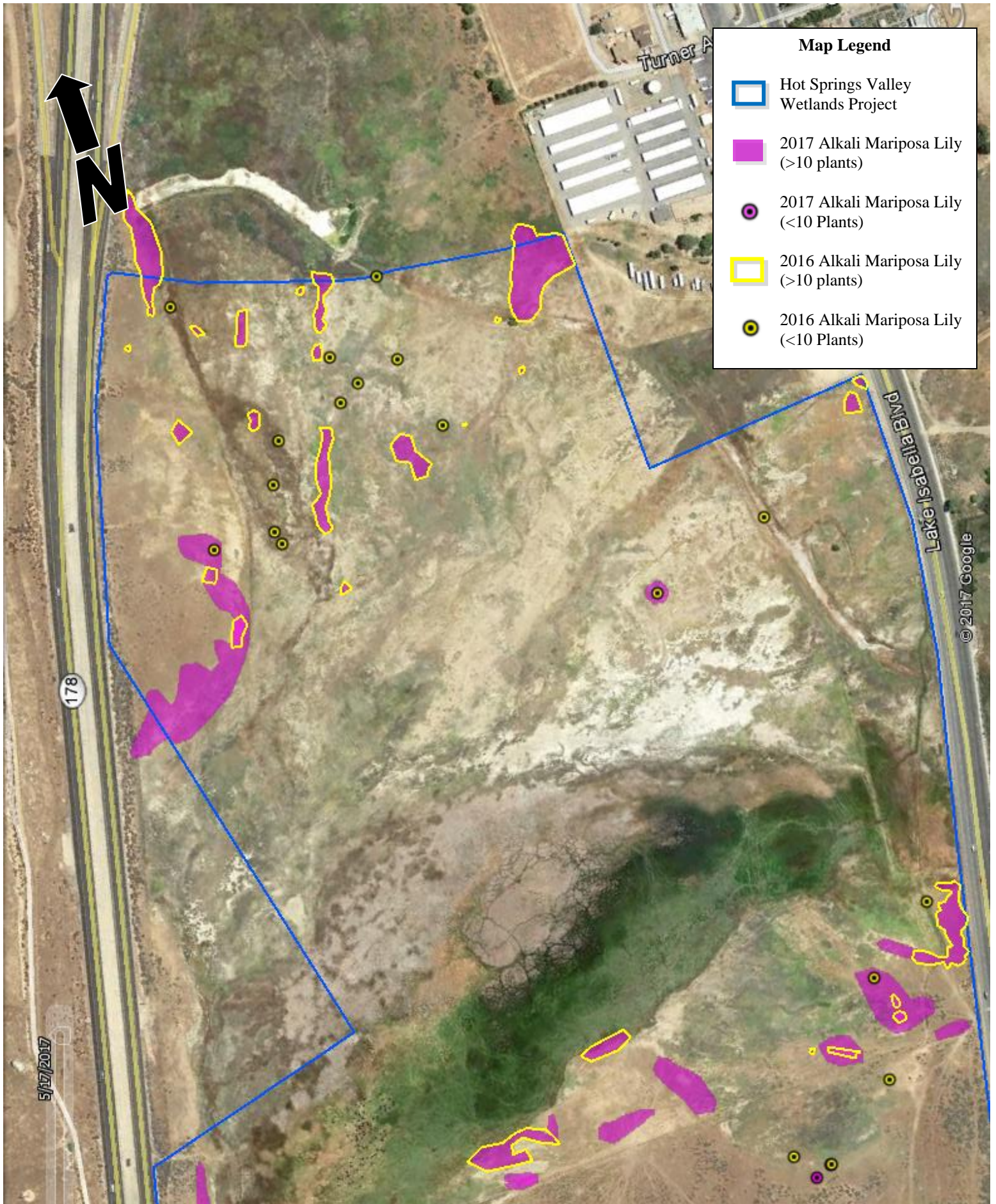


Figure 2a. Aerial Map of Alkali Mariposa Lily Populations

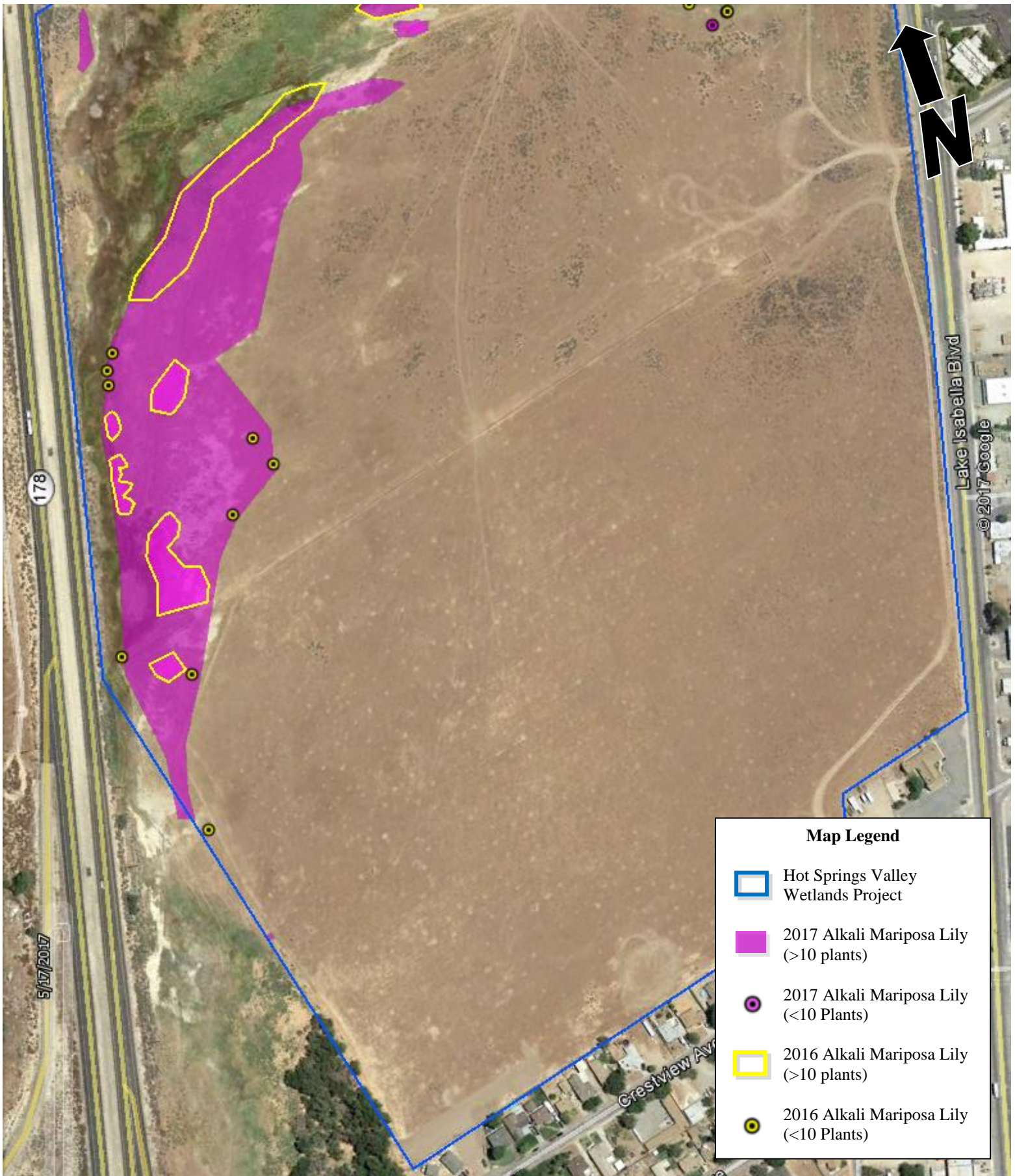


Figure 2b. Aerial Map of Alkali Mariposa Lily Populations



Figure 3. Photos of alkali mariposa lily populations observed during May 17, 2017 field survey