
Appendix D-7

LVRAS 2021 Special-Status Plant Survey Report

LUGO-VICTORVILLE 500 KV TRANSMISSION LINE REMEDIAL ACTION SCHEME PROJECT 2021 SPECIAL-STATUS PLANT SURVEY REPORT

San Bernardino County, California and
Clark County, Nevada

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1 INTRODUCTION

Artemis Environmental Services, Inc. (Artemis Environmental) was retained by Rincon Consultants, Inc. (Rincon) to perform a focused special-status plant survey on behalf of Southern California Edison (SCE) for the Lugo-Victorville 500-kilovolt (kV) Transmission Line Remedial Action Scheme Project (Project). A previous botanical survey was conducted during April, May, and June 2017 by Environmental Intelligence, LLC along portions of the Project alignment (EI 2017a, EI 2017b). Artemis Environmental was retained to survey areas added to the project during the planning phase of the project and contingency work areas under consideration that were not captured in the previous survey effort (gap areas).

The Project, which is located in San Bernardino County, California and Clark County, Nevada, includes two segments, Segment 1: Gale Substation to Pisgah Substation (Gale to Pisgah; Segment 1) and Segment 2: Pisgah Substation to tower M152-T2 just beyond Nipton Substation (Pisgah to Nipton; Segment 2). Segment 1 includes the installation of telecommunication all-dielectric self-supporting (ADSS) cable line from SCE's Gale Substation near Barstow, California to SCE's Pisgah Substation near Ludlow, California for approximately 29 miles within an existing SCE right-of-way (ROW) along U.S. Route 66 and Interstate Highway 40. Segment 2 includes the removal of the existing overhead ground wire (OHGW) and replacement with Optical Ground Wire (OPGW) along approximately 84 miles within the existing SCE ROW starting at SCE's Pisgah Substation and ending at transmission tower M152-T2 within Clark County, Nevada (near Nipton Road/Joshua Tree Highway).

The special-status plant survey area (Survey Area) totals 1,894.10 acres and encompasses all potential areas where work will be performed based on the current design, including previously surveyed areas, gap areas, and contingency areas from Gale Substation to Structure 30654S with a 25-foot buffer, from Structure 30654S to Pisgah Substation with a 65-foot buffer, and from Pisgah to Nipton with a 100-foot buffer to allow for engineering and design changes.

This Special-status Plant Survey Report (Report) describes the special-status plants with potential to occur in the Survey Area and the methodology and results of focused special-status plant spring and fall surveys that were conducted in March-April and September 2021, respectively. Additional special-status plants were detected within the Survey Area during a separate survey effort in June 2021 but were recorded and included in the Spring 2021 special-status plant data. The purpose of these focused surveys was to capture the gap areas not previously surveyed and update the extent of known special-status plant populations in all areas where work will be performed across the entire 115-mile linear alignment. This Report describes the special-status plants that were observed within the Survey Area.

1.1 SURVEY AREA LOCATION

The Survey Area consists of two segments, Segment 1: Gale to Pisgah and Segment 2: Pisgah to Nipton. Segment 1 is located within an existing distribution line ROW adjacent to U.S. Route 66, traversing private land and open space public lands including those administered by the Bureau of Land Management (BLM), Department of Defense (DOD), and State Lands Commission (SLC) in San Bernardino County, California (Appendix A, Figures 1 and 2: Project Overview and Project Vicinity, respectively). Segment 2 is located within primarily undisturbed desert scrub spanning lands administered by the BLM, DOD, Mojave National Preserve (MNP), SLC, and private landowners in San Bernardino County, California and Clark County, Nevada (Appendix A, Figure 2: Project Vicinity). The western edge of the Segment 1 Survey Area, at Gale Substation, is located at latitude N34.858043, and longitude W-116.866728. Structure 429142S, which represents the eastern edge of the Segment 1 Survey Area, is located at latitude N34.780758 and longitude

W-116.386662. The Pisgah Substation is located at latitude N34.782406, and longitude W-116.384607, and the eastern edge of the Segment 2 Survey Area, at Nipton Substation is located at latitude N35.484861 and longitude W-115.187637.

1.2 SURVEY AREA SITE DESCRIPTION

The Survey Area, which totals 1,894.10 acres, includes all potential areas where work will be performed, including gap areas, and contingency work areas from Gale Substation to Structure 30654S with a 25-foot buffer, from Structure 30654S to Pisgah Substation with a 65-foot buffer, and from Pisgah to Nipton with a 100-foot buffer (Appendix A, Figure 3: Special-status Plant Observations).

Elevations vary from approximately 1,800 feet above mean sea level (AMSL) to approximately 2,100 feet AMSL within the Segment 1 and from approximately 1,100 feet AMSL to approximately 4,600 feet AMSL within Segment 2. The Survey Area is located within the American Semidesert and Desert Province ecological region (322), which encompasses the Mojave, Colorado, and Sonoran Deserts (USFS 2018). Specifically, the Survey Area is within the Mojave Desert section and ecoregion subsections: Mojave Valley-Granite Mountains, Bullion Mountains-Bristol Lake, Silurian Valley-Devil's Playground, Kingston Range-Valley Wells, Ivanpah Valley, Providence Mountains - Lanfair Valley (Walter-Feller 2020).

2 SPECIAL-STATUS PLANT SURVEY METHODS

This section outlines the pre-field analysis used to develop a list of special-status plant species with the potential to occur in the Survey Area and the field survey methods used to document special-status plant species occurrences within the Survey Area for the purpose of facilitating pre-construction avoidance and mitigation planning efforts.

2.1 PRE-FIELD ANALYSIS

Special-status plant species within the Survey Area have been afforded special-status and/or recognition by federal, state, and local resource agencies and are included in the following:

- USFWS species records (USFWS 2021)
- California Natural Diversity Database (CNDDDB; CDFW 2021)
- California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2021) ¹.
- California Desert Conservation Area (BLM 1999)
- Desert Renewable Energy Conservation Plan (BLM 2016)

Prior to the initiation of field surveys, a literature review and desktop analysis were conducted to determine which special-status species have the potential to occur within five miles of the Survey Area. The following sources were consulted:

- Vegetation mapping completed during habitat assessment studies performed by Environmental Intelligence, LLC (EI 2016). Vegetation mapping, where aquatic resources were present, was updated during the 2021 aquatic resources delineation survey performed by Artemis Environmental (Artemis 2021).
- 7.5-minute USGS topographic quadrangle maps
- Aerial imagery of the Survey Area
- USFWS species records (USFWS 2021)
- California Natural Diversity Database (CNDDDB; CDFW 2021)
- California Native Plant Society (CNPS) Rare Plant Inventory (CNPS 2021)
- The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Web Soil Survey and State Soil Geographic Data Base (STATSGO) (NRCS 2021)
- Botanical Survey Report: Gale to Pisgah Project (EI 2017a)
- Botanical Survey Report: Lugo-Victorville 500-kV Transmission Line Remedial Action Scheme Project (EI 2017b)
- California Desert Conservation Area (BLM 1999)

¹ The CNPS and CDFW lists are identical and utilize the California Rare Plant Ranking (CRPR) designation for status.

- Desert Renewable Energy Conservation Plan (BLM 2016)

Special-status plant species with the potential to occur within the Survey Area were generally evaluated based on SCE's Species Determination Flow Chart (SCE 2017) which considers habitat suitability, distance and age of existing records, and field observations. All special-status plant species reported within five miles of the Survey Area were evaluated. Appendix B provides the potential for special-status plant species to occur within the Survey Area. The potential for occurrence ranking criteria are as follows:

Occurs – The species was observed/detected within the Survey Area during the field survey(s).

Likely – This species is expected to occur in the Survey Area based on presence of suitable habitat, and/or based on professional expertise specific to the site or species, and recent (less than 25 years) recorded occurrences for the species within two miles.

Unlikely – The Survey Area is on the periphery of the species range, or there are older records (greater than 25 years) within the Survey Area, but there is currently marginal suitable habitat on-site (habitat is highly disturbed, degraded, or limited).

Does Not Occur – This species is not expected to occur in the Survey Area. Suitable habitat was not observed in the Survey Area during the survey, the Survey Area is outside of the currently known range of the species, and/or there are no recent (less than 25 years) recorded occurrences for the species within five miles.

Absent – This species was not detected during focused field surveys. This species is conspicuous and had it been present would have been observed, or (for annuals) was observed flowering at a nearby known reference location during the survey period.

2.2 REFERENCE POPULATION CHECKS

Prior to the initiation of field surveys, qualified Artemis Environmental botanists conducted population reference checks for annual species during both the spring and fall blooming periods. Reference populations were located using the CNDDDB and Consortium of California Herbaria (CCH) databases. Representative reference populations were surveyed for the presence of selected ephemeral annual target species prior to the surveys. Spring reference populations were evaluated on March 31, 2021, during the flowering period for the target species Mojave monkeyflower (*Diplacus mohavensis*; CRPR 1B.2), creamy blazing star (*Mentzelia puberula*; CRPR 1B.3), white-margined beardtongue (*Penstemon albomarginatus*; CRPR 1B.1), and small-flowered androstephium (*Androstephium breviflorum*; CRPR 2B.2). Mojave menodora (*Menodora spinescens* var. *mohavensis*; CRPR 1B.2) was incidentally observed during reference checks, although it was not a target species requiring a reference check because it is a large conspicuous perennial. A second spring reference population check was conducted on April 27, 2021, targeting Cima milk-vetch (*Astragalus cimae* var. *cimae*; CRPR 1B.2), a higher elevation species found in Joshua tree woodland and pinyon and juniper woodland.

During the anticipated fall blooming period, reference populations were evaluated by qualified Artemis Environmental botanists on August 24, 2021, along the Project alignment and representative surrounding areas targeting the following species: black grama (*Bouteloua eriopoda*; CRPR 4.2), Abram's spurge (*Euphorbia abramsiana*; CRPR 2B.2), Parry's spurge (*Euphorbia parryi*; CRPR 2B.3), Revolute spurge (*Euphorbia revoluta*; CRPR 4.3), Utah vine milkweed (*Funastrum utahense*; CRPR 4.2), warty caltrop (*Kallstroemia parviflora*; CRPR 4.2), and desert portulaca (*Portulaca halimoides*; CRPR 4.2). Locations of the reference populations evaluated prior to fall surveys was informed by CNDDDB records, California

Consortium of Herbaria (CCH 2021) records, previous documentation by Artemis Environmental (Artemis 2021), and by personal and incidental observation.

2.3 FIELD SURVEYS

Artemis Environmental performed focused field surveys of the Survey Area for special-status plants during both the spring and fall blooming periods, during March-April and September 2021, respectively. Special-status plants incidentally observed by Artemis Environmental biologists conducting separate field efforts in 2021 focused on aquatic resources and cactus mapping were mapped during these efforts and verified during the botanical surveys.

Artemis Environmental botanists conducted pedestrian surveys at approximately 50-foot (15-meter) transect spacing throughout the Survey Area. Surveyors mapped special-status plant species points for individual plants or groups of plants less than five meters in diameter and more than five meters away from other plants of the same species. Polygon features were used to record groups of the same species of special-status plants larger than five meters in diameter and more than five meters away from groups of the same species.

The ESRI Collector application installed on tablets and smart phones was used to navigate the Survey Area and to map and document the location of special-status plant species using points and polygons. Points and polygons were recorded to sub-meter accuracy using Bluetooth connected Global Positioning Systems (GPS) units. The species scientific name, occurrence type (i.e., live or remains), estimated population size, and any observation notes were recorded directly into Collector during the surveys. Representative photographs of special-status plant species, areas of note, and a comprehensive list of all plant species within the Survey Area were recorded during the surveys. Representative photographs are provided in Appendix C: Representative Photographs. Plant species observed within the Survey Area are included in Appendix D: Plant Species Observed. One voucher specimen was collected of Abram's spurge (*Euphorbia abramsiana*) for submission to University of California Riverside. This species has not been documented previously to occur in the vicinity and was observed on BLM land in Segment 1.

2.4 SURVEY LIMITATIONS

Due to the lack of winter rains and extremely dry conditions in the general Project area in 2020-2021, there was essentially no germination of spring annuals in much of the Survey Area, and the majority of the target spring annual species did not germinate and were not detectable during the spring blooming period. Focused Spring surveys were not conducted within Segment 1 and much of Segment 2 due to the extremely dry conditions. Where conditions were more favorable in the higher elevation areas of Segment 2 within the MNP, focused spring surveys were conducted, and several species were detected.

During the fall blooming period, the area from the western end of the Project to one mile east of Fort Cady Road within Segment 1 was very dry and generally had little suitable habitat for fall special-status plants. This area was spot checked in depressions, roadsides, and other areas that showed some annual growth, but was not completely surveyed due to the poor survey conditions and/or lack of suitable habitat. Beginning one mile east of Fort Cady Road, the entire Survey Area was surveyed. Conditions for detecting fall special-status plants were generally good in this area, but mostly within washes and depressions.

All of the Segment 2 Survey Area was surveyed during the fall blooming period, however, from M81-T3 to M131-T1, germination and growth of fall annuals was generally poor, and the probability for the detection of special-status fall annuals was low in this area. From Pisgah Substation to Tower M81-T3, and from

roughly M131-T1 to the end of the Project alignment in Nevada, germination and growth of fall annuals was generally good, and survey conditions and timing were also favorable.

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3 RESULTS

3.1 POTENTIAL TO OCCUR

A total of 51 special-status plant species were analyzed for their potential to occur within the Survey Area. Sixteen species were categorized as Occurs during the spring and fall plant surveys. Nine species were determined to be Likely to Occur within the Survey Area but were not observable during the field surveys due to unfavorable spring survey conditions. Nine species determined to be Unlikely to Occur could not be definitively ruled out due to the lack of spring surveys. Sixteen conspicuous perennial species and annual species confirmed to be detectable during the survey periods were considered Absent. One species was evaluated as Does Not Occur due to the lack of suitable habitat. Further details regarding the species evaluated and their potential to occur determination can be found in Appendix B: Special-status Plant Species Evaluation of Potential to Occur.

3.2 STATUS OF REFERENCE POPULATIONS

Conditions during the spring reference population checks were noted to be extremely poor, with no or very little germination of annuals observed across most of the Project alignment with the exception of higher elevation areas in the MNP. The Mojave monkeyflower, creamy blazing star, white-margined beardtongue, and small-flowered androstephium were not observed during spring reference population checks. Only the remains of creamy blazing star and white-margined beardtongue were observed, and germination of annuals was not observed at the populations of Mojave monkeyflower and small-flowered androstephium. Mojave menodora is a conspicuous perennial shrub and several plants were observed. Approximately 30 identifiable individuals of Cima milk-vetch were observed at the second, higher-elevation, spring reference population check.

The Survey Area was observed to have received 0.22 inches of precipitation within the weeks prior to the fall reference population checks (NOAA AgACIS 2021), and germination of fall annual and perennial plant species was relatively consistent throughout the Survey Area with the exception of M81-T3 to M131-T1, where germination and growth of fall annuals was generally poor. Six of the seven species targeted for reference checks were detected. Incidental detections of black grama and revolute spurge both in flower were located in the New York Mountains approximately eight miles north of the Survey Area. Abram's spurge was detected in flower and in fruit near Pisgah Substation. A previously documented population by Artemis Environmental (Artemis 2021) of Utah vine milkweed was observed to be in flower also near the Pisgah Substation. Two observations of warty caltrop in flower and fruit were observed approximately 2.25 miles north of the Survey Area and also along the Project access road. Also, along the Project access road, desert portulaca was detected in fruit. Parry's spurge was the only target species not detected after evaluating a previously documented population recorded in the CCH records (Calflora 2021).

3.3 Special-status Plants Occurring within the Survey Area

During the spring and fall 2021 special-status plant survey, a total of 245 plant species were observed. Sixteen special-status plant species were observed within the Survey Area, fourteen of which were observed alive (Table 3). The remains and/or dormant individuals were observed of two special-status plant species. The mapping results are provided in Appendix A, Figures, Figure 3: Special-status Plant Observations. Representative photographs are also provided in Appendix C.

Table 1. Special-status Plant Species Observed in the Survey Area

Scientific Name	Common Name	Approximate* Number of Individuals Observed Live		
		Species Points	Species Polygons	Total
<i>Astragalus bernardinus</i>	San Bernardino milk-vetch	3	--	3
<i>Castela emoryi</i>	crucifixion thorn	6	--	6
<i>Coryphantha vivipara</i> var. <i>rosea</i>	viviparous foxtail cactus	92	--	92
<i>Cymopterus multinervatus</i>	purple-nerve cymopterus	13	33	46
<i>Enneapogon desvauxii</i>	nine-awn pappusgrass	171	380	551
<i>Euphorbia abramsiana</i>	Abrams' spurge	219	5,248	5,467
<i>Euphorbia extipulata</i> var. <i>extipulata</i>	Clark Mountain spurge	--	30	30
<i>Euphorbia revoluta</i>	revolute spurge	--	10	10
<i>Funastrum utahense</i>	Utah vine milkweed	45	46	91
<i>Grusonia parishii</i>	matted cholla	51	7	58
<i>Kallstroemia parviflora</i>	warty caltrop	401	3,833	4,234
<i>Opuntia curvispina</i>	curved-spine beavertail	4	--	4
<i>Portulaca halimoides</i>	desert purslane	2,718	17,391	20,109
<i>Sphaeralcea rusbyi</i> var. <i>eremicola</i>	Rusby's desert-mallow	433	374	807
	Total	4,156	27,352	31,508

* These numbers are approximate, as the individual counts within polygons were estimated.

The following are brief descriptions of each special-status plant species observed within the Survey Area.

San Bernardino milk-vetch (*Astragalus bernardinus*)

Status: CRPR 1B.2; CA Endemic; BLM_S; USDA_S

Description: Perennial herb typically blooming April to June.

Distribution: San Bernardino and Riverside counties within the Transverse Ranges and Mojave Desert between 2,955 and 6,560 feet in elevation.

Habitat: Often carbonate or granitic soils in stony areas among desert shrubs, Joshua tree woodland, and pinyon and juniper woodland.

Observations within Survey Area: Three individuals of San Bernardino milk-vetch were observed in the eastern portion of the Survey Area in the MNP, within a mile southwest of Cima Road. This species was observed during the spring surveys.

Crucifixion thorn (*Castela emoryi*)

Status: CRPR 2B.2

Description: Perennial deciduous shrub typically blooming in June to July, sometimes early as April and late as October.

Distribution: Imperial, Riverside, and San Bernardino counties into Arizona and northwestern Mexico between 300 to 2,400 feet in elevation.

Habitat: Gravelly soils of playas, washes, slopes, and plains of Mojavean and Sonoran desert scrub.

Observations within Survey Area: Six individuals of crucifixion thorn were observed in the southwestern portion of the Survey Area approximately 8.5 miles northeast of Interstate 40. This species was observed during the spring surveys.

Viviparous foxtail cactus (*Coryphantha vivipara* var. *rosea*)

Status: CRPR 2B.2

Description: Perennial stem typically blooming May to June.

Distribution: San Bernardino into northwestern Arizona and southern Nevada in the Mojave Desert between 4100 and 8860 feet in elevation.

Habitat: Limestone slopes and hills in Mojavean desert scrub and pinyon and juniper woodland.

Observations within Survey Area: A total of 92 individuals of viviparous foxtail cactus were estimated in the central portion of the MNP in the eastern portion of the Survey Area, between three miles east of Morning Star Mine Road and nine miles west of Cima Road. This species was observed during the spring and fall surveys.

Purple-nerve cymopterus (*Cymopterus multinervatus*)

Status: CRPR 2B.2

Description: Perennial herb typically blooming in March to April.

Distribution: Inyo, Riverside, and San Bernardino counties into Arizona, Nevada, Utah, New Mexico, Texas, and Baja California between 2,590 to 5,905 feet in elevation.

Habitat: Sandy or gravelly soils and rocky slopes in Mojavean desert scrub, and pinyon and juniper woodland.

Observations within Survey Area: A total of 46 individuals of purple-nerve cymopterus were estimated within the MNP in the eastern portion of the Survey Area, between three miles southeast of Kelbaker Road and northeast to Cima Road. This species was observed during the spring surveys.

Nine-awn pappusgrass (*Enneapogon desvauxii*)

Status: CRPR 2B.2

Description: Perennial herb typically blooming in August to September.

Distribution: San Bernadino County into Arizona, Nevada, Colorado, Utah, New Mexico, Texas, Oklahoma, Maryland, and Hawaii between 4185—5990 feet in elevation.

Habitat: Carbonate, calcareous, rocky substrates, on slopes and in crevices in desert and pinyon and juniper woodland.

Observations within Survey Area: A total of 551 individuals of nine-awn pappusgrass were estimated in the northeastern portion of the Survey Area, between 3.25 miles northeast of Nipton Moore Road northwest to U.S. Highway 164. This species was observed during the fall surveys.

Harwood's eriastrum (*Eriastrum harwoodii*)

Status: CRPR 1B.2; CA Endemic; BLM S

Description: Annual herb typically blooming in March to June.

Distribution: Imperial, Riverside, San Bernardino, and San Diego counties, in the Mojave Desert, and Transverse and Peninsular Ranges between 410 to 3,000 feet in elevation.

Habitat: Desert dunes and sand dunes in creosote-bush scrub.

Observations within Survey Area: The remains of Harwood's eriastrum were observed in the far western portion of the MNP within the Survey Area. No live individuals were documented.

Abrams' spurge (*Euphorbia abramsiana*)

Status: CRPR 2B.2

Description: Annual herb typically blooming in September to November, sometimes early as August.

Distribution: San Diego, Imperial, Riverside, and San Bernardino counties, into Arizona and Mexico below 4,300 feet in elevation.

Habitat: Sandy flats and cracked soils in depressions in Mojavean and Sonoran desert scrub.

Observations within Survey Area: A total of 5,467 individuals of Abrams' spurge were estimated in the southwestern portion of the Survey Area, within a mile east of Center Road for up to 3 miles, south of U.S. Route 66 and Interstate 40. This species was observed during the fall surveys.

Clark Mountain spurge (*Euphorbia exstipulata* var. *exstipulata*)

Status: CRPR 2B.1

Description: Annual herb typically blooming in September, sometimes as late as October.

Distribution: Clark Mountain in San Bernardino County, in the Mojave Desert, into Arizona, New Mexico, Utah, Texas, Oklahoma, and Wyoming between 4,200 to 6,560 feet in elevation.

Habitat: Rocky slopes and substrates in Mojavean desert scrub.

Observations within Survey Area: A total of 30 individuals of Clark Mountain spurge were estimated in the northeastern portion of the Survey Area, immediately south of U.S. Highway 164. This species was observed during the fall surveys.

Revolute spurge (*Euphorbia revoluta*)

Status: CRPR 4.3; County List D

Description: Annual herb typically blooming in August to September.

Distribution: San Diego, Riverside, and San Bernardino counties into the Rocky Mountains and Mexico between 3,500 to 10,170 feet in elevation.

Habitat: Rocky slopes in creosote bush scrub and Mojavean desert scrub.

Observations within Survey Area: A total of 10 individuals of revolute spurge were estimated in the northeastern portion of the Survey Area, north of U.S. Highway 164. This species was observed during the fall surveys.

Utah vine milkweed (*Funastrum utahense*)

Status: CRPR 4.2; County List D

Description: Perennial, viny herb typically blooming in April to June, sometimes early as March and late as October.

Distribution: Eastern San Diego, western Imperial, western Riverside, and San Bernardino counties into Utah and Arizona between 330 to 4,700 feet in elevation.

Habitat: Sandy or gravelly soils in open areas of Mojavean and Sonoran desert scrub, usually climbing and growing through other shrubs.

Observations within Survey Area: A total of 91 individuals of Utah vine milkweed were estimated in the northeastern portion of the MNP and Survey Area, between 1.25 miles northwest of Tenmile Tank and west of Nipton Moore Road. This species was observed during the spring and fall surveys.

Matted cholla (*Grusonia parishii*)

Status: CRPR 2B.2

Description: Perennial stem typically blooming in May to June, sometimes as late as July.

Distribution: Riverside and San Bernardino counties in the Transverse Ranges and Mojave Desert, into Arizona, Nevada, and Texas between 985 to 5,000 feet in elevation.

Habitat: Sandy, rocky substrates and gravelly flats in creosote-bush and bur-sage scrub, Joshua tree woodland, and Mojavean and Sonoran desert scrub.

Observations within Survey Area: A total of 58 individuals of matted cholla were estimated in the eastern portion of the MNP and northeastern portion of the Survey Area, between 6 miles southwest of Cima Road and west of Nipton Moore Road. This species was observed during the spring and fall surveys.

Warty caltrop (*Kallstroemia parviflora*)

Status: CRPR 4.2

Description: Annual herb typically blooming in August to November.

Distribution: San Diego, Imperial, Riverside, and San Bernardino counties in the Transverse and Peninsular Ranges and Mojave Desert, into Arizona, Colorado, Nevada, Utah, New Mexico, Texas, District of Columbia, Illinois, Kansas, Louisiana, Maryland, Mississippi, Missouri, Oklahoma, Pennsylvania and Sonora, Mexico between 2,805 to 5,595 feet in elevation.

Habitat: Sandy roadsides, slopes, and sometimes disturbed areas, in Mojavean desert scrub, Joshua tree woodland, and pinyon and juniper woodland.

Observations within Survey Area: A total of 4,234 individuals of warty caltrop were estimated in the northeastern portion of the MNP and Survey Area, between 11 miles southwest of Nipton Moore Road to north of U.S. Highway 164. This species was observed during the fall surveys.

Curved-spine beavertail (*Opuntia curvispina*)

Status: CRPR 2B.2

Description: Perennial stem typically blooming from April to June.

Distribution: San Bernardino County in the Mojave Desert, into Arizona and Nevada between 3,280 to 4,595 feet in elevation.

Habitat: Mojavean desert scrub, chaparral, grassland, and Joshua tree and pinyon and juniper woodland.

Observations within Survey Area: Four individuals of curved-spine beavertail were observed within the eastern portion of the MNP and in the northeastern portion of the Survey Area, around 1.75 miles northeast of Morning Star Mine Road and just south of U.S. Highway 164. This species was observed during the fall surveys.

White-margined beardtongue (*Penstemon albomarginatus*)

Status: CRPR 1B.1; BLM S

Description: Perennial herb typically blooming in March to May, sometimes as late as June.

Distribution: San Bernardino County in the Mojave Desert and into Arizona and Nevada between 2,100 to 3,495 feet in elevation.

Habitat: Sandy, stabilized soils in desert dunes and Mojavean desert scrub.

Observations within Survey Area: The remains and/or dormant individuals of white-margined beardtongue were observed in the western portion of the Survey Area. No live individuals were documented.

Desert portulaca (*Portulaca halimoides*)

Status: CRPR 4.2

Description: Annual herb typically blooming in September.

Distribution: Eastern San Bernardino County and Riverside County, into Colorado, Oklahoma, Texas, and Mexico between 3,280 to 3,940 feet in elevation.

Habitat: Sandy soils in flats and washes in Joshua tree woodland.

Observations within Survey Area: A total of 20,109 individuals of desert purslane were estimated in the eastern portion of the MNP and northeastern portion of the Survey Area, between 5 miles southwest of Cima Road and northeast of Nipton Moore Road about 1.5 miles. This species was observed during the fall surveys.

Rusby's desert-mallow (*Sphaeralcea rusbyi* var. *eremicola*)

Status: CRPR 1B.2; CA Endemic; BLM_S

Description: Perennial herb typically blooming from March to June.

Distribution: Inyo, San Bernardino, and Riverside counties in Death Valley National Park, MNP, and Joshua Tree National Park between 3,200 to 5,395 feet in elevation.

Habitat: Joshua tree woodland and Mojavean desert scrub.

Observations within Survey Area: A total of 807 individuals of Rusby's desert-mallow were estimated in the central portion of the MNP in the eastern portion of the Survey Area, between 1.25 miles southwest of Kelbaker Road to about 1.5 miles northeast of Morning Star Mine Road. This species was observed during the spring and fall surveys.

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4 REFERENCES

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Appendix A

Figures

DRAFT

- Figure 1 Project Overview
- Figure 2 Project Vicinity
- Figure 3 Special-status Plant Observations



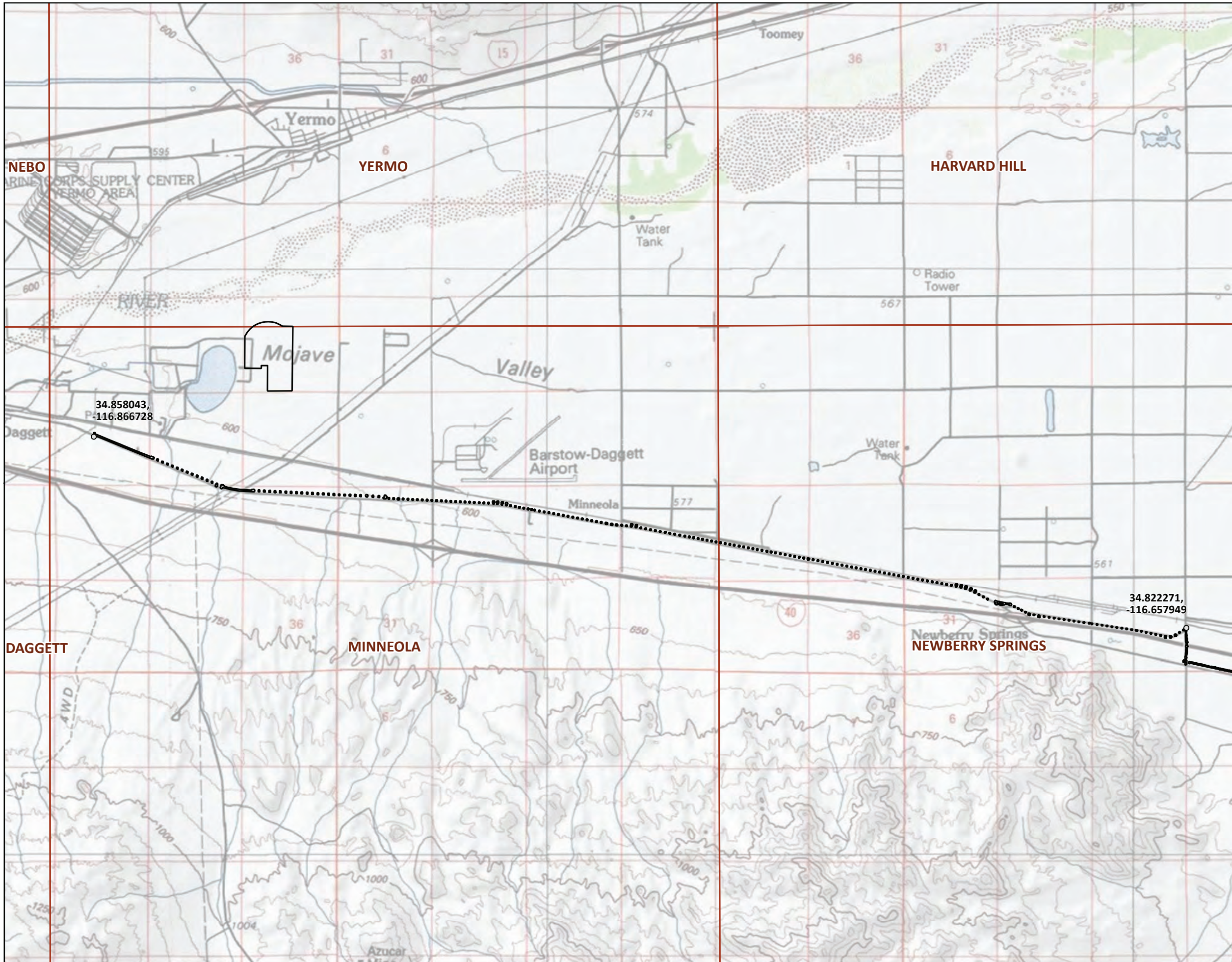
○ Survey Area

Figure 1

Project Overview

LUGO-VICTORVILLE 500-KV TRANSMISSION LINE
 REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT







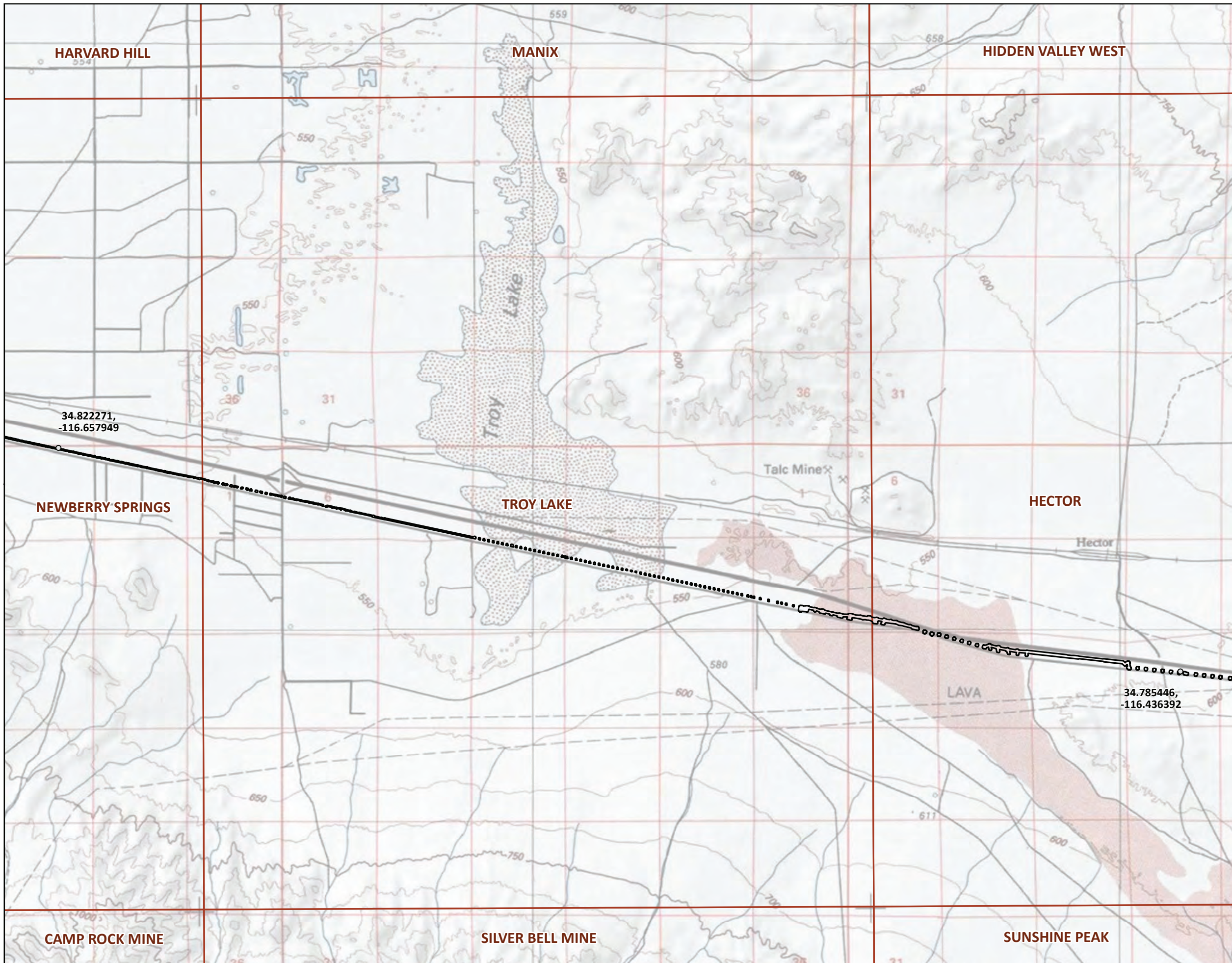
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 1 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







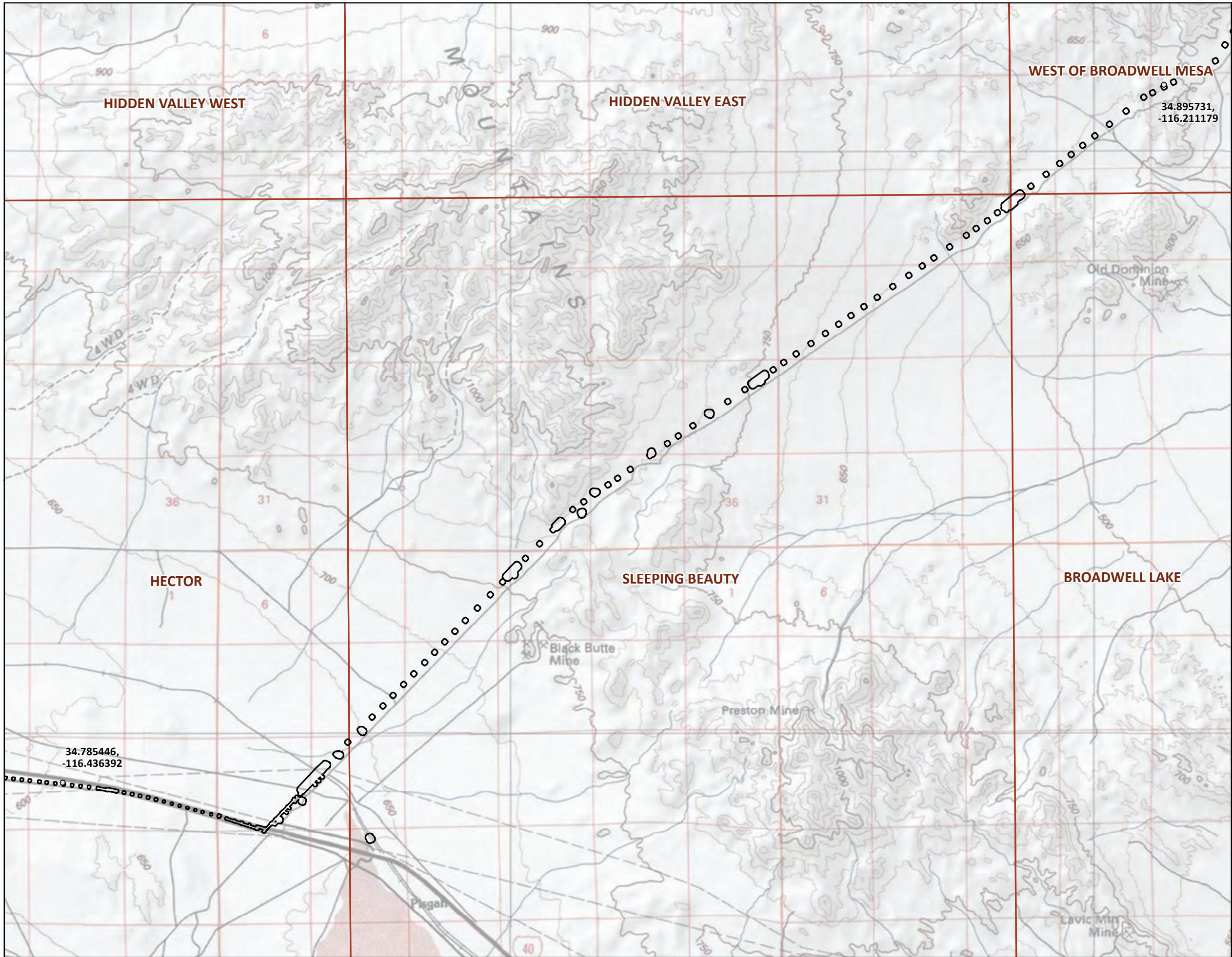
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 2 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 3 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







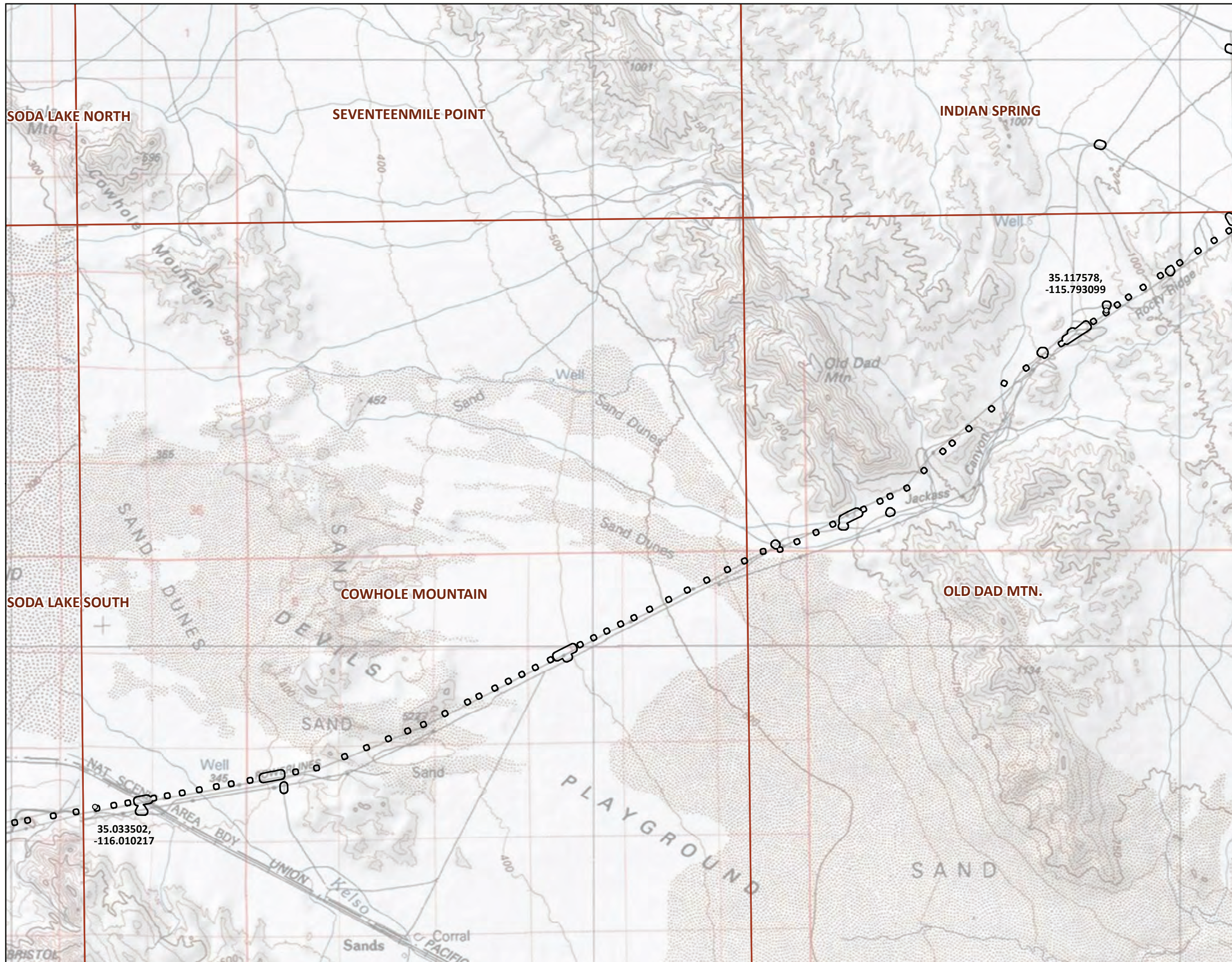
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 4 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







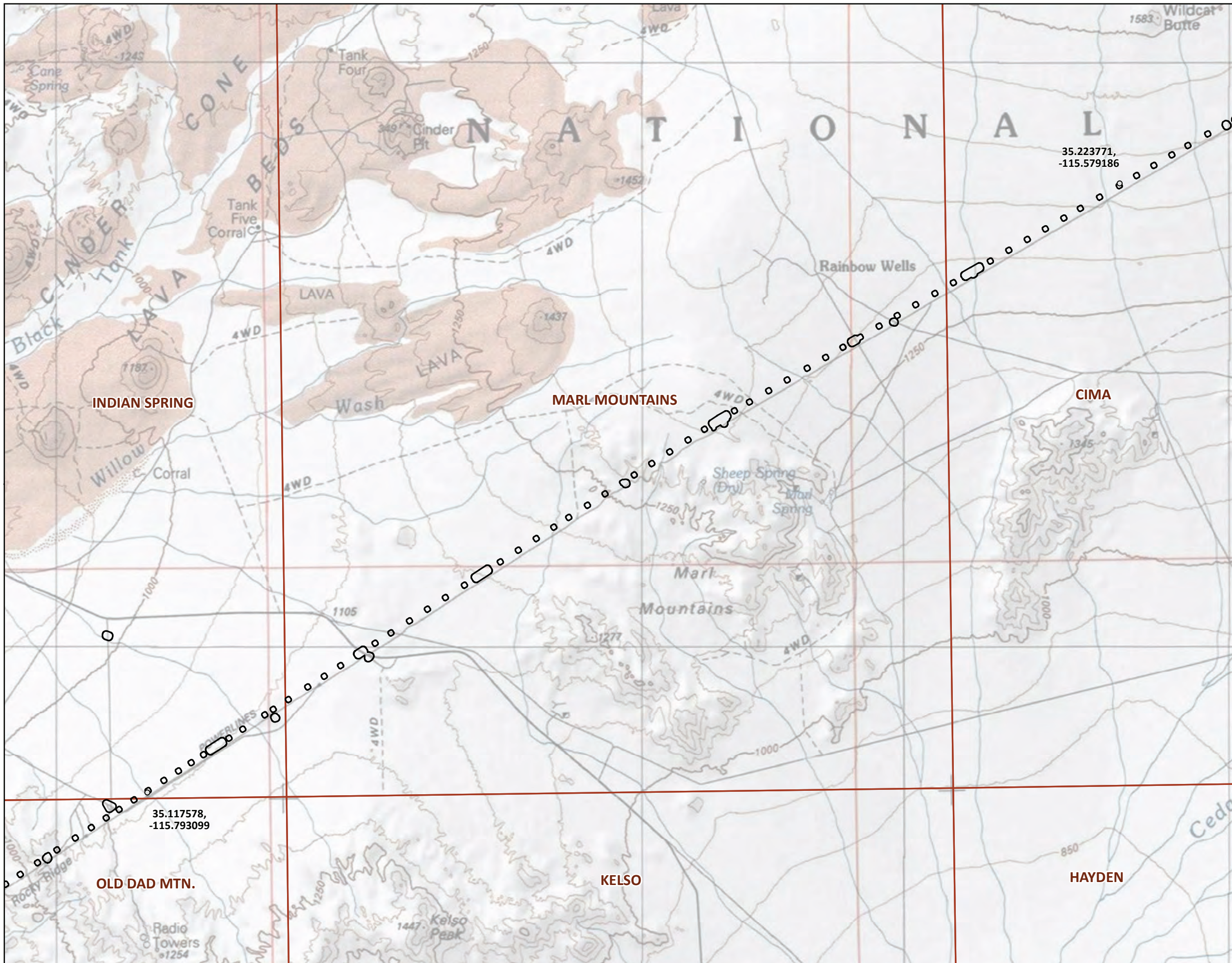
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 5 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







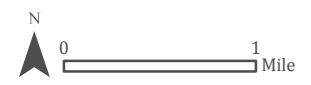
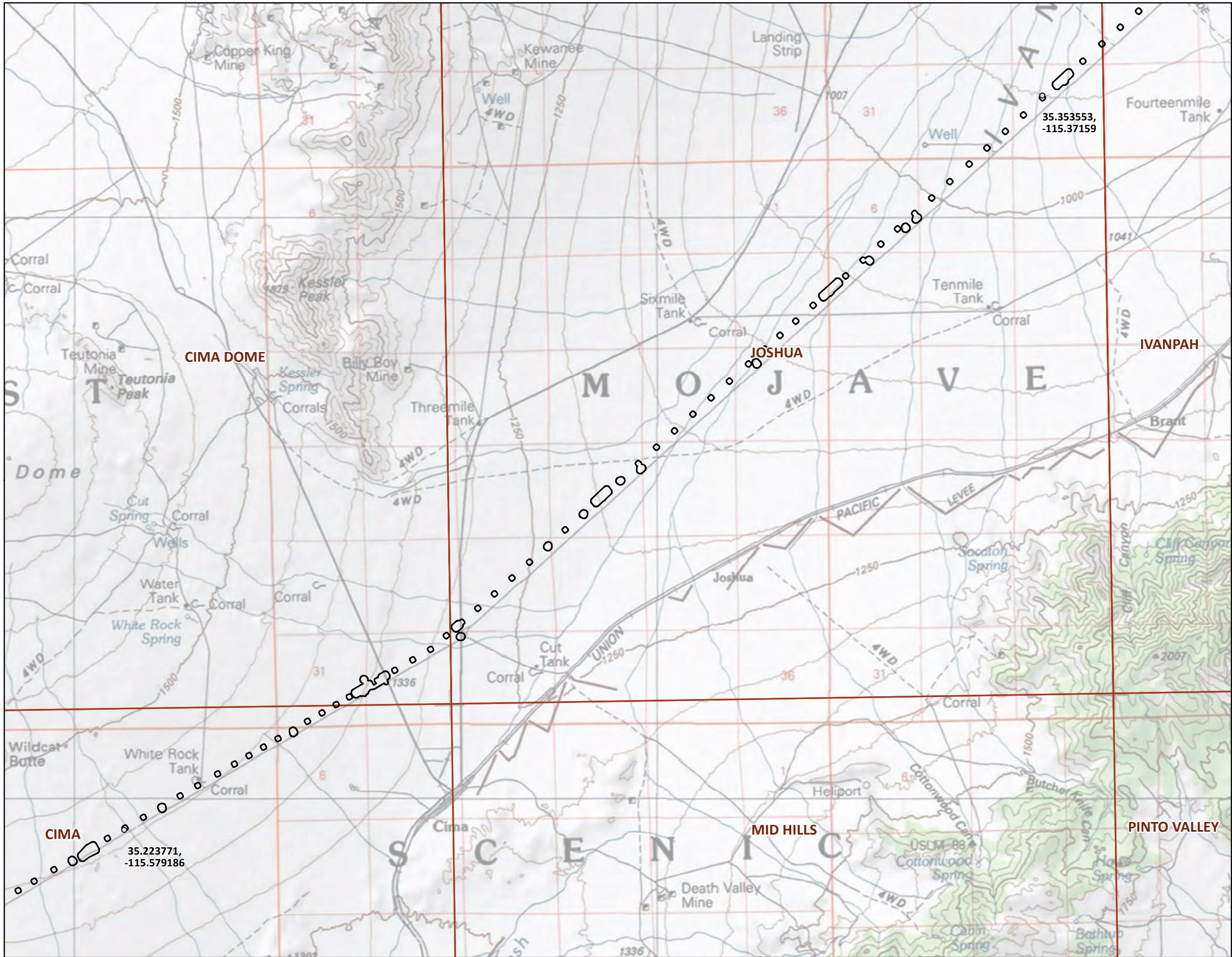
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 6 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







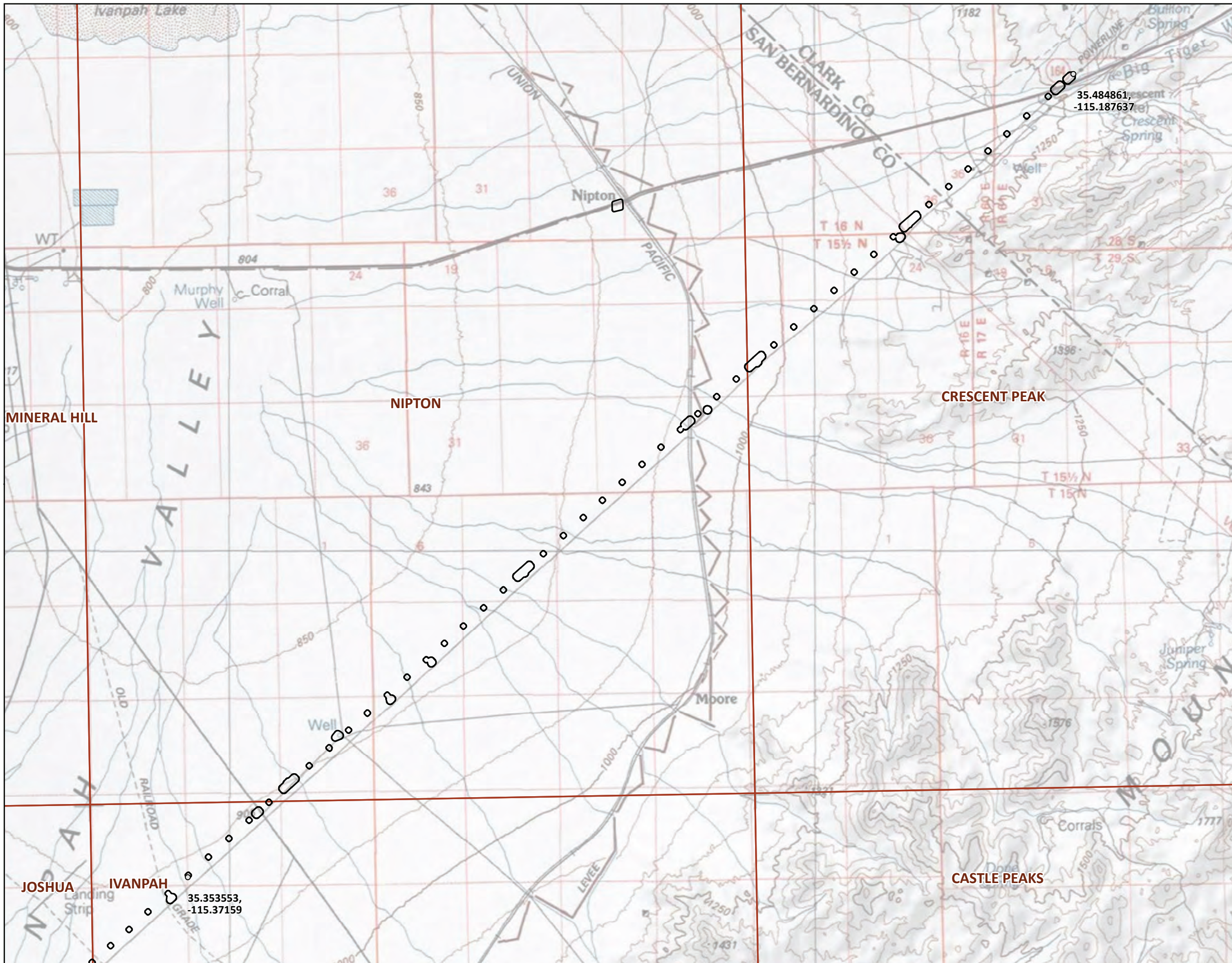
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 7 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
TRANSMISSION LINE REMEDIAL
ACTION SCHEME PROJECT
2021 SPECIAL-STATUS PLANT
SURVEY REPORT







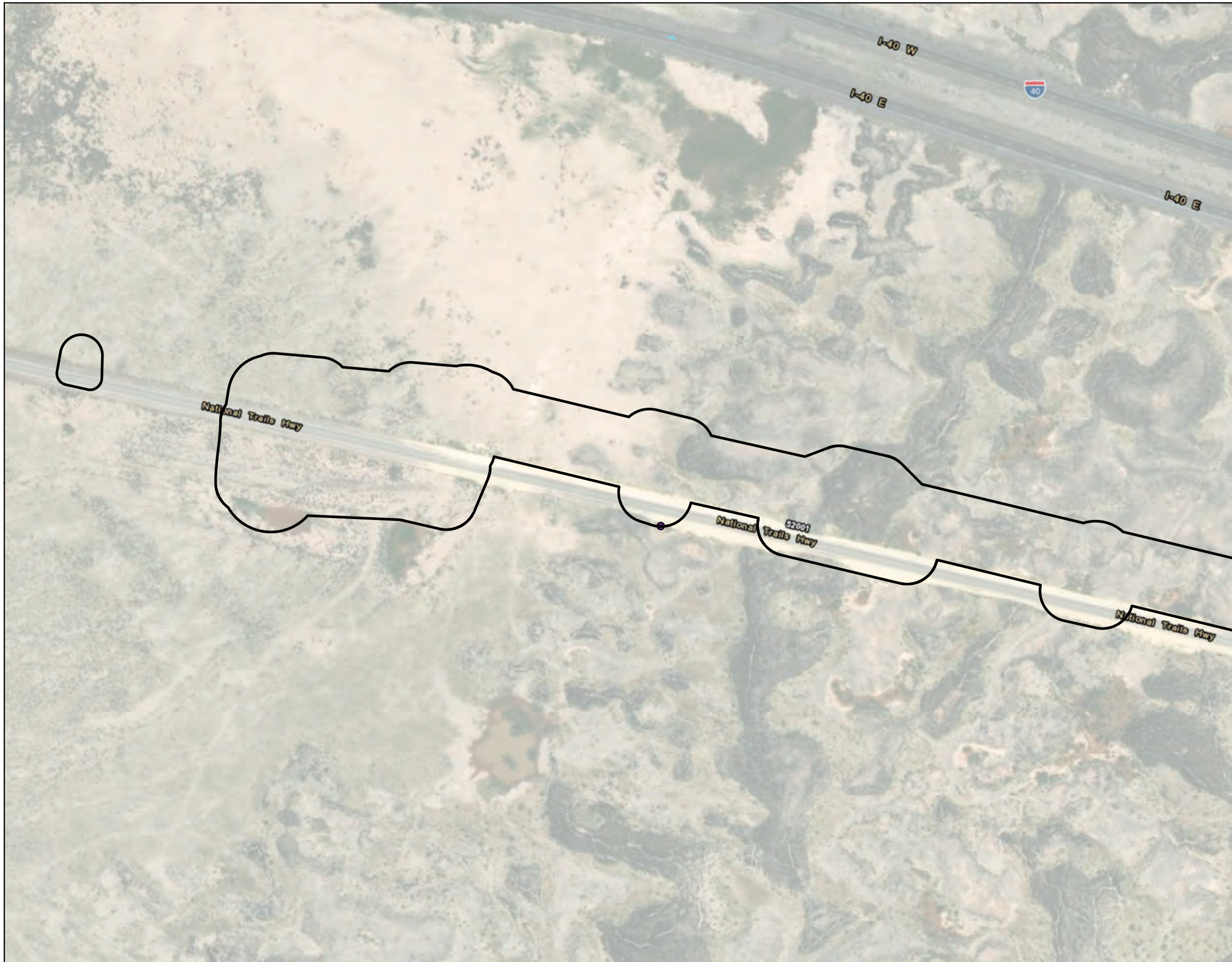
-  USGS 7.5' Quadrangles
-  Survey Area



Figure 2, Page 8 of 8
Project Vicinity

LUGO-VICTORVILLE 500-KV
 TRANSMISSION LINE REMEDIAL
 ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT
 SURVEY REPORT







-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Abrams' spurge



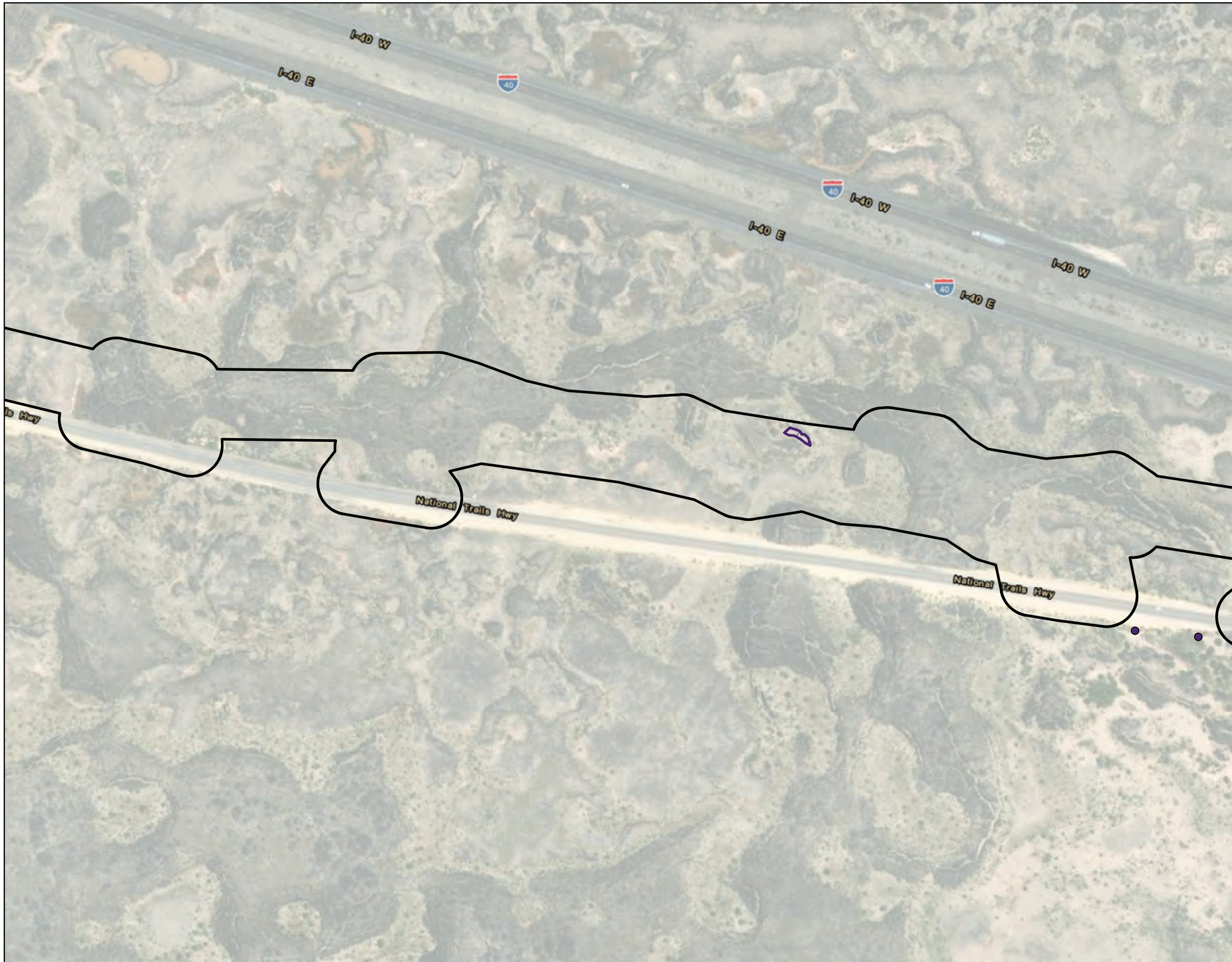
Figure 3, Page 1 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet





-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Abrams' spurge
- California Rare Plant Rank 2B
-  Abrams' spurge



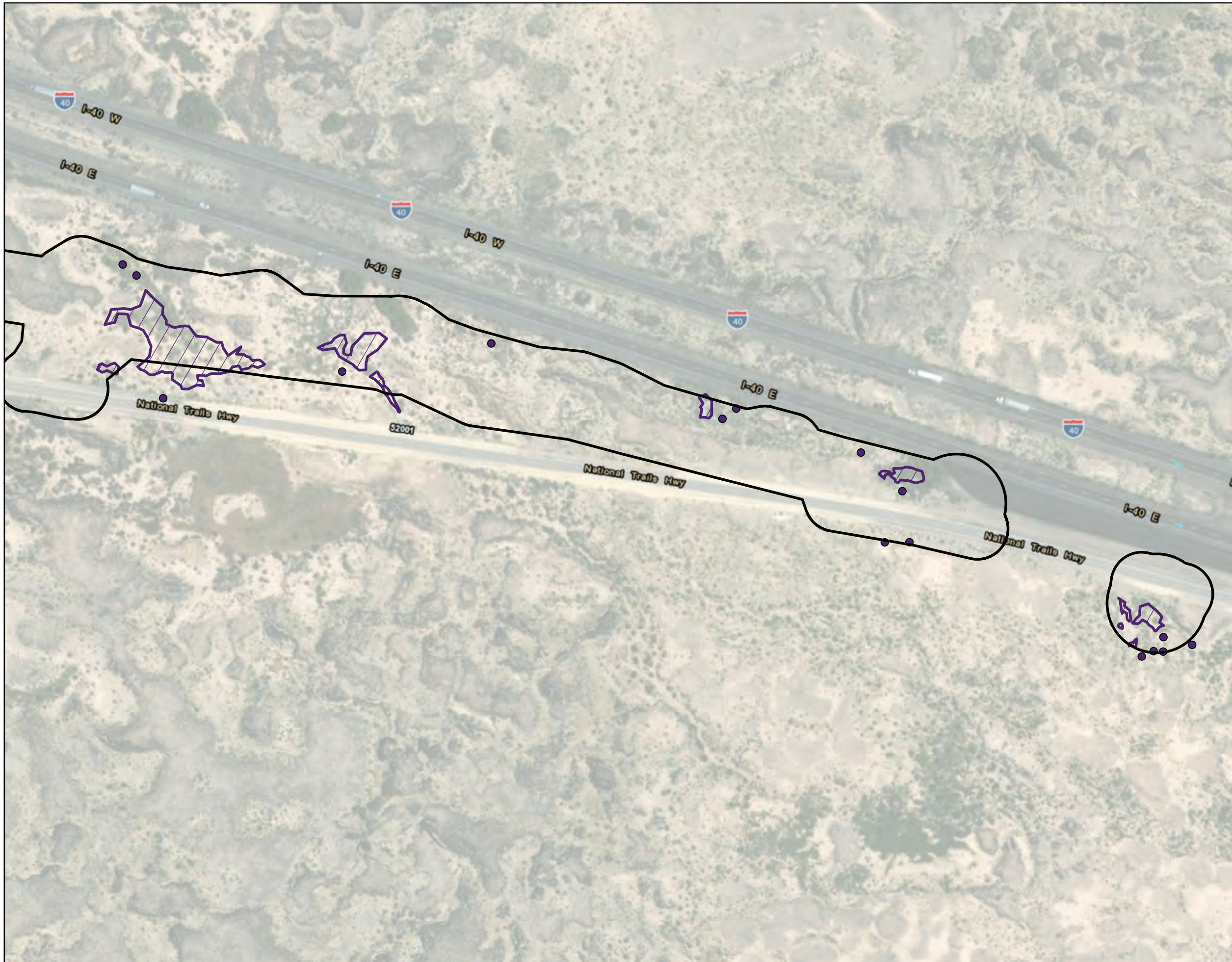
Figure 3, Page 2 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet





-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
 -  Abrams' spurge
 -  California Rare Plant Rank 2B



Figure 3, Page 3 of 83
 Special-status Plant
 Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
- Abrams' spurge
- California Rare Plant Rank 2B
- ◌ Abrams' spurge

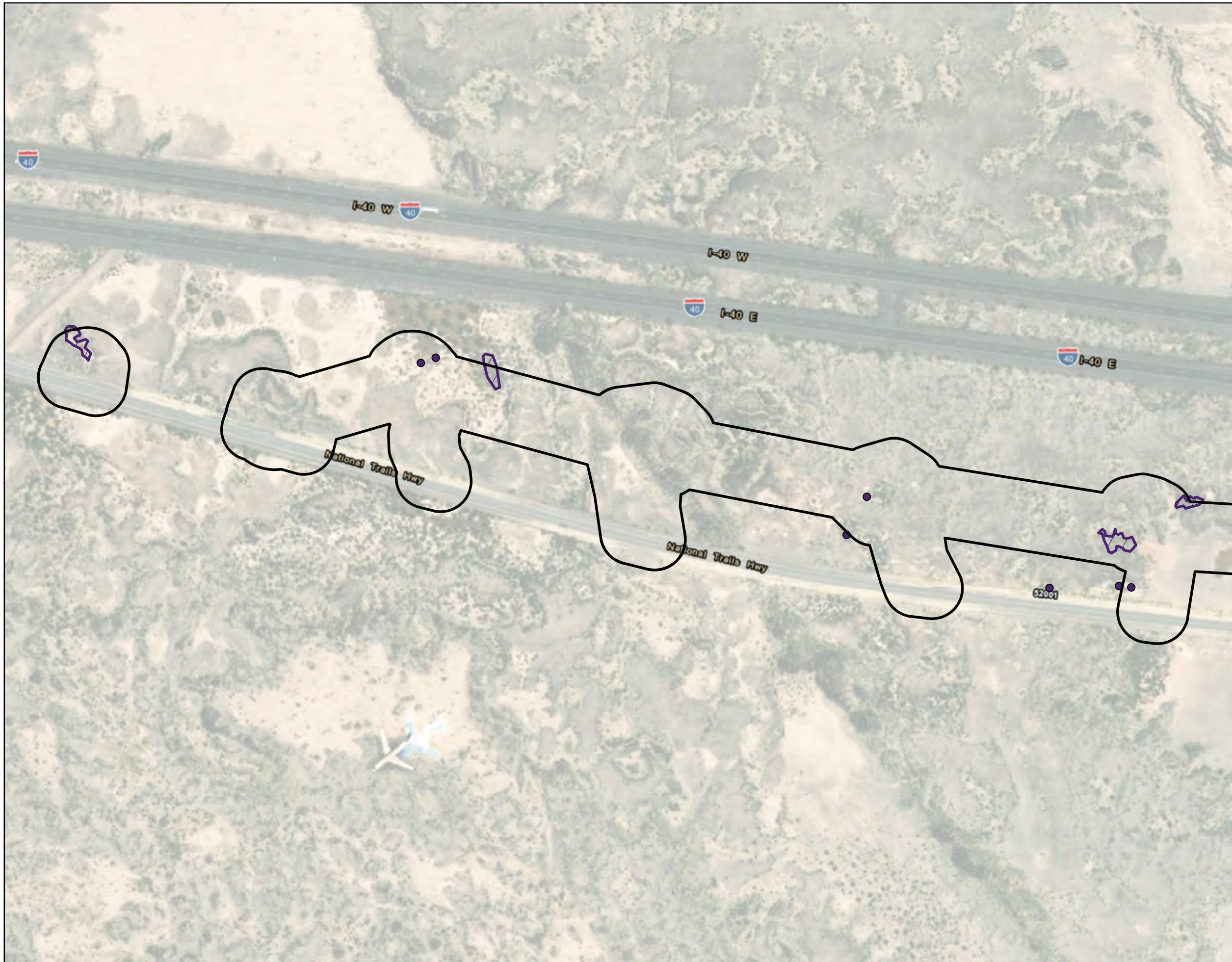


Figure 3, Page 4 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet



-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Abrams' spurge
- California Rare Plant Rank 2B
-  Abrams' spurge



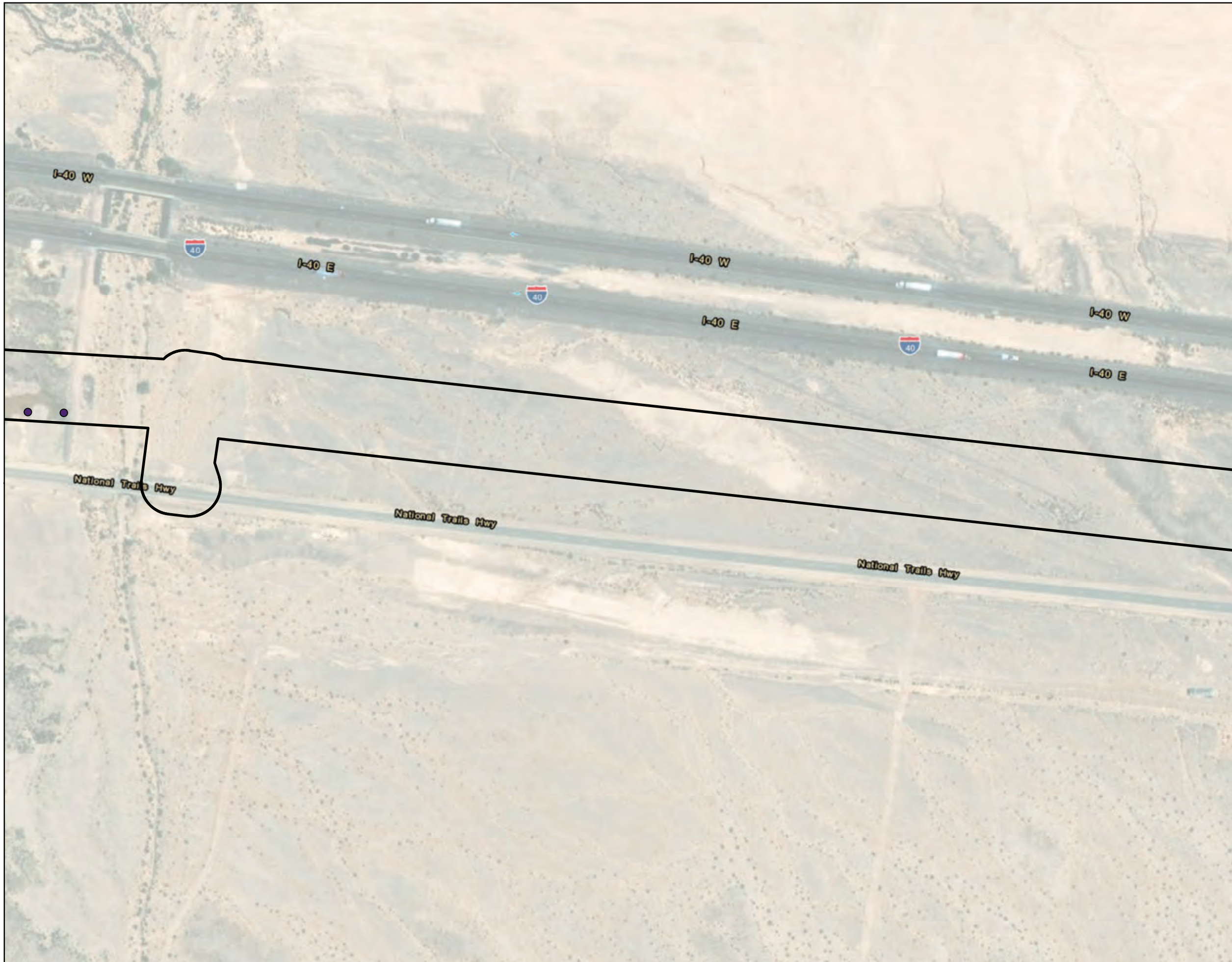
Figure 3, Page 5 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet





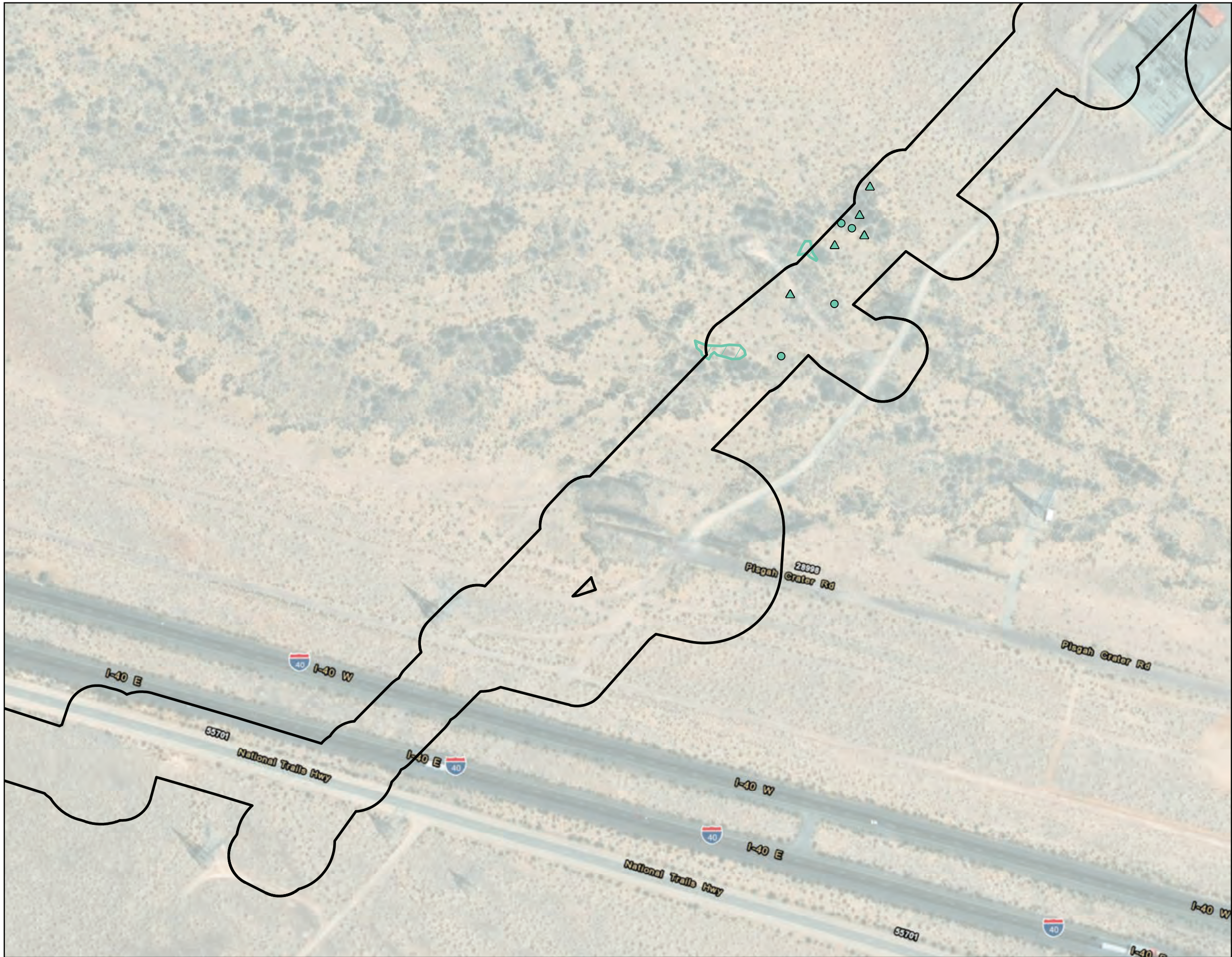
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
- Abrams' spurge



Figure 3, Page 6 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 4
- ▲ Utah vine milkweed
- Fall 2021 Survey Results
- California Rare Pant Rank 4
- Revolute spurge
- California Rare Pant Rank 4
- Utah vine milkweed



Figure 3, Page 7 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

Artemis Environmental Services, Inc.



- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Revolute spurge



Figure 3, Page 8 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Revolute spurge
- California Rare Plant Rank 1B
- ◆ *Penstemon albomarginatus* (remains)



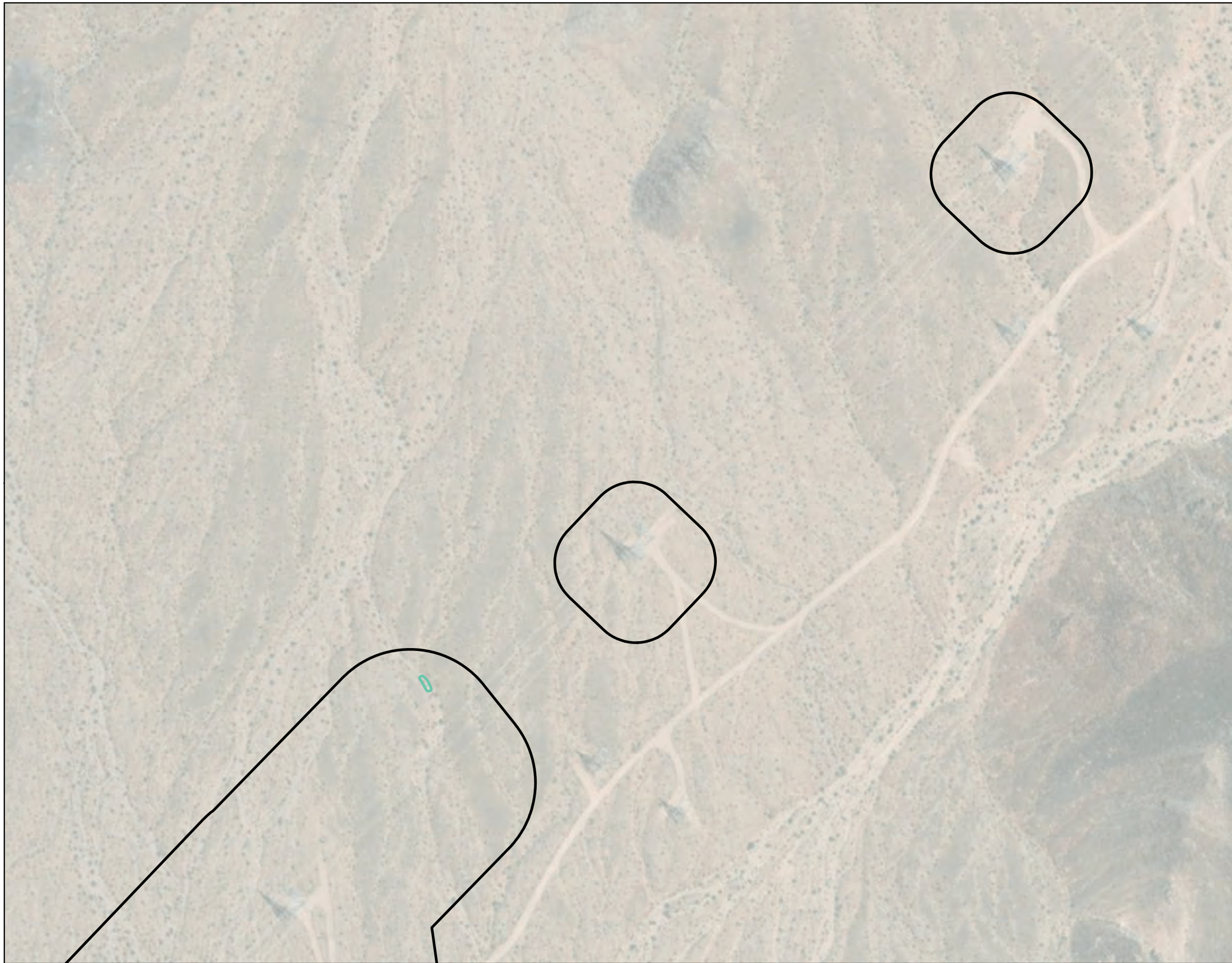
Figure 3, Page 9 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

Artemis Environmental Services, Inc.





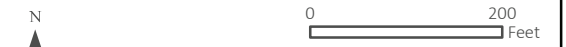
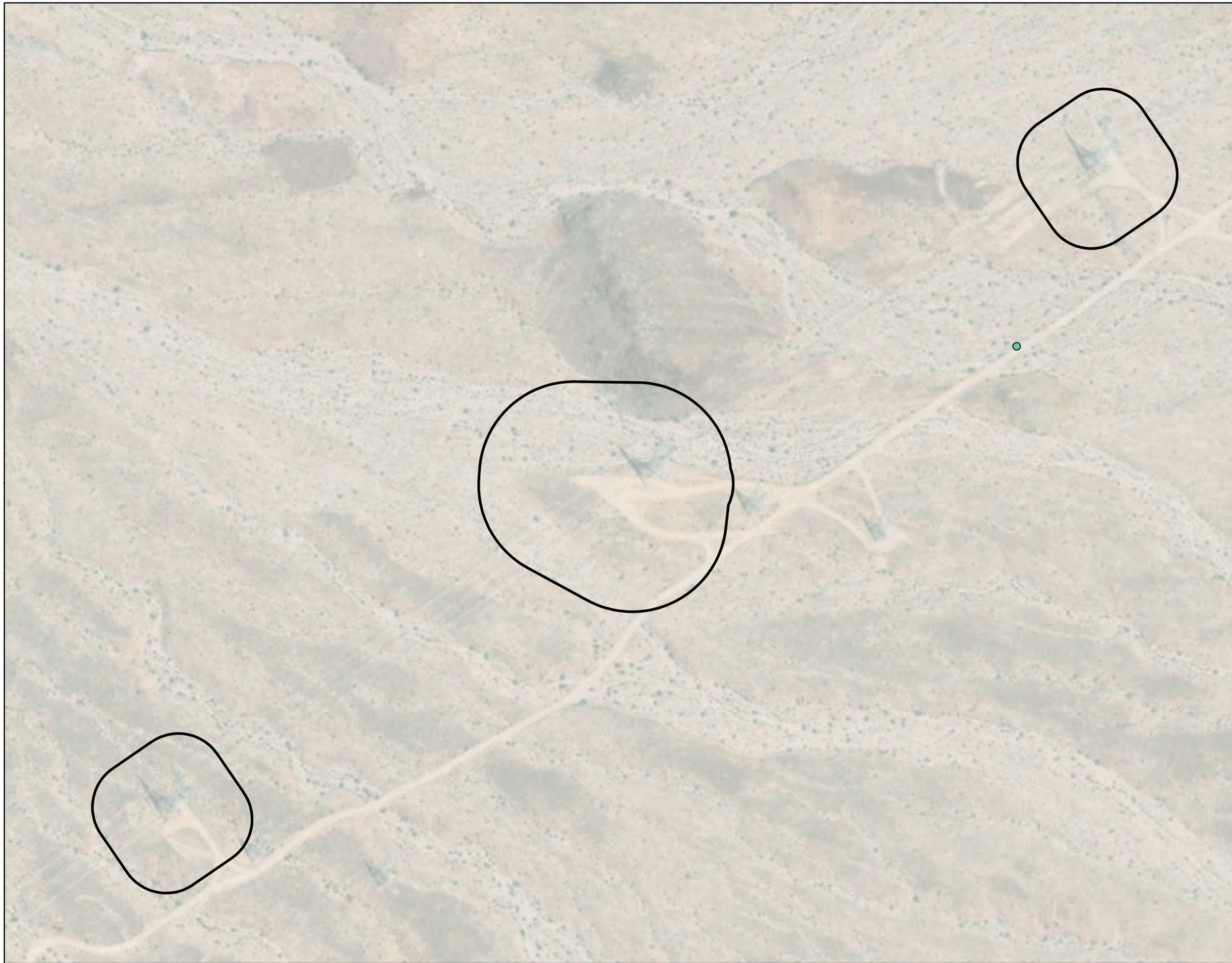
-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Utah vine milkweed



Figure 3, Page 10 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Revolute spurge



Figure 3, Page 11 of 83
Special-status Plant
Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
LINE REMEDIAL ACTION SCHEME PROJECT
2021 SPECIAL-STATUS PLANT SURVEY REPORT



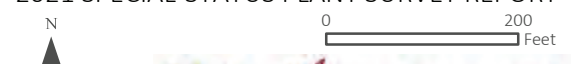


- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
- Emory's crucifixion-thorn



Figure 3, Page 12 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT










-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
-  *Eriastrum harwoodii* (remains)
- Fall 2021 Survey Results
- California Rare Pant Rank 1B
-  *Eriastrum harwoodii* (remains)
- California Rare Pant Rank 1B
-  *Eriastrum harwoodii* (remains)



Figure 3, Page 13 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



 Spring 2021 Survey Area

 Fall 2021 Survey Area

Spring 2021 Survey Results

California Rare Plant Rank 1B


 *Eriastrum harwoodii* (remains)



Figure 3, Page 14 of 83
Special-status Plant
Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
LINE REMEDIAL ACTION SCHEME PROJECT
2021 SPECIAL-STATUS PLANT SURVEY REPORT








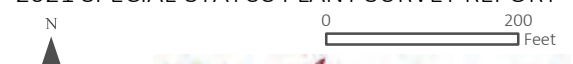
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Purple-nerve cymopterus



Figure 3, Page 15 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 16 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



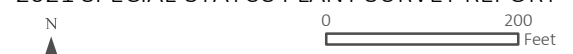


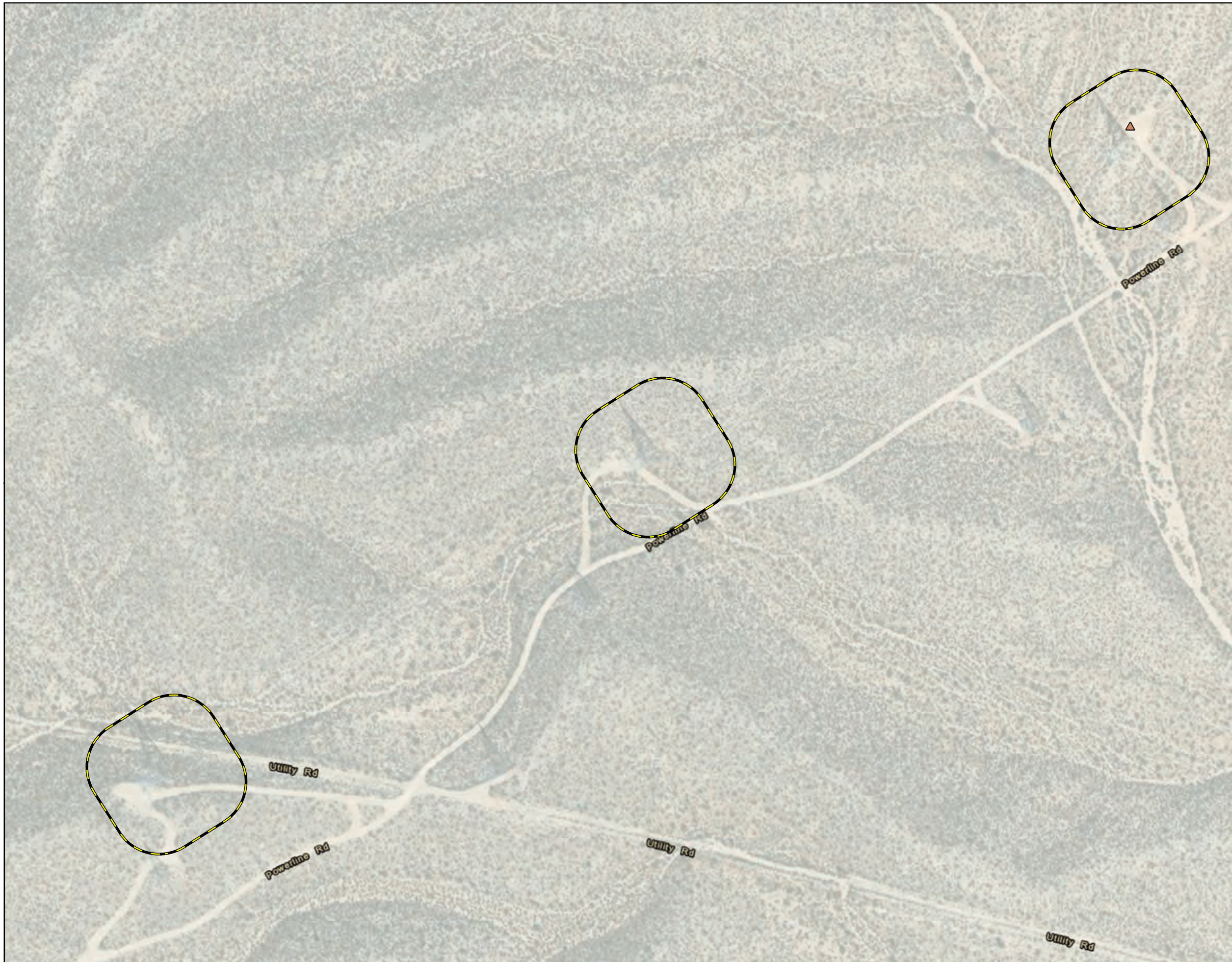
- Spring 2021 Survey Area
- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
- Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Pant Rank 1B
- Rusby's desert-mallow



Figure 3, Page 17 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 18 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT







-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 19 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








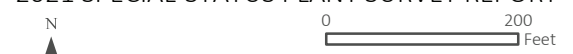
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 20 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Spring 2021 Survey Area
- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
- Rusby's desert-mallow
- California Rare Plant Rank 1B
- Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Plant Rank 1B
- Rusby's desert-mallow



Figure 3, Page 21 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

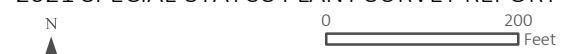


-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 22 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 23 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Purple-nerve cymopterus



Figure 3, Page 24 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet








-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow



Figure 3, Page 25 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








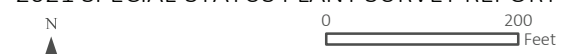
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- California Rare Pant Rank 2B
-  Purple-nerve cymopterus
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus



Figure 3, Page 26 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Viviparous foxtail cactus



Figure 3, Page 27 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



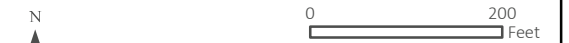


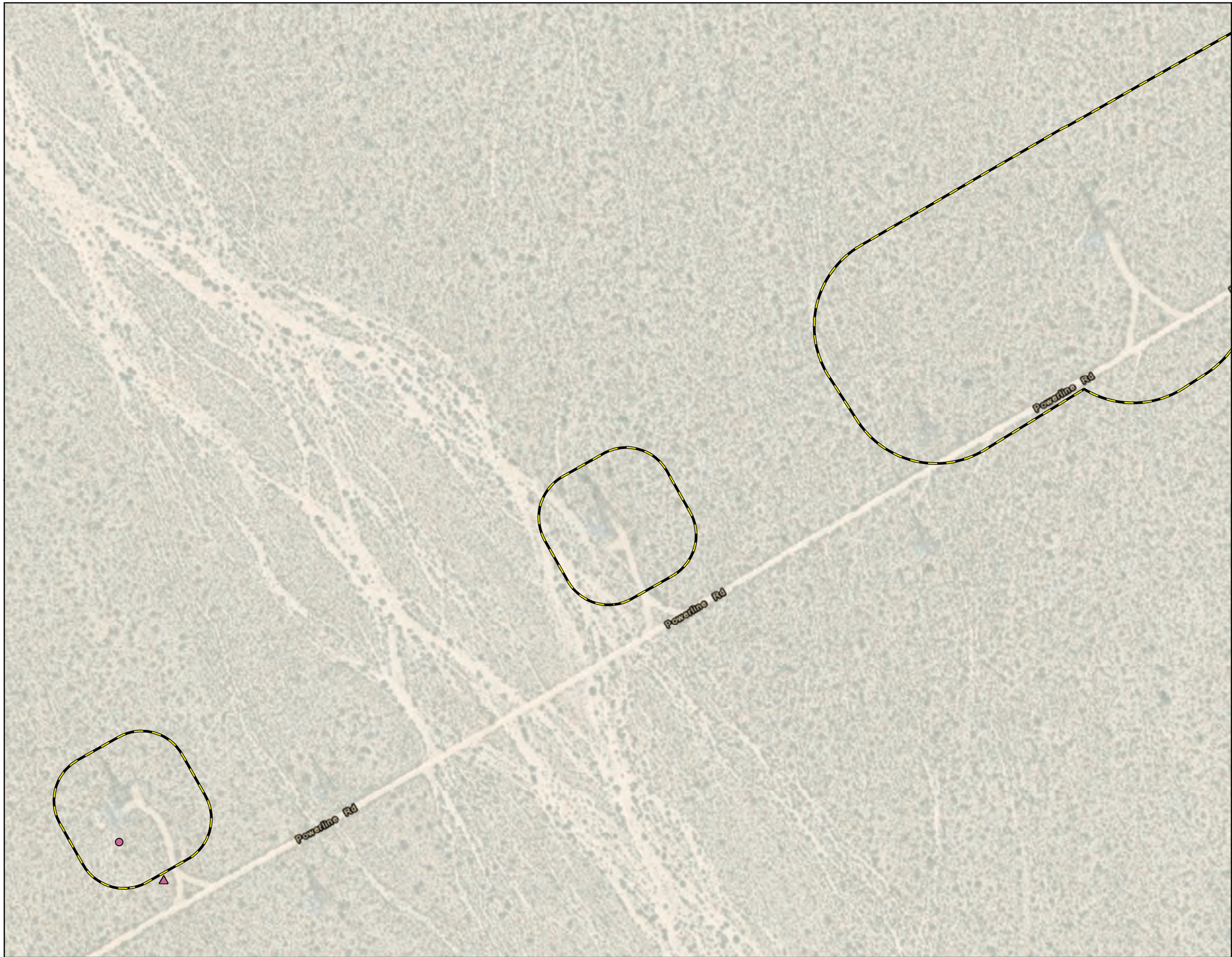
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus



Figure 3, Page 28 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT









-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Viviparous foxtail cactus



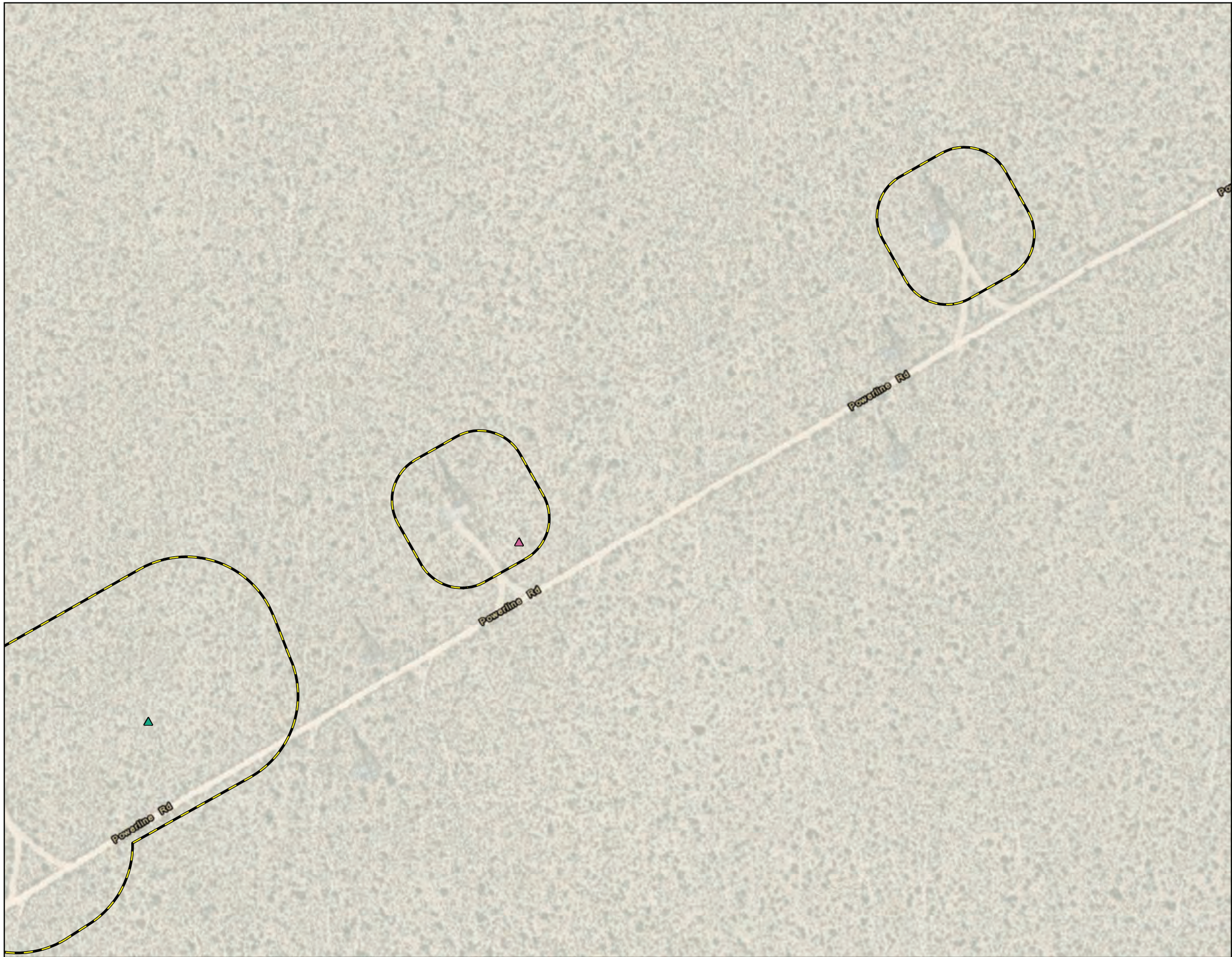
Figure 3, Page 29 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet









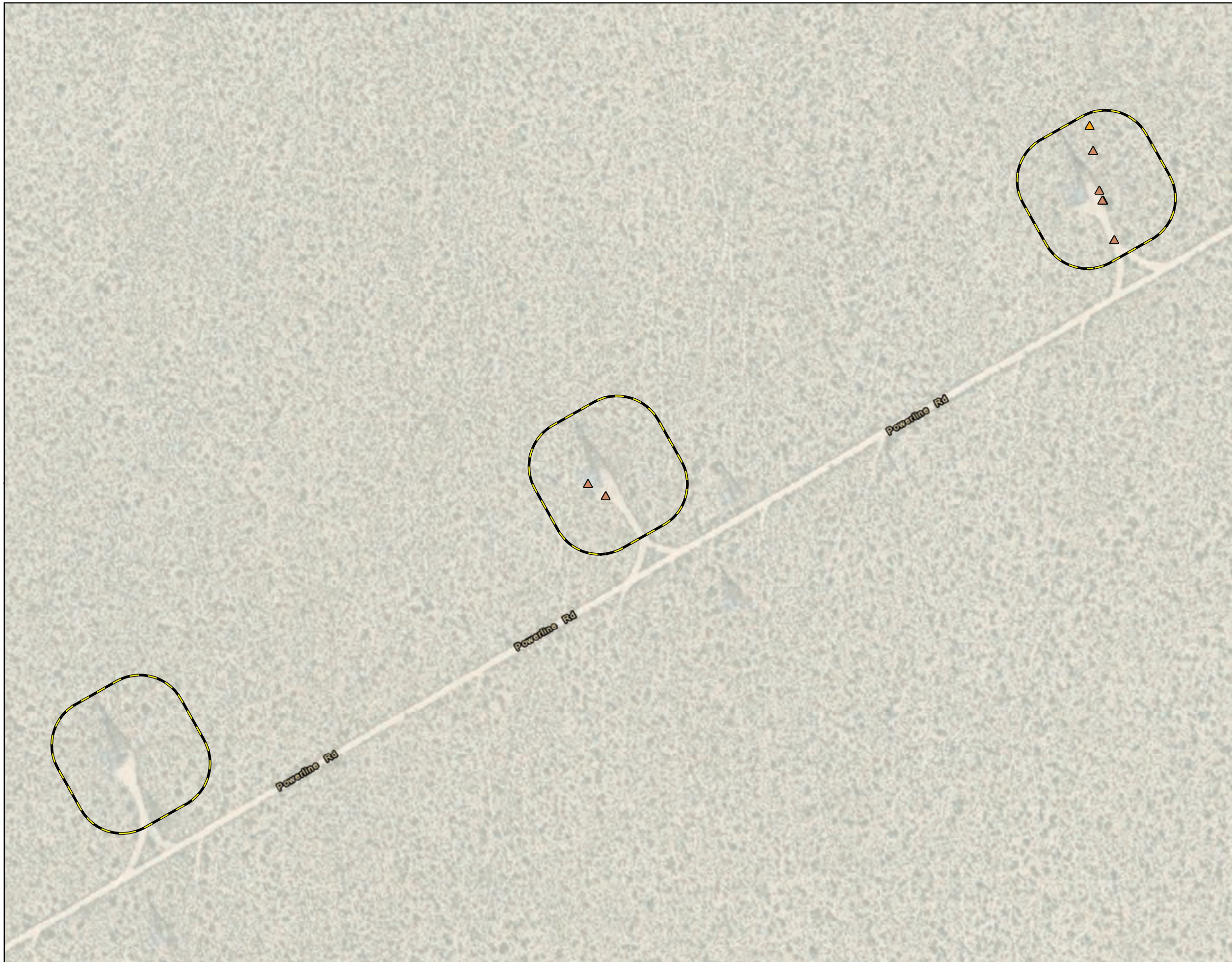
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Purple-nerve cymopterus
-  Viviparous foxtail cactus



Figure 3, Page 30 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



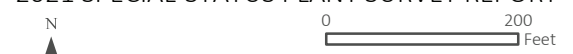


-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 2B
-  Parish's club-cholla



Figure 3, Page 31 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Spring 2021 Survey Area
- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
- Rusby's desert-mallow
- California Rare Pant Rank 2B
- Viviparous foxtail cactus
- California Rare Pant Rank 1B
- Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
- Parish's club-cholla

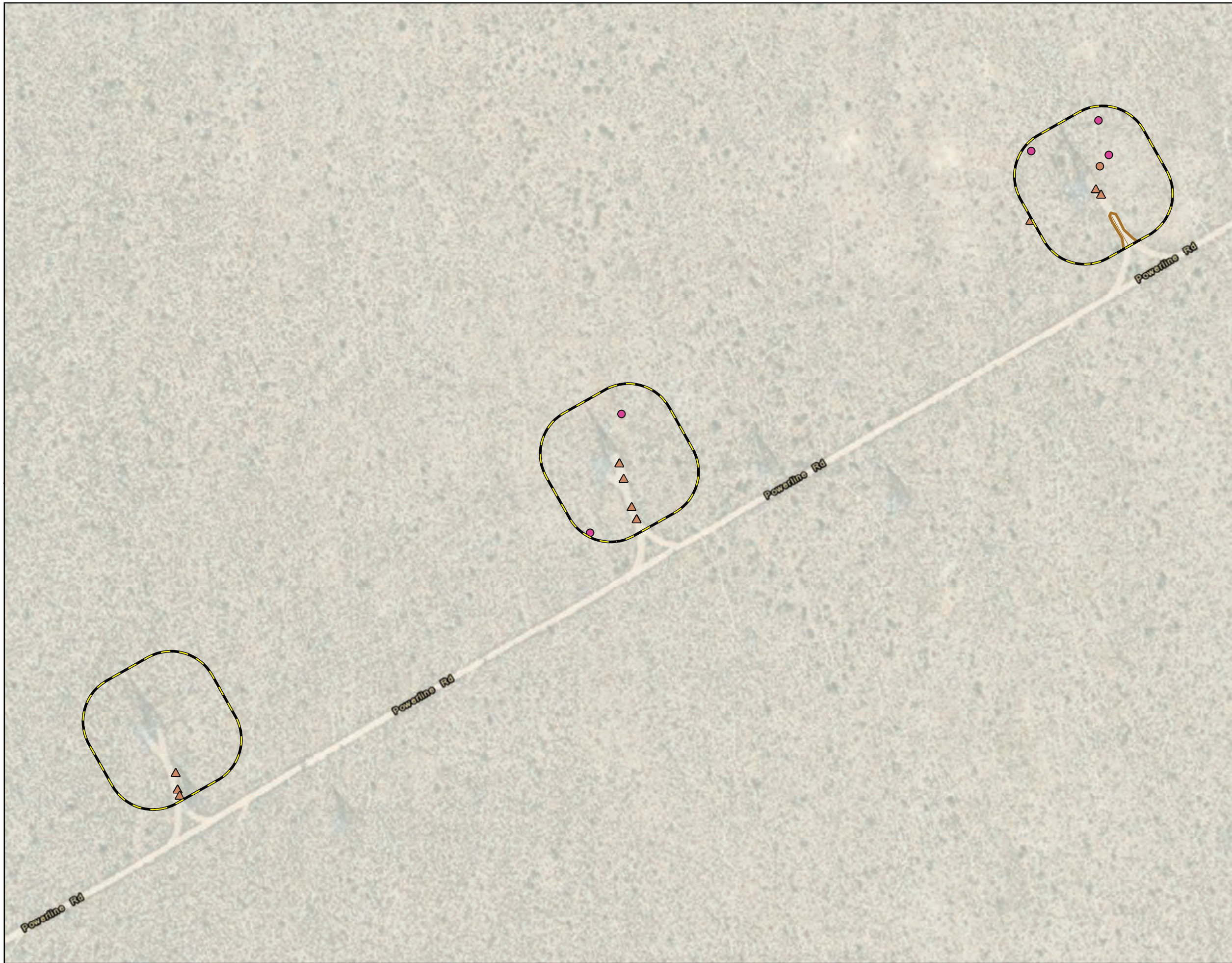


Figure 3, Page 32 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet



- Spring 2021 Survey Area
- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
- Rusby's desert-mallow
- California Rare Pant Rank 1B
- Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Pant Rank 1B
- Rusby's desert-mallow
- California Rare Pant Rank 4
- Desert portulaca

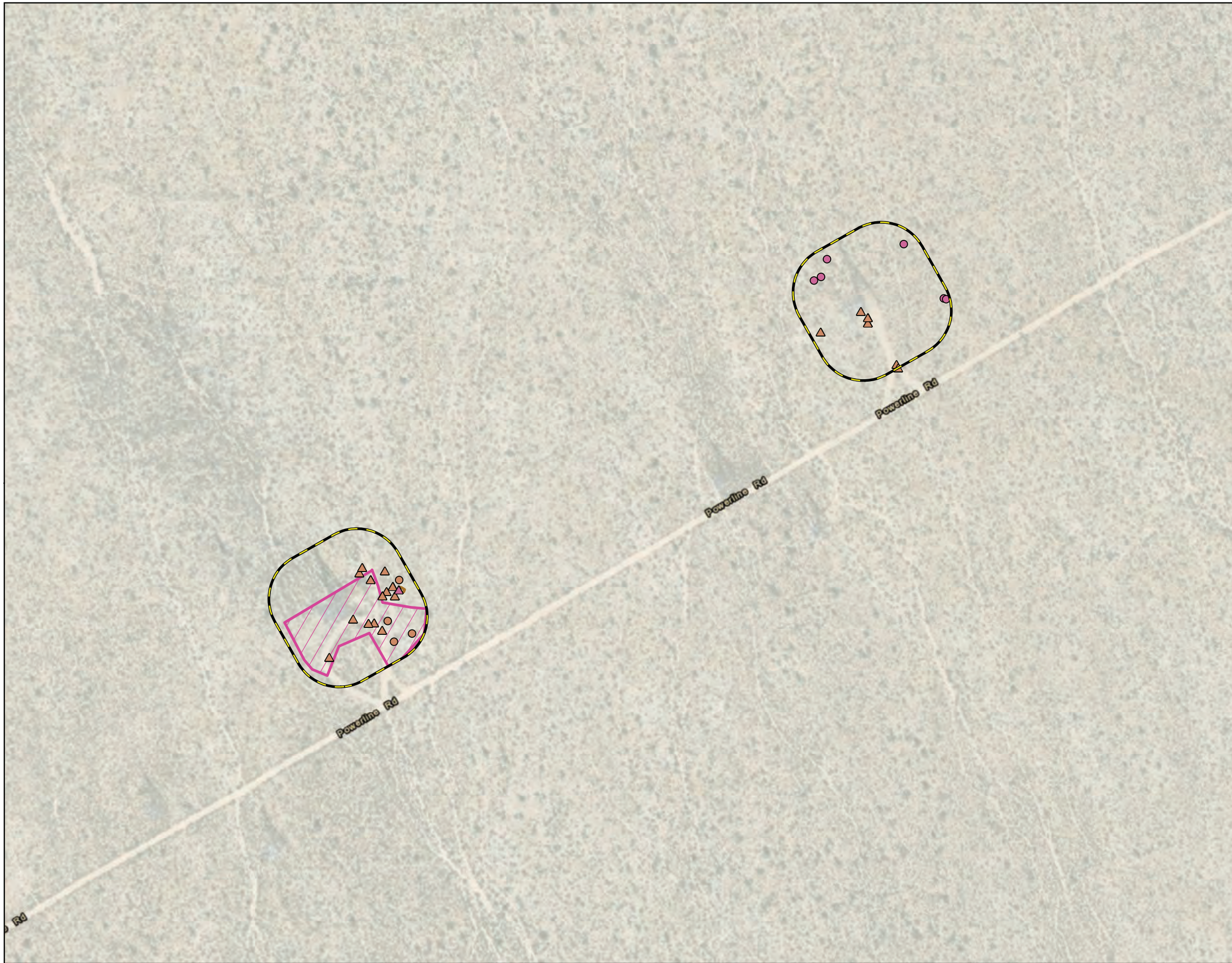


Figure 3, Page 33 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet











-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 2B
-  Viviparous foxtail cactus
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 2B
-  Viviparous foxtail cactus
- California Rare Plant Rank 4
-  Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT














-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus
- California Rare Plant Rank 2B
-  Parish's club-cholla
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



Figure 3, Page 35 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








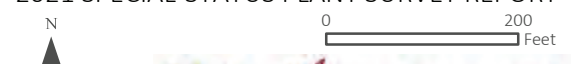
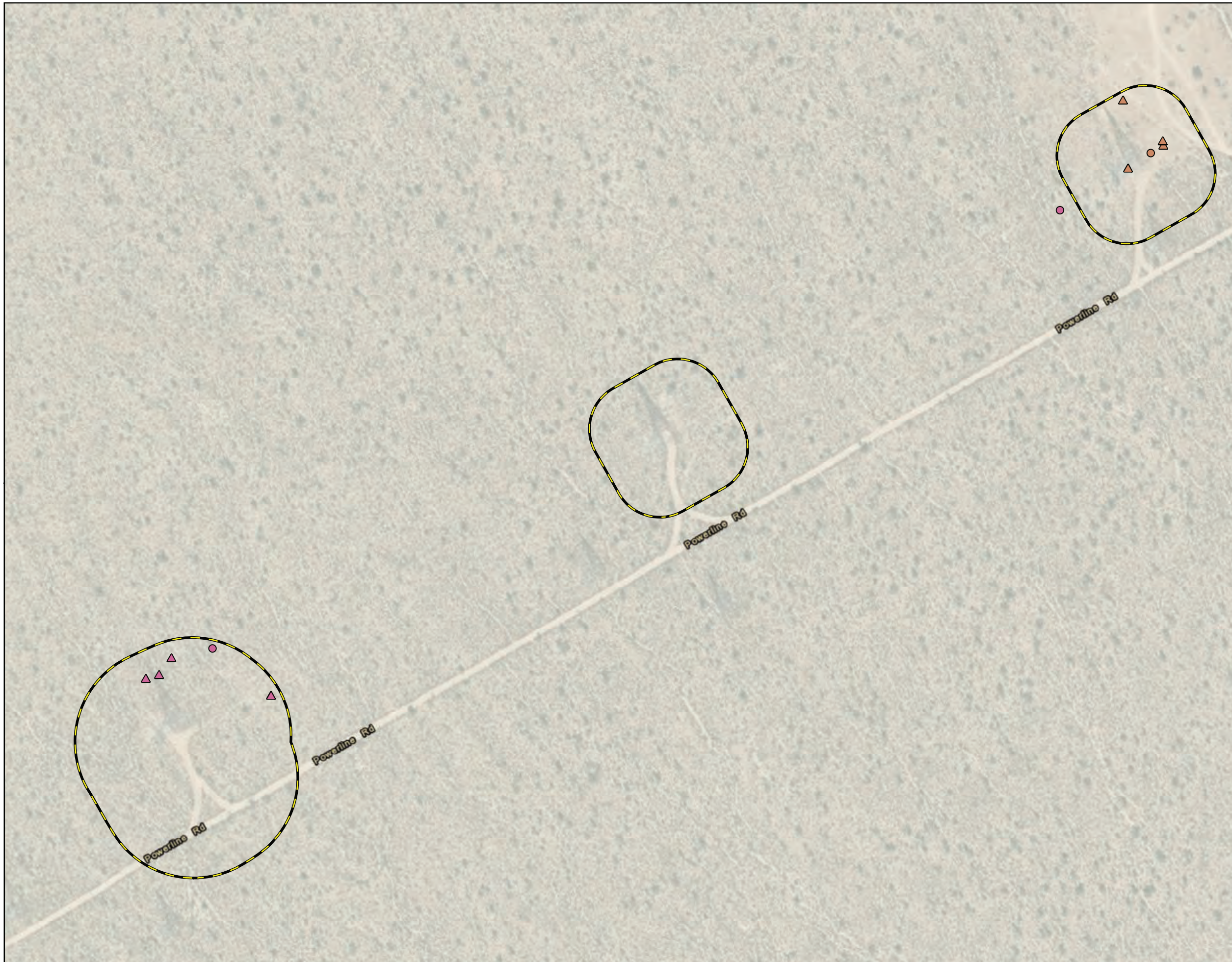
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Viviparous foxtail cactus



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





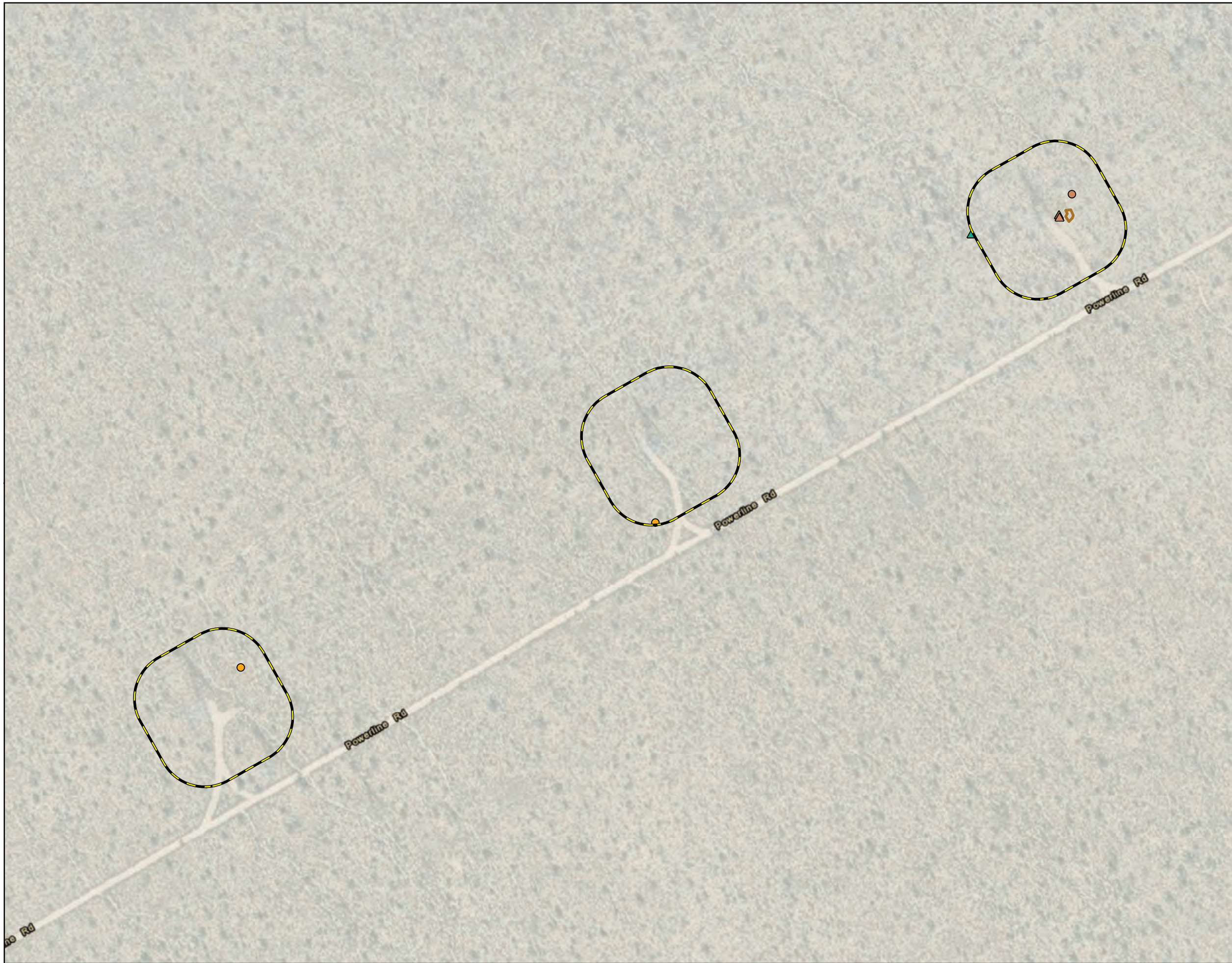
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT







-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 2B
-  Purple-nerve cymopterus
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 2B
-  Parish's club-cholla



Figure 3, Page 38 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet











-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
-  Rusby's desert-mallow
- California Rare Pant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus



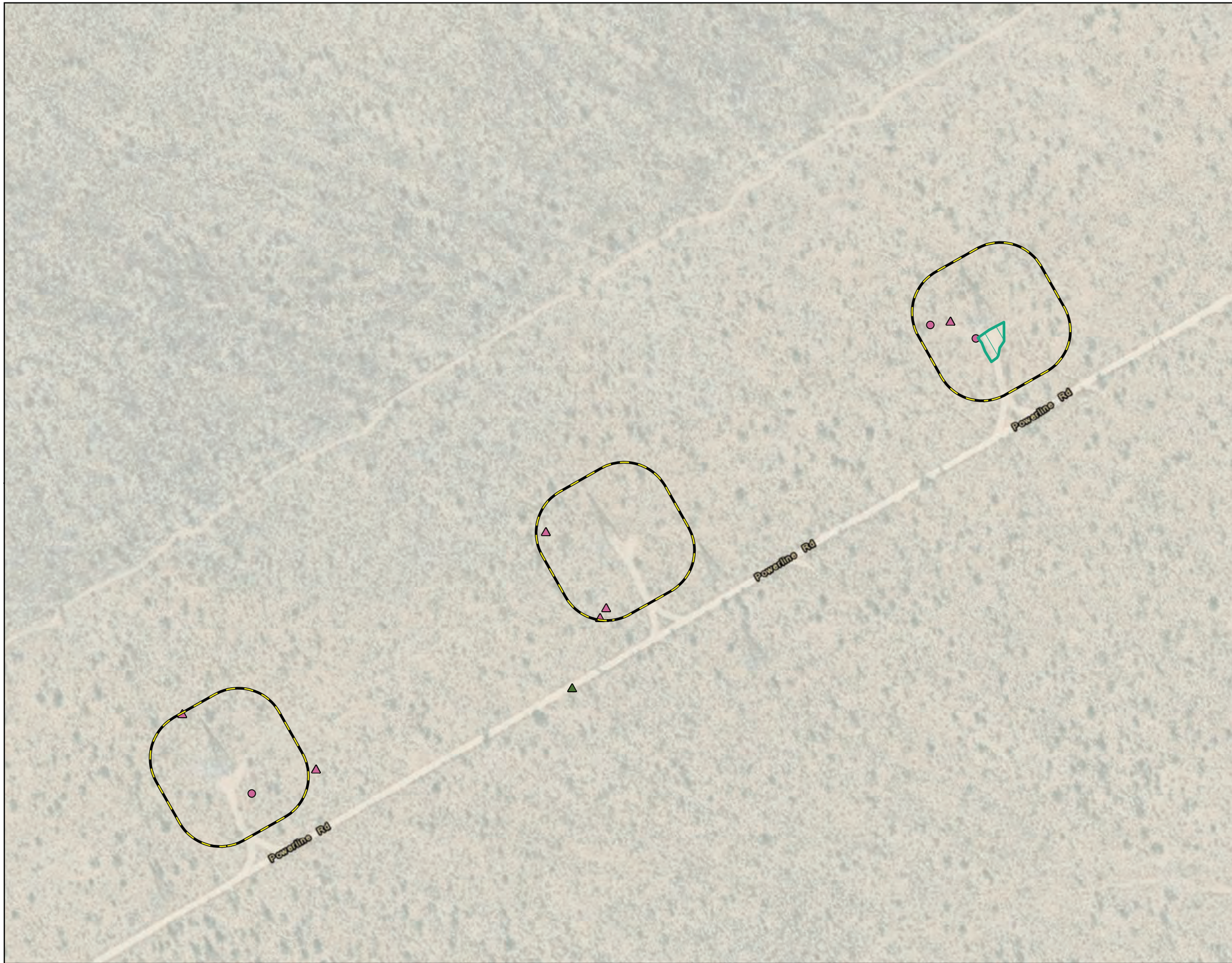
Figure 3, Page 39 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet











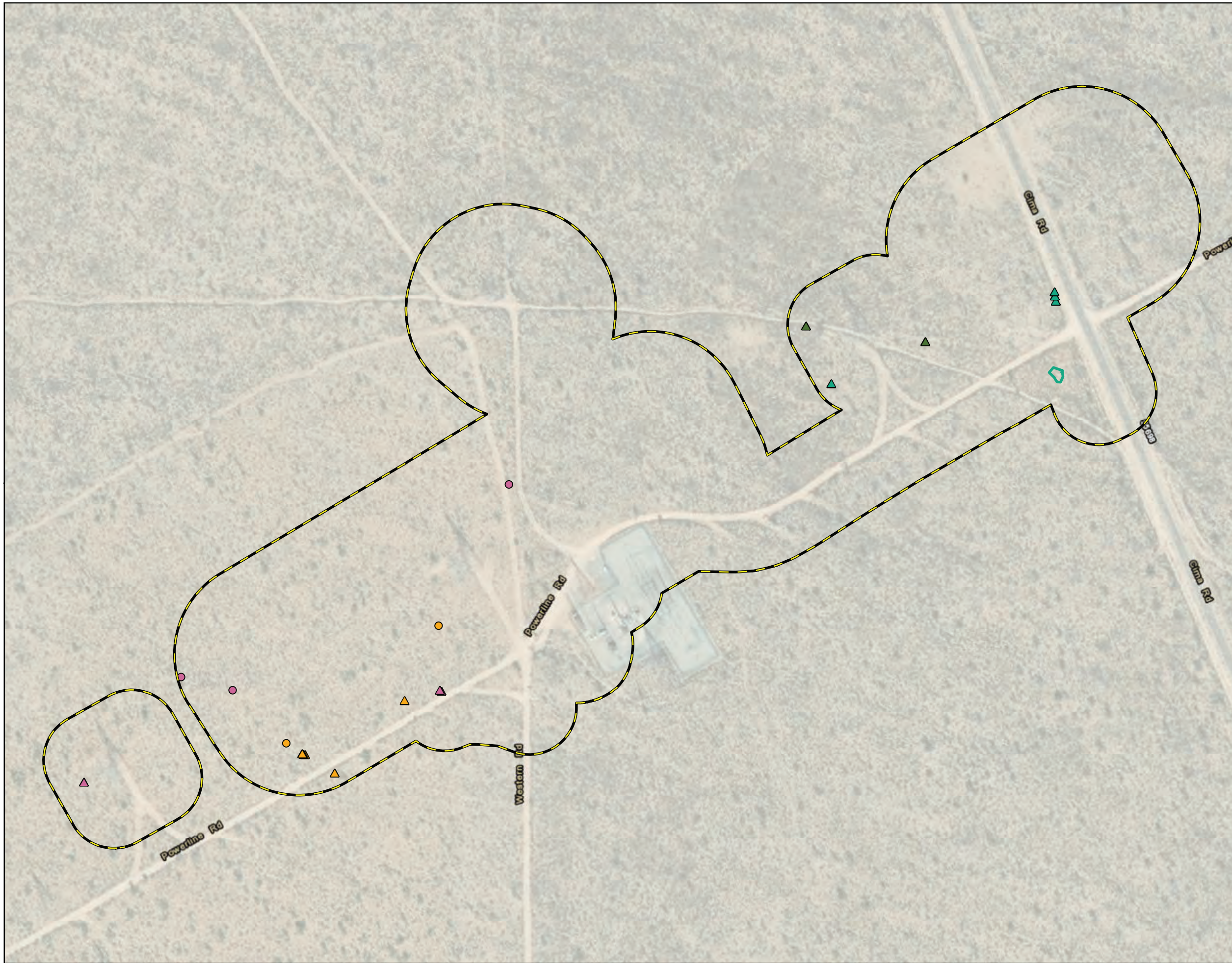
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
-  San Bernardino milk-vetch
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus
- California Rare Pant Rank 2B
-  Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT












-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 1B
 -  San Bernardino milk-vetch
- California Rare Pant Rank 2B
 -  Parish's club-cholla
 -  Purple-nerve cymopterus
 -  Viviparous foxtail cactus
- California Rare Pant Rank 2B
 -  Rusby's desert-mallow
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
 -  Parish's club-cholla
 -  Viviparous foxtail cactus



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT






-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus



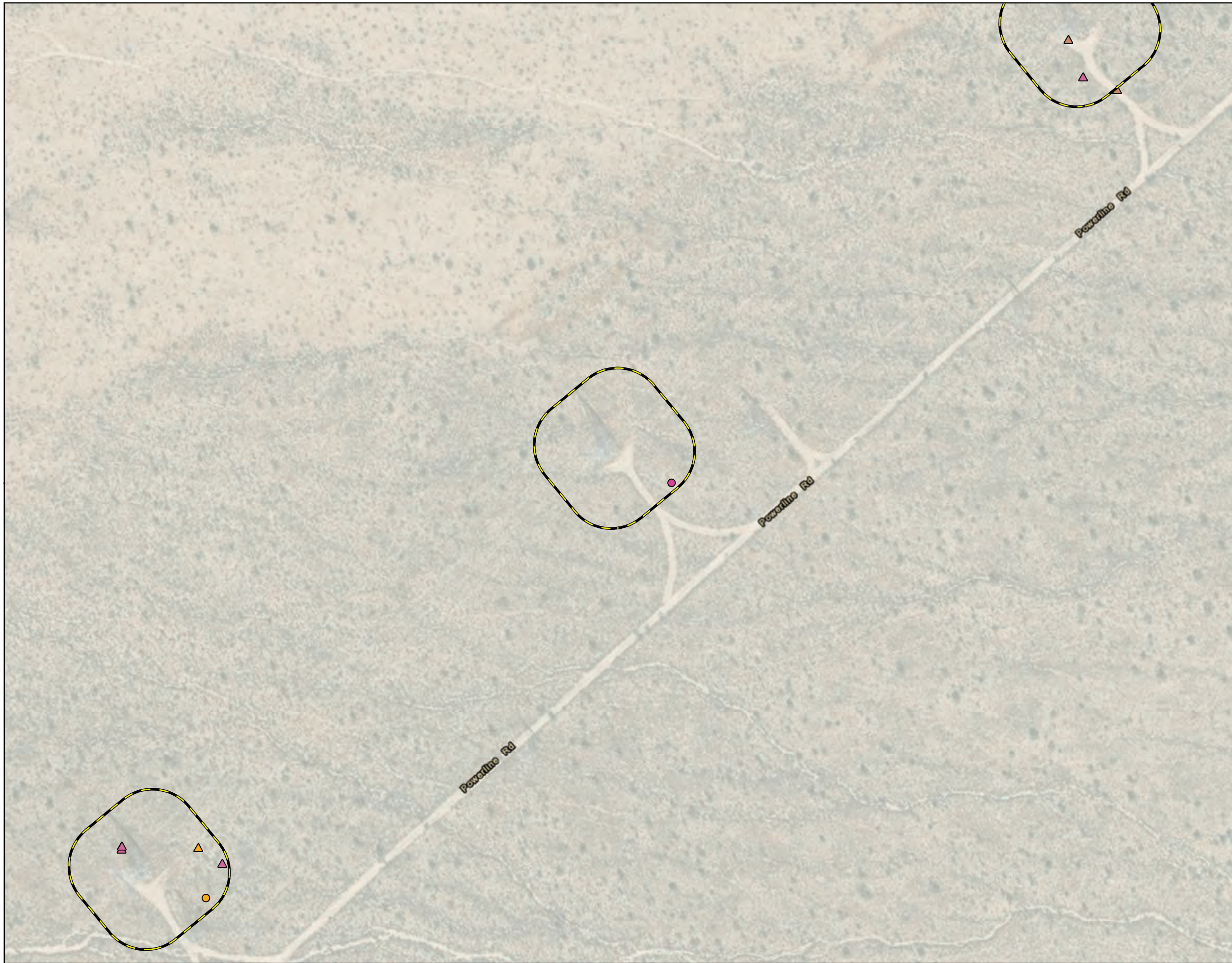
Figure 3, Page 42 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet












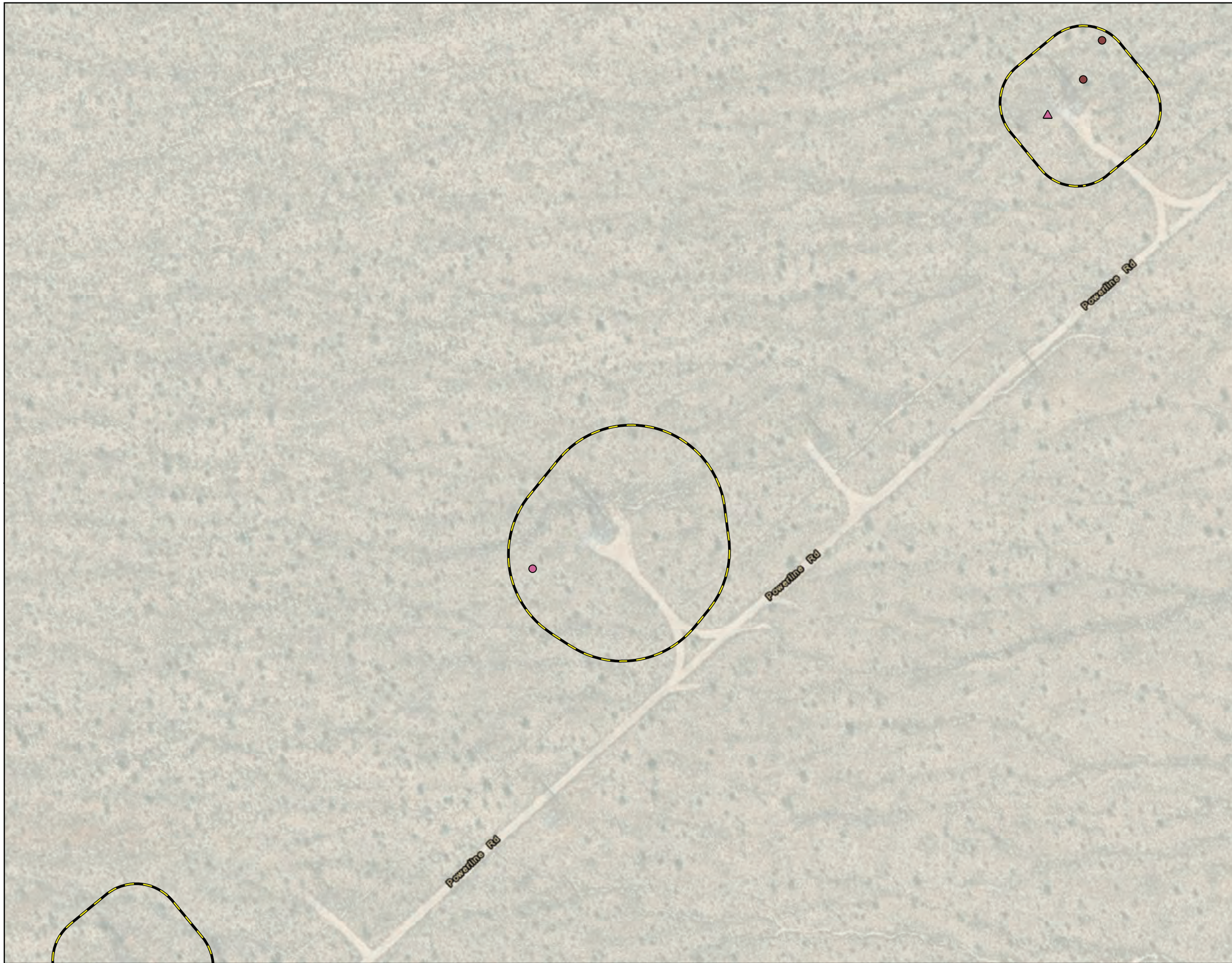
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 1B
-  Rusby's desert-mallow
- California Rare Plant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla
- California Rare Plant Rank 4
-  Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT








-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
-  Curved-spine beavertail
-  Viviparous foxtail cactus



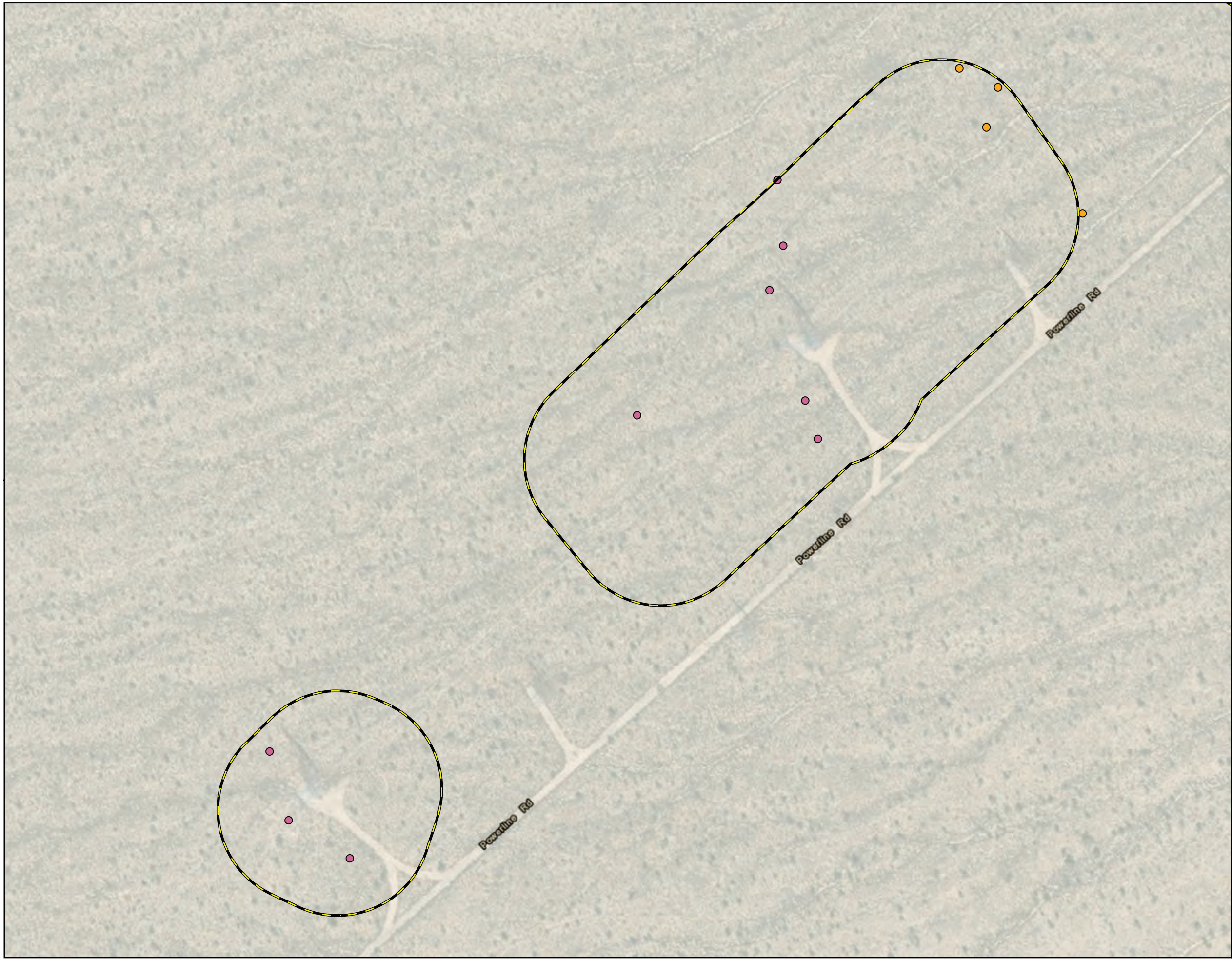
Figure 3, Page 44 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet









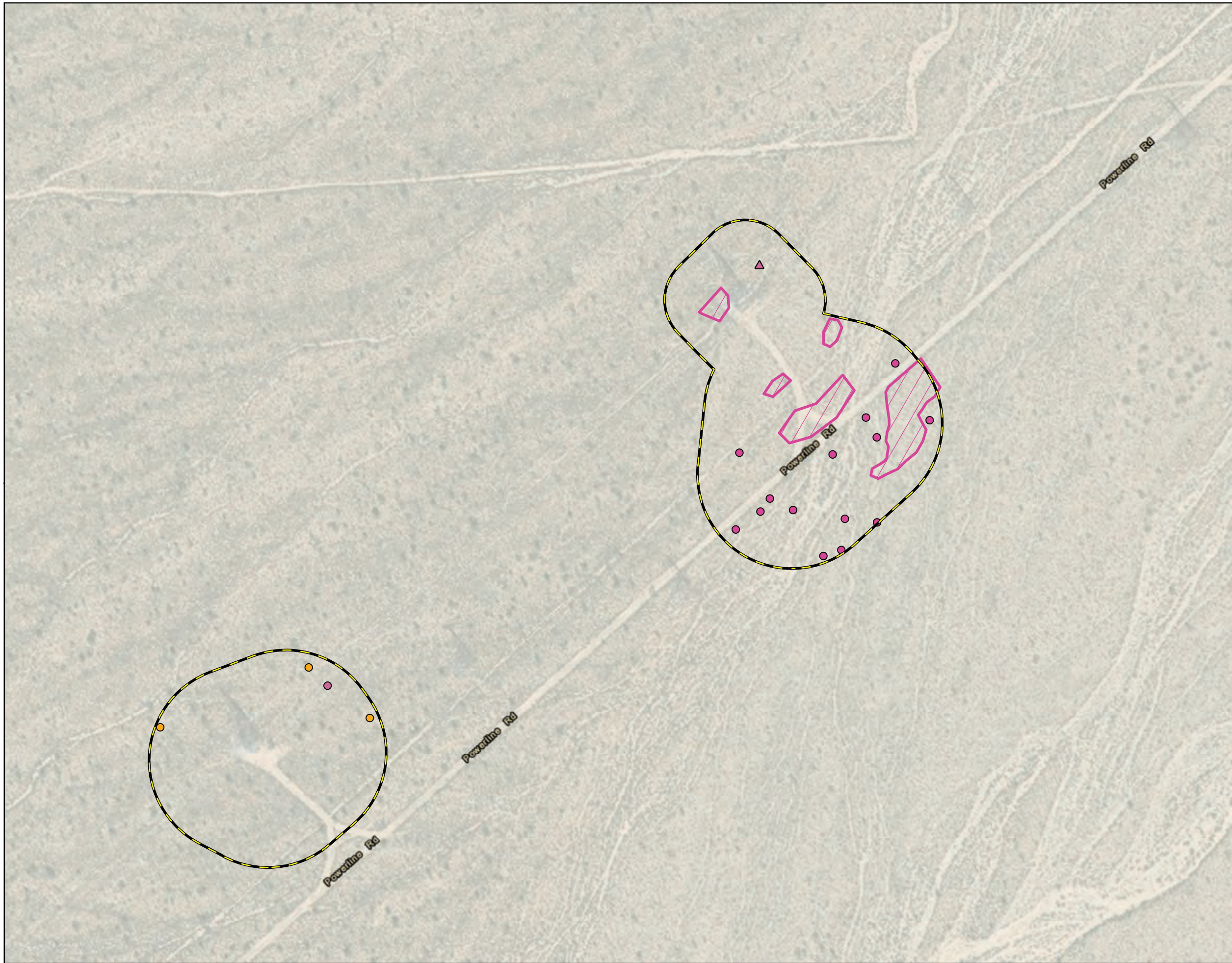
-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus



Figure 3, Page 45 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT












-  Spring 2021 Survey Area
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 2B
-  Viviparous foxtail cactus
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
-  Parish's club-cholla
-  Viviparous foxtail cactus
- California Rare Pant Rank 4
-  Desert portulaca
- California Rare Pant Rank 4
-  Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



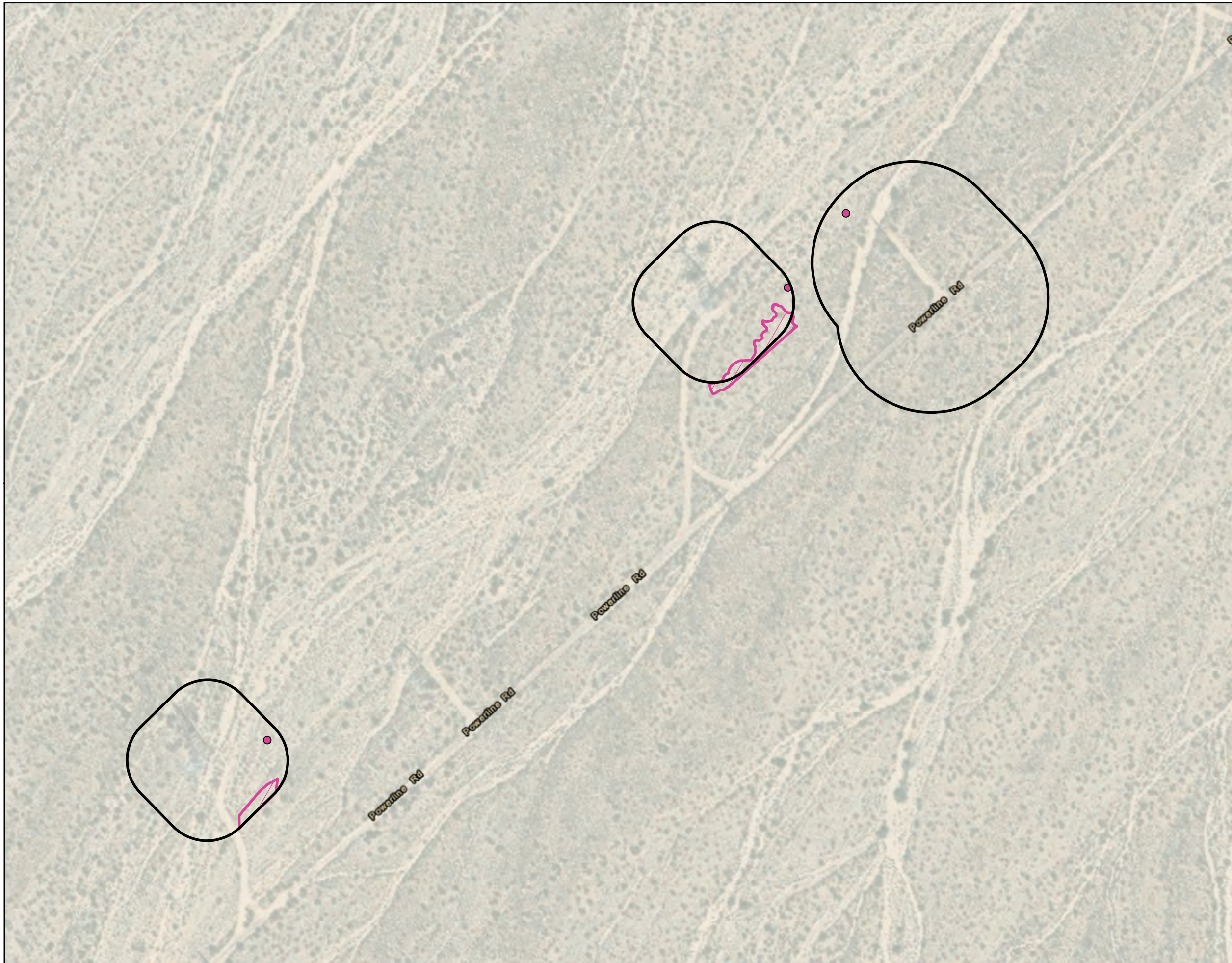
Figure 3, Page 48 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet



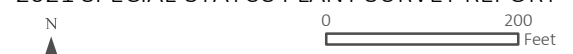


-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



Figure 3, Page 49 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet





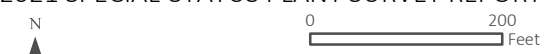
-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca

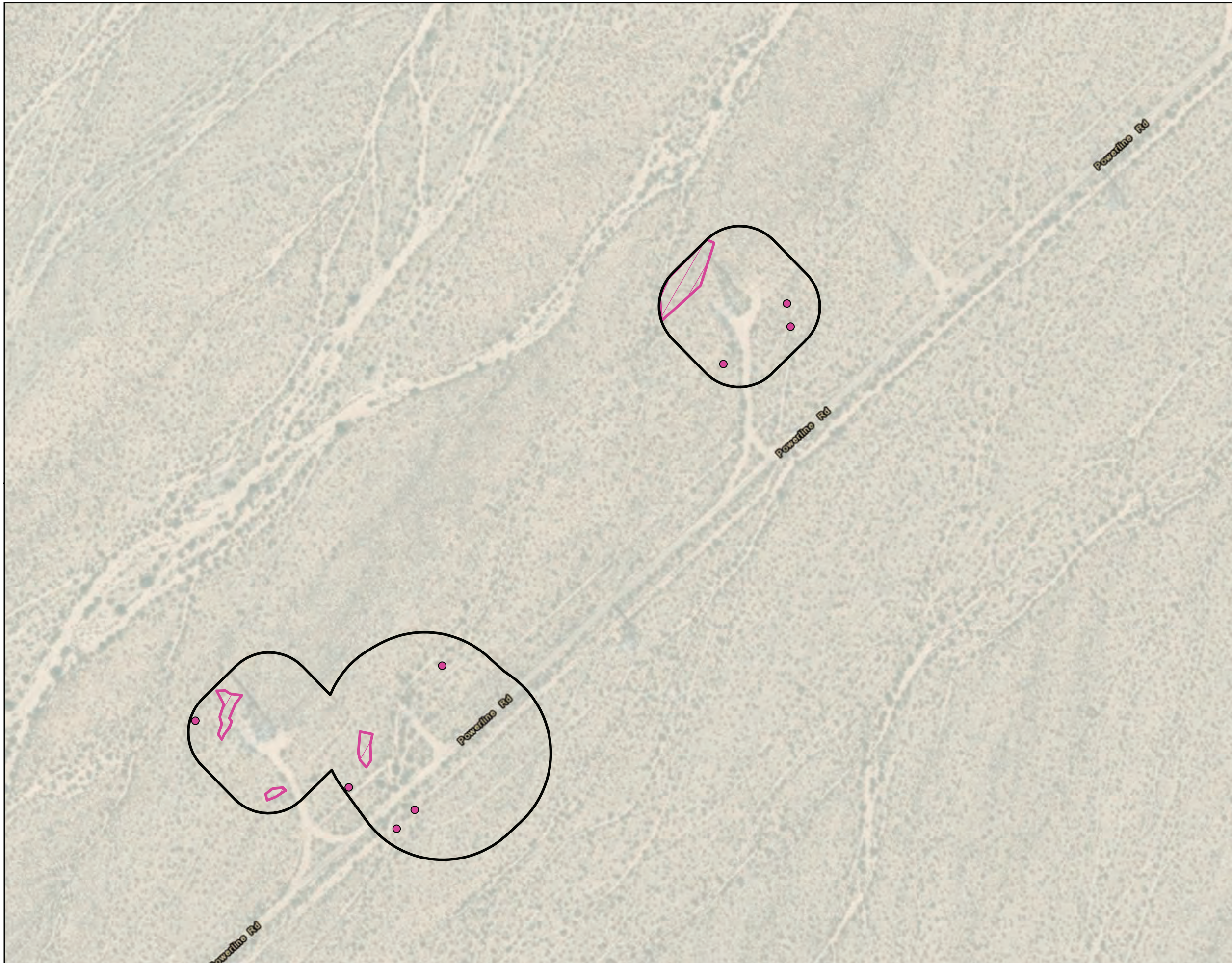


Detail Area Extent

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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





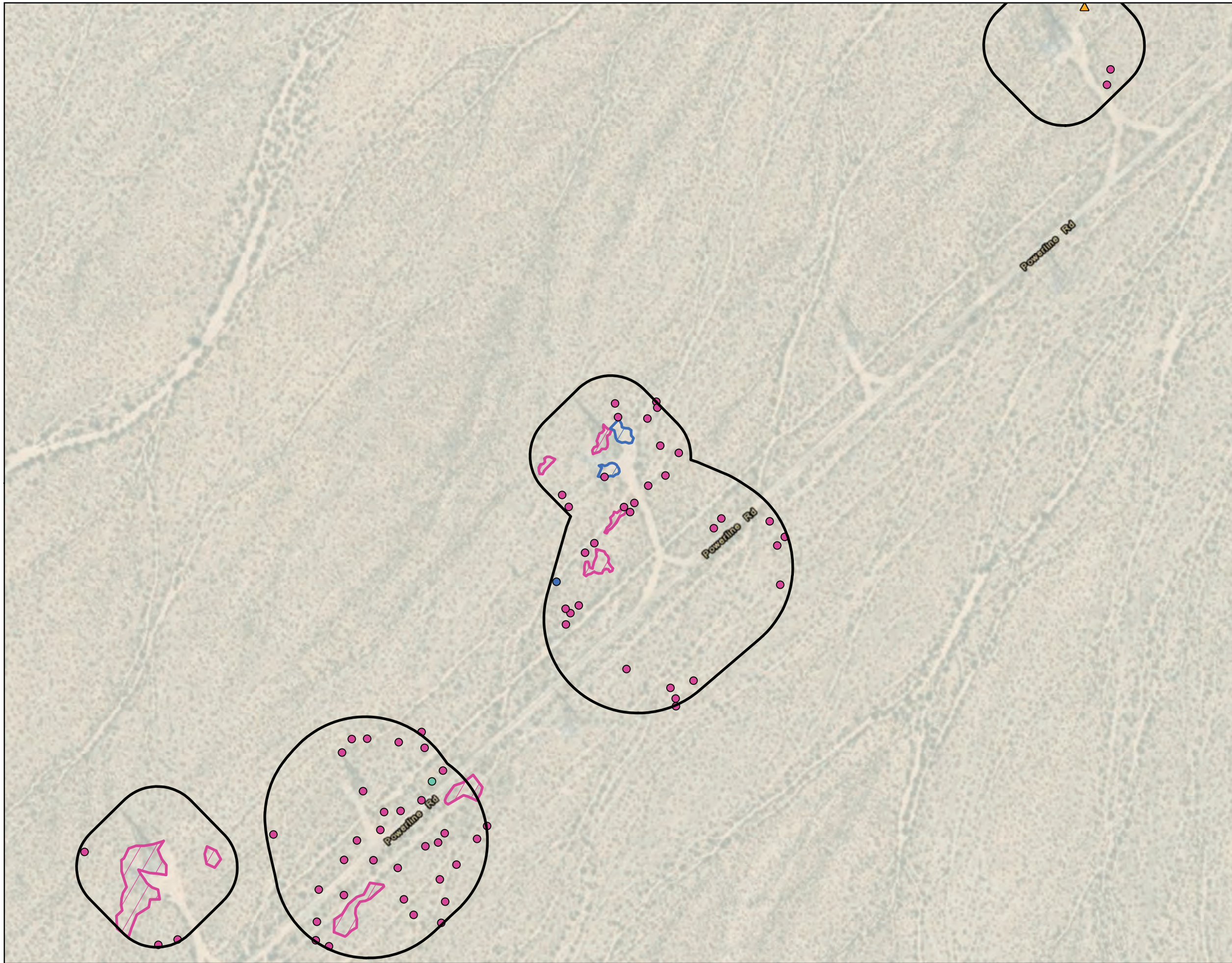
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Desert portulaca
- California Rare Plant Rank 4
- ◌ Desert portulaca



Figure 3, Page 52 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
- ▲ Parish's club-cholla
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Desert portulaca
- Revolute spurge
- Warty caltrop
- California Rare Plant Rank 4
- Desert portulaca
- Warty caltrop

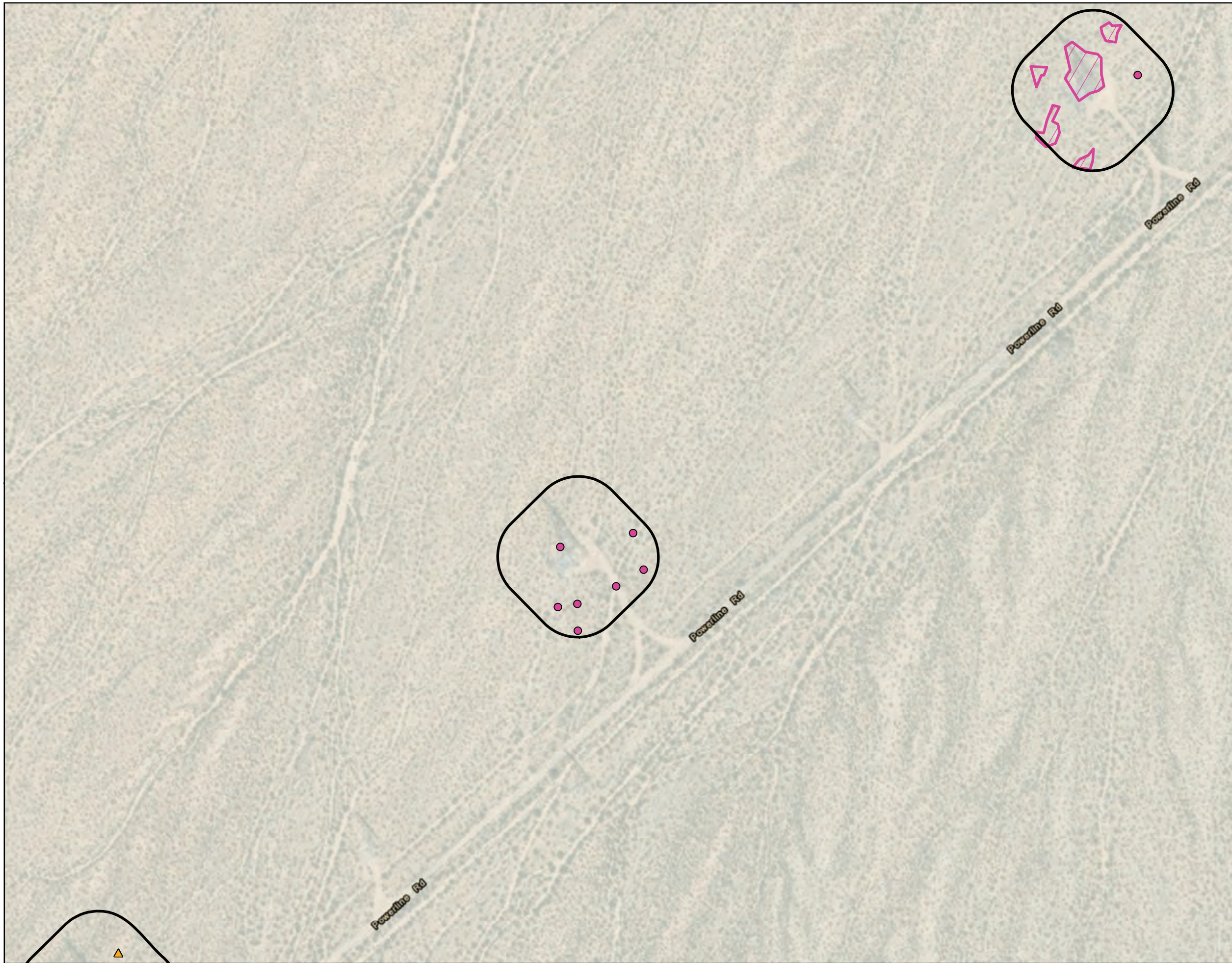


Figure 3, Page 53 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

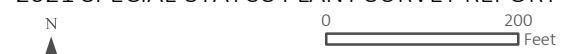


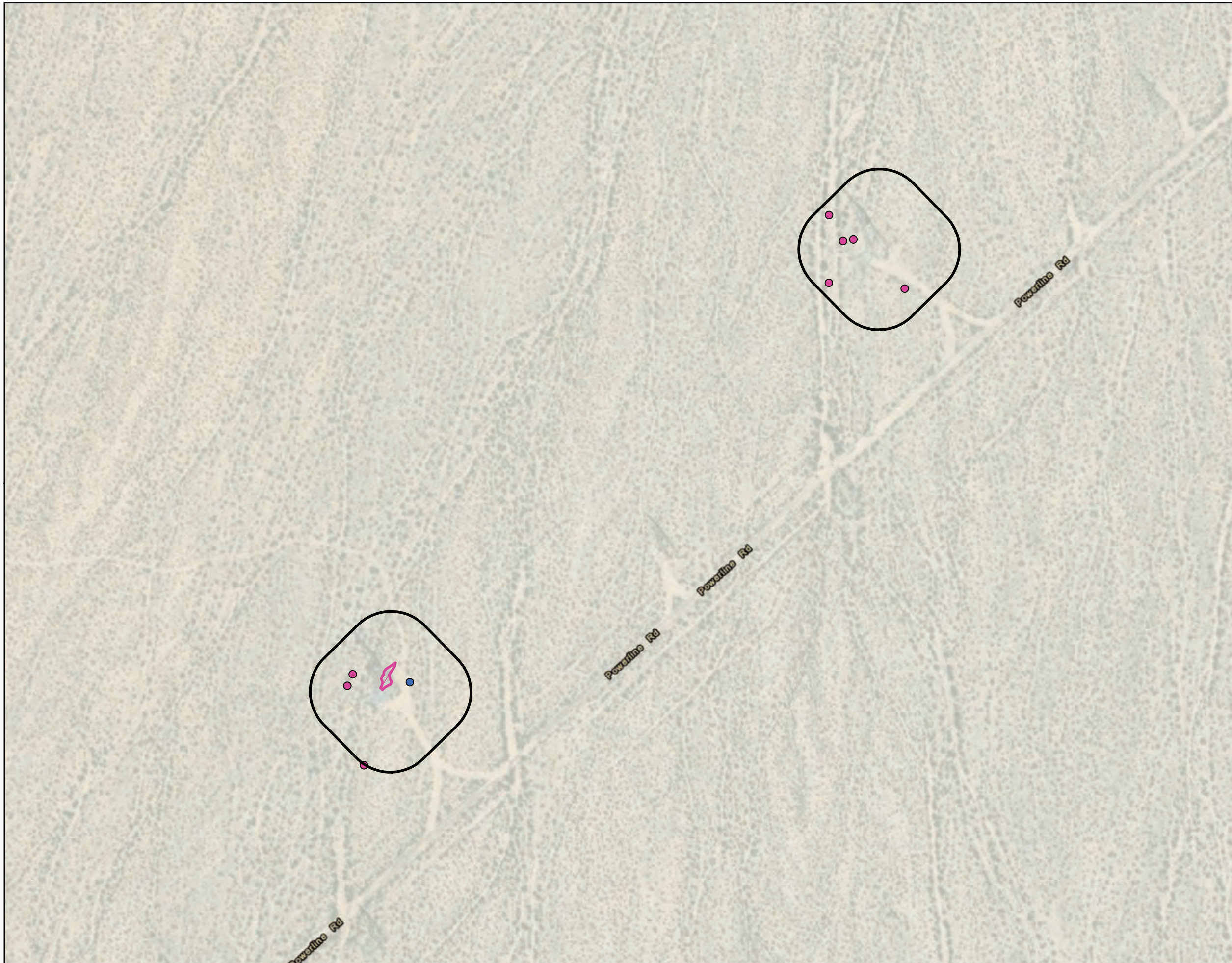
-  Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



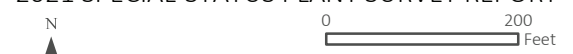


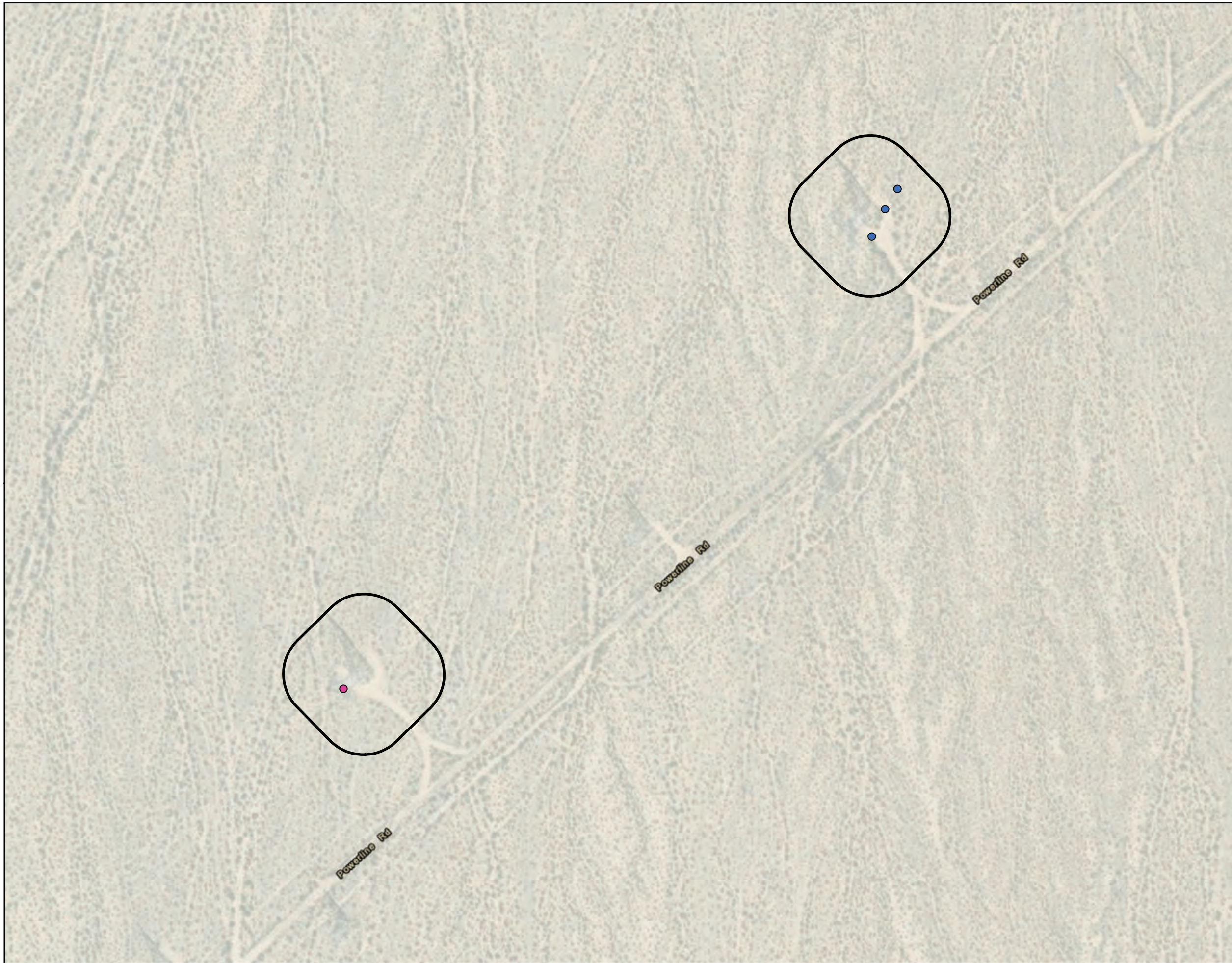
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
 - Desert portulaca
 - Warty caltrop
- California Rare Plant Rank 4
 - ◌ Desert portulaca



Figure 3, Page 55 of 83
 Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





○ Fall 2021 Survey Area

Fall 2021 Survey Results

California Rare Plant Rank 4

● Desert portulaca

● Warty caltrop

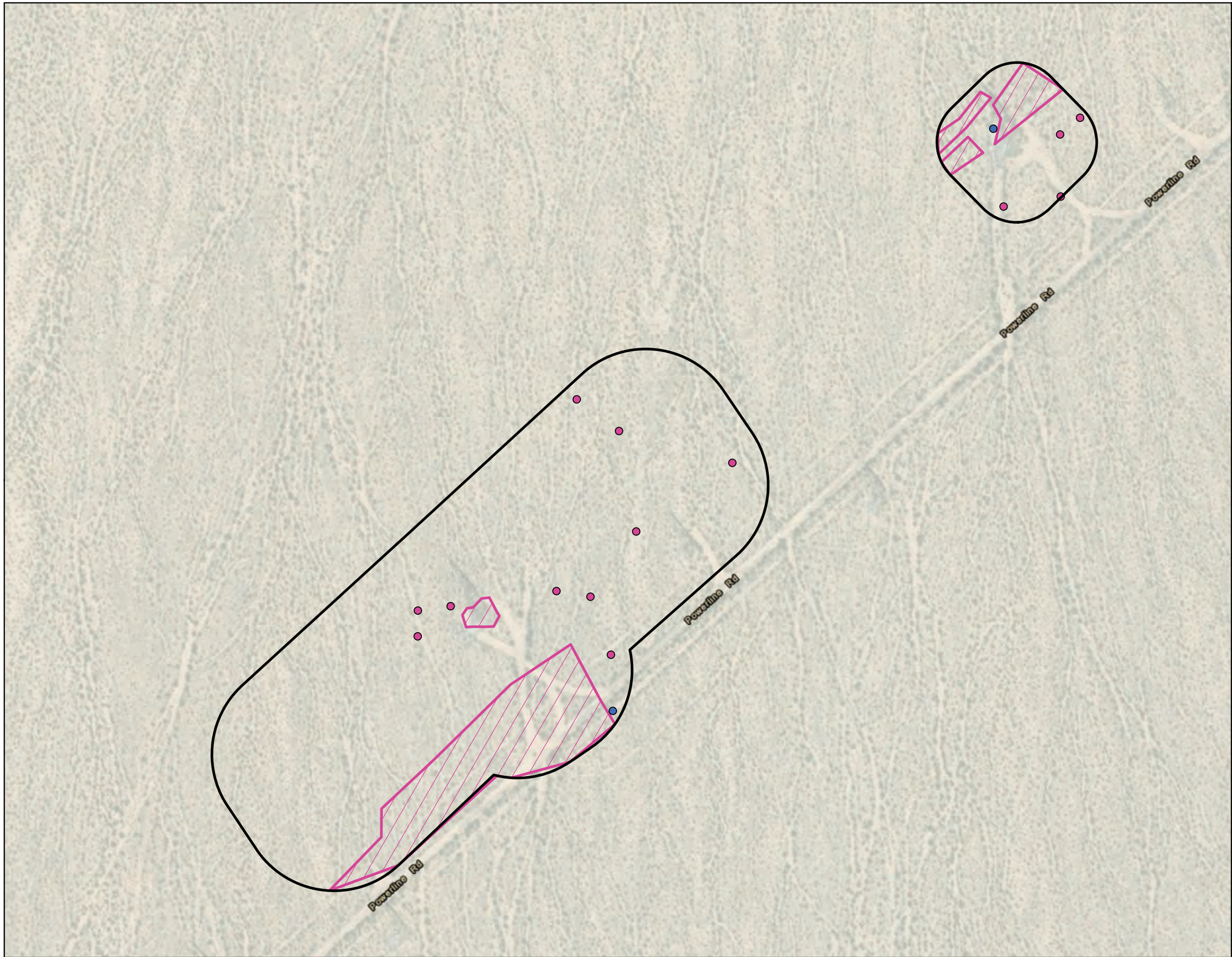


Figure 3, Page 56 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N 0 200 Feet



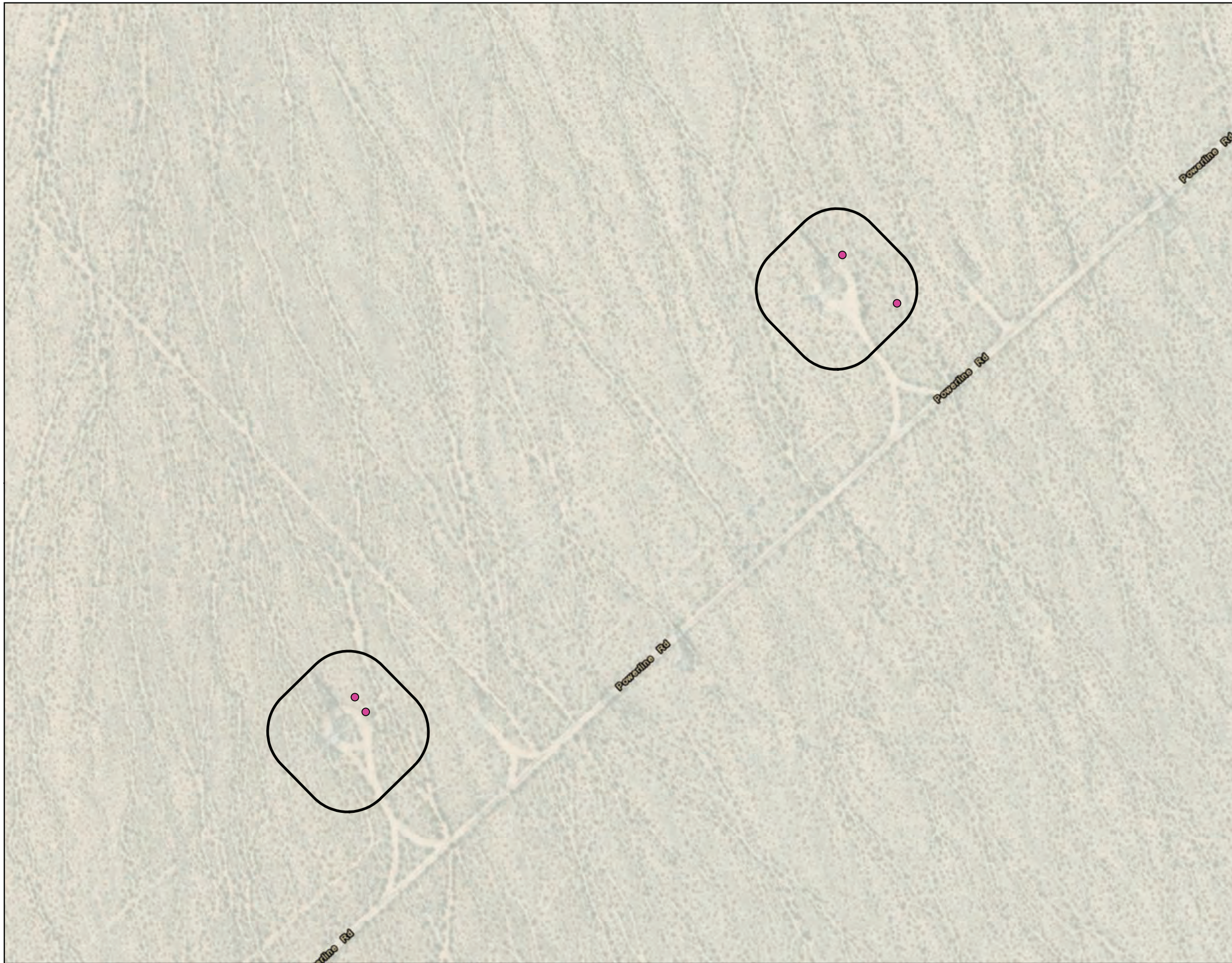


-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
 -  Desert portulaca
 -  Warty caltrop
- California Rare Plant Rank 4
 -  Desert portulaca



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 Special-status Plant
 Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

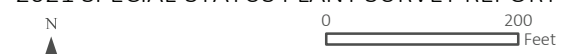


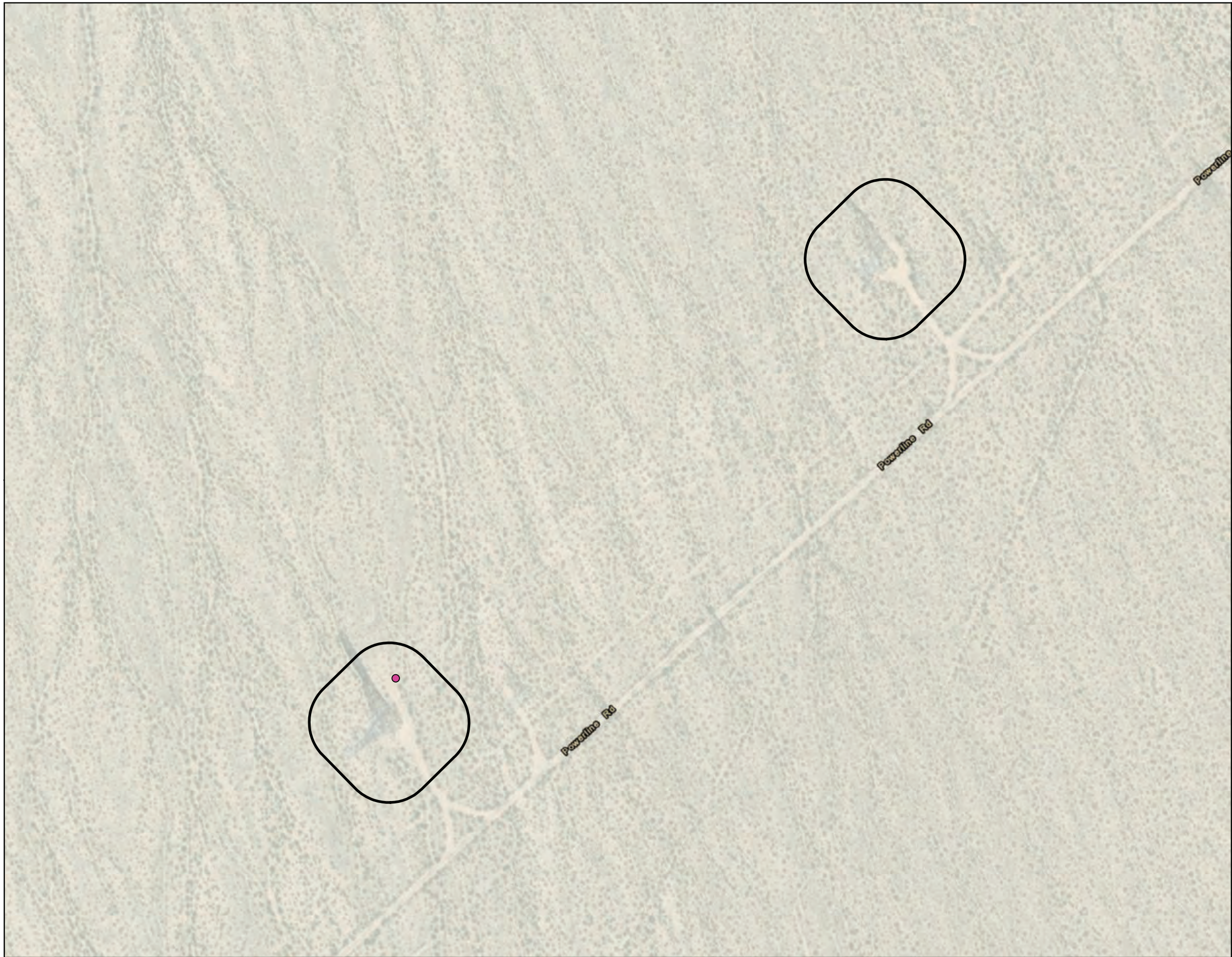
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Desert portulaca



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



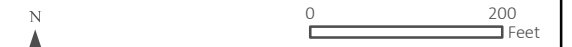


- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Desert portulaca



Figure 3, Page 59 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT







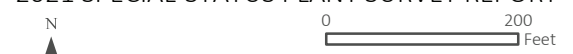
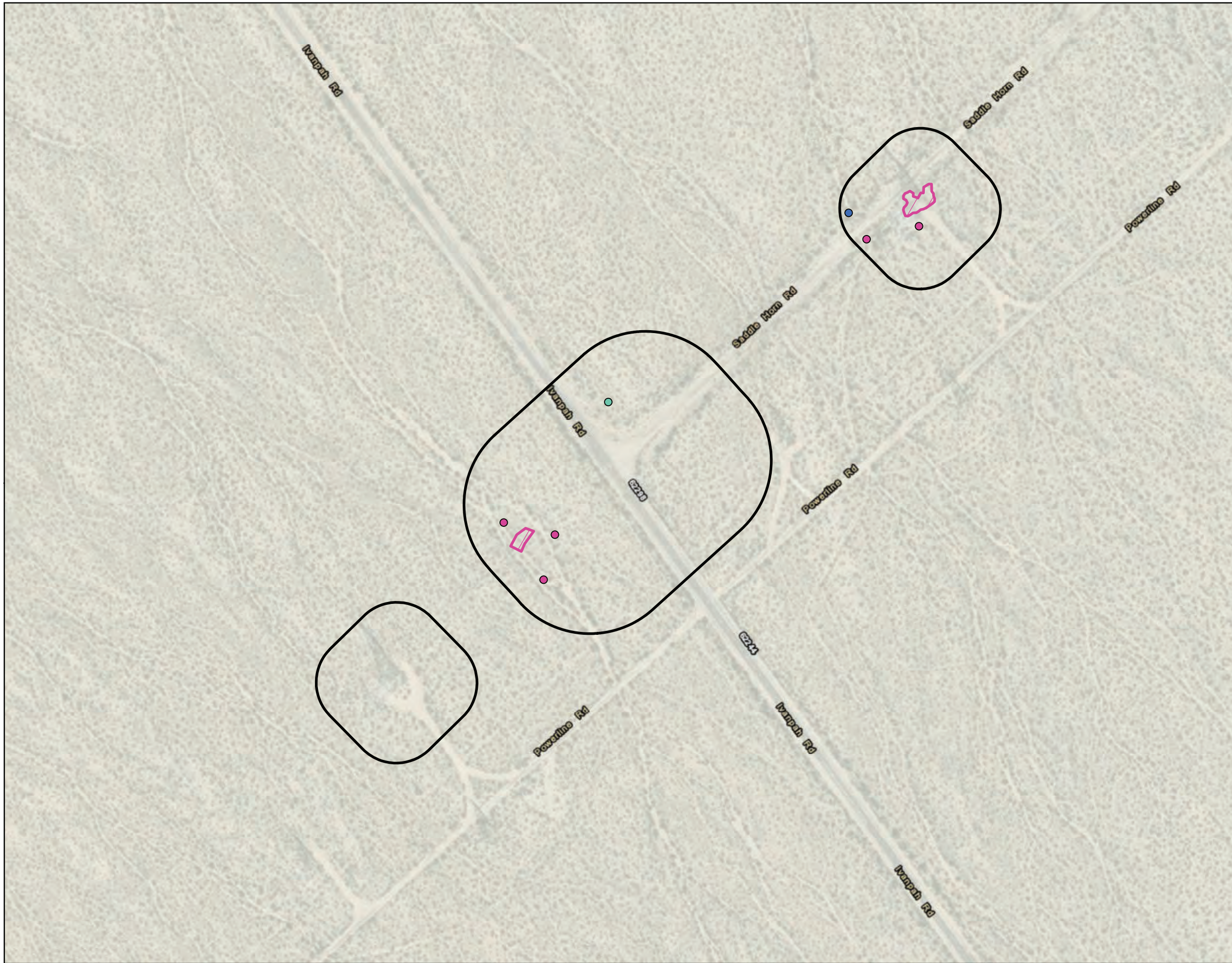
-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca



Figure 3, Page 60 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
 -  Desert portulaca
 -  Revolute spurge
 -  Warty caltrop
- California Rare Plant Rank 4
 -  Desert portulaca



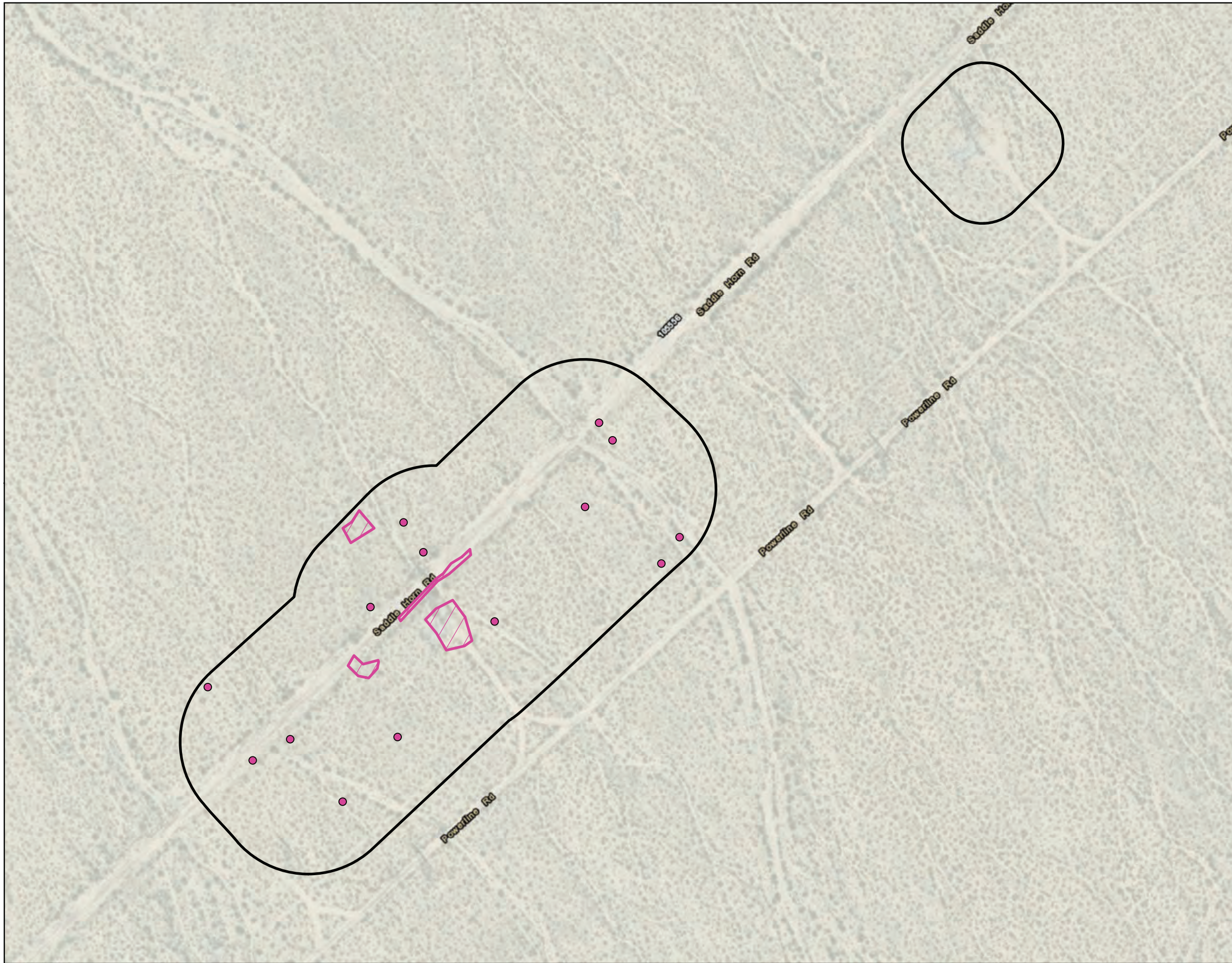
Figure 3, Page 61 of 83
 Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet





-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Desert portulaca
- California Rare Plant Rank 4
-  Desert portulaca



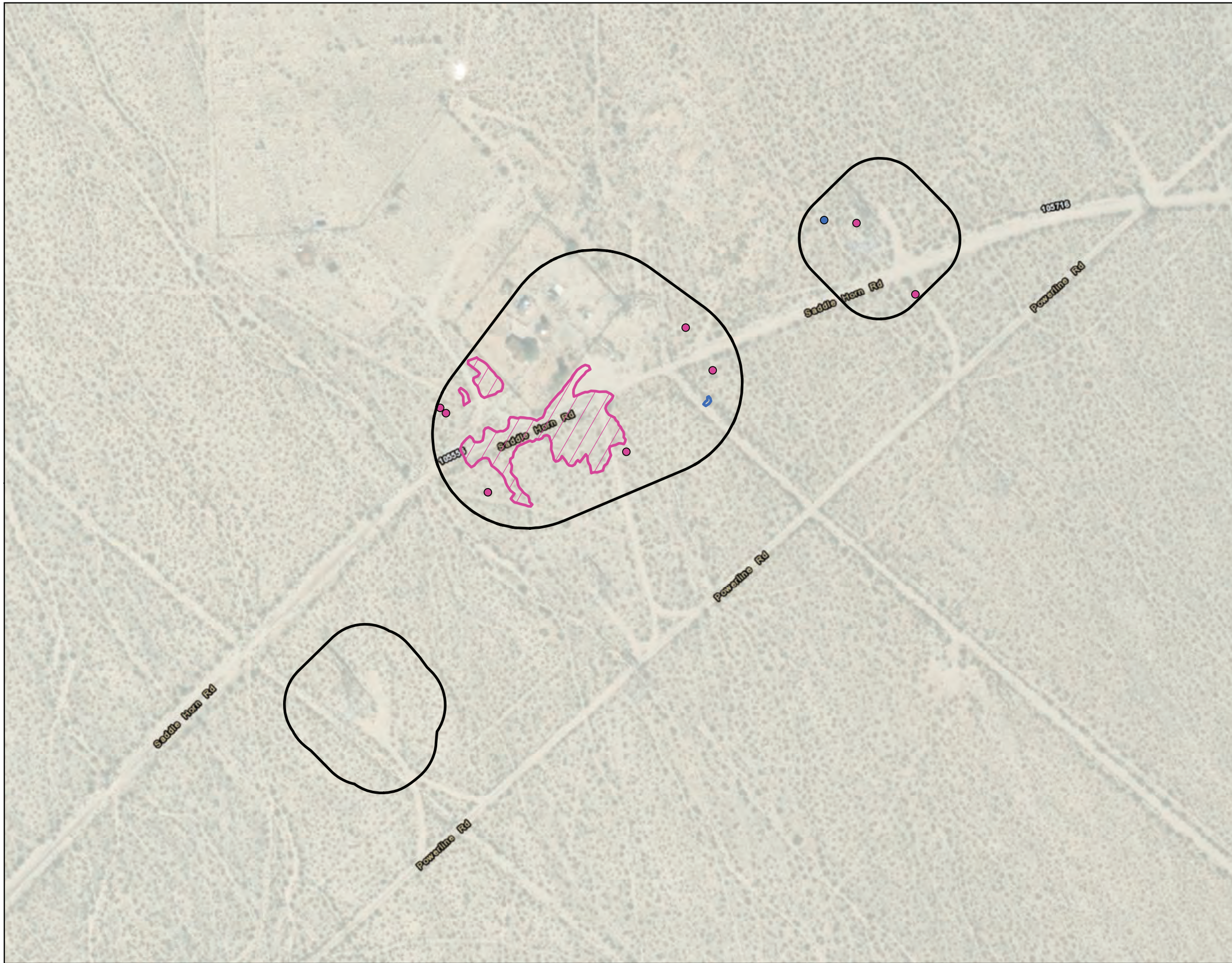
Figure 3, Page 62 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet





- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
 - Desert portulaca
 - Warty caltrop
- California Rare Plant Rank 4
 - ◌ Desert portulaca
 - ◌ Warty caltrop



Figure 3, Page 63 of 83
 Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet



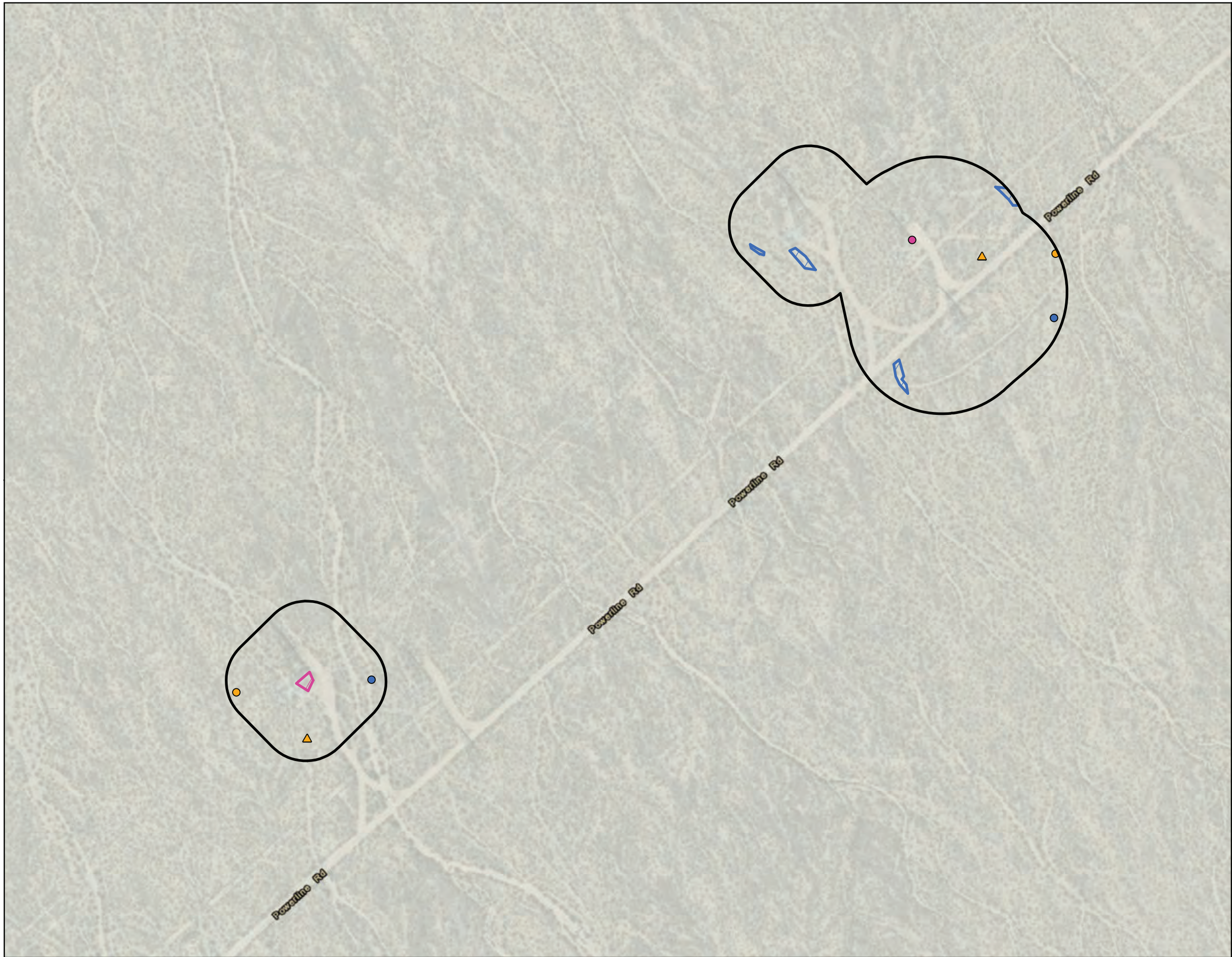
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Desert portulaca
- Revolute spurge
- Warty caltrop
- California Rare Plant Rank 4
- Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Pant Rank 2B
 - ▲ Parish's club-cholla
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
 - Parish's club-cholla
- California Rare Pant Rank 4
 - Desert portulaca
 - Warty caltrop
- California Rare Pant Rank 4
 - ◻ Desert portulaca
 - ◻ Warty caltrop



Figure 3, Page 65 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



- Fall 2021 Survey Area
- Spring 2021 Survey Results
- California Rare Plant Rank 2B
- ▲ Parish's club-cholla
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Warty caltrop
- California Rare Plant Rank 4
- ◌ Desert portulaca
- ◌ Warty caltrop



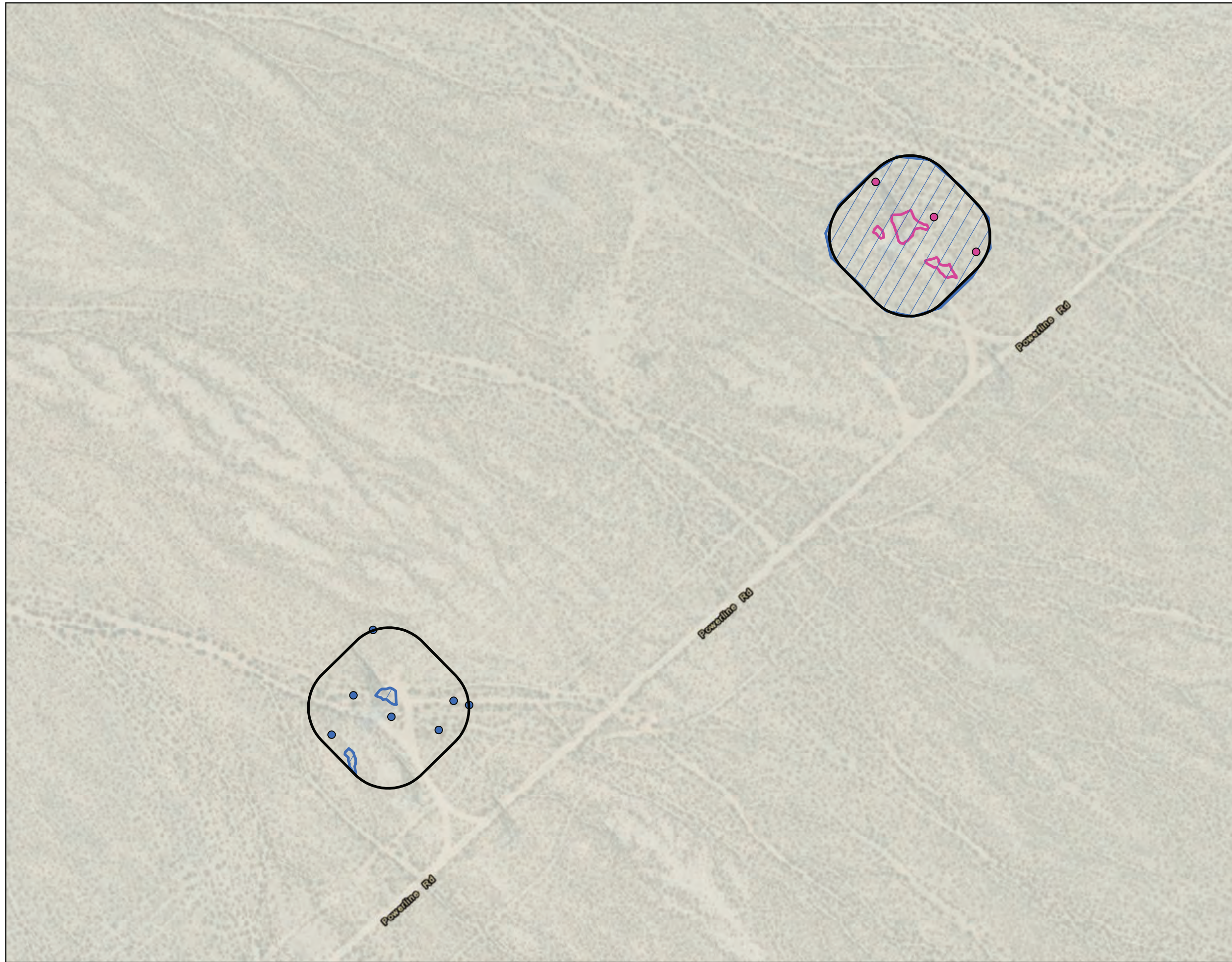
Figure 3, Page 66 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

Artemis Environmental Services, Inc.



- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Desert portulaca
- Warty caltrop
- California Rare Plant Rank 4
- Desert portulaca
- Warty caltrop

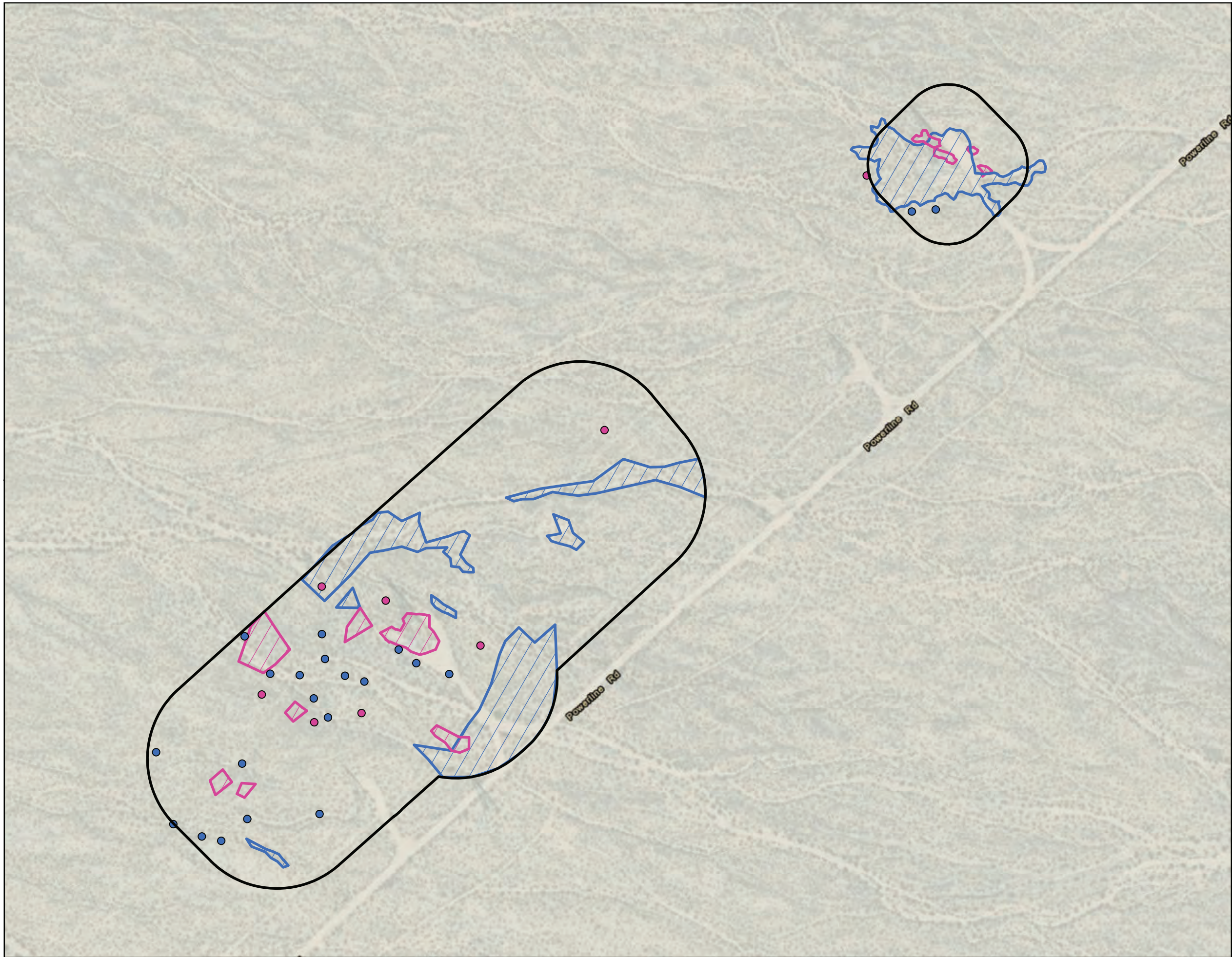


Figure 3, Page 67 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

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0 200 Feet

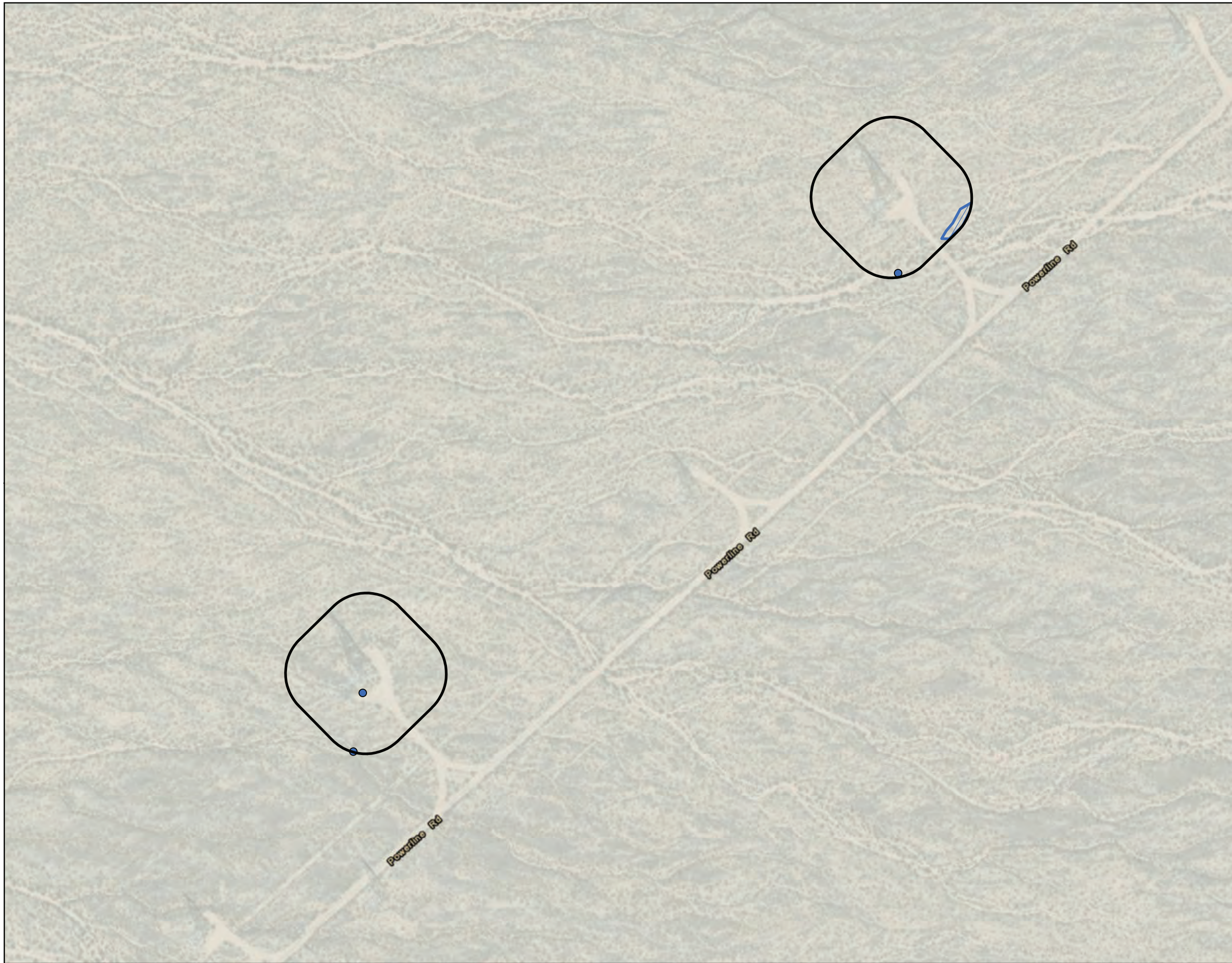


- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
 - Desert portulaca
 - Warty caltrop
- California Rare Plant Rank 4
 - ▨ Desert portulaca
 - ▨ Warty caltrop



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 Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT



- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Warty caltrop
- California Rare Plant Rank 4
- Warty caltrop



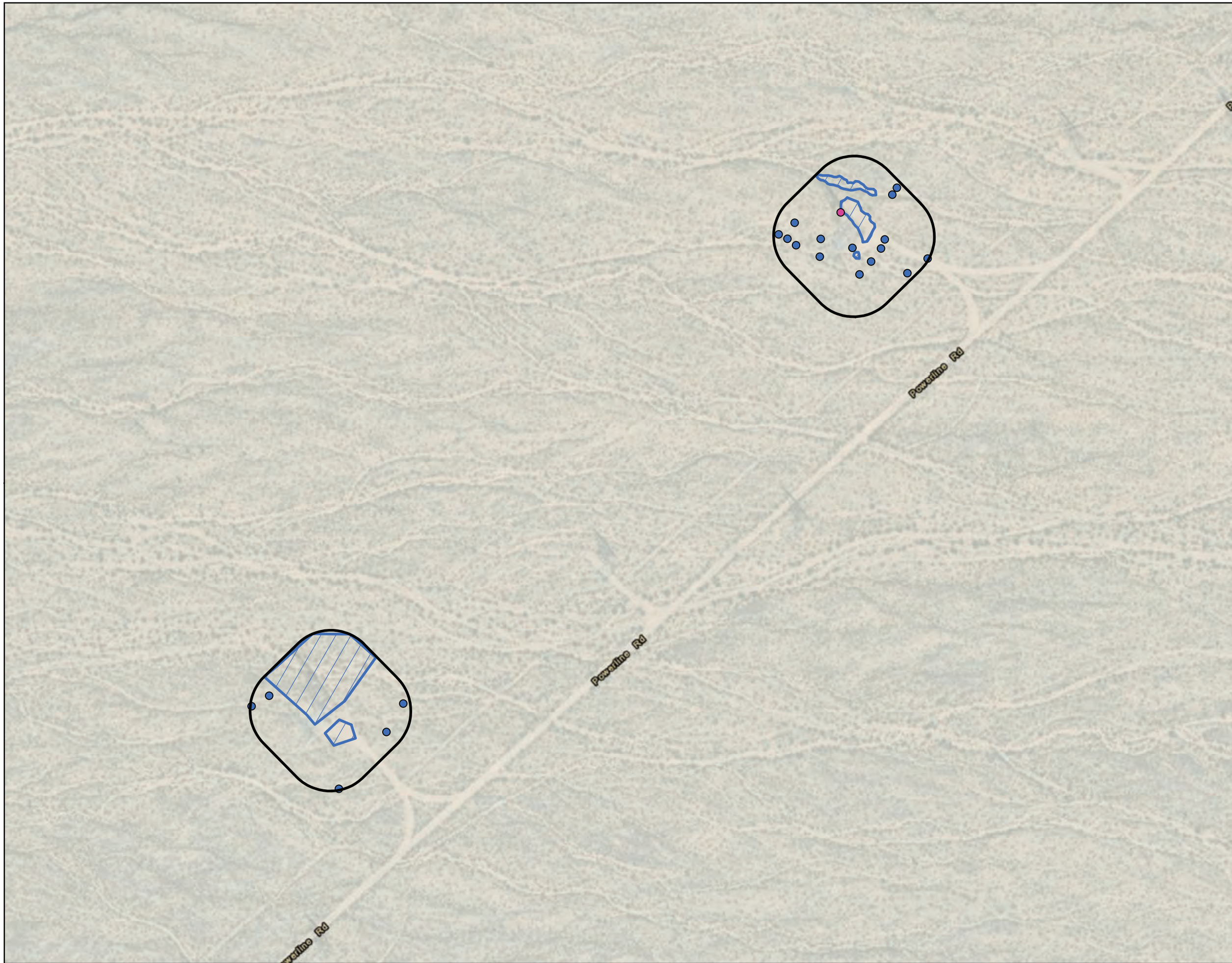
Figure 3, Page 69 of 83
Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

Artemis Environmental Services, Inc.



- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
 - Desert portulaca
 - Warty caltrop
- California Rare Plant Rank 4
 - ◌ Warty caltrop



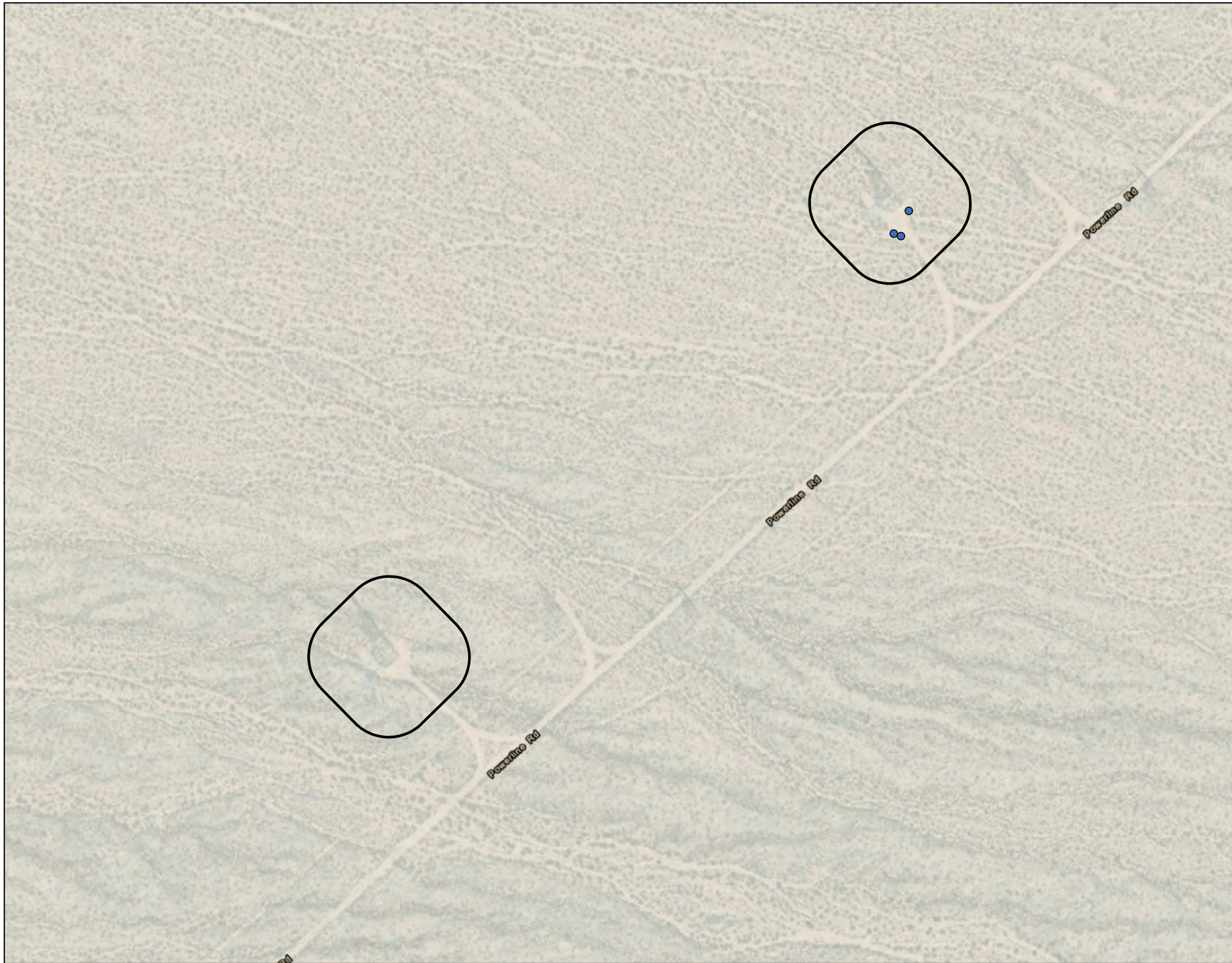
Figure 3, Page 70 of 83
 Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

Artemis Environmental Services, Inc.

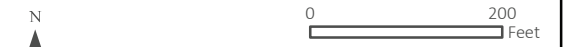


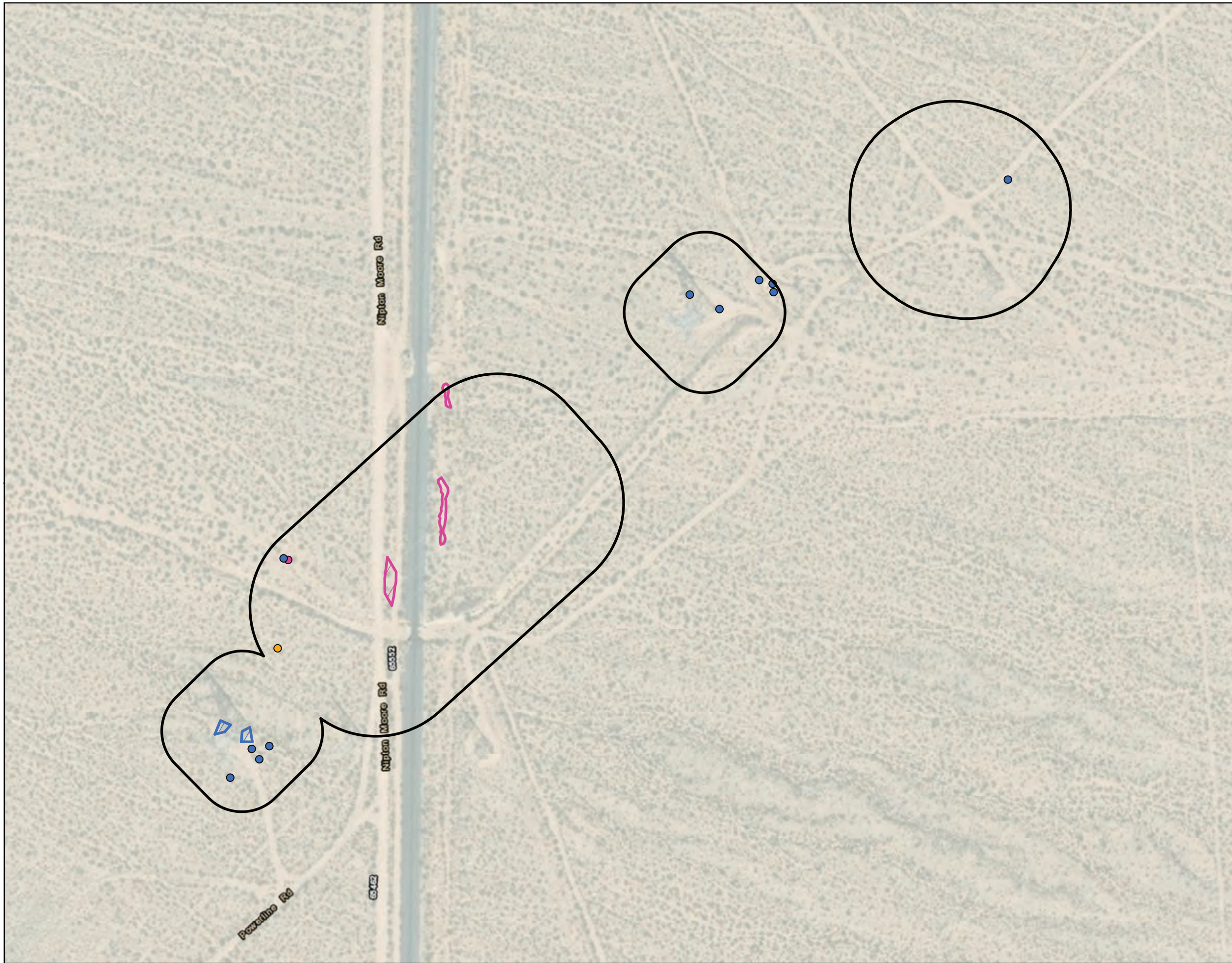
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
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 2021 SPECIAL-STATUS PLANT SURVEY REPORT



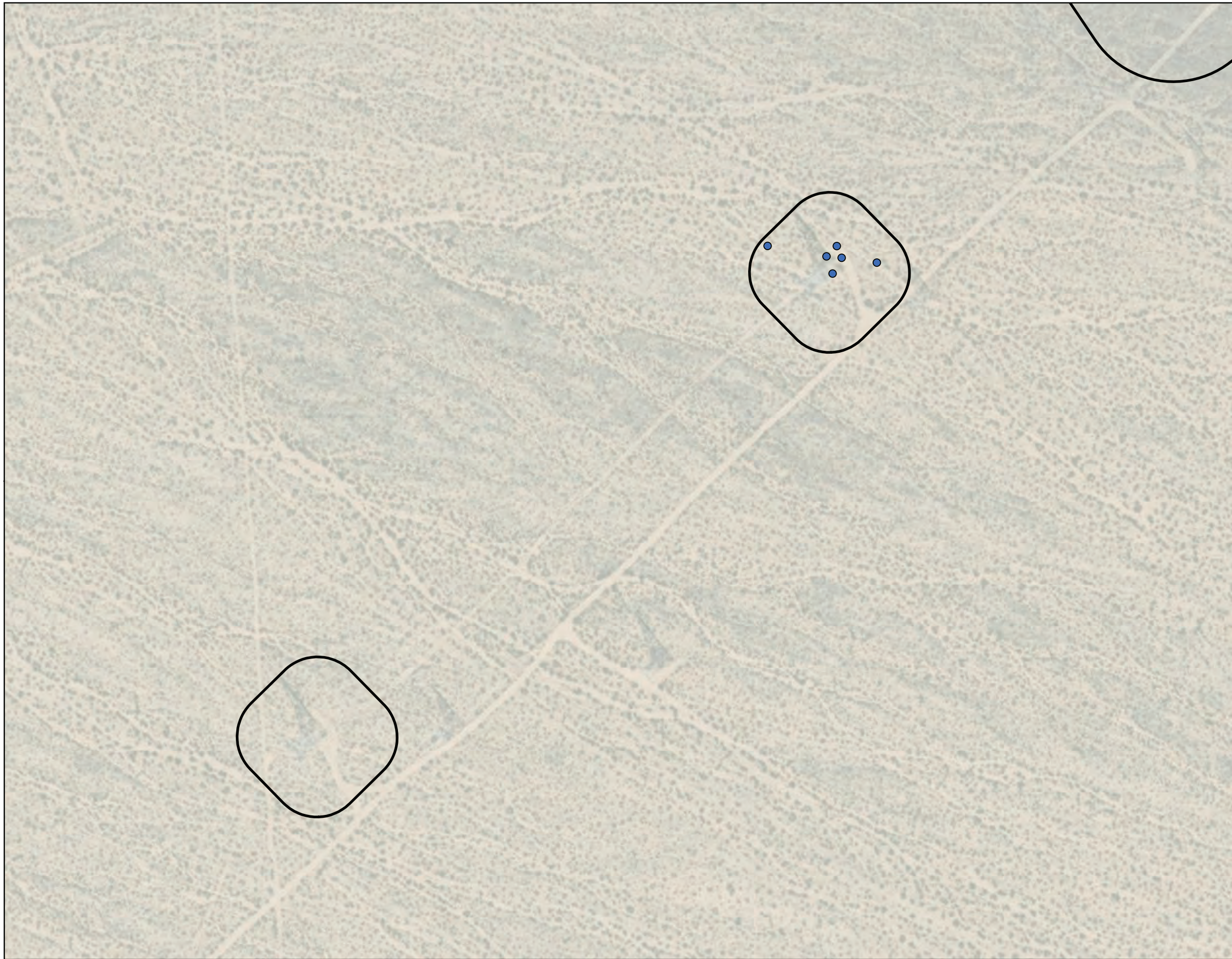


- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
 - Parish's club-cholla
- California Rare Plant Rank 4
 - Desert portulaca
 - Warty caltrop
- California Rare Plant Rank 4
 - ◊ Desert portulaca
 - ◊ Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION LINE REMEDIAL ACTION SCHEME PROJECT
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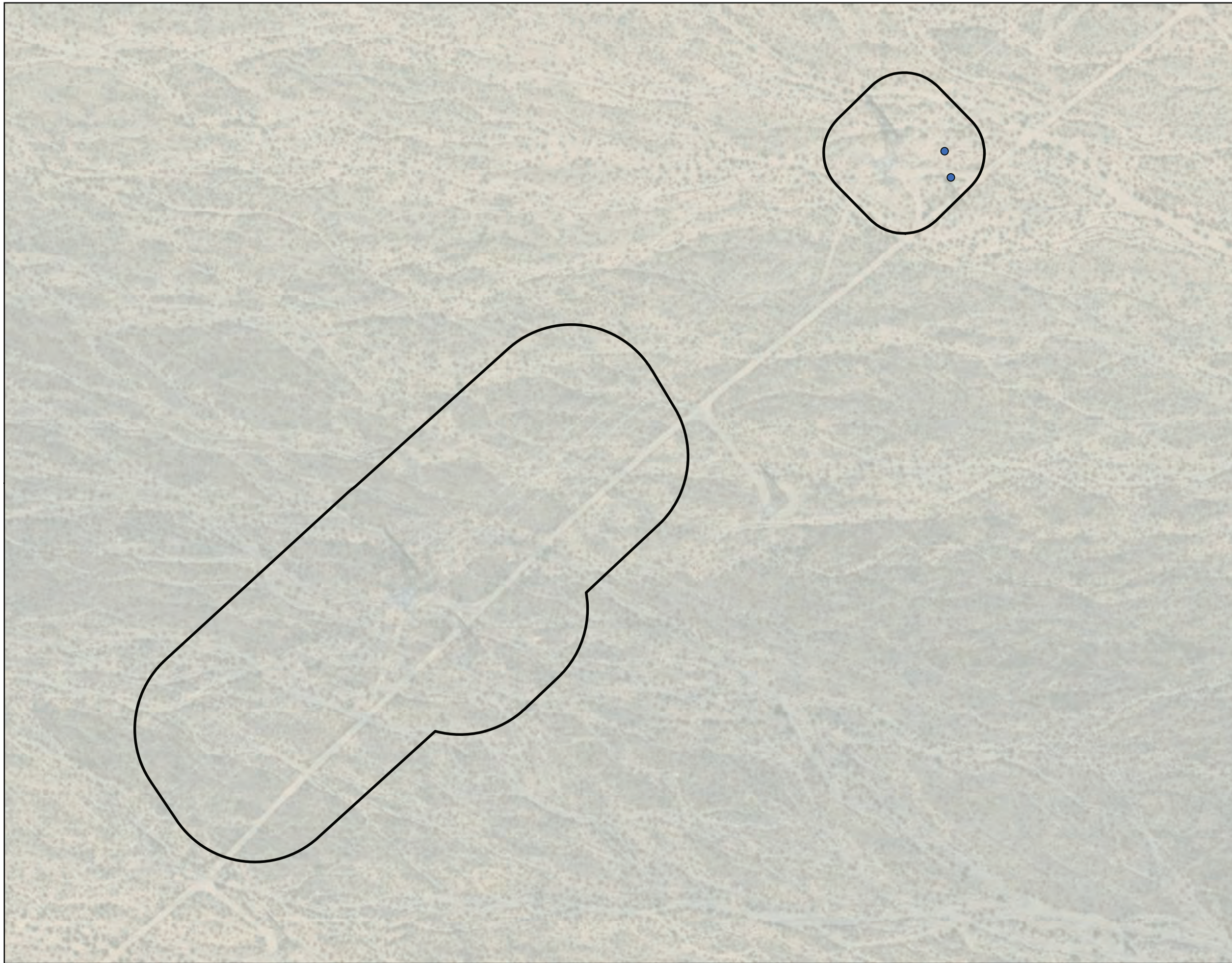
-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
-  Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
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- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Warty caltrop



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Special-status Plant Observations

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-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Parish's club-cholla



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
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N

0 200 Feet





○ Fall 2021 Survey Area

Fall 2021 Survey Results

California Rare Plant Rank 4

● Desert portulaca

● Warty caltrop

California Rare Plant Rank 4

○ Desert portulaca



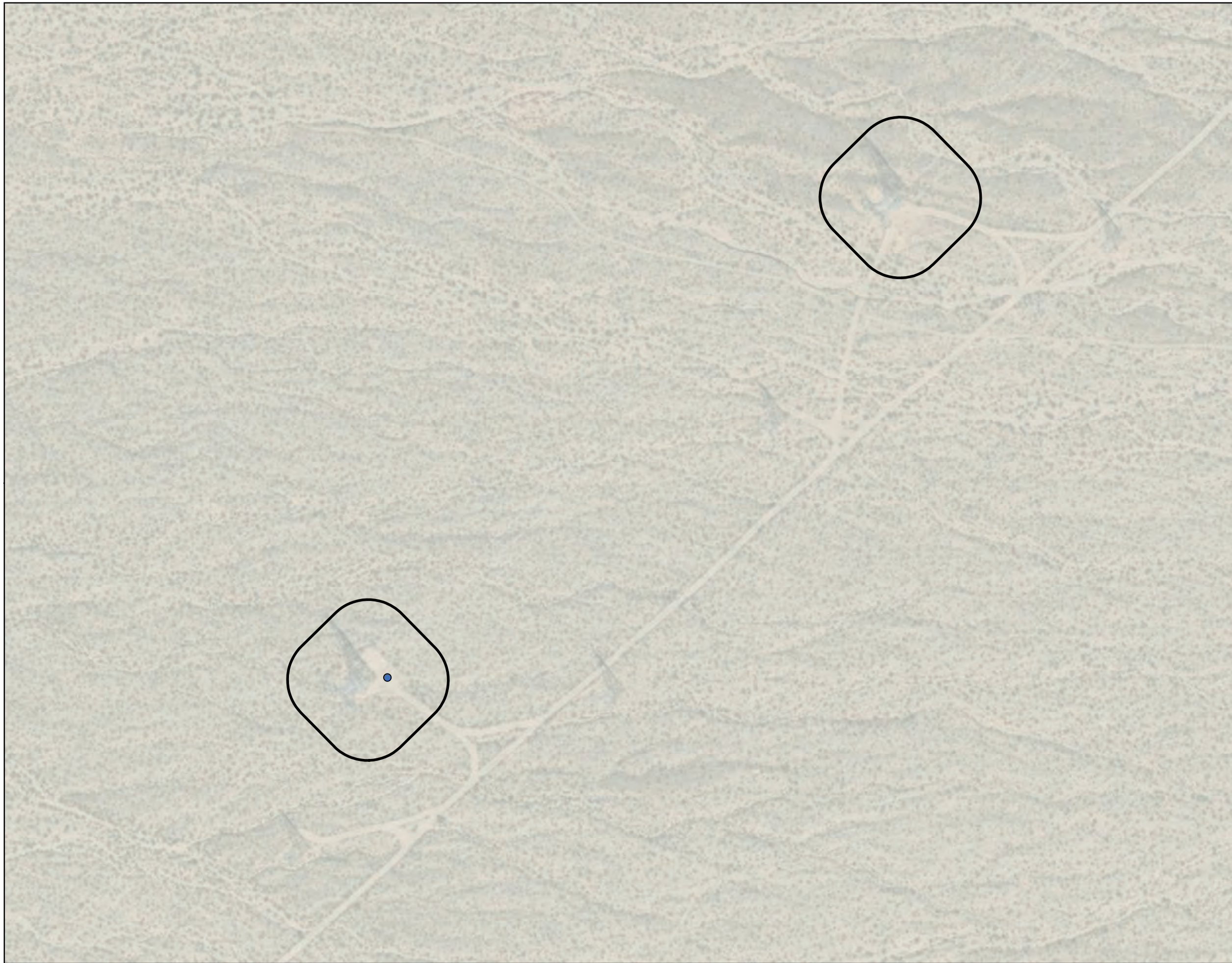
Figure 3, Page 76 of 83
Special-status Plant
Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
LINE REMEDIAL ACTION SCHEME PROJECT
2021 SPECIAL-STATUS PLANT SURVEY REPORT



0 200 Feet





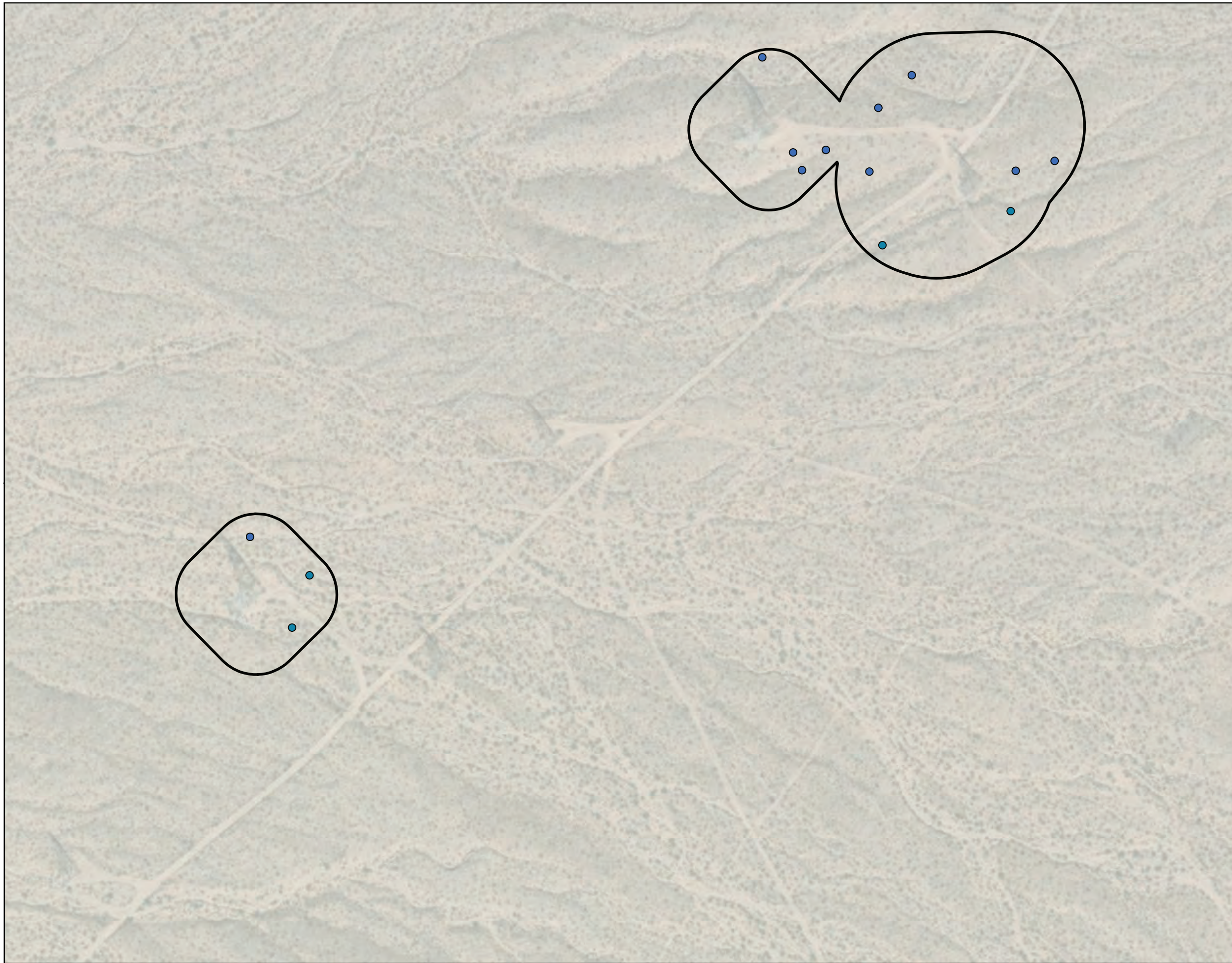
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 4
- Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
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- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
- Nineawn pappusgrass
- California Rare Plant Rank 4
- Warty caltrop

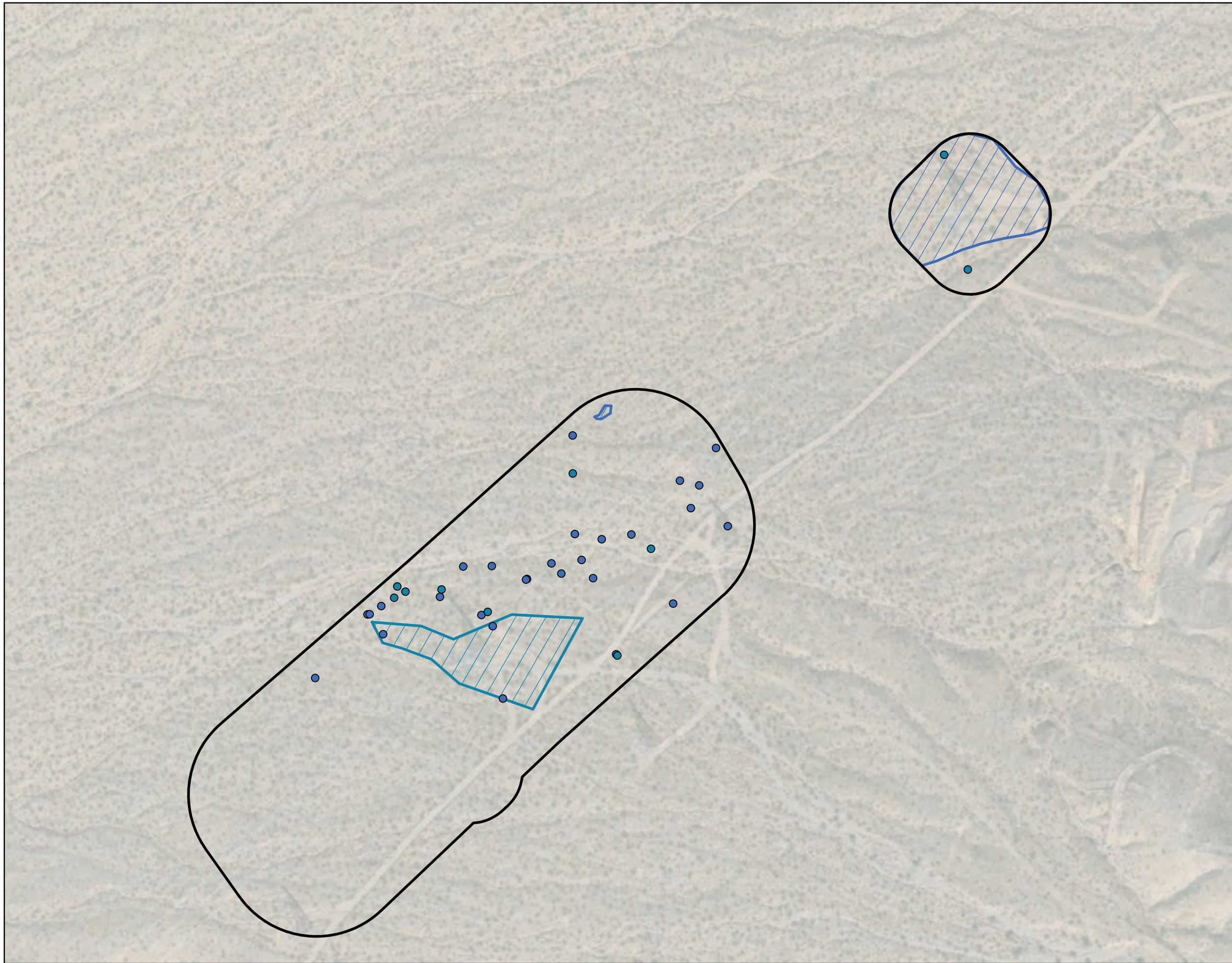


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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N 0 200 Feet





- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
 - Nineawn pappusgrass
- California Rare Plant Rank 4
 - Warty caltrop
- California Rare Plant Rank 2B
 - ▨ Nineawn pappusgrass
- California Rare Plant Rank 4
 - ▨ Warty caltrop



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Special-status Plant Observations

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 LINE REMEDIAL ACTION SCHEME PROJECT
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- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
- Nineawn pappusgrass
- California Rare Plant Rank 4
- ◌ Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

Artemis Environmental Services, Inc.






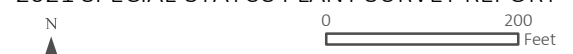
-  Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
-  Nineawn pappusgrass
- California Rare Plant Rank 4
-  Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
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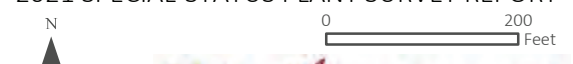


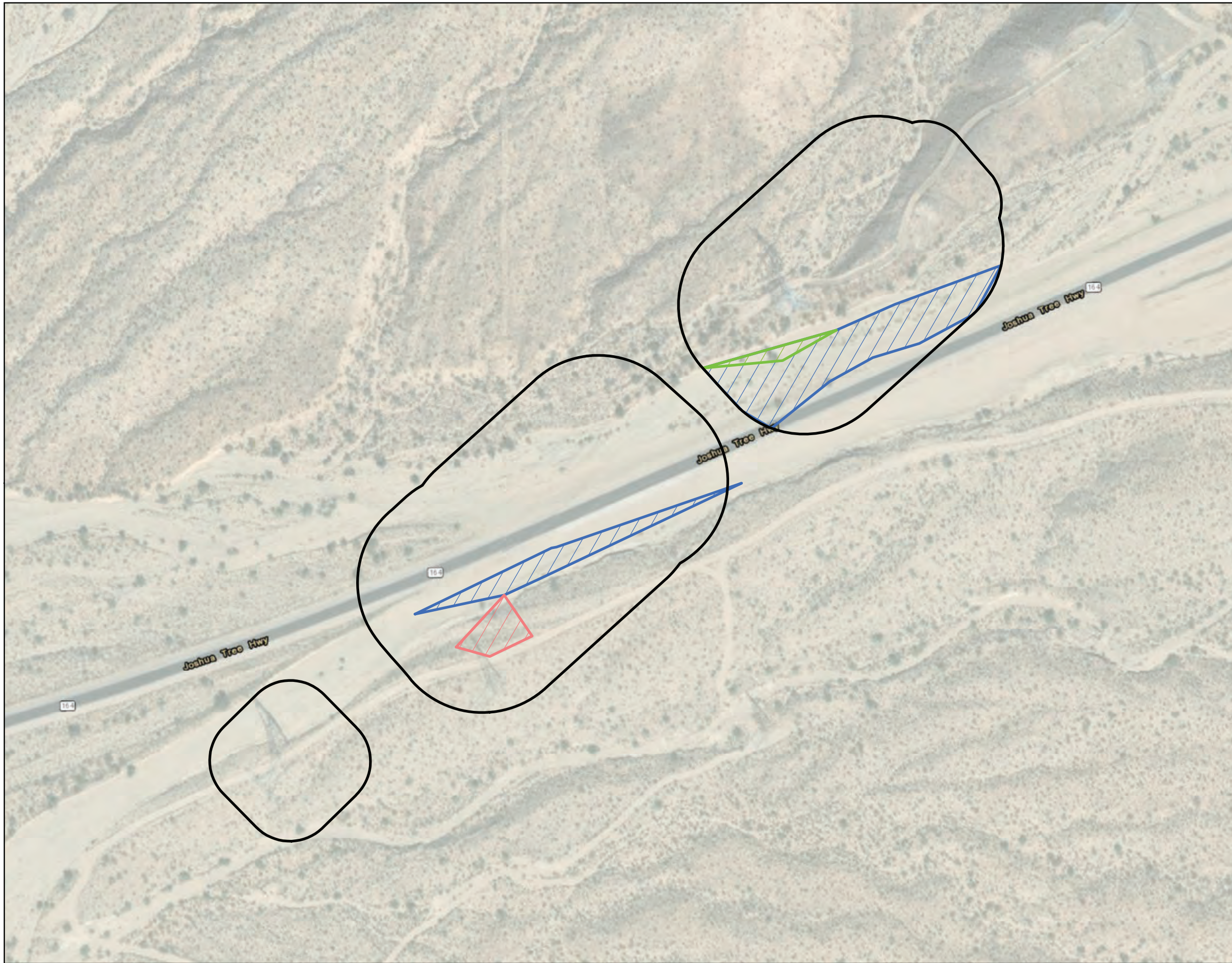
- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Pant Rank 2B
- Curved-spine beavertail
- Nineawn pappusgrass
- California Rare Pant Rank 2B
- ▨ Nineawn pappusgrass



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT





- Fall 2021 Survey Area
- Fall 2021 Survey Results
- California Rare Plant Rank 2B
- ◌ Clark Mountain spurge
- California Rare Plant Rank 4
- ◌ Revolute spurge
- ◌ Warty caltrop



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Special-status Plant Observations

LUGO-VICTORVILLE 500-KV TRANSMISSION
 LINE REMEDIAL ACTION SCHEME PROJECT
 2021 SPECIAL-STATUS PLANT SURVEY REPORT

N

0 200 Feet

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Appendix B

Special-status Plant Species Evaluation of Potential
to Occur

LUGO-VICTORVILLE 500 KV TRANSMISSION LINE REMEDIAL ACTION SCHEME PROJECT 2021 SPECIAL-STATUS PLANT SURVEY REPORT
APPENDIX B
SPECIAL-STATUS PLANT SPECIES EVALUATION OF POTENTIAL TO OCCUR

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
	Fed:	State:				
<i>Agave utahensis</i> var. <i>nevadensis</i> Clark Mountain agave	Fed: -- State: -- CRPR: 4.2 REG: --	--	May-Jul	Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland; carbonate or volcanic. 2,950-5,200 ft.	Absent; conspicuous perennial not observed during surveys	Spring and Fall
<i>Ageratina herbacea</i> desert ageratina	Fed: -- State: -- CRPR: 2B.3 REG: --	--	Jul-Oct	Pinyon and juniper woodland (rocky). 5,000-7,220 ft.	Absent; there are recent records within 2 miles, but the taxon was not observed during surveys	Fall
<i>Aloysia wrightii</i> Wright's beebrush	Fed: -- State: -- CRPR: 4.3 REG: --	--	Apr-Oct	Joshua tree woodland, Pinyon and juniper woodland; rocky, often carbonate. 2,950-5,250 ft.	Absent; conspicuous perennial not observed during surveys	Spring and Fall
<i>Androstephium breviflorum</i> small-flowered androstephium	Fed: -- State: -- CRPR: 2B.2 REG: --	--	Mar-Apr	Desert dunes, Mojavean desert scrub (bajadas). 685-2,920 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Astragalus bernardinus</i> San Bernardino milk-vetch	Fed: BLMS State: -- CRPR: 1B.2 REG: --	--	Apr-Jun	Joshua tree woodland, Pinyon and juniper woodland; Often granitic or carbonate. 2,950-6,560 ft.	Occurs; three plants were mapped near the Cima substation	Spring
<i>Astragalus cimae</i> var. <i>cimae</i> Cima milk-vetch	Fed: BLMS State: -- CRPR: 1B.2 REG: CDCA	--	Apr-May	Great Basin scrub, Joshua tree woodland, Pinyon and juniper woodland; clay. 2,915-6,070 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys in all areas of suitable habitat	Spring
<i>Astragalus lentiginosus</i> var. <i>borreganus</i> Borrego milk-vetch	Fed: -- State: -- CRPR: 4.3 REG: --	--	Feb-May	Mojavean desert scrub, Sonoran desert scrub; sandy. 95-2,935 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring

Lugo-Victorville 500 KV Transmission Line Remedial Action Scheme Project 2021 Special-Status Plant Survey Report

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
	Fed:	State:				
<i>Berberis fremontii</i> Fremont barberry	Fed: -- State: -- CRPR: 2B.3 REG: --		Mar-May	Joshua tree woodland, Pinyon and juniper woodland; Rocky, sometimes granitic. 3,755-5,645 ft.	Absent; conspicuous perennial not observed during surveys	Spring
<i>Blepharidachne kingii</i> King's eyelash grass	Fed: -- State: -- CRPR: 2B.3 REG: --		May	Great Basin scrub, usually carbonate. 3,495 – 7,005 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring
<i>Bouteloua eriopoda</i> black grama	Fed: -- State: -- CRPR: 4.2 REG: --		May-Aug	Joshua tree woodland, Pinyon and juniper woodland. 2,950-6,235 ft.	Absent; there are recent records within 5 miles, but the taxon was not observed during surveys	Spring and Fall
<i>Castela emoryi</i> Emory's crucifixion-thorn	Fed: -- State: -- CRPR: 2B.2 REG: --		(Apr)Jun-Jul (Sep-Oct)	Mojavean desert scrub, Playas, Sonoran desert scrub; gravelly. 295-2,380 ft.	Occurs; six plants were mapped in the southern portion of Segment 2	Spring and Fall
<i>Coryphantha chlorantha</i> desert pincushion	Fed: -- State: -- CRPR: 2B.1 REG: --		Apr-Sep	Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland; carbonate, gravelly, rocky. 145-5,595 ft.	Absent; conspicuous perennial not observed during surveys	Spring and Fall
<i>Coryphantha vivipara</i> var. <i>rosea</i> viviparous foxtail cactus	Fed: -- State: -- CRPR: 2B.2 REG: CDCA		May-Jun	Mojavean desert scrub, Pinyon and juniper woodland; carbonate. 4,100-8,860 ft.	Occurs; 92 plants were mapped near Cima in the Mojave National Preserve	Spring
<i>Cryptantha clokeyi</i> Clokey's cryptantha	Fed: BLMS State: -- CRPR: 1B.2 REG: --		Apr	Mojavean desert scrub. 2,380 – 4,480 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring
<i>Cuscuta californica</i> var. <i>apiculata</i> pointed dodder	Fed: -- State: -- CRPR: 3 REG: --		Feb-Aug	Mojavean desert scrub, Sonoran desert scrub; sandy. 0-1,640 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring and Fall

Lugo-Victorville 500 KV Transmission Line Remedial Action Scheme Project 2021 Special-Status Plant Survey Report

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
<i>Cymopterus multinervatus</i> purple-nerve cymopterus	Fed: State: CRPR: REG:	-- -- 2B.2 --	Mar-Apr	Mojavean desert scrub, Pinyon and juniper woodland; sandy or gravelly. 2,590-5,905 ft.	Occurs; 46 plants were mapped near Cima in the Mojave National Preserve	Spring
<i>Diplacus mohavensis</i> Mojave monkeyflower	Fed: State: CRPR: REG:	BLMS -- 1B.2 DRECP	Apr-Jun	Joshua tree woodland, Mojavean desert scrub; sandy or gravelly, often in washes. 1,980-3,960 ft.	Unlikely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Enneapogon desvauxii</i> nine-awned pappus grass	Fed: State: CRPR: REG:	-- -- 2B.2 --	Aug-Sep	Pinyon and juniper woodland (rocky, carbonate). 4,180-5,990 ft.	Occurs; about 551 plants were mapped in the northeastern portion of the Survey Area	Fall
<i>Eremothera boothii</i> ssp. <i>boothii</i> Booth's evening-primrose	Fed: State: CRPR: REG:	-- -- 2B.3 --	Apr-Sep	Joshua tree woodland, Pinyon and juniper woodland. 2,670-7,875 ft.	Absent; there are recent records within 5 miles, but the taxon was not observed during surveys	Spring and Fall
<i>Eriastrum harwoodii</i> Harwood's eriastrum	Fed: State: CRPR: REG:	BLMS -- 1B.2 --	Mar-Jun	Desert dunes. 410-3,000 ft.	Occurs; about 841 skeletons from the spring of 2020 were mapped in the Devil's Playground portion of the Mojave National Preserve	Spring
<i>Eriogonum heermannii</i> var. <i>floccosum</i> Clark Mountain buckwheat	Fed: State: CRPR: REG:	-- -- 4.3 --	Aug-Oct	Pinyon and juniper woodland (carbonate). 2,950-7,875 ft.	Absent; conspicuous perennial not observed during surveys	Fall
<i>Erioneuron pilosum</i> hairy erioneuron	Fed: State: CRPR: REG:	-- -- 2B.3 --	(Apr) May-Jun	Pinyon and juniper woodland (rocky, sometimes carbonate). 4,655-6,595 ft.	Likely; there are recent (<25 years) records within 2 miles. Poor spring conditions precluded surveys	Spring
<i>Euphorbia abramsiana</i> Abrams' spurge	Fed: State: CRPR: REG:	-- -- 2B.2 --	(Aug)Sep-Nov	Mojavean desert scrub, Sonoran desert scrub; sandy. -15-4,300 ft.	Occurs; about 5,467 plants were mapped near the Pisgah lava flow of Segment 1	Fall

Lugo-Victorville 500 KV Transmission Line Remedial Action Scheme Project 2021 Special-Status Plant Survey Report

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
	Fed:	State:				
<i>Euphorbia exstipulata</i> var. <i>exstipulata</i> Clark Mountain spurge	Fed: -- State: -- CRPR: 2B.1 REG: --	--	Sep	Mojavean desert scrub (rocky). 4,195-6,560 ft.	Occurs; 30 plants were mapped in Nevada	Fall
<i>Euphorbia revoluta</i> revolute spurge	Fed: -- State: -- CRPR: 4.3 REG: --	--	Aug-Sep	Mojavean desert scrub (rocky); 3,590-10,170 ft.	Occurs; 10 plants were mapped in Nevada	Fall
<i>Funastrum utahense</i> Utah vine milkweed	Fed: -- State: -- CRPR: 4.2 REG: --	--	(Mar)Apr- Jun (Sep- Oct)	Mojavean desert scrub, Sonoran desert scrub; sandy or gravelly. 325-4,710 ft.	Occurs; 91 plants were mapped throughout the central portion of the Survey Area	Spring and Fall
<i>Grusonia parishii</i> Parish's club-cholla	Fed: -- State: -- CRPR: 2B.2 REG: --	--	May-Jun (Jul)	Joshua tree woodland, Mojavean desert scrub, Sonoran desert scrub; sandy, rocky. 980-5,000 ft.	Occurs; 58 plants were mapped within the Mojave National Preserve	Spring and Fall
<i>Kallstroemia parviflora</i> wartly caltrop	Fed: -- State: -- CRPR: 4.2 REG: --	--	Aug-Nov	Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland; Sometimes disturbed areas. 2,805-5,595 ft.	Occurs; about 4,234 plants were mapped near the eastern end of the Survey Area	Fall
<i>Lycium torreyi</i> Torrey's box-thorn	Fed: -- State: -- CRPR: 4.2 REG: --	--	(Jan-Feb) Mar-Jun (Sep-Nov)	Mojavean desert scrub, Sonoran desert scrub; Sandy, rocky, washes, streambanks, desert valleys. -160-4,005 ft.	Absent; conspicuous perennial not observed during surveys	Spring and Fall
<i>Menodora spinescens</i> var. <i>mohavensis</i> Mojave menodora	Fed: BLMS State: -- CRPR: 1B.2 REG: --	--	Apr-May	Mojavean desert scrub; Andesite gravel, rocky hillsides, canyons. 2,260-6,560 ft.	Absent; conspicuous perennial not observed during surveys	Spring
<i>Mentzelia puberula</i> Darlington's blazing star	Fed: -- State: -- CRPR: 2B.2 REG: --	--	Mar-May	Mojavean desert scrub, Sonoran desert scrub; sandy or rocky. 295-4,200 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring

Lugo-Victorville 500 KV Transmission Line Remedial Action Scheme Project 2021 Special-Status Plant Survey Report

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
	Fed:	BLMS				
<i>Mentzelia tridentata</i> creamy blazing star	State: CRPR: REG:	-- 1B.3 --	Mar-May	Mojavean desert scrub; generally rocky . 2,310-3,875 ft.	Does Not Occur; there are recent (<25 years) records within 2 miles, but no suitable talus habitat is present; poor spring conditions precluded surveys	Spring
<i>Mirabilis coccinea</i> red four o'clock	State: CRPR: REG:	-- 2B.3 --	May-Jul	Pinyon and juniper woodland. 3,510-5,905 ft.	Absent; there are recent records within 5 miles, but the taxon was not observed during surveys	Spring and Fall
<i>Muilla coronata</i> crowned muilla	State: CRPR: REG:	-- 4.2 --	Mar-Apr (May)	Chenopod scrub, Joshua tree woodland, Mojavean desert scrub, Pinyon and juniper woodland. 2,195-6,430 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring
<i>Munroa squarrosa</i> false buffalo-grass	State: CRPR: REG:	-- 2B.2 --	Oct	Pinyon and juniper woodland, gravelly or rocky. 4,920 -5,905 ft.	Absent; there are recent records within 5 miles, but the taxon was not observed during surveys	Fall
<i>Nemacaulis denudata var. gracilis</i> slender cottonheads	State: CRPR: REG:	-- 2B.2 --	(Mar)Apr- May	Coastal dunes, Desert dunes, Sonoran desert scrub. -160-1,310 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Opuntia xcurvispina</i> curved-spine beavertail	State: CRPR: REG:	-- 2B.2 --	Apr-Jun	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland. 3,280-4,595 ft.	Occurs; 4 plants were mapped within the Mojave National Preserve	Spring
<i>Pediomelum castoreum</i> Beaver Dam breadroot	State: CRPR: REG:	BLMS -- 1B.2 --	Apr-May	Joshua tree woodland, Mojavean desert scrub; sandy. 2,000-5,030 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Pellaea truncata</i> spiny cliff-brake	State: CRPR: REG:	-- 2B.3 --	Apr-Jun	Pinyon and juniper woodland (volcanic or granitic, rocky). 3,935-7,055 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring

Lugo-Victorville 500 KV Transmission Line Remedial Action Scheme Project 2021 Special-Status Plant Survey Report

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
	Fed:	BLMS				
<i>Penstemon albomarginatus</i> white-margined beardtongue	Fed: State: CRPR: REG:	BLMS -- 1B.1 --	Mar-May (Jun)	Desert dunes (stabilized), Mojavean desert scrub (sandy). 2,095-3,495 ft.	Occurs; 4 plants were mapped near the Pisgah substation	Spring
<i>Penstemon pseudospectabilis</i> ssp. <i>pseudospectabilis</i> desert beardtongue	Fed: State: CRPR: REG:	-- -- 2B.2 --	Jan-May	Mojavean desert scrub, Sonoran desert scrub; often sandy washes, sometimes rocky. 260-6,350 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Penstemon utahensis</i> Utah beardtongue	Fed: State: CRPR: REG:	-- -- 2B.3 --	Apr-May	Chenopod scrub, Great Basin scrub, Mojavean desert scrub, Pinyon and juniper woodland; rocky. 3,490-8,200 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Phacelia coerulea</i> sky-blue phacelia	Fed: State: CRPR: REG:	-- -- 2B.3 --	Apr-May	Mojavean desert scrub, Pinyon and juniper woodland. 4,590-6,560 ft.	Likely; there are recent (<25 years) records within 2 miles; poor spring conditions precluded surveys	Spring
<i>Phacelia parishii</i> Parish's phacelia	Fed: State: CRPR: REG:	BLMS -- 1B.1 --	Apr-May (Jun), (Jul)	Mojavean desert scrub, Playas/clay or alkaline. 1,770 -3,935 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring
<i>Polygala acanthoclada</i> thorny milkwort	Fed: State: CRPR: REG:	-- -- 2B.3 --	May-Aug	Chenopod scrub, Joshua tree woodland, Pinyon and juniper woodland. 2,490-7,495 ft.	Absent; conspicuous perennial not observed during surveys	Spring and Fall
<i>Portulaca halimoides</i> desert portulaca	Fed: State: CRPR: REG:	-- -- 4.2 --	Sep	Joshua tree woodland (sandy). 3,280-3,935 ft.	Occurs; about 20,109 plants were mapped near the eastern end of the Survey Area	Fall
<i>Psoralea arborescens</i> var. <i>arborescens</i> Mojave indigo-bush	Fed: State: CRPR: REG:	-- -- 4.3 --	Apr-May	Mojavean desert scrub, Riparian scrub. 1,310 -3,890 ft.	Absent; conspicuous perennial not observed during surveys	Spring

Lugo-Victorville 500 KV Transmission Line Remedial Action Scheme Project 2021 Special-Status Plant Survey Report

Scientific Name Common Name	—Status—		Flowering Period ¹	Habitat and Elevation ¹	Potential to Occur and Analysis	Season
<i>Quercus turbinella</i> shrub live oak	Fed: State: CRPR: REG:	-- -- 4.3 --	Apr-Jun	Chaparral, Cismontane woodland, Lower montane coniferous forest, Pinyon and juniper woodland. 3,935 -6,560 ft.	Absent; conspicuous perennial not observed during surveys	Spring
<i>Sibara deserti</i> desert winged-rockcress	Fed: State: CRPR: REG:	-- -- 4.3 --	Mar-Apr	Mojavean desert scrub. 1,140-4,290 ft.	Unlikely; there are recent (<25 years) records within 5 miles; poor spring conditions precluded surveys	Spring
<i>Sphaeralcea rusbyi</i> var. <i>eremicola</i> Rusby's desert-mallow	Fed: State: CRPR: REG:	BLMS -- 1B.2 CDCA	Mar-Jun	Joshua tree woodland, Mojavean desert scrub. 3,195-5,395 ft.	Occurs; about 807 plants were mapped in the central portion of the Mojave National Preserve	Spring
<i>Xanthisma gracile</i> annual bristleweed	Fed: State: CRPR: REG:	-- -- 4.3 --	Apr-Jul (Sep)	Joshua tree woodland, Mojavean desert scrub. 4,000-5,100 ft.	Absent; there are recent records within 5 miles, but the taxon was not observed during surveys	Spring and Fall

¹ California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39).

Sensitivity Status Key

CNPS Threat Ranks:

0.1 = Seriously threatened in California (over 80 percent of occurrences threatened, high degree and immediacy of threat)
 0.2 = Moderately threatened in California (20 to 80 percent of occurrences threatened, moderate degree and immediacy of threat)
 0.3 = Not very threatened in California (less than 20 percent of occurrences threatened, low degree and immediacy of threat or no current threats known)

Regional (REG):

CDCA = California Desert Conservation Area Covered
 DRECP = Desert Renewable Energy Conservation Plans Covered
 -- = No Listing

State (California):

-- = No Listing

Federal (Fed):

BLMS = BLM Sensitive
 -- = No Listing

California Rare Plant Rank (CRPR):

1A = Plants presumed extinct in California
 1B = Plants rare and endangered in California and throughout their range
 2A = Plants presumed extirpated in California, but more common elsewhere
 2B = Plants rare, threatened, or endangered in California, but more common elsewhere
 3 = Plants about which more information is needed; a review list
 4 = Plants of limited distribution; a watch list

Appendix C

Representative Photographs

DRAFT



Photo 1: San Bernardino milk-vetch observed in the MNP during spring surveys (4/22/2021).



Photo 2: Crucifixion thorn observed in Segment 2 (9/03/2021).



Photo 3: Viviparous foxtail cactus observed in Segment 2 (4/08/2021).



Photo 4: Purple-nerve cymopterus observed in Segment 2 (4/12/2021).



Photo 5: Nine-awn pappusgrass in the far eastern portion of the Survey Area (9/20/2021).



Photo 6: Harwood's eriastrum remains observed in Segment 2 (9/27/2021).



Photo 7: Abrams' spurge observed in Segment 1 (9/01/2021).



Photo 8: Clark Mountain spurge in the far eastern Nevada portion of the Survey Area (9/09/2021).



Photo 9: Revolute spurge observed in Segment 2 (8/24/2021).



Photo 10: Utah vine milkweed observed in Segment 2 (9/02/2021).



Photo 11: Matted cholla observed in Segment 2 (9/22/2021).



Photo 12: Warty caltrop observed in Segment 2 (9/21/2021).



Photo 13: Curved-spine beavertail within the MNP (9/30/2021).



Photo 14: White-margined beardtongue remains observed in Segment 1 (9/02/2021).



Photo 15: Desert portulaca observed in Segment 2 (9/21/2021).



Photo 16: Rusby's desert-mallow observed in Segment 2 (4/09/2021).



Photo 17: Black grama observed near Segment 2 during a reference check (8/24/2021).



Photo 18: Abram's spurge observed near Segment 1 during a reference check (8/24/2021).



Photo 19: Utah vine milkweed observed in Segment 1 during a reference check (8/24/2021).



Photo 20: Warty caltrop observed near Segment 2 during a reference check (8/24/2021).



Photo 21: Desert portulaca (left) and purslane (right) observed near Segment 2 during a reference check (8/24/2021).

Appendix D

Plant Species Observed

DRAFT

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APPENDIX D
PLANT SPECIES OBSERVED

Family	Scientific Name	Common Name	Status
Agavaceae	<i>Hesperocallis undulata</i>	desert lily	
Agavaceae	<i>Yucca baccata</i> var. <i>baccata</i>	banana yucca	
Agavaceae	<i>Yucca brevifolia</i>	Joshua tree	
Agavaceae	<i>Yucca schidigera</i>	Mojave yucca	
Aizoaceae	<i>Trianthema portulacastrum</i>	desert horsepurslane	
Amaranthaceae	<i>Amaranthus albus</i> *	prostrate pigweed	
Amaranthaceae	<i>Amaranthus fimbriatus</i>	fringed amaranth	
Amaranthaceae	<i>Tidestromia suffruticosa</i> var. <i>oblongifolia</i>	honeysweet	
Apiaceae	<i>Cymopterus multinervatus</i>	purple-nerve cymopterus	2B.2
Apocynaceae	<i>Asclepias erosa</i>	desert milkweed	
Apocynaceae	<i>Asclepias subulata</i>	rush milkweed	
Apocynaceae	<i>Funastrum hirtellum</i>	trailing townula	
Apocynaceae	<i>Funastrum utahense</i>	Utah vine milkweed	4.2
Asteraceae	<i>Acamptopappus sphaerocephalus</i>	rayless goldenhead	
Asteraceae	<i>Adenophyllum cooperi</i>	Cooper's dogweed	
Asteraceae	<i>Adenophyllum porophylloides</i>	San Felipe dogweed	
Asteraceae	<i>Ambrosia xplatyspina</i>	hybrid bursage	
Asteraceae	<i>Ambrosia acanthicarpa</i>	annual bursage	
Asteraceae	<i>Ambrosia dumosa</i>	white bursage	
Asteraceae	<i>Ambrosia eriocentra</i>	woolly bursage	
Asteraceae	<i>Ambrosia salsola</i>	cheesebush	
Asteraceae	<i>Amphipappus fremontii</i>	Fremont's chaffbush	
Asteraceae	<i>Baccharis brachyphylla</i>	shortleaf baccharis	
Asteraceae	<i>Baileya multiradiata</i>	desert marigold	
Asteraceae	<i>Bebbia juncea</i> var. <i>aspera</i>	sweetbush	
Asteraceae	<i>Brickellia atractyloides</i>	spearleaf brickellbush	
Asteraceae	<i>Brickellia incana</i>	woolly brickellbush	
Asteraceae	<i>Chaenactis carphoclinia</i> var. <i>carphoclinia</i>	pebble pincushion	
Asteraceae	<i>Chaenactis fremontii</i>	Fremont pincushion	
Asteraceae	<i>Chaenactis stevioides</i>	desert pincushion	
Asteraceae	<i>Dieteria canescens</i> var. <i>leucanthemifolia</i>	hoary aster	
Asteraceae	<i>Encelia farinosa</i>	brittlebush	
Asteraceae	<i>Encelia frutescens</i>	button brittlebush	
Asteraceae	<i>Encelia virginensis</i>	Virgin River brittlebush	
Asteraceae	<i>Ericameria cooperi</i> var. <i>cooperi</i>	Cooper's goldenbush	
Asteraceae	<i>Ericameria linearifolia</i>	interior goldenbush	
Asteraceae	<i>Ericameria paniculata</i>	black-banded rabbitbrush	
Asteraceae	<i>Ericameria teretifolia</i>	green rabbitbrush	
Asteraceae	<i>Eriophyllum wallacei</i>	Wallace's woolly daisy	
Asteraceae	<i>Geraea canescens</i>	desert sunflower	

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Family	Scientific Name	Common Name	Status
Asteraceae	<i>Gutierrezia microcephala</i>	sticky snakeweed	
Asteraceae	<i>Gutierrezia sarothrae</i>	matchweed	
Asteraceae	<i>Layia glandulosa</i>	white layia	
Asteraceae	<i>Logfia depressa</i>	hierba limpia	
Asteraceae	<i>Malacothrix coulteri</i>	snake's-head	
Asteraceae	<i>Malacothrix glabrata</i>	desert dandelion	
Asteraceae	<i>Palafoxia arida</i>	desert palafox	
Asteraceae	<i>Pectis papposa</i> var. <i>papposa</i>	chinchweed	
Asteraceae	<i>Perityle emoryi</i>	Emory's rockdaisy	
Asteraceae	<i>Peucephyllum schottii</i>	Schott's pygmycedar	
Asteraceae	<i>Pleurocoronis pluriseta</i>	bush arrowleaf	
Asteraceae	<i>Porophyllum gracile</i>	slender poreleaf	
Asteraceae	<i>Psilostrophe cooperi</i>	whitestem paperflower	
Asteraceae	<i>Rafinesquia neomexicana</i>	New Mexico plumeseed	
Asteraceae	<i>Senecio flaccidus</i> var. <i>monoensis</i>	smooth threadleaf ragwort	
Asteraceae	<i>Stephanomeria exigua</i>	small wire-lettuce	
Asteraceae	<i>Stephanomeria pauciflora</i>	wire-lettuce	
Asteraceae	<i>Stylocline</i> sp.	neststraw	
Asteraceae	<i>Tetradymia stenolepis</i>	Mojave cottonthorn	
Asteraceae	<i>Trichoptilium incisum</i>	yellowdome	
Asteraceae	<i>Trixis californica</i> var. <i>californica</i>	California trixis	
Asteraceae	<i>Xylorhiza tortifolia</i> var. <i>tortifolia</i>	Mojave aster	
Bignoniaceae	<i>Chilopsis linearis</i> ssp. <i>arcuata</i>	desert willow	
Boraginaceae	<i>Amsinckia tessellata</i>	bristly fiddleneck	
Boraginaceae	<i>Cryptantha angustifolia</i>	narrow-leaved cryptantha	
Boraginaceae	<i>Cryptantha circumscissa</i> var. <i>circumscissa</i>	cushion cryptantha	
Boraginaceae	<i>Cryptantha dumetorum</i>	scrambling cryptantha	
Boraginaceae	<i>Cryptantha maritima</i>	Guadalupe cryptantha	
Boraginaceae	<i>Cryptantha micrantha</i>	redroot cryptantha	
Boraginaceae	<i>Cryptantha nevadensis</i> var. <i>nevadensis</i>	Nevada cryptantha	
Boraginaceae	<i>Cryptantha pterocarya</i> var. <i>cycloptera</i>	Tuscon cryptantha	
Boraginaceae	<i>Pectocarya heterocarpa</i>	mixed-nut pectocarya	
Boraginaceae	<i>Pectocarya platycarpa</i>	wide-toothed pectocarya	
Boraginaceae	<i>Pectocarya recurvata</i>	arched-nut pectocarya	
Boraginaceae	<i>Pectocarya setosa</i>	round-nut pectocarya	
Boraginaceae	<i>Phacelia crenulata</i>	notch-leaf scorpion-weed	
Boraginaceae	<i>Phacelia distans</i>	distant phacelia	
Boraginaceae	<i>Phacelia fremontii</i>	Fremont's phacelia	
Boraginaceae	<i>Phacelia vallis-mortae</i>	Death Valley phacelia	
Boraginaceae	<i>Plagiobothrys arizonicus</i>	Arizona popcornflower	
Boraginaceae	<i>Tiquilia plicata</i>	fan-leaved tiquilia	
Brassicaceae	<i>Brassica tournefortii</i> *	Saharan mustard	
Brassicaceae	<i>Caulanthus cooperi</i>	Cooper's wild cabbage	
Brassicaceae	<i>Caulanthus lasiophyllus</i>	California mustard	
Brassicaceae	<i>Descurainia pinnata</i>	western tansymustard	
Brassicaceae	<i>Lepidium fremontii</i>	desert pepperweed	

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Brassicaceae	<i>Lepidium lasiocarpum</i> ssp. <i>lasiocarpum</i>	shaggyfruit pepperweed	
Brassicaceae	<i>Sisymbrium irio</i> *	London rocket	
Brassicaceae	<i>Streptanthella longirostris</i>	longbeak streptanthella	
Brassicaceae	<i>Thysanocarpus curvipes</i>	sand fringepod	
Cactaceae	<i>Coryphantha vivipara</i> var. <i>rosea</i>	viviparous foxtail cactus	2B.2
Cactaceae	<i>Cylindropuntia acanthocarpa</i> var. <i>acanthocarpa</i>	buckhorn cholla	
Cactaceae	<i>Cylindropuntia echinocarpa</i>	silver cholla	
Cactaceae	<i>Cylindropuntia ramosissima</i>	pencil cholla	
Cactaceae	<i>Echinocactus polycephalus</i> var. <i>polycephalus</i>	cottontop cactus	
Cactaceae	<i>Echinocereus engelmannii</i>	Engelmann's hedgehog cactus	
Cactaceae	<i>Echinocereus mojavenis</i>	Mojave kingcup cactus	
Cactaceae	<i>Ferocactus cylindraceus</i>	California barrel cactus	
Cactaceae	<i>Grusonia parishii</i>	matted cholla	2B.2
Cactaceae	<i>Mammillaria tetrancistra</i>	common fishhook cactus	
Cactaceae	<i>Opuntia basilaris</i> var. <i>basilaris</i>	beavertail pricklypear	
Cactaceae	<i>Opuntia chlorotica</i>	pancake pricklypear	
Cactaceae	<i>Opuntia curvispina</i>	curved-spine beavertail	2B.2
Cactaceae	<i>Opuntia engelmannii</i> var. <i>engelmannii</i>	Engelmann pricklypear	
Cactaceae	<i>Opuntia phaeacantha</i>	brown-spined pricklypear	
Cactaceae	<i>Opuntia polyacantha</i> var. <i>erinacea</i>	Mojave pricklypear	
Caryophyllaceae	<i>Eremogone macradenia</i>	Mojave sandwort	
Chenopodiaceae	<i>Atriplex canescens</i>	fourwing saltbush	
Chenopodiaceae	<i>Atriplex confertifolia</i>	shadscale	
Chenopodiaceae	<i>Atriplex hymenelytra</i>	desertholly	
Chenopodiaceae	<i>Atriplex polycarpa</i>	allscale saltbush	
Chenopodiaceae	<i>Grayia spinosa</i>	spiny hopsage	
Chenopodiaceae	<i>Krascheninnikovia lanata</i>	winterfat	
Chenopodiaceae	<i>Salsola paulsenii</i> *	barbwire Russian thistle	
Chenopodiaceae	<i>Salsola</i> sp.*	Russian thistle	
Chenopodiaceae	<i>Suaeda nigra</i>	bush seepweed	
Cleomaceae	<i>Peritoma arborea</i>	bladderpod	
Convolvulaceae	<i>Cuscuta</i> sp.	dodder	
Crassulaceae	<i>Dudleya saxosa</i> ssp. <i>aloides</i>	Panamint liveforever	
Cucurbitaceae	<i>Cucurbita palmata</i>	coyote melon	
Cupressaceae	<i>Juniperus osteosperma</i>	Utah juniper	
Ephedraceae	<i>Ephedra californica</i>	California jointfir	
Ephedraceae	<i>Ephedra funerea</i>	Death Valley jointfir	
Ephedraceae	<i>Ephedra nevadensis</i>	Nevada jointfir	
Euphorbiaceae	<i>Ditaxis neomexicana</i>	New Mexico ditaxis	
Euphorbiaceae	<i>Euphorbia abramsiana</i>	Abrams' spurge	2B.2
Euphorbiaceae	<i>Euphorbia albomarginata</i>	rattlesnake sandmat	
Euphorbiaceae	<i>Euphorbia exstipulata</i> var. <i>exstipulata</i>	Clark Mountain spurge	2B.1
Euphorbiaceae	<i>Euphorbia micromera</i>	Sonoran sandmat	
Euphorbiaceae	<i>Euphorbia parishii</i>	Parish's sandmat	
Euphorbiaceae	<i>Euphorbia polycarpa</i>	smallseed sandmat	

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Family	Scientific Name	Common Name	Status
Euphorbiaceae	<i>Euphorbia revoluta</i>	revolute spurge	4.3
Euphorbiaceae	<i>Euphorbia serpillifolia</i>	thyme-leaved spurge	
Euphorbiaceae	<i>Euphorbia setiloba</i>	Yuma sandmat	
Euphorbiaceae	<i>Stillingia spinulosa</i>	annual toothleaf	
Fabaceae	<i>Astragalus bernardinus</i>	San Bernardino milk-vetch	1B.2
Fabaceae	<i>Astragalus layneae</i>	Layne milkvetch	
Fabaceae	<i>Astragalus lentiginosus</i> var. <i>fremontii</i>	Fremont's milkvetch	
Fabaceae	<i>Dalea mollissima</i>	soft prairie clover	
Fabaceae	<i>Lupinus concinnus</i>	bajada lupine	
Fabaceae	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	honey mesquite	
Fabaceae	<i>Psoralea arborescens</i> var. <i>simplicifolia</i>	Mojave indigo-bush	
Fabaceae	<i>Psoralea fremontii</i> var. <i>fremontii</i>	Fremont's indigo-bush	
Fabaceae	<i>Psoralea spinosus</i>	smoketree	
Fabaceae	<i>Senegalia greggii</i>	catclaw acacia	
Fabaceae	<i>Senna armata</i>	desert senna	
Geraniaceae	<i>Erodium cicutarium</i> *	redstem filaree	
Geraniaceae	<i>Erodium texanum</i>	Texas filaree	
Krameriaceae	<i>Krameria bicolor</i>	white ratany	
Krameriaceae	<i>Krameria erecta</i>	littleleaf ratany	
Lamiaceae	<i>Salvia columbariae</i>	chia	
Lamiaceae	<i>Salvia dorrii</i>	Dorr's sage	
Lamiaceae	<i>Scutellaria mexicana</i>	bladdersage	
Loasaceae	<i>Eucnide urens</i>	desert stingbush	
Loasaceae	<i>Mentzelia albicaulis</i>	whitestem blazingstar	
Loasaceae	<i>Mentzelia involucrata</i>	bracted blazingstar	
Loasaceae	<i>Petalonyx thurberi</i>	Thurber's sandpaper plant	
Malvaceae	<i>Eremalche rotundifolia</i>	desert fivespot	
Malvaceae	<i>Sphaeralcea ambigua</i>	desert globemallow	
Malvaceae	<i>Sphaeralcea rusbyi</i> var. <i>eremicola</i>	Rusby's desert-mallow	1B.2
Molluginaceae	<i>Mollugo cerviana</i> *	threadstem carpetweed	
Nyctaginaceae	<i>Allionia incarnata</i> var. <i>incarnata</i>	trailing windmills	
Nyctaginaceae	<i>Boerhavia coulteri</i> var. <i>palmeri</i>	Coulter's spiderling	
Nyctaginaceae	<i>Boerhavia triquetra</i> var. <i>intermedia</i>	slender spiderling	
Nyctaginaceae	<i>Boerhavia wrightii</i>	largebract spiderling	
Nyctaginaceae	<i>Mirabilis laevis</i>	desert wishbone-bush	
Nyctaginaceae	<i>Mirabilis multiflora</i>	Colorado four o'clock	
Oleaceae	<i>Menodora spinescens</i> var. <i>spinescens</i>	spiny menodora	
Onagraceae	<i>Camissonia campestris</i> ssp. <i>campestris</i>	Mojave suncup	
Onagraceae	<i>Chylismia brevipes</i>	yellow cups	
Onagraceae	<i>Chylismia claviformis</i>	browneyes	
Onagraceae	<i>Eremothera boothii</i>	Booth's evening primrose	
Onagraceae	<i>Eremothera refracta</i>	narrow leaved primrose	
Onagraceae	<i>Oenothera californica</i> ssp. <i>avita</i>	California evening primrose	
Orobanchaceae	<i>Castilleja chromosa</i>	desert paintbrush	
Papaveraceae	<i>Argemone</i> sp.	pricklypoppy	
Papaveraceae	<i>Eschscholzia minutiflora</i>	pygmy poppy	

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Plantaginaceae	<i>Penstemon albomarginatus</i>	white-margined beardtongue	1B.1
Plantaginaceae	<i>Plantago ovata</i>	desert indianwheat	
Poaceae	<i>Aristida adscensionis</i>	sixweeks threeawn	
Poaceae	<i>Aristida californica</i>	California threeawn	
Poaceae	<i>Aristida purpurea</i> var. <i>longiseta</i>	red threeawn	
Poaceae	<i>Bouteloua aristidoides</i> var. <i>aristidoides</i>	needle grama	
Poaceae	<i>Bouteloua barbata</i> var. <i>barbata</i>	sixweeks grama	
Poaceae	<i>Bromus rubens</i> *	red brome	
Poaceae	<i>Bromus tectorum</i> *	cheatgrass	
Poaceae	<i>Dasyochloa pulchella</i>	fluff grass	
Poaceae	<i>Elymus elymoides</i>	squirreltail	
Poaceae	<i>Enneapogon desvauxii</i>	nine-awn pappusgrass	2B.2
Poaceae	<i>Eragrostis cilianensis</i> *	stinkgrass	
Poaceae	<i>Eragrostis lehmanniana</i> *	Lehmann's love grass	
Poaceae	<i>Hilaria rigida</i>	big galleta	
Poaceae	<i>Hordeum</i> sp.	barley	
Poaceae	<i>Muhlenbergia porteri</i>	bush muhly	
Poaceae	<i>Panicum urvilleanum</i>	silky panic grass	
Poaceae	<i>Poa secunda</i>	Nevada blue grass	
Poaceae	<i>Schismus</i> spp.*	Mediterranean grass	
Poaceae	<i>Sporobolus contractus</i>	spike dropseed	
Poaceae	<i>Sporobolus cryptandrus</i>	sand dropseed	
Poaceae	<i>Sporobolus flexuosus</i>	mesa dropseed	
Poaceae	<i>Stipa hymenoides</i>	sand rice grass	
Poaceae	<i>Stipa speciosa</i>	desert needlegrass	
Polemoniaceae	<i>Eriastrum harwoodii</i>	Harwood's eriastrum	1B.2
Polemoniaceae	<i>Eriastrum</i> sp.	woollystar	
Polemoniaceae	<i>Gilia</i> sp.	gilia	
Polemoniaceae	<i>Linanthus dichotomus</i>	evening snow	
Polemoniaceae	<i>Linanthus filiformis</i>	yellow gilia	
Polygonaceae	<i>Centrostegia thurberi</i>	red triangles	
Polygonaceae	<i>Chorizanthe brevicornu</i>	brittle spineflower	
Polygonaceae	<i>Chorizanthe rigida</i>	Devil's spineflower	
Polygonaceae	<i>Eriogonum brachypodum</i>	Parry's wild buckwheat	
Polygonaceae	<i>Eriogonum deflexum</i>	skeleton weed	
Polygonaceae	<i>Eriogonum fasciculatum</i> var. <i>polifolium</i>	Eastern Mojave buckwheat	
Polygonaceae	<i>Eriogonum inflatum</i>	desert trumpet	
Polygonaceae	<i>Eriogonum nidularium</i>	birdnest wild buckwheat	
Polygonaceae	<i>Eriogonum palmerianum</i>	Palmer's wild buckwheat	
Polygonaceae	<i>Eriogonum plumatella</i>	Yucca wild buckwheat	
Polygonaceae	<i>Eriogonum pusillum</i>	yellow turbans	
Polygonaceae	<i>Eriogonum trichopes</i>	little desert trumpet	
Polygonaceae	<i>Eriogonum wrightii</i>	bastard-sage	
Polygonaceae	<i>Oxytheca perfoliata</i>	roundleaf puncturebract	
Polygonaceae	<i>Rumex hymenosepalus</i>	canaigre dock	
Portulacaceae	<i>Portulaca halimoides</i>	desert purselane	4.2

Family	Scientific Name	Common Name	Status
Portulacaceae	<i>Portulaca oleracea</i> *	purslane	
Pteridaceae	<i>Myriopteris parryi</i>	Parry's lipfern	
Ranunculaceae	<i>Delphinium parishii</i>	desert larkspur	
Resedaceae	<i>Oligomeris linifolia</i>	lineleaf whitepuff	
Rosaceae	<i>Coleogyne ramosissima</i>	blackbrush	
Rosaceae	<i>Prunus fasciculata</i>	desert almond	
Rosaceae	<i>Purshia stansburyana</i>	cliffrose	
Rubiaceae	<i>Galium stellatum</i>	starry bedstraw	
Rutaceae	<i>Thamnosma montana</i>	turpentine broom	
Simaroubaceae	<i>Castela emoryi</i>	crucifixion thorn	2B.2
Solanaceae	<i>Datura wrightii</i>	jimsonweed	
Solanaceae	<i>Lycium andersonii</i>	Anderson's box thorn	
Solanaceae	<i>Lycium cooperi</i>	Cooper's box thorn	
Solanaceae	<i>Nicotiana obtusifolia</i>	desert tobacco	
Solanaceae	<i>Physalis crassifolia</i>	thick-leaved groundcherry	
Tamaricaceae	<i>Tamarix aphylla</i> *	athel	
Tamaricaceae	<i>Tamarix ramosissima</i> *	saltcedar	
Viscaceae	<i>Phoradendron californicum</i>	desert mistletoe	
Zygophyllaceae	<i>Kallstroemia californica</i>	California caltrop	
Zygophyllaceae	<i>Kallstroemia parviflora</i>	warty caltrop	4.2
Zygophyllaceae	<i>Larrea tridentata</i>	creosote bush	
Zygophyllaceae	<i>Tribulus terrestris</i> *	puncturevine	

* Non-native species

Notes:

CNPS Rare Plant Ranks (CRPR):

- 1A = Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
- 1B = Plants Rare, Threatened, or Endangered in California and Elsewhere
- 2A = Plants Presumed Extirpated in California, but More Common Elsewhere
- 2B = Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
- 3 = Plants about Which More Information is Needed
- 4 = Plants of Limited Distribution

CNPS Threat Ranks:

- 0.1 = Seriously threatened in California (over 80 percent of occurrences threatened; high degree and immediacy of threat)
- 0.2 = Moderately threatened in California (20 to 80 percent of occurrences threatened; moderate degree and immediacy of threat)
- 0.3 = Not very threatened in California (less than 20 percent of occurrences threatened; low degree and immediacy of threat or no current threats known)