

**2018 FOCUSED PLANT SURVEY RESULTS
FOR THE TL 649 WOOD-TO-STEEL POLE
REPLACEMENT PROJECT**

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SECTION 1.0 – PROJECT DESCRIPTION

SDG&E proposes the TL 649 Wood-to-Steel Pole Replacement project (Proposed Project) in an effort to fire-harden existing facilities in SDG&E's service territory. SDG&E proposes to replace wood poles with steel poles along the existing 69-kilovolt (kV) single-circuit power line. Installation of steel poles will minimize damages to utilities in the event of a fire, thereby increasing system reliability, decreasing routine maintenance needs, and increasing the life span of both the poles and the entire line.

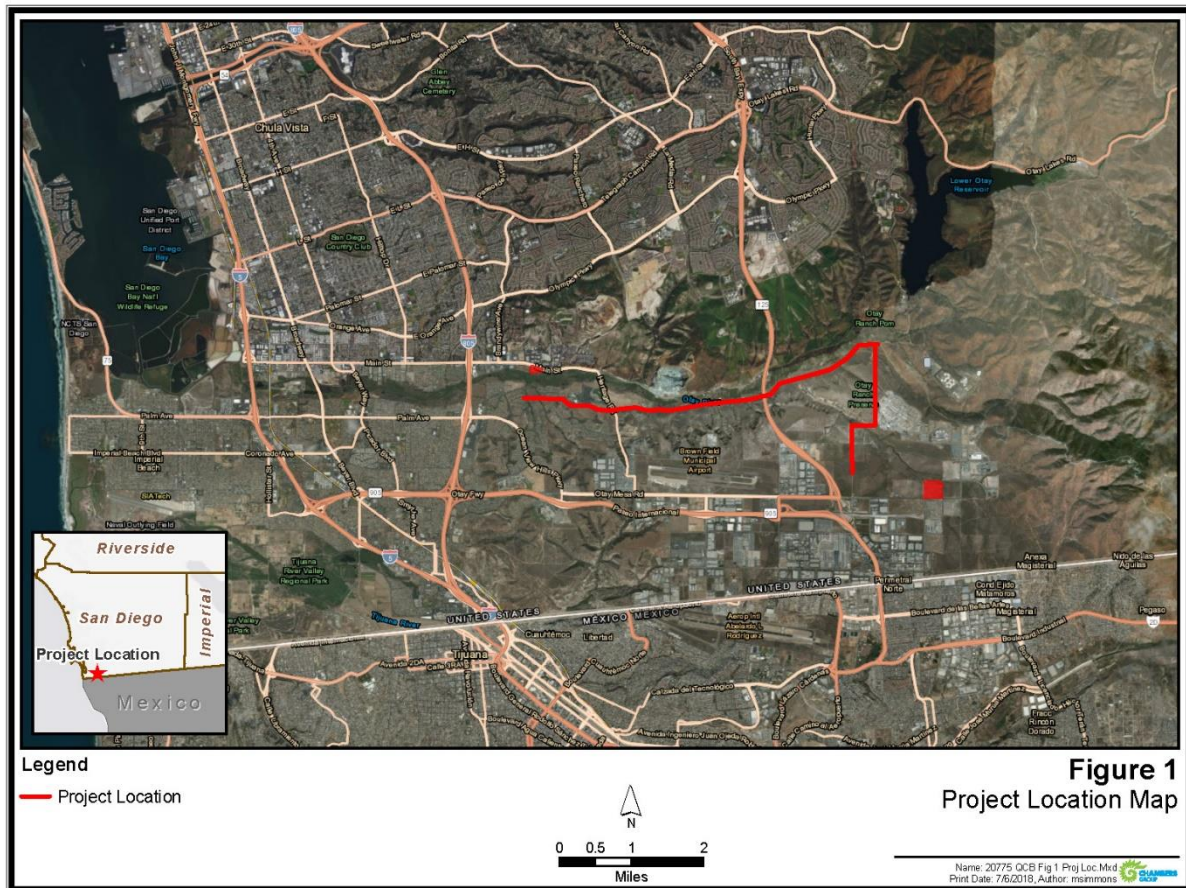
Specifically, SDG&E proposes to conduct the following activities as part of the Proposed Project:

- Replace approximately 118 existing wood power line and interset distribution line poles with galvanized steel structures. Of the 118 replacement structures, approximately 21 poles will require a pier foundation, approximately 7 will require a micropile foundation, and the remaining 90 will be directly buried.
- Reroute approximately 130 feet of existing underground distribution lines.
- Remove approximately 15 existing wood poles.
- Install approximately two new steel poles.
- Conduct overhead work on one existing pole.
- Transfer existing power line conductors to the new steel poles.
- Replace the existing distribution conductors with new aluminum conductor steel-reinforced (ACSR) distribution conductors.

1.1 PROJECT LOCATION

This segment of TL 649 is located in the Cities of San Diego and Chula Vista, California (State), as well as unincorporated San Diego County (County) (Figure 1). The Proposed Project extends east from Black Coral Way and Sea Lavender Way in the City of San Diego for approximately 5.0 miles; then travels south for approximately 2.0 miles to just north of Otay Mesa Road in unincorporated San Diego County. Over this distance, TL 649 traverses private and public lands, including lands owned by the County of San Diego, the City of San Diego, the City of Chula Vista, the State of California, and SDG&E.

Figure 1. Project Location Map



1.2 2018 SURVEY AREA LOCATION

The following paragraphs describe surveys that were conducted within the Biological Survey Area (BSA) for the Proposed Project. The BSA covers the Proposed Project area (i.e., the physical limits of all proposed work areas) and also includes a 300-foot buffer (150 feet on each side of the transmission centerline), a 10-foot buffer along both sides of access roads, and a 50-foot buffer around staging yards and other work areas in order to account for minor shifts in work areas where potential indirect effects to biological resources could occur.

1.3 PURPOSE OF THE SURVEYS

The purpose of the 2018 botanical surveys was: 1) to update the existing vegetation communities maps based on current conditions and revised engineering design, and 2) to update the 2014 focused plant surveys with any new occurrences of special-status plant species, particularly within the Proposed Project work areas per BIO-1 of the Mitigation Monitoring and Reporting Plan (MMRP) for the Project. Understanding the constraints within their work areas and any potential mitigation necessary will assist SDG&E with final design of their project and biological monitoring needs.

1.4 VEGETATION TYPES

There were 35 vegetation communities and 2 additional unvegetated areas identified within the BSA in 2018 (Table 1). Vegetation community names, to the greatest extent possible, follow the *Manual of California Vegetation, Second Edition* (MCVII, Sawyer et al. 2009). Vegetation types were originally mapped by Chambers Group biologists in 2014 and updated in 2018 (Table 1 and Appendix A). Descriptions of the communities can be found in the Biological Technical Report for the project (Chambers Group 2015).

Table 1. TL649 Wood-To-Steel Project Vegetation Communities

Vegetation Communities	
Annual Brome Grassland	Lemonade Berry Stand
Arroyo Willow-Mulefat Woodland	Mulefat Thickets
Black Willow Forest	Mulefat Thickets-Restoration
Broom Baccharis Scrub	Pale Spike Rush Marshes
Disturbed Broom Baccharis Scrub	Purple Needlegrass Grassland
California Bulrush Marsh	Disturbed Purple Needlegrass Grassland
California Sagebrush-California Buckwheat Scrub	San Diego Mesa Claypan Vernal Pool
Disturbed California Sagebrush-California Buckwheat Scrub	Disturbed San Diego Mesa Claypan Vernal Pools
Castor Bean Thickets	San Diego Mesa Claypan Vernal Pool Native Grassland Mix
Coast Prickly Pear Scrub	Singlewhorl Burrobush-Broom Baccharis Scrub
Coast Prickly Pear Scrub-Restoration	Singlewhorl Burrobush Scrub
Disturbed Coast Prickly Pear Scrub	Spiny Rush Marsh-Restoration
Creeping Ryegrass Grassland	Tamarisk Thickets
Disturbed	Tecate Cypress Stands
Fremont Cottonwood Forest	Upland Mustard-Fennel Alliance
Giant Reed Breaks	Upland Mustards
Landscape/Ornamental	Vegetated Rip-Rap Channel
Lemonade Berry - California Sagebrush-California Buckwheat Scrub	
Other Areas	
Urban and Developed	Bare Ground

SECTION 2.0 – METHODS

The surveys focused on plant species within the following four designations: 1) Federally threatened and federally endangered (FT and FE), 2) California state listed threatened and state endangered (CT and CE), 3) SDG&E's Subregional Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP), and 4) California Rare Plant Rank (CRPR) 1, 2, 3, and 4. Plants with a rare plant rank of 1 and 2 are, in general, subject to CEQA Guidelines Section 15380(b) criteria, and adverse effects to these species may be considered significant. Impacts to plants that have a rare plant rank of 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those with ranks of 1 or 2, impacts on them are less frequently considered potentially significant. The surveys were conducted in accordance with the California Department of Fish and Wildlife (CDFW) *Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities* (CDFW 2000) and the California Native Plant Society's (CNPS) Botanical Survey Guidelines (CNPS 2001).

A list of special-status plant species was developed for the Proposed Project by reviewing the results of various database searches for special-status plant species reported within 5 miles of the BSA. The focused plant surveys were conducted in two rounds by Chambers Group botanists Clark Austin, Natalie Borchardt, Caesara Brungraber, Heather Clayton, Travis Cooper, Brian Cropper, John Dicus, Melanie Dicus, Dave Fleitner, Maya Mazon, Kaelin McAtee, Margie Mulligan, and Andrew Pignolo. The 2018 survey dates were April 23-24, 26-27, and 30; and June 11-13, and 25-27, 2018.

During the focused plant surveys, the botanists both visually scanned and walked meandering transects through the entire BSA for the presence of special-status plant species. When a special-status plant species was observed, a waypoint was taken with a handheld Global Positioning System (GPS) device that recorded the plant's location. Where vegetation was very dense on steep slopes or behind fenced areas (e.g., Donovan State Prison), documentation of some species was accomplished through the use of binoculars and marking of the species' location on a field map that was later digitized and incorporated into the Geographic Information System (GIS) database.

The surveys included all areas identified by SDG&E as potential work areas and associated rights-of-way in both 2014 and 2018. Additional surveys were conducted in 2015 by Blackhawk Environmental, but were only relegated to areas associated with installation of an underground zinc ribbon for cathodic corrosion protection of the gas pipeline beneath the powerline. Table 3 includes counts for those perennial species observed in 2014 and 2015 as well as additional individuals observed in 2018. Botanists checked populations of perennial species observed in 2014 to verify presence of those populations in 2018. If additional individuals were observed, these were counted and recorded. No retractions were made to the 2014 dataset except within an identified work area if perennial species were no longer present at the time of the 2018 surveys.

Due to the ephemeral nature of herbaceous annual species and bulbiferous species, only those special-status individuals of annual species observed in 2018 are presented in Table 3. Absence of a previously observed herbaceous individual in 2014 or 2015 does not preclude its presence in 2018 even if it was not again observed. Rainfall in 2018 was below average as is shown in Table 2 (NOAA 2018). As in 2014, the below average precipitation and above average temperatures in 2018 may have reduced the occurrences of special-status plants during the surveys (e.g., the density of annual species such as Otay tarplant may have been lower than historically recorded during times of above-average rainfall). Many plants will go into early dormancy without sufficient water; during dormancy, the plants often forego producing flowers and may not be evident. It is presumed that herbaceous species, if observed in 2014 or 2015, may still be

present in the seed bank or below ground (e.g., *Bloomeria clevelandii*) in 2018 and they have the potential to flower in future years under sufficient rainfall conditions.

Table 2: Weather Conditions of Chula Vista (April-August 2018)

Month (2018)	Total Precipitation (inches)	Weather Conditions & Storm Events
April	0.05	No storm events. Above average temperatures.
May	0.20	No storm events. Above average temperatures.
June	none	No storm events. Above average temperatures.
July	none	No storm events. Above average temperatures.
August	none	No storm events. Above average temperatures.

All plant species observed during the focused surveys are included in Appendix B. Plants of uncertain identity were collected and subsequently identified from keys, descriptions, and illustrations in *The Jepson Manual: Vascular Plants of California, Second Edition* (Baldwin et al. 2012) and *A Flora of Southern California* (Munz 1974). Plant nomenclature follows that of the *Checklist of the Vascular Plants of San Diego County, Fifth Edition* (Rebman and Simpson 2014) and Baldwin et al. (2012), where appropriate.

SECTION 3.0 – RESULTS

A total of 404 plant species, including 225 native species and 179 non-native species, were observed within the BSA during the 2014, 2015 and 2018 surveys (Appendix B). Twenty-seven special-status species were observed during the 2014, 2015 and 2018 surveys (Table 3), where three are federal- and/or state-listed as endangered species. Two special-status species were only observed during a separate survey effort along a portion of the alignment for the zinc ribbon project in 2015, but these species were not again observed in 2018. This may have occurred due to below average rainfall totals during the 2018 growing season.

The surveys were conducted during the appropriate blooming period for all target species. No other federal- and/or state-listed endangered or threatened or otherwise sensitive plant species were observed during the surveys. Point and polygon data from 2014, 2015 and 2018 are shown on the focused plant survey results maps (Appendix C). Representative photographs of the special-status plant species observed during the 2018 surveys are included in Appendix D.

Table 3. Special-Status Plant Species Observed

Scientific Name	Common Name	Blooming Period	Status*	Number of Individuals Observed
<i>Adolphia californica</i>	spineshrub	December to March	CRPR 2B.1	34
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	April to June	CRPR 2B.1	282
<i>Ambrosia monogyra</i>	leafy burrobrush	August to November	CRPR 2B.2	2,088
<i>Arctostaphylos otayensis</i>	Otay manzanita	January to April	CRPR 1B.2	1
<i>Artemisia palmeri</i>	Palmer's sage	May to September	CRPR 4.2	31
<i>Atriplex pacifica</i>	South Coast saltbush	March to October	CRPR 1B.2	16
<i>Bahiopsis [Viguiera] laciniata</i>	San Diego sunflower	February to August	CRPR 4.3	2,000
<i>Bergerocactus emoryi</i>	golden-club cactus	May to June	CRPR 2B.2	303
<i>Bloomeria clevelandii</i>	San Diego goldenstar	April to May	CRPR 1B.1, NCCP-Covered	327
<i>Ceanothus otayensis</i>	Otay-lilac	January to April	CRPR 1B.2	1
<i>Convolvulus simulans</i>	small-flower bindweed	March to July	CRPR 4.2	10

Scientific Name	Common Name	Blooming Period	Status*	Number of Individuals Observed
<i>Deinandra conjugens</i>	Otay tarplant	May to June	FT, CE, CRPR 1B.1, NCCP-Covered	735
<i>Dicranostegia orcuttiana</i>	Orcutt's bird's-beak	April to July	CRPR 2B.1	25
<i>Dudleya variegata</i> [^]	variegated dudleya	April to June	CRPR 1B.2, NCCP-Covered	265
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	April to June	FE, CE, CRPR 1B.1, NCCP-Covered	12
<i>Euphorbia misera</i>	cliff spurge	December to August	CRPR 2B.2	38
<i>Ferocactus viridescens</i>	coast barrel cactus	May to June	CRPR 2B.1, NCCP-Covered	646
<i>Hesperocyparis forbesii</i>	Tecate cypress	N/A (conifer)	CRPR 1B.1, NCCP-Covered	1,429
<i>Harpagonella palmeri</i>	Palmer's grapplinghook	March to May	CRPR 4.2, NCCP-Covered	1
<i>Holocarpha virgata</i> subsp. <i>elongata</i>	graceful tarplant	May to November	CRPR 4.2	807
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	April to November	CRPR 1B.2	1,619
<i>Iva hayesiana</i>	San Diego marsh-elder	April to October	CRPR 2B.2	1,434
<i>Juncus acutus</i> subsp. <i>leopoldii</i>	southwestern spiny rush	May to June	CRPR 4.2	145
<i>Myosurus minimus</i> subsp. <i>apus</i>	little mousetail	March to June	CRPR 3.1, NCCP-Covered	1,230
<i>Rosa minutifolia</i>	small-leaf rose	January to June	CE, CRPR 2B.1, NCCP-Covered	43
<i>Salvia munzii</i>	Munz's sage	February to April	CRPR 2B.2	2,139

Scientific Name	Common Name	Blooming Period	Status*	Number of Individuals Observed
<i>Selaginella cinerascens</i>	mesa spike-moss	N/A	CRPR 4.1	rhizomatous habit, >1,000

^: Observed during 2015 surveys conducted for the zinc ribbon project only; none observed during 2014 or 2018 rare plant survey efforts.

*: **Federal or State (California) Listed** FE = Federally Endangered; FT = Federally Threatened; CT = State Threatened; CE = State Endangered; **California Rare Plant Rank (CRPR)** 1A = Plants presumed extinct in California; 1B = Plants Rare and Endangered in California and throughout their range; 2 = Plants Rare, Threatened, or Endangered in California but more common elsewhere in their range; 3 = Plants about which we need more information; a review list; 4 = Plants of limited distribution; a watch list (CRPR 4 species are not generally identified in the literature and database review. However, if a CRPR 4 species was observed during the focused plant surveys, this species was documented.) **CRPR Extensions** 0.1 = Seriously endangered in California (greater than 80 percent of occurrences threatened/high degree and immediacy of threat); 0.2 = Fairly endangered in California (20 to 80 percent occurrences threatened); 0.3 = Not very endangered in California (less than 20 percent of occurrences threatened). **NCCP-Covered** = species conserved by SDG&E's Subregional Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) through the California Department of Fish and Wildlife.

SECTION 4.0 – SPECIAL-STATUS PLANT SPECIES

The following paragraphs describe characteristics of those special-status plant species, arranged alphabetically by scientific name, that were observed in 2014, 2015 and/or 2018.

4.1 SPECIES DESCRIPTIONS

4.1.1 Spineshrub

Spineshrub (*Adolphia californica*) is a CRPR 2B.1 species. This perennial deciduous shrub blooms between December and March. It grows in clay soils in chaparral, coastal scrub, and valley and foothill grassland habitats from 30 to 1,320 feet in elevation. The range of this species includes southwestern San Diego County and Baja California where it is threatened by urbanization, road construction, non-native plants, development and grazing (CNPS 2018).

Spineshrub was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.2 San Diego bur-sage

San Diego bur-sage (*Ambrosia chenopodiifolia*) is a CRPR 2B.1 species. This perennial shrub blooms between April and June. It grows in coastal scrub habitats from 165 to 465 feet in elevation. This species is only found in southwestern San Diego county and Baja California, where this species is known from fewer than 15 occurrences in California and is threatened by development (CNPS 2018).

San Diego bur-sage was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.3 Leafy burrobrush

Leafy burrobrush (*Ambrosia monogyra*) is a CRPR 2B.2 species. This perennial shrub blooms between August and November. It grows on sandy soils in chaparral and Sonoran Desert scrub habitats from 30 to 1,500 feet in elevation. The range of this species includes Riverside, San Bernardino, and San Diego Counties; and Arizona, Baja California, New Mexico, Nevada, Sonora, and Texas. This species is threatened by development (CNPS 2018).

Leafy burrobrush was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.4 Otay manzanita

Otay manzanita (*Arctostaphylos otayensis*) is a CRPR 1B.2 species. This perennial evergreen shrub blooms between January and April. It grows metavolcanic in chaparral habitats or cismontane woodlands from 825 to 5,100 feet in elevation. This species is only known in San Diego County where it is threatened by development and frequent wildfires (CNPS 2018).

Otay manzanita was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.5 Palmer's sagewort

Palmer's sagewort (*Artemisia palmeri*) is a CRPR 4.2 species. This perennial deciduous shrub blooms between May and September and grows in sandy, mesic soils in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodland habitats from 45 to 2,745 feet in elevation. This species is only found in San Diego County and Baja California where it is threatened by development and flood control projects, and possibly by non-native plants (CNPS 2018).

Palmer's sagewort was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.6 South coast saltbush

South coast saltbush (*Atriplex pacifica*) is a CRPR 1B.2 species. This annual herb blooms between March and October and grows in coastal bluff scrub, coastal dunes, coastal scrub, and playas up to 460 feet in elevation. The range of this species includes Los Angeles, Orange, Riverside, Santa Barbara, San Diego, and Ventura Counties; and Anacapa, San Clemente, Santa Catalina, Santa Cruz, San Nicolas and Santa Rosa Islands. This species is considered rare throughout its range and many known occurrences have been extirpated. It is threatened by urbanization on the mainland (CNPS 2018).

South coast saltbush was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.7 San Diego sunflower

San Diego sunflower (*Bahiopsis* [*Viguiera*] *laciniata*) is a CRPR 4.3 species. This perennial shrub blooms between February and June and with enough rainfall will bloom into August as well. It grows in chaparral and coastal scrub habitats from 180 to 1,500 feet in elevation. This species is only found in San Diego county where it is threatened by urbanization and development (CNPS 2018).

San Diego sunflower was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.8 Golden-club cactus

Golden-club cactus (*Bergerocactus emoryi*) is a CRPR 2B.2 species. This perennial stem succulent blooms between May and June. It grows in sandy soils in closed-cone coniferous forests, chaparral and coastal scrub habitats from up to 1,185 feet in elevation. The range of this species includes Los Angeles and San Diego Counties, and San Clemente and Santa Catalina Islands. This species is threatened by development, horticultural collecting, and feral goats (CNPS 2018).

Golden-club cactus was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.9 San Diego goldenstar

San Diego goldenstar (*Bloomeria clevelandii*) is a CRPR 1B.1, NCCP-covered species. This perennial bulb blooms between April and May. It grows in clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pool habitats from 150 to 1,395 feet in elevation. The range of this species includes

Riverside and San Diego Counties; and Baja California. This species is threatened by urbanization, road construction, vehicles, non-native plants, and illegal dumping (CNPS 2018).

San Diego goldenstar was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.10 Otay-lilac

Otay-lilac (*Ceanothus otayensis*) is a CRPR 1B.2 species and is believed to be a hybrid between two other species of native lilac, *C. crassifolius* and *C. greggii* var. *perplexans*. This perennial evergreen shrub blooms between January and April. It grows in metavolcanic or gabbroic soils in chaparral habitats from 1,800 to 3,300 feet in elevation. This species is only known in San Diego County and Baja California in the San Miguel and Otay mountains where this species is threatened by alteration of fire regimes, and possibly by Border Patrol activities (CNPS 2018).

Otay-lilac was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.11 Small-flower bindweed

Small-flower bindweed (*Convolvulus simulans*) is a CRPR 4.2 species. This annual herb blooms between March and July and grows in clay, serpentine soils in chaparral, coastal scrub, and valley and foothill grassland habitats from 90 to 2,220 feet in elevation. The range of this species includes Contra Costa, Fresno, Kern, Los Angeles, Orange, Riverside, Santa Barbara, San Benito, San Diego, San Joaquin, San Luis Obispo, and Stanislaus Counties; and San Clemente, Santa Catalina, and Santa Cruz Islands. This species is threatened by development and vehicles and possibly by non-native plants (CNPS 2018).

Small-flower bindweed was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.12 Otay tarplant

Otay tarplant (*Deinandra* [*Hemizonia*] *conjugens*) is a federal threatened, state endangered, CRPR 1B.1, and NCCP-covered species. This annual herb flowers between May and June and grows in clay soils in coastal scrub, and valley and foothills grassland habitats between 75 and 900 feet. This species is only known in San Diego County and Baja California where it is threatened by development, agriculture, vehicles, illegal dumping, foot traffic, non-native plants, habitat disturbance, and Border Patrol activities. Possibly threatened by landfill construction (CNPS 2018).

Otay tarplant was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.13 Orcutt's bird's-beak

Orcutt's bird's-beak (*Dicranostegia orcuttiana*) is a CRPR 2B.1 species. This hemiparasitic annual herb blooms between April and July. It grows in coastal scrub habitats from 30 to 1,050 feet in elevation. This species is only known in San Diego County and Baja California where this species is seriously threatened by urbanization and by trail widening and non-native plants (CNPS 2018).

Orcutt's bird's-beak was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.14 Variegated dudleya

Variegated dudleya (*Dudleya variegata*) is a CRPR 1B.2 and NCCP-covered species. This perennial herb blooms from April through June. This species grows in heavy clay soils within chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pool habitats at elevations between 10 and 1,900 feet in elevation. This species is threatened by development and grazing and possibly threatened by competition with non-native plants (CNPS 2018).

Variegated dudleya was only observed within the BSA during the 2015 survey effort and not observed in 2018. It is included in Table 3 and with specific locations shown on Appendix C.

4.1.15 San Diego button-celery

San Diego button-celery (*Eryngium aristulatum* var. *parishii*) is a federal and state endangered, CRPR 1B.1, NCCP-covered species. This annual (sometimes biennial or perennial) herb blooms between April and June. It grows in disturbed areas in mesic soils in coastal scrub, valley and foothill grassland, and vernal pool habitats from 60 to 1,860 feet in elevation. The range of this species includes Los Angeles, Orange, Riverside, and San Diego Counties. This species is threatened by agriculture, urbanization, road maintenance, grazing, vehicles, illegal dumping, non-native plants, and foot traffic (CNPS 2018).

San Diego button-celery was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.16 Cliff spurge

Cliff spurge (*Euphorbia misera*) is a CRPR 2B.2 species. This perennial shrub blooms between December and August. It grows on rocky soils in coastal bluff scrub, coastal scrub, and Mojavean desert scrub habitats from 30 to 1,500 feet in elevation. The range of this species includes Los Angeles, Orange, Riverside, San Diego, and Santa Barbara Counties; San Clemente, Santa Catalina, and Santa Cruz Islands; and Baja California and Guadalupe Island. This species is threatened by development and non-native plants (CNPS 2018).

Cliff spurge was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.17 Coast barrel cactus

Coast barrel cactus (*Ferocactus viridescens*) is a CRPR 2B.1, NCCP-covered species. This perennial stem succulent flowers between May and June. It grows in chaparral, coastal scrub, and valley and foothill grassland habitats at elevations up to 1,500 feet. This species is only found in southwestern San Diego County and Baja California where it is threatened by urbanization, vehicles, horticultural collecting, agriculture and non-native plants (CNPS 2018).

Coast barrel cactus was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.18 Tecate cypress

Tecate cypress (*Hesperocyparis forbesii*) is a CRPR 1B.1, NCCP-covered species. This perennial evergreen tree produces pollen/cones in April and grows in clay, gabbroic or metavolcanic soils in closed-cone coniferous forest and chaparral habitats from 240 to 4,500 feet in elevation. The range of this species includes Orange, Riverside, and San Diego Counties; and Baja California. This species is threatened by alteration of fire regimes, mining, and development (CNPS 2018).

Tecate cypress was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.19 Graceful tarplant

Graceful tarplant (*Holocarpha virgata* subsp. *elongata*) is a CRPR 4.2 species. This annual herb blooms between May to November and grows in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats from 180 to 3,300 feet in elevation. The range of this species includes Orange, Riverside, and San Diego Counties where it is threatened by development (CNPS 2018).

Graceful tarplant was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.20 Decumbent goldenbush

Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) is a CRPR 1B.2 species. This perennial shrub blooms between April and November. It grows in disturbed areas in sandy soils in chaparral and coastal scrub habitats from 30 to 405 feet in elevation. The range of this species includes Los Angeles, Orange, and San Diego Counties; and San Clemente and Santa Catalina Islands. This species is threatened by development and non-native plants (CNPS 2018).

Decumbent goldenbush was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.21 San Diego marsh-elder

San Diego marsh-elder (*Iva hayesiana*) is a CRPR 2B.2 species. This subshrub flowers between April and October. It grows in marsh, swamp, and playa habitats from 30 to 1,500 feet in elevation. This species is only known in San Diego County and Baja California where it is threatened by waterway channelization, coastal development, vehicles, and non-native plants (CNPS 2018).

San Diego marsh-elder was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.22 Southwestern spiny rush

Southwestern spiny rush (*Juncus acutus* subsp. *leopoldii*) is a CRPR 4.2 species. This perennial rhizomatous herb blooms between May and June and grows in mesic soils in coastal dune, meadow and alkaline seep, and marsh and swamp habitats from 9 to 1,800 feet in elevation. The range of this species includes Los Angeles, Orange, Santa Barbara, San Diego, San Luis Obispo, and Ventura Counties; as well as in Arizona,

Baja California, Georgia, Nevada, and South America. This species is threatened by urbanization and flood control (CNPS 2018).

Southwestern spiny rush was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.23 Little mouse-tail

Little mouse-tail (*Myosurus minimus* subsp. *apus*) is a CRPR 3.1, NCCP-covered species. This annual herb blooms between March and June. It grows in valley and foothill grassland, alkaline vernal pool, wet field, streambank, and lake shore habitats from 60 to 1,920 feet in elevation. The range of this species includes Alameda, Contra Costa, Colusa, Lake, Merced, Riverside, San Bernardino, San Diego, Solano, Tulare, Yolo Counties. This species is reduced by vernal pool habitat loss; threatened by vehicles, grazing, development, and agriculture (CNPS 2018).

Little mouse-tail was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.24 Palmer's grapplehook

Palmer's grapplehook (*Harpagonella palmeri*) is a CRPR 4.2 and NCCP-covered species. This annual herb blooms between March and May. It is typically found in clay soils in open areas within chaparral, coastal scrub, and valley and foothill grasslands at elevations less than 3,000 feet (CNPS 2018).

Palmer's grapplehook was observed within the BSA during the 2014 survey effort and not observed in 2018. It is included in Table 3 and with specific locations shown on Appendix C.

4.1.25 Small-leaf rose

Small-leaf rose (*Rosa minutifolia*) is a state listed as endangered, CRPR 2B.1, and an NCCP-covered species. This perennial deciduous shrub blooms between January and June and grows in chaparral and coastal scrub habitats from 450 to 480 feet in elevation. There is only one known occurrence outside Baja California, located in Otay Mesa, San Diego County, transplanted in 1997 for mitigation. The species is threatened by development, motorized vehicles, and non-native plants (CNPS 2018).

Small-leaved rose was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.26 Munz's sage

Munz's sage (*Salvia munzii*) is a CRPR 2B.2 species. This perennial evergreen shrub blooms between February and April. It grows in chaparral and coastal scrub habitats from 345 to 3,195 feet in elevation. This species is only known in San Diego County and Baja California where this species is threatened by development, and possibly by non-native plants and illegal dumping (CNPS 2018).

Munz's sage was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.1.27 Mesa spike-moss

Mesa spike-moss (*Selaginella cinerascens*) is a CRPR 4.1 species. This perennial rhizomatous fern produces cones with reproductive spores during winter rains. It grows in red clay soils in chaparral and coastal scrub habitats from 60 to 1,920 feet in elevation. The range of this species includes Orange, Riverside, and San Diego Counties where it is threatened by development (CNPS 2018).

Mesa spike-moss was observed growing within the BSA as documented in Table 3 and with specific locations shown on Appendix C.

4.2 PROJECT AVOIDANCE AND MINIMIZATION MEASURES

Multiple proposed work areas (e.g., poles, string sites) are within close proximity to mapped points or polygons of special-status plant species. These include:

- Page 4: Pole Location 7 – 2014 results for *Convolvulus simulans* (CRPR 4.2)
- Page 5: Pole Location 15 – 2018 results for *Bahiopsis laciniata* (CRPR 4.2)
- Page 10: Pole Location 43 – 2018 results for *Ambrosia monogyra* (CRPR 2B.2)
- Page 11: Pole Location 46 – 2014 results for *Ambrosia monogyra* (CRPR 2B.2)
- Page 13: Pole Location 58 – 2014 results for *Ambrosia monogyra* (CRPR 2B.2), 2018 results for *Bahiopsis laciniata* (CRPR 4.2)
- Page 15: Pole Location 66 – 2018 results for *Bahiopsis laciniata* (CRPR 4.2)
- Page 16: Pole Location 69 – 2018 results for *Holocarpha virgata* subsp. *elongata* (CRPR 4.2)
- Page 17: Pole Location 71G and 70 – 2014 results for *Salvia munzii* (CRPR 2B.2)
- Page 18: Pole Location 77 – 2014 results for *Iva hayesiana* (CRPR 2B.2)
- Page 23: Pole Locations 97, 97.1, 98, 99, SS23, SS24 – 2014 results for *Bahiopsis laciniata* (CRPR 4.2)
- Page 24: Pole Location 103, SS25 – New Restoration Area, 2018 results for *Bahiopsis laciniata* (CRPR 4.2), *Deinandra conjugens* (CRPR 1B.1), *Isocoma menziesii* var. *decumbens* (CRPR 1B.1)

Of these 11 identified work locations, only 6 are within close proximity to special-status plant species as identified as CRPR 1 and 2 species, and have been underlined above. Of these locations, only Otay tarplant (*Deinandra conjugens*) is a federal-listed threatened, state-listed endangered species and NCCP-covered species. This species is located within a New Caltrans Restoration Area. The string site SS25 will be modified and work activities will be contained within the existing access road. The limits of the stringing site will be flagged for avoidance; therefore, no impacts to this species or the restoration area are anticipated.

No other federal- or state-listed plant species were found within the proposed project impact areas. SDG&E plans to conduct additional pre-construction surveys, to monitor all construction activities within habitat, and to conduct a post-construction survey and prepare a report. If Otay tarplant is observed within the impact area at any time, and it is determined that impacts to Otay tarplant are unavoidable and occur during the proposed project, SDG&E will rely on the NCCP and will deduct credits from the NCCP impact and mitigation banks. If upon project completion, Otay tarplant has not been impacted, SDG&E will deduct credits from the LE-HCP impact and mitigation banks.

SDG&E's NCCP Operational Protocols will apply to all special-status plant species. Consistent with NCCP Operational Protocol 14 and BIO-5 of the MMRP, locations of special-status plants to be avoided will be flagged during construction. Additional NCCP Operational Protocols that will minimize inadvertent damage and destruction of special-status plants include restricting vehicles to existing roads when feasible, minimizing impacts by defining the disturbance areas, providing biological monitoring to assist crews in avoiding and minimizing impacts at sites with the potential for direct impacts, and designing the construction activities to avoid or minimize new disturbance and erosion. As such, impacts to special-status plant species are expected to be less-than-significant with the implementation of the NCCP Operational Protocols.

If avoidance of *Ambrosia monogyra* (CRPR 2B.2; pole location 43, 46, and 58), *Salvia munzii* (CRPR 2B.2; pole locations 71G and 70), *Iva hayesiana* (CRPR 2B.2; pole location 77), and *Isocoma menziesii* var. *decumbens* (CRPR 1B.1; pole location 103 and SS25) is not feasible, SDG&E shall implement MMRP measure BIO-6 to compensate for impacts on special-status plant species, as these plants are not NCCP or LE-HCP covered species. Where impacts to these special-status plant species are unavoidable, the impact shall be quantified and compensated through mitigation consistent with the measures established in the SDG&E LE-HCP and/or NCCP. Where salvage and relocation are demonstrated to be feasible and biologically preferred by the resource agencies, it shall be conducted pursuant to a CPUC- and CDFW-approved salvage and relocation plan that details the methods for salvage, stockpiling, and replanting, as well as the characteristics of the receiver sites. The salvage and relocation plan shall also define the monitoring strategy with a minimum of annual monitoring for five years or until success criteria are met. If the salvage and relocation fail to meet the established success criteria after five years, maintenance and monitoring shall extend beyond the five-year period until the criteria are met, or unless otherwise approved by the CPUC.

SECTION 5.0 – CONCLUSIONS

A total of 27 special-status plant species were observed within the BSA during the 2014 and 2018 surveys (Table 3) including 3 federal- and/or state-listed as endangered species and 16 additional species that are only designated as CRPR 1 or 2 species and which are considered special-status species. Plants with a rare plant rank of 1 and 2, in general, must comply with CEQA Guidelines Section 15380(b) criteria, and adverse effects to these species may be considered significant. Impacts to the 8 plant species that have a rare plant rank of 3 or 4 are also considered during CEQA review, although because these species are typically not as rare as those with ranks of 1 or 2, impacts to them are less frequently considered potentially significant. Impacts to species with a rare plant rank of 3 or 4 will be avoided to the greatest extent possible; however, as per BIO-6, no mitigation is required for impacts specifically to these plant species.

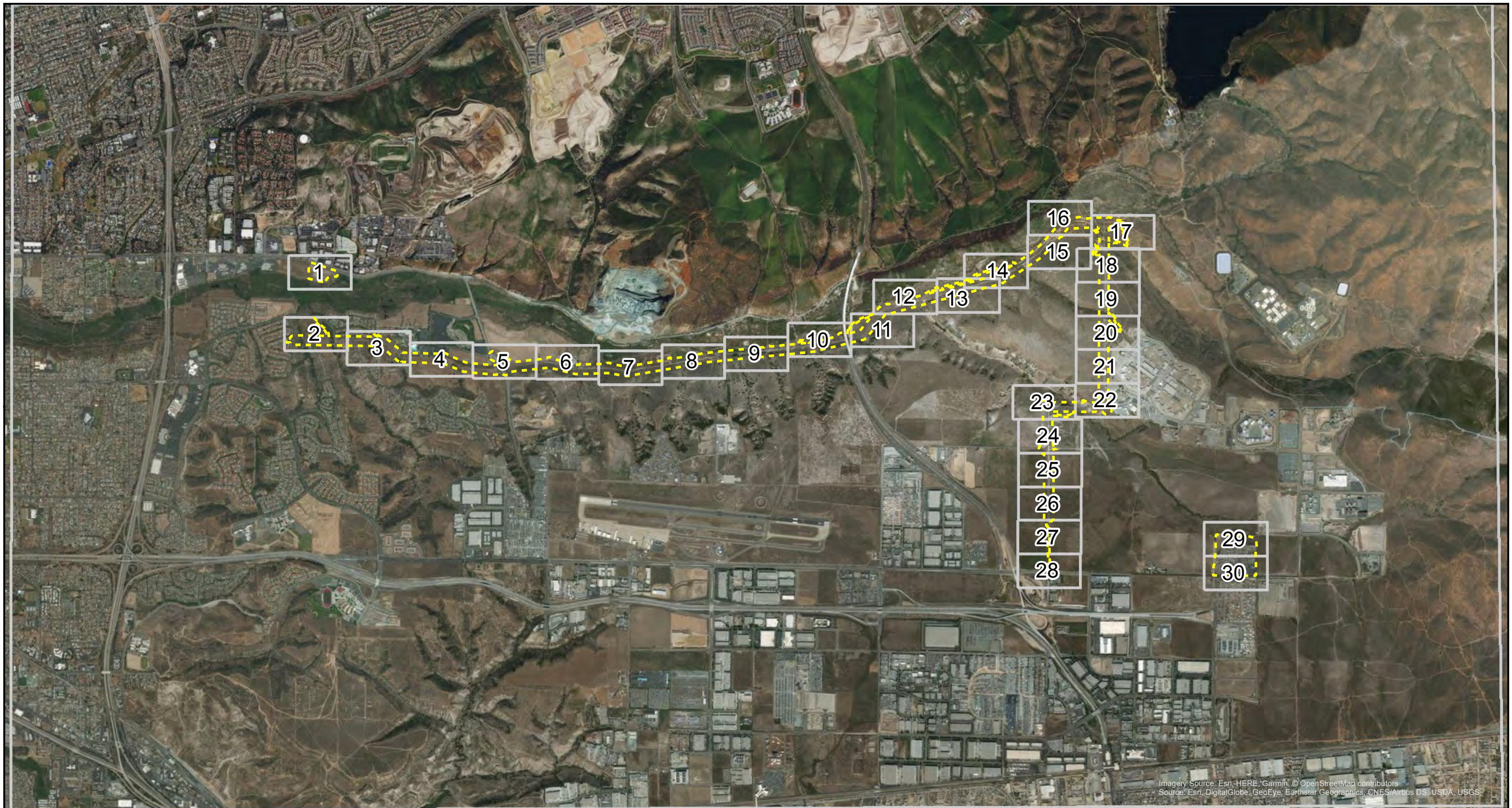
No impacts to the federal- or state-listed plants are anticipated. The following four special-status plant species with a rare plant rank of 1 or 2: *Ambrosia monogyra* (CRPR 2B.2), *Salvia munzii* (CRPR 2B.2), *Iva hayesiana* (CRPR 2B.2), and *Isocoma menziesii* var. *decumbens* (CRPR 1B.1) are within or in close proximity to work areas. No other special-status plant species were observed to occur within or in close proximity to work areas. All efforts will be made to avoid individual special-status plants as possible during Project activities. SDG&E's NCCP Operational Protocols will apply to all special-status plant species. Consistent with NCCP Operational Protocol 14 and BIO-5 of the MMRP, locations of special-status plants to be avoided will be flagged during construction, and biological monitoring will be necessary during ground-disturbing activities in the areas known to contain special-status plant species.

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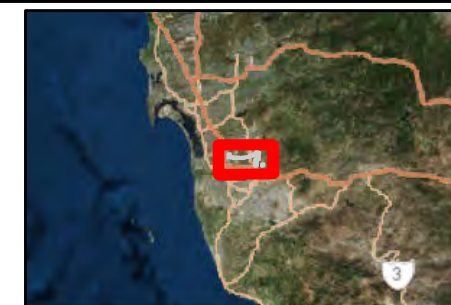
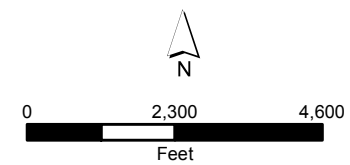
APPENDIX A – VEGETATION COMMUNITIES






Legend

- Survey Corridor
- Map Page



Appendix A TL 649 Wood-to-Steel Project Vegetation Communities

Page 1 of 31

Name: 20775 PCR Appendix A Veg Communities.Mxd
 Print Date: 8/17/2018, Author: esimmons 



Imagery Source: Esri, HERE, Garmin, © OpenStreetMap contributors
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Legend

Survey Corridor 8. Disturbed

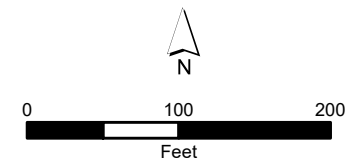
Work Area Type

Proposed Staging Yard

Vegetation Community (MCV II)

3. California Sagebrush—California Buckwheat Scrub

7. Urban and Developed



Appendix A

TL 649

Wood-to-Steel Project Vegetation Communities



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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

— Existing Non-TCM Access Road

— Access Road

Work Area Type

▨ Proposed String Site

▨ Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

102D. Disturbed Broom Baccharis Scrub

103. Lemonade Berry—California Sagebrush—California Buckwheat Scrub

12. Landscape/Ornamental

13. Coast Prickly Pear Scrub

13D. Disturbed Coast Prickly Pear Scrub

24. Arroyo Willow - Mulefat Woodland

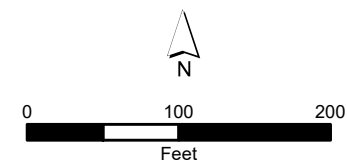
3. California Sagebrush—California Buckwheat Scrub

54. Lemonade Berry Stand

56. California Bulrush Marsh

7. Urban and Developed

8. Disturbed



Appendix A

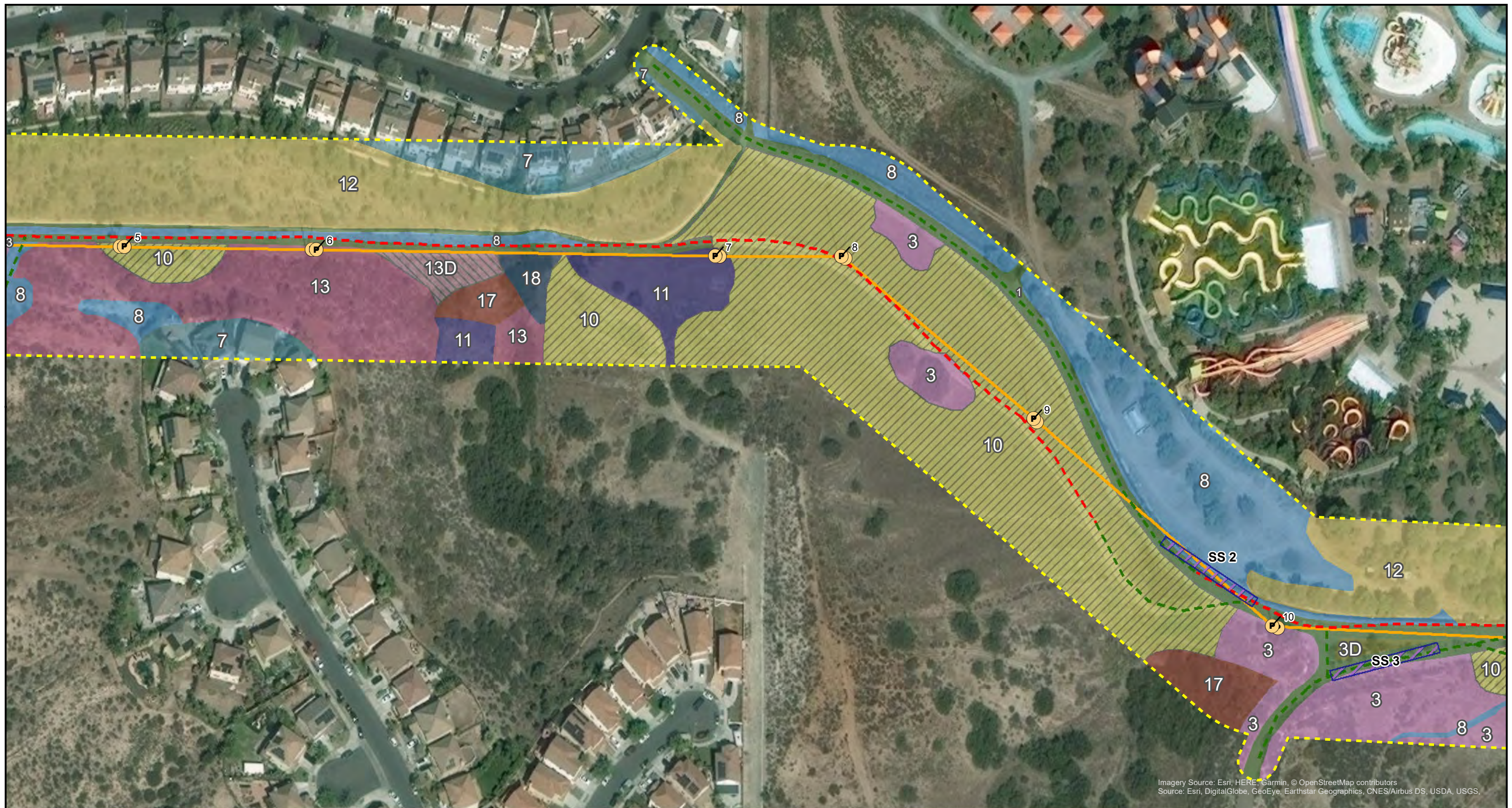
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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Work Area Type

▨ Proposed String Site

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

12. Landscape/Ornamental

13. Coast Prickly Pear Scrub

13D. Disturbed Coast Prickly Pear Scrub

17. Tamarisk Thickets

18. Mulefat Thickets

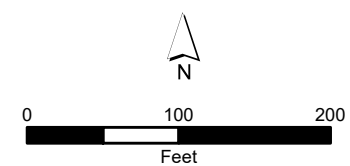
3. California Sagebrush—California Buckwheat Scrub

3D. Disturbed California

Sagebrush—California Buckwheat Scrub

7. Urban and Developed

8. Disturbed



Appendix A

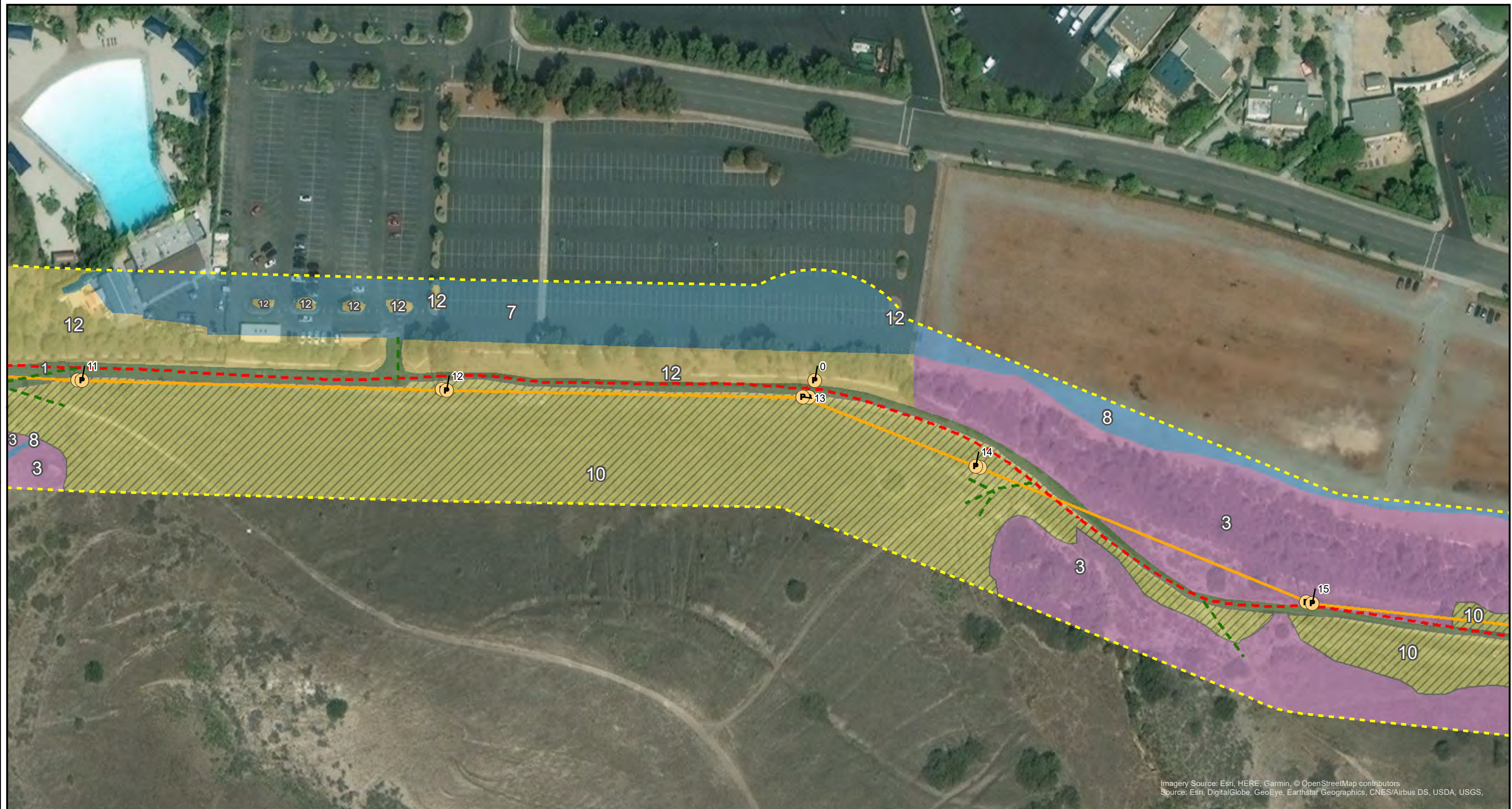
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Wood-to-Steel Project Vegetation Communities

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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Vegetation Community (MCV II)

1. Bare Ground

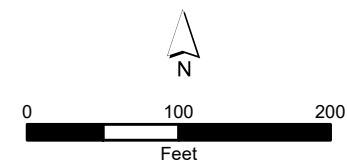
10. Annual Brome Grassland

12. Landscape/Ornamental

3. California Sagebrush—California Buckwheat Scrub

7. Urban and Developed

8. Disturbed



Appendix A

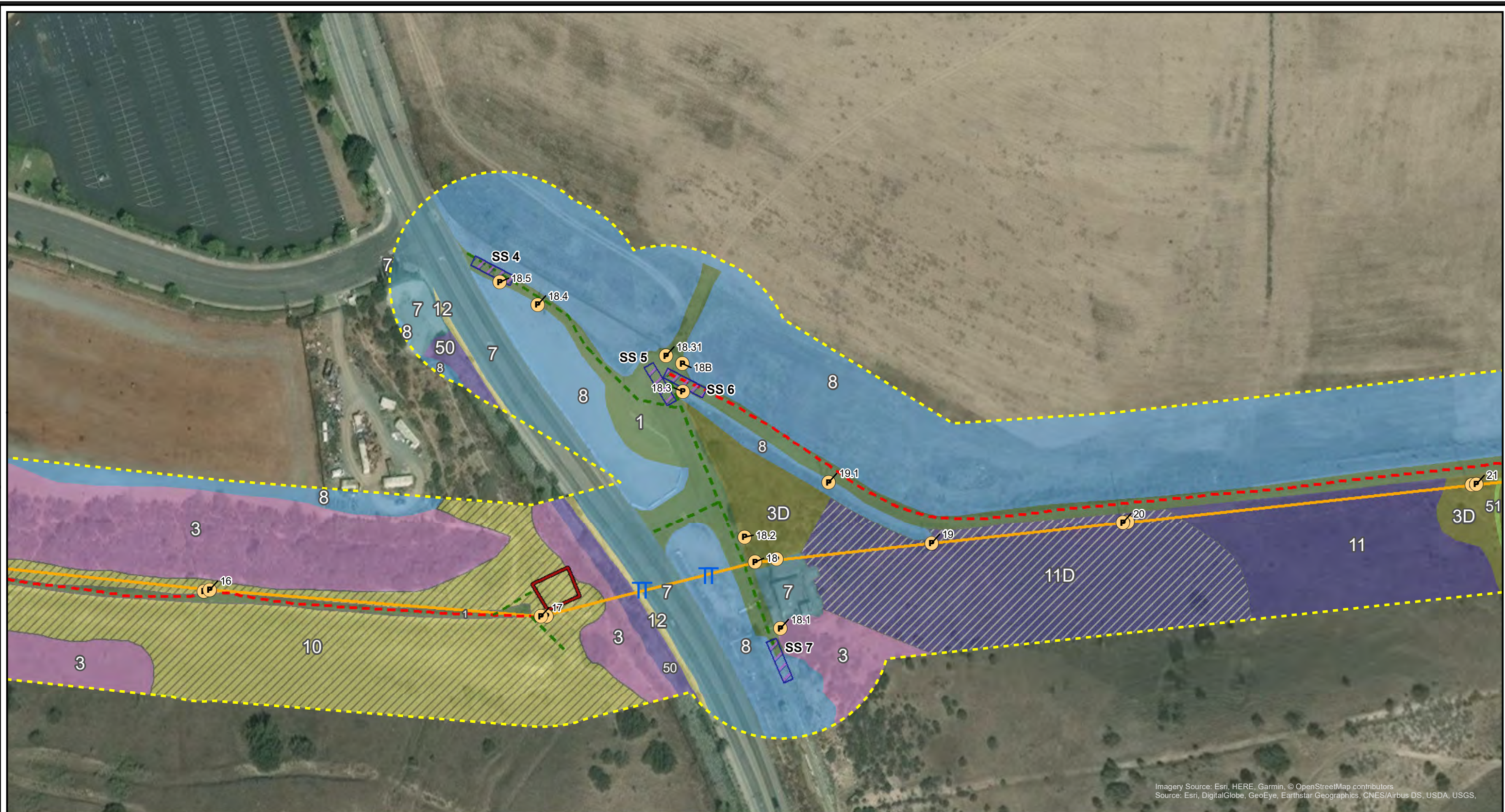
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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

TT Guard Structure

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Work Area Type

▨ Proposed String Site

▨ Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

11D. Disturbed Purple Needlegrass Grassland

12. Landscape/Ornamental

3. California Sagebrush—California Buckwheat Scrub

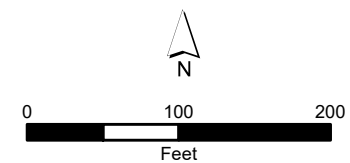
3D. Disturbed California Sagebrush—California Buckwheat Scrub

50. Vegetated Rip-Rap Channel

51. Castor Bean Thickets

7. Urban and Developed

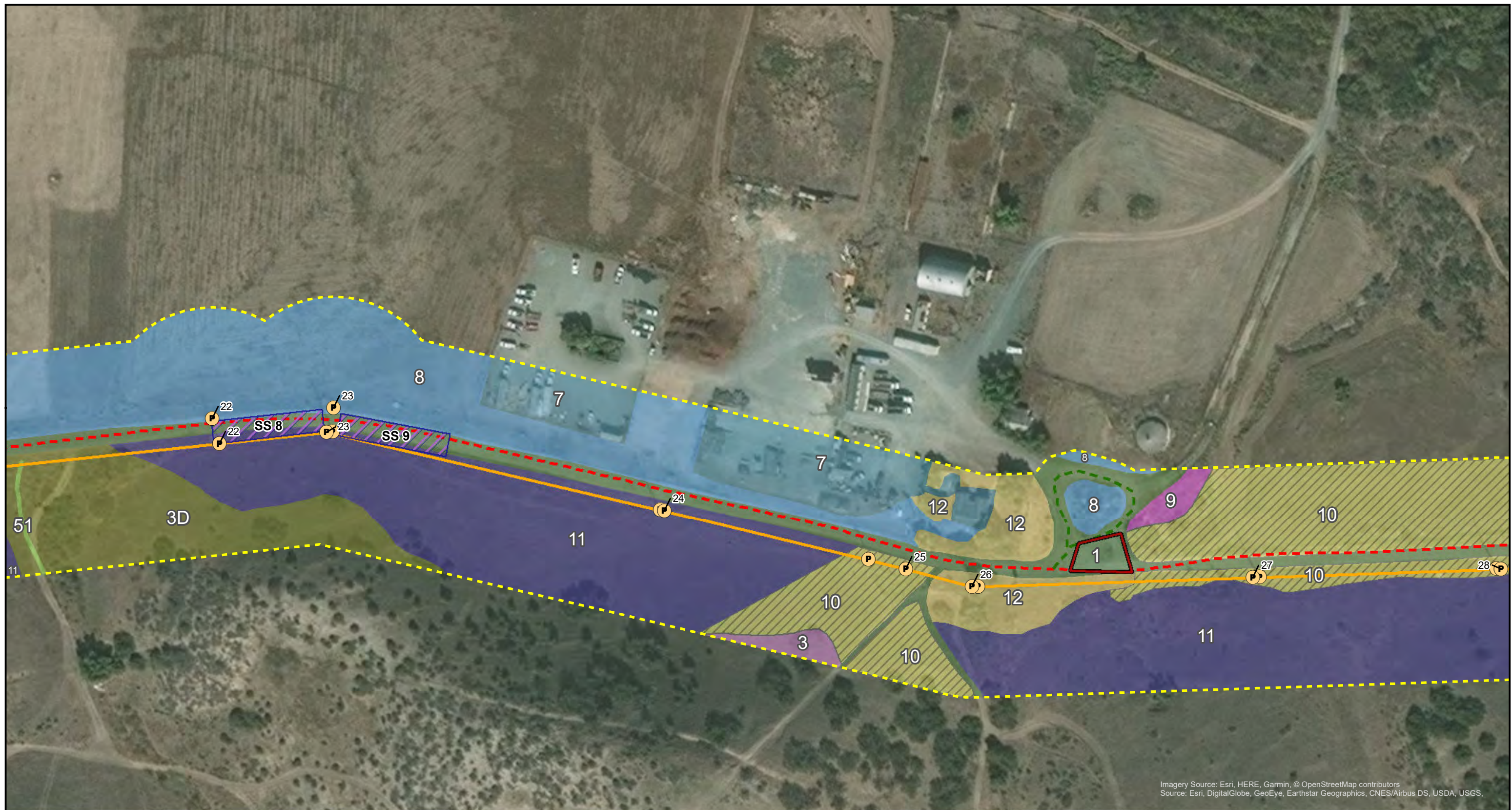
8. Disturbed



Appendix A

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Wood-to-Steel Project Vegetation Communities



Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

— Existing Non-TCM Access Road

--- Access Road

Work Area Type

▨ Proposed String Site

▭ Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

12. Landscape/Ornamental

3. California Sagebrush—California Buckwheat Scrub

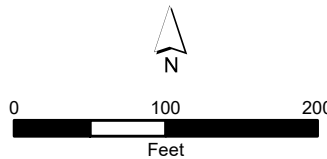
3D. Disturbed California Sagebrush—California Buckwheat Scrub

51. Castor Bean Thickets

7. Urban and Developed

8. Disturbed

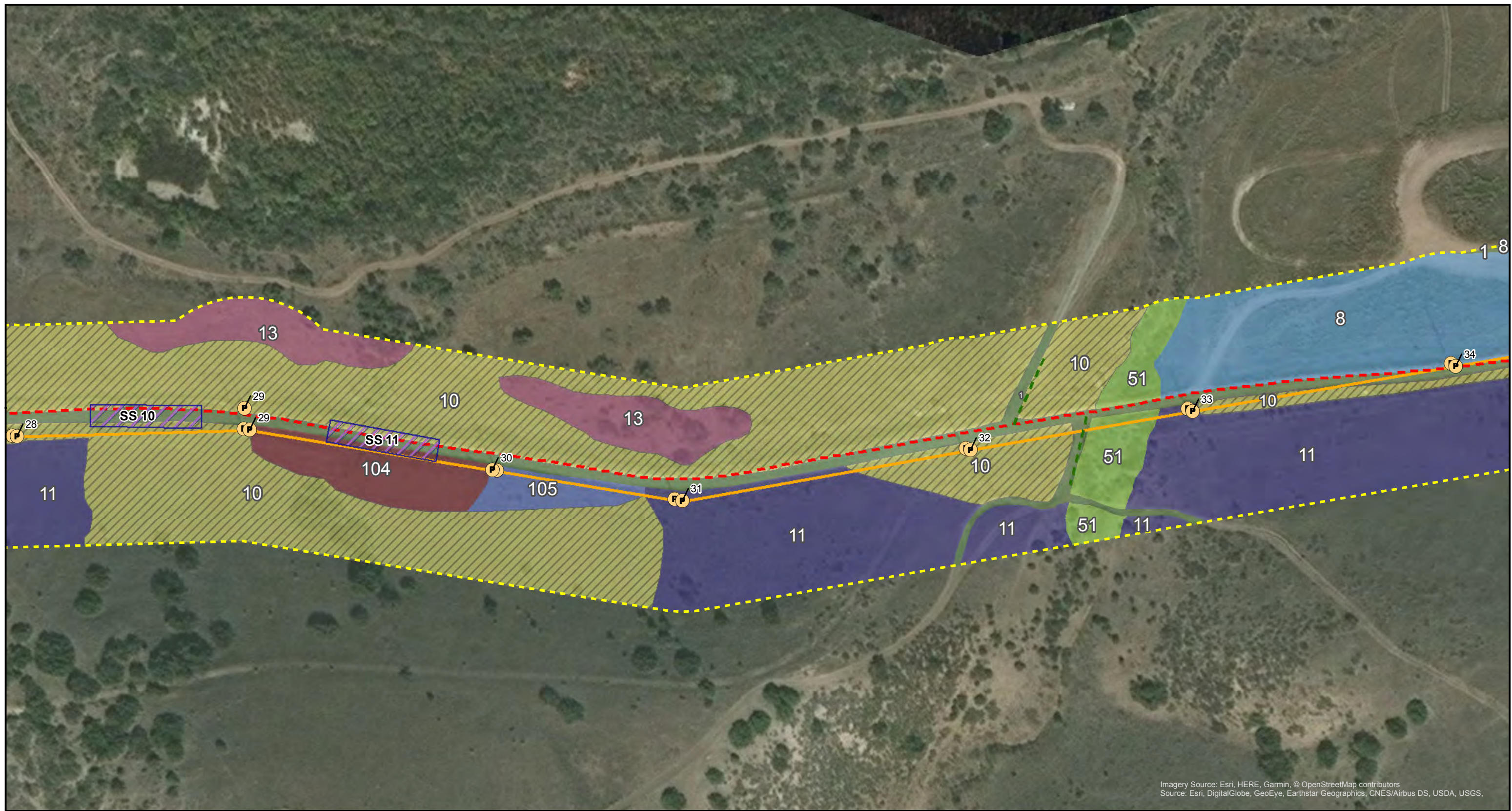
9. Giant Reed Breaks



Appendix A

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Wood-to-Steel Project Vegetation Communities



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Legend

Transmission Centerline

Survey Corridor

Project Pole

Access Type

Existing Non-TCM Access Road

Access Road

Work Area Type

Proposed String Site

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

104. Upland Mustards

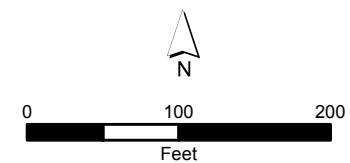
105. Upland Mustard-Fennel Alliance

11. Purple Needlegrass Grassland

13. Coast Prickly Pear Scrub

51. Castor Bean Thickets

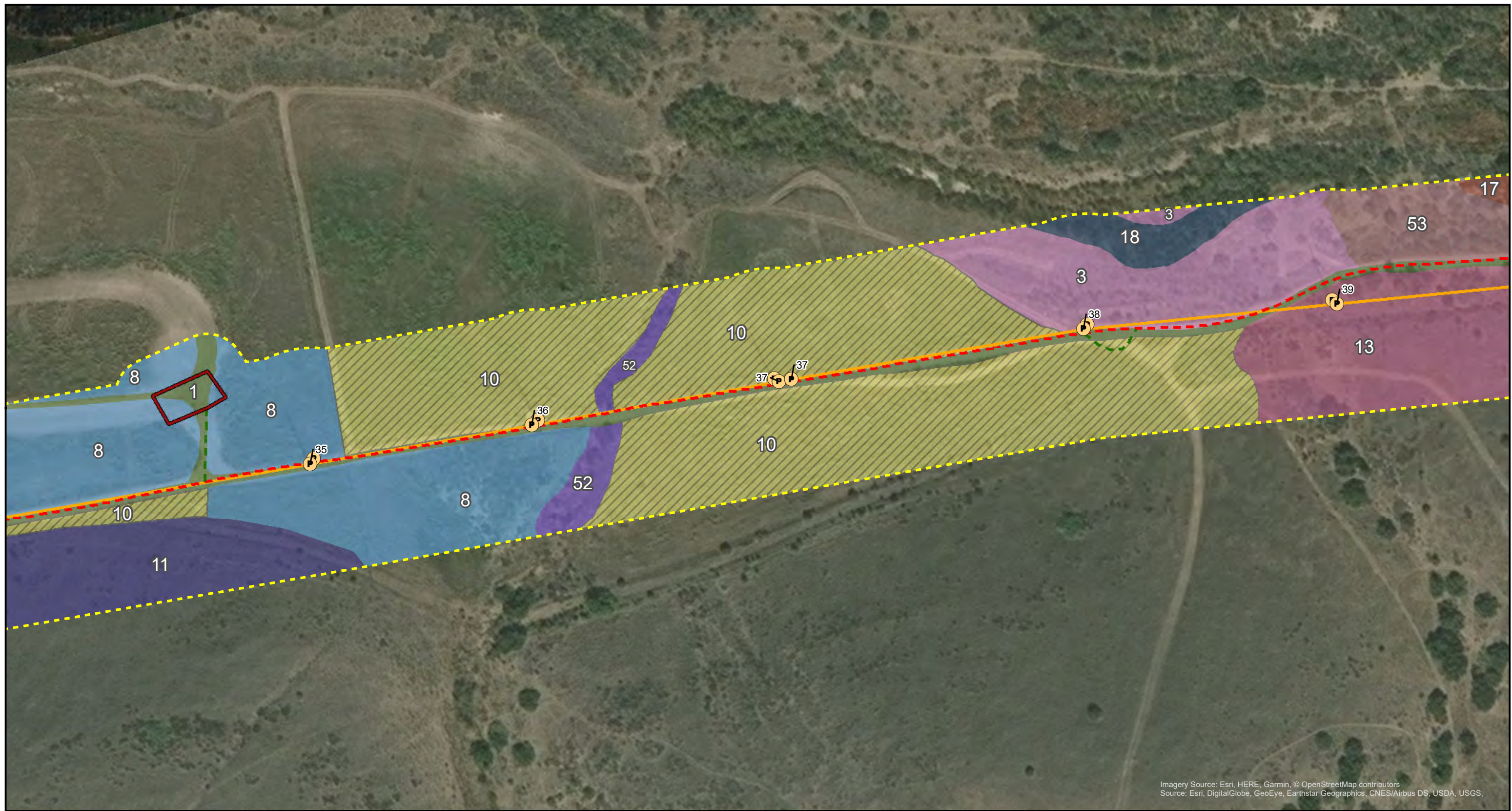
8. Disturbed



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Wood-to-Steel Project Vegetation Communities



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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

— Existing Non-TCM Access Road

--- Access Road

Work Area Type

▭ Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

13. Coast Prickly Pear Scrub

17. Tamarisk Thickets

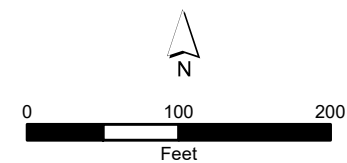
18. Mulefat Thickets

3. California Sagebrush—California Buckwheat Scrub

52. Singlewohl Burrobrush Scrub

53. Singlewohl Burrobrush—Broom Baccharis Scrub

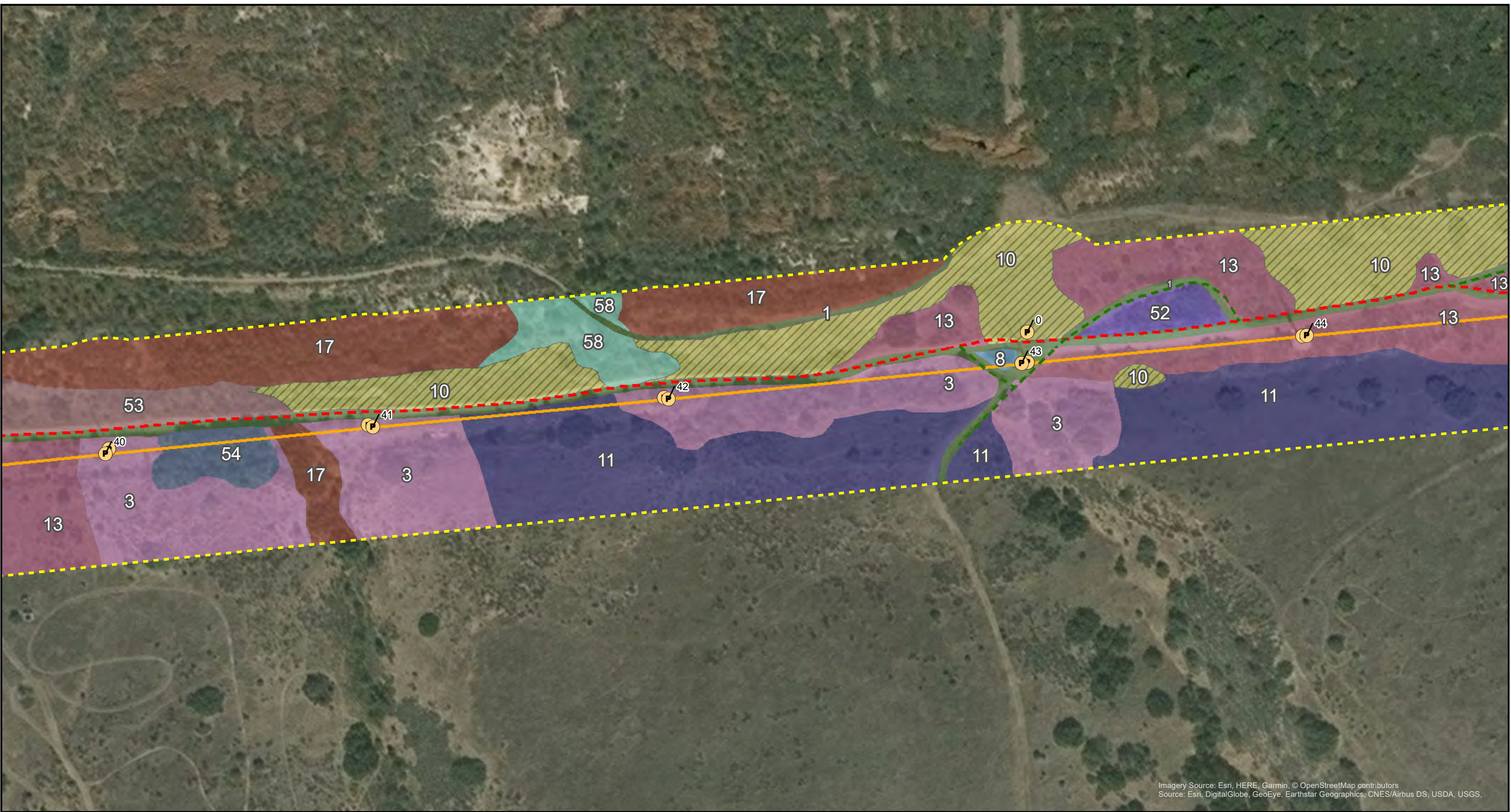
8. Disturbed



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Wood-to-Steel Project Vegetation Communities



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Legend

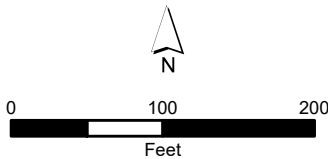
- Transmission Centerline
- Survey Corridor
- Project Pole

Access Type

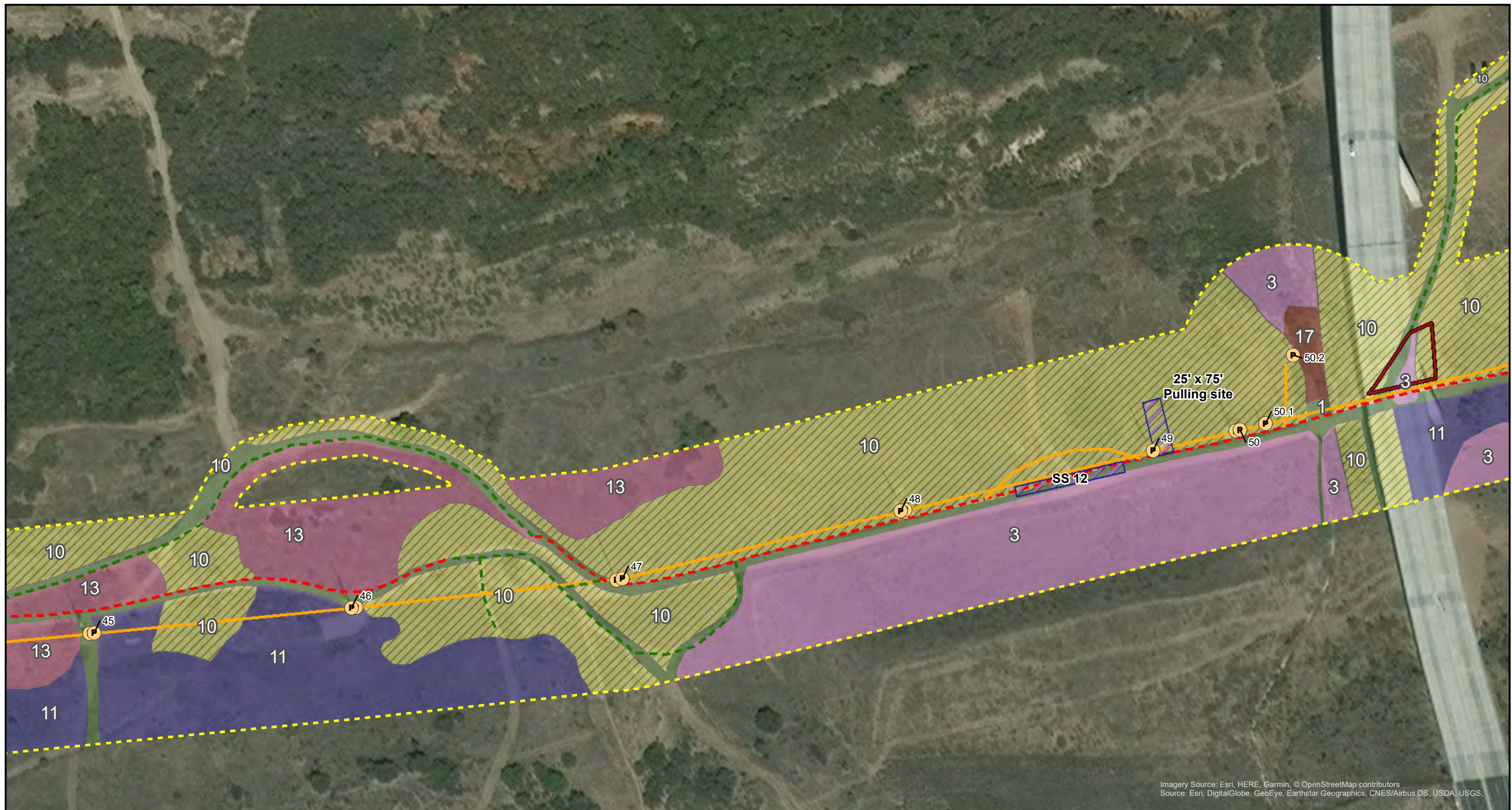
- Existing Non-TCM Access Road
- Access Road

Vegetation Community (MCV II)

- | | |
|--|--|
| 1. Bare Ground | 52. Singlewhorl Burrobrush Scrub |
| 10. Annual Brome Grassland | 53. Singlewhorl Burrobrush—Broom Baccharis Scrub |
| 11. Purple Needlegrass Grassland | 54. Lemonade Berry Stand |
| 13. Coast Prickly Pear Scrub | 58. Black Willow Forest |
| 17. Tamarisk Thickets | 8. Disturbed |
| 3. California Sagebrush—California Buckwheat Scrub | |



Appendix A
TL 649
Wood-to-Steel Project
Vegetation Communities



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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

— Existing Non-TCM Access Road

— Access Road

— Overland Travel

Work Area Type

▨ Proposed String Site

▭ Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

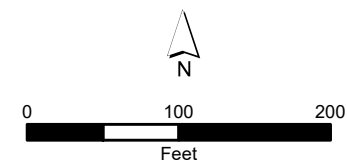
10. Annual Brome Grassland

11. Purple Needlegrass Grassland

13. Coast Prickly Pear Scrub

17. Tamarisk Thickets

3. California Sagebrush—California Buckwheat Scrub



Appendix A

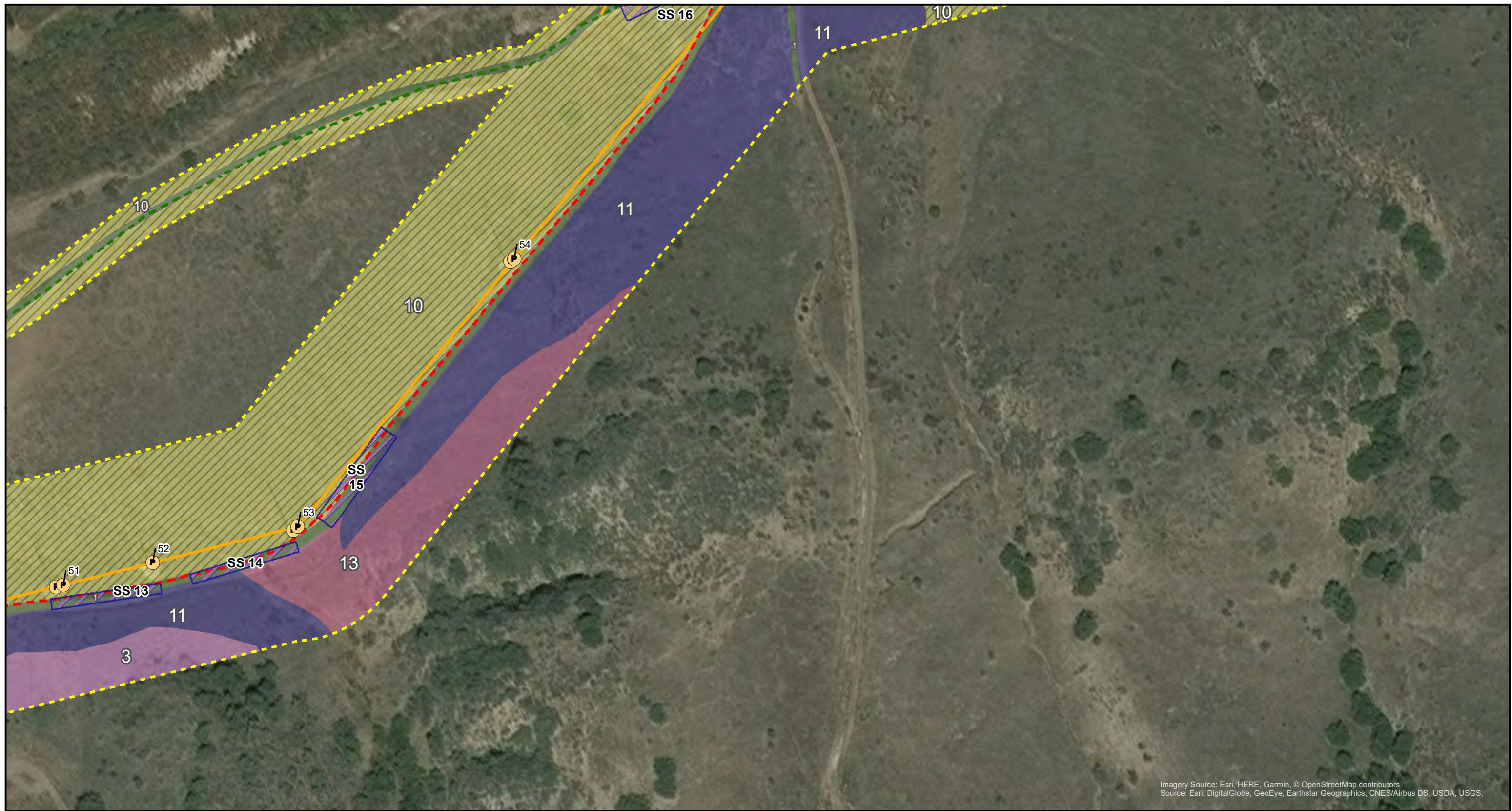
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Legend

Transmission Centerline

Survey Corridor

Project Pole

Access Type

Existing Non-TCM Access Road

Access Road

Overland Travel

Work Area Type

Proposed String Site

Vegetation Community (MCV II)

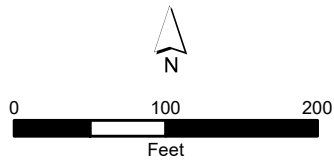
1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

13. Coast Prickly Pear Scrub

3. California Sagebrush—California Buckwheat Scrub

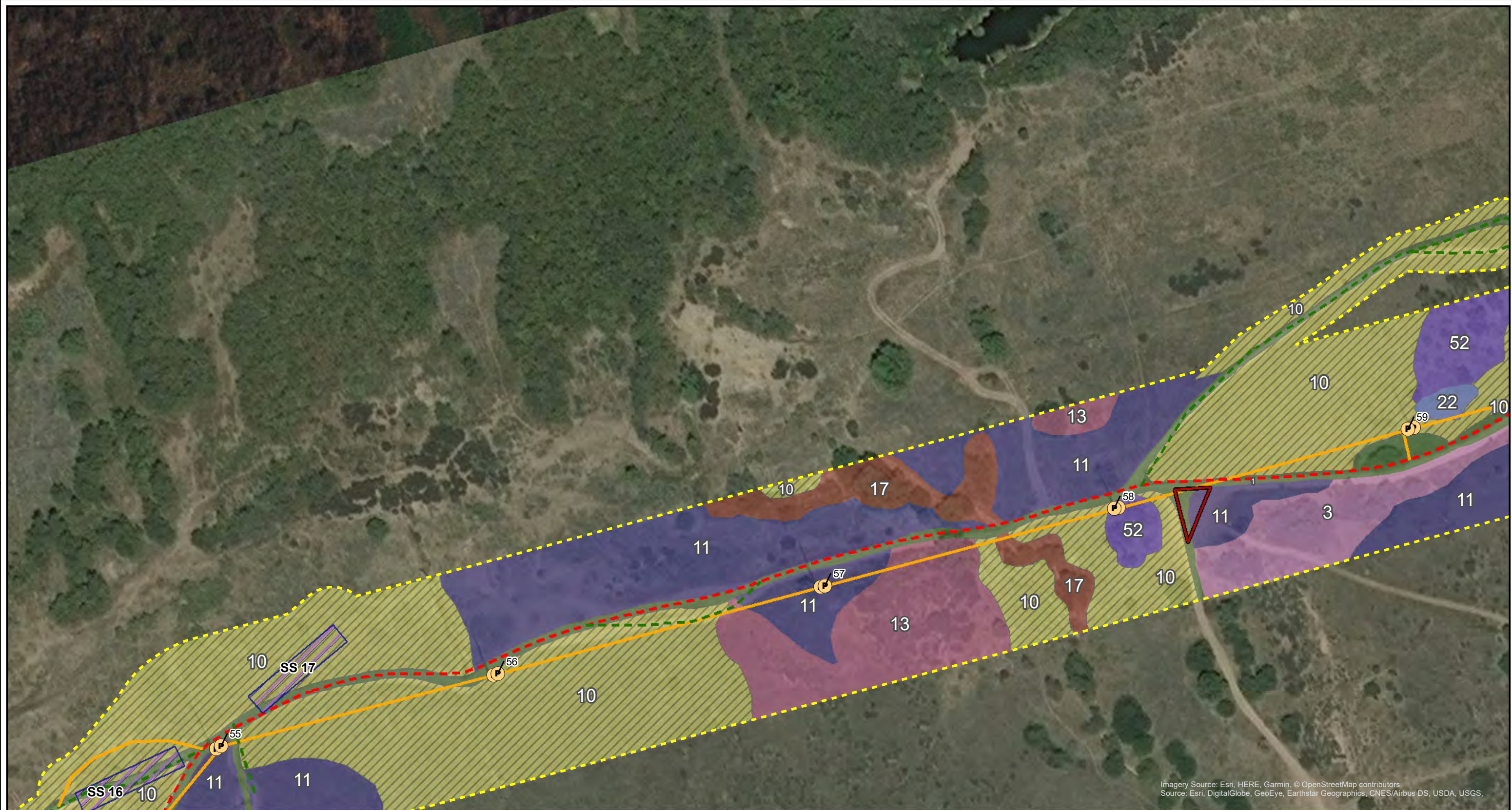


Appendix A

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Wood-to-Steel Project Vegetation Communities





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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

— Existing Non-TCM Access Road

— Access Road

— Overland Travel

Work Area Type

▨ Proposed String Site

▨ Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

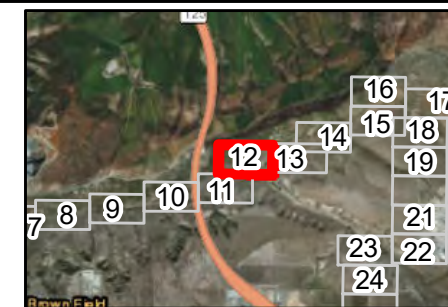
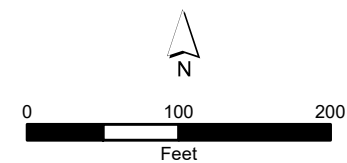
13. Coast Prickly Pear Scrub

17. Tamarisk Thickets

22. Creeping Ryegrass Grassland

3. California Sagebrush—California Buckwheat Scrub

52. Singlewhorl Burrobrush Scrub



Appendix A

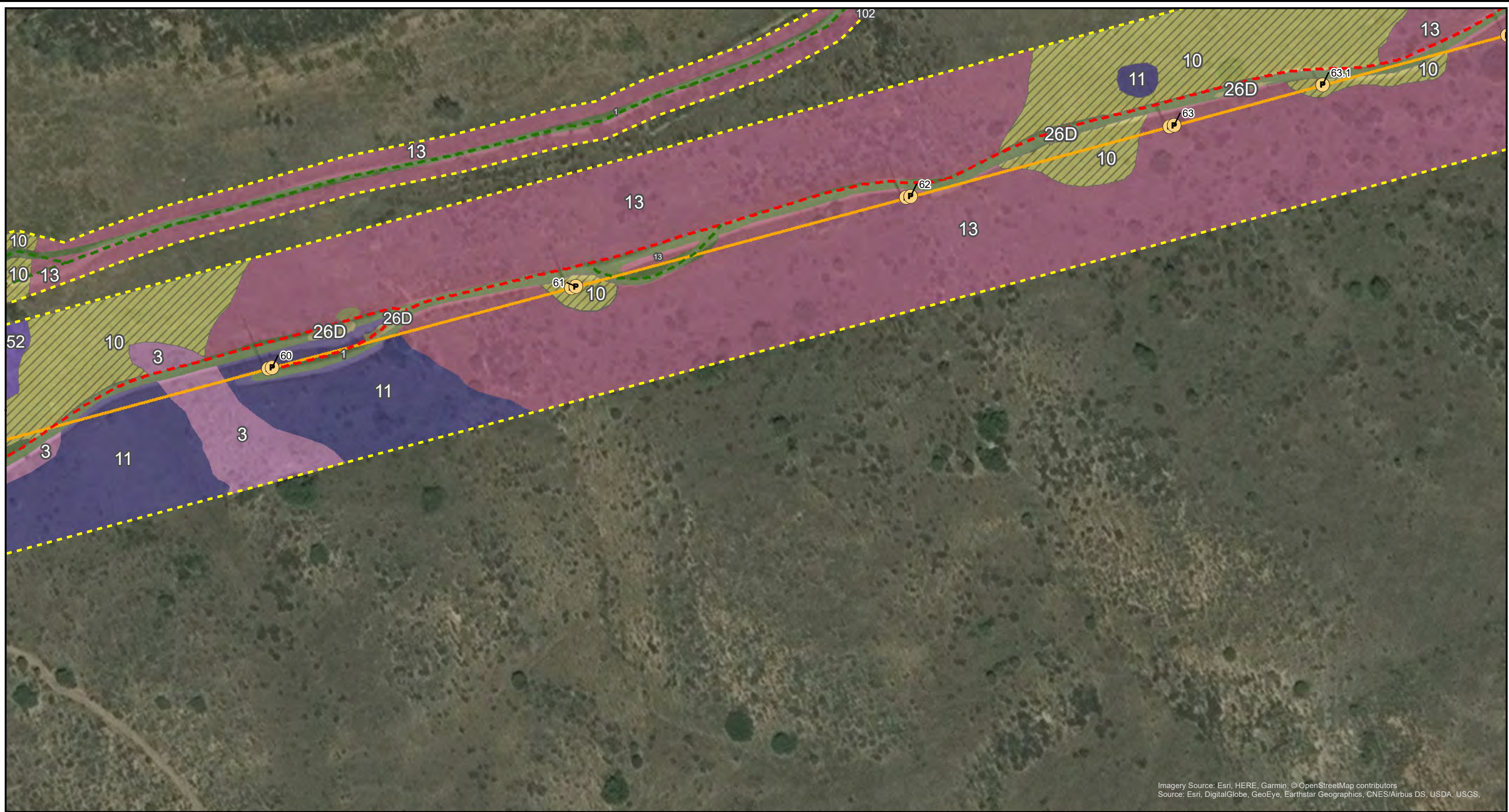
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Wood-to-Steel Project Vegetation Communities

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Name: 20775 PCR Appendix A Veg Communities.Mxd
Print Date: 8/17/2018, Author: esimmons





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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

102. Broom Baccharis Scrub

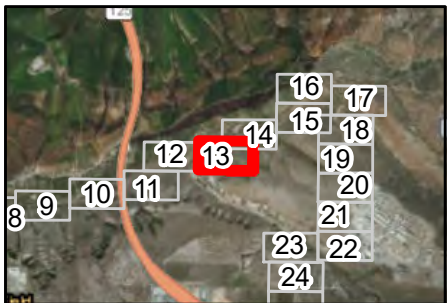
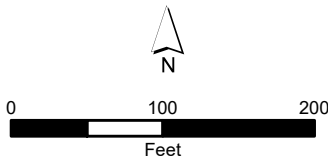
11. Purple Needlegrass Grassland

13. Coast Prickly Pear Scrub

26D. Disturbed San Diego Mesa Claypan Vernal Pools

3. California Sagebrush—California Buckwheat Scrub

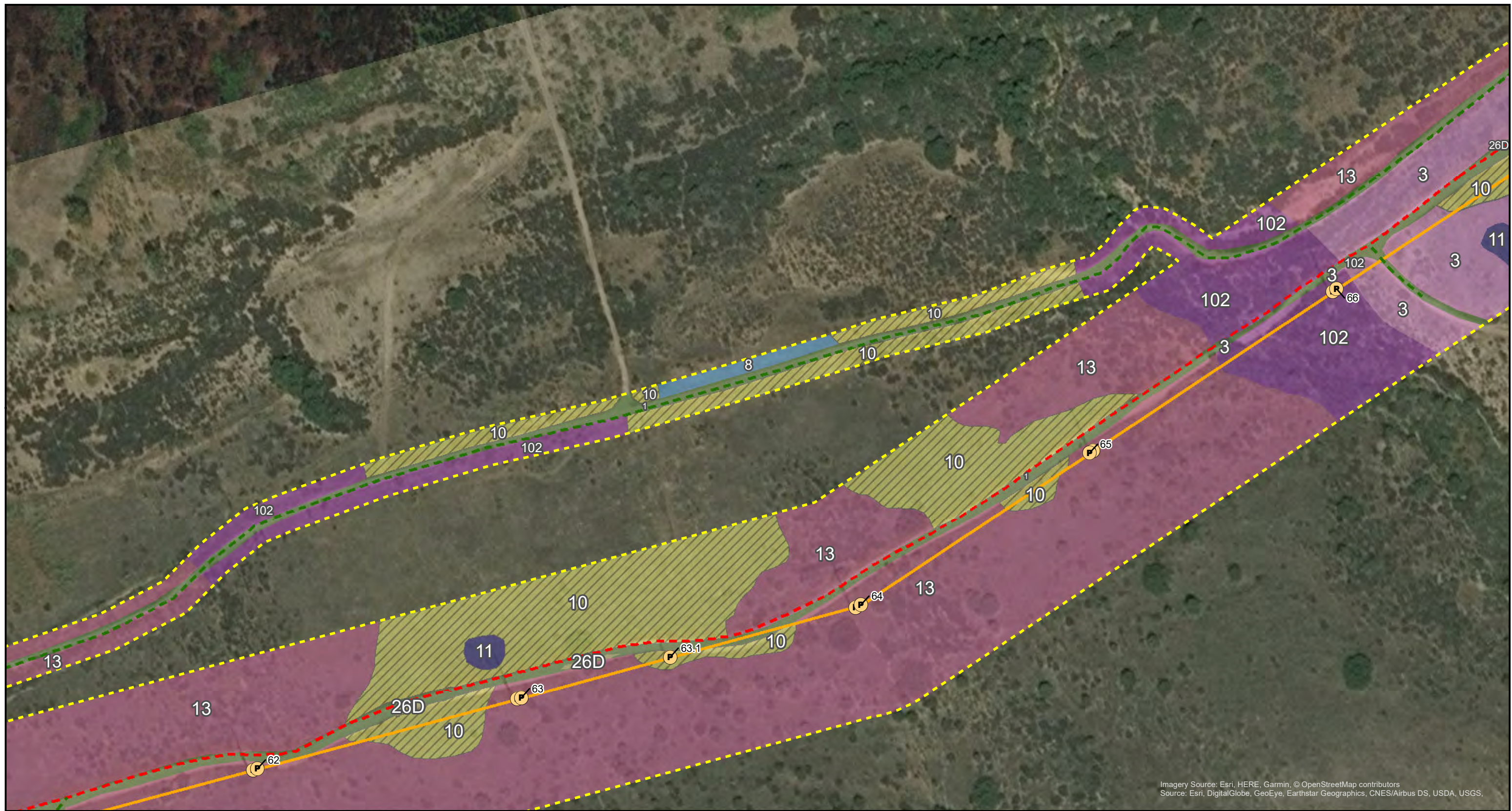
52. Singlewhorl Burrobrush Scrub



Appendix A

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**Wood-to-Steel Project
Vegetation Communities**



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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

102. Broom Baccharis Scrub

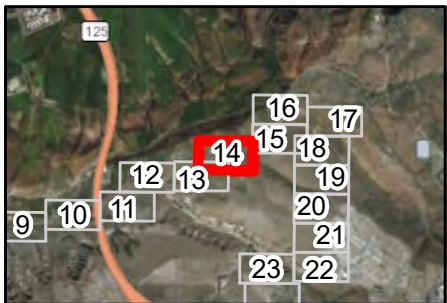
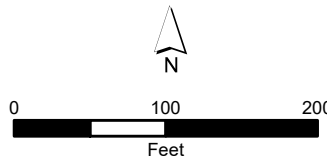
11. Purple Needlegrass Grassland

13. Coast Prickly Pear Scrub

26D. Disturbed San Diego Mesa Claypan Vernal Pools

3. California Sagebrush—California Buckwheat Scrub

8. Disturbed



Appendix A

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Wood-to-Steel Project Vegetation Communities



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Legend

Transmission Centerline

Survey Corridor

Project Pole

Access Type

Existing Non-TCM Access Road

Access Road

Overland Travel

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

11. Purple Needlegrass Grassland

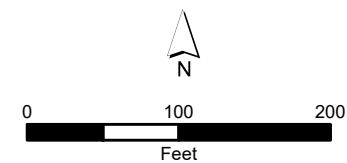
13. Coast Prickly Pear Scrub

15. Pale Spike Rush Marshes

26D. Disturbed San Diego Mesa Claypan Vernal Pools

3. California Sagebrush—California Buckwheat Scrub

3D. Disturbed California Sagebrush—California Buckwheat Scrub



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Wood-to-Steel Project Vegetation Communities

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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Work Area Type

▨ Proposed String Site

Vegetation Community (MCV II)

1. Bare Ground

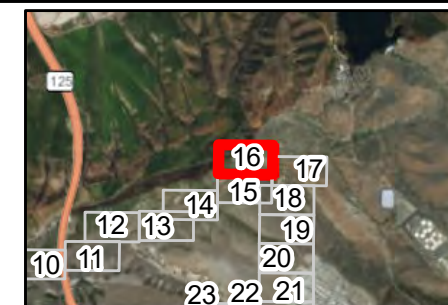
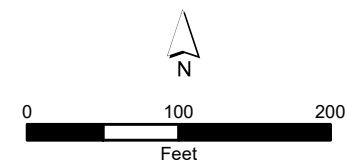
13. Coast Prickly Pear Scrub

17. Tamarisk Thickets

19. Tecate Cypress Stands

26D. Disturbed San Diego Mesa
Claypan Vernal Pools

3. California Sagebrush—California
Buckwheat Scrub



Appendix A

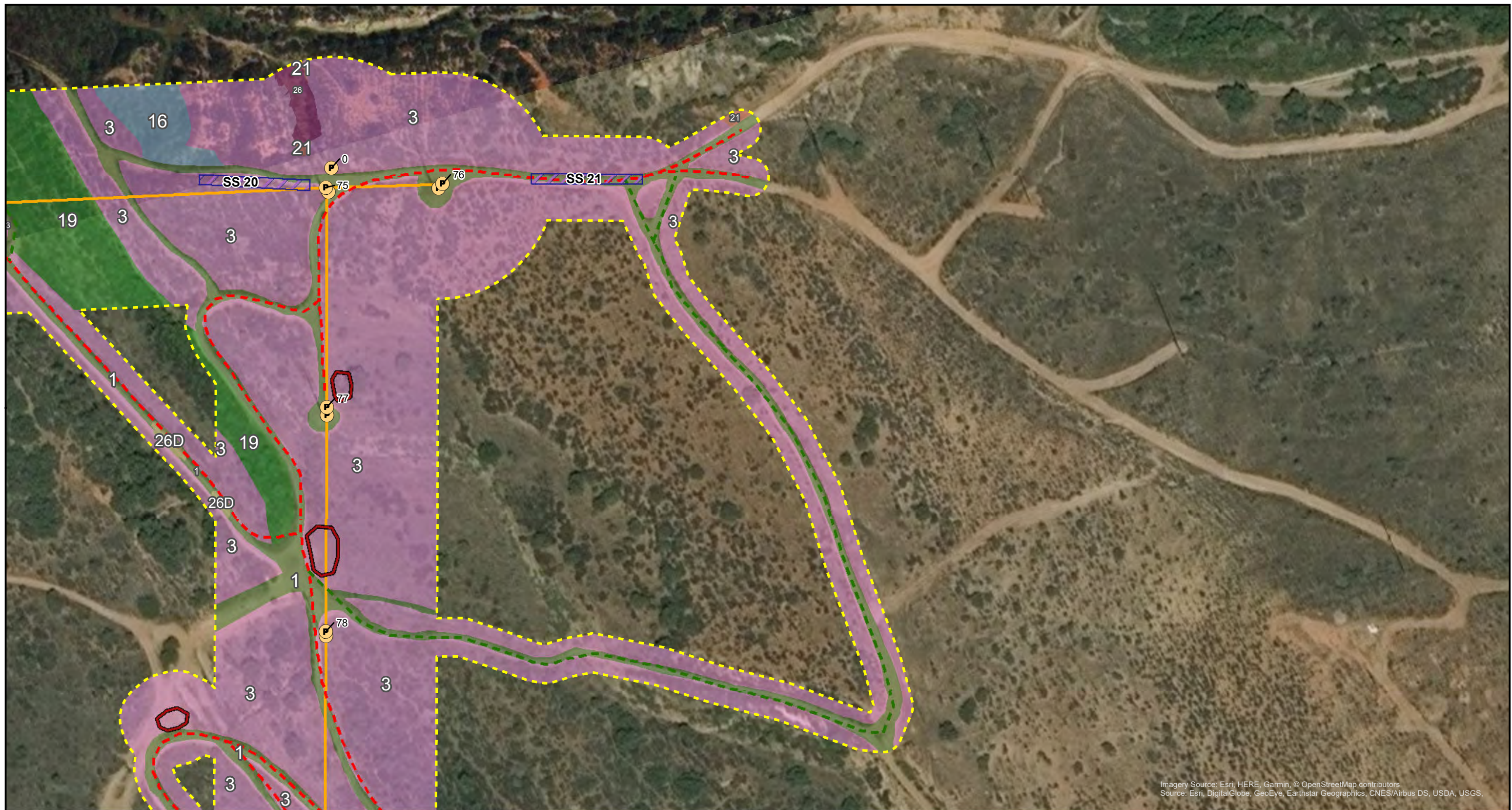
TL 649

Wood-to-Steel Project Vegetation Communities

Page 17 of 31

Name: 20775 PCR Appendix A Veg Communities.Mxd
Print Date: 8/17/2018, Author: esimmons





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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

— Existing Non-TCM Access Road

--- Access Road

Work Area Type

--- Proposed String Site

--- Proposed Turnaround

Vegetation Community (MCV II)

1. Bare Ground

16. Fremont Cottonwood Forest

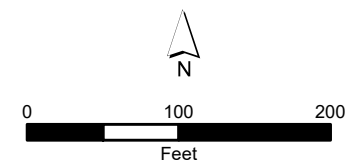
19. Tecate Cypress Stands

21. San Diego Mesa Claypan Vernal Pool Native Grassland Mix

26. San Diego Mesa Claypan Vernal Pool

26D. Disturbed San Diego Mesa Claypan Vernal Pools

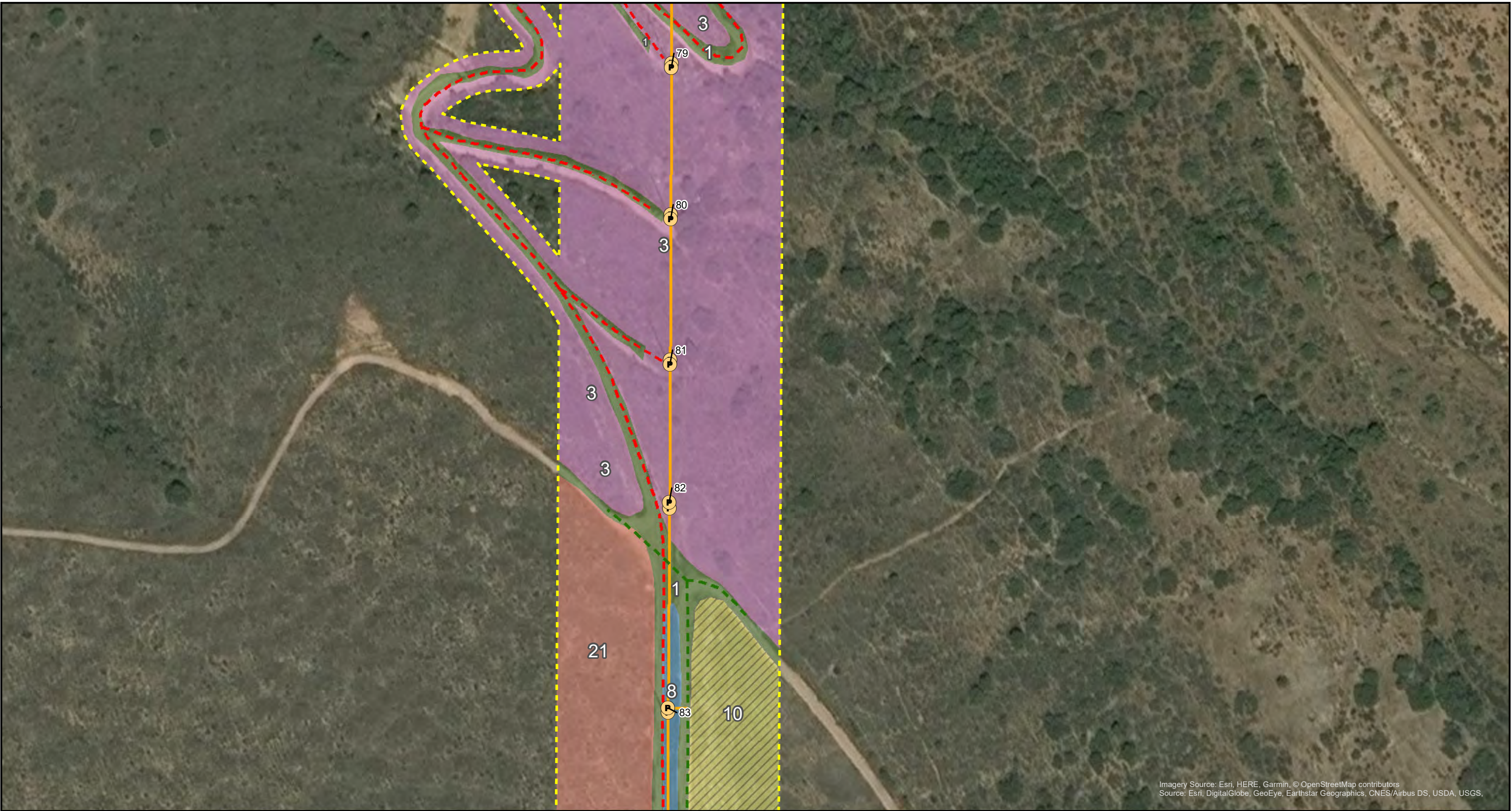
3. California Sagebrush—California Buckwheat Scrub



Appendix A

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Wood-to-Steel Project Vegetation Communities



Imagery Source: Esri, HERE, Garmin, © OpenStreetMap contributors
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Legend

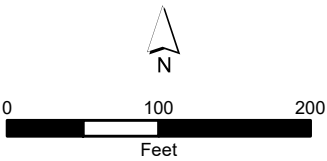
- Transmission Centerline
- Survey Corridor
- Project Pole

Access Type

- Existing Non-TCM Access Road
- Access Road
- Overland Travel

Vegetation Community (MCV II)

- 1. Bare Ground
- 10. Annual Brome Grassland
- 21. San Diego Mesa Claypan Vernal Pool Native Grassland Mix
- 3. California Sagebrush—California Buckwheat Scrub
- 8. Disturbed



Appendix A
TL 649
Wood-to-Steel Project
Vegetation Communities



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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

— Overland Travel

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

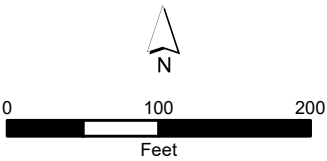
21. San Diego Mesa Claypan Vernal
Pool Native Grassland Mix

26. San Diego Mesa Claypan Vernal
Pool

3D. Disturbed California
Sagebrush—California Buckwheat
Scrub

58. Black Willow Forest

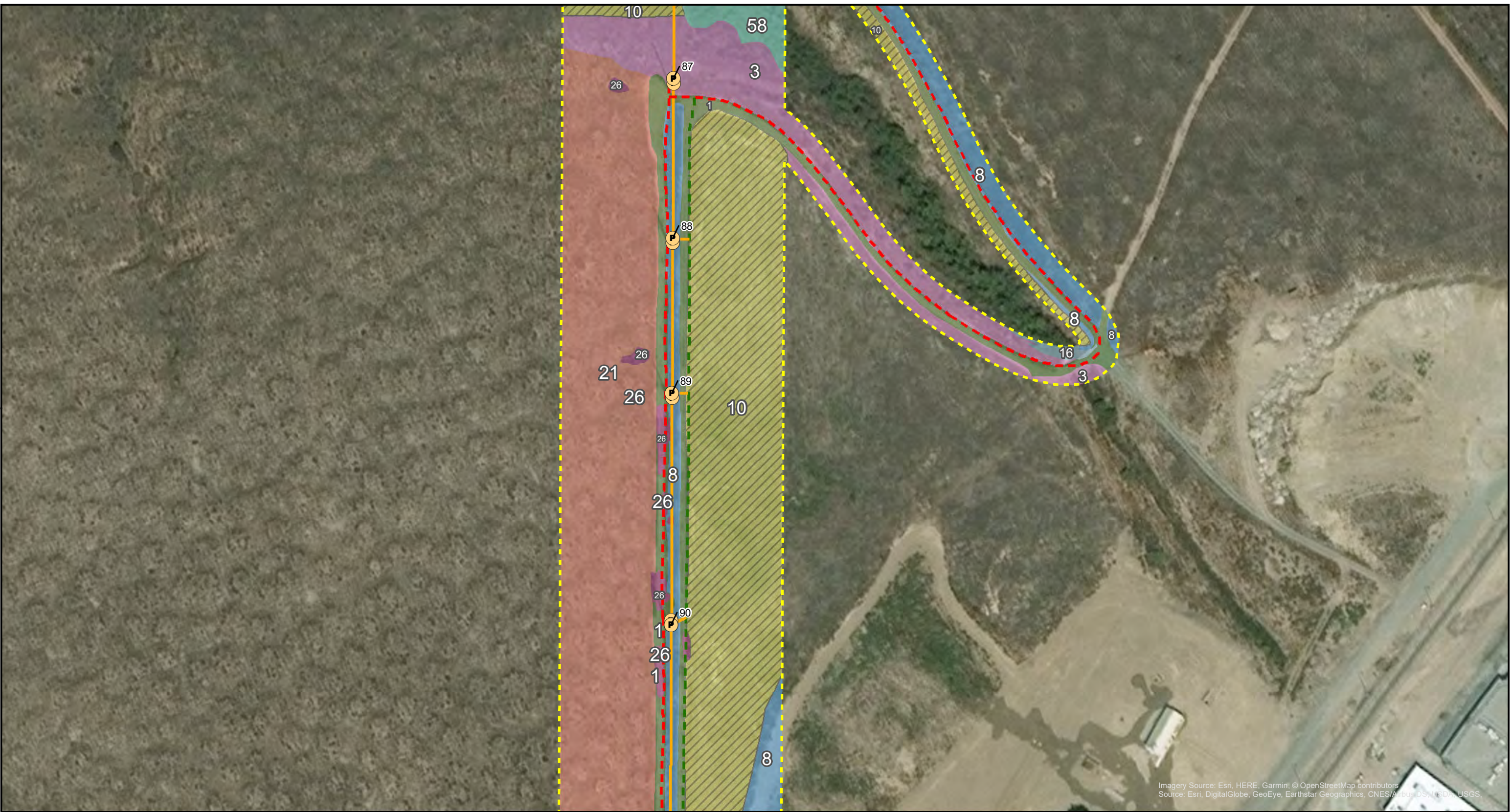
8. Disturbed



Appendix A

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**Wood-to-Steel Project
Vegetation Communities**



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Legend

- Transmission Centerline
- Survey Corridor
- Project Pole

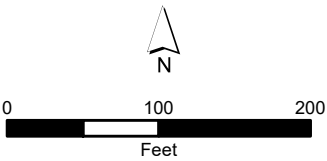
Access Type

- Existing Non-TCM Access Road
- Access Road
- Overland Travel

Vegetation Community (MCV II)

- 1. Bare Ground
- 10. Annual Brome Grassland
- 16. Fremont Cottonwood Forest
- 21. San Diego Mesa Claypan Vernal Pool Native Grassland Mix
- 26. San Diego Mesa Claypan Vernal Pool

- 3. California Sagebrush—California Buckwheat Scrub
- 58. Black Willow Forest
- 8. Disturbed



Appendix A
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Wood-to-Steel Project
Vegetation Communities



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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

— Overland Travel

Vegetation Community (MCV II)

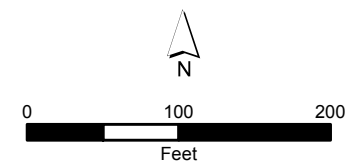
1. Bare Ground

10. Annual Brome Grassland

21. San Diego Mesa Claypan Vernal Pool Native Grassland Mix

26. San Diego Mesa Claypan Vernal Pool

8. Disturbed



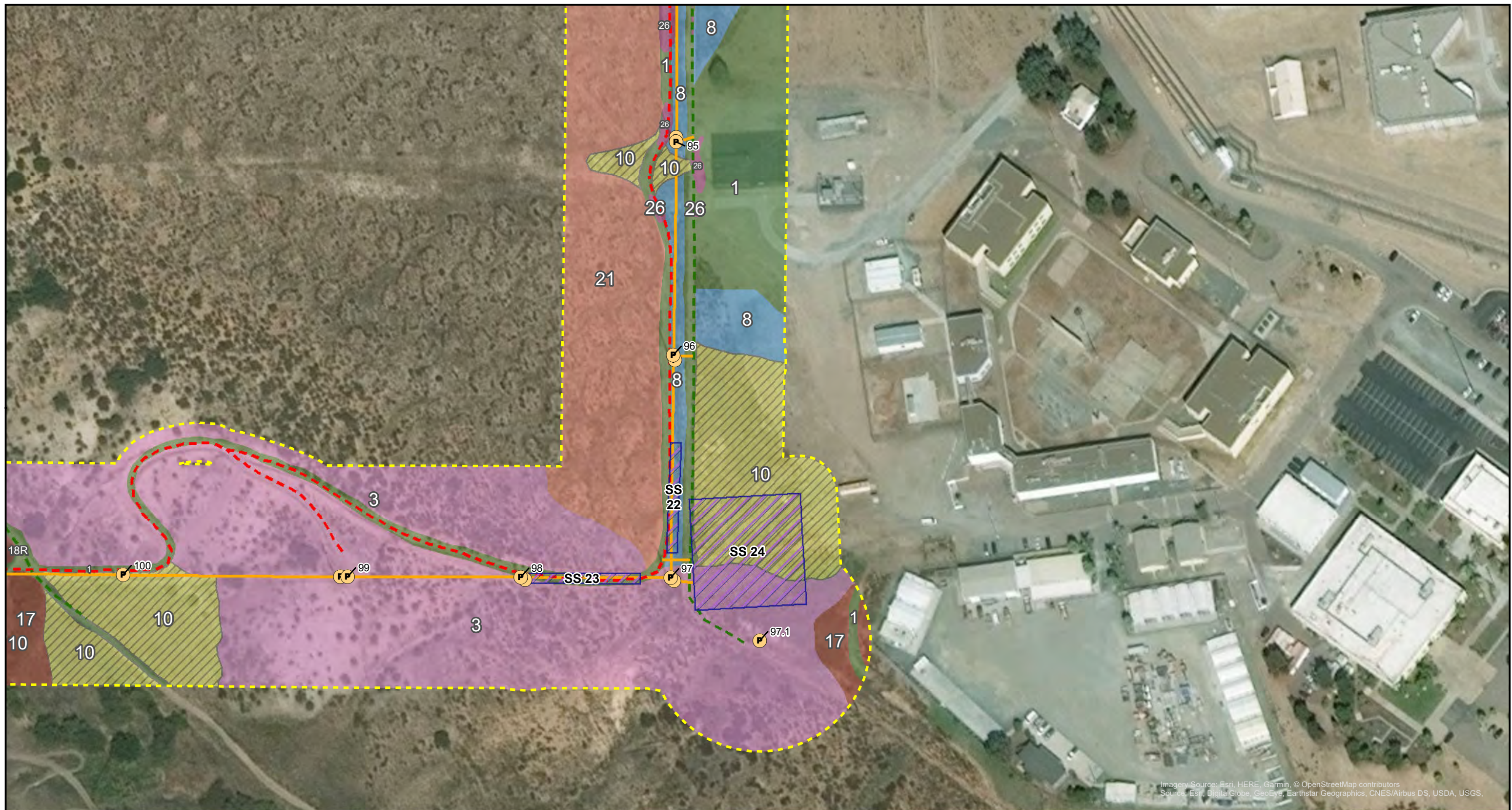
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Wood-to-Steel Project Vegetation Communities

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Legend

Transmission Centerline

Survey Corridor

Project Pole

Access Type

Existing Non-TCM Access Road

Access Road

Overland Travel

Work Area Type

Proposed String Site

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

17. Tamarisk Thickets

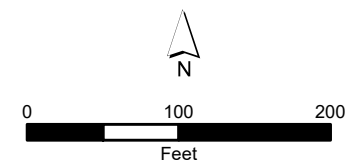
18R. Mulefat Thickets (Active Restoration)

21. San Diego Mesa Claypan Vernal Pool Native Grassland Mix

26. San Diego Mesa Claypan Vernal Pool

3. California Sagebrush—California Buckwheat Scrub

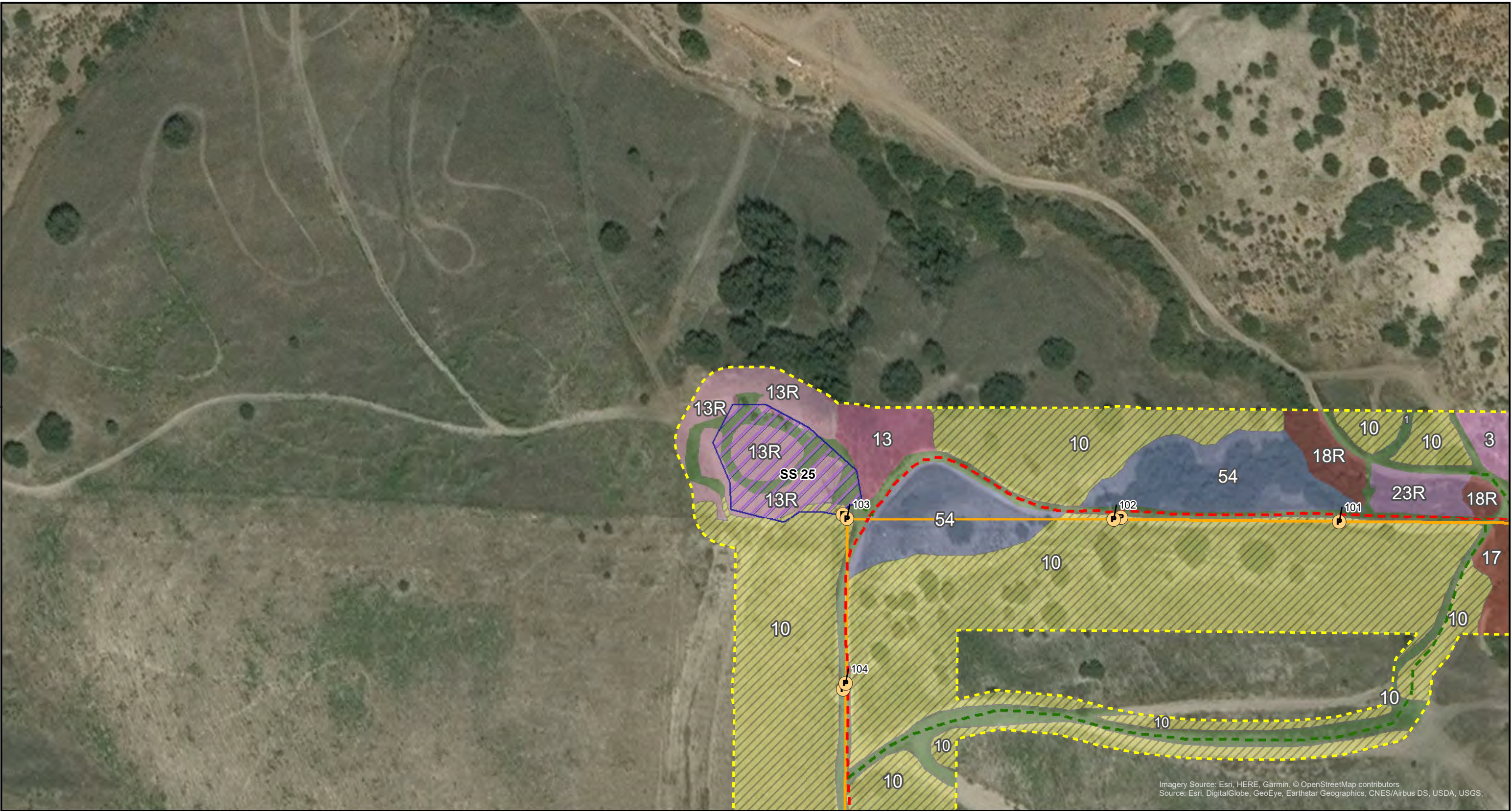
8. Disturbed



Appendix A

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Wood-to-Steel Project Vegetation Communities



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Legend

- Transmission Centerline
- Survey Corridor
- Project Pole

Access Type

- Existing Non-TCM Access Road
- Access Road

Work Area Type

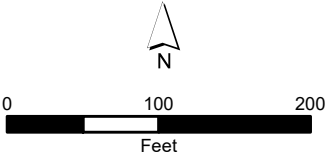
- Proposed String Site

Vegetation Community (MCV II)

- 1. Bare Ground
- 10. Annual Brome Grassland
- 13. Coast Prickly Pear Scrub

- 13R. Coast Prickly Pear Scrub (Active Restoration)
- 17. Tamarisk Thickets
- 18R. Mulefat Thickets (Active Restoration)
- 23R. Spiny Rush Marsh (Active Restoration)

- 3. California Sagebrush—California Buckwheat Scrub
- 54. Lemonade Berry Stand



Appendix A

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**Wood-to-Steel Project
Vegetation Communities**



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Legend

Transmission Centerline

Survey Corridor

Project Pole

Access Type

Existing Non-TCM Access Road

Access Road

Overland Travel

Work Area Type

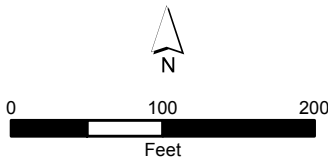
Proposed String Site

Vegetation Community (MCV II)

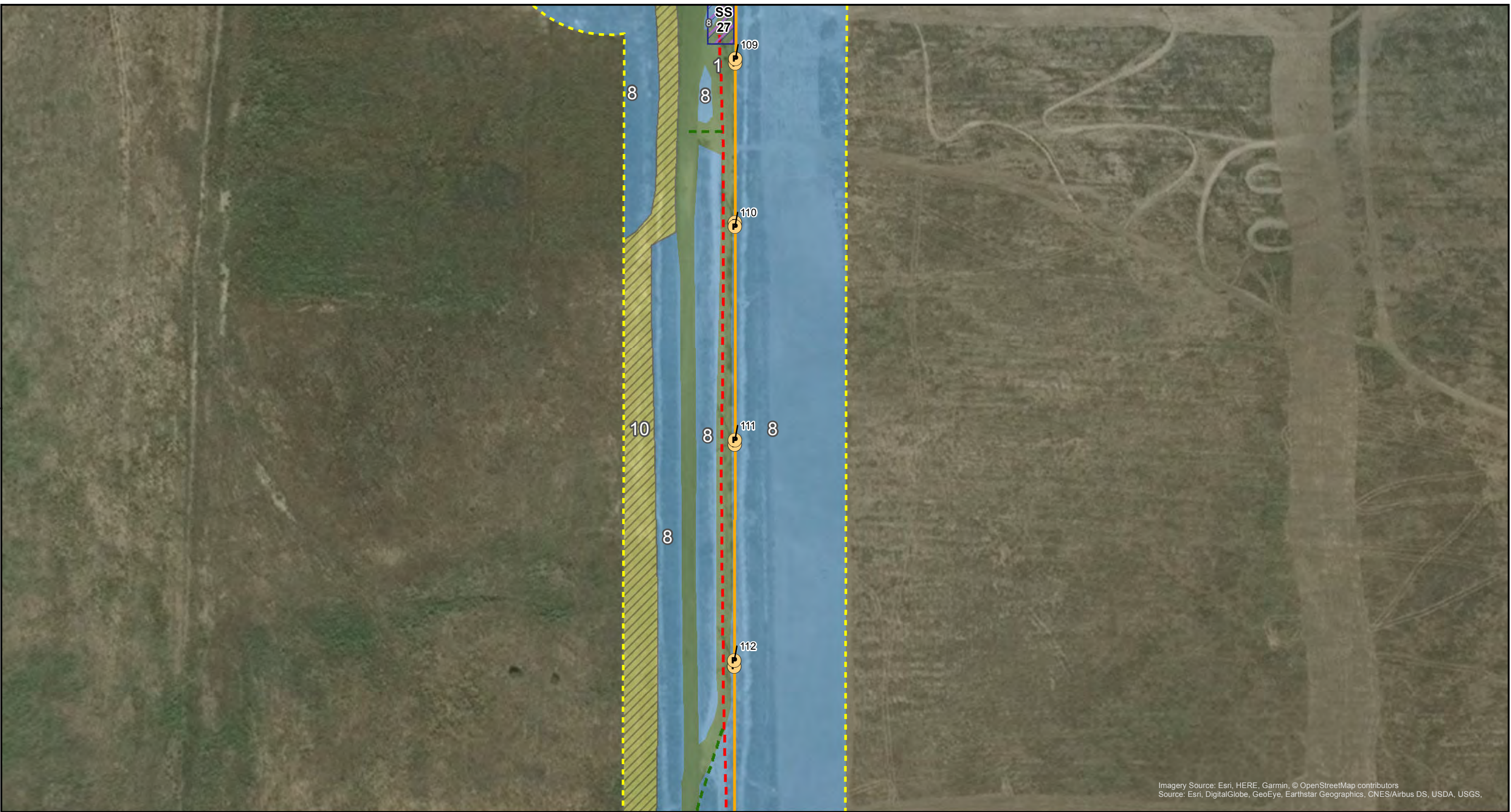
1. Bare Ground

10. Annual Brome Grassland

8. Disturbed



Appendix A
 TL 649
 Wood-to-Steel Project
 Vegetation Communities



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Legend

— Transmission Centerline

- - - Survey Corridor

● Project Pole

Access Type

- - - Existing Non-TCM Access Road

- - - Access Road

Work Area Type

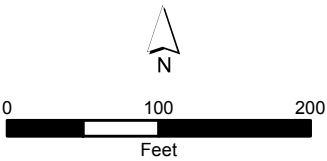
▨ Proposed String Site

Vegetation Community (MCV II)

1. Bare Ground

10. Annual Brome Grassland

8. Disturbed



Appendix A

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**Wood-to-Steel Project
Vegetation Communities**



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 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Legend

- Transmission Centerline
- - - Survey Corridor
- Project Pole

Access Type

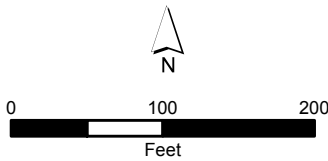
- - - Existing Non-TCM Access Road
- - - Access Road

Work Area Type

- ▨ Proposed String Site

Vegetation Community (MCV II)

- 1. Bare Ground
- ▨ 10. Annual Brome Grassland
- 8. Disturbed



Appendix A

TL 649

**Wood-to-Steel Project
Vegetation Communities**

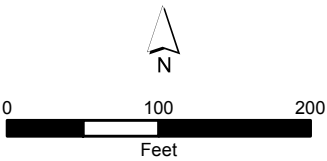


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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Legend

- Survey Corridor
- Access Type**
- Existing Non-TCM Access Road
- Access Road
- Work Area Type**
- Proposed String Site

- Vegetation Community (MCV II)**
1. Bare Ground
8. Disturbed



Appendix A
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Wood-to-Steel Project
Vegetation Communities



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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Legend

 Survey Corridor

Access Type

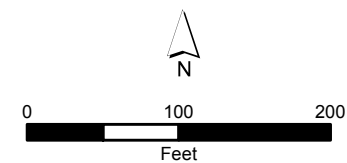
 Existing Non-TCM Access Road

 Access Road

Vegetation Community (MCV II)

1. Bare Ground

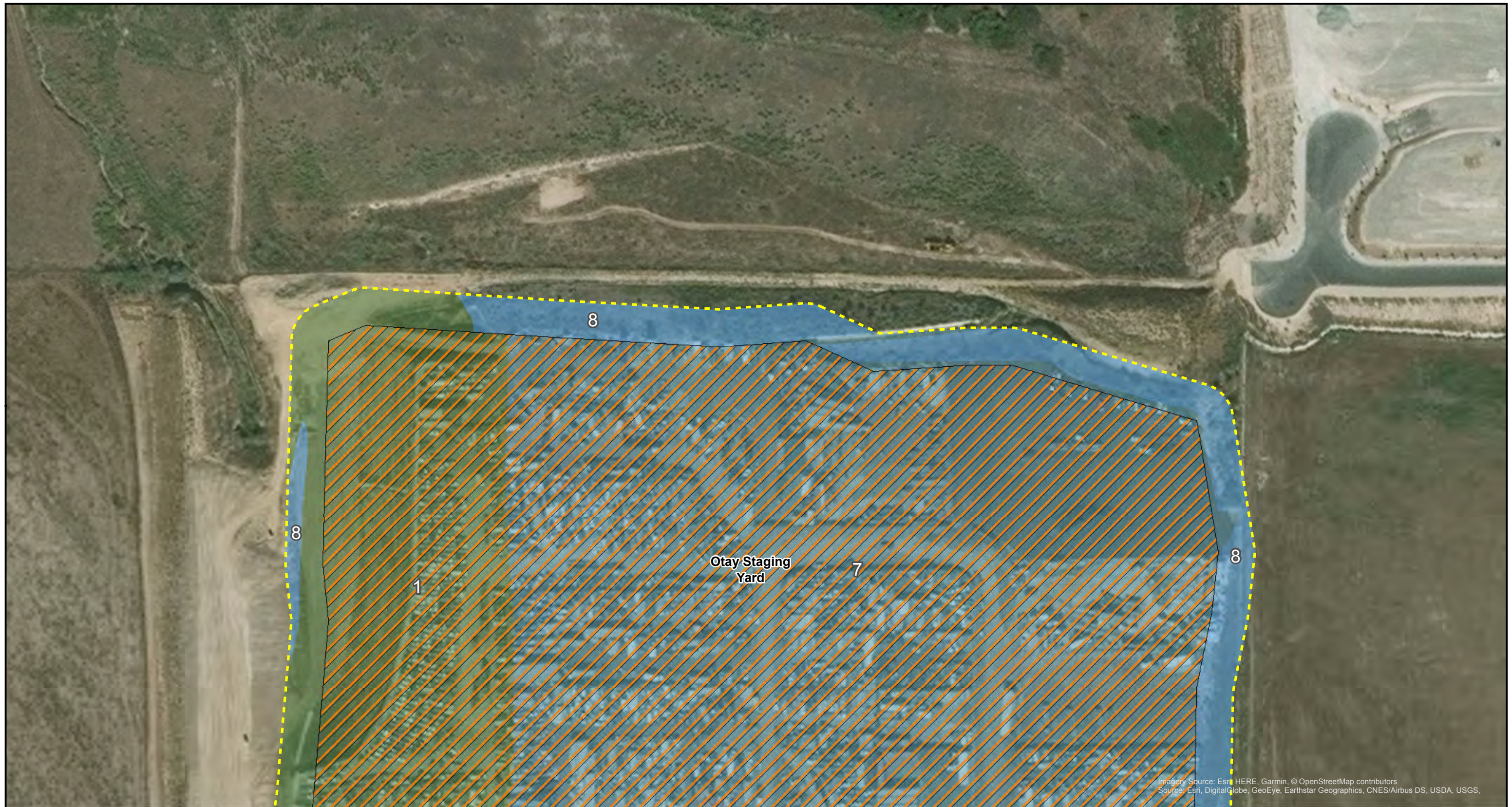
8. Disturbed



Appendix A

TL 649

Wood-to-Steel Project Vegetation Communities



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 Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Legend

 Survey Corridor

Work Area Type

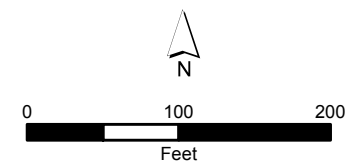
 Proposed Staging Yard

Vegetation Community (MCV II)

1. Bare Ground

7. Urban and Developed

8. Disturbed



Appendix A

TL 649

Wood-to-Steel Project Vegetation Communities



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Legend

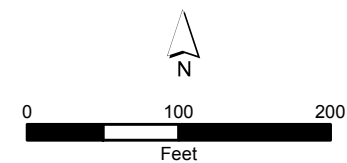
 Survey Corridor

Work Area Type

 Proposed Staging Yard

Vegetation Community (MCV II)

- 1. Bare Ground
- 7. Urban and Developed
- 8. Disturbed



Appendix A

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Wood-to-Steel Project Vegetation Communities

APPENDIX B – PLANT LIST



APPENDIX B – PLANT SPECIES OBSERVED

Scientific Name	Common Name	2014	2018
LYCOPHYTES			
SELAGINELLACEAE	SPIKE-MOSS FAMILY		
<i>Selaginella bigelovii</i>	Bigelow's spike-moss	X	X
<i>Selaginella cinerascens</i>	mesa spike-moss	X	X
FERNS			
POLYPODIACEAE	POLYPODY FAMILY		
<i>Polypodium californicum</i>	California polypody	X	
PTERIDACEAE	BRAKE FAMILY		
<i>Pellaea mucronata</i> var. <i>mucronata</i>	bird's foot cliff-brake	X	
<i>Pentagramma triangularis</i> subsp. <i>triangularis</i>	California goldback fern	X	X
GYMNOSPERMS			
CUPRESSACEAE	CYPRESS FAMILY		
<i>Cupressus sempervirens</i> *	Italian cypress	X	
<i>Hesperocyparis forbesii</i>	Tecate cypress	X	X
EPHEDRACEAE	EPHEDRA FAMILY		
<i>Ephedra californica</i>	desert tea	X	X
PINACEAE	PINE FAMILY		
<i>Pinus halepensis</i> +	Aleppo pine		X
MAGNOLIIDS			
SAURURACEAE	LIZARD'S-TAIL FAMILY		
<i>Anemopsis californica</i>	yerba mansa	X	X
ANGIOSPERMS (EUDICOTS)			
ADOXACEAE	MUSKROOT FAMILY		
<i>Sambucus nigra</i> subsp. <i>caerulea</i>	blue elderberry	X	X
AIZOACEAE	FIG-MARIGOLD FAMILY		
<i>Aptenia cordifolia</i> *	baby sun rose	X	
<i>Carpobrotus edulis</i> *	hottentot-fig	X	X
<i>Mesembryanthemum crystallinum</i> *	crystalline iceplant	X	X
<i>Mesembryanthemum nodiflorum</i> *	slender-leaved iceplant	X	X
<i>Sesuvium verrucosum</i>	western sea-purslane	X	X
AMARANTHACEAE	AMARANTH FAMILY		
<i>Amaranthus albus</i> *	tumbling pigweed	X	X
ANACARDIACEAE	SUMAC OR CASHEW FAMILY		

Scientific Name	Common Name	2014	2018
<i>Malosma laurina</i>	laurel sumac	X	X
<i>Rhus integrifolia</i>	lemonadeberry	X	X
<i>Rhus ovata</i>	sugar bush	X	X
<i>Schinus molle</i> *	Peruvian pepper tree	X	X
<i>Schinus terebinthifolius</i> +	Brazilian pepper tree	X	X
<i>Searsia lancea</i> +	African sumac		X
<i>Toxicodendron diversilobum</i>	poison oak	X	X
APIACEAE	CARROT FAMILY		
<i>Apiastrum angustifolium</i>	wild celery	X	
<i>Apium graveolens</i> *	celery	X	X
<i>Daucus pusillus</i>	rattlesnake weed	X	X
<i>Eryngium aristulatum</i> var. <i>parishii</i>	San Diego button-celery	X	X
<i>Foeniculum vulgare</i> *	fennel	X	X
<i>Lomatium dasycarpum</i>	woolly-fruited lomatium	X	
<i>Lomatium lucidum</i>	shiny lomatium	X	
<i>Sanicula arguta</i>	sharp-toothed sanicle	X	
<i>Sanicula bipinnatifida</i>	purple sanicle	X	X
<i>Sanicula crassicaulis</i>	Pacific sanicle	X	X
APOCYNACEAE	DOGBANE FAMILY		
<i>Carissa macrocarpa</i> +	natal plum	X	X
<i>Funastrum cynanchoides</i> var. <i>hartwegii</i>	climbing milkweed	X	X
<i>Nerium oleander</i> +	oleander	X	X
ASTERACEAE	SUNFLOWER FAMILY		
<i>Achillea millefolium</i>	California yarrow	X	X
<i>Ambrosia acanthicarpa</i>	annual bur-sage	X	X
<i>Ambrosia chenopodiifolia</i>	San Diego bur-sage	X	X
<i>Ambrosia confertiflora</i>	weak-leaved burweed	X	X
<i>Ambrosia monogyra</i>	leafy burrobush	X	X
<i>Ambrosia psilostachya</i>	western ragweed	X	X
<i>Artemisia californica</i>	California sagebrush	X	X
<i>Artemisia douglasiana</i>	mugwort	X	X
<i>Artemisia dracunculus</i>	tarragon	X	
<i>Artemisia palmeri</i>	Palmer's sagewort	X	X
<i>Baccharis pilularis</i>	coyote brush	X	X
<i>Baccharis salicifolia</i> subsp. <i>salicifolia</i>	mule fat	X	X
<i>Baccharis sarothroides</i>	broom baccharis	X	X

Scientific Name	Common Name	2014	2018
<i>Bahiopsis laciniata</i> [<i>Viguiera laciniata</i>]	San Diego County viguiera	X	X
<i>Bidens pilosa</i>	common beggar-ticks	X	
<i>Brickellia californica</i>	California brickellbush	X	X
<i>Carduus pycnocephalus</i> subsp. <i>pycnocephalus</i> *	Italian thistle	X	X
<i>Centaurea melitensis</i> *	tocalote	X	X
<i>Cirsium vulgare</i> *	bull thistle	X	X
<i>Corethrogyne filaginifolia</i>	sand-aster	X	X
<i>Cotula australis</i> *	Australian brass-buttons	X	
<i>Cotula coronopifolia</i> *	brass-buttons	X	
<i>Cynara cardunculus</i> *	cardoon	X	
<i>Deinandra conjugens</i>	Otay tarplant	X	X
<i>Deinandra fasciculata</i>	fascicled tarweed	X	X
<i>Dittrichia graveolens</i> *	stinkwort	X	X
<i>Encelia californica</i>	California bush sunflower	X	X
<i>Ericameria brachylepis</i>	boundary goldenbush	X	X
<i>Erigeron bonariensis</i> *	flax-leaved horseweed	X	
<i>Erigeron canadensis</i>	horseweed	X	
<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i>	long-stem golden-yarrow	X	X
<i>Gazania linearis</i> *	treasure flower	X	
<i>Glebionis coronaria</i> *	garland daisy	X	X
<i>Grindelia camporum</i>	gum-plant	X	X
<i>Gutierrezia californica</i>	california matchweed	X	X
<i>Hedypnois rhagadioloides</i> *	crete hedypnois	X	X
<i>Helminthotheca echioides</i> *	bristly ox-tongue	X	X
<i>Hesperexax caulescens</i> *	hogwallow starfish	X	
<i>Heterotheca grandiflora</i>	telegraph weed	X	X
<i>Holocarpha virgata</i> subsp. <i>elongata</i>	graceful tarplant	X	X
<i>Hypochaeris glabra</i> *	smooth cat's-ear	X	X
<i>Hypochaeris radicata</i> *	hairy cat's-ear	X	
<i>Isocoma menziesii</i> var. <i>decumbens</i>	decumbent goldenbush	X	X
<i>Isocoma menziesii</i> var. <i>menziesii</i>	spreading goldenbush	X	X
<i>Isocoma menziesii</i> var. <i>vernonioides</i>	Coastal goldenbush	X	X
<i>Iva hayesiana</i>	San Diego marsh-elder	X	X
<i>Lactuca serriola</i> *	prickly lettuce	X	X
<i>Laennecia coulteri</i>	Coulter's fleabane	X	X
<i>Lasthenia gracilis</i>	common goldfields	X	X

Scientific Name	Common Name	2014	2018
<i>Logfia filaginoides</i>	California fluffweed	X	X
<i>Logfia gallica</i> *	narrow-leaf filago	X	X
<i>Matricaria discoidea</i> *	common pineapple-weed	X	X
<i>Oncosiphon piluliferum</i> *	globe chamomile	X	X
<i>Osmadenia tenella</i>	southern rosinweed	X	X
<i>Pluchea odorata</i> var. <i>odorata</i>	salt marsh fleabane	X	
<i>Pseudognaphalium biolettii</i>	bicolored cudweed	X	X
<i>Pseudognaphalium californicum</i>	California everlasting	X	X
<i>Pseudognaphalium canescens</i>	Wright's cudweed		X
<i>Pseudognaphalium luteoalbum</i> *	everlasting cudweed	X	X
<i>Pseudognaphalium stramineum</i>	cotton-batting plant	X	
<i>Psilocarphus brevissimus</i>	woolly marbles	X	
<i>Senecio vulgaris</i> *	common groundsel	X	X
<i>Silybum marianum</i> *	milk thistle	X	X
<i>Sonchus asper</i> subsp. <i>asper</i> *	prickly sow thistle	X	X
<i>Sonchus oleraceus</i> *	common sow thistle	X	X
<i>Stylocline gnaphaloides</i>	everlasting nest straw	X	X
<i>Taraxacum officinale</i> *	common dandelion	X	
<i>Uropappus lindleyi</i>	silver puff	X	X
<i>Xanthium strumarium</i>	cocklebur	X	
BIGNONIACEAE	BIGNONIA FAMILY		
<i>Jacaranda mimosifolia</i> +	jacaranda	X	
<i>Spathodea campanulata</i> +	fountain tree	X	
<i>Tecomaria capensis</i> +	Cape honeysuckle	X	X
BORAGINACEAE	BORAGE FAMILY		
<i>Amsinckia menziesii</i>	common fiddleneck	X	X
<i>Cryptantha clevelandii</i> var. <i>clevelandii</i>	Cleveland's cryptantha	X	
<i>Echium candicans</i> *	pride of Madeira	X	
<i>Eriodictyon trichocalyx</i> var. <i>trichocalyx</i>	shiny-leaf yerba santa	X	X
<i>Eucrypta chrysanthemifolia</i> var. <i>chrysanthemifolia</i>	common eucrypta	X	
Harpagonella palmeri	Palmer's grappling hook	X	
<i>Heliotropium curassavicum</i> var. <i>oculatum</i>	salt heliotrope	X	X
<i>Pectocarya linearis</i> subsp. <i>ferocula</i>	slender pectocarya	X	X
<i>Phacelia cicutaria</i> var. <i>hispida</i>	caterpillar phacelia	X	X
<i>Phacelia distans</i>	wild heliotrope	X	X
<i>Plagiobothrys acanthocarpus</i>	adobe allocarya	X	X

Scientific Name	Common Name	2014	2018
<i>Plagiobothrys arizonicus</i>	Arizona popcorn flower	X	X
<i>Plagiobothrys collinus</i> var. <i>gracilis</i>	San Diego popcornflower	X	X
BRASSICACEAE	MUSTARD FAMILY		
<i>Brassica nigra</i> *	black mustard	X	X
<i>Brassica tournefortii</i> *	Sahara mustard	X	X
<i>Hirschfeldia incana</i> *	shortpod mustard	X	X
<i>Lepidium didymum</i>	wart cress	X	X
<i>Lepidium latifolium</i> *	peppergrass	X	X
<i>Lepidium nitidum</i>	shining peppergrass	X	X
<i>Lobularia maritima</i> *	sweet-alyssum	X	
<i>Raphanus sativus</i> *	radish	X	X
<i>Sisymbrium altissimum</i> *	tumble mustard	X	
<i>Sisymbrium irio</i> *	London rocket	X	X
<i>Sisymbrium orientale</i> *	oriental hedge mustard	X	
CACTACEAE	CACTUS FAMILY		
<i>Bergerocactus emoryi</i>	golden club cactus	X	X
<i>Cylindropuntia prolifera</i>	coast cholla	X	X
<i>Ferocactus viridescens</i>	coast barrel cactus	X	X
<i>Mammillaria dioica</i>	fish-hook cactus	X	
<i>Opuntia ficus-indica</i> *	Mission prickly-pear		X
<i>Opuntia littoralis</i>	coastal prickly pear	X	X
<i>Opuntia oricola</i>	pancake prickly pear	X	X
CAPRIFOLIACEAE	HONEYSUCKLE FAMILY		
<i>Lonicera subspicata</i> var. <i>denudata</i>	Johnston's honeysuckle	X	X
CARYOPHYLLACEAE	PINK FAMILY		
<i>Cardionema ramosissimum</i>	sand mat	X	X
<i>Silene gallica</i> *	common catchfly	X	X
<i>Spergularia bocconi</i> *	Boccone's sandspurrey	X	X
<i>Spergularia marina</i>	saltmarsh sandspurrey	X	
<i>Stellaria media</i> *	common chickweed		X
<i>Stellaria pallida</i> *	lesser chickweed		X
CHENOPODIACEAE	GOOSEFOOT FAMILY		
<i>Atriplex canescens</i>	four-wing saltbush	X	X
<i>Atriplex lentiformis</i>	big saltbush	X	X
<i>Atriplex pacifica</i>	south coast saltbush	X	X
<i>Atriplex semibaccata</i> *	Australian saltbush	X	X

Scientific Name	Common Name	2014	2018
<i>Atriplex suberecta</i> *	peregrine saltbush	X	X
<i>Bassia hyssopifolia</i> +	five horn bassia		X
<i>Beta vulgaris</i> subsp. <i>maritima</i> *	sea beet	X	X
<i>Chenopodium album</i> *	lamb's quarters	X	X
<i>Chenopodium californicum</i>	California goosefoot	X	X
<i>Salsola australis</i> *	Russian thistle	X	X
<i>Salsola tragus</i> *	tumbleweed		X
CLEOMACEAE	SPIDERFLOWER FAMILY		
<i>Peritoma arborea</i> var. <i>arborea</i>	bladderpod	X	X
CONVOLVULACEAE	MORNING-GLORY FAMILY		
<i>Calystegia macrostegia</i> subsp. <i>tenuifolia</i>	San Diego morning-glory	X	X
<i>Convolvulus arvensis</i> *	bindweed	X	X
<i>Convolvulus simulans</i>	small-flower bindweed	X	X
<i>Cuscuta californica</i> var. <i>californica</i>	chaparral dodder	X	X
CRASSULACEAE	STONECROP FAMILY		
<i>Crassula argentea</i> *	jade plant	X	X
<i>Crassula connata</i>	pygmy-weed	X	X
<i>Dudleya edulis</i>	ladies-fingers	X	X
<i>Dudleya pulverulenta</i>	chalk dudleya	X	X
<i>Dudleya variegata</i>^	variegated dudleya		
CUCURBITACEAE	GOURD FAMILY		
<i>Cucurbita foetidissima</i>	calabazilla	X	X
<i>Marah macrocarpa</i>	wild cucumber	X	X
ERICACEAE	HEATH FAMILY		
<i>Arctostaphylos otayensis</i>	Otay manzanita	X	X
EUPHORBIACEAE	SPURGE FAMILY		
<i>Croton setiger</i>	doveweed	X	X
<i>Euphorbia albomarginata</i>	white-margin sandmat	X	X
<i>Euphorbia maculata</i> *	spotted spurge	X	X
<i>Euphorbia misera</i>	cliff spurge	X	X
<i>Euphorbia peplus</i> *	petty spurge	X	
<i>Euphorbia polycarpa</i>	small-seed sandmat	X	X
<i>Euphorbia serpens</i> *	creeping spurge	X	
<i>Ricinus communis</i> *	castor-bean	X	X
FABACEAE	LEGUME FAMILY		
<i>Acacia melanoxylon</i> *	blackwood acacia		X

Scientific Name	Common Name	2014	2018
<i>Acacia redolens</i> *	desert carpet	X	
<i>Acacia saligna</i> *	golden wreath wattle	X	X
<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish clover	X	X
<i>Acmispon glaber</i> var. <i>brevialatus</i>	short-wing deerweed	X	X
<i>Acmispon glaber</i> var. <i>glaber</i>	coastal deerweed	X	X
<i>Acmispon maritimus</i> var. <i>maritimus</i>	alkali lotus	X	
<i>Acmispon micranthus</i>	San Diego lotus	X	
<i>Acmispon strigosus</i>	strigose lotus	X	
<i>Astragalus trichopodus</i> var. <i>lonchus</i>	ocean locoweed	X	X
<i>Lupinus concinnus</i>	bajada lupine	X	
<i>Medicago polymorpha</i> *	bur clover	X	X
<i>Melilotus albus</i> *	white sweetclover	X	X
<i>Melilotus indicus</i> *	yellow sourclover	X	X
<i>Prosopis glandulosa</i> var. <i>torreyana</i>	honey mesquite	X	X
<i>Prosopis velutina</i> +	velvet mesquite	X	
<i>Trifolium hirtum</i> *	rose clover	X	X
<i>Vachellia farnesiana</i> var. <i>farnesiana</i> +	sweet acacia	X	X
<i>Vicia villosa</i> subsp. <i>villosa</i> *	winter vetch	X	X
FAGACEAE	OAK FAMILY		
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	coast live oak, encina	X	X
<i>Quercus x acutidens</i>	Torrey's scrub oak	X	X
GERANIACEAE	GERANIUM FAMILY		
<i>Erodium botrys</i> *	broad-lobed filaree	X	X
<i>Erodium brachycarpum</i> *	long-beaked filaree	X	X
<i>Erodium cicutarium</i> *	red-stemmed filaree	X	X
<i>Erodium malacoides</i> *	Mediterranean stork's-bill	X	X
<i>Erodium moschatum</i> *	white-stemmed filaree	X	X
<i>Geranium carolinianum</i>	Carolina geranium		X
<i>Pelargonium</i> sp.+	garden geranium	X	
GROSSULARIACEAE	GOOSEBERRY FAMILY		
<i>Ribes speciosum</i>	fuchsia-flowered gooseberry	X	X
LAMIACEAE	MINT FAMILY		
<i>Marrubium vulgare</i> *	horehound	X	X
<i>Rosmarinus officinalis</i> +	rosemary		X
<i>Salvia apiana</i>	white sage	X	X
<i>Salvia mellifera</i>	black sage	X	X

Scientific Name	Common Name	2014	2018
<i>Salvia munzii</i>	Munz's sage	X	X
<i>Stachys rigida</i> var. <i>quercetorum</i>	hillside hedge-nettle	X	X
<i>Trichostema lanceolatum</i>	vinegar weed	X	
LYTHRACEAE	LOOSESTRIFE FAMILY		
<i>Lythrum hyssopifolia</i> *	hyssop loosestrife		X
MALVACEAE	MALLOW FAMILY		
<i>Malacothamnus densiflorus</i>	many-flowered mallow	X	
<i>Malva nicaeensis</i> *	bull mallow	X	
<i>Malva parviflora</i> *	cheeseweed	X	X
<i>Malva pseudolavatera</i> *	Cretan mallow		X
<i>Sidalcea sparsifolia</i>	checker mallow	X	X
MONTIACEAE	MINER'S LETTUCE FAMILY		
<i>Calandrinia ciliata</i>	red maids	X	X
<i>Claytonia parviflora</i> subsp. <i>parviflora</i>	Utah miner's-lettuce	X	X
MORACEAE	MULBERRY FAMILY		
<i>Ficus</i> sp.+	fig	X	
MYRSINACEAE	MYRSINE FAMILY		
<i>Lysimachia arvensis</i> *	scarlet pimpernel	X	X
MYRTACEAE	MYRTLE FAMILY		
<i>Callistemon</i> sp.+	bottlebrush tree	X	
<i>Eucalyptus</i> sp.*	gum tree		X
<i>Eucalyptus camaldulensis</i> *	red gum	X	
<i>Eucalyptus leucoxydon</i> +	yellow gum		X
<i>Eucalyptus pulverulenta</i> *	silver dollar eucalyptus	X	
<i>Eucalyptus viminalis</i> +	ribbon gum		X
<i>Lophostemon confertus</i> +	brush box	X	
NYCTAGINACEAE	FOUR O'CLOCK FAMILY		
<i>Bougainvillea</i> sp.+	bougainvillea	X	X
<i>Mirabilis laevis</i> var. <i>crassifolia</i>	California wishbone bush	X	X
OLEACEAE	OLIVE FAMILY		
<i>Fraxinus</i> sp.+	ash	X	
<i>Fraxinus uhdei</i> +	Shamel ash		X
<i>Olea europaea</i> *	olive	X	X
ONAGRACEAE	EVENING PRIMROSE FAMILY		
<i>Clarkia purpurea</i>	purple clarkia		X
<i>Clarkia purpurea</i> subsp. <i>quadrivulnera</i>	four-spot		X

Scientific Name	Common Name	2014	2018
<i>Epilobium canum</i> subsp. <i>canum</i>	California fuchsia, zauschneria		X
<i>Epilobium ciliatum</i> subsp. <i>ciliatum</i>	epilobium cilatum	X	
<i>Oenothera sinuosa</i> *	wavy-leaf gaura	X	X
OROBANCHACEAE	BROOM-RAPE FAMILY		
<i>Castilleja affinis</i> subsp. <i>affinis</i>	coast paintbrush	X	
<i>Castilleja subinclusa</i> subsp. <i>subinclusa</i>	long-leaf Indian paintbrush	X	X
<i>Dicranostegia orcuttiana</i>	Orcutt's bird's-beak		X
OXALIDACEAE	OXALIS FAMILY		
<i>Oxalis californica</i>	California wood-sorrel	X	X
<i>Oxalis pes-caprae</i> *	Bermuda buttercup	X	X
PAPAVERACEAE	POPPY FAMILY		
<i>Eschscholzia californica</i>	California poppy	X	X
<i>Romneya trichocalyx</i>	hairy matilija poppy	X	X
PHRYMACEAE	LOPSEED FAMILY		
<i>Mimulus aurantiacus</i> var. <i>pubescens</i>	southern sticky monkey-flower	X	X
<i>Mimulus aurantiacus</i> var. <i>puniceus</i>	red monkey-flower	X	X
<i>Mimulus cardinalis</i>	scarlet monkeyflower		X
PHYTOLACCACEAE	POKEWEED FAMILY		
<i>Phytolacca isosandra</i> +	pokeweed	X	X
PITTOSPORACEAE	TOBIRA FAMILY		
<i>Pittosporum</i> sp.+	pittosporum	X	
PLANTAGINACEAE	PLANTAIN FAMILY		
<i>Kickxia elatine</i> *	fluellin	X	
<i>Plantago elongata</i>	prairie plantain	X	
<i>Plantago erecta</i>	western plantain	X	X
<i>Plantago rhodosperma</i>	redseed plantain	X	
<i>Plantago virginica</i> *	dwarf plantain	X	
PLATANACEAE	SYCAMORE FAMILY		
<i>Platanus x acerifolia</i> +	London plane tree		X
<i>Platanus racemosa</i>	western sycamore	X	X
PLUMBAGINACEAE	LEADWORT FAMILY		
<i>Limonium</i> sp.+	marsh rosemary, statice	X	X
<i>Plumbago auriculata</i> +	cape plumbago	X	X
POLEMONACEAE	PHLOX FAMILY		
<i>Linanthus dianthiflorus</i>	fringed linanthus		X
<i>Navarretia hamata</i> subsp. <i>leptantha</i>	hooked navaretia		X

Scientific Name	Common Name	2014	2018
POLYGONACEAE	BUCKWHEAT FAMILY		
<i>Eriogonum elongatum</i> var. <i>elongatum</i>	long-stemmed buckwheat	X	X
<i>Eriogonum fasciculatum</i> var. <i>fasciculatum</i>	coastal California buckwheat	X	X
<i>Eriogonum fasciculatum</i> var. <i>polifolium</i>	Mojave desert California buckwheat	X	X
<i>Polygonum aviculare</i> subsp. <i>aviculare</i> *	common knotweed	X	X
<i>Pterostegia drymarioides</i>	California thread-stem	X	
<i>Rumex conglomeratus</i> *	dock	X	
<i>Rumex crispus</i> *	curly dock	X	X
PORTULACACEAE	PURSLANE FAMILY		
<i>Portulaca oleracea</i> *	common purslane	X	
PRIMULACEAE	PRIMROSE FAMILY		
<i>Primula clevelandii</i>	Padre's shooting star		X
PUNICACEAE	POMEGRANATE FAMILY		
<i>Punica granatum</i> +	pomegranate	X	X
RANUNCULACEAE	BUTTERCUP FAMILY		
<i>Clematis pauciflora</i>	southern California clematis		X
<i>Myosurus minimus</i> subsp. <i>apus</i>	little mousetail		X
<i>Ranunculus californicus</i> var. <i>californicus</i>	California buttercup	X	X
RHAMNACEAE	BUCKTHORN FAMILY		
<i>Adolphia californica</i>	spine shrub	X	X
<i>Ceanothus otayensis</i>	Otay-lilac	X	X
<i>Ceanothus tomentosus</i>	woolly-leaved ceanothus	X	X
<i>Rhamnus crocea</i>	spiny redberry	X	X
ROSACEAE	ROSE FAMILY		
<i>Adenostoma fasciculatum</i>	chamise	X	X
<i>Drymocallis glandulosa</i> var. <i>wrangelliana</i>	sticky cinquefoil		X
<i>Heteromeles arbutifolia</i>	toyon	X	X
<i>Prunus ilicifolia</i>	holly-leaf cherry	X	X
<i>Prunus</i> sp.+	cherry	X	X
<i>Pyracantha</i> sp.+	firethorn	X	
<i>Pyrus</i> sp.+	pear	X	
<i>Raphiolepis indica</i> +	Indian hawthorn		X
<i>Rosa minutifolia</i>	small-leaf rose	X	X
<i>Rosa</i> sp.+	ornamental rose	X	
RUBIACEAE	MADDER FAMILY		
<i>Galium angustifolium</i> subsp. <i>angustifolium</i>	narrow-leaf bedstraw	X	X

Scientific Name	Common Name	2014	2018
<i>Galium aparine</i>	goose grass	X	X
<i>Galium nuttallii</i>	San Diego bedstraw		X
<i>Galium nuttallii</i> subsp. <i>nuttallii</i>	climbing bedstraw		X
<i>Galium parisiense</i> *	wall bedstraw	X	X
SALICACEAE	WILLOW FAMILY		
<i>Populus fremontii</i> subsp. <i>fremontii</i>	Fremont cottonwood	X	X
<i>Salix exigua</i>	narrow-leaved willow	X	X
<i>Salix gooddingii</i>	black willow	X	X
<i>Salix laevigata</i>	red willow	X	X
<i>Salix lasiolepis</i>	arroyo willow	X	X
SAPINDACEAE	SOAPBERRY FAMILY		
<i>Acer saccharinum</i> +	silver maple		X
<i>Dodonaea viscosa</i> var. <i>purpurea</i> +	hop bush	X	
<i>Koelreuteria bipinnata</i> +	goldenrain tree		X
SCROPHULARIACEAE	FIGWORT FAMILY		
<i>Myoporum bateae</i> +	Bate's myoporum	X	
<i>Myoporum laetum</i> +	myoporum, Ngaio tree	X	
<i>Myoporum parvifolium</i> +	slender myoporum		X
SIMAROUBACEAE	QUASSIA FAMILY		
<i>Ailanthus altissima</i> *	tree of heaven		X
SIMMONDSIACEAE	JOJOBA FAMILY		
<i>Simmondsia chinensis</i>	jojoba, goatnut	X	X
SOLANACEAE	NIGHTSHADE FAMILY		
<i>Datura wrightii</i>	jimson weed	X	X
<i>Lycium andersonii</i>	Anderson's wolfberry	X	X
<i>Lycium californicum</i>	California box-thorn		X
<i>Nicotiana glauca</i> *	tree tobacco	X	X
<i>Solanum douglasii</i>	Douglas' nightshade	X	X
<i>Solanum nigrum</i> *	black nightshade	X	
TAMARICACEAE	TAMARISK FAMILY		
<i>Tamarix ramosissima</i> *	Mediterranean tamarisk	X	X
URTICACEAE	NETTLE FAMILY		
<i>Hesperocnide tenella</i>	western nettle	X	
<i>Parietaria hespera</i> var. <i>hespera</i>	western pellitory	X	X
<i>Urtica dioica</i> subsp. <i>holosericea</i>	stinging nettle	X	X
<i>Urtica urens</i> *	dwarf nettle	X	X

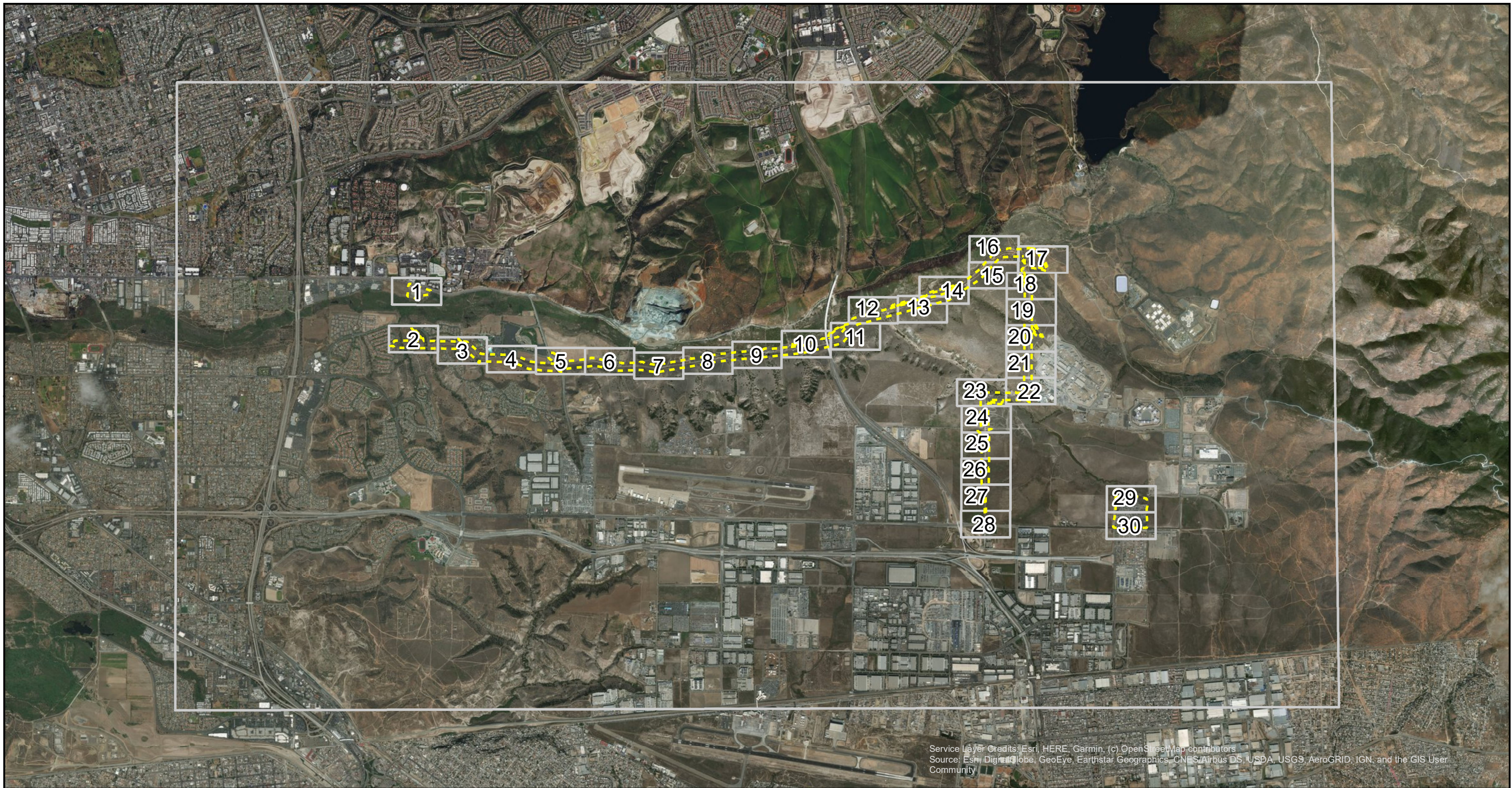
Scientific Name	Common Name	2014	2018
VERBENACEAE	VERVAIN FAMILY		
<i>Lantana camara</i> +	common lantana	X	
<i>Lantana montevidensis</i> +	trailing lantana	X	X
<i>Verbena lasiostachys</i>	western vervain		X
<i>Verbena menthifolia</i>	mint-leaved verbena	X	X
VIOLACEAE	VIOLET FAMILY		
<i>Viola pedunculata</i>	Johnny-jump-up	X	X
ZYGOPHYLLACEAE	CALTROP FAMILY		
<i>Fagonia laevis</i>	California fagonia	X	
ANGIOSPERMS (MONOCOTS)			
AGAVACEAE	AGAVE FAMILY		
<i>Agave americana</i> +	century plant	X	X
<i>Agave attenuata</i> +	agave	X	
<i>Chlorogalum parviflorum</i>	small-flowered amole	X	
<i>Hesperoyucca whipplei</i>	our Lord's candle	X	X
<i>Phormium</i> sp.+	New Zealand flax	X	
<i>Yucca elephantipes</i> +	spineless yucca		X
<i>Yucca schidigera</i>	Mojave yucca	X	X
ALLIACEAE	ONION FAMILY		
<i>Allium praecox</i>	early onion	X	X
<i>Allium</i> sp.+	onion		X
ARECACEAE	PALM FAMILY		
<i>Chamaerops humilis</i> +	European fan palm	X	
<i>Phoenix canariensis</i> *	Canary Island date palm	X	X
<i>Syagrus romanzoffiana</i> +	queen palm	X	
<i>Washingtonia robusta</i> +	Mexican fan palm	X	X
ASPHODELACEAE	ASPHODEL FAMILY		
<i>Aloe</i> sp.+	aloe	X	
<i>Asphodelus fistulosus</i> *	hollow-stem asphodel	X	
CYPERACEAE	SEDGE FAMILY		
<i>Eleocharis macrostachya</i>	common spike rush		
<i>Eleocharis montevidensis</i>	slender creeping spike-rush	X	X
<i>Schoenoplectus americanus</i>	winged three-square	X	X
<i>Schoenoplectus californicus</i>	California bulrush	X	X
IRIDACEAE	IRIS FAMILY		
<i>Iris</i> sp.+	iris	X	

Scientific Name	Common Name	2014	2018
<i>Sisyrinchium bellum</i>	blue-eyed grass	X	X
JUNCACEAE	RUSH FAMILY		
<i>Juncus acutus</i> subsp. <i>leopoldii</i>	southwestern spiny rush	X	X
<i>Juncus bufonius</i> var. <i>bufonius</i>	toad rush	X	X
<i>Juncus dubius</i>	mariposa rush		X
LILIACEAE	LILY FAMILY		
<i>Calochortus splendens</i>	lilac mariposa lily	X	X
MELANTHIACEAE	FALSE-HELLEBORE FAMILY		
<i>Toxicoscordion fremontii</i>	Fremont star lily		X
POACEAE	GRASS FAMILY		
<i>Agrostis viridis</i> *	water bentgrass	X	
<i>Aristida adscensionis</i>	six-week's three-awn	X	
<i>Arundo donax</i> *	giant reed	X	X
<i>Avena barbata</i> *	slender wild oat	X	X
<i>Avena fatua</i> *	wild oat	X	X
<i>Avena sativa</i> +	cultivated oat		X
<i>Bothriochloa barbinodis</i>	cane bluestem	X	
<i>Bouteloua dactyloides</i>	buffalo grass	X	
<i>Bouteloua gracilis</i>	common grama	X	
<i>Brachypodium distachyon</i> *	false-brome	X	X
<i>Bromus catharticus</i> *	rescue grass	X	X
<i>Bromus diandrus</i> *	ripgut grass	X	X
<i>Bromus grandis</i>	tall brome	X	
<i>Bromus hordeaceus</i> *	soft chess	X	X
<i>Bromus madritensis</i> subsp. <i>rubens</i> *	red brome	X	X
<i>Cortaderia selloana</i> *	pampas grass	X	X
<i>Crypsis schoenoides</i> *	prickle grass	X	
<i>Cynodon dactylon</i> *	Bermuda grass	X	X
<i>Dactylis glomerata</i> *	orchard grass	X	
<i>Digitaria sanguinalis</i> *	hairy crabgrass	X	
<i>Distichlis spicata</i>	saltgrass		X
<i>Elymus canadensis</i> *	Canada wild rye		X
<i>Elymus condensatus</i>	giant wild rye		X
<i>Elymus triticoides</i>	beardless wild rye	X	X
<i>Festuca myuros</i> *	rat-tail fescue	X	X
<i>Festuca perennis</i> *	Italian ryegrass	X	X

Scientific Name	Common Name	2014	2018
<i>Gastridium phleoides</i> *	nit grass	X	X
<i>Hordeum marinum</i> subsp. <i>gussoneanum</i> *	Mediterranean barley	X	X
<i>Hordeum murinum</i> subsp. <i>leporinum</i> *	hare barley	X	X
<i>Lamarckia aurea</i> *	goldentop	X	X
<i>Melica imperfecta</i>	coast range melic	X	X
<i>Muhlenbergia rigens</i>	deergrass	X	X
<i>Muhlenbergia microsperma</i>	littleseed muhly		X
<i>Pennisetum setaceum</i> *	fountain grass	X	X
<i>Phalaris minor</i> *	Mediterranean canary grass	X	X
<i>Poa secunda</i> subsp. <i>secunda</i>	one-sided bluegrass	X	X
<i>Polypogon monspeliensis</i> *	annual beard grass	X	X
<i>Schismus barbatus</i> *	Mediterranean schismus	X	X
<i>Setaria verticillata</i> *	hooked bristlegrass	X	
<i>Sporobolus cryptandrus</i>	sand dropseed	X	
<i>Stipa cernua</i>	nodding needlegrass	X	
<i>Stipa coronata</i>	crested needlegrass		X
<i>Stipa lepida</i>	small-flowered needlegrass	X	X
<i>Stipa miliacea</i> var. <i>miliacea</i> *	smilo grass	X	X
<i>Stipa pulchra</i>	purple needlegrass	X	X
<i>Triticum aestivum</i> +	common wheat		X
THEMIDACEAE	BRODIAEA FAMILY		
<i>Bloomeria clevelandii</i>	San Diego goldenstar	X	X
<i>Bloomeria crocea</i> var. <i>crocea</i>	common goldenstar	X	X
<i>Brodiaea terrestris</i> subsp. <i>kernensis</i>	dwarf brodiaea	X	X
<i>Dichelostemma capitatum</i>	blue dicks	X	X
TYPHACEAE	CATTAIL FAMILY		
<i>Typha domingensis</i>	slender cattail	X	
* = Non-Native Species; + = Non-Native and Ornamental, Unlikely to be Invasive; Emboldened = Special-Status Species; ^ = Observed in 2015 Only			

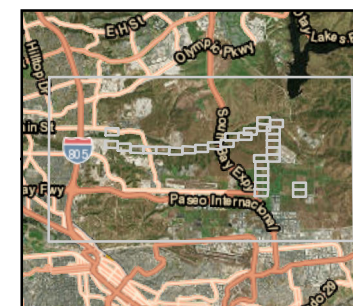
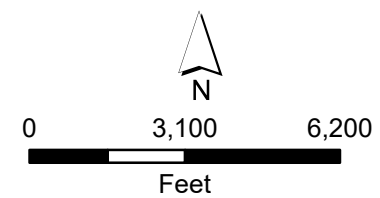
APPENDIX C – RARE PLANTS





Legend

- Survey Corridor
- Map Page



Appendix C

TL 649

Wood-to-Steel Project Focused Plant Survey Results 2014 & 2018

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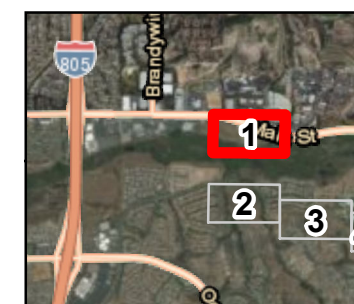
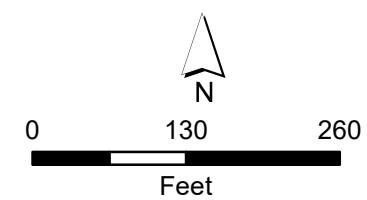
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Legend

- Survey Corridor
- Proposed Work Area**
- Staging Yard



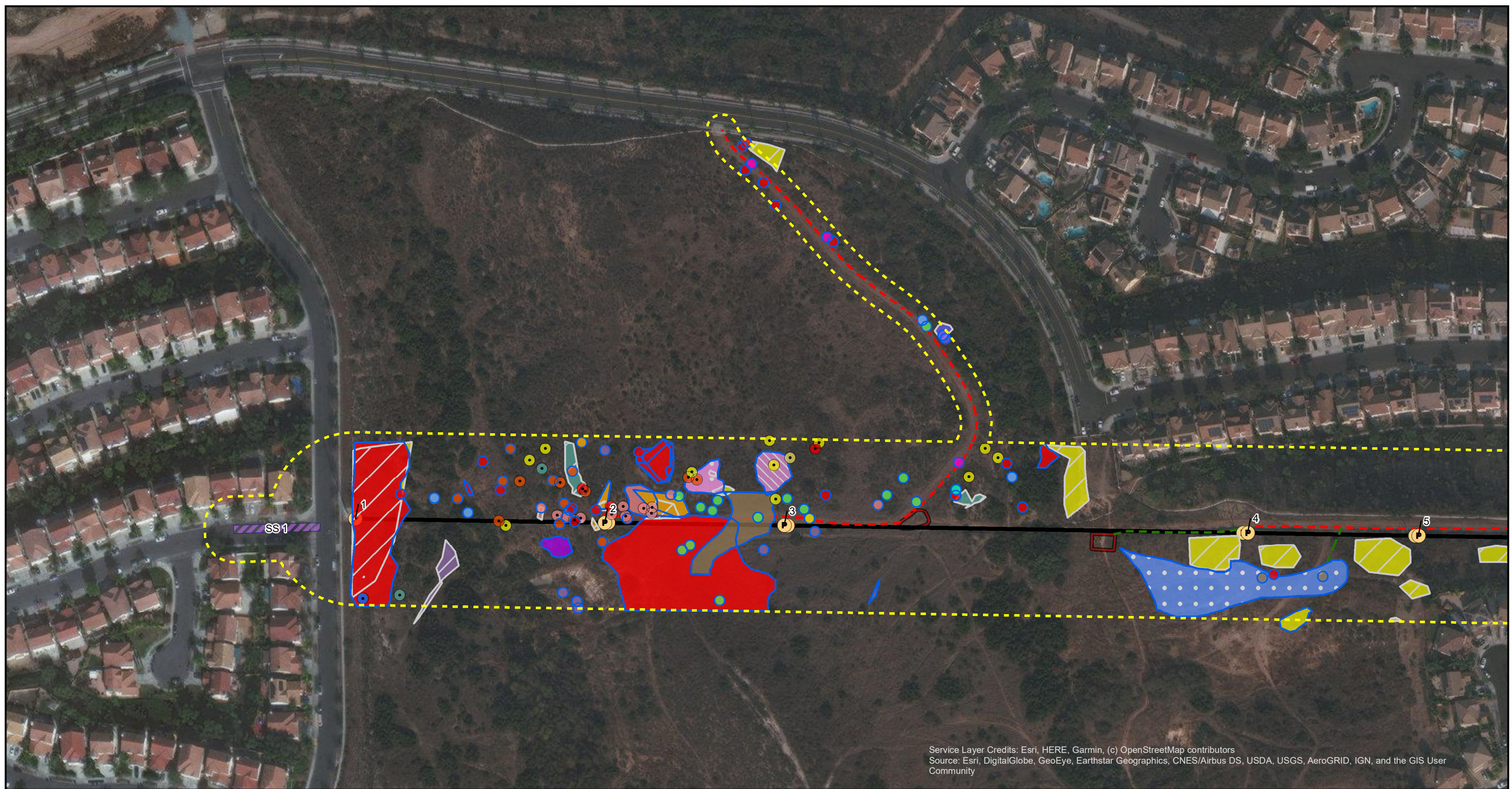
Appendix C

TL 649

Wood-to-Steel Project
Focused Plant
Survey Results
2014 & 2018

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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

— Existing Non-TCM Access Road

--- Access Road

Proposed Work Area

String Site

Turnaround Area

○ 2014 Survey Points

⦿ 2018 Survey Points

Species Points

● *Ambrosia chenopodiifolia*

● *Artemisia palmeri*

● *Atriplex pacifica*

● *Bahiopsis laciniata*

● *Bergerocactus emoryi*

● *Convolvulus simulans*

● *Deinandra conjugens*

● *Dicranostegia orcuttiana*

● *Euphorbia misera*

● *Ferocactus viridescens*

● *Harpagonella palmeri*

● *Isocoma menziesii* var. *decumbens*

● *Iva hayesiana*

● *Rosa minutifolia*

● *Selaginella cinerascens*

2014 Survey Polygons

2018 Survey Polygons

Species Polygons

Ambrosia chenopodiifolia, *Euphorbia misera*

Ambrosia chenopodiifolia

Ambrosia chenopodiifolia, *Ferocactus viridescens*, *Euphorbia misera*

Artemisia palmeri

Bahiopsis laciniata

Bahiopsis laciniata, *Convolvulus simulans*

Bergerocactus emoryi

Convolvulus simulans

Dicranostegia orcuttiana

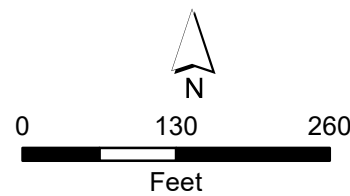
Euphorbia misera

Ferocactus viridescens

Isocoma menziesii var. *decumbens*

Rosa minutifolia, *Ambrosia chenopodiifolia*

Selaginella cinerascens



Appendix C

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Wood-to-Steel Project

Focused Plant

Survey Results

2014 & 2018

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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM

--- Access Road

--- Access Road

Proposed Work Area

--- String Site

○ 2014 Survey Points

○ 2018 Survey Points

Species Points

● *Ambrosia chenopodiifolia*

● *Bahiopsis laciniata*

● *Bloomeria clevelandii*

● *Convolvulus simulans*

● *Deinandra conjugens*

● *Isocoma menziesii* var. *decumbens*

■ 2014 Survey Polygons

2018 Survey Polygons

■ *Ambrosia chenopodiifolia*

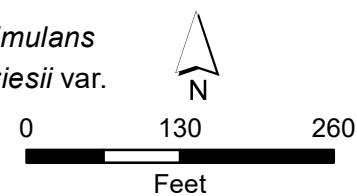
■ *Bahiopsis laciniata*

■ *Bahiopsis laciniata*, *Convolvulus simulans*

■ *Bahiopsis laciniata*, *Isocoma menziesii* var. *decumbens*

■ *Convolvulus simulans*

■ *Isocoma menziesii* var. *decumbens*



Appendix C

TL 649

Wood-to-Steel Project

Focused Plant

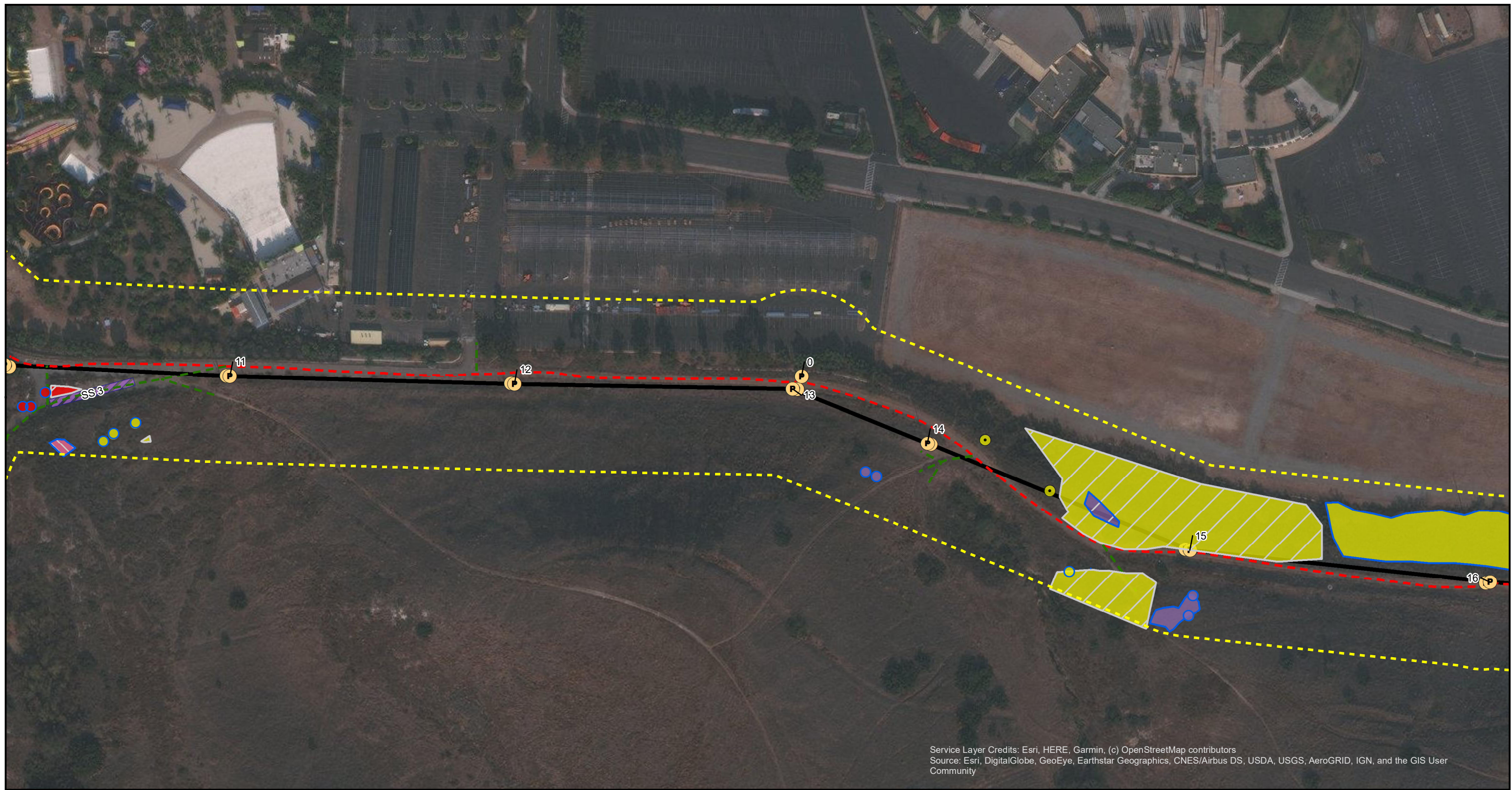
Survey Results

2014 & 2018

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Legend

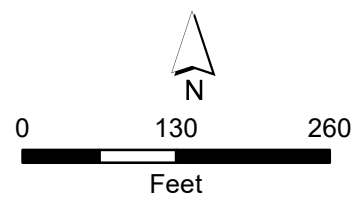
- Transmission Centerline
- - - Survey Corridor
- Ⓟ Project Pole
- Access Type**
 - - - Existing Non-TCM Access Road
 - - - Access Road

- Proposed Work Area**
 - ▨ String Site
 - 2014 Survey Points
 - ◉ 2018 Survey Points
- Species Points**
 - *Ambrosia chenopodiifolia*

- *Bahiopsis laciniata*
- *Isocoma menziesii* var. *decumbens*
- ▭ 2014 Survey Polygons
- ▭ 2018 Survey Polygons

- Species Polygons**
 - ▭ *Ambrosia chenopodiifolia*
 - ▭ *Bahiopsis laciniata*
 - ▭ *Isocoma menziesii* var. *decumbens*

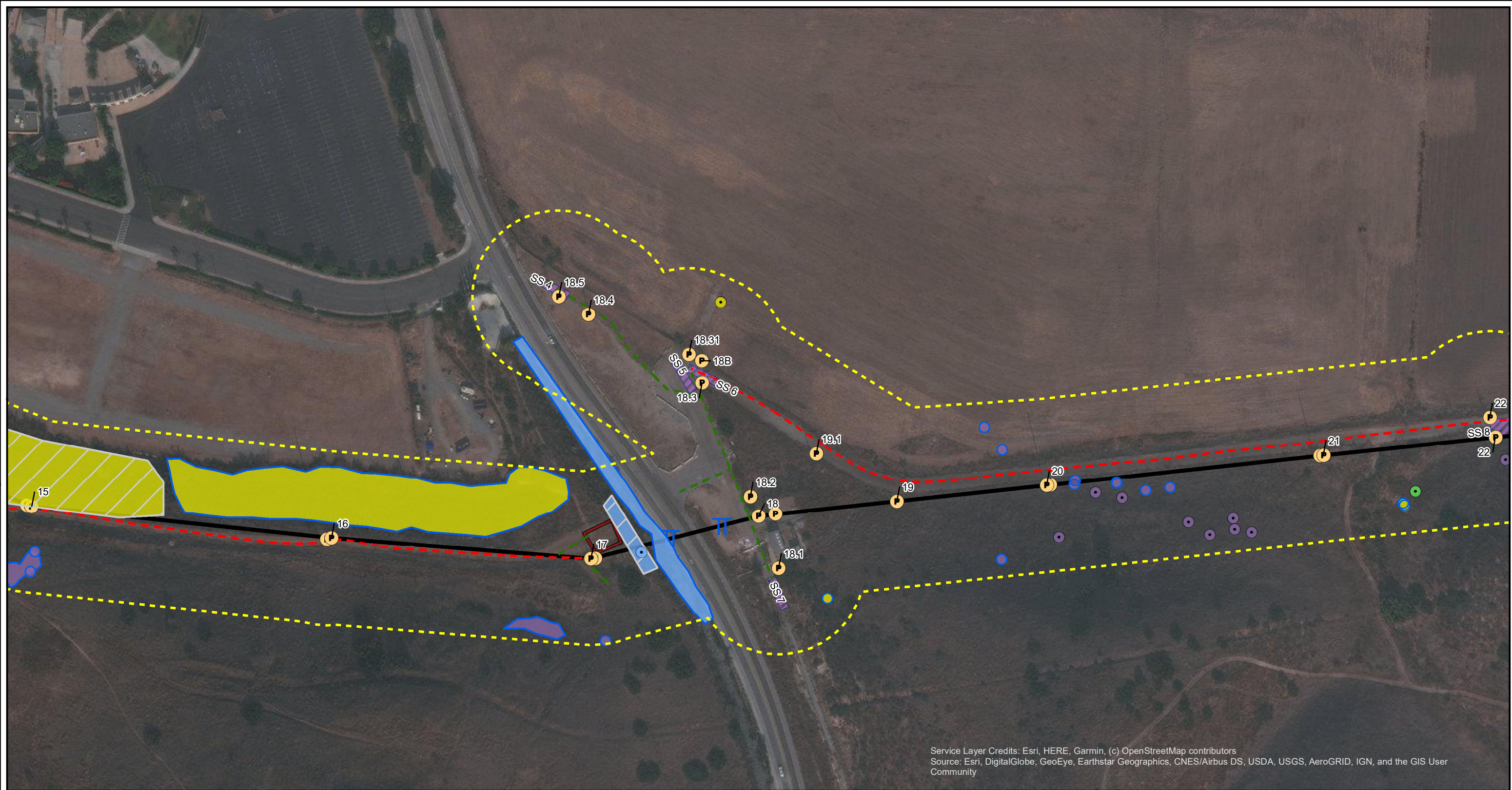
- ▭ *Isocoma menziesii* var. *decumbens*



Appendix C

TL 649
 Wood-to-Steel Project
 Focused Plant
 Survey Results
 2014 & 2018





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Legend

- Transmission Centerline
- - - Access Road
- Survey Corridor
- Project Pole
- ⌋ Guard Structure
- Access Type**
- Existing Non-TCM
- Access Road

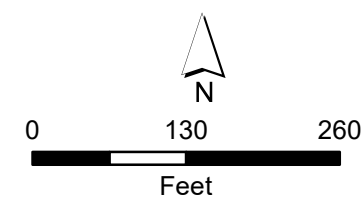
- Proposed Work Area**
- ▨ String Site
- ▭ Turnaround Area
- 2014 Survey Points
- 2018 Survey Points

Species Points

- *Bahiopsis laciniata*
- *Deinandra conjugens*
- *Isocoma menziesii* var. *decumbens*
- *Iva hayesiana*
- ▭ 2014 Survey Polygons

2018 Survey Polygons

- ▭ *Bahiopsis laciniata*
- ▭ *Isocoma menziesii* var. *decumbens*
- ▭ *Iva hayesiana*



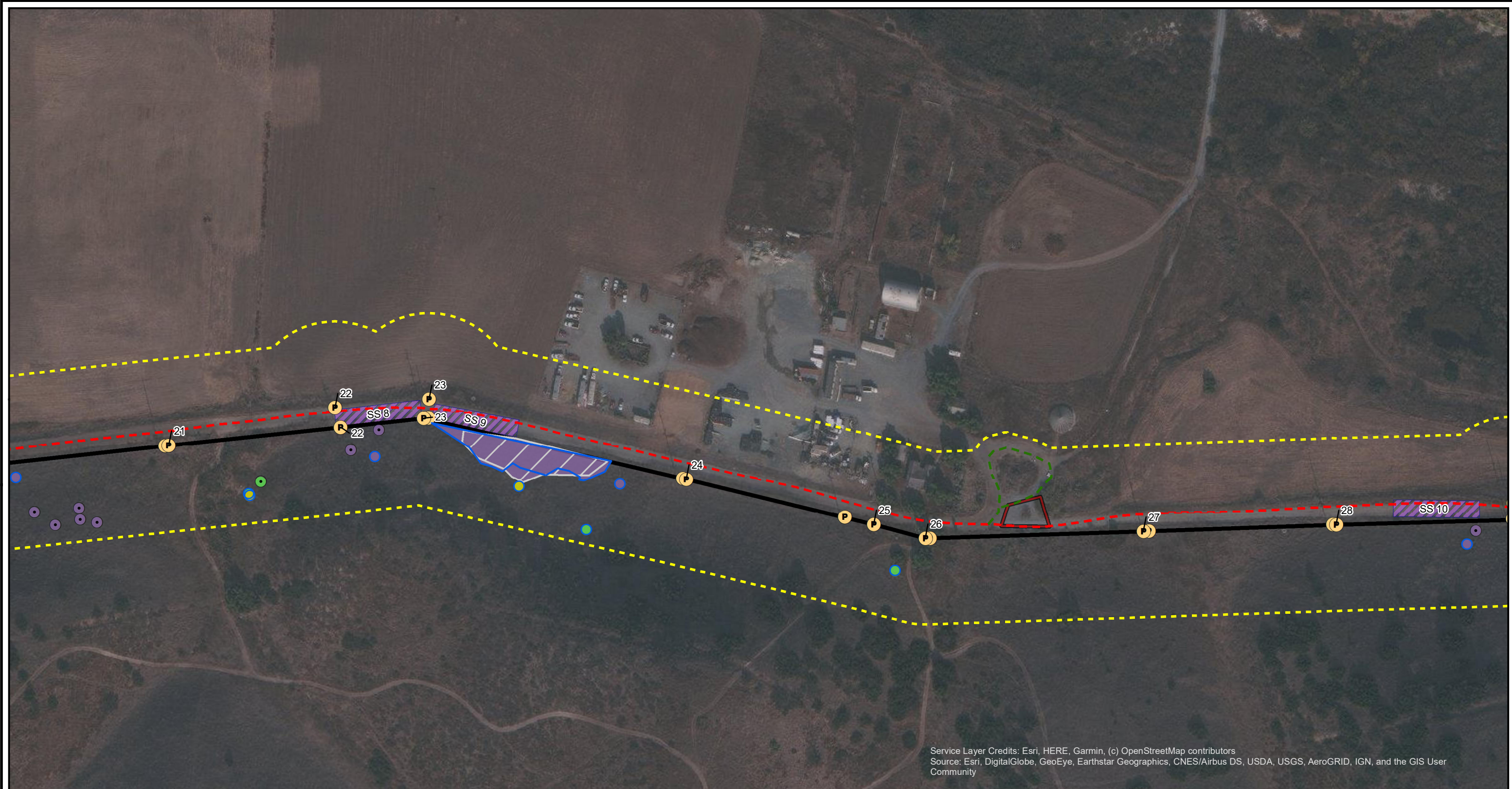
Appendix C

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Wood-to-Steel Project
Focused Plant
Survey Results
2014 & 2018

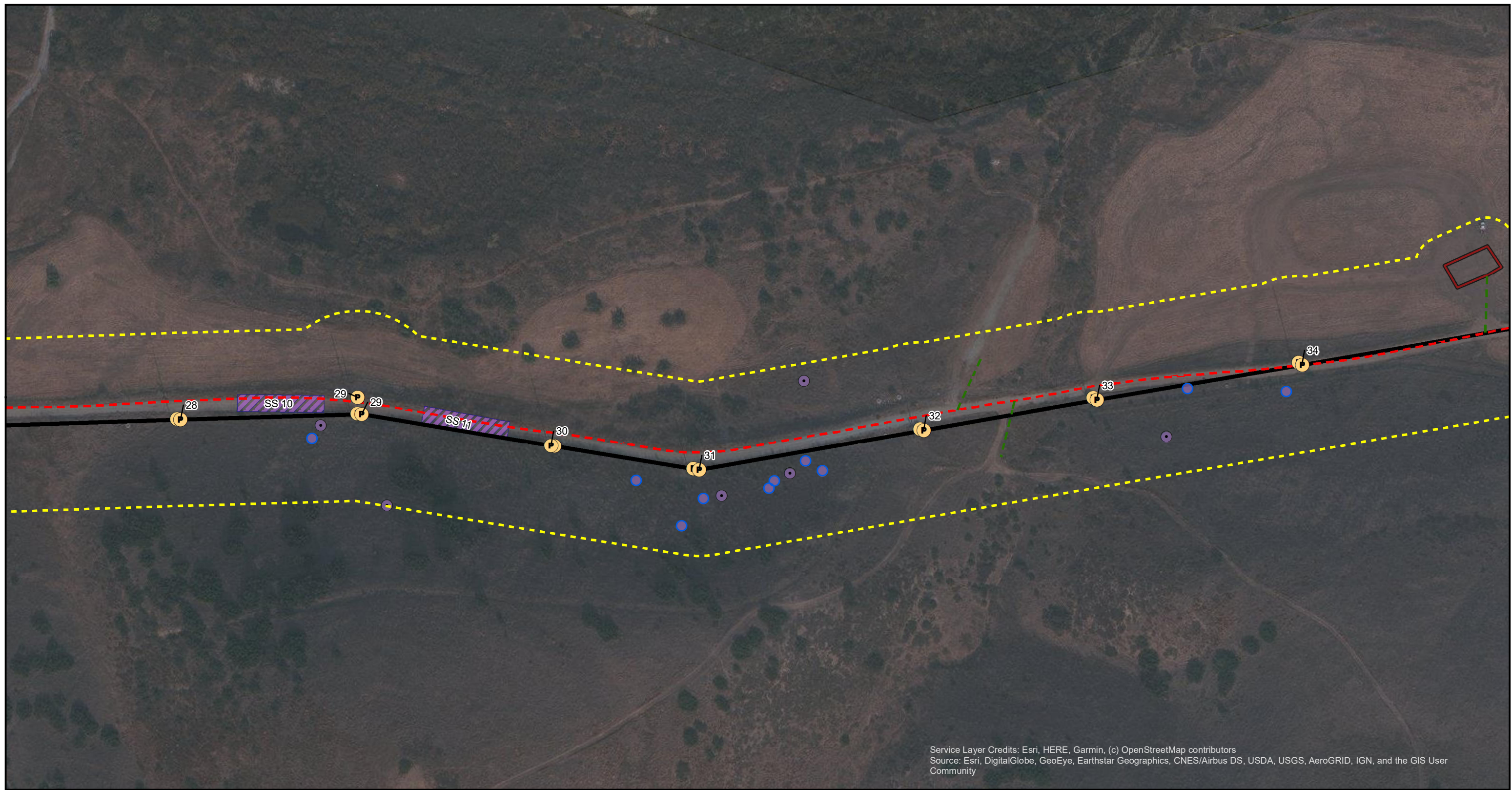
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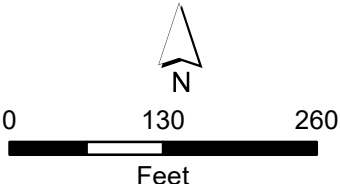


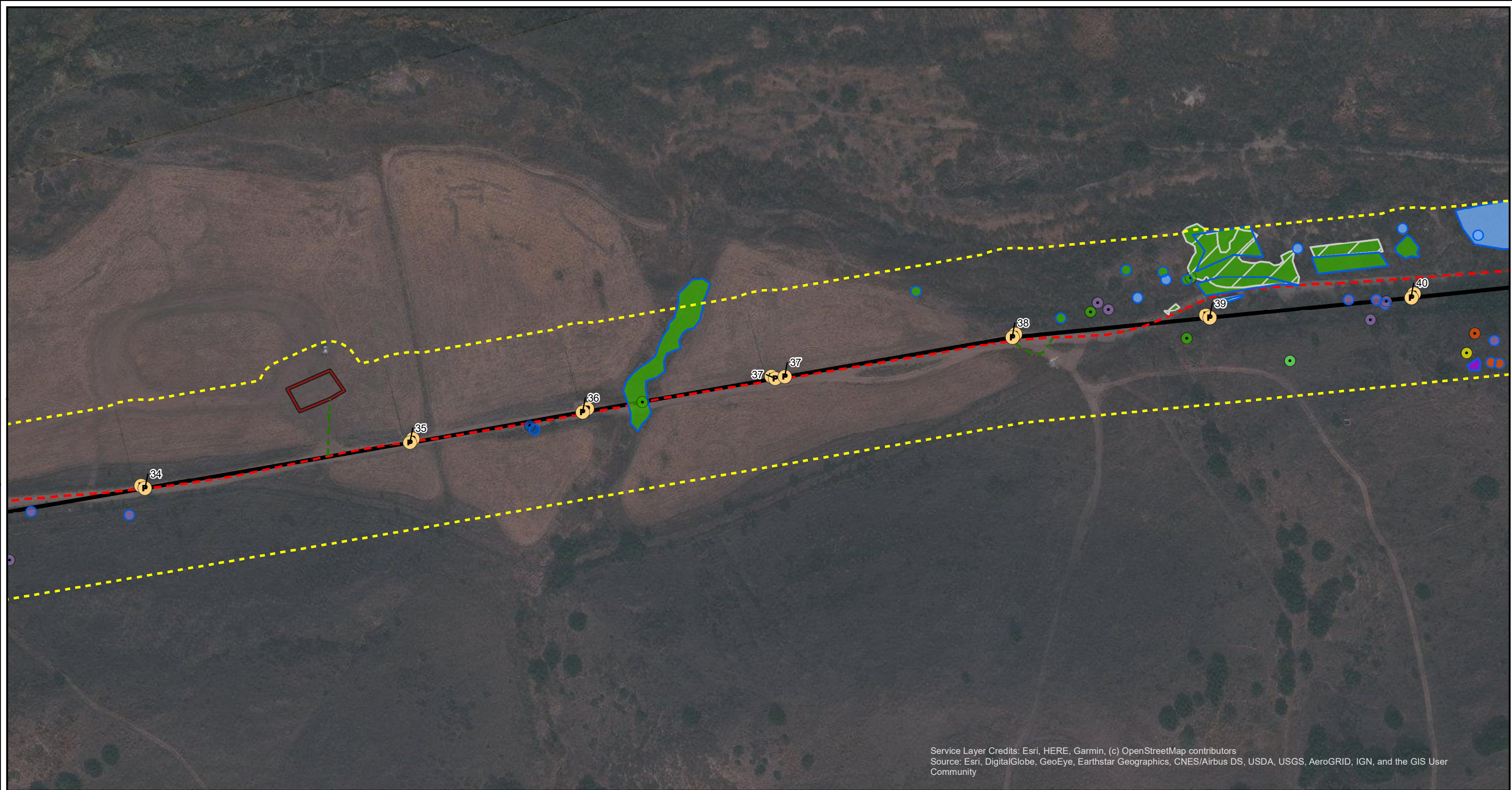


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- Legend**
- Transmission Centerline
 - Survey Corridor
 - Project Pole
 - Access Type**
 - Existing Non-TCM Access Road
 - Access Road
 - Proposed Work Area**
 - String Site
 - Turnaround Area
 - 2014 Survey Points
 - 2018 Survey Points
 - Species Points**
 - Isocoma menziesii* var. *decumbens*

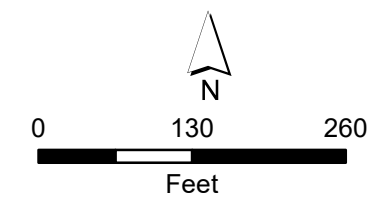


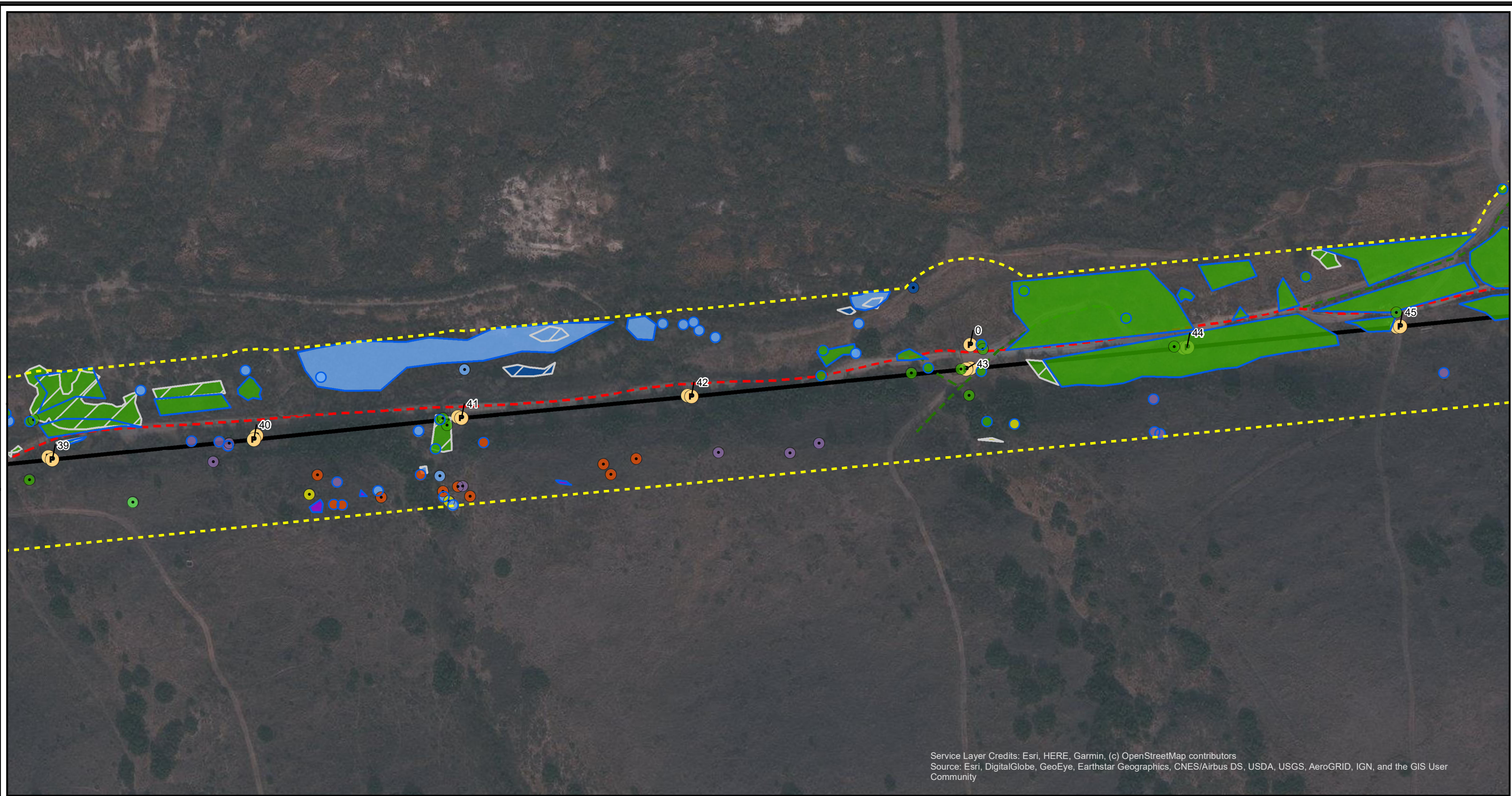


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Legend

- | | | | |
|--|---|---|--|
| Transmission Centerline
Transmission Centerline
Survey Corridor
Survey Corridor
Project Pole
Project Pole
Access Type
Existing Non-TCM Access Road
Access Road | Proposed Work Area
Turnaround Area
Survey Points
2014 Survey Points
2018 Survey Points
Species Points
<i>Ambrosia monogyra</i>
<i>Bahiopsis laciniata</i> | <i>Deinandra conjugens</i>
<i>Ferocactus viridescens</i>
<i>Isocoma menziesii</i> var. <i>decumbens</i>
<i>Iva hayesiana</i>
<i>Juncus acutus</i> subsp. <i>leopoldii</i> | Survey Polygons
2014 Survey Polygons
2018 Survey Polygons
Species Polygons
<i>Ambrosia monogyra</i>
<i>Ferocactus viridescens</i>
<i>Iva hayesiana</i> |
|--|---|---|--|





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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

○ 2014 Survey Points

⦿ 2018 Survey Points

Species Points

● *Ambrosia monogyra*

● *Bahiopsis laciniata*

● *Deinandra conjugens*

● *Ferocactus viridescens*

● *Isocoma menziesii* var. *decumbens*

● *Iva hayesiana*

● *Juncus acutus* subsp. *leopoldii*

▭ 2014 Survey Polygons

▭ 2018 Survey Polygons

Species Polygons

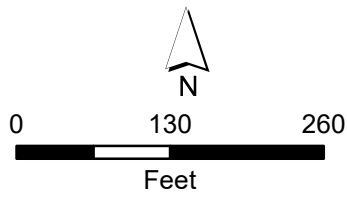
■ *Ambrosia monogyra*

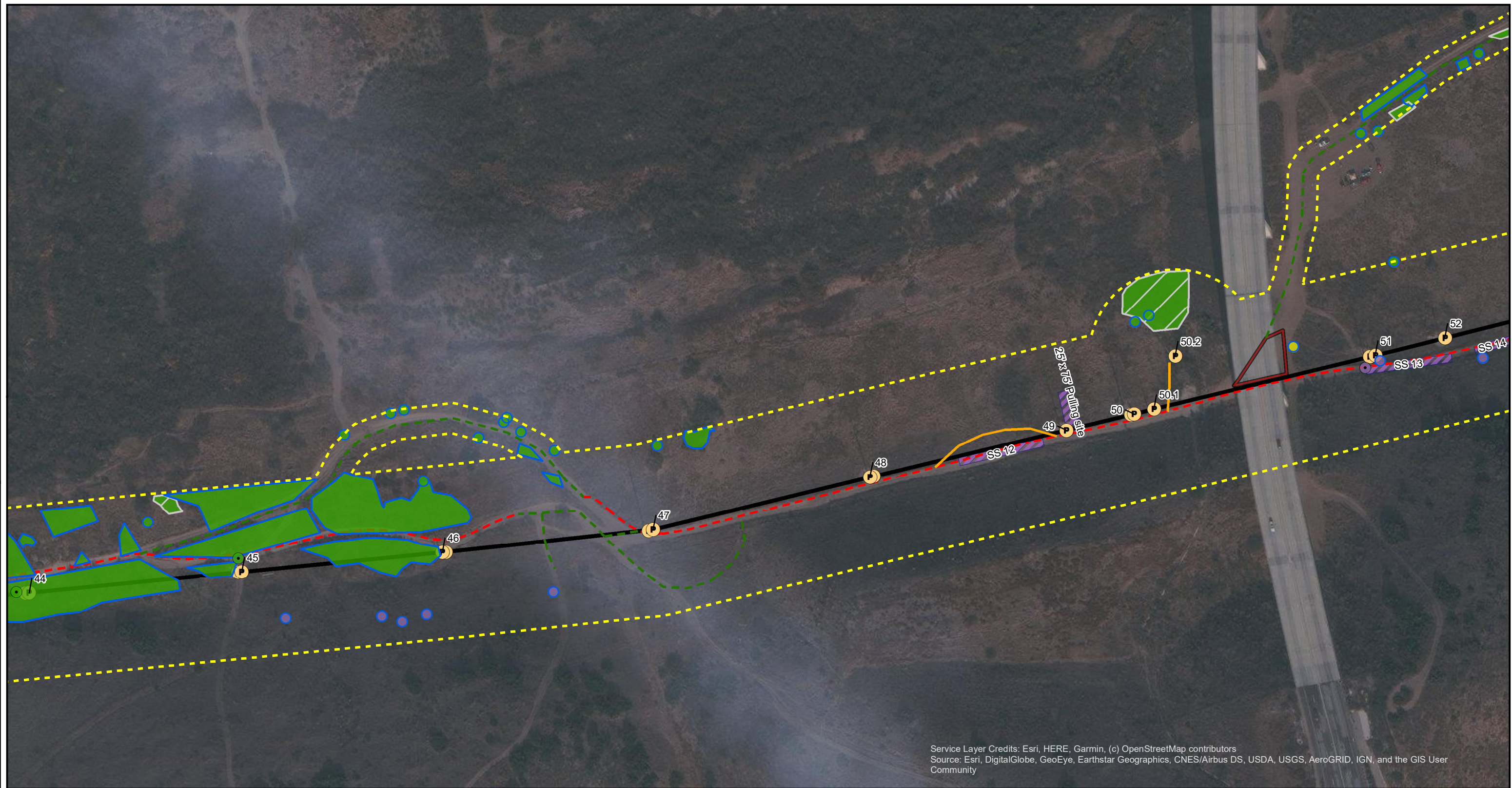
■ *Bahiopsis laciniata*

■ *Ferocactus viridescens*

■ *Iva hayesiana*

■ *Juncus acutus* subsp. *leopoldii*





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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM

--- Access Road

--- Access Road

— Overland Travel

Proposed Work Area

String Site

Turnaround Area

○ 2014 Survey Points

● 2018 Survey Points

Species Points

● *Ambrosia monogyra*

● *Bahiopsis laciniata*

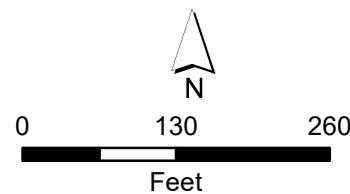
● *Isocoma menziesii* var. *decumbens*

□ 2014 Survey Polygons

□ 2018 Survey Polygons

Species Polygons

■ *Ambrosia monogyra*



Appendix C

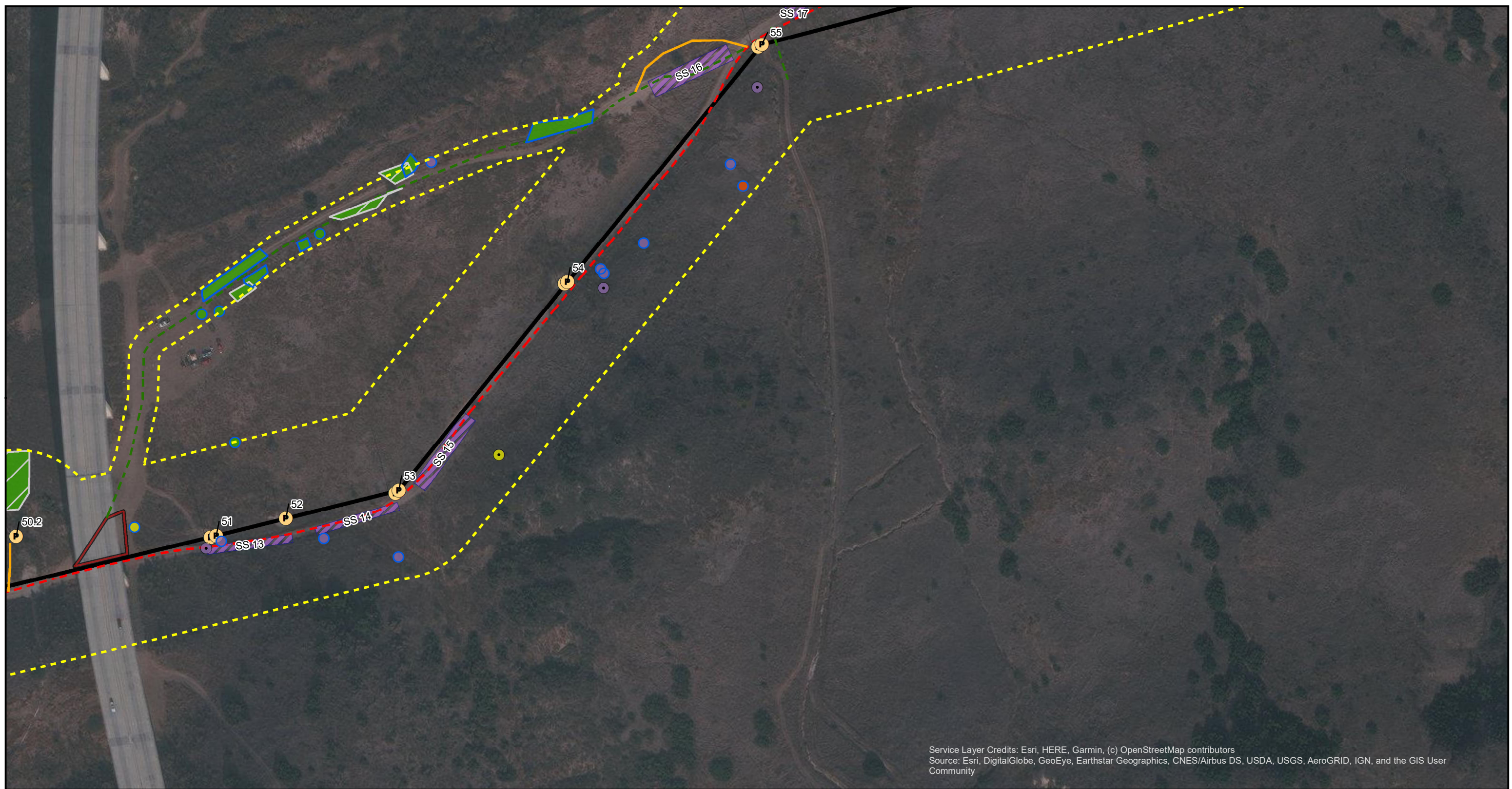
TL 649

Wood-to-Steel Project
Focused Plant
Survey Results
2014 & 2018

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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM

--- Access Road

--- Access Road

— Overland Travel

Proposed Work Area

--- String Site

--- Turnaround Area

○ 2014 Survey Points

○ 2018 Survey Points

Species Points

● *Ambrosia monogyra*

● *Bahiopsis laciniata*

● *Ferocactus viridescens*

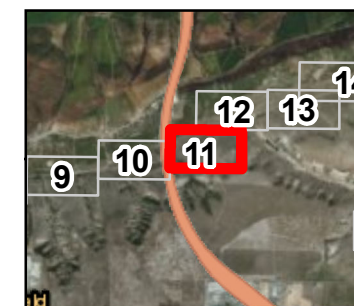
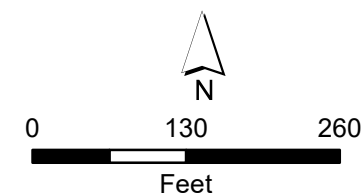
● *Isocoma menziesii* var. *decumbens*

□ 2014 Survey Polygons

□ 2018 Survey Polygons

Species Polygons

■ *Ambrosia monogyra*



Appendix C

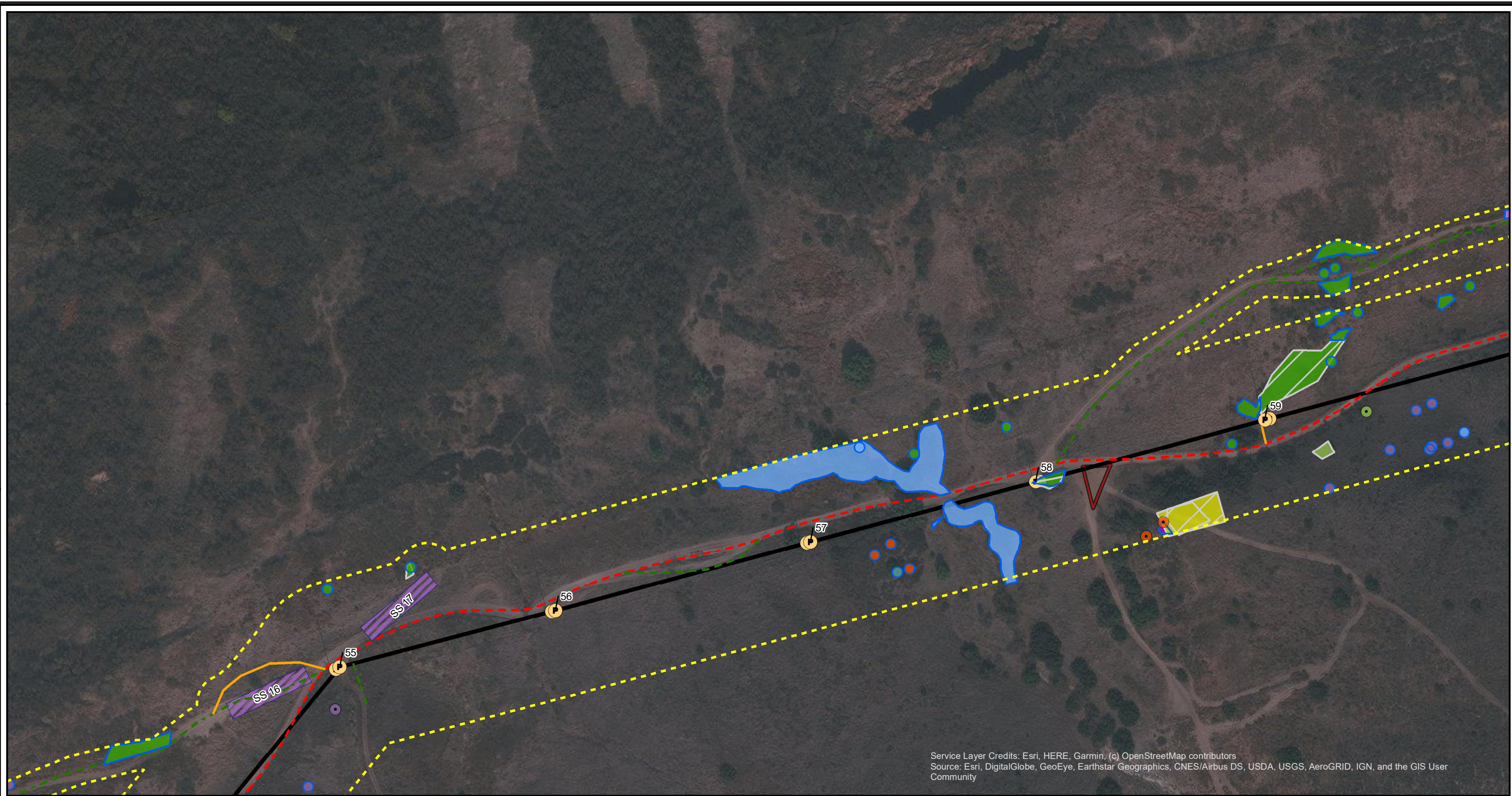
TL 649

Wood-to-Steel Project
Focused Plant
Survey Results
2014 & 2018

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Legend

- Transmission Centerline
- Overland Travel
- Survey Corridor
- Project Pole
- Access Type**
 - Existing Non-TCM
 - Access Road
 - Access Road
- Proposed Work Area**
 - String Site
 - Turnaround Area
 - 2014 Survey Points
 - 2018 Survey Points

Species Points

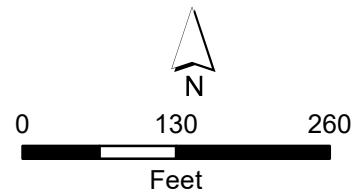
- *Ambrosia monogyra*
- *Ferocactus viridescens*
- *Holocarpha virgata* subsp. *elongata*
- *Isocoma menziesii* var. *decumbens*

- *Iva hayesiana*
- *Selaginella cinerascens*

- 2014 Survey Polygons
- 2018 Survey Polygons

- Species Polygons**
- *Ambrosia monogyra*
 - *Bahiopsis laciniata*

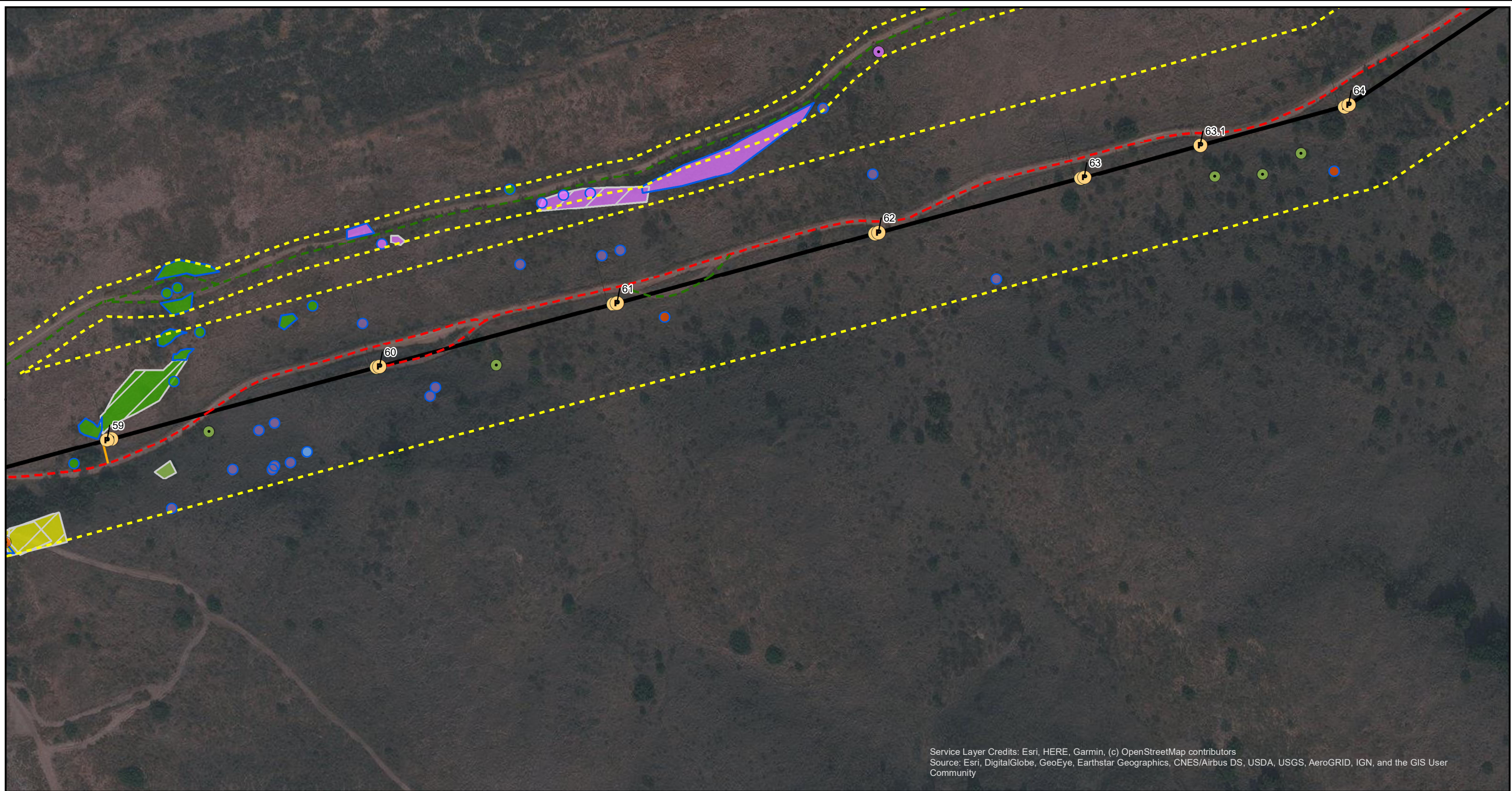
- *Ferocactus viridescens*
- *Holocarpha virgata* subsp. *elongata*
- *Iva hayesiana*
- *Salvia munzii*



Appendix C

TL 649
 Wood-to-Steel Project
 Focused Plant
 Survey Results
 2014 & 2018

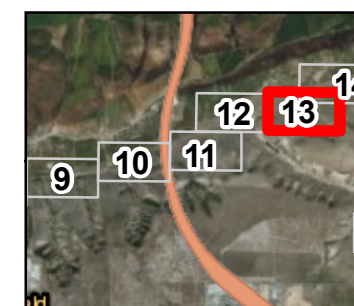
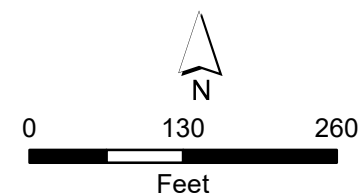




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Legend

- | | | | | |
|---------------------------|---------------------------------|--|--|------------------------|
| — Transmission Centerline | — Overland Travel | ● <i>Holocarpha virgata</i> subsp. <i>elongata</i> | ▭ 2018 Survey Polygons | ▭ <i>Salvia munzii</i> |
| --- Survey Corridor | ○ 2014 Survey Points | ● <i>Isocoma menziesii</i> var. <i>decumbens</i> | ▭ <i>Ambrosia monogyra</i> | |
| ⦿ Project Pole | ⦿ 2018 Survey Points | ● <i>Iva hayesiana</i> | ▭ <i>Bahiopsis laciniata</i> | |
| Access Type | Species Points | ● <i>Salvia munzii</i> | ▭ <i>Ferocactus viridescens</i> | |
| --- Existing Non-TCM | ● <i>Ambrosia monogyra</i> | ▭ 2014 Survey Polygons | ▭ <i>Holocarpha virgata</i> subsp. <i>elongata</i> | |
| --- Access Road | ● <i>Ferocactus viridescens</i> | | | |
| --- Access Road | | | | |



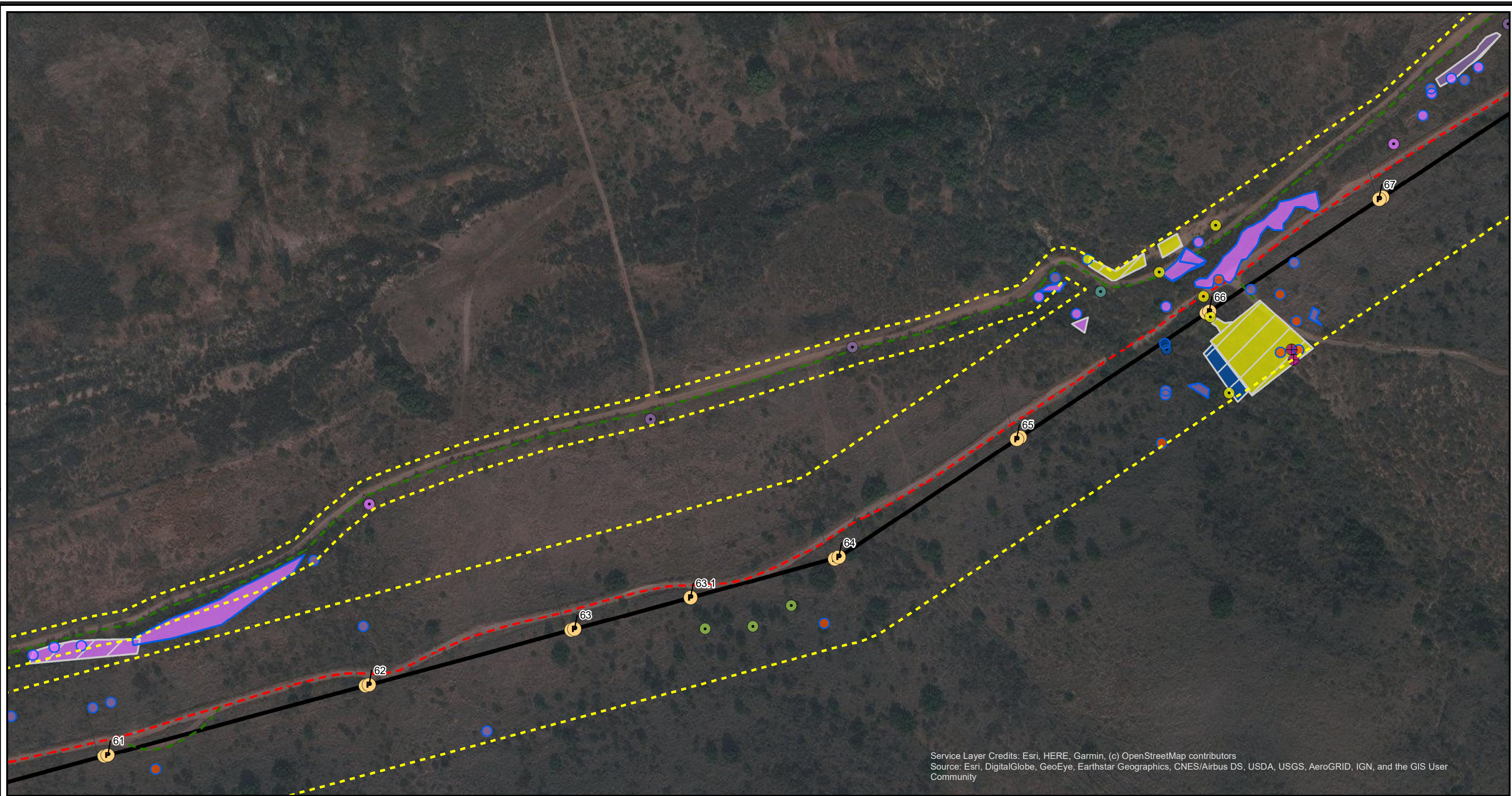
Appendix C

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Legend

- Transmission Centerline
- - - Survey Corridor
- Ⓟ Project Pole
- Access Type**
- - - Existing Non-TCM
- - - Access Road
- - - Access Road

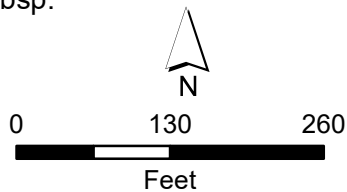
- 2014 Survey Points
- ⊕ 2015 Survey Points
- ⊙ 2018 Survey Points
- Species Points**

- *Bahiopsis laciniata*
- *Ferocactus viridescens*

- *Holocarpha virgata* subsp. *elongata*
- *Isocoma menziesii* var. *decumbens*
- *Juncus acutus* subsp. *leopoldii*
- *Salvia munzii*

- *Selaginella cinerascens*
- *Dudleya variegata*
- 2014 Survey Polygons
- 2018 Survey Polygons
- Species Polygons**
- *Bahiopsis laciniata*

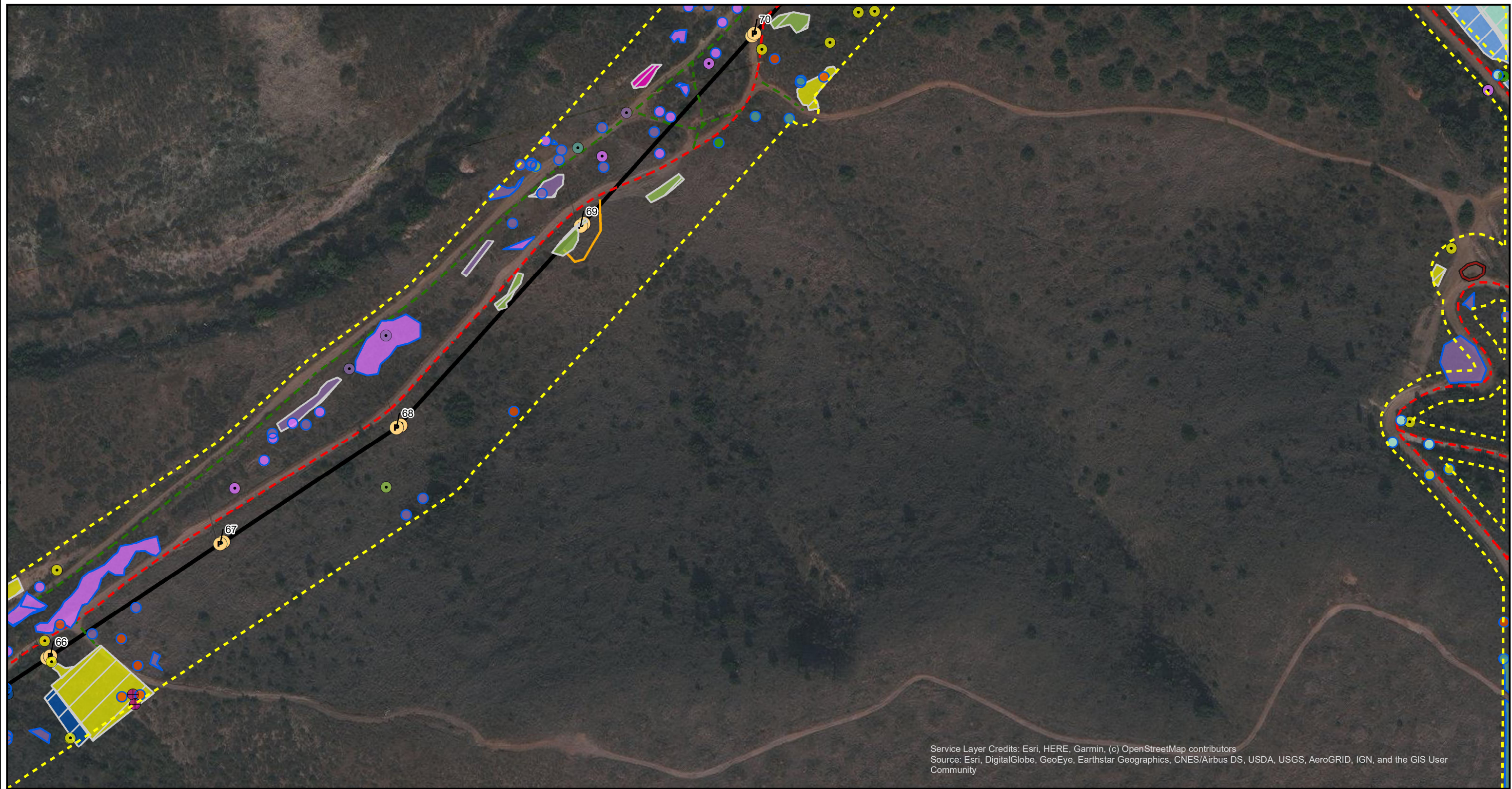
- *Isocoma menziesii* var. *decumbens*
- *Juncus acutus* subsp. *leopoldii*
- *Salvia munzii*



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 Wood-to-Steel Project
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Legend

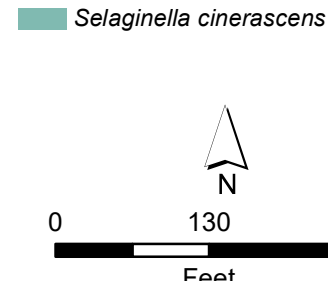
- Transmission Centerline
- Survey Corridor
- Project Pole
- Access Type**
 - Existing Non-TCM Access Road
 - Access Road
 - Overland Travel

- Proposed Work Area**
 - Turnaround Area
 - 2014 Survey Points
 - 2015 Survey Points
 - 2018 Survey Points
- Species Points**
 - Ambrosia monogyra
 - Bahiopsis laciniata

- Ferocactus viridescens
- Hesperocyparis forbesii
- Holocarpha virgata subsp. elongata
- Isocoma menziesii var. decumbens
- Juncus acutus subsp. leopoldii
- Salvia munzii

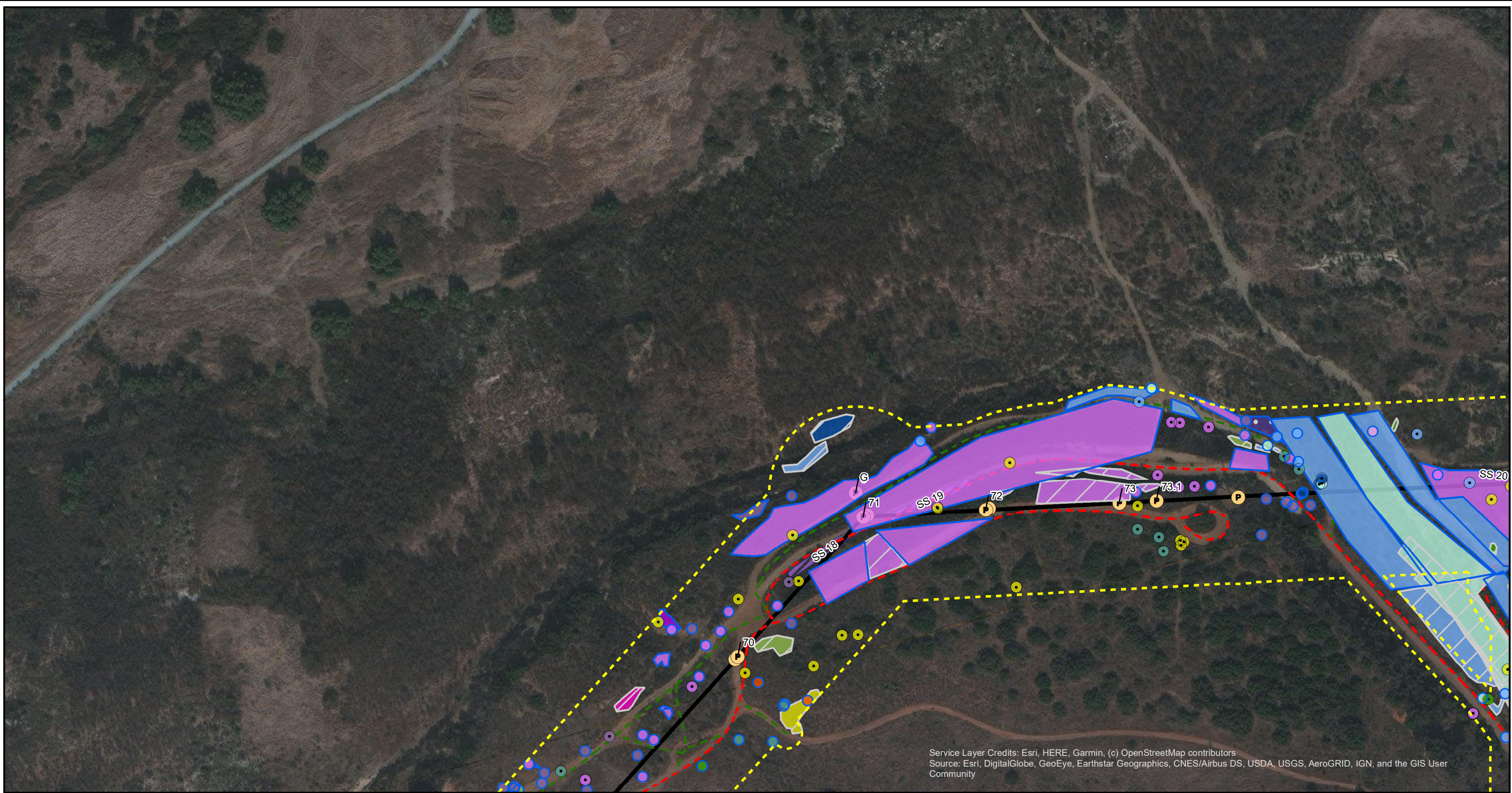
- Selaginella cinerascens
- Dudleya variegata
- 2014 Survey Polygons
- 2018 Survey Polygons
- Species Polygons**
 - Atriplex pacifica
 - Bahiopsis laciniata
 - Ferocactus viridescens

- Hesperocyparis forbesii
- Holocarpha virgata subsp. elongata
- Isocoma menziesii var. decumbens
- Iva hayesiana
- Juncus acutus subsp. leopoldii
- Salvia munzii



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Legend

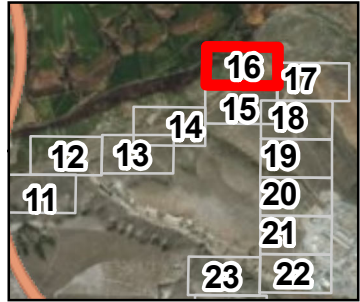
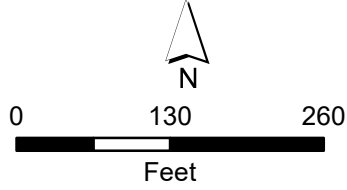
- Transmission Centerline
- Survey Corridor
- Project Pole
- Access Type**
 - Existing Non-TCM Access Road
 - Access Road
- Proposed Work Area**
 - String Site

- 2014 Survey Points**
- 2018 Survey Points**
- Species Points**
 - Ambrosia monogyra*
 - Bahiopsis laciniata*
 - Ceanothus otayensis*
 - Ferocactus viridescens*
 - Hesperocyparis forbesii*

- Holocarpha virgata* subsp. *elongata*
- Isocoma menziesii* var. *decumbens*
- Iva hayesiana*
- Juncus acutus* subsp. *leopoldii*
- Salvia munzii*
- Selaginella cinerascens*
- 2014 Survey Polygons**

- 2018 Survey Polygons**
- Species Polygons**
 - Ambrosia monogyra*
 - Atriplex pacifica*
 - Bahiopsis laciniata*
 - Ferocactus viridescens*
 - Hesperocyparis forbesii*
 - Hesperocyparis forbesii*, *Iva hayesiana*

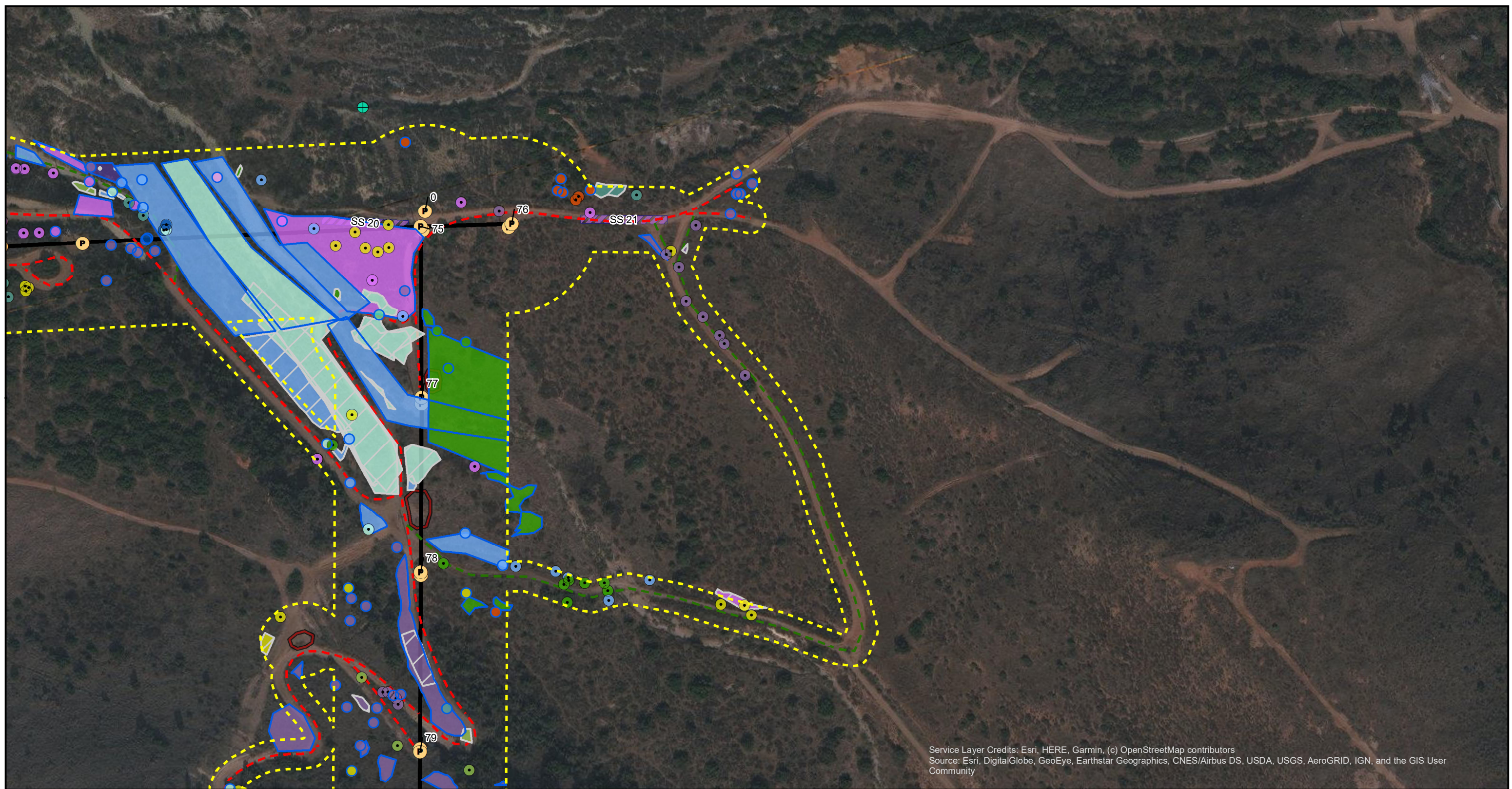
- Holocarpha virgata* subsp. *elongata*
- Isocoma menziesii* var. *decumbens*
- Iva hayesiana*
- Juncus acutus* subsp. *leopoldii*
- Salvia munzii*



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2014 & 2018





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Legend

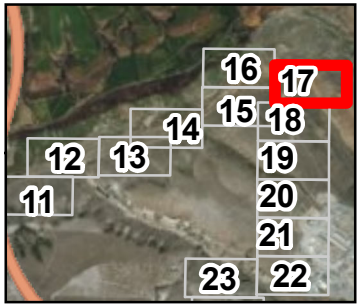
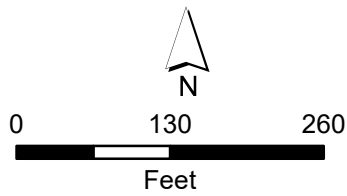
- Transmission Centerline
- Survey Corridor
- Project Pole
- Access Type**
 - Existing Non-TCM Access Road
 - Access Road
- Proposed Work Area**
 - String Site
 - Turnaround Area

- 2014 Survey Points
- 2015 Survey Points
- 2018 Survey Points
- Species Points**
 - Ambrosia monogyra
 - Arctostaphylos otayensis
 - Bahiopsis laciniata
 - Ceanothus otayensis
 - Ferocactus viridescens

- Hesperocyparis forbesii
- Holocarpha virgata subsp. elongata
- Isocoma menziesii var. decumbens
- Iva hayesiana
- Juncus acutus subsp. leopoldii
- Salvia munzii
- Selaginella cinerascens

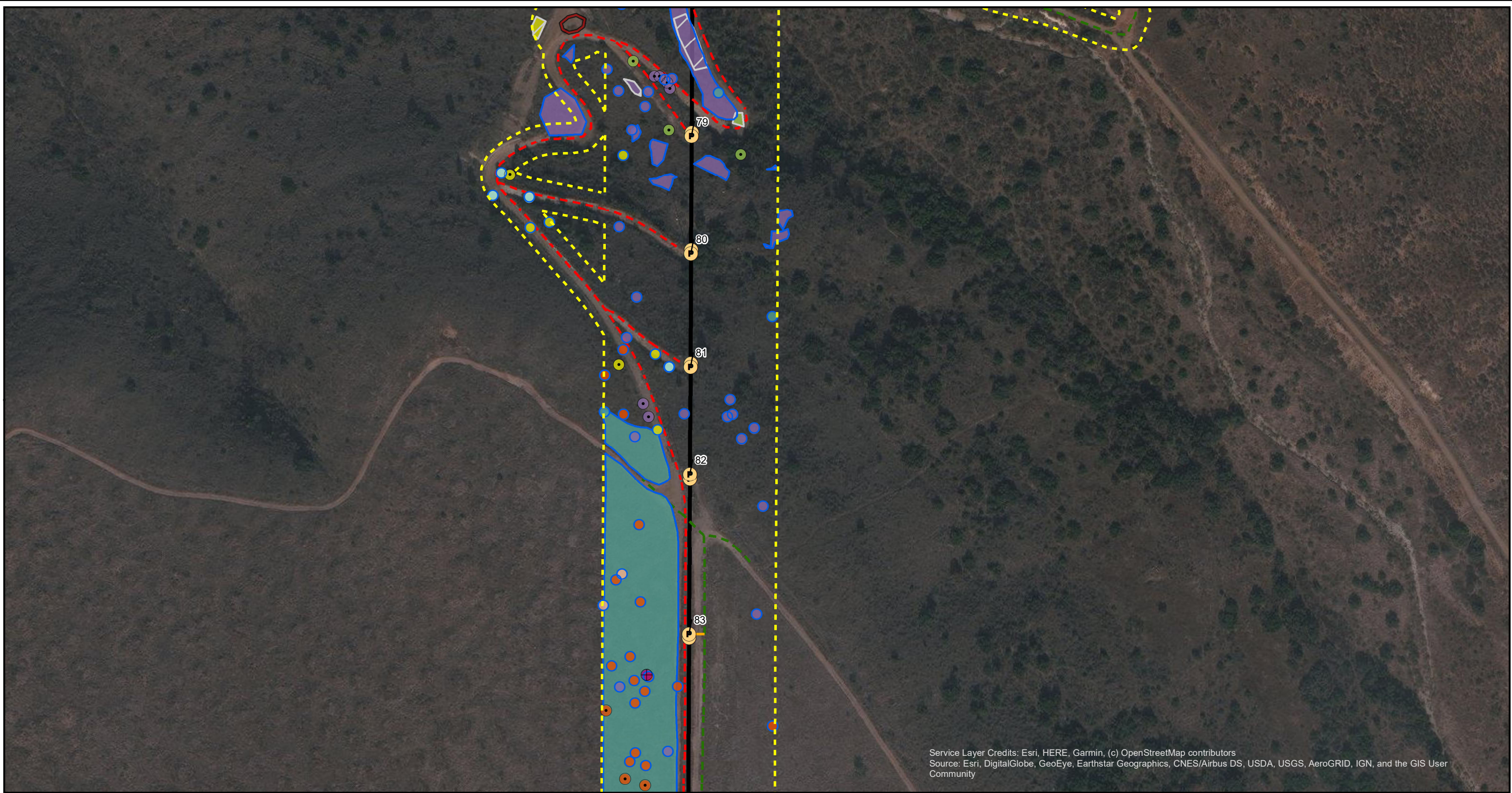
- Harpagonella palmeri
- 2014 Survey Polygons
- 2018 Survey Polygons
- Species Polygons**
 - Ambrosia monogyra
 - Bahiopsis laciniata
 - Hesperocyparis forbesii
 - Hesperocyparis forbesii, Iva hayesiana

- Holocarpha virgata subsp. elongata
- Isocoma menziesii var. decumbens
- Iva hayesiana
- Salvia munzii
- Selaginella cinerascens



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Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

--- Overland Travel

Proposed Work Area

--- Turnaround Area

○ 2014 Survey Points

⊕ 2015 Survey Points

⦿ 2018 Survey Points

Species Points

● *Bahiopsis laciniata*

● *Eryngium aristulatum* var. *parishii*

● *Ferocactus viridescens*

● *Hesperocyparis forbesii*

● *Holocarpha virgata* subsp. *elongata*

● *Isocoma menziesii* var. *decumbens*

● *Selaginella cinerascens*

● *Dudleya variegata*

□ 2014 Survey Polygons

□ 2018 Survey Polygons

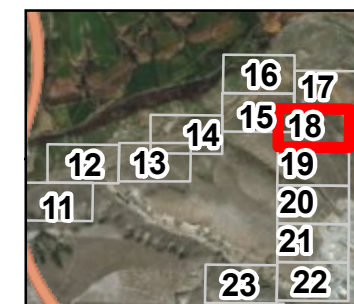
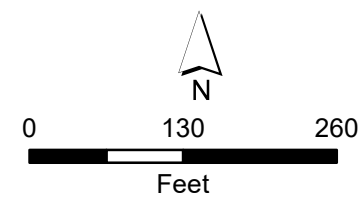
Species Polygons

■ *Bahiopsis laciniata*

■ *Holocarpha virgata* subsp. *elongata*

■ *Isocoma menziesii* var. *decumbens*

■ *Selaginella cinerascens*



Appendix C

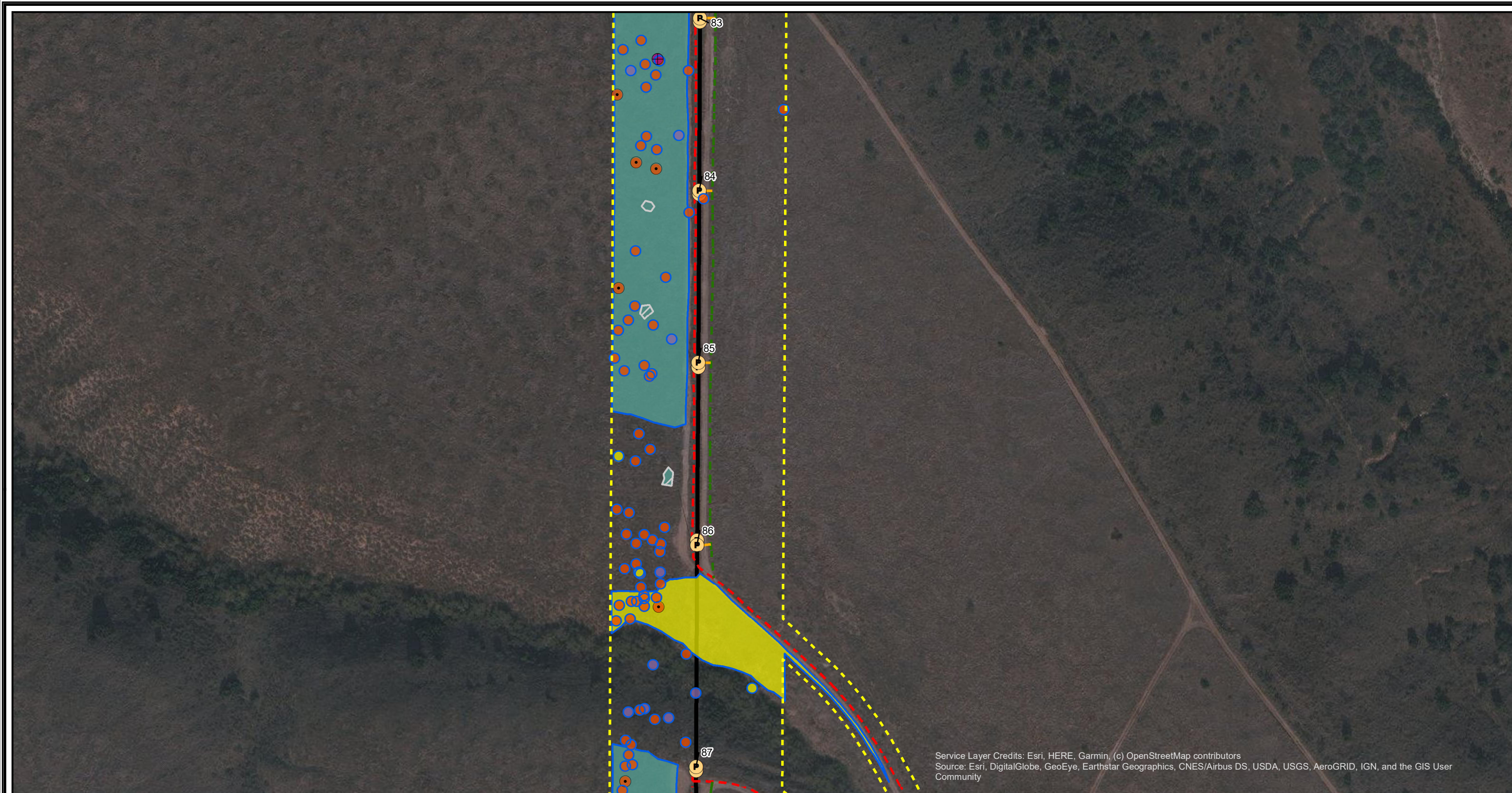
TL 649

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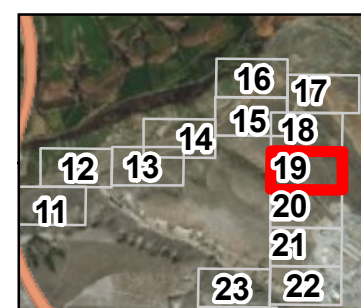
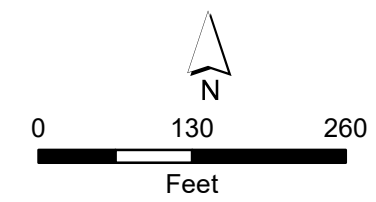
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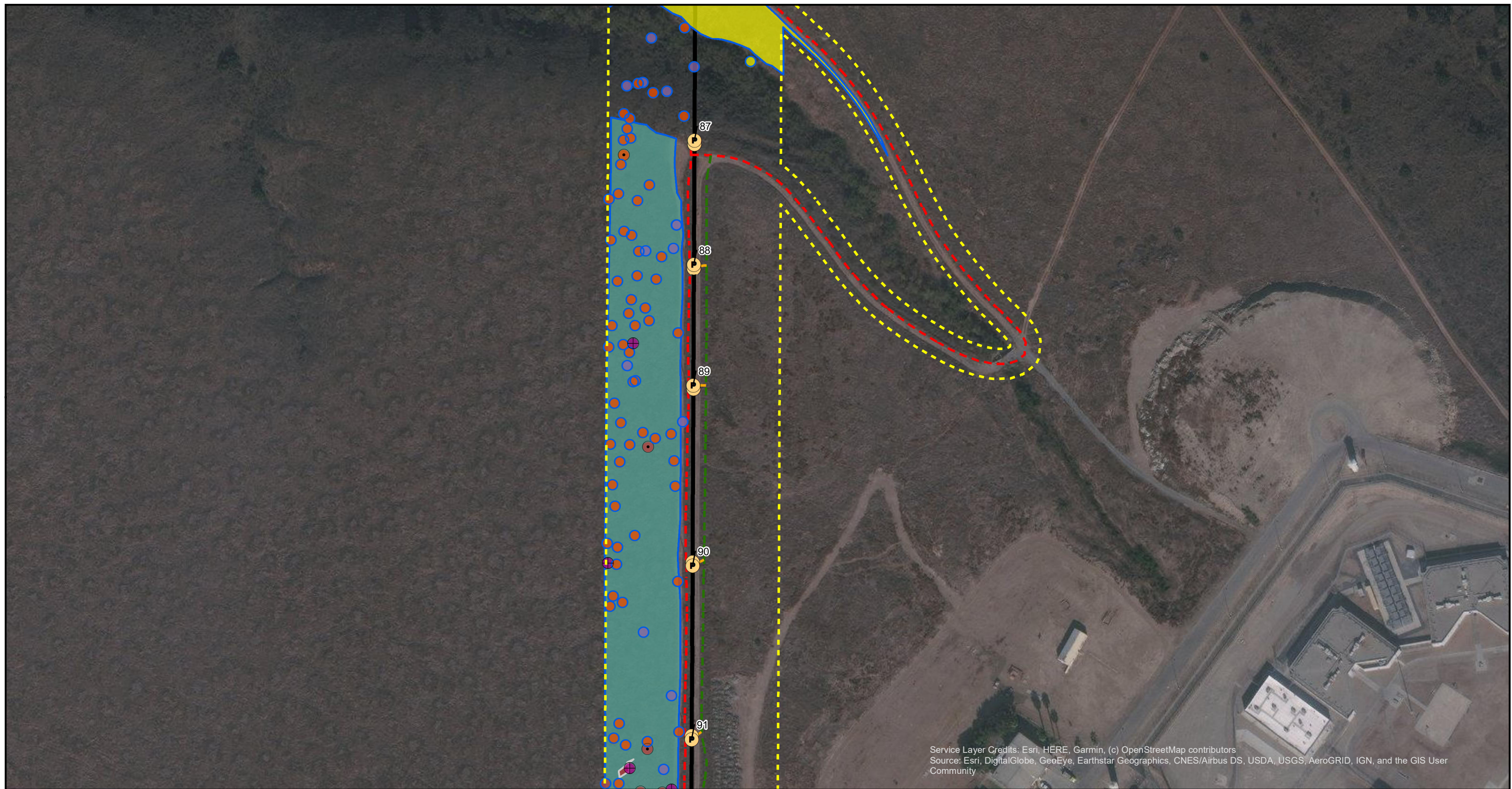




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- Legend**
- Transmission Centerline
 - Survey Corridor
 - Project Pole
 - Access Type**
 - Existing Non-TCM Access Road
 - Access Road
 - Overland Travel
 - 2014 Survey Points**
 - 2015 Survey Points**
 - 2018 Survey Points**
 - Species Points**
 - Bahiopsis laciniata*
 - Ferocactus viridescens*
 - Isocoma menziesii* var. *decumbens*
 - Species Polygons**
 - Dudleya variegata*
 - Bahiopsis laciniata*
 - Selaginella cinerascens*





Legend

— Transmission Centerline

--- Survey Corridor

Ⓟ Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

--- Overland Travel

○ 2014 Survey Points

⊕ 2015 Survey Points

⊙ 2018 Survey Points

Species Points

● *Bahiopsis laciniata*

● *Bloomeria clevelandii*

● *Ferocactus viridescens*

● *Isocoma menziesii* var. *decumbens*

● *Dudleya variegata*

□ 2014 Survey Polygons

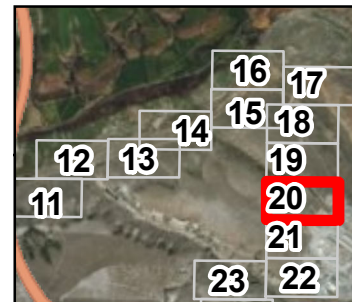
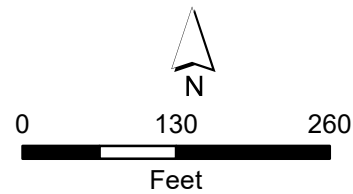
□ 2018 Survey Polygons

Species Polygons

■ *Bahiopsis laciniata*

■ *Bloomeria clevelandii*

■ *Selaginella cinerascens*



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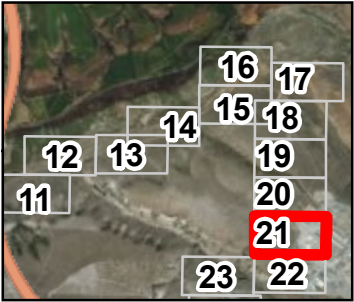
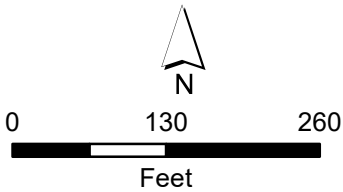




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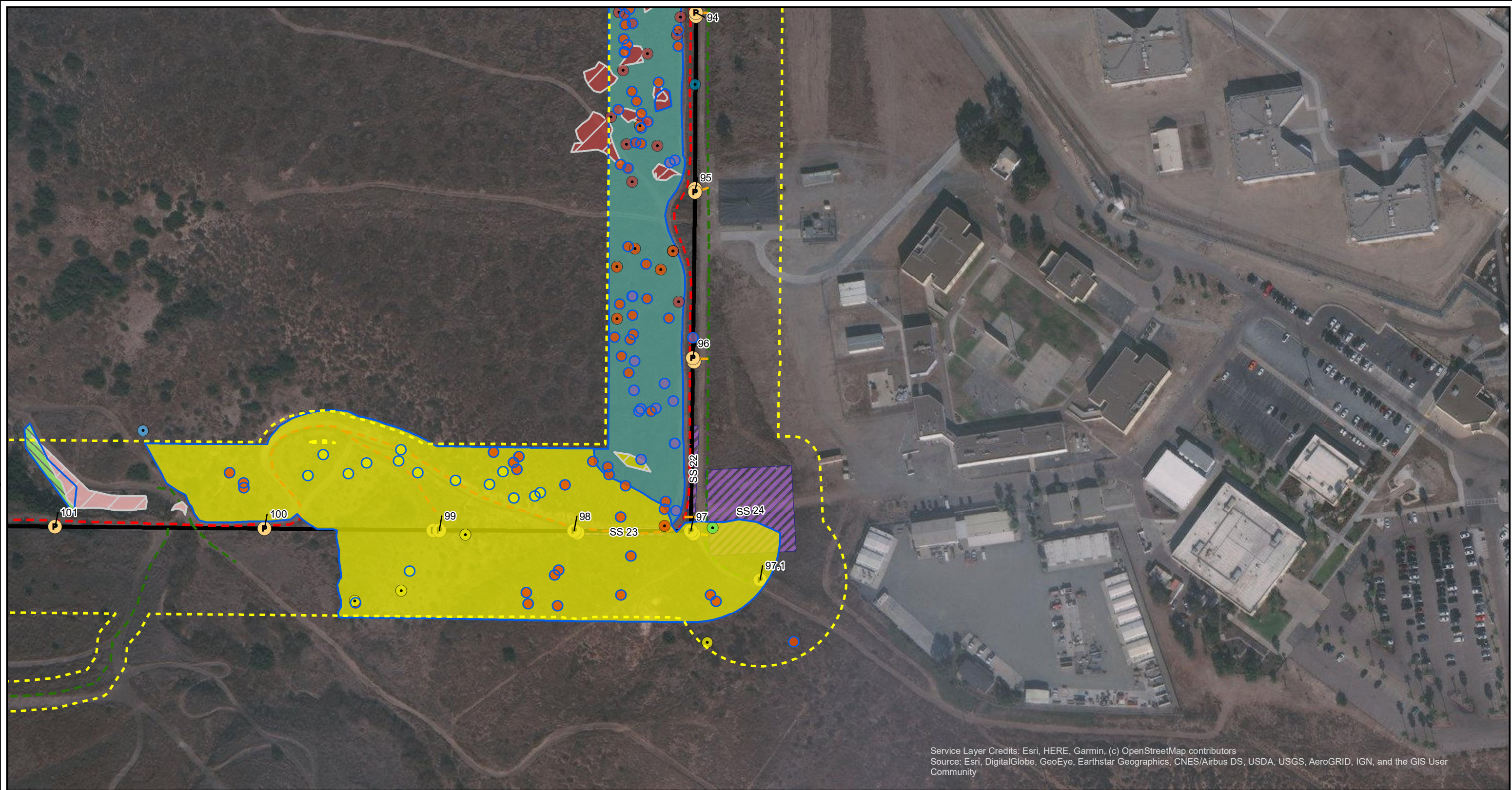
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|---|---|---|---|
| <p>— Transmission Centerline</p> <p>--- Survey Corridor</p> <p>● Project Pole</p> <p>Access Type</p> <p>--- Existing Non-TCM Access Road</p> <p>--- Access Road</p> <p>--- Overland Travel</p> | <p>○ 2014 Survey Points</p> <p>⊕ 2015 Survey Points</p> <p>⦿ 2018 Survey Points</p> <p>Species Points</p> <p>● <i>Bloomeria clevelandii</i></p> <p>● <i>Ferocactus viridescens</i></p> <p>● <i>Isocoma menziesii</i> var. <i>decumbens</i></p> | <p>● <i>Myosurus minimus</i></p> <p>● <i>Dudleya variegata</i></p> <p>▭ 2014 Survey Polygons</p> <p>▭ 2018 Survey Polygons</p> <p>Species Polygons</p> <p>▭ <i>Bloomeria clevelandii</i></p> <p>▭ <i>Isocoma menziesii</i> var. <i>decumbens</i></p> | <p>▭ <i>Selaginella cinerascens</i></p> |
|---|---|---|---|



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 Focused Plant
 Survey Results
 2014 & 2018





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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

--- Overland Travel

Proposed Work Area

String Site

● 2014 Survey Points

● 2018 Survey Points

Species Points

● Bahiopsis laciniata

● Bloomeria clevelandii

● Deinandra conjugens

● Deinandra conjugens, SDMMP population

● Ferocactus viridescens

● Isocoma menziesii var. decumbens

● Myosurus minimus

■ 2014 Survey Polygons

■ 2018 Survey Polygons

Species Polygons

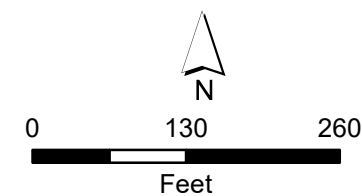
■ Adolphia californica

■ Adolphia californica, Ambrosia chenopodiifolia, Iva hayesiana

■ Bahiopsis laciniata

■ Bloomeria clevelandii

■ Selaginella cinerascens



Appendix C

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Wood-to-Steel Project

Focused Plant

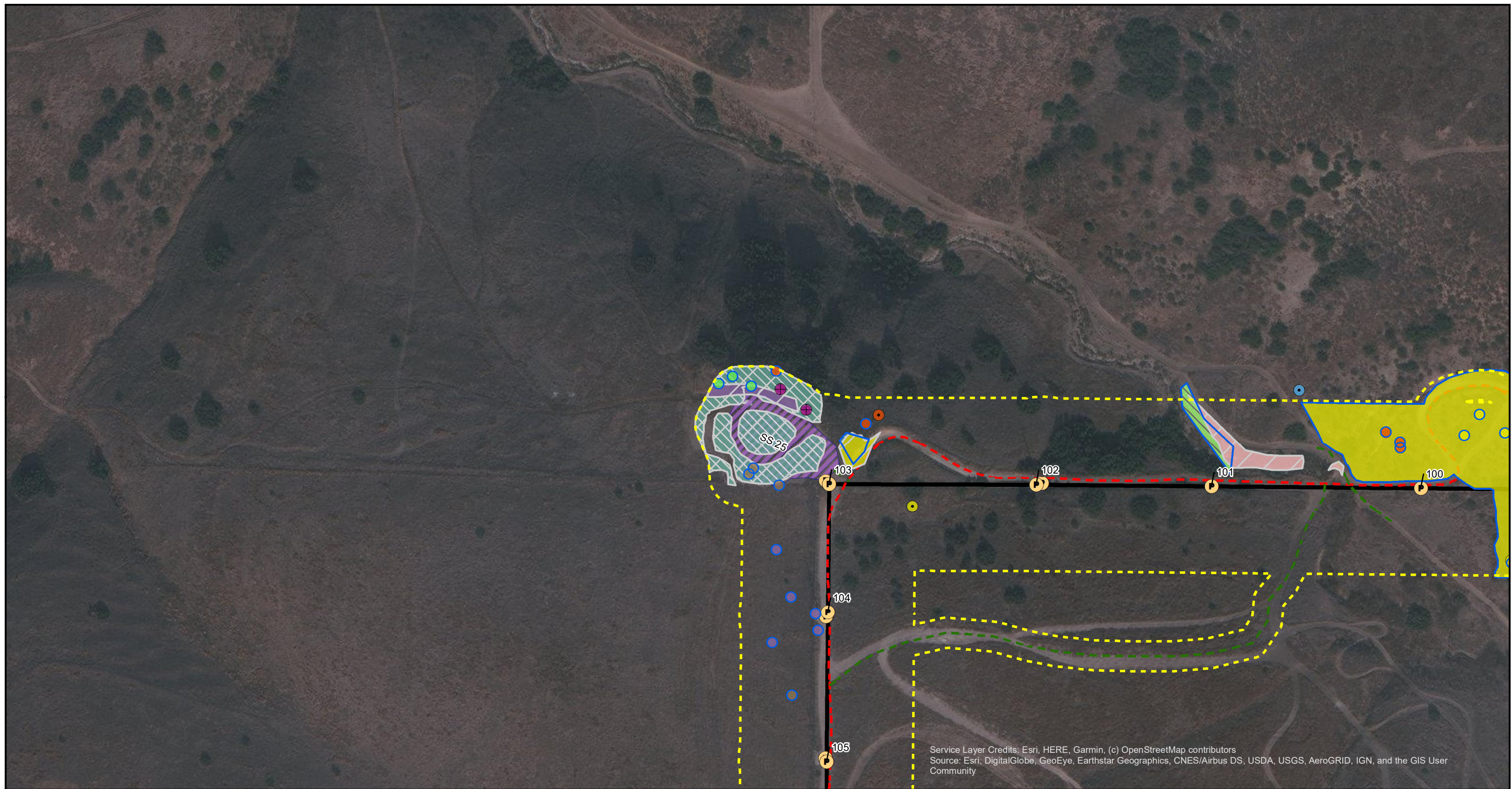
Survey Results

2014 & 2018

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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

Proposed Work Area

String Site

○ 2014 Survey Points

⊕ 2015 Survey Points

⊙ 2018 Survey Points

Species Points

● *Bahiopsis laciniata*

● *Convolvulus simulans*

● *Deinandra conjugens*

● *Deinandra conjugens*,
SDMMP population

● *Ferocactus viridescens*

● *Isocoma menziesii* var.
decumbens

● *Dudleya variegata*

□ 2014 Survey Polygons

2018 Survey Polygons

Species Polygons

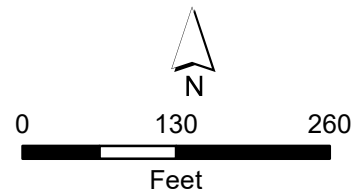
■ *Adolphia californica*

■ *Adolphia californica*,
Adolphia californica,
Iva hayesiana

■ *Bahiopsis laciniata*

■ *Bahiopsis laciniata*,
Deinandra conjugens

■ *Isocoma menziesii* var.
decumbens



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Focused Plant

Survey Results

2014 & 2018

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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

Access Type

--- Existing Non-TCM Access Road

--- Access Road

--- Overland Travel

Proposed Work Area

String Site

● 2014 Survey Points

● 2018 Survey Points

Species Points

● *Convolvulus simulans*

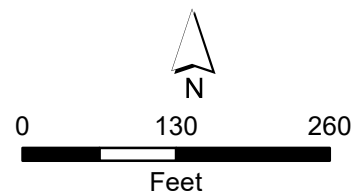
● *Isocoma menziesii* var. *decumbens*

2014 Survey Polygons

2018 Survey Polygons

Species Polygons

Isocoma menziesii var. *decumbens*



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Wood-to-Steel Project
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Survey Results
2014 & 2018

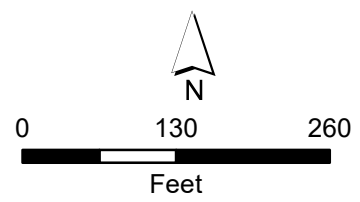
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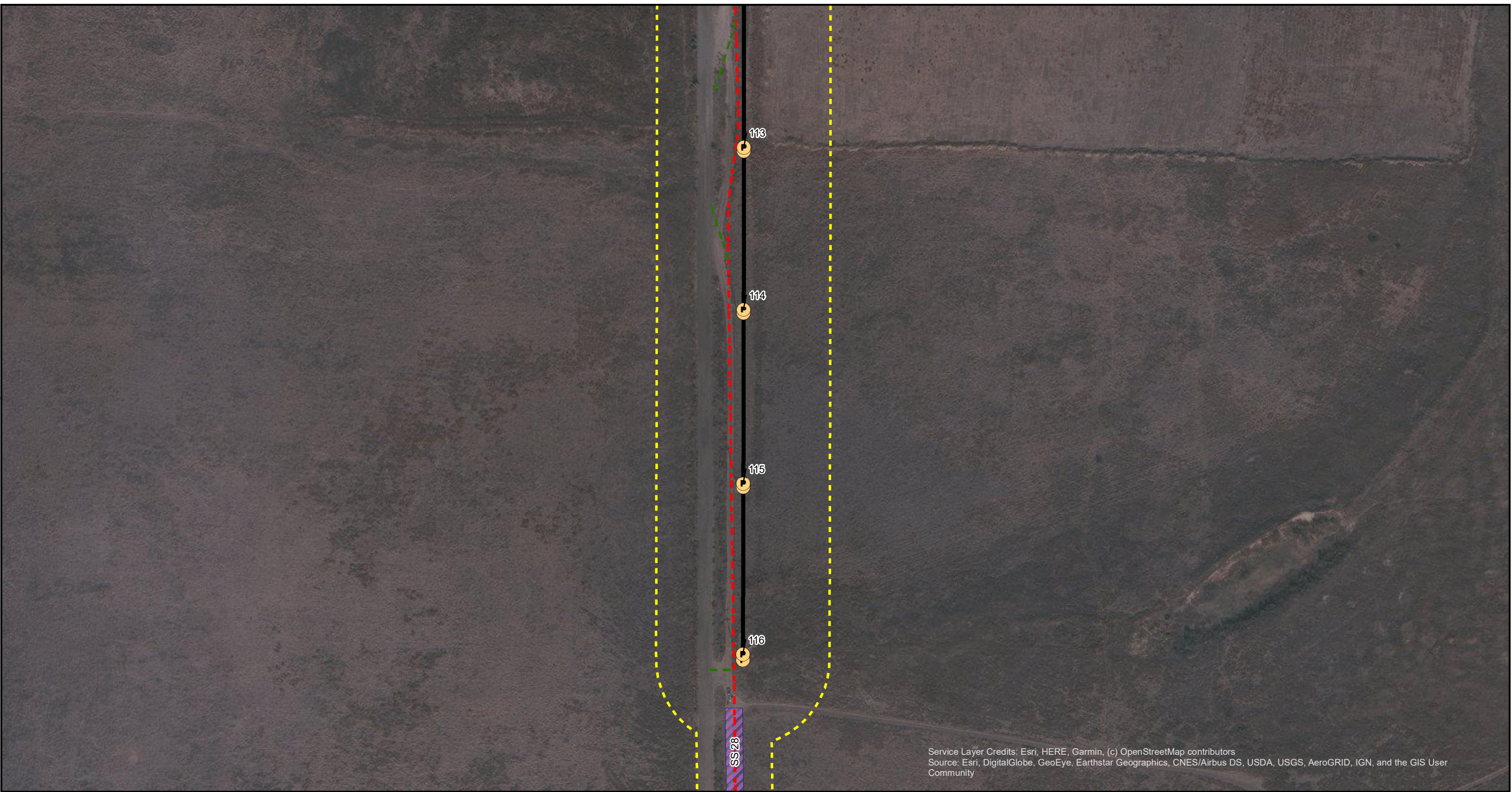
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- Legend**
- Transmission Centerline
 - Survey Corridor
 - Project Pole
 - Access Type
 - Existing Non-TCM Access Road
 - Access Road
 - Proposed Work Area**
 - String Site





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Legend

— Transmission Centerline

--- Survey Corridor

● Project Pole

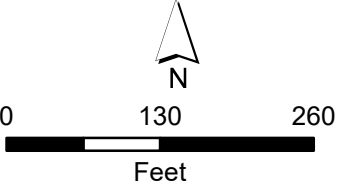
Access Type

--- Existing Non-TCM Access Road

--- Access Road

Proposed Work Area

String Site

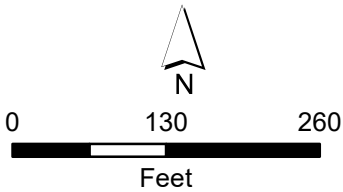


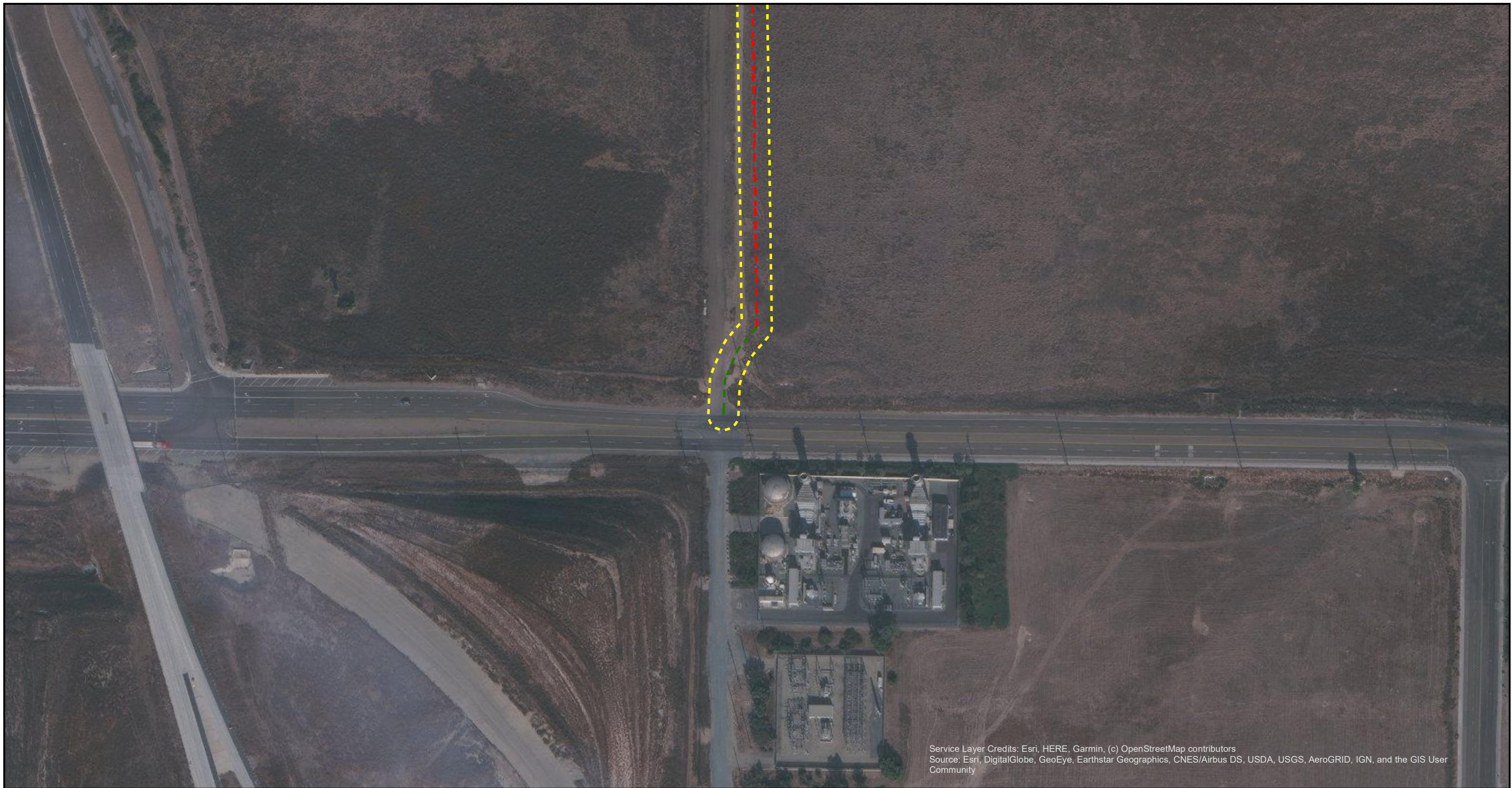
Appendix C
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Focused Plant
Survey Results
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- Legend**
- Transmission Centerline
 - Survey Corridor
 - Project Pole
 - Access Type
 - Existing Non-TCM Access Road
 - Access Road
 - Proposed Work Area**
 - String Site





Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

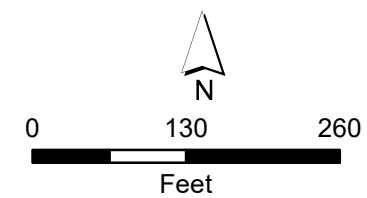
Legend

Survey Corridor

Access Type

Existing Non-TCM Access Road

Access Road



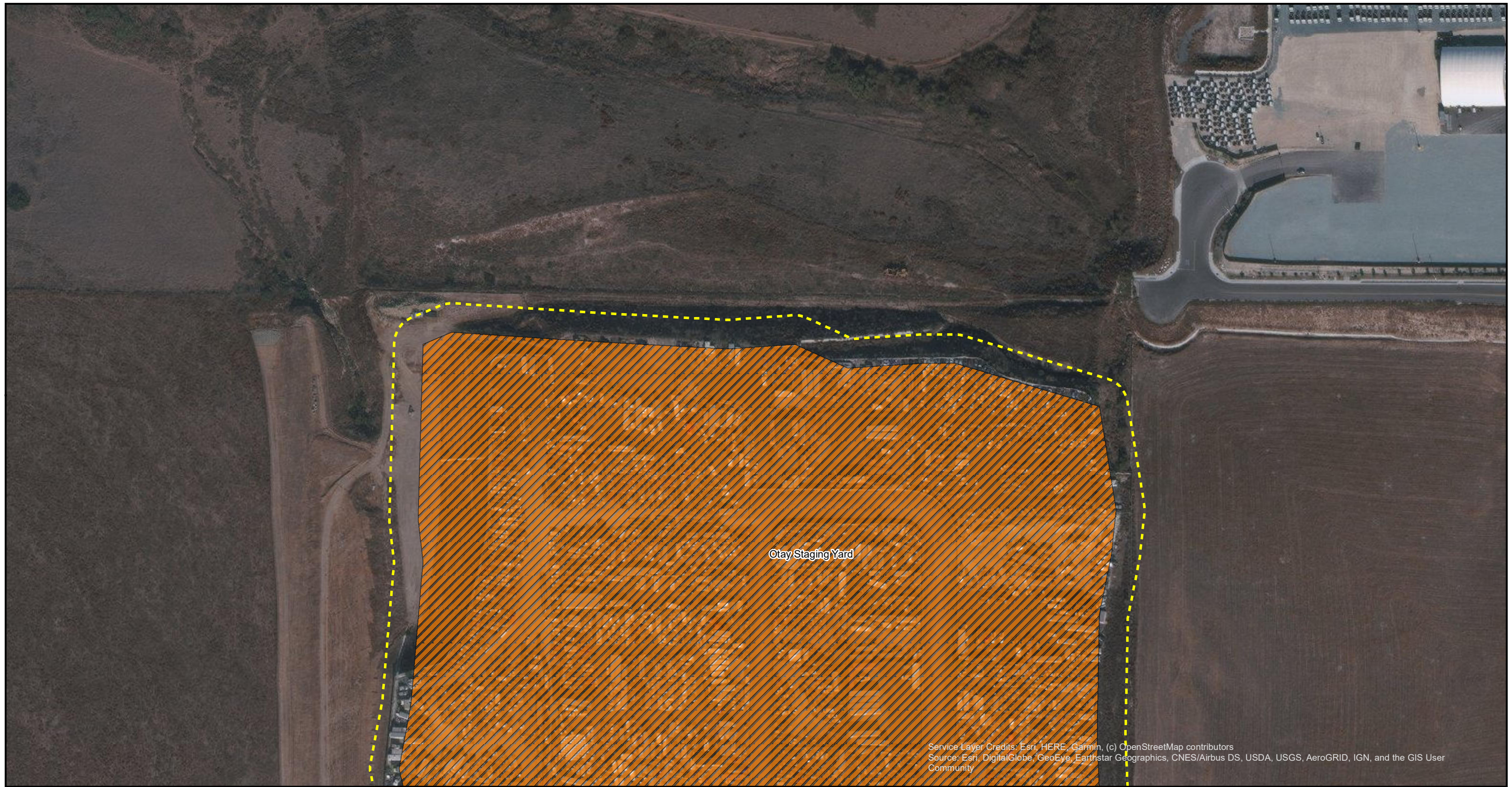
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Wood-to-Steel Project
Focused Plant
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2014 & 2018

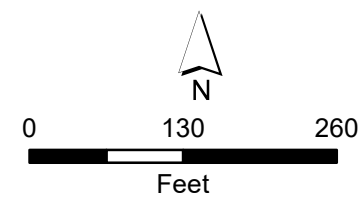
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Legend

- Survey Corridor
- Proposed Work Area**
- Staging Yard



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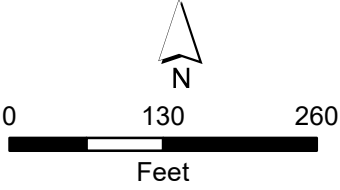
TL 649
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2014 & 2018

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- Legend**
- Survey Corridor
 - Proposed Work Area**
 - Staging Yard



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APPENDIX D – PHOTO PAGES



ATTACHMENT A – REPRESENTATIVE SPECIES PHOTOGRAPHS



Photo 1:
Spineshrub
(*Adolphia
californica*) -
CRPR 2B.1



Photo 2: San
Diego bur-sage
(*Ambrosia
chenopodiifolia*)
- CRPR 2B.1



Photo 3: Leafy
burrobush
(*Ambrosia
monogyra*) -
CRPR 2B.2



Photo 4: Otoy
manzanita
(*Arctostaphylos
otoyensis*) -
CRPR 1B.2



Photo 5:
Palmer's
sagewort
(*Artemisia
palmeri*) -
CRPR 4.2



Photo 6: South
Coast saltscale
(*Atriplex
pacifica*) - CRPR
1B.2



Photo 7: San
Diego
sunflower
(*Bahioopsis*
[*Viguiera*]
laciniata) -
CRPR 4.3



Photo 8:
Golden-club
cactus
(*Bergerocactus*
emoryi) - CRPR
2B.2, NCCP-
covered



Photo 9: San
Diego
goldenstar
(*Bloomeria
clevelandii*) -
CRPR 1B.1,
NCCP-covered

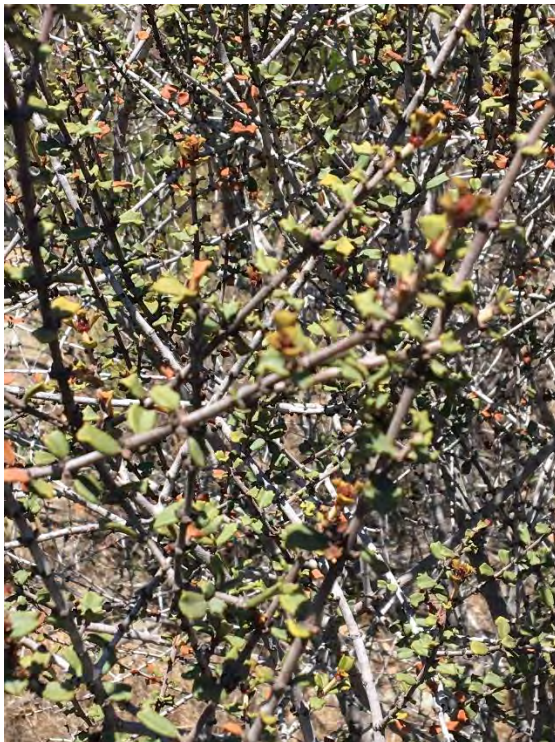


Photo 10: Otay-
lilac (*Ceanothus
otayensis*) -
CRPR 1B.2



Photo 11:
Small-flower
bindweed
(*Convolvulus
simulans*) -
CRPR 4.2



Photo 12: Otay
tarplant
(*Deinandra
conjugens*) - **FT**,
CE, CRPR 1B.1,
NCCP-covered



Photo 13:
Orcutt's bird's-
beak
(*Dicranostegia*
orcuttiana) -
CRPR 2B.1

NO PHOTO AVAILABLE

Photo 14: San
Diego button-
celery
(*Eryngium*
aristulatum var.
parishii) - FE,
CE, CRPR 1B.1,
NCCP-covered



Photo 15: Cliff
spurge
(*Euphorbia
misera*) -
CRPR 2B.2



Photo 16: San
Diego barrel
cactus
(*Ferocactus
viridescens*) -
CRPR 2B.1,
NCCP-covered



Photo 17:
Tecate cypress
(*Hesperocyparis
forbesii*) - CRPR
1B.1, NCCP-
covered plant

NO PHOTO AVAILABLE

Photo 18:
Virgate tarweed
(*Holocarpha
virgata* subsp.
elongata)- CRPR
4.2



Photo 19:
Decumbent
goldenbush
(*Isocoma*
menziesii var.
decumbens) -
CRPR 1B.2



Photo 20: San
Diego marsh-
elder (*Iva*
hayesiana) -
CRPR 2B.2



Photo 21:
Southwestern
spiny-rush
(*Juncus acutus*
subsp. *leopoldii*)
- CRPR 4.2



Photo 22: Little
mousetail
(*Myosurus*
minimus subsp.
apus) - CRPR
3.1, NCCP-
covered



Photo 23:
Small-leaf rose
(*Rosa
minutifolia*) -
CE, CRPR 2B.1,
NCCP-covered



Photo 24:
Munz's sage
(*Salvia munzii*) -
CRPR 2B.2



Photo 25: Mesa
spike-moss
(*Selaginella*
cinerascens) -
CRPR 4.1