CH2M HILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833
Tel 916.286.0224
Fax 916.614.3424

October 25, 2012

427930.DI.DR

Mike Monasmith
Senior Project Manager
Systems Assessment & Facility Siting Division
California Energy Commission
1516 Ninth Street, MS-15
Sacramento, CA 95814

Subject: Data Response, Set 2D-4B
Hidden Hills Solar Electric Generating System (11-AFC-2)

Dear Mr. Monasmith:

On behalf of Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC, please find attached an electronic copy of Data Response, Set 2D-4B.

Please call me if you have any questions.

Sincerely,

CH2M HILL

John L. Carrier, J.D.
Program Manager

Encl.

c: POS List
Project file

Data Response Set 2D-4B

Hidden Hills

Solar Electric Generating System

(11-AFC-2)

Application for Certification

Hidden Hills Solar I, LLC; and Hidden Hills Solar II, LLC

October 2012

With Technical Assistance from

CH2MHILL®

IS061411043744SAC

Hidden Hills Solar Electric Generating System (HHSEGS)

(11-AFC-2)

Data Response, Set 2D-4B
(Response to Data Request 174)

Submitted to the

California Energy Commission

Submitted by

Hidden Hills Solar I, LLC; and
Hidden Hills Solar II, LLC

October 25, 2012

With Assistance from

CH2MHILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833

Contents

Introduction

Attached is Hidden Hills Solar I, LLC, and Hidden Hills Solar II, LLC (collectively, "Applicant") response to the California Energy Commission (CEC) Staff's data request number 174 for the Hidden Hills Solar Electric Generating System (HHSEGS) Project (11-AFC-2). The CEC Staff served this data request on March 9, 2012.

Biological Resources (174)

BACKGROUND – Off-site Surveys

During the public workshop on February 22, 2012, the applicant volunteered to conduct additional off-site surveys for the 10 special-status plant species found on the project site during the spring 2011 botanical surveys within the proposed project site (tn 63262: Data Response Set 1B-2, Attachment Data Request #63-1A, filed 12/30/2011). Additional off-site occurrences, if found, could improve staff's understanding of the broader range of these rare species in California, and allow staff to understand where additional occurrences are located which could possibly lessen the likelihood of significant impacts for some of the rarest species. Additional information on the size and integrity of the off-site occurrences, ownership, and management opportunities would allow staff to consider a full range of mitigation options. Given the timing of these additional field surveys, the results of these additional surveys will not necessarily be available for the Preliminary Staff Assessment, however, they will be fully considered in staff's Final Staff Assessment.

DATA REQUEST

174. Please submit a brief status report or memo on the spring 2012 surveys for the following 10 special status plant species: pink funnel-lily (*Androstephium breviflorum*), gravel milk-vetch (*Astragalus sabulonum*), Preuss' milk-vetch (*Astragalus preussii var. preussii*), Tidestrom's milk-vetch (*Astragalus tidestromii*), Wheeler's skeletonweed (*Chaetadelpha wheeleri*), purplenerve spring parsley (*Cymopterus multinervatus*), Pahrump Valley buckwheat (*Eriogonum bifurcatum*), Goodding's phacelia (*Phacelia pulchella var. gooddingii*), desert wing-fruit (*Selinocarpus nevadensis*), and Nye milk-vetch (*Astragalus nyensis*). The status report shall include a table of all new occurrences, copies of completed California Natural Diversity Database (CNDDB) field forms for each special-status plant occurrence, and the new GPS data (and metadata). The status report shall be submitted no later than May 15th, 2012. A final spring 2012 Botanical Survey Report shall be submitted no later than June 15th, 2012. The final report shall include a brief discussion of the survey methods, maps of all occurrences at a scale identical to that used in the spring 2011 Botanical Resource Survey (1" = 2,400 feet), a table of new occurrences that includes information on the occurrence size and site quality, ownership, and management or restoration opportunities. Please include all GPS data (and metadata). If any new species are found, please provide species accounts and status codes.

Response: A spring 2012 off-site survey report for special-status plants is provided as Attachment DR174-1.

Attachment DR174-1
2012 Offsite Survey Report for Special-status Plants

Attachment DR174-1

Technical Report: 2012 Offsite Surveys for Special-status Plants for the Hidden Hills Solar Electric Generating System

Data Response, Set 2D-4B
(Response to Data Request 174)

Prepared for

Hidden Hills Solar I, LLC, and
Hidden Hills Solar II, LLC

October 2012

Prepared by

CH2MHILL®

2485 Natomas Park Drive, Suite 600
Sacramento, California 95833

With data collected by:

Garcia and Associates
One Saunders Avenue, San Anselmo, California 94960
Contact: Ann Howald, Senior Botanist
and
Clark Biological Consulting
201 East 8th Street
Alturas, CA 96101

Executive Summary

The purpose of the spring 2012 offsite surveys for the Hidden Hills Solar Electric Generating System (HHSEGS) was to identify and document new localities of target special-status species[1] within California and outside of the HHSEGS boundaries.[2] The 2012 offsite surveys were conducted within the northeastern Mojave Desert in several locations within southeastern Inyo County and northeastern San Bernardino County, California. The areas included in the offsite special-status plant surveys are shown in Figure 1 in Appendix A.

The following special-status plant species were the focus of surveys: Nye milkvetch (*Astragalus nyensis*), Preuss' milkvetch (*Astragalus preussii* var. *preussii*), gravel milkvetch (*Astragalus sabulonum*), Tidestrom's milkvetch (*Astragalus tidestromii*), Wheeler's skeletonweed (*Chaetadelpha wheeleri*), purplenerve springparsley (*Cymopterus multinervatus*), Torrey's jointfir (*Ephedra torreyana*), Pahrump Valley buckwheat (*Eriogonum bifurcatum*), Goodding's phacelia (*Phacelia pulchella* ssp. *gooddingii*), and desert wing-fruit (*Selinocarpus nevadensis*).

New localities of five of the ten special-status plant species were identified in the following survey areas: Stewart Valley and Ash Meadows Area, Central and Southern Pahrump Valley, Chicago Valley, California Valley, Mesquite Valley, the Mesquite Mountains, and Shadow Valley (Figure 1, Appendix A). The number of localities and individuals found include:

- Thirty-six new locations of Preuss' milkvetch were identified in Central and Southern Pahrump Valley and in Mesquite Valley, totaling approximately 20,516 individuals.
- Tidestrom's milkvetch was observed in 10 localities in Central and Southern Pahrump Valley, Shadow Valley, and the Mesquite Mountains, with a total of 262 individuals.
- One new locality of Wheeler's skeletonweed, consisting of five individuals, was observed in the Southern Pahrump Valley, within the U.S. Bureau of Land Management Pahrump Valley Wilderness.
- Torrey's jointfir was identified in the Southern Pahrump Valley in 54 localities, with 126 female individuals.
- Pahrump Valley buckwheat was observed in 72 new localities within the Stewart Valley and Ash Meadows Area, Central and Southern Pahrump Valley, Chicago Valley, California Valley, and Mesquite Valley. Approximately 7.3 million individuals were observed within these new localities.

[1] The term "special-status" species is not limited in scope to describe threatened, endangered or candidate species under the federal ESA or CESA. Instead, the term "special-status" is a more expansive term, employed by many agencies as described herein.

[2] As used in this report, "locality" refers to a plant population. A locality is not the same as an "element occurrence" (EO). As defined by the California Natural Diversity Database (CNDDB), an EO is a population or group of nearby populations [or localities] located more than 0.25 miles from any other population [or locality] (CNDDB, 2012). Localities are points that represent a single special-status plant or multiple special-status plants and they are similar to a sub-population

Contents

SECTION 1

Introduction

In spring 2012, offsite special-status plant surveys were conducted within the northeastern Mojave Desert in California. The objective of special-status plant surveys was to identify new localities of selected special-status plants outside of the Hidden Hills Solar Electric Generating System (HHSEGS) project boundary.

Section 1 of this report summarizes the purpose of the 2012 spring offsite surveys. The methods used to conduct the offsite surveys are described in Section 2. Section 3 presents the results of the offsite surveys for each survey area including a summary of the totals observed by species. California Natural Diversity Database (CNDDB) field survey forms were prepared and submitted to the CNDDB for all of the special-status plant localities identified during the spring 2012 offsite surveys on June 24, 2012. A copy of the CNDDB forms was also provided to the California Energy Commission (CEC) on July 2, 2012.

1.1 Objective of the Spring 2012 Offsite Surveys

The objective of the spring 2012 offsite surveys was to locate and document new localities[3] of selected special-status plants to obtain additional information regarding the number of localities and their distribution in California. These special-status plant species are: Nye milkvetch (*Astragalus nyensis*), Preuss' milkvetch (*Astragalus preussii* var. *preussii*), gravel milkvetch (*Astragalus sabulonum*), Tidestrom's milkvetch (*Astragalus tidestromii*), Wheeler's skeletonweed (*Chaetadelpha wheeleri*), purplenerve springparsley (*Cymopterus multinervatus*), Torrey's jointfir (*Ephedra torreyana*), Pahrump Valley buckwheat (*Eriogonum bifurcatum*), Goodding's phacelia (*Phacelia pulchella* ssp. *gooddingii*), and desert wing-fruit (*Selinocarpus nevadensis*).

1.2 Environmental Setting

The 2012 offsite surveys were performed within southeastern Inyo County and part of northeastern San Bernardino County, California. This area is located in the northeastern Mojave Desert in California, and has climatic conditions typical of that region. The climate is arid with extreme fluctuations in daily and seasonal temperatures. Average annual precipitation is less than 5 inches. The 2011–2012 rainfall season was extremely dry. Recorded precipitation was less than 50 percent of average at both Pahrump and Las Vegas, Nevada (WRCC, 2012). During the March through May 2012 offsite survey period, no annual plants were observed due to the low rainfall. Also, the germination and growth of many herbaceous perennial plant and shrub species was lower than typically would occur in years of average or above-average rainfall.

[3] As used in this report, "locality" refers to a plant population. A locality is not the same as an "element occurrence" (EO). As defined by the California Natural Diversity Database (CNDDB), an EO is a population or group of nearby populations [or localities] located more than 0.25 miles from any other population [or locality] (CNDDB, 2012a). Localities are points that represent a single special-status plant or multiple special-status plants and they are similar to a sub-population

SECTION 2

Methods

This section describes the methods used by the botany team to plan and conduct the spring 2012 offsite surveys. The survey team consisted of Senior Botanist Ann Howald of Garcia and Associates (GANDA) (field supervisor); Chloe Scott (GANDA Biologist and assistant field supervisor); University of California (UC) Riverside Herbarium Curator Andrew Sanders (taxonomic expert); botanists Florence Caplow, Eve Laeger, Onkar Singh, and Josh Utter; and biologists William Clark and Russell Kokx. All of the survey team members participated in previous botanical surveys for the HHSEGS project in 2010 and 2011 with the exception of Florence Caplow, who was present only for the 2011 survey.

2.1 Pre-field Preparations

The survey team was already familiar with the identification of the special-status plant species that were the focus of these surveys from previous surveys and this reduced the survey training requirements. Online databases and the botanical literature were used to identify the known distribution and specific habitat requirements of the special-status plants. U.S. Geological Survey (USGS) 7.5-minute topographic maps and Google Earth imagery were used to select potentially suitable offsite survey areas and identify access roads into these areas.

2.2 Field Survey Methods

Reference site checks (visits to known special-status plant locations) were conducted prior to the surveys to assess species phenology (stage of plant development) and confirm that the species that were the focus of these surveys were present and in identifiable condition. Information obtained during the reference site visits was used to help refine the timing of surveys and narrow the geographic scope of the surveys. More detail on survey methods is presented in the following sections.

2.2.1 Reference Site Visits

Reference site visits were conducted prior to field work in the survey areas to determine the phenology of each targeted species. Rainfall in spring 2012 was significantly below average. As a result, annual plant growth was substantially reduced or absent. Of the ten target special-status plants, three are annuals: Pahrump Valley buckwheat, gravel milkvetch, and Goodding's phacelia. Although it is an annual, Pahrump Valley buckwheat can be reliably identified from dried plant material ("skeletons") from the previous year. During the reference site visits, known localities of Pahrump Valley buckwheat were reviewed to determine if plant skeletons were present and identifiable. The other two annual special-status plants, gravel milkvetch and Goodding's phacelia, generally cannot be found and identified using dried plant skeletons. These species were not observed during the reference site visits or surveys, likely due to drought conditions. The survey team also examined known localities of the other targeted special-status plants, which are shrubs or perennial herbaceous species. Reference site visits for these species are described below.

Preuss' milkvetch: This herbaceous perennial was observed actively growing and flowering along Tecopa Road[4] in the vicinity of the proposed transmission line corridor on March 11, 2012. The survey approach for this species included early surveys in Mesquite Valley, where two localities for this plant had previously been documented (CNDDB, 2012b; Jepson Online Interchange, 2012).

[4] Tecopa Road is also called "Old Spanish Trail Highway."

Tidestrom's milkvetch: The survey team examined a known location (CNDDB EO #15) for Tidestrom's milkvetch near the intersection of Excelsior Mine Road and Interstate 15 (I-15) on April 16, 2012. Hundreds of plants were observed at this location, of which approximately 90 percent were vegetative and 10 percent were flowering and fruiting. Mature pods from the previous year were observed near some of the vegetative individuals.

Wheeler's skeletonweed: The survey team searched for known localities for Wheeler's skeletonweed along the California-Nevada state line road within the HHSEGS site on April 11, 2012. No actively growing plants were observed but a few identifiable skeletons of this herbaceous perennial were seen.

Purplenerve springparsley: The survey team reviewed a known locality (CNDDB EO #27) for purplenerve springparsley along Cima Road on April 16, 2012. No trace of this species was found. Most species in the genus *Cymopterus* appear aboveground only in wet years. The unusually dry spring 2012 conditions could explain why this species was not found in the survey areas.

Torrey's jointfir: The survey team examined several known Torrey's jointfir offsite localities within 1 mile of the HHSEGS site to determine the progress of female cone formation, since mature female cones are required to identify this large woody shrub and to distinguish Torrey's jointfir from Death Valley jointfir (*Ephedra funerea*). The Death Valley jointfir is common on rocky hillsides in the vicinity of Death Valley and elsewhere in the northeastern Mojave Desert (Jepson Online Interchange, 2012). Known localities of Torrey's jointfir were reviewed in March and April 2012. Young female cones were observed on some *Ephedra* individuals on April 13, 2012, and this confirmed that the surveys for Torrey's jointfir, scheduled for early May, were properly timed to coincide with the presence of mature female cones.

Desert wing-fruit: The botany team checked three known localities of desert wing-fruit in the vicinity of Jean, Nevada, where many individuals of desert wing-fruit were observed in 2011. This species was not observed in two of these locations, but small desert wing-fruit plants (in vegetative condition) were observed at a third location. On April 16, 2012, the team checked all of the localities of desert wing-fruit that had been observed along Excelsior Mine Road in San Bernardino County in 2011 (Caplow, 2012) but no plants were found at any of these localities.

2.2.2 Offsite Field Survey Methods

Survey areas were selected based on the known range of the species and the likelihood that suitable habitat was present. Selected survey areas included the geographic areas where special-status plant species had been previously recorded or locations nearby previous records.

Surveys were conducted by driving into selected survey areas and observing the habitats present. If suitable habitat for one or more special-status plants was identified, spot checks of the area were made on foot. At each specific location surveyed, each member of the survey team walked in a different direction to maximize the area covered and most efficiently cover the area. In roadless areas or areas where existing roads could not be used because of wilderness or other travel restrictions, the surveys were conducted only on foot. In some cases, special-status plants were spotted from the vehicles while traveling slowly on access roads.

Each locality where a special-status plant was observed was recorded as one or more points using a Trimble GeoXT or GeoXH global positioning system (GPS) unit. A unique code was assigned to each locality and entered into the GPS unit. Information on abundance, habitat, and location was also recorded. Backup data were recorded on paper data sheets. Recorded data also included: scientific name; number of individuals; phenology (vegetative, flowering, fruiting); substrate type; vegetation type; name of USGS 7.5' topographic quadrangle; and township, range, and section. Data sheets were

collected and reviewed daily by the survey field supervisor. Representative photographs were taken of special-status plant species and their habitats (see Appendix B).

CNDDB field survey forms were prepared and submitted to the CNDDB on June 24, 2012, for all of the special-status plant localities documented during the HHSEGS spring 2012 offsite surveys. A copy of the CNDDB forms was also provided to the California Energy Commission (CEC) on July 2, 2012.

2.3 Global Positioning System / Geographic Information System Data Collection and Analysis, and Quality Assurance

Data collected in the field were recorded using Trimble GeoXH or GeoXT GPS units. Location data collected with these units is accurate to the sub-meter level after the data have been post-processed. GPS units were equipped with background files for navigation, and data dictionaries for data collection. Garmin GPS units with topographic map background files and iPhone map tools were used to assist with navigation in the field. A project-specific data dictionary was used to increase data recording efficiency and data quality.

All data collected with GPS units were downloaded and backed up each night onto laptop computers, and emailed to the project's Geographic Information System (GIS) technician. GPS data were post-processed by the GIS technician and downloaded into a project GIS database. Location data were mapped onto aerial photographic or USGS topographic base maps by the GIS technician. These draft figures were checked for accuracy by the field supervisor, using the backup data on the paper data sheets, and spreadsheets containing locality-specific information.

SECTION 3

Results

Five special-status plant species were observed during the 2012 offsite surveys. These species are: 1) Preuss' milkvetch, 2) Tidestrom's milkvetch, 3) Wheeler's skeletonweed, 4) Torrey's jointfir, and 5) Pahrump Valley buckwheat. Results of the 2012 special-status plant surveys are described in Sections 3.1 and 3.2. A tabular summary of the number of special-status plant localities and individuals observed is provided in Tables 3-1 and 3-2. Figure 1 in Appendix A shows the location of the offsite survey areas. The distribution of the five special-status plants identified is shown in Figures 2 through 9 in Appendix A.

As discussed in Section 2, the spring 2012 season was unusually dry. Three annual special-status plants (Nye milkvetch, gravel milkvetch, Goodding's phacelia) and two perennials (purplenerve springparsley and desert wing-fruit) were not identified during the spring 2012 special-status plant surveys, likely due to low rainfall conditions.. Reference sites for these species were reviewed in the field and surveys of suitable habitat were performed but no evidence of any of them was found in California. Vegetative individuals of desert wing-fruit were observed at one reference site near Jean, Nevada. It is possible that these species do occur in the survey areas but they can only be identified in years with at least average rainfall.

Incidental to these surveys, the following non-target special status species were observed: Pahrump silverscale (*Atriplex argentea* var. *longitrichoma* [one locality]), Parish's phacelia (*Phacelia parishii* [one locality]), and Johnson's bee-hive cactus (*Sclerocactus johnsonii* [one locality]). Information on these incidental observations was provided to the CNDDB and these species are not described further in this report.

3.1 Results by Survey Area

Five special-status plants (Preuss' milkvetch, Tidestrom's milkvetch, Wheeler's skeletonweed, Torrey's jointfir, and Pahrump Valley buckwheat) were found in seven survey areas. These survey areas are: Stewart Valley and Ash Meadows Area, Central and Southern Pahrump Valley, Chicago Valley, California Valley, Mesquite Valley, Mesquite Mountains and Shadow Valley. Table 3-1 summarizes the special-status plant species observed by survey area. The location of the 2012 offsite special-status plant survey areas is shown in Figure 1 in Appendix A. Figures depicting the special-status plants observed are provided in Figures 2 through 9 in Appendix A. CNDDB forms that include a description of the habitat and associate species identified at these locations were provided to the CNDDB on June 24, 2012. Information on the habitat and plant associates observed is therefore not included in this report.

TABLE 3-1
Number of Special-status Plants Observed by Offsite Survey Area

Survey Area and Special-status Plant Species Observed	No. of Localities	Approximate No. of Individuals
Stewart Valley		
Pahrump Valley buckwheat (*Eriogonum bifurcatum)*	2	50,250
Central and Southern Pahrump Valley		
Preuss' milkvetch (*Astragalus preussii* var. *preussii)*	3	29
Tidestrom's milkvetch (*Astragalus tidestromii)*	2	6

TABLE 3-1
Number of Special-status Plants Observed by Offsite Survey Area

Survey Area and Special-status Plant Species Observed	No. of Localities	Approximate No. of Individuals
Wheeler's skeletonweed (*Chaetadelpha wheeleri)*	1	5
Torrey's jointfir (*Ephedra torreyana)*	54	126 (female)
Pahrump Valley buckwheat (*Eriogonum bifurcatum)*	36	2.5 million
Chicago Valley		
Pahrump Valley buckwheat (*Eriogonum bifurcatum)*	4	1,637
California Valley		
Pahrump Valley buckwheat (*Eriogonum bifurcatum)*	3	1,350
Mesquite Valley		
Preuss' milkvetch (*Astragalus preussii* var. *preussii)*	33	20,487
Pahrump Valley buckwheat (*Eriogonum bifurcatum)*	27	4.7 million
Mesquite Mountains		
Tidestrom's milkvetch (*Astragalus tidestromii)*	1	3
Shadow Valley		
Tidestrom's milkvetch (*Astragalus tidestromii)*	7	253

Notes:

The number of individual plants in very large populations was rounded to the nearest 100,000 for this report

Localities generally refer to populations. Element Occurrences are defined as any population or group of nearby populations [or localities] located more than 0.25 miles from any other population [or locality] (CNDDB, 2012a).

Data Source: Surveys conducted offsite by GANDA, Clark Biological Consulting, and Andrew Sanders, UC Riverside, in support of the HHSEGS project in March, April, and May 2012.

3.1.1 Stewart Valley and Ash Meadows

Special-status plant habitat within Stewart Valley and the Ash Meadows survey area were searched for special-status plants in mid-April 2012. The location of Stewart Valley and Ash Meadows survey area is shown on Figures 1 and 2, Appendix A. Vehicle traffic is prohibited within the U.S. Bureau of Land Management (BLM) Resting Spring Wilderness Area in the western portion of this survey area (Figure 2, Appendix A) and surveys in this wilderness were conducted on foot. Surveyors hiked a 10-mile loop within the BLM Resting Spring Range Wilderness. The portion of Stewart Valley traversed by Highway 178 was accessed by vehicle and surveys of suitable habitat adjacent to existing roads were also performed. Two localities of Pahrump Valley buckwheat were documented within the Stewart Valley and Ash Meadows Area in valley bottom locations (Figure 2, Appendix A).

3.1.2 Central and Southern Pahrump Valley

The Central Pahrump Valley survey area is located northwest of the HHSEGS, at the base of the Nopah Range, near the California and Nevada state line (Figures 1 and 3, Appendix A). The Southern Pahrump Valley survey area is composed of several privately owned parcels and lands managed by BLM and these lands are west, southwest, and south of the HHSEGS site (Figures 1 and 4, Appendix A). Suitable habitat in the Central and Southern Pahrump Valley survey areas was accessed by vehicle where road access was available and by foot where no existing roads were present. Access to suitable special-status plant habitat was only obtained on foot within the BLM Pahrump Valley Wilderness, in the southern tip of the Southern Pahrump Valley survey area.

During surveys performed in April and May 2012, five special-status plant species were found in the Central and Southern Pahrump Valley survey areas. These include: Preuss' milkvetch (3 localities), Tidestrom's milkvetch (2 localities), Wheeler's skeletonweed (1 locality), Torrey's jointfir (54 localities), and Pahrump Valley buckwheat (36 localities) (Figures 3 and 4, Appendix A). Preuss's milkvetch, Torrey's jointfir, and Pahrump Valley buckwheat were all in valley bottom sites. Tidestrom's milkvetch and Wheeler's skeletonweed were on the lower edge of the bajada that extends north from the base of the Kingston Range within the BLM Pahrump Valley Wilderness (Figures 3 and 4, Appendix A).

3.1.3 Chicago Valley

Chicago Valley is located in between the Nopah and Resting Springs Mountains (Figure 5, Appendix A). Surveys of the Chicago Valley were performed in mid-April 2012. Access to Chicago Valley was obtained by existing roads. Surveys of suitable habitat were conducted along the roadside by vehicle and elsewhere on foot. Four new localities of Pahrump Valley buckwheat were documented in valley bottom locations during pedestrian surveys (Figure 5, Appendix A).

3.1.4 California Valley

California Valley is west of the Pahrump Valley Wilderness, south of the southern tip of the Nopah Range (Figure 6, Appendix A). Roadless portions of California Valley were surveyed on foot in May 2012. Three new localities of Pahrump Valley buckwheat were documented in the central part of the bottom of the valley (Figure 6, Appendix A). These localities are the first documented records of Pahrump Valley buckwheat from California Valley.

3.1.5 Mesquite Valley

Mesquite Valley is located east of the Mesquite Mountains, near the junction of Inyo and San Bernardino counties (Figure 7, Appendix A). Mesquite Valley straddles the California-Nevada border but the 2012 offsite special-status plant surveys were performed only within the California portion of the valley (Figure 7, Appendix A). Mesquite Valley was surveyed in March and April 2012. Surveys along existing roads were performed by vehicle and other areas were accessed on foot. Thirty-three new localities of Preuss' milkvetch and 27 new localities of Pahrump Valley buckwheat were documented in the Mesquite Valley. Preuss' milkvetch was found in valley bottom locations with low competition such as unpaved roads, roadsides, and in sparsely vegetated sites. Pahrump Valley buckwheat was found to be locally abundant in valley bottom locations with sparse vegetation.

3.1.6 Mesquite Mountains

The Mesquite Mountains are located southwest of Mesquite Valley, west of the junction of Inyo and San Bernardino counties (Figures 1 and 8, Appendix A). Rocky limestone habitat suitable for Tidestrom's milkvetch was observed on the edge of unpaved Kingston Road during vehicular transit from Excelsior Mine Road to Mesquite Valley. One new locality of Tidestrom's milkvetch was found in a gravelly roadcut in the vicinity of Winters Pass (Figure 8, Appendix A). This locality is the first documented Tidestrom's milkvetch occurrence in the Mesquite Mountains. No additional localities were detected during foot surveys of the limestone habitat on the east side of the range in the BLM Mesquite Mountains Wilderness.

3.1.7 Shadow Valley

Shadow Valley is located southeast of the HHSEGS site, near Interstate 15 (I-15) (Figures 1 and 9, Appendix A). Surveys were performed in several different portions of Shadow Valley in mid-April 2012. Existing roads (Shadow Mountain, Cima, and Excelsior Mine Roads) were driven in "loops" through Shadow Valley to identify suitable special-status plant habitat. Surveys of suitable habitat were then performed on foot. Seven new localities of Tidestrom's milkvetch were documented along Excelsior

Mine Road within the Mojave Preserve in the vicinity of Cima Road (Figure 9, Appendix A). Most of the localities are north of I-15, in the vicinity of Kingston/Excelsior Mine Roads, but one locality is mapped to the south of the interstate near Cima Road (Figure 9, Appendix A).

3.2 Results by Special-status Plant Species

The total number of individuals and localities of the five special-status plant species observed is provided in Table 3-2. Figure 1 in Appendix A shows the location of the offsite survey areas. The distribution of the five special-status plants identified during the 2012 offsite special-status plant surveys is shown in Figures 2 through 9 in Appendix A.

TABLE 3-2
Total Number of Special-status Plants Observed During 2012 Offsite Surveys

Special-status Plant Species and Survey Area		No. of Localities	Approximate No. of Individuals
Preuss' milkvetch (*Astragalus preussii* var. *preussii)*			
Pahrump Valley		3	29
Mesquite Valley		33	20,487
	Total	36	20,516
Tidestrom's milkvetch (*Astragalus tidestromii)*			
Pahrump Valley		2	6
Mesquite Mountains		1	3
Shadow Valley		7	253
	Total	10	262
Wheeler's skeletonweed (*Chaetadelpha wheeleri)*			
Central and Southern Pahrump Valley		1	5
Torrey's jointfir (*Ephedra torreyana)*			
Pahrump Valley		54	126 (female)
Pahrump Valley buckwheat (*Eriogonum bifurcatum)*			
Stewart Valley		2	50,250
Central and Southern Pahrump Valley		36	2.5 million
Chicago Valley		4	1,637
California Valley		3	1,350
Mesquite Valley		27	4.7 million
	Total (Approximate)	72	7.3 million

Notes:

The number of individual plants in very large populations was rounded to the nearest 100,000 for this report

Localities generally refer to populations. Element Occurrences are defined as any population or group of nearby populations [or localities] located more than 0.25 miles from any other population [or locality] (CNDDB, 2012a).

Data Source: Surveys conducted offsite by GANDA, Clark Biological Consulting, and Andrew Sanders, UC Riverside, in support of the HHSEGS project in March, April, and May 2012.

3.2.1 Preuss' milkvetch (*Astragalus preussii* var. *preussii*)

Thirty-six localities of Preuss' milkvetch were found in the Central and Southern Pahrump Valley and Mesquite Valley survey areas (Figures 3, 4 and 7, Appendix A), with a total of approximately 20,516 individuals (Table 3-2). During the very dry 2012 survey season, Preuss' milkvetch was observed to grow

robustly, with individual plants producing many stems covered with slightly succulent dark green leaves, and multiple flowering stalks with many flowers and fruits.

Three localities with a total of 29 individuals were mapped in Central and Southern Pahrump Valley bottom locations along roads, in areas with pale-colored silty soil, and adjacent to shadscale scrub. The shadscale scrub was dominated by shadscale (*Atriplex confertifolia*), box thorn species (*Lycium* spp.), desert alyssum (*Lepidium fremontii*), and prince's plume (*Stanleya pinnata*). Preuss' milkvetch was mapped previously (2010–2012) in only a few widely scattered localities in the Central and Southern Pahrump Valley, each consisting of fewer than ten individuals (CH2M HILL, 2011, 2012a; Jepson Online Interchange, 2012).

In Mesquite Valley, Preuss's milkvetch was identified in the central and northern parts of the valley (in California) in 33 localities with a total of about 20, 500 individuals. These localities were primarily along roadsides and in the roadbeds of infrequently traveled unpaved roads. However, plants were also observed adjacent to roads in shadscale scrub with seepweed (*Suaeda moquinii*) and desert alyssum. Soils in the bottom of Mesquite Valley are predominantly pale-colored, silty, and likely contain selenium, since Preuss's milkvetch typically grows on selenium-rich soils (Barneby, 1989). One large locality (approximately 5,000 individuals) of Preuss' milkvetch was observed on hummocks of wind-blown sand with scattered honey mesquite. Another locality, consisting of robust, young plants with poorly developed taproots, was within a field of cultivated alfalfa. Preuss' milkvetch was observed to be much more common and widespread in Mesquite Valley than in the Central and Southern Pahrump Valley.

It is possible that additional plants could occur in suitable habitat on the edge of the Mesquite playa (dry lake) in the Mesquite Valley survey area (Figure 7, Appendix A). Access to this part of the playa would be on foot through dunes and dense stands of mesquite, and time constraints precluded pedestrian surveys in this area. The southern end of Mesquite Valley was surveyed along an unpaved access road, but Preuss' milkvetch was not observed. Elsewhere in the southern Mesquite Valley, the native habitat consists mainly of sandy-gravelly soils with Mojave Desert scrub dominated by creosote bush (*Larrea tridentata*) and burrobush (*Ambrosia dumosa*). Preuss' milkvetch has not been found in this habitat type and it is therefore unlikely that Preuss' milkvetch would occur in this part of the survey area.

3.2.2 Tidestrom's milkvetch (*Astragalus tidestromii*)

Tidestrom's milkvetch was mapped in 10 localities, with a total of 262 individuals, in the Central and Southern Pahrump Valley, Mesquite Mountains, and the Shadow Valley survey areas (Figures 3, 4, 7, and 9, Appendix A). Flowering and fruiting plants of Tidestrom's milkvetch were observed at a known locality near the intersection of Excelsior Mine Road and I-15 and this location served as a reference site (CNDDB EO #15). About 10 percent of the hundreds of plants observed at this location were flowering or fruiting.

Most of the plants mapped during the 2012 offsite special-status plant surveys were based on identification of fresh leaves produced during the 2012 growing season and dried mature pods found near the plants. A few localities were identified from vegetative plants only, and two localities were identified from isolated mature pods. The mature pods of Tidestrom's milkvetch are distinctive even in a dried state. The Tidestrom's milkvetch plants that were identified on the basis of leaves were verified by Andrew Sanders (UC Riverside), an expert on the flora of the Mojave Desert. In each of these cases, the team observed other Tidestrom's plants nearby in vegetative condition that had dried mature pods of Tidestrom's milkvetch.

Two localities (totaling six plants) of Tidestrom's milkvetch with isolated dried mature pods were mapped in the Southern Pahrump Valley in the BLM Pahrump Valley Wilderness (Figure 4, Appendix A). These localities were found in small, sandy washes. In 2011, several localities of Tidestrom's milkvetch,

based on flowering and fruiting plants, were mapped approximately 1 mile north of these finds, in similar habitat (CH2M HILL, 2012a).

One new locality of Tidestrom's milkvetch, consisting of three individuals, was mapped on the southern roadside of unpaved Kingston Road, near Winters Pass in limestone rubble within the Mesquite Mountains (Figure 8, Appendix A). This is the first documented record for this species in the Mesquite Mountains.

Seven localities of Tidestrom's milkvetch, with a total of 253 individuals, were mapped mainly along Excelsior Mine Road in Shadow Valley (Figure 9, Appendix A). One locality was mapped east of Cima Road in the Mojave Preserve. These localities were in sandy or gravelly soil, often with some calcareous gravel, in Mojave Desert scrub, or the low elevation form of Joshua tree woodland.

3.2.3 Wheeler's skeletonweed (*Chaetadelpha wheeleri*)

One locality of Wheeler's skeletonweed, consisting of five individuals, was mapped in the southern Pahrump Valley in the BLM Pahrump Valley Wilderness (Figure 4, Appendix A). This identification was based on the presence of prior-year plant skeletons that closely resembled Wheeler's skeletonweed skeletons observed at a nearby reference site (CH2M HILL, 2011). These (and other) characteristics were similar to the reference site plants: 1) branching pattern, 2) light golden color, 3) small receptacles attached at the ends of the branches, and 4) dried linear leaves still attached to the branches.

3.2.4 Torrey's jointfir (*Ephedra torreyana*)

Torrey's jointfir was mapped in 54 localities (with 126 female plants) in the Central and Southern Pahrump Valley survey area (Figures 3 and 4, Appendix A). Torrey's jointfir localities were found in valley bottom locations, in pale silty soil, sometimes with basalt or calcareous microgravels on the surface, with shadscale scrub dominated by shadscale, box thorn species, desert alyssum, and prince's plume.

Only Torrey's jointfir plants with mature female cones were mapped during the 2012 offsite surveys. Many additional three-leaved (plants with three leaves at each node of the stem) *Ephedra* shrubs that were vegetative or male were observed in the vicinity of the mapped female Torrey's jointfir plants. Based on this proximity, it is likely that the vegetative and male shrubs were also Torrey's jointfir, but this cannot be determined with certainty because another three-leaved *Ephedra* species, Death Valley jointfir (*Ephedra funerea*), is known from the vicinity. Without the female cones, *Ephedra* shrubs of *E. torreyana* and *E. funerea* cannot be reliably separated, based on current knowledge (FNA, 2012).

It is noteworthy that during the 2012 surveys, no female individuals of Death Valley ephedra (the other three-leaved *Ephedra* species that occurs in the vicinity) were identified in the Central and Southern Pahrump Valley. For this reason, all of the three-leaved *Ephedra* shrubs found in this area are likely to be Torrey's jointfir. However, this cannot be assumed because it is also possible that Death Valley jointfir is also present but Death Valley jointfir just did not produce any female cones in 2012 because of the drought.

3.2.5 Pahrump Valley buckwheat (*Eriogonum bifurcatum*)

Pahrump Valley buckwheat was mapped in 72 localities in the Stewart Valley, Central and Southern Pahrump Valley, Chicago Valley, California Valley, and Mesquite Valley survey areas. Approximately 7.3 million individuals were observed in these survey areas (Table 3-2). The majority of these localities are in valley bottom situations, in pale-colored, silty soil, sometimes with fine cracks, and sometimes with basalt or calcareous microgravels on the surface. Some Mesquite Valley localities were mapped in sandy soil near or at the base of low dunes.

All of the localities of Pahrump Valley buckwheat mapped during these 2012 offsite surveys were identified from prior year skeletons based on reference site observations. The identification was made on the basis of these characters, which were also observed at the reference sites: 1) small size, 2) a flat-topped aspect, 3) branching pattern, 4) involucres (part of the inflorescence) sessile (without a stalk at the base), and upright on the branches, and 5) black color.

Two localities of Pahrump Valley buckwheat were mapped In Stewart Valley, including approximately 50,250 individuals.

In the Central and Southern Pahrump Valley, 36 localities were mapped including approximately 2.5 million individuals. Two of these localities were estimated to contain approximately 1 million and 1.5 million Pahrump Valley buckwheat plants, respectively.

Four localities were mapped in Chicago Valley totaling approximately 1,637 individuals.

Three localities of Pahrump Valley buckwheat (totaling approximately 1,350 individuals) were mapped in the central part of the bottom of California Valley. These are the first documented records of Pahrump Valley buckwheat from California Valley.

In Mesquite Valley, 27 new localities and approximately 4.7 million individual plants were mapped in the central and northern parts of the valley bottom. Several of these localities were very large. They extended continuously for up to 1.8 miles and consisted of at least a million individuals. Pahrump Valley buckwheat had previously been recorded in only one location in Mesquite Valley (CNDDB EO #1), near Cub Lee Well, where fewer than 50 plants were observed in 1979 (CNDDB, 2012b).

SECTION 4

Areas Surveyed but Plants Not Found

Several areas were included in the 2012 offsite botany surveys because they are within or near the known range of the species and contain suitable habitat for one or more of the target special-status species. However, in spring 2012, the target special-status plants were not observed in these locations. These areas are:

- Death Valley Junction / Amargosa Valley Area
- Silurian Valley
- Salt Spring Hills
- Dumont Dunes Area
- Kingston Wash
- Shoshone-Tecopa Area
- Southern end of the Nopah Range

The above geographic areas are not shown on Figures presented in Appendix A. Rainfall in spring 2012 was substantially below normal and low rainfall conditions strongly influenced survey results. For this reason it is possible that the target special-status plants could occur in these geographic areas during years with normal or above-normal rainfall. If additional surveys for these species are required or performed, they should not be considered to be absent in the above-listed geographic areas.

SECTION 5

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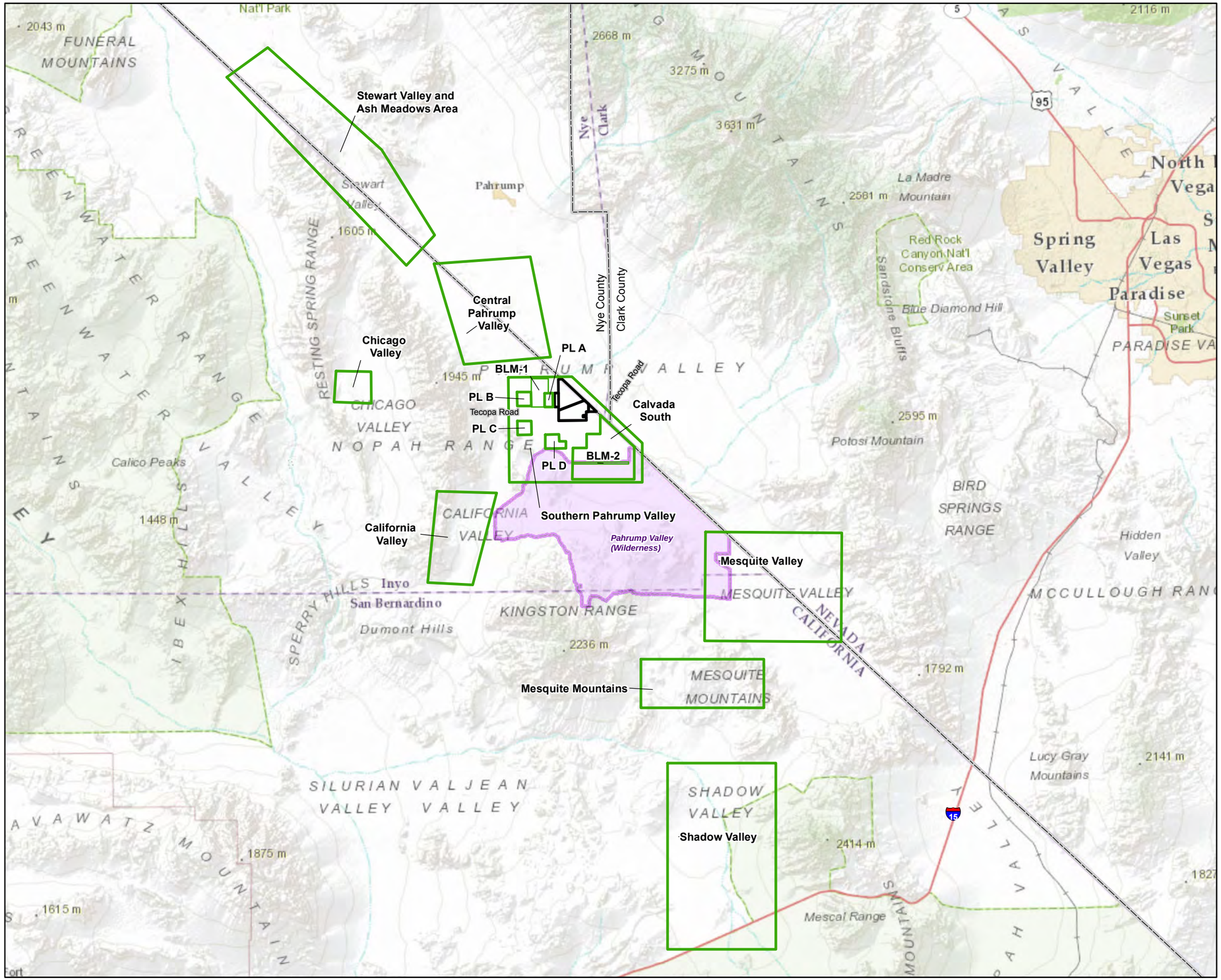
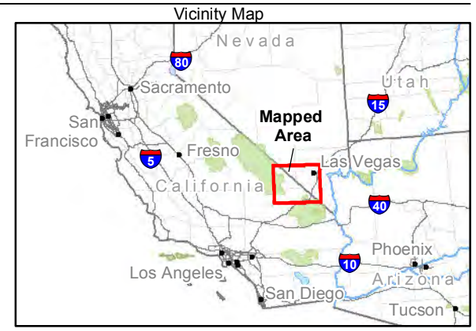
Appendix A
Figures





LEGEND

- HHSEGS Site Boundary
- Offsite Survey Area (2012)
- Wilderness Area
- County Boundary*

Data Sources:
GANDA, Clark Biological Consulting, and Andy Sanders (UC Riverside)

N

0 5 10
Miles

FIGURE 1
Location of 2012 Offsite Spring Botany Survey Areas
Hidden Hills Solar Electric Generating System

LEGEND

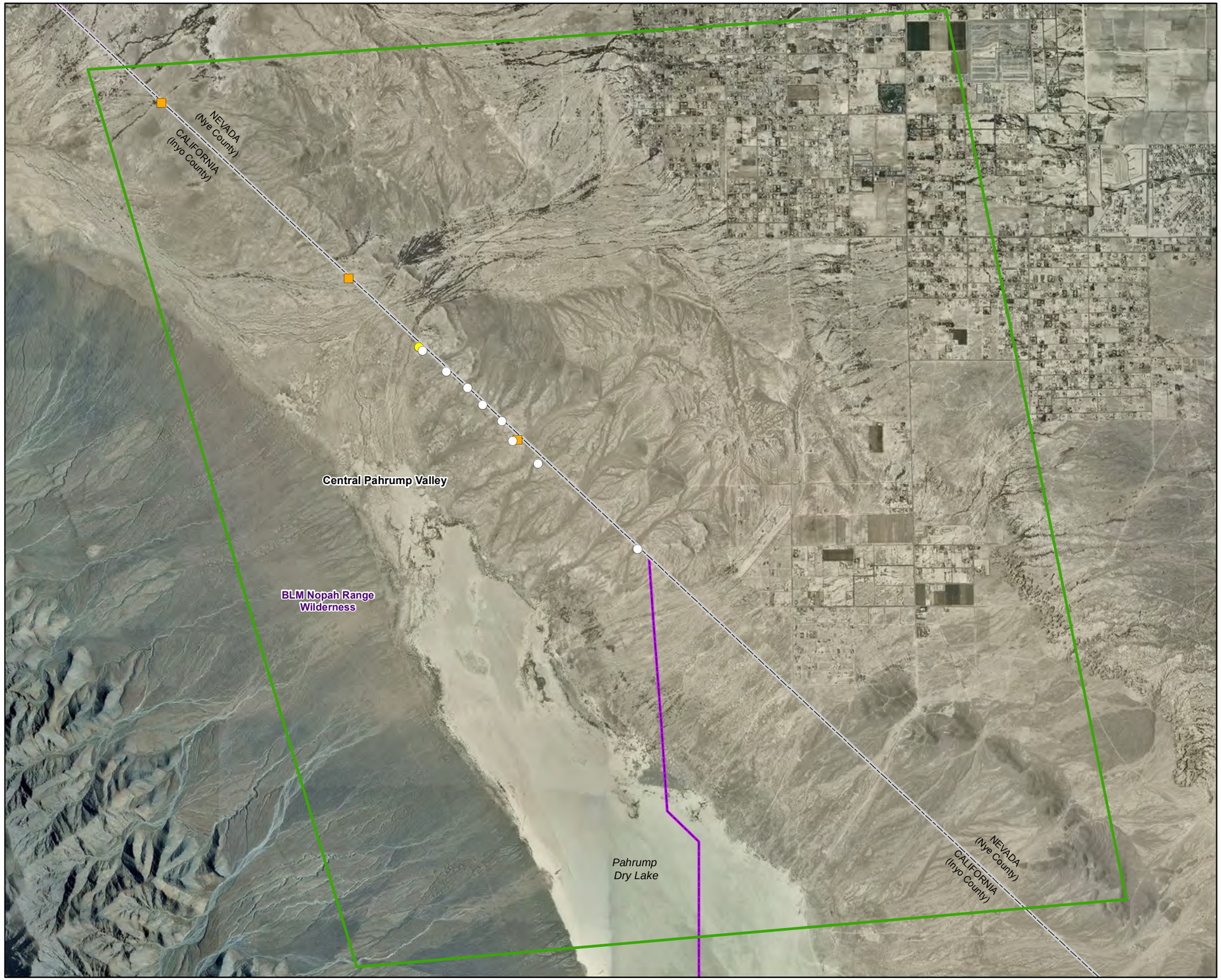
- *Astragalus preussii* var. *preussii* (Preuss' milkvetch)
- *Atriplex argentea* var. *longitrichoma* (Pahrump Valley silverscale)
- *Eriogonum bifurcatum* (Pahrump Valley buckwheat)
- *Phacelia parishii* (Parish's phacelia)
- OffSite Survey Area (2012)
- County Boundary
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting,
and Andy Sanders (UC Riverside)

N

0 4,300 8,600
Feet

FIGURE 2
Results of 2012 Offsite Spring Botany Surveys - Stewart Valley and Ash Meadows Area
Hidden Hills Solar Electric Generating System



LEGEND

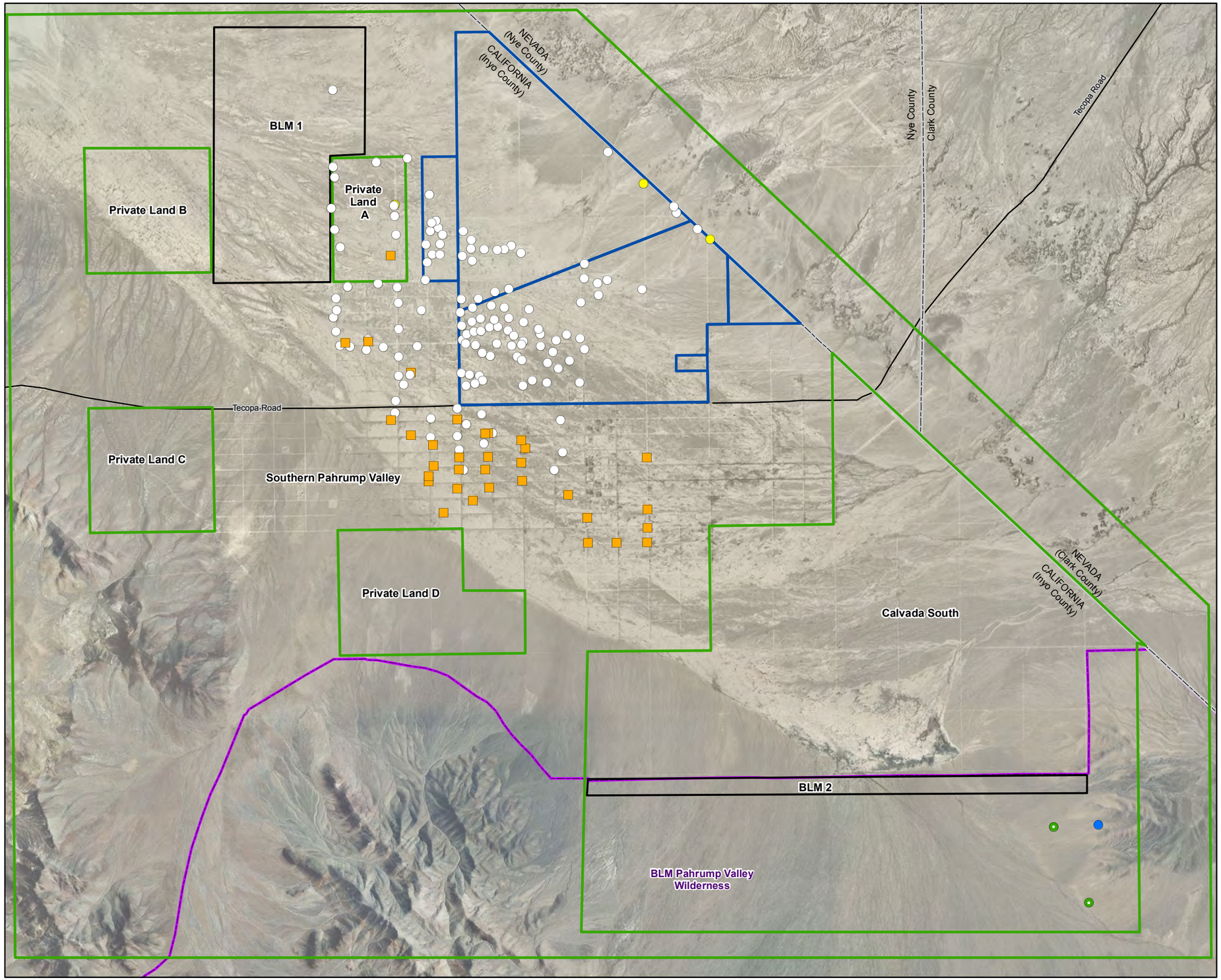
- *Astragalus preussii* var. *preussii* (Preuss' milkvetch)
- *Ephedra torreyana* (Torrey's jointfir)
- *Eriogonum bifurcatum* (Pahrump Valley buckwheat)
- HHSEGS Site Boundary
- Offsite Survey Area (2012)
- County Boundary
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting,
and Andy Sanders (UC Riverside)

N

0 2,100 4,200
Feet

FIGURE 3
Results of 2012 Offsite Spring Botany Surveys – Central Pahrump Valley
Hidden Hills Solar Electric Generating System



LEGEND

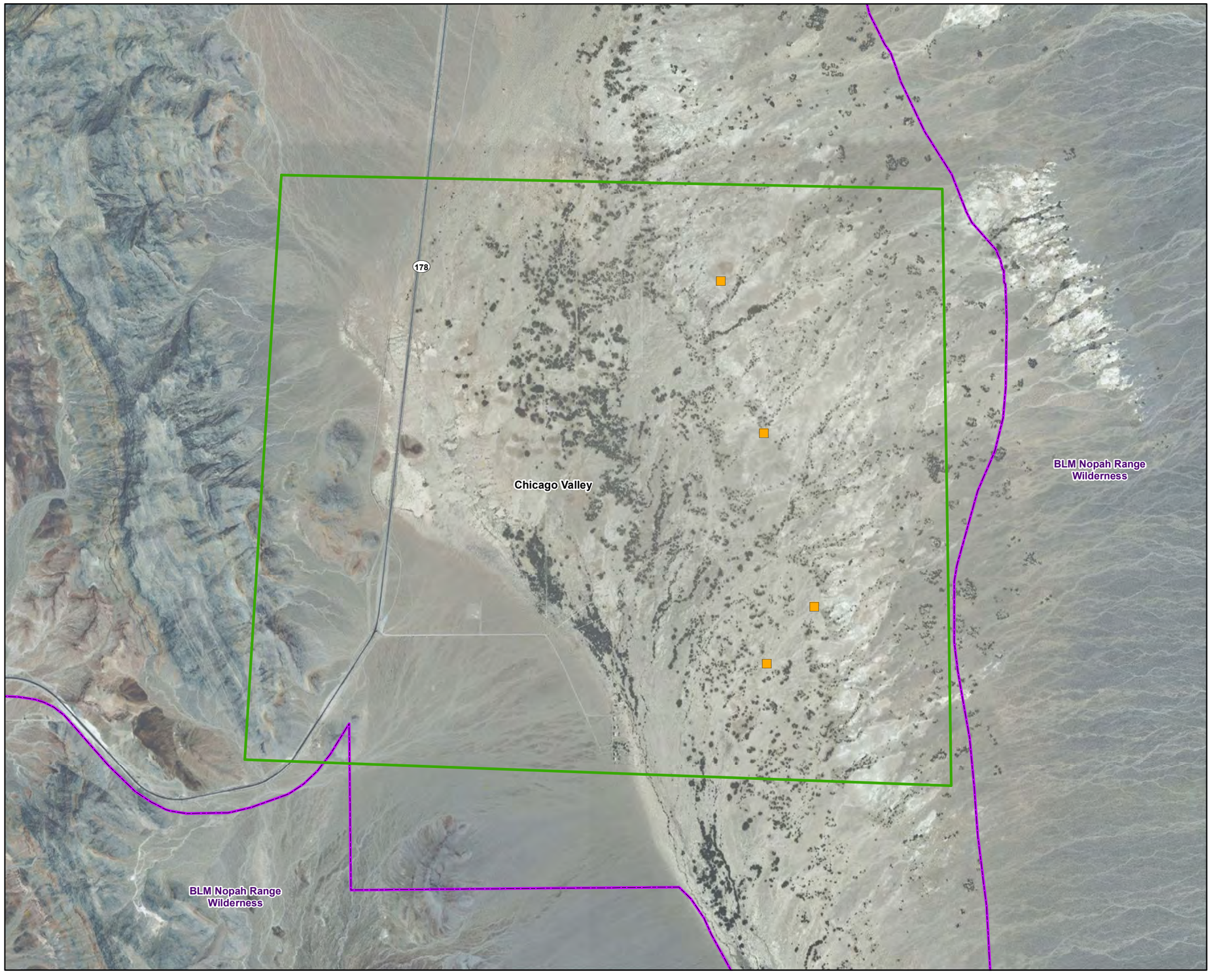
- *Astragalus preussii* var. *preussii* (Preuss' milkvetch)
- *Astragalus tidestromii* (Tidestrom's milkvetch)
- *Chaetadelpha wheeleri* (Wheeler's skeletonweed)
- *Ephedra torreyana* (Torrey's jointfir)
- *Eriogonum bifurcatum* (Pahrump Valley buckwheat)
- HHSEGS Site Boundary
- Offsite Survey Area (2012)
- County Boundary
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting, and Andy Sanders (UC Riverside)

N

0 2,100 4,200
Feet

FIGURE 4
Results of 2012 Offsite Spring Botany Surveys - Southern Pahrump Valley
Hidden Hills Solar Electric Generating System



LEGEND

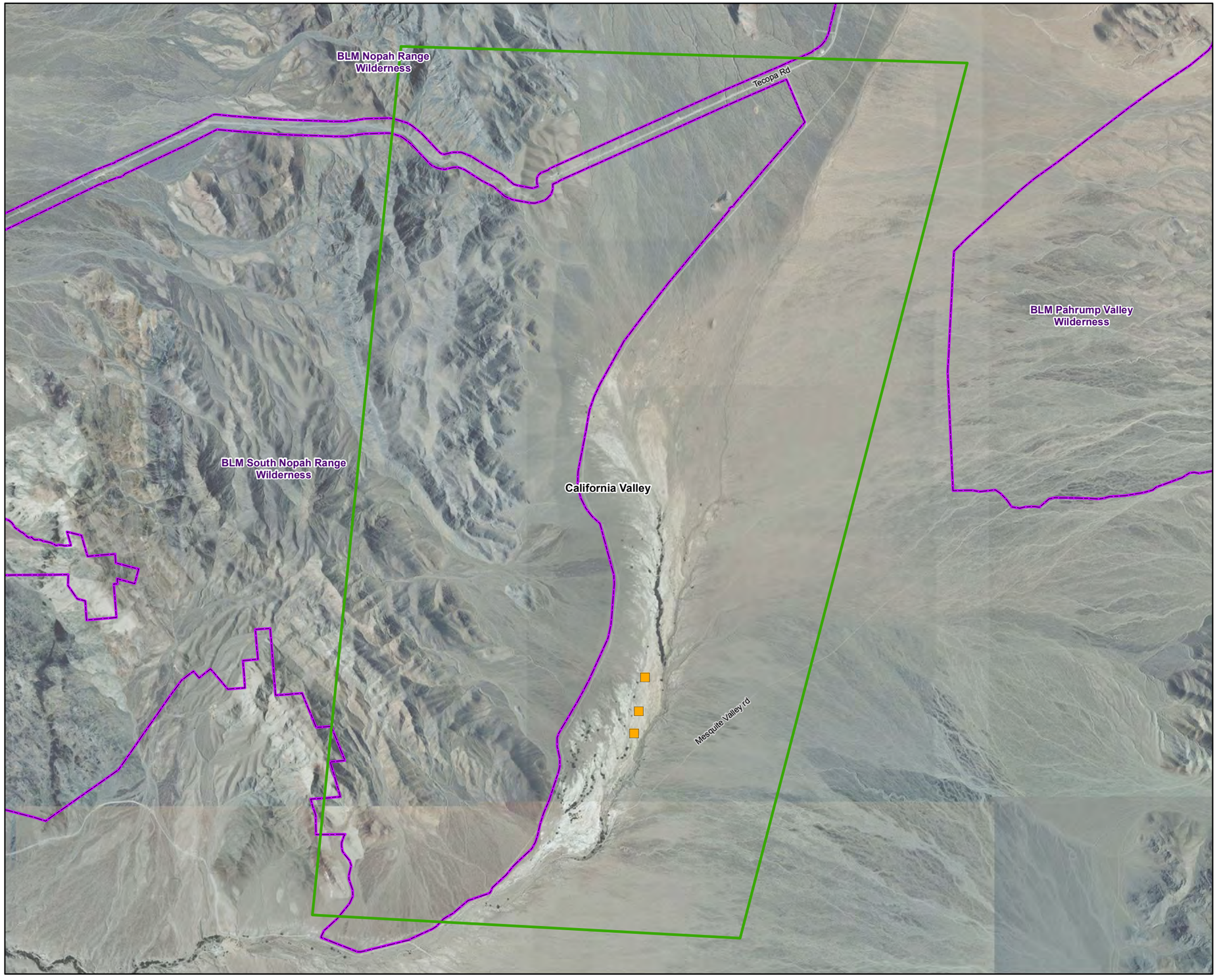
- *Eriogonum bifurcatum* (Pahrump Valley buckwheat)
- Offsite Survey Area (2012)
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting,
and Andy Sanders (UC Riverside)

N

0 1,000 2,000
Feet

FIGURE 5
Results of 2012 Offsite Spring Botany Surveys - Chicago Valley
Hidden Hills Solar Electric Generating System



LEGEND

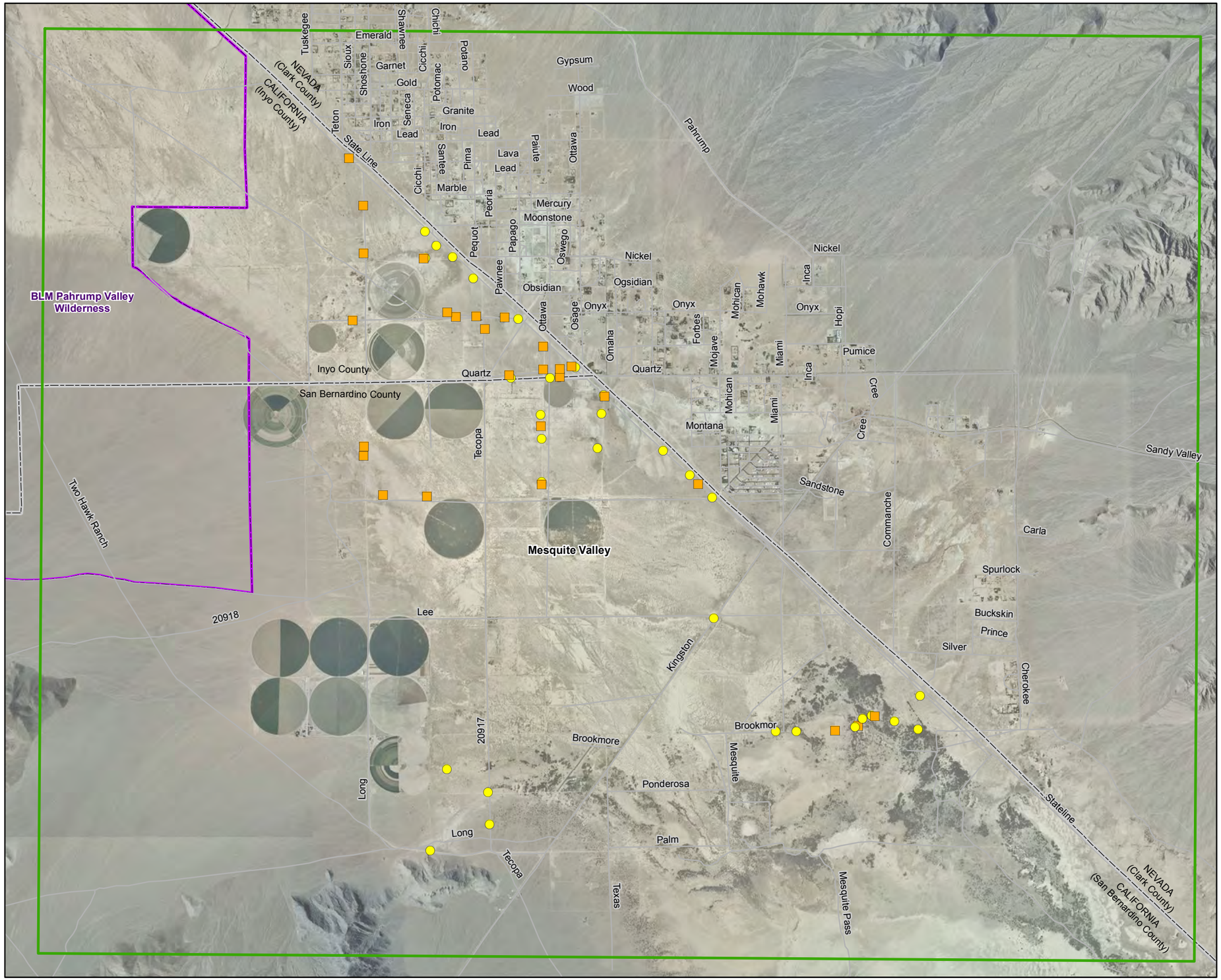
- *Eriogonum bifurcatum* (Pahrump Valley buckwheat)
- Offsite Survey Area (2012)
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting, and Andy Sanders (UC Riverside)

N

0 2,000 4,000
Feet

FIGURE 6
Results of 2012 Offsite Spring Botany Surveys – California Valley
Hidden Hills Solar Electric Generating System



LEGEND

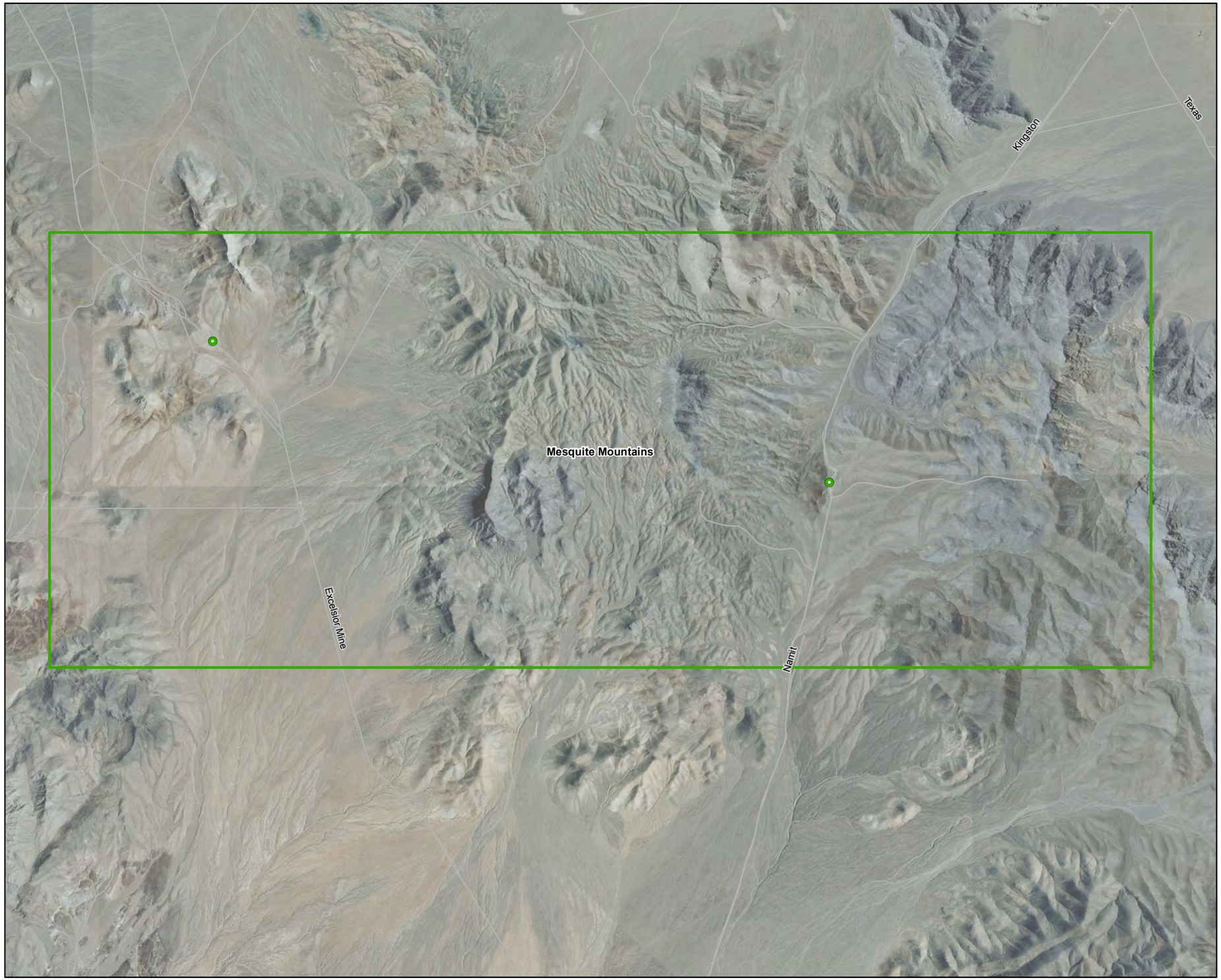
- *Astragalus preussii* var. *preussii* (Preuss' milkvetch)
- *Eriogonum bifurcatum* (Pahrump Valley buckwheat)
- Offsite Survey Area (2012)
- County Boundary
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting, and Andy Sanders (UC Riverside)

N

0 2,100 4,200
Feet

FIGURE 7
Results of 2012 Offsite Spring Botany Surveys – Mesquite Valley
Hidden Hills Solar Electric Generating System



LEGEND

- *Astragalus tidestromii* (Tidestrom's milkvetch)
- Offsite Survey Area (2012)
- County Boundary
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting, and Andy Sanders (UC Riverside)

N

0 2,100 4,200
Feet

FIGURE 8
Results of 2012 Offsite Spring Botany Surveys – Mesquite Mountains
Hidden Hills Solar Electric Generating System

LEGEND

- *Astragalus tidestromii* (Tidestrom's milkvetch)
- Offsite Survey Area (2012)
- County Boundary
- Wilderness Areas

Data Sources:
GANDA, Clark Biological Consulting,
and Andy Sanders (UC Riverside)

N

0 4,000 8,000
Feet

FIGURE 9
Results of 2012 Offsite Spring Botany Surveys – Shadow Valley
Hidden Hills Solar Electric Generating System

Appendix B
Representative Site Photographs

STEWART VALLEY

One new locality of Pahrump Valley buckwheat (*Eriogonum bifurcatum*) found during 10-mile walking survey loop in BLM Resting Spring Range Wilderness, looking west toward Resting Spring Range, April 15, 2012. Photo by William Clark.

PAHRUMP VALLEY

Torrey's jointfir (*Ephedra torreyana*), shrub in front of surveyor mapping with yellow GPS unit, is female with mature cones, southern Pahrump Valley, north of Old Spanish Trail Highway, in sparse shadscale scrub, May 8, 2012. Photo by Ann Howald.

Torrey's jointfir, closeup of mature female cones, showing yellow color and wavy edges of cone scales. Photo by William Clark.

Pahrump Valley buckwheat, dense stand of skeletons (dark stems in foreground and middle ground), southern Pahrump Valley, looking northwest toward the Nopah Range, May 10, 2012. Photo by William Clark.

PAHRUMP VALLEY

Wheeler's skeletonweed (*Chaetadelpha wheeleri*) skeleton found in southern Pahrump Valley, BLM Pahrump Valley Wilderness, April 11, 2012. Photo by Florence Caplow.

CHICAGO VALLEY

Pahrump Valley buckwheat location in Chicago Valley, in sparse shadscale scrub, looking east toward the Nopah Range, April 20, 2012. Photo by Ann Howald.

CALIFORNIA VALLEY

Potential habitat for Pahrump Valley buckwheat in California Valley, looking north toward the Nopah Range, May 12, 2012. Photo by William Clark.

CALIFORNIA VALLEY

Pahrump Valley buckwheat skeletons (dark stems center and right) in California Valley, on pale-colored silty soil with caliche gravels, May 12, 2012. Photo by William Clark.

CALIFORNIA VALLEY

Pahrump Valley buckwheat skeleton showing black stems, forked branching pattern and upright involucres, California Valley, May 12, 2012. Photo by William Clark.

MESQUITE VALLEY

Preuss' milkvetch (*Astragalus preussii* var. *preussii*), large, actively growing plants, in Mesquite Valley bottom, April 18, 2012. Photo by Florence Caplow.

MESQUITE VALLEY

Preuss' milkvetch in Mesquite Valley, green plants scattered along roadsides of unpaved road, in pale brown silty soil, March 16, 2012. Photo by Ann Howald.

MESQUITE VALLEY

Preuss' milkvetch in Mesquite Valley, on roadside of Brookmore Road, in pale brown silty soil, March 14, 2012. Photo by Ann Howald.

MESQUITE VALLEY

Preuss' milkvetch, Mesquite Valley, growing vigorously and flowering in very dry year, April 18, 2012. Photo by Florence Caplow.

MESQUITE VALLEY

Pahrump Valley buckwheat skeletons (dark stems in foreground and middle ground), Mesquite Valley, west of Stateline Rd, looking west toward the Mesquite Mountains, April 18, 2012. Photo by Ann Howald.

Pahrump Valley buckwheat skeletons, closeup, Mesquite Valley, April 18, 2012. Photo by William Clark.

SHADOW VALLEY

Tidestrom's milkvetch (*Astragalus tidestromii*) at reference site, flowering and fruiting individual (center foreground), being examined by the botany team, Shadow Valley, April 16, 2012. Photo by William Clark.

Tidestrom's milkvetch, closeup, flowering and fruiting, Shadow Valley, April 16, 2012. Photo by Florence Caplow.

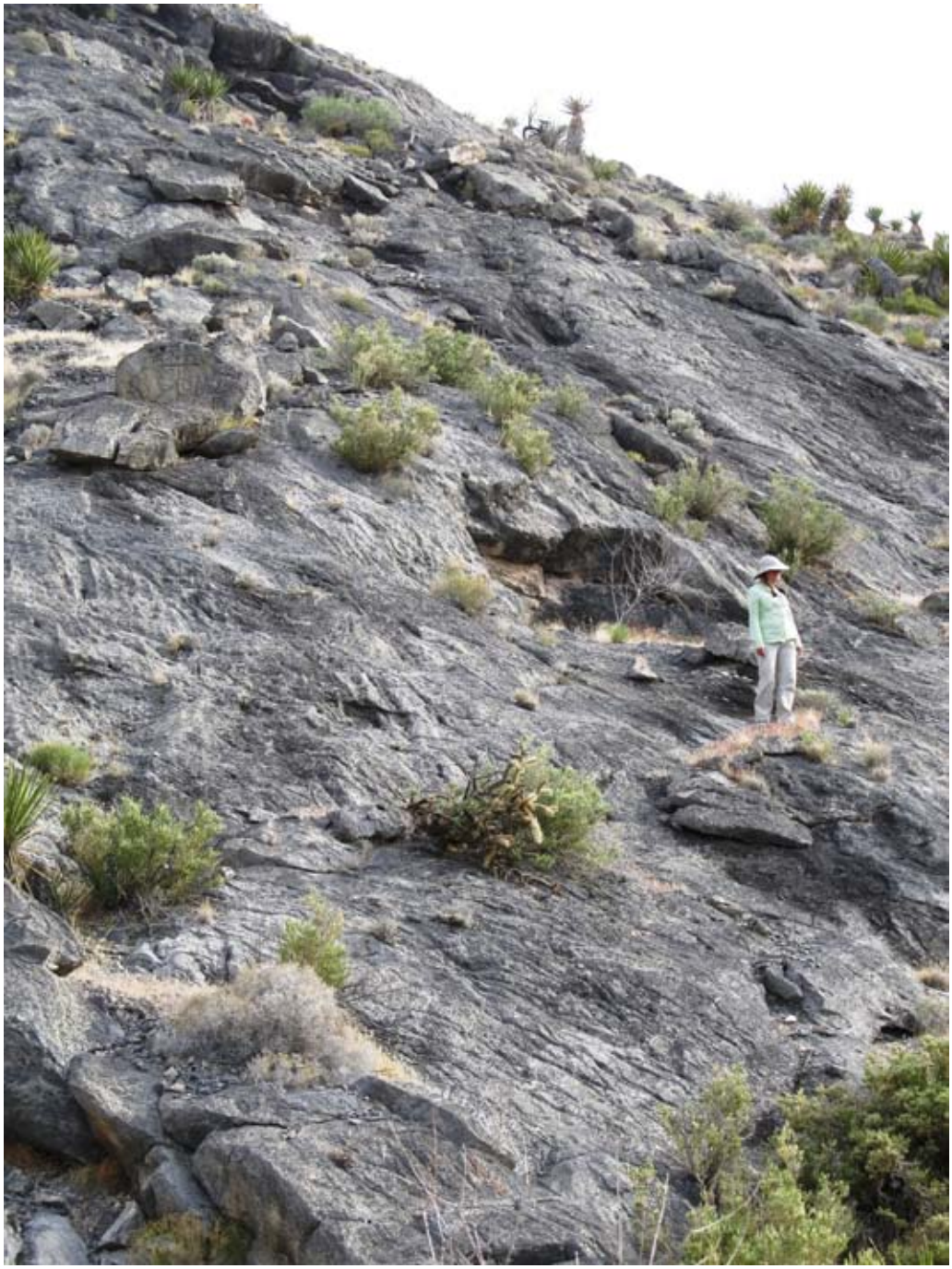
SHADOW VALLEY

Tidestrom's milkvetch, mapping a new locality along Excelsior Mine Road, Shadow Valley, in calcareous gravels on roadside, looking north, April 19, 2012. Photo by Florence Caplow.

MESQUITE MOUNTAINS

Tidestrom's milkvetch (old fruit and leaves), in limestone rubble on roadside of Kingston Road, Mesquite Mountains, near Winters Pass, April 19, 2012. Photo by Florence Caplow.

MESQUITE MOUNTAINS



Potential habitat for Tidestrom's milkvetch, limestone slopes in the Mesquite Mountain Wilderness, was searched, but no plants of this species were found in this area, April 19, 2012. Photo by William Clark.

KINGSTON WASH

Location of Pahrump Valley buckwheat CNDDB EO #9 in Kingston Wash was searched, but no individuals of this species, or suitable habitat for this species, was observed, April 19, 2012. Photo by Ann Howald.

SALT SPRING HILLS

Salt Spring Hills, with potential habitat for Wheeler's skeletonweed, Pahrump Valley buckwheat, and Torrey's jointfir, was searched but no target species were found, April 13, 2012. Photo by William Clark.

MESQUITE VALLEY – SOUTH END

The south end of Mesquite Valley was surveyed from vehicles, and no suitable habitat for Preuss' milkvetch, Pahrump Valley buckwheat or other target species was found in accessible locations. Habitat shown is Mojave Desert scrub, looking northwest toward the Mesquite Mountains, April 18, 2012. Photo by Ann Howald.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE HIDDEN HILLS SOLAR ELECTRIC GENERATING SYSTEM

Docket No. 11-AFC-02

PROOF OF SERVICE
(Revised 9/20/12)

APPLICANT
BrightSource Energy
Stephen Wiley
1999 Harrison Street, Suite 2150
Oakland, CA 94612-3500
swiley@brightsourceenergy.com

BrightSource Energy
Bradley Brownlow
Michelle L. Farley
1999 Harrison Street, Suite 2150
Oakland, CA 94612-3500
bbrownlow@brightsourceenergy.com
mfarley@brightsourceenergy.com

BrightSource Energy
Clay Jensen
Gary Kazio
410 South Rampart Blvd., Suite 390
Las Vegas, NV 89145
cjensen@brightsourceenergy.com
gkazio@brightsourceenergy.com

APPLICANTS' CONSULTANTS
Strachan Consulting, LLC
Susan Strachan
P.O. Box 1049
Davis, CA 95617
susan@strachanconsult.com

CH2MHill
John Carrier
2485 Natomas Park Drive, Suite 600
Sacramento, CA 95833-2987
jcarrier@ch2m.com

COUNSEL FOR APPLICANT
Ellison, Schneider and Harris, LLP
Chris Ellison
Jeff Harris
Samantha Pottenger
2600 Capitol Avenue, Suite 400
Sacramento, CA 95816-5905
cte@eslawfirm.com
jdh@eslawfirm.com
sgp@eslawfirm.com

INTERVENORS
Jon William Zellhoefer
P.O. Box 34
Tecopa, CA 92389
jon@zellhoefer.info

Center for Biological Diversity
Lisa T. Belenky, Sr. Attorney
351 California Street, Suite 600
San Francisco, CA 94104
lbelenky@biologicaldiversity.org

Center for Biological Diversity
Ileene Anderson, Public Lands
Desert Director
PMB 447
8033 Sunset Boulevard
Los Angeles, CA 90046
ianderson@biologicaldiversity.org

Old Spanish Trail Association
Jack Prichett
857 Nowita Place
Venice, CA 90291
jackprichett@ca.rr.com

INTERVENORS (con't.)
Cindy R. MacDonald
3605 Silver Sand Court
N. Las Vegas, NV 89032
sacredintent@centurylink.net

Richard Arnold
P.O. Box 3411
Pahrump, NV 89041
rwarnold@hotmail.com

INTERESTED AGENCIES
California ISO
e-recipient@caiso.com

Great Basin Unified APCD
Duane Ono
Deputy Air Pollution Control Officer
157 Short Street
Bishop, CA 93514
dono@gbuapcd.org

County of Inyo
Dana Crom
Deputy County Counsel
P.O. Box M
Independence, CA 93526
dcrom@inyocounty.us

Nye County
Lorinda A. Wichman, Chairman
Board of County Supervisors
P.O. Box 153
Tonopah, NV 89049
lawichman@gmail.com

*indicates change

INTERESTED AGENCIES (con't.)
Nye County Water District
L. Darrel Lacy
Interim General Manager
2101 E. Calvada Boulevard
Suite 100
Pahrump, NV 89048
llacy@co.nye.nv.us

National Park Service
Michael L. Elliott
Cultural Resources Specialist
National Trails Intermountain Region
P.O. Box 728
Santa Fe, NM 87504-0728
Michael_Elliott@nps.gov

*Southern Inyo
Fire Protection District
Larry Levy, Fire Chief
P.O. Box 51
Tecopa, CA 92389
sifpd@yahoo.com

ENERGY COMMISSION – DECISIONMAKERS
KAREN DOUGLAS
Commissioner and Presiding Member
karen.douglas@energy.ca.gov

CARLA PETERMAN
Commissioner and Associate Member
carla.peterman@energy.ca.gov

Ken Celli
Hearing Adviser
ken.celli@energy.ca.gov

Eileen Allen
Commissioners' Technical Advisor for Facility Siting
eileen.allen@energy.ca.gov

Galen Lemei
Advisor to Presiding Member
galen.lemei@energy.ca.gov

Jennifer Nelson
Advisor to Presiding Member
jennifer.nelson@energy.ca.gov

Jim Bartridge
Advisor to Associate Member
jim.bartridge@energy.ca.gov

ENERGY COMMISSION – STAFF
Mike Monasmith
Senior Project Manager
mike.monasmith@energy.ca.gov

Richard Ratliff
Staff Counsel IV
dick.ratliff@energy.ca.gov

Kerry Willis
Staff Counsel
kerry.willis@energy.ca.gov

ENERGY COMMISSION – PUBLIC ADVISER
Jennifer Jennings
Public Adviser's Office
publicadviser@energy.ca.gov

DECLARATION OF SERVICE

I, Mary Finn, declare that on October 25, 2012, I served and filed copies of the attached Hidden Hills (11-afc-02) Data Response, Set 2D-4B, dated October 25, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: www.energy.ca.gov/sitingcases/hiddenhills/index.html.

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

(*Check all that Apply*)

For service to all other parties:

__x__ Served electronically to all e-mail addresses on the Proof of Service list;

____ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked *"hard copy required" or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

__x__ by sending an electronic copy to the e-mail address below (preferred method); *OR*

____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

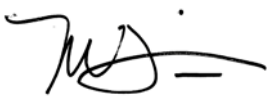
CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-AFC-02
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

____ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.



Mary Finn
CH2M Hill