Appendix D-5

Calcite Substation Project Botanical Report

BOTANICAL REPORT

CALCITE SUBSTATION PROJECT

SAN BERNARDINO COUNTY, CALIFORNIA

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1.0 INTRODUCTION

This botanical survey documents and describes the existing conditions of botanical resources associated with the Calcite Substation Project (Project). BRC-Equals 3, Inc. (B3) has prepared this report for the analysis of botanical resources, including the potential occurrence of special-status species within the Project Area.

2.0 PROJECT LOCATION

The Project is divided into three geographically-defined segments (the Apple Valley Telecom Route, the Northern Telecom Route, and the Southeast Telecom Route) (Figures 1 and 2). The Apple Valley Telecom Route extends southward from the proposed Calcite Substation, following State Route 247 to its intersection with State Route 18, and westward, from the proposed Calcite Substation to the Apple Valley Substation. The North Telecom Route extends eastward from the Gale Substation (which lies directly west of the Coolwater Switchyard), following Historic Route 66 to the Pisgah substation and terminating at the Hector Microwave Communication Site. The Southeastern Telecom Route extends southward from the proposed Calcite Substation toward State Route 18 and continues southeast, terminating at the Cottonwood Substation.

3.0 PROJECT DESCRIPTION

The Project will construct a new 220kV Jasper Substation, either the proposed site or at the alternate site in the Lucerne Valley. The new Jasper Substation will connect to two renewable power generators in the Lucerne Valley area. The renewable power generation site and the generator's tie-in line are not part of this Project description. Transmission loop-in lines would connect the substation to the "Lugo-Pisgah No. 1" 220 kV transmission line. The loop-in 220 kV lines will need to cross under the existing 500 kV "Lugo-Mojave" SCE transmission line; this line-crossing will require the removal and replacement of two 500 kV lattice towers along the Lugo-Mojave transmission line. The Project would also require the installation of new 12 kV overhead lines, which would connect the distribution system to the Jasper Substation. Telecommunication fiber optic cable, both new and existing, will connect the Jasper Substation to the Apple Valley and Cottonwood Substations. A second, unconnected telecom route will occur north of the Jasper Substation; this route would begin at the Gale Substation, pass through the Pisgah Substation, and terminate at the Hector Microwave Communication Site.

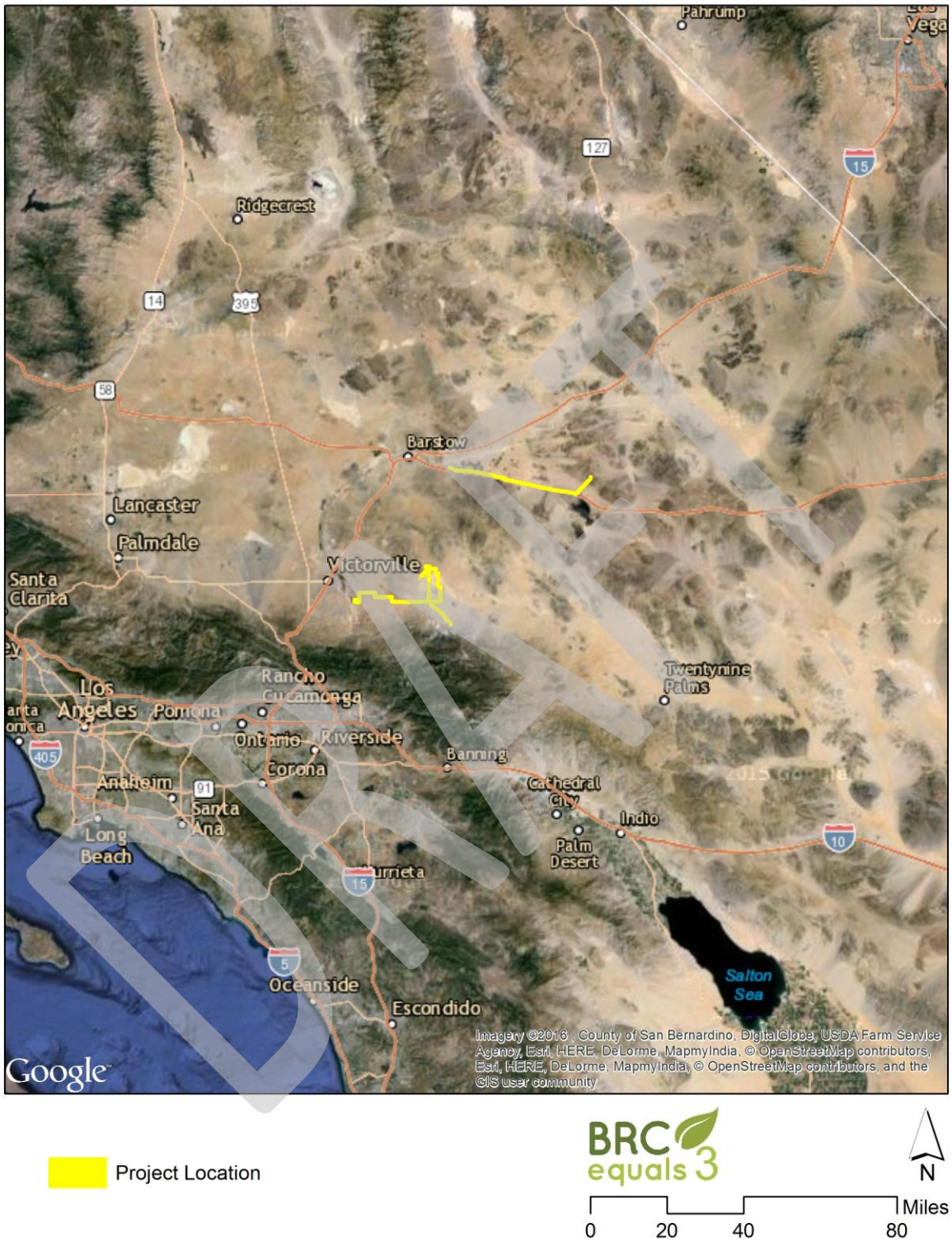

Figure 1. Project vicinity.

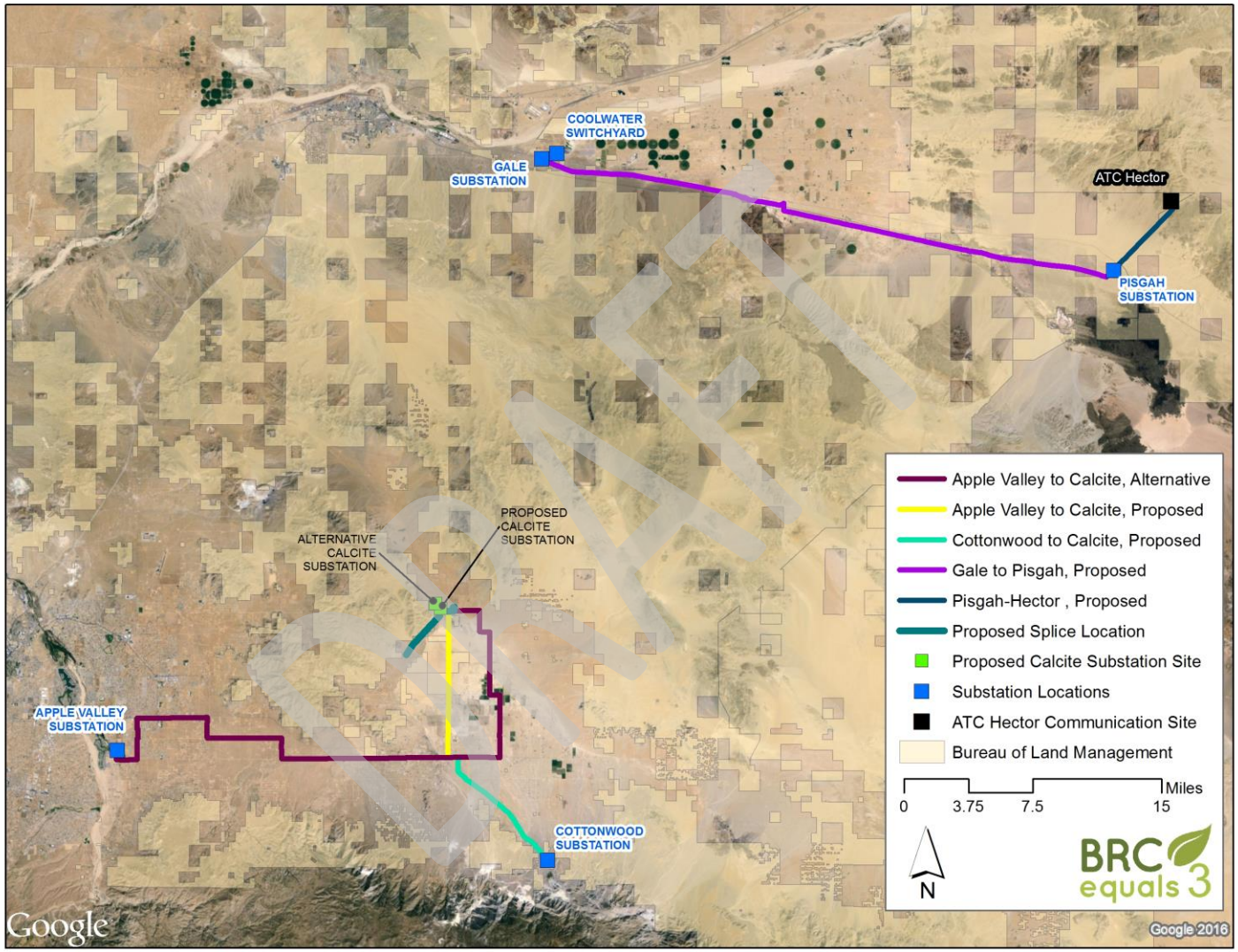

Figure 2. Project location.

3.1 ENVIRONMENTAL SETTING

The Project is located within the Mojave Desert. Temperatures at the Project location vary, with highs typically near 97.4 degrees Fahrenheit (°F) in the summer to lows near 32.7°F in the winter. Average rainfall can vary greatly with an average of 6.15 inches between 1981 to 2010 (NCDC 2016a). Snowfall occurs at higher elevations. The Project alignment crosses numerous ephemeral drainages of varying size. The last several years have been drought years characterized by extremely low winter rainfall (NCDC 2016b).

The Project lies within typical basin and range topography for the Mojave Desert. Elevations at the Project site vary from a low of approximately 1,776 feet above mean sea level (amsl) along the Northern Telecom Route to a high of approximately 3,170 feet amsl near the ATC Hector Microwave Communication Site. Large alluvial fans, which occur adjacent to the mountain fronts, slope toward the north where ephemeral streams deposit alluvial materials into dry lakes and the Mojave River. Soils within the survey area vary from extremely gravelly to sandy loam.

The Project is located on lands administered by the Bureau of Land Management (BLM) and private lands (Figure 2). Land uses in the immediate vicinity of the Project Area include open space areas, off-highway vehicle recreation areas, and low-density rural residential development.

3.1.1 Vegetation Communities

Fourteen vegetation communities/alliances were identified within the Project Area during the habitat assessment conducted by B3 in March 2016 (B3 2016). Within these alliances, a total of 20 vegetation associations were identified and mapped according to the three dominant plant species within each alliance (B3 2016). Vegetation communities follow the California Native Plant Society's (CNPS) Manual of California Vegetation (Sawyer et al., 2009). Table 1 provides the acreages of each vegetation community within the survey area. Full descriptions of each vegetation community are provided in B3's 2016 Habitat Assessment report for the Project.

TABLE 1. VEGETATION COMMUNITIES MAPPED WITHIN THE SURVEY AREA.

Vegetation Community Alliance/Association	Acres
Ambrosia dumosa Scrub	11.01
Atriplex canescens Shrubland	27.54
Atriplex confertifolia Shrubland	---
Atriplex confertifolia–Ambrosia dumosa	217.74
Atriplex confertifolia–Atriplex canescens	55.82
Atriplex confertifolia–Atriplex polycarpa sparse playa	20.42
Atriplex confertifolia–Larrea tridentata - Ambrosia dumosa	176.33
Alliance Only / No Association–Atriplex confertifolia Shrubland	253.43
Atriplex polycarpa Shrubland	---
Atriplex polycarpa–Atriplex confertifolia	72.50
Atriplex polycarpa sparse playa	411.42
Alliance Only / No Association–*Atriplex polycarpa* Shrubland	1,795.44
Distichlis spicata Herbaceous	---
Distichlis spicata / annual grasses	1.72
Ericameria nauseosa Shrubland	145.17
Larrea tridentata Shrubland	---

Vegetation Community Alliance/Association	Acres
Larrea tridentata–Ambrosia salsola	94.14
Larrea tridentata–Atriplex polycarpa	450.62
Larrea tridentata–Ephedra nevadensis	216.88
Alliance Only/No Association–Larrea tridentata Shrubland	549.23
Larrea tridentata–Ambrosia dumosa Shrubland	---
Larrea tridentata–Ambrosia dumosa	3,408.41
Larrea tridentata–Ambrosia dumosa–Atriplex canescens	1.87
Larrea tridentata–Ambrosia dumosa–Atriplex polycarpa	374.40
Larrea tridentate / Ambrosia dumosa–Ambrosia salsola	11.34
Larrea tridentata–Ambrosia dumosa–Ephedra nevadensis	85.61
Populus fremontii Forest	---
Populus fremontii–Salix laevigata / Salix lasiolepis–Baccharis salicifolia	3.49
Alliance Only/No Association–*Populus fremontii* Forest	23.05
Prosopis glandulosa Woodland	22.35
Salix exigua Shrubland	---
Salix exigua / Juncus spp.	0.40
Suaeda moquinii Shrubland	---
Suaeda moquinii–Atriplex canescens	2.12
Alliance Only / No Association–*Suaeda moquinii* Shrubland	127.64
Tamarix spp. Semi-natural Shrubland Stands	74.71
Yucca brevifolia Woodland	---
Yucca brevifolia / Ephedra nevadensis	24.63
Yucca brevifolia / Larrea tridentata–Ambrosia dumosa–Eriogonum fasciculatum	92.42
Yucca brevifolia / Prunus fasciculata	5.18
Alliance Only / No Association–*Yucca brevifolia* Woodland	299.26
Active Agriculture	310.75
Barren–Not Developed	30.60
Developed	653.00
Dry lake bed	330.70
Total Acreage	10,381.34

Note: indented text indicates vegetation associations within the vegetation community alliance.

4.0 METHODOLOGY

Prior to conducting the botanical surveys, standard database searches were conducted and previous surveys in the area were reviewed to obtain pertinent information regarding habitat types. The results of these preliminary database searches provided a basis for addressing the appropriate special-status species within the Project Area.

4.1 LITERATURE AND DATABASE REVIEW

B3 performed a review of special-status species and habitats within the survey area using information obtained from the California Natural Diversity Database (CNDDB; CDFW 2016). The CNDDB search included the *Apple Valley South*, *Big Bear City*, *Cougar Buttes*, *Fifteenmile Valley*, *Lucerne Valley*, *Hector*, *Minneola*, *Newberry Springs*, *Sleeping Beauty*, *Troy Lake*, *White Horse Mountain*, and surrounding U.S. Geological Survey (USGS) 7.5-minute quadrangles.

Additional literature and databases referenced include:

- California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2016)
- The Jepson Manual: Higher Plants of California (Baldwin 2012)
- A Manual of California Vegetation (Sawyer et al. 2009)
- The CalFlora Database online Database (CalFlora 2016)
- Consortium of California Herbaria (CCH) online Database (CCH 2016)
- Rarefind 5 (CNDDB 2016)
- Jepson Flora Project (Jepson 2016)
- BLM sensitive (BLMS) plant and animal lists (BLM 2015).

Plants may be considered to have special-status due to declining populations, vulnerability to habitat change, restricted distributions, or insufficient knowledge of the species' biological status. Using information from the various listed sources and floral and faunal surveys of the area, the potential for special-status species to occur within the Project Area was assessed as Occurs, Likely, Unlikely, or Does Not Occur based on the following criteria:

- Occurs – The species was observed on-site during the survey.
- Likely - This species is expected to occur in the proposed Project Area based on presence of suitable habitat, and/or based on professional expertise specific to the site or species, with documented CNDDB/CCH occurrences within 3 miles from the last decade.
- Unlikely – This species may occur within the proposed Project Area but is considered unlikely based on presence of only marginally suitable habitat and/or no documented CNDDB/CCH records within the last decade within 3 miles of the Project Area.
- Does Not Occur –1) This species is not expected to occur in the proposed Project Area. Suitable habitat was not observed in the Project Area during the survey. 2) The Project Area is outside of the currently known range of the species. 3) This species was observed to be present and identifiable at a reference site location and was found to be absent during surveys of the Project Area.

A table of documented CNDDB special-status plant species occurrences within 3 miles of the Project Area along with their habitat suitability and an assessment of their potential to occur in the Project Area based on the aforementioned criteria is listed in Attachment A.

4.2 SURVEY METHODS

B3 botanists Steve Jones, Sarah Termondt, Chez Brungraber, and Griffin Brungraber conducted botanical surveys within the Project Area from April 26 to May 6, 2016 (April/May survey), and from June 14 to 17, 2016 (June survey). The survey area included 75 feet on either side of the alignment centerline and the entire proposed substation and work area sites (Attachment B). Botanists assessed suitable habitat for special-status species with potential to occur within the Project area during the April/May survey. During the June survey, the survey area was reduced to include only these previously identified areas of suitable habitat. Areas not surveyed during the June Survey included developed, agricultural and heavily disturbed areas and habitats determined from the April/May surveys to not be suitable for target special-status species. Plant species were

identified, either in the field or following collection for subsequent identification, using the identification keys described in Baldwin (2012). Nomenclature generally follows Sawyer et al. (2009) for vegetation types and communities and Calflora (2016), Baldwin (2012), and current scientific data (e.g., scientific journals) for plant species.

4.3 BOTANICAL REFERENCE SITES

B3 conducted botanical reference site monitoring to determine whether special-status plant species with the potential to occur within the Project Area were in bloom and identifiable at the time of botanical surveys and to obtain a visual image of the species and its associated habitat and natural community. Criteria utilized in reference site selection are outlined below.

- Species is documented in CNDDB within Project vicinity and has a potential of occurrence rated as 'Likely' (Attachment A).
- Species has a status of federally- or state-listed endangered, or threatened, and/or a CNPS California Rare Plant Rank (CRPR) of 1B.1 or 1B.2.
- Species has recent CNDDB/CCH records (within the last decade) found within ten miles of the Project Area.

CNDDB, BIOS, and CCH queries were performed for plant species which meet the criteria described above. The results of the queries were used to determine the most current known occurrences closest to the Project alignment. Additional information on the locations of special-status plant populations from past studies conducted within the Project Area were also utilized (BRC 2014).

Eight reference sites were identified for the botanical reference site monitoring (Figure 3). Reference site visits were only conducted within the known blooming periods of identified target species. Each reference site was surveyed during the week of April 26, 2016. When species were observed, the surveying biologist determined the population size, identified the habitat type and associated species, documented the plant's phenology, and took representative photographs of the area.

5.0 RESULTS

5.1 BOTANICAL REFERENCE SITE MONITORING RESULTS

The following eight species were identified as target species for the botanical reference site monitoring:

- alkali mariposa-lily (*Calochortus striatus*)
- Clokey's cryptantha (*Cryptantha clokeyi*)
- Mojave menodora (*Menodora spinescens* var. *mohavensis*)
- creamy blazing star (*Mentzelia tridentata*)
- Mojave monkey flower (*Mimulus mojavensis*)
- white-margined beardtongue (*Penstemon albomarginatus*)
- Parish's phacelia (*Phacelia parishii*)
- Parish's popcorn flower (*Plagiobothrys parishii*)

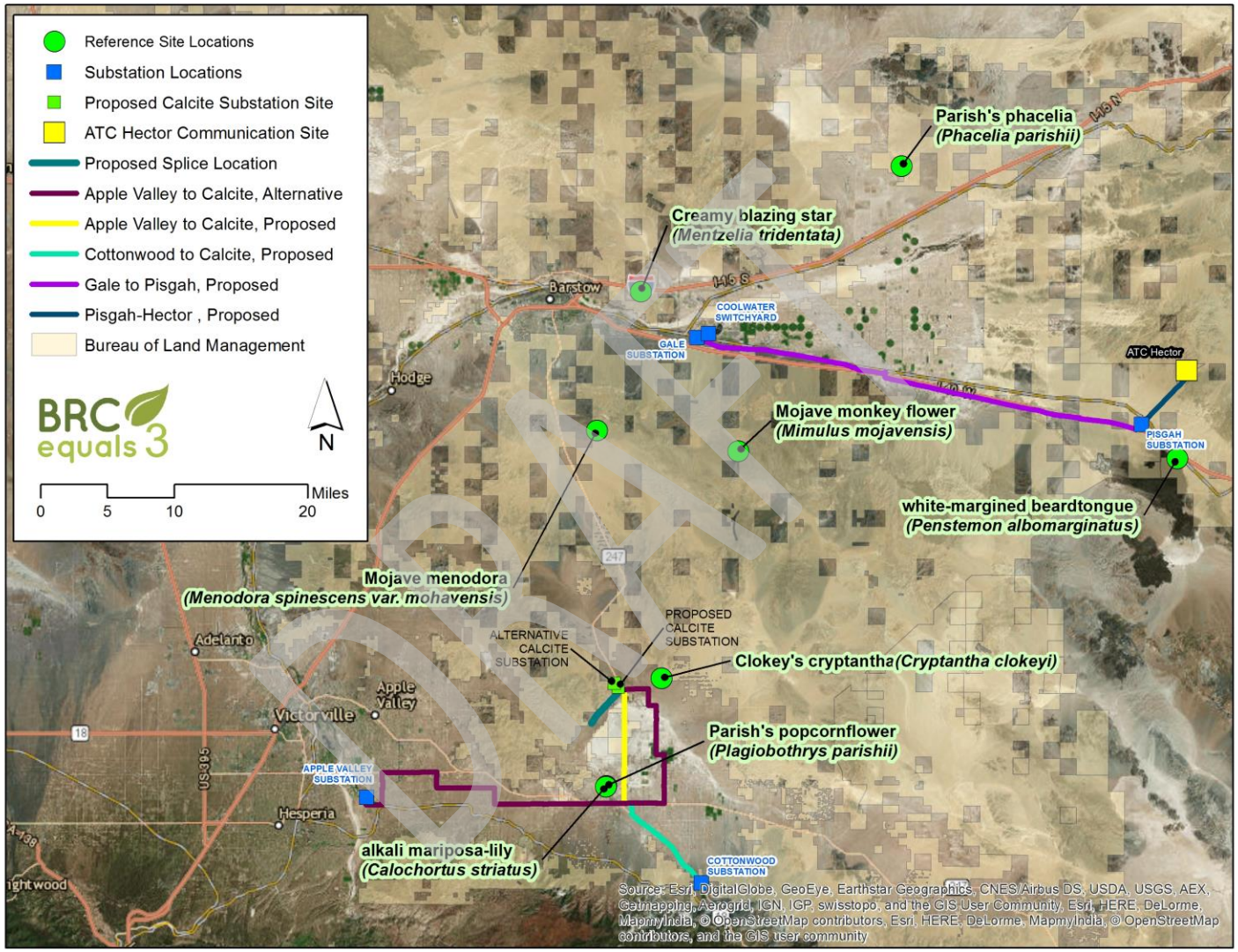

Figure 3. Reference site locations.

Although no CNDDB occurrences of Mojave monkeyflower (*Mimulus mojavensis*) occur within 3 miles of the Project Area, a reference site for Mojave monkeyflower was selected and visited after consulting with a BLM local expert (Larry LaPre, BLM 2016, pers. comm., 26 April).

During the reference site visits alkali mariposa-lily, Mojave menodora, Parish's phacelia, and Parish's popcorn flower were present and all in identifiable phenological states. Clokey's cryptantha, creamy blazing star, Mojave monkeyflower, and white-margined beardtongue were not observed to be present or were not identifiable at the selected reference site locations. Follow up reference site visits were not conducted in June as a result of June falling outside the known bloom period of the previously unobserved target plant species.

5.2 PLANT SPECIES

A total of 212 plant species were identified during surveys, including 20 non-native species and three special-status species. A complete list of plant species observed in the Project Area is provided in Attachment C.

5.3 SPECIAL-STATUS PLANT SPECIES

Three special-status plant species were observed during 2016 surveys including Borrego milkvetch (*Astragalus lentiginosus* var. *borreganus*), alkali mariposa-lily, and Utah vine milkweed (*Funastrum utahense)*. Below are detailed descriptions of the special-status plant species that were observed as well as special-status species that are currently or were initially assessed to have a "Likely" potential to occur.

5.3.1 Alkali mariposa lily – CRPR 1B.2

Alkali mariposa lily is a perennial herb in the Liliaceae family. Its habitat requirements include mesic Shadscale Scrub, Creosote Bush–White Bursage Scrub, and Yerba Mansa Meadows with alkaline soils at elevations ranging from 70 to 1,595 meters amsl. This species generally blooms between April and June (CNDDB 2016).

Alkali mariposa lily was observed during surveys within the Project Area (Attachment B, Attachment D - Photo 1). Thirty-five individuals were observed during the April/May survey. The individuals were observed on the southwest side of California Highway 18 within a *Yucca brevifolia–Larrea tridentata–Ambrosia dumosa–Eriogonum fasciculatum* Association and a *Salix exigua–Juncus* sp. Association, with the presence of yerba mansa (*Anemopsis californica*). The species was also observed at the selected reference site location just prior to the April/May survey. The species was not observed during the June surveys.

5.3.2 Borrego milkvetch – CRPR 4.3

Borrego milkvetch is an annual herb in the Fabaceae family. Its habitat requirements include sandy soils in Mojavean Desert Scrub and Sonoran Desert Scrub from 30 to 320 meters amsl. The species generally blooms from March to May (CNDDB 2016).

Borrego milkvetch was observed at three locations during the surveys within the Project Area (Attachment B, Attachment D - Photo 2). The first observation was during the April/May survey, during which time two fruiting individuals were observed. The second observation was observed

during the June survey in a non-flowering vegetative state. All occurrences were observed in sandy to gravelly soils within a *Larrea tridentata–Ambrosia dumosa* Association.

5.3.3 Utah vine milkvetch – CRPR 4.2

Utah vine milkvetch is a perennial herb in the Apocynaceae family. Its habitat requirements include sand or gravelly soils located within Mojavean and Sonoran Desert Scrub vegetation communities from 100 to 1435 meters amsl. This species generally blooms from April to September (CNDDB 2016).

Utah vine milkvetch was observed during surveys within the Project Area (Attachment B, Attachment D - Photo 3). One location with four living, non-flowering and ten desiccated individuals were observed. The individuals were observed along the northern telecom alignment north of Interstate 15 and northwest of Pisgah Road within a *Larrea tridentata–Ambrosia dumosa* Association. The species was observed during both the April/May and June survey events.

5.3.4 Clokey's cryptantha – CRPR 1B.2, BLM Sensitive

Clokey's cryptantha is an annual herb in the Boraginaceae family. It is generally found in Creosote Bush–White Bursage Scrub habitat at elevations of 725–1,365 meters amsl. The known blooming period for this species occurs in April (CNDDB 2016).

Clokey's cryptantha was not observed during the survey or at the reference site location. It was assessed to have a 'Likely' potential as a result of the proximity of CNDDB Occurrence #6, which was subsequently chosen as the reference site. Several species of *Cryptantha* collected at the site were taken to Rancho Santa Ana Botanical Garden to be keyed to confirm the absence of *C. clokeyi* from the reference site. The potential for this species' occurrence remains where suitable habitat exists within the Project Area.

5.3.5 Mojave menodora – CRPR 1B.2, BLM Sensitive

Mojave menodora is a shrub in the Oleaceae family. It is generally found on andesite gravel, rocky hillsides, and canyons in Creosote Bush–White Bursage Scrub habitat at elevations of 690–2,000 meters amsl. The known blooming period for this species is April to May (CNDDB 2016).

Mojave menodora was not observed during the survey but was observed at the reference site location. A previous observation identified in 2014 by BioResource Consultants (BRC) was utilized as a reference site location (BRC 2014). Five individuals were observed to be identifiable at the reference site location with individual phenology ranging from 10% floral buds, 5% fruit, to 85% post fruit vegetative. Individuals were encountered within a creosote/white bursage community along a rocky slope near a small drainage.

This species was positively identified at the reference site location. The lack of its presence during surveys within the Project Area suggests that Mojave Menodora does not occur within the Project Area.

5.3.6 Creamy blazing star – CRPR 1B.3, BLM Sensitive

Creamy blazing star is an annual herb in the Losaceae family. It is generally found within rocky slopes gravelly, and sandy slopes in Creosote Bush–White Bursage Scrub habitat at elevations between 700–1,160 meters amsl. The known blooming period for this species is March–May (CNDDB 2016).

Creamy blazing star was not observed during the survey or at the reference site location. It was assessed to have a 'Likely' potential as a result of the proximity of CNDDB Occurrence #33, which was subsequently chosen as the reference site. The potential for this species' occurrence remains where suitable habitat exists within the Project Area.

5.3.7 Mojave monkey flower – CRPR 1B.3, BLM Sensitive

Mojave monkey flower is an annual herb in the Phrymaceae family. It is generally found in gravelly banks of desert washes at elevations between 600–1,000 meters amsl. The known blooming period for this species is April–May (CNDDB 2016).

Mojave monkey flower was not observed during the survey or at the reference site location. No CNDDB records exist in 3 miles of the Project Area for this species but it was assessed to have a 'Likely' potential as a result of the proximity of CalFlora Record (GP4593)(CalFlora 2016) and personal communication with BLM botanists with local expertise (Larry LaPre, BLM 2016, pers. comm., 26 April). The potential for this species' occurrence remains where suitable habitat exists within the Project Area.

5.3.8 White-margined beardtongue – CRPR 1B.1, BLM Sensitive

White-margined beardtongue is a perennial herb in the Plantaginaceae family. It is generally found in deep stabilized desert sand, in washes and along roadsides in desert dunes and desert wash, and Creosote Bush–White Bursage Scrub at elevations of 640–1,065 meters amsl. The known blooming period for this species occurs from March-May (CNDDB 2016).

White-margined beardtongue was not observed during the survey or at the reference site location. It was assessed to have a 'Likely' potential and Rancho Santa Ana Record (RSA822497)(CalFlora 2016) was subsequently chosen as the reference site. The potential for this species' occurrence remains where suitable habitat exists within the Project Area.

5.3.9 Parish's phacelia – CRPR 1B.1, BLM Sensitive

Parish's phacelia is an annual herb in the Boraginaceae family. It is generally found on dry lake margins, alkaline flats and slopes or on clay soils in Creosote Bush–White Bursage Scrub and within playa habitats at elevations of 540–1,200 meters amsl. The known blooming period for this species is April-July (CNDDB 2016).

Parish's phacelia was not observed during the survey but was observed at the reference site location. A University of California Riverside record (Specimen number UCR226404) (CCH 2016) was utilized as a reference site location. Six individuals were observed to be identifiable at the reference site location with individual phenology ranging from 15% flower, 75% fruit, 10% post fruit

vegetative. Individuals were encountered along a dry lake margin that was completely void of vegetation with the exception of Parish's phacelia.

This species was positively identified at the reference site location. The lack of its presence during surveys within the Project Area suggests that Parish's phacelia does not occur within the Project Area.

5.3.10 Parish's popcorn flower – CRPR 1B.1, BLM Sensitive

Parish's popcorn flower is an annual herb in the Boraginaceae family. It is generally found in alkaline, mesic areas of big sagebrush and Joshua tree woodland habitats at elevations of 750–1,400 meters amsl. The known blooming period for this species is March-November (CNDDB 2016).

Parish's popcorn flower was not observed during the survey but was observed at the reference site location. A University of California Riverside record (Specimen number UCR 225931) (CCH 2016) was utilized as a reference site location. A large population of approximately 1,000 individuals was observed to be identifiable at the reference site location with individual phenology 100 percent in flower. The population was encountered in a seep with associate species including *Atriplex polycarpa*, *Suaeda moquinii*, *Calochortus striatus* and *Elocharis parishii*.

This species was positively identified at the reference site location. The lack of its presence during surveys within the Project Area suggests that Parish's popcorn flower does not occur within the Project Area.

6.0 DISCUSSION

Three special-status plant species, alkali mariposa-lily, Borrego milkvetch, and Utah vine milkweed, were observed within the Project Area during the 2016 botanical surveys.

While only three special-status plant species were observed during the focused botanical surveys, several additional special-status plant species are known to occur in the area and have suitable habitat along the Project alignment (Attachment A). The majority of these species are herbaceous annuals, dependent on annual rainfall and micro-habitat conditions that vary from year to year. Dry conditions, resulting from long-term drought, cause characteristically low herbaceous annual blooms (Sawyer et al. 2009). The special-status plant species with "Likely" and "Unlikely" probability of occurrence in the Project Area have a collective bloom period running from March through October. The focused botanical surveys described herein occurred during the portion of this broad bloom period optimal for annual species. Due to the timing of these focused surveys during consecutive drought years, surveys conducted during non-drought conditions may identify additional areas where special-status annual herbaceous plant species may occur (NCDC 2016b). Perennial herbs, shrubs, and subshrubs blooming outside of the survey window remain identifiable throughout the spring and summer seasons, both before and after their ideal bloom period.

Of the eight plant species selected for reference site monitoring, four species were observed during the reference site visits including, alkali mariposa-lily, Parish's popcorn flower, Parish's phacelia and Mojave menodora in April/May. The reference sites have similar habitat characteristics to the Project Area and they are located nearby. It is reasonable to presume that species observed within the botanical reference sites would be present and observable within the Project Area during the

same period. As such, negative findings during special-status plant surveys would indicate that these species are not present within the Project Area.

However, the absence of observations of some special-status plant species are not absolutely conclusive because: 1) rainfall within the desert can be highly variable even over small geographic areas; 2) although habitats types within the reference sites are similar to those present within the Project Area, small variations such a slope aspect, soil composition, and/or other factors can significantly impact the germination success of various plant species; and 3) seed banks for special-status species may be more robust within the botanical reference sites, which would increase the likelihood for successful germination within that area as compared to the Project Area.

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ATTACHMENT A:
SPECIAL-STATUS PLANT SPECIES POTENTIAL TO OCCUR

Table 2. CNDDB Special-status plants potential to occur within 3 miles of the survey area.

Common Name (*Scientific Name*)	Species Status	Comments	Potential to Occur
PLANTS			
Cushenbury oxytheca (*Acanthoscyphus parishii* var. *goodmaniana*)	FE, CRPR 1B.1	Considered out of range. Found in singleleaf pinyon woodland with carbonate, or talus, or sandy soils. Found at elevations of 1,219–2,377 meters amsl. Species is only known from occurrences in San Bernardino County. Known blooming period is from May–October.	Does not occur
small-flowered androstephium (*Androstephium breviflorum*)	CRPR 2B.2	Habitat present with recent CCH records in area. Prefers bajadas and desert dunes and creosote bush–white bursage scrub. Found at elevations of 1,219–2,377 meters amsl. Blooming period is from March–April	Likely
Cushenbury milk-vetch (*Astragalus albens*)	FE, CRPR 1B.1	Marginal habitat present and no recent CNDDB records. Not observed during survey. Found in Joshua tree woodland, creosote bush–white bursage scrub, and singleleaf pinyon woodland habitats with granitic or carbonate soils. Found at elevations from 1200-1900 meters amsl. Blooming period is from March–June.	Unlikely
San Bernardino milk-vetch (*Astragalus bernardinus*)	CRPR 1B.2	Considered out of species range. Found in singleleaf pinyon woodland and Joshua tree woodland habitats with granitic or carbonate soils. Found at elevations from 900-2000 meters amsl. Blooming period is from April–June.	Does not occur
Borrego milk-vetch *Astragalus lentiginosus* var. *borreganus*	CRPR 4.3	Suitable habitat present, observed during surveys. Found in sandy flats and semi-stabilized dunes within Mojavean desert scrub. Found at elevations from 30-320 meters amsl. Blooming period is from Mar-May.	Observed
pinyon rockcress (*Boechera dispar*)	CRPR 2B.3	Considered out of range. No suitable habitat present. Prefers granitic, gravelly slopes & mesas in Joshua tree woodland, creosote bush–white bursage scrub, singleleaf pinyon woodland. Found at elevations 1,200–2,540 meters amsl. Blooming period is from March–June.	Does not occur
Shockley's rockcress (*Boechera shockleyi*)	CRPR 2B.2	Considered out of range. No Suitable habitat present. Found in pinyon-juniper woodlands with rocky or gravelly soils at elevations of 875–2,310 meters amsl. Known blooming period is from May–June.	Does not occur
alkali mariposa-lily (*Calochortus striatus*)	CRPR 1B.2	Suitable habitat present, species observed during survey and at reference site. Found in mesic allscale scrub, creosote bush–white bursage scrub, yerba mansa meadows habitats with alkaline soils. Found at elevations of 70–1,595 meters amsl. Known blooming period of April–June.	Occurs

Common Name (*Scientific Name*)	**Species Status**	**Comments**	**Potential to Occur**
white pygmy-poppy (*Canbya candida*)	CRPR 4.2	Suitable habitat present but no recent CNDDB records in the area. Not observed during survey. Found in sandy places in Joshua tree woodland, creosote bush–white bursage scrub, and singleleaf pinyon woodland. Found at elevations of 610–1,200 meters amsl. Known blooming period April–September.	Unlikely
Emory's crucifixion-thorn (*Castela emoryii*)	CRPR 2B.2	Suitable habitat present with recent CCH records in area. Not observed during survey. Occurs in areas of creosote bush–white bursage scrub, playas, brittlebush scrub habitats with gravelly soils. Found at elevations of 90-670 meters amsl. Known blooming period of April–September.	Likely
Clokey's cryptantha (*Cryptantha clokeyi*)	BLMS, CRPR 1B.2	Suitable habitat present with recent CNDDB record in area. Not observed during survey or at selected reference site location. Found in Creosote Bush–White Bursage Scrub habitat at elevations of 725–1,365 meters amsl. Known blooming period of April.	Likely
purple-nerve cymopterus *Cymopterus multinervatus*	CRPR 2B.2	Suitable habitat present with recent CCH records in area. Not observed during survey. Found in Creosote Bush–White Bursage Scrub and singleleaf pinyon woodland habitats with sandy or gravelly soils at elevations of 790–1,800 meters amsl. Known blooming period is March–April.	Likely
Salina Pass wild-rye (*Elymus salina*)	CRPR 2B.3	No suitable habitat present. Found in rocky areas of singleleaf pinyon woodland at elevations of 1,350–2,135 meters amsl. Known blooming period is May–June.	Does not occur
Parish's daisy (*Erigeron parishii*)	FT, CRPR 1B.1	No suitable habitat present. Prefers limestone mountain slopes; often associated with drainages. Sometimes on granite in Creosote Bush–White Bursage Scrub and singleleaf pinyon woodland habitats at elevation of 800–2,000 meters amsl. . Known blooming period is May–August.	Does not occur
Cushenbury buckwheat (*Eriogonum ovalifolium var. vineum*)	FE, CRPR 1B.1	Considered out of species range. Prefers limestone mountain slopes in Joshua tree woodland, creosote bush–white bursage scrub, and singleleaf pinyon woodland habitats. Found at elevations of 1,400–2,440 meters amsl. Known blooming period is May–August.	Does not occur
Utah vine milkvetch (*Funastrum utahense*)	CRPR 4.2	Suitable habitat present, observed during surveys. Found in sandy or gravelly sites in the desert. 100-1435 amsl. Known blooming period is April - September.	Occurs
Mojave menodora (*Menodora spinescens varmohavensis*)	BLMS, CRPR 1B.2	Suitable habitat present. Species not observed within Project Area but observed at reference site location. Positive identification of this species at the reference site location and a lack of its presence during surveys suggest species does not occur within the Project Area. Occurs on andesite gravel, rocky hillsides, and canyons in creosote bush–white bursage scrub. Found at elevations of 690–2,000 meters amsl. Known blooming period is April-May.	Does not occur (*Formerly Likely*)

Common Name (*Scientific Name*)	Species Status	Comments	Potential to Occur
Darlington's blazing star (*Mentzelia puberula*)	CRPR 2B.2	Suitable habitat present but no recent records in area. Prefers sandy crevices in cliffs or on rocky slopes within creosote bush–white bursage scrub. Found at elevations of 90–1,280 meters amsl. Known blooming period is March–May.	Unlikely
creamy blazing star (*Mentzelia tridentata*)	BLMS, CRPR 1B.3	Suitable habitat present with recent CCH records in area. Not observed during surveys or at reference site location. Prefers rocky slopes gravelly, and sandy slopes in Creosote Bush–White Bursage Scrub habitat. Found at elevation of 700–1,160 meters amsl. Known blooming period is March–May.	Likely
Mojave monkeyflower (*Mimulus mohavensis*)	BLMS, CRPR 1B.2	Suitable habitat present with recent CCH record in area. Not observed during surveys or at reference site location. Prefers gravelly banks of desert washes. Found at elevation of 600–1000 meters amsl. Known blooming period is April–May.	Likely
white-margined beardtongue (*Penstemon albomarginatus*)	BLMS, CRPR 1B.1	Suitable habitat present with recent CCH records in area. Not observed during surveys or at reference site location. Prefers deep stabilized desert sand, in washes and along roadsides in desert dunes and desert wash, and creosote bush–white bursage scrub. Found at elevations of 640-1,065 meters amsl. Known blooming period is March–May.	Likely
Parish's phacelia (*Phacelia parishii*)	BLMS, CRPR 1B.1	Suitable habitat present. Species not observed within Project Area but observed at reference site location. Positive identification of this species at the reference site location and a lack of its presence during surveys suggest this species does not occur within the Project Area. Found on dry lake margins, alkaline flats and slopes or on clay soils in Creosote Bush–White Bursage Scrub and playa habitats. Occurs at elevations of 540–1200 meters. Known blooming period is April–July.	Does not occur (*Formerly Likely*)
Parish's popcornflower (*Plagiobothrys parishii*)	CRPR 1B.1	Suitable habitat present. Species not observed within Project Area but observed at reference site location. Positive identification of this species at the reference site location and a lack of its presence during surveys suggest this species does not occur within the Project Area. Occurs on alkaline, mesic areas of big sagebrush and Joshua tree woodland habitats at elevations of 750–1,400 meters amsl. Known blooming period is March–November.	Does not occur (*Formerly Likely*)
intermountain milkwort (*Polygala intermontana*)	CRPR 2B.1	Considered out of species range. Occurs in singleleaf pinyon woodland habitats at elevations of 2,010–3,080 meters. Known blooming period is June–July.	Does not occur
Parish's alkali grass (*Puccinellia parishii*)	BLMS, CRPR 1B.1	Marginal habitat present with CCH recent records in area, not observed during surveys. Occurs in yerba mansa meadows habitats at elevations of 700–1,000 meters amsl. Known blooming period is April–May.	Unlikely

Common Name (*Scientific Name*)	**Species Status**	**Comments**	**Potential to Occur**
California alkali grass (*Puccinellia simplex*)	CRPR 1B.2	Marginal habitat present and no recent records, not observed during surveys. Prefers alkaline, vernally mesic sinks, flats, and lake margins in yerba mansa meadows, allscale scrub, and annaul grasslands, and vernal pools at elevations ranging from 2–930 meters amsl. Known blooming period is March–May.	Unlikely
Latimer's woodland-gilia (*Saltugilia latimeri*)	BLMS, CRPR1B.2	Marginal suitable habitat present and no recent records. Found in chaparral, Mojavean desert scrub, pinyon juniper woodland. habitats with rocky or sandy soils at elevations of 400–1,900 meters amsl. Known blooming period March–June.	Unlikely
salt spring checkerbloom (*Sidalcea neomexicana*)	CRPR 2B.2	Marginal habitat present with recent CCH records in area. Not observed during surveys. Found in Alkaline springs, marshes. Prefers alkaline and mesic soils of black sage scrub, singleleaf pinyon woodland, creosote bush–white bursage scrub, and playa habitats at elevations of 15–1,530 meters. Known blooming period is March–June.	Unlikely

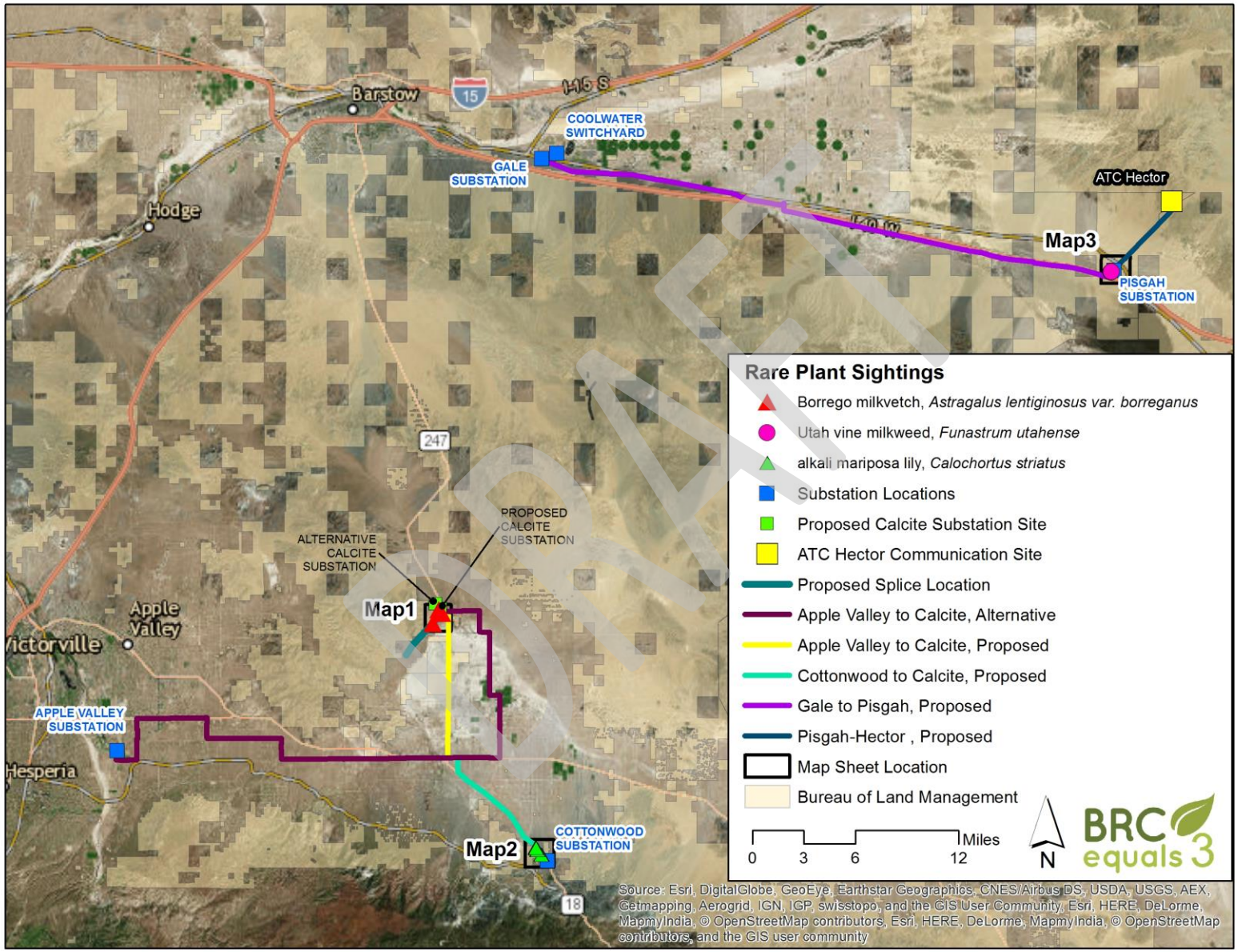
Status:

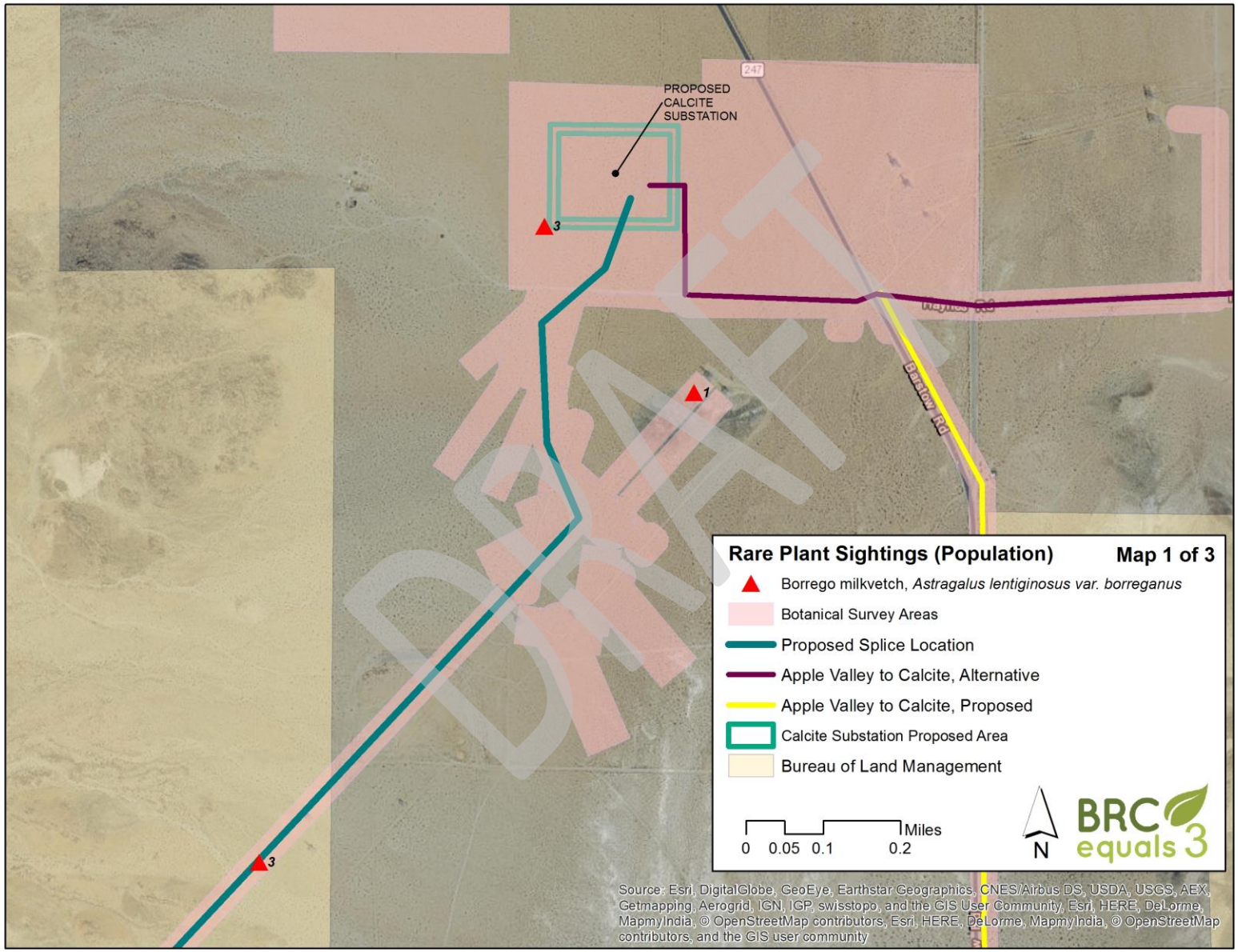
FE = Federally Endangered
FT = Federally Threatened
BLMS = BLM Sensitive

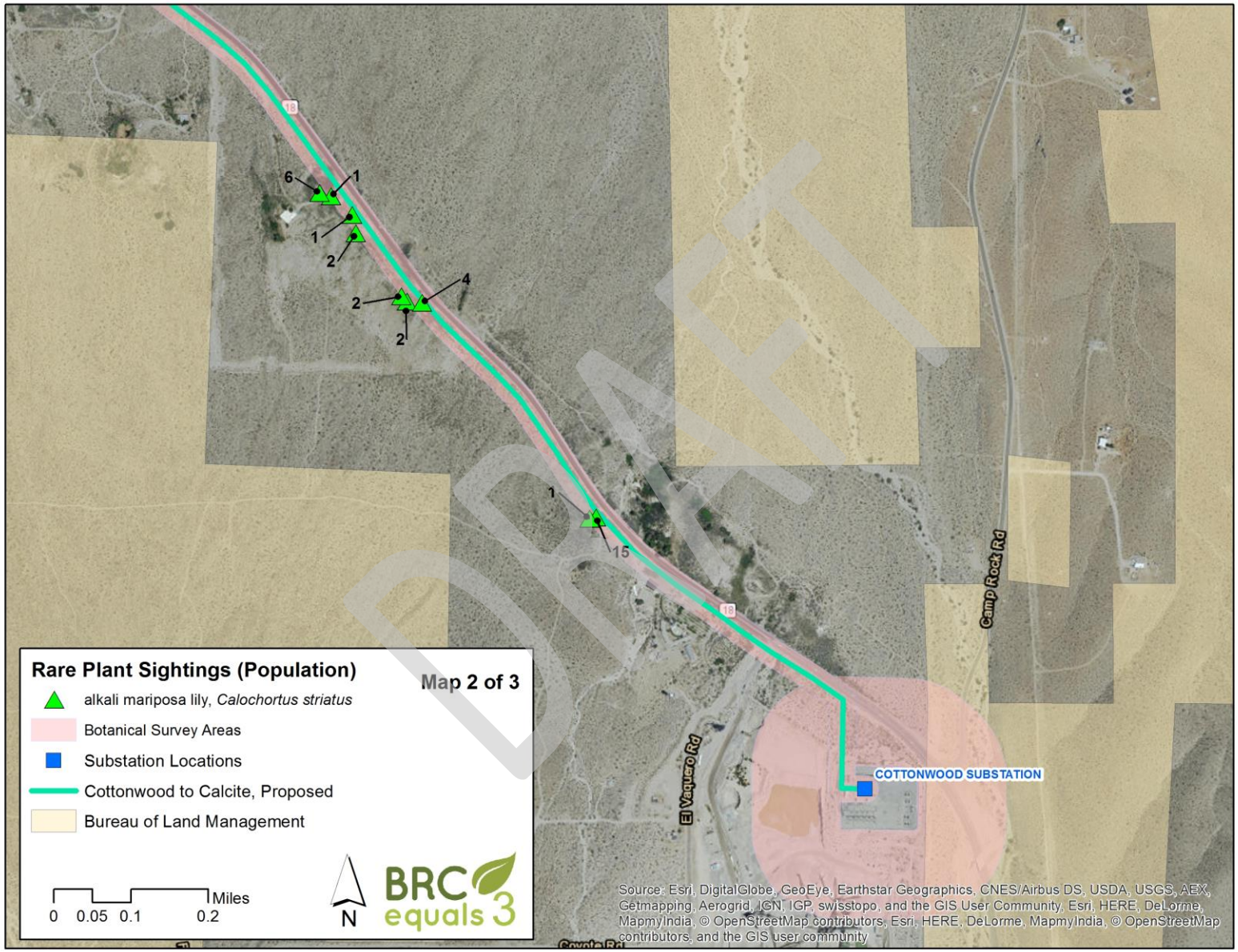
California Rare Plant Rank:

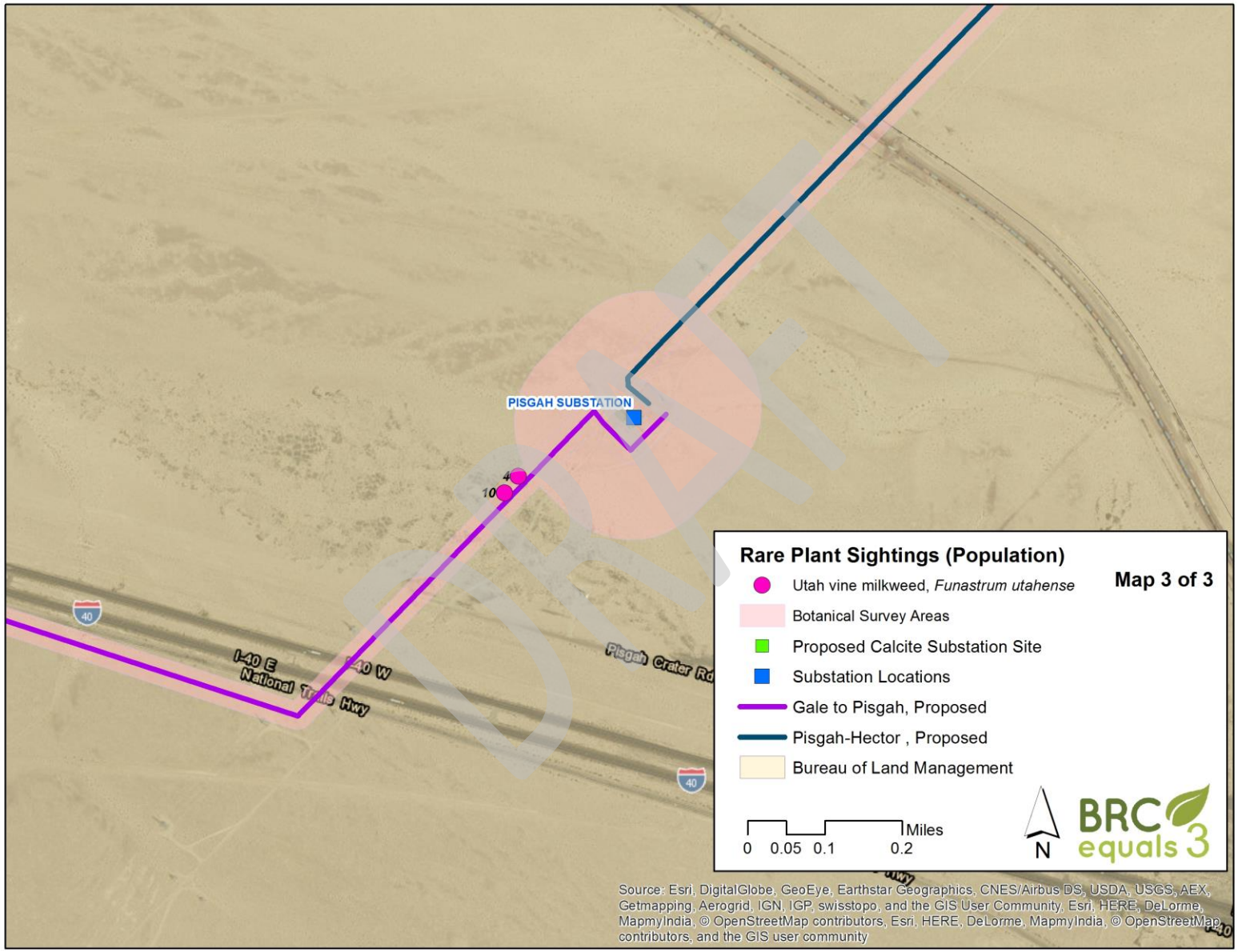
1B = Rare or Endangered in California and elsewhere
2B = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
4 = Plants of limited distribution - Watch list
.1 = Seriously endangered in California (>80% of occurrences threatened)
.2 = Fairly endangered in California (20-80% occurrences threatened)
.3 = Not very endangered in California (<20% of occurrences threatened) threats known)

ATTACHMENT B:
PROJECT SURVEY AREA AND LOCATION OF SPECIAL STATUS PLANT SPECIES OBSERVED


Barstow
I-15 S
COOLWATER SWITCHYARD
GALE SUBSTATION
ATC Hector
Hodge
Map3
PISGAH SUBSTATION
247
PROPOSED CALCITE SUBSTATION
ALTERNATIVE CALCITE SUBSTATION
Map1
Apple Valley
Victorville
APPLE VALLEY SUBSTATION
Hesperia
COTTONWOOD SUBSTATION
Map2
18
Rare Plant Sightings
Borrego milkvetch, Astragalus lentiginosus var. borreganus
Utah vine milkweed, Funastrum utahense
alkali mariposa lily, Calochortus striatus
Substation Locations
Proposed Calcite Substation Site
ATC Hector Communication Site
Proposed Splice Location
Apple Valley to Calcite, Alternative
Apple Valley to Calcite, Proposed
Cottonwood to Calcite, Proposed
Gale to Pisgah, Proposed
Pisgah-Hector , Proposed
Map Sheet Location
Bureau of Land Management
0 3 6 12 Miles
N
BRC equals 3
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community


PROPOSED
CALCITE
SUBSTATION
247
Highway 18
Barstow Rd
3
1
3
DRAFT
Rare Plant Sightings (Population)
Map 1 of 3
Borrego milkvetch, Astragalus lentiginosus var. borreganus
Botanical Survey Areas
Proposed Splice Location
Apple Valley to Calcite, Alternative
Apple Valley to Calcite, Proposed
Calcite Substation Proposed Area
Bureau of Land Management
Miles
0 0.05 0.1 0.2
N
BRC equals 3
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community


Rare Plant Sightings (Population)
Map 2 of 3
alkali mariposa lily, Calochortus striatus
Botanical Survey Areas
Substation Locations
Cottonwood to Calcite, Proposed
Bureau of Land Management
Miles
0 0.05 0.1 0.2
N
BRC equals 3
COTTONWOOD SUBSTATION
Camp Rock Rd
El Vaquero Rd
Coyote Rd
6
1
1
2
2
4
2
1
15
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community


PISGAH SUBSTATION
I-40 E
National Trails Hwy
I-40 W
Pisgah Crater Rd
Rare Plant Sightings (Population)
Map 3 of 3
Utah vine milkweed, Funastrum utahense
Botanical Survey Areas
Proposed Calcite Substation Site
Substation Locations
Gale to Pisgah, Proposed
Pisgah-Hector , Proposed
Bureau of Land Management
Miles
0 0.05 0.1 0.2
N
BRC equals 3
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community

ATTACHMENT C:
PLANT SPECIES OBSERVED IN THE PROJECT AREA

Table 3. Plant species observed during 2016 botanical surveys.

Scientific Name	Common Name	Family	Native / Non-Native
Abronia villosa var. *villosa*	desert sand verbena	Nyctaginaceae	Native
Aamptopappus sphaerocephalus	goldenheads	Asteraceae	Native
Achnatherum hymenoides	Indian rice grass	Poaceae	Native
Ailanthus altissima	tree of heaven	Simaroubaceae	Non-Native
Aliciella latifolia	broadleaf gilia	Polemoniaceae	Native
Allionia incarnata	trailing allionia	Nyctaginaceae	Native
Allium fimbriatum	wild onion	Alliaceae	Native
Ambrosia acanthicarpa	burrweed	Asteraceae	Native
Ambrosia dumosa	white bursage	Asteraceae	Native
Ambrosia psilostachya	western ragweed	Asteraceae	Native
Ambrosia salsola	burrowbush	Asteraceae	Native
Amsinckia tessellata	fiddleneck	Boraginaceae	Native
Anemopsiscalifornica	yerba mansa	Saururaceae	Native
Asclepias erosa	desert milkweed	Apocynaceae	Native
Astragalus lentiginosus	freckled milkvetch	Fabaceae	Native
Astragalus lentiginosus* var. *borreganus	**Borrego milkvetch**	**Fabaceae**	**Native**
Atriplex canescens	fourwing saltbush	Chenopodiaceae	Native
Atriplex confertifolia	shadscale	Chenopodiaceae	Native
Atriplex lentiformis	big saltbush	Chenopodiaceae	Native
Atriplex polycarpa	allscale	Chenopodiaceae	Native
Atriplex hymenlytra	desert holly	Chenopodiaceae	Native
Avena fatua	wild oat	Poaceae	Non-Native
Baileya pleniradiata	wooly marigold	Asteraceae	Native
Bebbia juncea var. *aspera*	sweetbush	Asteraceae	Native
Brassica nigra	black mustard	Brassicaceae	Non-Native
Brassica tournefortii	Sahara mustard	Brassicaceae	Non-Native

Scientific Name	Common Name	Family	Native / Non-Native
Brickellia atractyloides	spearleaf brickelbush	Asteraceae	Native
Brickellia desertorum	desert brickelbush	Asteraceae	Native
Bromus madritensis	red brome	Poaceae	Non-Native
Bromus tectorum	cheatgrass	Poaceae	Non-Native
Caesalpinia gilliesii	bird of paradise	Fabaceae	Non-Native
Calochortus striatus	**alkali mariposa-lily**	**Liliaceae**	**Native**
Chaenactis Carphoclinia var. *carpoclinia*	pebble pincushion	Asteraceae	Native
Castilleja chromosa	desert paint brush	Orobanchaceae	Native
Catilleja linarifolia	Wyoming paint brush	Orobanchaceae	Native
Chaenactis fremontii	pincusion flower	Asteraceae	Native
Chaenactis stevioides	desert pincushion	Asteraceae	Native
Chilopsis linearis	desert willow	Bignoniaceae	Native
Chorizanthe brevicornu	rigid spiny herb	Polygonaceae	Native
Chorizanthe rigida	rigid spineflower	Polygonaceae	Native
Chrysothamnus viscidiflorus	yellow rabbit brush	Asteraceae	Native
Chylismia brevipes	yellow cups	Onagraceae	Native
Chylismia campestris	Mojave suncup	Onagraceae	Native
Chylismia claviformis ssp. *claviformis*	clavate fruited primrose	Onagraceae	Native
Circium mohavense	Mojave thistle	Asteraceae	Native
Cleomella obtusifolia	bluntleaf stinkweed	Cleomaceae	Native
Coleogyne ramosissima	blackbrush	Rosaceae	Native
Croton californicus	croton	Euphorbiaceae	Native
Cryptantha angustifolia	panamint cryptantha	Boraginaceae	Native
Cryptantha barbigera	bearded cryptantha	Boraginaceae	Native
Cryptantha circumscissa	forget-me-not	Boraginaceae	Native
Cryptantha nevadensis	Nevada forget-me-not	Boraginaceae	Native
Cryptanttha pectocarya	winged nut cryptantha	Boraginaceae	Native
Cucurbita palmata	coyote gourd	Cucurbitaceae	Native
Cuscuta nevadensis	desert dodder	Convolvulaceae	Native

Scientific Name	Common Name	Family	Native / Non-Native
Cylindropuntia echinocarpa	golden cholla	Cactaceae	Native
Cylindropuntia ramosissima	branched pencil cholla	Cactaceae	Native
Cynodon dactylon	Bermuda grass	Poaceae	Non-Native
Dalea mollis	hairy prairie clover	Fabaceae	Native
Dalea mollissima	downy dalea	Fabaceae	Native
Dasyochloa pulchella	fluffgrass	Poaceae	Native
Datura discolor	desert thornapple	Solanaceae	Native
Delphinium parishii	Parish's larkspur	Ranunculaceae	Native
Descurainia pinnata	tansy mustard	Brassicaceae	Native
Descurainia sophia	flix weed	Brassicaceae	Native
Dieteria canescens	hoary aster	Asteraceae	Native
Distichlis spicata	saltgrass	Poaceae	Native
Ditaxis neomexicana	common ditaxis	Euphorbiaceae	Native
Echinocactus polycephalus	cottontop cactus	Cactaceae	Native
Echinoceris engelmannii	Engelmann's hedgehog	Cactaceae	Native
Encelia actonii	Acton encelia	Asteraceae	Native
Encelia farinosa	brittlebush	Asteraceae	Native
Encelia frutescens	rayless brittlebush	Asteraceae	Native
Ephedra nevadensis	Nevada ephedra	Ephedraceae	Native
Ephedra viridis	Mormon tea	Ephedraceae	Native
Ephedra trifurca	long-leafed ephedra	Ephedraceae	Native
Eremalche exilis	white mallow	Malvaceae	Native
Eremalche rotundifolia	desert five spot	Malvaceae	Native
Eremothera boothii ssp. *condensata*	desert lantern	Onagraceae	Native
Eremothera refacta	narrow-leaved primrose	Onagraceae	Native
Eriastrum eremicum	desert wooly star	Polemoniaceae	Native
Ericameria laricifolia	turpentine bush	Asteraceae	Native
Ericameria nauseosa	rubber rabbitbrush	Asteraceae	Native
Eriodictyon trichocalyx	hairy yerba santa	Boraginaceae	Native

Scientific Name	Common Name	Family	Native / Non-Native
Eriogonum brachypodum	Parry's buckwheat	Polygonaceae	Native
Eriogonum deflexum var. *defleum*	flatcrown buckwheat	Polygonaceae	Native
Eriogonum fasciculatum var. *polifolium*	California buckwheat	Polygonaceae	Native
Eriogonum inflatum	desert trumpet	Polygonaceae	Native
Eriogonum maculatum	angle stemmed buckwheat	Polygonaceae	Native
Eriogonum midularium	whisk broom	Polyganaceae	Native
Eriogonum reniforme	kidney leaf buckwheat	Polygonaceae	Native
Eriogonum tricopes	little desert buckwheat	Polygonaceae	Native
Eriophyllum wallacei	Wallace's eriophyllum	Asteraceae	Native
Erodium cicutarium	Storksbill filaree	Geraniaceae	Non-Native
Erodium texanum	desert heron's bill	Geraniaceae	Native
Eschscholzia californica	California poppy	Papaveraceae	Native
Eschscholzia minutiflora	pygmy poppy	Papaveraceae	Native
Eucnide urens	desert bush nettle	Loasaceae	Native
Euphorbia albomarginata	rattlesnake spruge	Ephedraceae	Native
Euphorbia polycarpa	smallseed sandmat	Ephedraceae	Native
Ferocactus acanthodes	California barrel cactus	Cactaceae	Native
Funastrum utahense	**Utah vine milkweed**	**Apocynaceae**	**Native**
Geraea canescens	hairy desert sunflower	Asteraceae	Native
Gilia sp.	gilia	Polemoniaceae	Native
Grayia spinosa	hopsage	Chenopodiaceae	Native
Gutierrezia microcephala	matchweed	Asteraceae	Native
Isocoma aradenia var. *eremophila*	solitary-leaved alkali goldenbush	Asteraceae	Native
Heliotropium curassavicum	Chinese parsley	Boraginaceae	Native
Hesperoyucca whipplei	chaparral yucca	Agavaceae	Native
Hilaria rigida	big galleta grass	Poaceae	Native
Hirschfeldia incana	Sahara mustard	Brassicaceae	Non-Native
Hordeum murinum ssp. glaucum	blue foxtail	Poaceae	Non-Native
Iva axillaris	poverty weed	Asteraceae	Native

Scientific Name	Common Name	Family	Native / Non-Native
Juncus sp.	rush	Juncaceae	Native
Juniperus californica	California juniper	Cupressaceae	Native
Krameria bicolor	white ratany	Krameriaceae	Native
Krameria erecta	little leaved ratany	Krameriaceae	Native
Krascheninnikovia lanata	winter fat	Chenopodiaceae	Native
Langloisia setosissima ssp. *punctata*	lilac sunbonnet	Polemoniaceae	Native
Larrea tridentata	creosote bush	Zygophylaceae	Native
Lasthenia californica	goldfields	Asteraceae	Native
Lepidium flavum	yellow pepper grass	Brassicaceae	Native
Lepidium fremontii	bush peppergrass	Brassicaceae	Native
Lepidium nitidum	peppergrass	Brassicaceae	Native
Lepidospartum squamatum	California broomsage	Asteraceae	Native
Linanthus parryae	Parry's linanthus	Polemoniaceae	Native
Loeseliastrum mathewsii	desert calico	Polemoniaceae	Native
Lupinus shockleyi.	Shockley lupine	Fabaceae	Native
Lycium andersonii	Anderson's thorn bush	Solanaceae	Native
Lycium cooperii	Cooper's box thorn	Solanaceae	Native
Malacothrix glabrata	desert dandelion	Asteraceae	Native
Mammillaria tetracistra	common fishhook cactus	Cactaceae	Native
Mentzelia albicaulis	small-flowered blazing star	Loasaceae	Native
Mentzelia laevicaulis	giant blazing star	Loasaceae	Native
Mesembryanthemum crystallinum	common iceplant	Aizoaceae	Non-native
Mimulus bigelovii	Bigelow's monkeyflower	Phrymaceae	Native
Mirabilis multiflora	desert four-o'-clock	Nyctaginaceae	Native
Mohavea breviflora	lesser mohavea	Plantaginaceae	*Native*
Mohavea confertiflora	ghost flower	Plantaginaceae	Native
Monoptilon bellidiforme	small desert star	Asteraceae	Native
Muhlenbergia asperfolia	scratchgrass	Poaceae	Native
Myriopteris parryi	Parry's lip fern	Pteridaceae	Native

Scientific Name	Common Name	Family	Native / Non-Native
Nama demissum	purple mat	Hydrophyllaceae	Native
Nicolletia occidnetallis	Mojave sand plant	Asteraceae	Native
Nicotiana obtusifolia	desert tobacco	Solanaceae	Native
Oenothera californica	evening primrose	Onagraceae	Native
Oligomeris linifolia	lineleaf whitepuff	Resedaceae	Native
Opuntia basilaris ssp. *basilaris*	beavertail cactus	Cactaceae	Native
Opuntia echinocarpa	silver cholla	Cactaceae	Native
Oxytheca perfoliata	roundleaf oxytheca	Polygonaceae	Native
Parkinsonia aculeata	Mexican palo verde	Fabaceae	Native
Pectis papposa	chinch weed	Asteraceae	Native
Pectocarya penicillata	Baja pectocarya	Boraginaceae	Native
Pectocarya platycarpa	broad nutted comb bur	Boraginaceae	Native
Pectocarya setosa	moth combseed	Boraginaceae	Native
Peritoma arborea var. *angustata*	bladderpod	Cleomaceae	Native
Perityle emoryi	Emory's rock daisy	Asteraceae	Native
Petalonyx thurberi	sandpaper plant	Loasaceae	Native
Peucephyllum schottii	desert fir	Asteraceae	Native
Phacelia distans	common phacelia	Boraginaceae	Native
Phacelia campanularia	desert cantebury bell	Boraginaceae	Native
Phacelia crenulata var. *ambigua*	heliotrope phacelia	Boraginaceae	Native
Phacelia fremontii	Fremont's phacelia	Boraginaceae	Native
Pholistoma membranaceum	white fiesta flower	Boraginaceae	Native
Physalis crassifolia	thick leaf ground cherry	Solanaceae	Native
Plantago ovata	desert plantain	Plantaginaceae	Native
Plantago ovata var. *insularis*	desert plantain	Plantaginaceae	Native
Pleurocoronis pluriseta	arrow leaf	Asteraceae	Native
Populus fremontii	Fremont cottonwood	Salicaceae	Native
Prosopis glandulosa	honey mesquite	Fabaceae	Native
Prunus fasciculata	desert almond	Rosaceae	Native

Scientific Name	Common Name	Family	Native / Non-Native
Psorothamnus schottii	indigo bush	Fabaceae	Native
Psorothamnus spinosus	smoketree	Fabaceae	Native
Pterostegia drymariodes	fairy mist	Polygonaceae	Native
Purshia tridentate var. *glandulosa*	antelope brush	Rosaceae	Native
Rafinesquia neomexicana	desert chicory	Asteracea	Native
Robinia neomexicana	desert locust	Fabaceae	Native
Salix exigua	narrow-leaved willow	Salicaceae	Native
Salix laevigata	red willow	Salicaceae	Native
Salix lasiolepis	arroyo willow	Salicaceae	Native
Salsola tragus	Russian thistle	Chenopodiaceae	Non-Native
Salvia columbariae	chia sage	Lamiaceae	Native
Salvia mohavensis	Mohave sage	Lamiaceae	Native
Sambucus nigra	black elderberry	Adoxaceae	Native
Schinus molle	Peruvian pepper tree	Anacardiaceae	Non-Native
Schismus barbatus	Mediterranean grass	Poaceae	Non-native
Senegalia greggii	cat claw	Fabaceae	Native
Senna armata	desert senna	Fabaceae	Native
Sisymbrium irio.	London rocket	Brassicaceae	Non-native
Solanum elaegnifolium	horse nettle	Solanaceae	Non-native
Sphaeralcea ambigua	desert globe mallow	Malvaceae	Native
Stanleya pinnata	Prince’s plume	Brassicaceae	Native
Stephanomeria exigua ssp. *exigua*	mitra	Asteraceae	Native
Stephanomeria pauciflora	desert straw	Asteraceae	Native
Stipa hymenoides	Indian ricegrass	Poaceae	Native
Stipa speciosa	desert needle	Poaceae	Native
Suaeda moquinii	Mojave seablite	Chenopodiaceae	Native
Syntrichopappus freemontii	false woolly daisy	Asteraceae	Native
Tamarix sp.	salt cedar	Tamaricaceae	Non-Native
Tauschia parishii	Parish’s tauschia	Apiaceae	Native

Scientific Name	Common Name	Family	Native / Non-Native
Tetradymia axillaris var. *longispina*	catclaw horsebush	Asteraceae	Native
Tidestromia suffruticosa var. *oblongifolia*	honeysweet	Amaranthaceae	Native
Tiquilia plicata	plicate coldenia	Boraginaceae	Native
Trianthema portulacastrum	desert horseplane	Aizoaceae	Native
Tribulus terrestris	puncture vine	Zygophyllaceae	Non-Native
Typha latifolia	broad-leaved cattail	Potamogetonaceae	Native
Vitis californica	southern California grape	Vitaceae	Native
Vulpia myuros	rattail fescue	Poaceae	Non-Native
Xylorhiza tortifolia var. *tortifolia*	Mojave woodystar	Asteraceae	Native
Yucca brevifolia	Joshua tree	Agavaceae	Native
Yucca schidigera	Mojave yucca	Agavaceae	Native

ATTACHMENT D:
PHOTOS OF SPECIAL-STATUS PLANT SPECIES OBSERVED IN THE PROJECT AREA

Photo 1. Individual alkali mariposa-lily in flower observed directly west of Hwy 18 within the Project Area.

Photo 2. Borrego's milkvetch with fruit observed west of Hwy 247 within the Project Area.

Photo 3. Utah vine milkweed vegetation observed along northern telecom, within the Project Area.