

APPENDIX A

Biological Survey Report

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Karen Stackpole
Environmental Quality Control Manager
CBP Environmental Services Contractor
DAWSON

September 25, 2020

RE: Environmental Support Services for FY 2020-284 Wall, San Diego 15, San Diego County, California

Dear Karen:

Bio-Studies has prepared a summary of information collected from a variety of literature sources and field surveys to describe the biological resources present and potentially present along the FY 2020-284 Wall, San Diego 15 Fence Replacement Project (Project) in San Diego County, California. This letter characterizes the surrounding habitat and determines the potential for presence of special-status plant and wildlife species.

The Project is located in the eastern portion of the San Diego Sector and is composed of 8 separate survey segments (**Figure 1**) and 7 proposed staging yards starting approximately 5.4 kilometers east of the Tecate Port of Entry (POE) and ending approximately 1 kilometer east of the San Diego County line. The Survey Area segments start and stop points are noted below and in Figure 1.

Survey Segment	Location	
	Start	End
15-2A	32.581042, -116.570625	32.581533, -116.564637
15-2B	32.582222, -116.556301	32.584168, -116.532623
15-2C	32.585800, -116.512790	32.586212, -116.507678
15-2D	32.586851, -116.499866	32.587672, -116.489832
15-2E	32.593228, -116.421692	32.593982, -116.412406
15-2F	32.606098, -116.261873	32.609032, -116.225067
15-2G	32.615070, -116.148981	32.615753, -116.140342
15-2H	32.617714, -116.115477	32.619207, -116.096494

The Survey Area focused on areas between existing legacy primary pedestrian fence where no border infrastructure was present. The Project is located on a combination of BLM (El Centro and Palm Springs – South Coast Field Offices) lands and undeveloped private holdings. The Survey Area is defined as an area extending 100 feet to the north from the international border along each of the 8 segments (**Figures 2 – 7**).

In addition, 7 proposed staging areas near the 8 Survey Area segments were also surveyed. Staging areas were identified in the field by staking prior to surveys being conducted.

The Survey Area is located within the Southern California/Northern Baja Coast Ecoregion and two Level IV Ecoregions: Diegan Western Granitic Foothills (Segments 15-2A to 15-F) and Morena/Boundary Mountain Chaparral (Segments 15-2G and 15-2H) (Griffith et al. 2016). To the west the ecoregion is characterized by low hills at intermediate elevations and includes parts of the lower Peninsular Ranges. A few valleys occur in the ecoregion and can be narrow to broad. The ecoregion is mildly influenced by marine air. Characteristic vegetation includes needlegrass, coast live oak, chamise mixed chaparral and California sagebrush. The ecoregion to the eastern part of the Survey Area is transitional between the Southern California/Northern Baja Coast Ecoregion to the west and south, and the Southern California Mountains to the east. The topographical relief in this area is less dramatic than in the Southern California Mountains and it lacks the hardwood and conifer woodlands. Characteristic vegetation is mixed chaparral and chamise. Elevations along the Survey Area gradually increase moving west to east and range between 1,998 to 4,026 feet above mean sea level (Google Earth 2020).

A search of relevant literature identified 73 special-status plants and 55 special status animal species whose potential to occur in the Survey Area required assessment. Field surveys were conducted in March, April and May of 2020 to map vegetation communities in the Survey Area and to identify suitable habitat for special-status species. The potential for special status species to occur in the Survey Area was based on the conditions observed in the field, habitat preferences and known distributions of special-status species, and the professional expertise of the biologists conducting the survey. The following resources were reviewed to determine which special-status plant and animal species have potential to occur in the Survey Area:

- California Natural Diversity Database records (CNDDDB 2020)
- California Native Plant Society Inventory of Rare and Endangered Plants of California (CNPS 2020)
- United States Geological Survey 7.5-minute quadrangles Potrero, Campo, Tierra del Sol, Jacumba OE S, and In-Ko-Pah Gorge OE S.
- NatureServe (NatureServe 2020)
- U.S. Department of Agriculture Natural Resource Conservation Service Soil Survey Data (Soil Survey Staff 2020)
- Conservation Biology Institute, Data Basin (CBI 2013)
- Bureau of Land Management California Special-Status Animal Species and Sensitive Species List (BLM 2014).
- California Department of Fish and Wildlife, Special Animals List (CDFW 2020)

Biologist Dustin Janeke conducted a general biological survey at Segment 15-2D, 15-2G and 15-2H on March 12 – 14, 2020. Biologists Dustin Janeke and Diana Saucedo conducted general biological surveys at Segment 15-2A, 15-2B, 15-2C, 15-2E and 15-2F on April 2 – 3, 2020. Biologist Caesara Brungraber conducted surveys at 7 proposed staging yards in the Survey Area on May 16, 2020.

Vegetation communities in the Survey Area were mapped using the United States National Vegetation Classifications Database and A Manual of California Vegetation (USNVC 2020, Sawyer et. al 2008). Vegetation communities were mapped to the association level when possible (**Figures 8 – 13**). Vegetation

mapping was conducted using aerial imagery and on-site ground truthing and species identification. Biologists documented all plant and wildlife species observed during field surveys.

Plant species observed in the Survey Area were identified using the Jepson eFlora (Jepson Flora Project 2020) and The Jepson Manual, Vascular Plants of California (Baldwin et. al. 2012). Vegetation in the Survey Area presented varying degrees of human disturbance, including foot-trails, Customs and Border Protection patrol and access roads and private land holdings and managed vegetation to create firebreaks. Proposed staging yards were sighted within these disturbed areas.

Vegetation within the Survey Area consists of native vegetation communities as follows: *Adenostoma fasciculatum* – (*Eriogonum fasciculatum*, *Artemisia californica*, *Salvia melifera*) Association, *Adenostoma fasciculatum* – *Eriogonum fasciculatum* Association, *Adenostoma fasciculatum* – annual grass-forb Association, *Adenostoma sparsifolium* Association, *Agave deserti* Association, *Artemisia californica* – *Eriogonum fasciculatum* Association, *Bahiopsis laciniata* – *Artemisia californica* – *Eriogonum fasciculatum* Association, *Ceanothus leucodermis* Association, Developed – Non native forbs, *Ericameria teretifolia* Association, *Eriogonum fasciculatum* Association, *Larrea tridentata* Association, *Prunus fremontii* Alliance, *Quercus agrifolia* – *Salix lasiolepis* Association, *Quercus berberidifolia* Association, *Quercus berberidifolia* – *Adenostoma fasciculatum* Association, *Rhus ovata* Association, *Quercus cornelius-mulleri* – *Rhus ovata* Association, *Eriogonum fasciculatum* Shrubland Alliance, *Eriogonum fasciculatum* – *Salvia apiana* Xeric Scrub Alliance, *Keckiella antirrhinoides* Shrubland Alliance, and *Lotus scoparius* [*Acmispon glaber*] Shrubland Alliance.

Five special-status plant species and 1 special-status wildlife species were observed within the Survey Area during field surveys or during subsequent monitoring. Of the special-status species assessed for the Survey Area but not observed, 36 special-status plants and 49 special status wildlife species have the potential to occur (**Table 1**). Special-status species have the potential to occur in the Survey Area due to suitable soils, vegetation communities, preferred elevation range, habitat characteristics and known distribution. Specific vegetation communities where each special-status species may be expected to occur are listed in **Table 1**.

Critical habitat has been designated for one special-status wildlife species in the Survey Area, arroyo toad (*Anaxyrus californicus*). Critical habitat for the arroyo toad has been identified along Campo Creek in Survey Area Segment 15-2B (USFWS 2020). Suitable shallow, slow-moving stream habitat is present in the survey. No surveys for arroyo toads were conducted as part of this survey effort.

References:

- Bureau of Land Management. 2014. BLM Special Status Animal Species by Field Office. Retrieved March 2020, from [https://www.blm.gov/sites/blm.gov/files/documents/files/Programs_FishandWildlife_BLM CA%20Special%20Status%20Species.pdf](https://www.blm.gov/sites/blm.gov/files/documents/files/Programs_FishandWildlife_BLM_CA%20Special%20Status%20Species.pdf)
- California Department of Fish and Wildlife, Biogeographic Data Branch. 2020. California Natural Diversity Database (CNDDDB) [Commercial Digital Map]. Accessed March 2020.
- California Department of Fish and Wildlife. 2020. Special Animals List. Department of Fish and Wildlife Biogeographic Data Branch. Accessed online <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109406&inline> March 2020.

- California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39) Retrieved from, <http://www.rareplants.cnps.org>
- Conservation Biology Institute. 2013. Gabbro Soils, Soil Survey Geographic (SSURGO) database for San Diego County, California. Data Basin accessed online at <https://databasin.org/datasets/fb12ea0169eb45a1aace3522b24605e1>, September 2020.
- Griffith, G.E., Omernik, J.M., Smith, D.W., Cook, T.D., Tallyn, E., Moseley, K., and Johnson, C.B. 2016. Ecoregions of California (poster). U.S. Geological Survey Open-File Report 2016–1021, with map, scale 1:1,100,000, <http://dx.doi.org/10.3133/ofr20161021>.
- Jepson Flora Project (eds.). 2020. Jepson eFlora. Accessed August 2020, from <http://ucjeps.berkeley.edu/IJM.html>
- NatureServe. 2020. NatureServe’s Classification of Ecological Communities. Retrieved April 2020, from <http://services.natureserve.org>
- Sawyer, J.O., T. Keeler-Wolf, J.M. Evens. 2008. A Manual of California Vegetation, Second Edition. California Native Plant Society Press. Sacramento, California. 1,300 pp.
- Soil Survey Staff. 2020. Natural Resources Conservation Service, United States Department of Agriculture. Soil Survey Geographic (SSURGO) Database for Imperial County, California. Accessed online August 2020.
- United States Fish and Wildlife Service (USFWS). 2020. Critical Habitat for Threatened and Endangered Species online mapping tool. Retrieved September 2020, from <https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77>
- United States Geological Survey (USGS). 1972. USGS 1:24000-scale Quadrangle for Potrero, Campo, Tierra del Sol, Jacumba OE S, and In-Ko-Pah OE S, 1972: U.S. Geological Survey.
- United States National Vegetation Classification (USNVC). 2020. United States National Vegetation Classification Database, V2.01. Federal Geographic Data Committee, Vegetation Subcommittee, Washington DC. Retrieved July 2020, from <http://usnvc.org/>

If you have any questions or concerns regarding the results of this survey do not hesitate to contact us at 858-776-7444, rod@bio-studies.com

Sincerely,



Owner

Table 1: Special-Status Species with Potential to Occur

Special-Status Plant Species

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
PTERIDOPHYTES			
Aspleniaceae – Spleenwort family			
<i>Asplenium vespertinum</i> Western spleenwort	CRPR 4.2	Occurs in the shade of overhanging boulders in chaparral, coastal sage and oak woodlands. Suitable Habitat in The Survey Area includes <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association and <i>Rhus ovata</i> Association	Western spleenwort has potential to occur in the Survey Area in Segments 15-2A to 15-2E.
Selaginellaceae - Spike-moss family			
<i>Selaginella cinerascens</i> Ashy spike-moss	CRPR 4.1	A pteridophyte, rhizomatous fern. Occurs in chaparral and coastal sage scrub; less than 1,800 ft. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association and <i>Eriogonum fasciculatum</i> Association.	Ashy spike-moss is unlikely to occur in the Survey Area. Suitable vegetation communities occur in the Survey Area, but the bulk of the population occurs well west of the Survey Area at lower elevation.
<i>Selaginella eremophila</i> , Desert spike-moss	CRPR 2B.2	A pteridophyte, rhizomatous fern. Occurs in shaded sites on sandy or gravelly soils in Sonoran Desert habitats. Suitable habitats in the Survey Area include <i>Larrea tridentata</i> Association, <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association, <i>Agave deserti</i> Association, <i>Ericameria teretifolia</i> Association and <i>Prunus fremontii</i> Alliance.	Desert spike moss has the potential to occur in the Survey Area in Segments 15-2G and 15-2H.
GYMNOSPERMS			
Cupressaceae - Cypress family			
<i>Hesperocyparis forbesii</i> Tecate cypress	CRPR 1B.1	Occurs in clay, gabbroic, or metavolcanic soils within closed-cone coniferous forest and chaparral between 1,400–5,000 feet elevation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb and <i>Rhus ovata</i> Association.	Tecate cypress is unlikely to occur in the Survey Area due to a lack of suitable soil type. Small areas of suitable soils are present in Segment 15-2B and one documented occurrence has been reported near the Survey Area.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
EUDICOTS			
Asteraceae - Sunflower family			
<i>Ambrosia monogyra</i> Singlewhorl burrobrush	CRPR 2B.2	Occurs in washes and dry riverbeds in chaparral below 1,700 feet elevation. Suitable habitats in the Survey Area include <i>Rhus ovata</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association and <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association.	Singlewhorl burrowbrush is unlikely to occur in the Survey Area. Suitable vegetation communities are present in the Survey Area, but the majority of the population of this species occurs west of the Survey Area at more suitable elevations.
<i>Corethrogyne filaginifolia</i> var. <i>incana</i> San Diego sand aster	CRPR 1B.1	Occurs in coastal sage scrub vegetation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association and <i>Eriogonum fasciculatum</i> Association.	San Diego sand aster has potential to occur in the Survey Area in Segments 15-2A to 15-2D.
<i>Dieteria asteroides</i> var. <i>lagunensis</i> Mount Laguna Aster	State Rare, CRPR 2B.1, BLM Sensitive	Found in cismontane woodland and lower montane coniferous forest; 2,600–7,875 ft. Suitable habitat for this species does not occur in the Survey Area though occurrences have been reported with a mile of the Survey Area.	Mount Laguna aster is unlikely to occur in the Survey Area due to the lack of suitable vegetation communities; however, occurrences have been documented within a mile of the Survey Area.
<i>Deinandra floribunda</i> Tecate tarplant	CRPR 1B.2	Occurs along ephemeral stream beds, disturbed sites and wet openings in chaparral and coastal sage scrub. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, Developed – Non native forbs, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i>	Tecate Tarplant has potential to occur throughout the Survey Area from Segment 15-2A to 15-2H.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		Association.	
<i>Ericameria palmeri</i> var. <i>palmeri</i> Palmer's goldenbush	CRPR 1B.1	Occurs in coastal sage scrub habitats under 2,000 feet elevation. Suitable habitats in the Survey Area include <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, and <i>Rhus ovata</i> Association.	Palmer's goldenbush has potential to occur in the Survey Area in Segment 15-2A and 15-2B.
<i>Geraea viscida</i> Sticky geraea	CRPR 2B.2	Occurs in openings in chaparral between 1,500 and 5,500 feet elevation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.	Sticky Geraea was observed in the Survey Area in Segment 15-2h and has potential to occur from Segment 15-2A to 15-2H.
<i>Grindelia hallii</i> San Diego gumplant	CRPR 1B.2, BLM Sensitive	Occurs in meadows and dry slopes in chaparral, pine/oak woodland and grasslands habitats. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Quercus berberidifolia</i> Association and <i>Rhus ovata</i> Association.	San Diego gumplant has potential to occur in the Survey Area in Segments 15-2A to 15-2F.
<i>Hulsea californica</i> San Diego sunflower	CRPR 1B.3, BLM Sensitive	Occurs in open and/or burned sites in chaparral, and upper and lower montane coniferous forest; 3,275–6,560 ft. Suitable habitat types in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma</i>	San Diego sun flower has potential to occur in the Survey Area in Segments 15-2A to 15-2F.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.	
<i>Hulsea mexicana</i> Mexican hulsea	CRPR 2B.3	Occurs in disturbed and burned sites in chaparral above 4,000 feet. Suitable habitats in the Survey Area include <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association, <i>Larrea tridentata</i> Association, and <i>Ericameria teretifolia</i> Association.	Mexican hulsea has potential to occur in the Survey Area in Segment 15-2G and 15-2H.
<i>Isocoma menziesii</i> var. <i>decumbens</i> Decumbent goldenbush	CRPR 1B.2	Occurs in coastal sage, chaparral and wetland-riparian habitats in sandy soil, typically under 650 feet elevation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association and <i>Rhus ovata</i> Association.	Decumbent goldenbush is unlikely to occur in the Survey Area. Suitable vegetation communities are present in the Survey Area, but those areas are at an elevation significantly higher than that preferred by the species. Few records of this species have been documented near the Survey Area.
<i>Iva hayesiana</i> San Diego marsh-elder	CRPR 2B.2	Occurs in mesic areas, alkali sink, and wetland riparian habitats, rarely in non-wetlands; typically found <1,000 and up to 2,900 ft. Suitable habitats in the Survey Area include <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association.	San Diego marsh elder has no potential to occur in the Survey Area. Suitable mesic, wetland or riparian habitats in the Survey Area are located further east than the general species distribution of San Diego marsh elder.
<i>Microseris douglasii</i> ssp. <i>platycarpha</i> Douglas' silverpuffs	CRPR 4.2	Occurs in grasslands, woodlands and coastal sage scrub on clay soils or serpentine under 3,600 feet elevation. Suitable habitat types in the Survey Area include <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association and <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association.	Douglas' silver has potential to occur in the Survey Area in Segments 15-2A to 15.2D.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<i>Symphotrichum defoliatum</i> San Bernardino aster	CNPR 1B.2	Occurs in oak woodlands and disturbed sites under 6,700 feet elevation. Suitable habitats in the Survey Area include <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation community.	San Bernardino aster has potential to occur in the Survey Area in Segment 15-2E.
<i>Viguiera laciniata</i> San Diego County viguiera	CRPR 4.3	Found on chaparral slopes and coastal sage scrub, road edges; 300–2,500 ft. Suitable habitats in the Survey Area include <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association and <i>Rhus ovata</i> Association.	San Diego County viguiera is present in the Survey Area in Segment 15-2B and has potential to occur in Segments 15-2A, 15-2C and 15-2D.
<i>Xanthisma junceum</i> Rush like bristleweed	CNPR 4.3	Occurs on dry hillsides in chaparral and coastal sage scrub under 3,300 feet elevation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.	Rush like bristleweed has potential to occur in the Survey Area from Segment 15-2A to 15-2G.
Berberidaceae – Barberry family			
<i>Berberis higginsiae</i> Fremont's mahonia	CRPR 3.2	Occurs on rocky slopes in pinyon-juniper and chaparral habitats between 2,300 and 6,200 feet elevation. Suitable habitat types in the Survey Area include <i>Ericameria teretifolia</i> Association, <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association and <i>Prunus fremontii</i> Alliance.	Fremont's mahonia has potential to occur in the Survey Area in Segments 15-2F and 15-2G.
Boraginaceae – Borage family			
<i>Amsinckia douglasiana</i> Douglas' fiddleneck	CRPR 4.2	Occurs in unstable shale-based soils on slopes in grassland and woodland habitats. There are no suitable habitats within the Survey Area, but one occurrence has been reported approximately 4.5 kilometer from the Survey Area.	Douglas' fiddleneck is unlikely to occur in the Survey Area. Suitable shale-based soils do not occur in the Survey Area; however, one occurrence has been reported between Segment 15-2F and 15.2G. This single location is widely separated from the bulk of documented occurrences to the west.
<i>Harpagonella palmeri</i> Palmer's grapplinghook	CRPR 4.2	Occurs in sparsely vegetated sites within chaparral, coastal sage scrub and grassland habitats under 3,300 feet elevation. Suitable habitats in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association,	Palmer's grapplinghook has potential to occur in the Survey Area in Segments 15-2A to 15-2F.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<p><i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.</p>	
<p><i>Pholistoma auritum</i> var. <i>arizonicum</i> Arizona fiestaflower</p>	CRPR 2B.3	<p>Occurs in desert scrub habitat between 1,000 and 2,300 feet in elevation. Suitable habitat types in the Survey Area include <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Ericameria teretifolia</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.</p>	<p>Arizona fiestaflower was observed present in Survey Area Segment 15-2H and has potential to occur in Segment 15-2G.</p>
Brassicaceae - Mustard family			
<p><i>Caulanthus simulans</i> Payson's wild cabbage</p>	CRPR 4.2	<p>Occurs in chaparral, coastal sage scrub and pinyon-juniper woodlands from 1,300 to 7,200 feet in elevation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.</p>	<p>Payson's wild cabbage has potential to occur in the Survey Area in Segments 15-2F and 15-2G.</p>
<p><i>Lepidium virginicum</i> var. <i>robinsonii</i> Robinson's pepperweed</p>	CRPR 4.3	<p>Occurs in openings in chaparral and sage scrub; below 2,900 ft. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma</i></p>	<p>Robinson's pepperweed has potential to occur in the Survey Area in Segments 15-2A to 15-2F.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>fasciculatum</i> Association and <i>Rhus ovata</i> Association.	
<i>Streptanthus bernardinus</i> Laguna Mountain jewelflower	CRPR 4.3	Occurs in conifer forest and chaparral habitats between 4,000 and 8,200 feet in elevation. Suitable habitats in the Survey area can be found in <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsioflum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Laguna Mountain jewelflower is unlikely to occur in the Survey Area. Suitable chaparral vegetation is present in the Survey Area, but Laguna Mountain jewelflower is generally found at higher elevation. One documented occurrence of this species is reported near Segments 15-2C and 15-2D.
<i>Streptanthus campestris</i> Southern jewel-flower	CRPR 1B.3	Occurs in rocky areas in chaparral, lower montane coniferous forest, pinyon and juniper woodland between 2,953–7,546 feet in elevation. Suitable habitat types in the Survey Area include rocky portions of <i>Rhus ovata</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Adenostoma sparsioflum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb and <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association.	Southern jewel flower has potential to occur in the Survey Area in Segments 15-2A to 15-2F.
Cactaceae - Cactus family			
<i>Cylindropuntia wolfii</i> Wolf's opuntia	CRPR 4.3	Occurs in dry areas above valley floors in creosote bush scrub. Suitable habitat in the Survey Area can be found in <i>Agave deserti</i> Association, <i>Ericameria teretifolia</i> Association, and <i>Larrea tridentata</i> Association.	Wolf's opuntia has potential to occur in the Survey Area in Segments 15-2G and 15-2H.
<i>Ferocactus viridescens</i> San Diego barrel cactus	CRPR 2B.1	Occurs in chaparral, valley grassland, coastal sage scrub, and wetland habitats under 500ft. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association and <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association vegetation communities.	San Diego barrel cactus is unlikely to occur in the Survey Area. Suitable chaparral and coastal sage scrub vegetation is present in the Survey Area, but San Diego barrel cactus is generally found further west and at a lower elevation.
Chenopodiaceae - Goosefoot family			

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<i>Atriplex pacifica</i> South coast saltscale	CRPR 1B.2	Occurs in coastal sage scrub, wetland riparian habitats, alkali sink, playas, and coastal areas below 1,000 feet in elevation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association and <i>Eriogonum fasciculatum</i> Association vegetation communities.	South coast saltscale has no potential to occur in the Survey Area. While suitable coastal sage scrub habitats are present in the Survey Area, south coast salt scale generally occurs further west and at a lower elevation.
Convolvulaceae - Morning-glory family			
<i>Dichondra occidentalis</i> Western dichondra	CRPR 4.2	Occurs in chaparral, foothill woodland, coastal sage scrub, and valley grassland habitats under 1,700 feet elevation. Suitable habitat types in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	Western dichondra has potential to occur in the Survey Area in Segments 15-2A to 15-2D.
Crassulaceae - Stonecrop family			
<i>Dudleya variegata</i> Variegated dudleya	CRPR 1B.2	Occurs in chaparral, foothill woodland, coastal sage scrub, and valley grassland habitats below 1,000 feet elevation. Suitable habitats in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Variegated dudleya is unlikely to occur in the Survey Area. The Survey Area is located further east and at higher elevation than what is generally preferred by this species.
Ericaceae - Heath family			
<i>Arctostaphylos otayensis</i> Otay manzanita	CRPR 1B.2	Occurs in chaparral and foothill woodland habitats on metavolcanic soils between 900–5,600 feet elevation. Suitable habitats in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association and <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association vegetation communities.	Otay manzanita has no potential to occur in the Survey Area due to a lack of suitable metavolcanic soils.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer holly	CRPR 1B.2	Occurs in chaparral habitat between 300–1,800 feet elevation. Suitable habitats in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, and <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association vegetation communities.	Summer holly is unlikely to occur in the Survey Area. Suitable habitat is present in the Survey Area, but it is generally higher in elevation and further east than where summer holly has been documented previously.
Euphorbiaceae – Spurge family			
<i>Euphorbia arizonica</i> Arizona spurge	CRPR 2B.3	Occurs on sandy flats in creosote bush scrub below 1,000 feet elevation. Suitable habitat types in the Survey Area can be found in <i>Larrea tridentata</i> Association vegetation communities.	Arizona spurge has potential to occur in the Survey Area in Segment 15-2H. This segment is at higher elevation than typically expected for this species; however, other occurrences of Arizona spurge have been documented in this area.
Fabaceae - Legume family			
<i>Acmispon haydonii</i> Pygmy lotus	CRPR 1B.3	Occurs in creosote bush scrub and pinyon-juniper woodland habitats between 2,000 and 4,000 feet elevation. Suitable habitats in the Survey Area can be found in <i>Larrea tridentata</i> Association, <i>Eriogonum fasciculatum</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities	Pygmy lotus has potential to occur in Survey Area Segments 15-2G and 15-2H.
<i>Astragalus douglasii</i> var. <i>perstrictus</i> Jacumba milkvetch	CRPR 1B.2	Occurs in rocky chaparral, cismontane woodland, pinyon-juniper woodland, riparian scrub, and grassland between 2,775–4,550 feet elevation. Suitable habitats in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Jacumba milkvetch has potential to occur throughout the Survey from Segment 15-2A to 15-2H.
<i>Hosackia crassifolia</i> var. <i>otayensis</i> Otay Mountain lotus	CRPR 1B.1	Occurs in chaparral and disturbed margins between 2,900–3,300 feet elevation. Suitable habitats may be found in the Survey Area in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i>	Otay Mountain lotus is unlikely to occur in the Survey Area. Suitable vegetation communities are present in the Survey Area at appropriate

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and Developed – Non native forbs, vegetation communities.	elevation, but all documented occurrences of this species occur well to the west of the Survey Area (approximately 25 kilometers).
<i>Lathyrus splendens</i> Pride of California	CRPR 4.3	Occurs in chaparral habitats under 3,500 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	Pride of California has potential to occur throughout the Survey Area from Segment 15-2A to 15-2H.
<i>Lupinus excubitus</i> [<i>albifrons</i>] var. <i>medius</i> Mountain Springs bush lupine	CRPR 1B.3, BLM Sensitive	Occurs in desert washes in creosote bush scrub and pinyon-juniper woodlands under 3,300 feet elevation. Suitable habitats in the Survey Area may be found in <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association and <i>Prunus fremontii</i> Alliance vegetation communities.	Mountain Springs bush lupine has potential to occur in Survey Area Segment 15-2H. It was observed outside the Survey Area in sandy soils just northwest Segment 15-2H.
<i>Pickeringia montana</i> var. <i>tomentosa</i> Chaparral pea	CRPR 4.3	Occurs in chaparral and dry wash habitats on gabbroic, granitic and clay soils under 5,500 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Chaparral pea has potential to occur in the Survey Area in Segment 15-2A where gabbroic soils are present and 15-2H where granitic soils are present.
Fagaceae – Oak family			
<i>Quercus cedrosensis</i> Cedros island oak	CRPR 2B.2	Occurs in chaparral habitats between 300 and 6,000 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	Cedros island oak is unlikely to occur in the Survey Area. The majority of documented occurrences for this species is found west of the Survey Area.
<i>Quercus dumosa</i> Nuttall's scrub oak	CRPR 1B.1	Occurs in chaparral, and coastal sage scrub generally below 650 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia</i>	Nuttall's scrub oak is unlikely to occur in the Survey Area. The majority of this species is found at

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, and <i>Eriogonum fasciculatum</i> Association vegetation communities.	lower elevations to the west of the project area.
<i>Quercus engelmannii</i> Engelmann oak	CRPR 4.2	Occurs in foothills and woodland habitats under 4,300 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Engleman oak has potential to occur across much of the Survey Area from Segments 15-2A to 15-2F.
<i>Quercus turbinella</i> Sonoran scrub oak	CRPR 4.3	Occurs in pinyon-juniper and Joshua tree woodland habitats between 4,000 and 6,500 feet elevation. Suitable habitats in the Survey Area may be found in <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation community.	Sonoran scrub oak is unlikely to occur in the Survey Area. Suitable pinyon-juniper and Joshua tree woodland vegetation communities are not present in the Survey Area and the Survey Area is largely under the minimum reported elevation range for this species. There is some potential in Segment 15-2H.
Lamiaceae - Mint family			
<i>Lepechinia ganderi</i> Gander's pitcher sage	CRPR 1B.3	Occurs in chaparral, coastal sage scrub, grassland and coniferous forests on gabbroic or metavolcanics soils between 1,000 and 3,600 feet in elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Quercus berberidifolia</i> Association <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	This species is unlikely to occur in the Survey Area. Suitable soils for Gander's pitcher sage in the Survey Area are limited to a small area just west of Bell Canyon.
<i>Monardella hypoleuca ssp. lanata</i> Felt leaved monardella	CRPR 1B.2	Occurs on rocky granitic slopes or hilltops in chaparral habitats between 1,000 and 5,000 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia</i>	Felt leaved monardella has potential to occur in Survey Segments 15-2A to 15-2D.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<p><i>californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.</p>	
<p><i>Salvia munzii</i> Munz's sage</p>	<p>CRPR 2B.2</p>	<p>Occurs in chaparral, coastal sage scrub, closed-cone coniferous forest, and valley grassland habitats below <2,600 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.</p>	<p>Munz's sage is unlikely to occur in the Survey Area. This species is typically found much further west (approximately 25 kilometers), but a couple documented occurrences have been recorded near Survey Segments 15-2B to 15-2F.</p>
Loasaceae – Loasa family			
<p><i>Mentzelia hirsutissima</i> Hairy stickleaf</p>	<p>CRPR 2B.3</p>	<p>Occurs in washes, fans and slopes in creosote bush scrub habitat below 2,400 feet elevation. Suitable habitats in the Survey Area may be found in <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association and <i>Larrea tridentata</i> Association vegetation communities.</p>	<p>Hairy stickleaf is unlikely to occur in the Survey Area. Suitable habitat is present in Segment 15-2G and 15-2H, but these segments are higher in elevation than areas where hairy stickleaf are generally found.</p>
Malvaceae - Mallow family			
<p><i>Fremontodendron mexicanum</i> Mexican flannelbush</p>	<p>Federal Endangered, State Rare, CRPR 1B.1, BLM Sensitive</p>	<p>Occurs in chaparral habitats on gabbroic, metavolcanic, or serpentine soils between 10 and 2,400 feet elevation. Suitable habitats in the Survey AREa may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.</p>	<p>This species is unlikely to occur in the Survey Area. Suitable soils for Mexican flannelbush in the Survey Area are limited to a small area just west of Bell Canyon in Segment 15-2A.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<i>Malacothamnus aboriginum</i> Gray bush mallow	CRPR 1B.2	Occurs in chaparral in rocky, granitic and often burned areas between 500 and 2,300 feet in elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	Gray bush mallow is unlikely to occur in the Survey Area. Suitable vegetation communities are present, but the majority of documented occurrences are well north of the project area. Greatest potential to occur would be in Segments 15-2A to 15-2E.
Nyctaginaceae – Four O'clock family			
<i>Mirabilis tenuiloba</i> Slender lobed four o'clock	CRPR 4.3	Occurs on rocky slopes in creosote bush and desert scrub habitats under 1700 feet elevation. Suitable habitats in the Survey Area may be found in <i>Larrea tridentata</i> Association, <i>Ericameria teretifolia</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.	Slender lobed four o'clock has potential to occur in Survey Segments 15-2G and 15-2H on the east end of the Survey Area.
Oleaceae – Olive family			
<i>Fraxinus parryi</i> Chaparral ash	CRPR 2B.2	Occurs in canyons and on slopes and margins of chaparral habitats around 2,000 feet in elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Chaparral ash is unlikely to occur in the Survey Area. Few records of this species are documented in San Diego County and the nearest known population is 18 kilometers to the west of the Survey Area. Greatest areas of potential are in Segments 15-2A, 15-2B and 15-2E in canyon-like topography.
Onagraceae - Evening Primrose family			
<i>Clarkia delicata</i> Delicate clarkia	CRPR 1B.2	Occurs in oak woodlands and chaparral, often on gabbroic soils; below 3,300 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	Delicate clarkia has potential to occur in the Survey Area in Segments 15-2A to 15-2E.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
Phrymaceae - Lopseed family			
<i>Diplacus aridus</i> Low bush monkeyflower	CRPR 4.3	Occurs in granite crevices and outcrops in chaparral and desert scrub habitats between 2,200 and 3,900 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.	Low bush monkey is present in Survey Segment 15-2H and also has potential to occur in Segments 15-2G and 15-2F.
<i>Erythranthe diffusa</i> Palomar monkeyflower	CRPR 4.3	Occurs in sandy to gravelly soils in chaparral and lower montane coniferous forest between 950 and 6,900 feet. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association vegetation communities.	Palomar monkeyflower has potential to occur in Survey Segments 15-2A to 15-2F.
Picrodendraceae - Bitter-Tree family			
<i>Tetracoccus dioicus</i> Parry's tetracoccus	CRPR 1B.2	Occurs on dry slopes in chaparral and coastal sage scrub under 3,300 feet. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	Parry's tetracoccus is unlikely to be present in the Survey Area. Suitable habitat is present in Segment 15-2A to 15-2F, but few documented records of this species in the area are known.
Plantaginaceae – Plantain family			

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<i>Penstemon clevelandii</i> var. <i>connatus</i> San Jacinto beardtongue	CRPR 4.3	Occurs in rocky chaparral, pinyon-juniper woodland and rock crevices in desert scrub habitats between 1300 and 5,600 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.	San Jacinto beardtongue has potential to occur in all Survey Area segments from Segment 15-2A to 15-2H.
Polemoniaceae – Phlox family			
<i>Ipomopsis tenuifolia</i> Slender leaved ipomopsis	CRPR 2B.3	Occurs on gravelly to rocky slopes in chaparral, pinyon-juniper woodland and desert scrub habitats between 330 and 4,000 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.	Slender leaved ipomopsis was observed present in Survey Segment 15-2H and has potential to occur in Segment 15-2G as well.
<i>Leptosiphon pygmaeus</i> Pygmy leptosiphon	CRPR 1B.2	Occurs in coastal sage scrub and valley and foothill grassland habitats between 1,500 and 2,000 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, and <i>Eriogonum fasciculatum</i> Association vegetation communities.	There is potential for pygmy leptosiphon to occur in Survey Area Segments 15-2A to 15-2D.
<i>Linanthus bellus</i> Desert beauty	CRPR 2B.1	Occurs in sandy chaparral habitats between 3,300 and 4,600 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum</i>	There is potential for desert beauty to occur in Survey Area Segments 15-2E to 15-2G.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>fasciculatum</i> Association, <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association, <i>Rhus ovata</i> Association, <i>Quercus berberidifolia</i> Association and <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association vegetation communities.	
<i>Saltugilia caruifolia</i> Caraway leaved woodland gilia	CRPR 4.3	Occurs in sandy openings in chaparral and lower montane pine forest between 4,600 and 7,600 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.	There is potential for caraway leaved woodland gilia to occur in Survey Area Segments 15-2C to 15-2G.
Polygonaceae – Buckwheat family			
<i>Chorizanthe polygonoides</i> var. <i>longispina</i> Long spined spineflower	CRPR 1B.2, BLM Sensitive	Occurs in sand and often clay soils in chaparral, coastal sage scrub, grasslands, meadows and seeps from 100 to 5,000 feet elevation. Also occurs in vernal pools. Suitable habitats can be found in the Survey Area in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	There is potential for long spined spineflower to occur in Survey Area Segments 15-2A to 15-2F.
<i>Chorizanthe leptotheca</i> Peninsular spineflower	CRPR 4.2	Occurs in sandy and gravelly soils in chaparral, coastal sage scrub and pine forest habitats between 2,000 and 5,300 feet elevation. Suitable habitats can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus</i>	There is potential for Peninsular spineflower occur in Survey Area Segments 15-1A through 15-2E.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	
Ranunculaceae – Buttercup family			
<i>Delphinium parishii</i> ssp. <i>subglobosum</i> Oceanblue larkspur	CRPR 4.3	Occurs in chaparral, desert scrub and pinyon-juniper woodland habitats between 2,000 and 4,300 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association vegetation communities.	Oceanblue larkspur has potential to occur in the eastern end of the Survey Area in Segments 15-2G and 15-2H near Jacumba Hot Springs and the western Jacumba Mountains.
Rhamnaceae - Buckthorn family			
<i>Ceanothus otayensis</i> Otay Mountain ceanothus	CRPR 1B.2	Occurs on metavolcanic or gabbroic soils in chaparral habitats between 400–3,600 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	This species is unlikely to occur in the Survey Area. Suitable soils for Otay Mountain ceanothus in the Survey Area are limited to a small area just west of Bell Canyon in Segment 15-2A.
Rosaceae – Rose family			
<i>Chamaebatia australis</i> Southern mountain misery	CRPR 4.2	Occurs in metavolcanics or gabbroic soils in chaparral habitats between 1,000 and 3,400 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	This species is unlikely to occur in the Survey Area. Suitable soils for Southern mountain misery in the Survey Area are limited to a small area just west of Bell Canyon in Segment 15-2A.
Rubiaceae – Coffee family			

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<i>Galium angustifolium</i> ssp. <i>borregoense</i> Borrego bedstraw	CRPR 1B.3	Occurs among granitic boulders on northern slopes in desert scrub habitat between 1,200 and 4,100 feet elevation. Suitable habitats in the Survey Area may be found in <i>Larrea tridentata</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association and <i>Prunus fremontii</i> Alliance vegetation communities.	Borrego bedstraw is unlikely to occur in the Survey Area. Few records of this subspecies have been reported near the Survey Area, but suitable habitat does occur in Segment 15-2H in the western Jacumba Mountains.
<i>Galium angustifolium</i> ssp. <i>gracillimum</i> Narrow leaved bedstraw	CRPR 4.2	Occurs in shaded areas among granite boulders in canyons and rock outcrops in desert scrub and Joshua tree woodland habitats between 400 and 5,000 feet elevation. Suitable habitats in the Survey Area may be found in <i>Larrea tridentata</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association and <i>Prunus fremontii</i> Alliance vegetation communities.	Narrow leaved bedstraw is unlikely to occur in the Survey Area. Few records of this subspecies have been reported near the Survey Area, but suitable habitat does occur in Segment 15-2H in the western Jacumba Mountains.
MONOCOTS			
Poaceae – Grass family			
<i>Hordeum intercedens</i> Vernal barley	CRPR 3.2	Occurs in coastal dunes, coastal sage scrub, grasslands, vernal pools, saline streambeds and alkaline flats under 1700 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association and <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association vegetation communities.	Vernal barley is unlikely to occur in the Survey Area. Suitable coastal sage habitat is present at the west end of the Survey Area in Segment 15-2A and 15-2B, but the Survey Area is approximately 16 kilometers east of the nearest reported population and approximately 500 feet higher in elevation than previously reported occurrences.
Juncaceae – Rush family			
<i>Juncus acutus</i> ssp. <i>leopoldii</i> Leopold's rush	CRPR 4.2	Occurs in wet saline habitats and alkaline seeps typically under 1,000 feet but some populations have been reported from higher elevations. Suitable habitat in the Survey Area may be found in <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Larrea tridentata</i> Association and <i>Prunus fremontii</i> Alliance vegetation communities.	Leopold's rush is unlikely to occur in the Survey Area due to a lack of suitable alkaline or saline meadow or seep habitat. The greatest potential for occurrence is in the western Jacumba Mountains in Segment 15-2H.
<i>Juncus cooperi</i> Cooper's rush	CNPR 4.3	Occurs in alkaline or saline meadows and seeps typically under 2,300 feet elevation. Suitable habitats in the Survey Area may be found in <i>Quercus</i>	Cooper's rush is unlikely to occur in the Survey Area due to a lack of

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Larrea tridentata</i> Association and <i>Prunus fremontii</i> Alliance vegetation communities.	suitable alkaline or saline meadow or seep habitat. The greatest potential for occurrence is in in the western Jacumba Mountains in Segment 15-2H.
Themidaceae - Brodiaea family			
<i>Bloomeria clevelandii</i> San Diego goldenstar	CRPR 1B.1	Occurs in chaparral, coastal sage scrub, wetlands, and valley grassland habitats below 1,700 feet elevation. Suitable habitats in the Survey Area may be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.	This species is unlikely to occur on in the Survey Area. Suitable vegetation communities are present on the western end of the Survey Area, but the Survey Area is approximately 16 kilometers east of the nearest reported population and approximately 500 feet higher than previously reported occurrences.

Special Status Wildlife Species

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
INVERTEBRATES			
Moths, Skippers and Butterflies			
<i>Callophrys thornei</i> Thorne's Hairstreak	BLM Sensitive	May occur where its host plant, Tecate cypress (<i>Hesperocyparis forbesii</i>), is found in chaparral vegetation communities. Chaparral communities include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb Association.	Unlikely to occur in the Survey Area due to a lack of host plants. Greatest likelihood of occurrence is in the western portions of the Survey Area in Segment 15-2B.
<i>Euphydryas editha quino</i> Quino Checkerspot Butterfly	Federal Endangered	Occurs in a range of chaparral and sage scrub vegetation types with an open shrub structure and suitable host plants. Host plants include, dotseed plantain (<i>Plantago erecta</i>), Chinese houses (<i>Collinsia concolor</i>),	This species has potential to occur in all Survey Areas from Segment 15-2A to 15-2 g where the

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		stiffbranch bird's beak (<i>Cordylanthus rigidus</i>), and white snapdragon (<i>Antirrhinum coulterianum</i>). Suitable vegetation communities in the project include open structure forms of <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb Association, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association.	vegetation structure is sufficiently open.
<i>Lycaena Hermes</i> Hermes copper butterfly	Federal Candidate	Found in habitats with mature redberry buckthorn (<i>Rhamnus crocea</i>) in close association with California buckwheat (<i>Eriogonum fasciculatum</i>). Suitable habitat types include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.	This species has the potential to occur in all vegetation types where the host plant, redberry buckthorn occurs. Greatest potential is from Segment 15-2A to 15-2E.
Bees			
<i>Bombus crotchii</i> Crotch Bumble Bee	California Candidate Endangered	Found in warm, dry habitats. Suitable habitats occur in all vegetation types throughout the Survey Area.	This species has the potential to occur throughout the Survey Area from Segment 15-2A to 15-2H.
VERTEBRATES			
Amphibians			
<i>Anaxyrus californicus</i> Arroyo Toad	Federal Endangered, CDFW Species of Special Concern	Suitable riparian habitat may occur in <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation.	Arroyo toads have the potential to occur in the Survey Area in Segment 15-2B. Critical habitat for Arroyo Toads has been designated in Segment 15-2B.
<i>Spea hammondi</i> Western Spadefoot	CDFW Species of Special Concern; BLM Sensitive	Found in open vegetation structures of mixed woodland, chaparral, sage scrub, grassland and river flood plains. Suitable habitat in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum</i>	This species has potential to occur from Segment 15-2A to 15g in appropriate habitats.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		<i>fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.	
Reptiles			
<i>Coleonyx switaki</i> Barefoot gecko	California Threatened, BLM Sensitive	Occurs in areas with large boulders and rock outcrops with sparse vegetation. Suitable habitat in the Survey Area includes <i>Larrea tridentata</i> Association, <i>Agave deserti</i> Association, <i>Ericameria teretifolia</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	This species has the potential to occur in the Survey Area from Segment 15-2G to 15-2H in appropriate habitats.
<i>Anniella stebbinsi</i> Southern California Legless Lizard	CDFW Species of Special Concern	Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodland, desert scrub, sandy washes, and stream terraces. Suitable habitat in the Survey Area includes <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	This species has the potential to occur in sandy soils or thick duff material throughout the Survey Area in Segments 15-2A to 15-2H.
<i>Gambelia copeii</i> Cope's Leopard Lizard	CDFW Species of Special Concern	Occurs in sage scrub, chaparral and oak woodland habitats, but avoids dense vegetation. Suitable habitat in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia</i>	This species has potential to occur in open structure habitats from Segment 15-2A to 15d in appropriate habitats.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<p><i>californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation types.</p>	
<p><i>Phrynosoma blainvillii</i> Coast Horned Lizard</p>	<p>CDFW Species of Special Concern; BLM Sensitive</p>	<p>Occurs in areas with sandy soil and sparse vegetation in valleys, foothills and dry mountains. Suitable habitat in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation types..</p>	<p>This species has the potential to occur throughout the Survey Area in Segments 15-2A to 15-2H in appropriate habitats.</p>
<p><i>Plestiodon skiltonianus interparietalis</i> Coronado Skink</p>	<p>CDFW Watch List; BLM Sensitive</p>	<p>Found along stream and upland habitats and prefers rocky substrates. Suitable habitat in the Survey Area includes <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, and <i>Rhus ovata</i> Association.</p>	<p>This species has potential to occur in a variety of habitats from Segment 15-2A to 15-2E.</p>
<p><i>Aspisdoscelis hyperythra beldingi</i> Orange-throated Whiptail</p>	<p>CDFW Watch List; USFS Sensitive</p>	<p>Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral. Suitable habitats in the Survey Area include, <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i></p>	<p>This species has the potential to occur in a variety of habitats from Segment 15-2A to 15-2H.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, and <i>Rhus ovata</i> Association.	
<i>Aspidoscelis tigris stejnegeri</i> San Diegan Tiger Whiptail	CDFW Species of Special Concern	Found in arid and semiarid desert to open woodlands where the vegetation is sparse, providing space for running. Suitable habitats in the Survey Area include open structure forms of <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsioflum</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association and and <i>Rhus ovata</i> Association	This species has the potential to occur in the Survey Area in open structure habitats from Segment 15-2A to 15-2H.
<i>Arizona elegans occidentalis</i> California Glossy Snake	CDFW Species of Special Concern	Prefers small areas within habitat matrix with soft soil for burrowing in arid scrub, grasslands, and chaparral. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsioflum</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Larrea tridentata</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	This species has the potential to occur in the Survey Area from Segment 15-2A to 15-2H.
<i>Coluber fuliginosus</i> Baja California Coachwhip	CDFW Species of Special Concern	Mainly found in open grassland, arid shrub, and coastal sand dunes rocky arroyos, and marshlands from southern Baja California to southern San Diego County. Suitable habitats in the Study Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsioflum</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Prunus fremontii</i> Alliance, <i>Larrea tridentata</i> Association, <i>Quercus agrifolia</i> – <i>Salix</i>	This species has to potential to occur in appropriate habitats in the Survey Area from Segment 15-2A to 15-2H.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		<i>lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	
<i>Salvadora hexalepis virgulata</i> Coast Patch-nosed Snake	CDFW Species of Special Concern	Inhabits arid shrub and chaparral habitats in canyons, rocky hillsides, and grasslands. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsioflum</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association and <i>Rhus ovata</i> Association.	This species has potential to occur in appropriate habitats in the Survey Area from 15-2A to 15-2H.
<i>Thamnophis hammondi</i> Two-striped Garter Snake	CDFW Species of Special Concern; BLM Sensitive	Found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland and coniferous forest. Highly aquatic. Associated with permanent and semi-permanent water bordered by dense vegetation in a variety of habitats. Suitable habitats in the Survey Area include <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association.	This species has potential to occur in the Survey Area where seasonal or perennial water is found, including Segments 15-2 b and 15-2E.
<i>Crotalus ruber</i> Red Diamond Rattlesnake	CDFW Species of Special Concern	Occurs in chaparral, woodland, pine forest, and arid desert habitats with rocky areas and dense vegetation. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsioflum</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association, and	This species has potential to occur in appropriate habitats throughout the Survey Area in Segments 15-2A to 15-2H.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		<i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	
Birds			
<i>Accipiter cooperii</i> Cooper's Hawk	CDFW Watch List	A resident of riparian deciduous habitats and oak woodlands but in recent times has become adapted to urban park environments. Suitable nesting habitats in the Survey Area include <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association.	This species has potential to nest in Segments 15-2B and 15-2E and may actively forage in Segments near suitable nesting habitat, including 15-2A, and 15-2F.
<i>Aquila chrysaetos</i> Golden Eagle	CDFW Fully Protected, CDFW Watch List, BLM Sensitive,	Habitat includes rolling foothills and mountain terrain, wide arid plateaus deeply cut by streams and canyons, open mountain slopes, and cliffs and rock outcrops. Suitable foraging habitats observed in the Study Area include open structure habitats of <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, Developed – Non native forbs, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association. There was no suitable nesting habitat observed.	There is potential for this species to forage throughout the Survey Area in Segments 15-2A to 15-2H; however, there is no suitable nesting habitat in the Survey Area.
<i>Buteo swainsoni</i> Swainson's Hawk	BLM Sensitive	Forages in open habitats including grasslands, and agricultural lands. This species is migratory through San Diego County in the spring and fall moving from Central and South America to Central California and on north. Common breeding bird in San Diego County in the early 1900s, but they no longer nest here.	It is unlikely that Swainson's hawks will be present in the Survey Area and if sighted would be expected

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
			to be moving through, possibly roosting a short period.
<i>Circus cyaneus</i> Northern Harrier	CDFW: Species of Special Concern,	Found in open habitats, including grasslands, prairies, brackish and saltwater marshes, sagebrush flats, desert sinks, and agricultural areas. Nests on the ground in dense vegetation, typically near water or otherwise moist areas. Suitable habitats in the Survey area include <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, and <i>Eriogonum fasciculatum</i> Association.	There is no suitable nesting habitat in the Survey Area for northern harriers, but there is potential for them to forage in Segments 15-2A to 15-2D and 15-2G.
<i>Elanus leucurus</i> White-tailed Kite	CDFW Fully Protected	Year-round resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Nests in trees, of which the type and setting are highly variable. Preys on small mammals and other vertebrates.	White-tailed kites are unlikely to nest in the Survey Area. They may forage in the Survey Area where suitable nesting habitat occurs nearby.
<i>Falco mexicanus</i> Prairie Falcon	CDFW Watch List	Prairie falcons breed in open country where suitable nest cliffs and bluffs can be found. Suitable foraging habitat in the Survey Area includes <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Ericameria teretifolia</i> Association, and <i>Agave deserti</i> Association.	This species has the potential to forage in the eastern portion of the Survey Area in Segment 15-2G and 15-2H. There is no nesting habitat in the Survey Area.
<i>Asio otus</i> Long-eared Owl	CDFW Species of Special Concern	Occurs in areas with dense trees for nesting and roosting with open areas for foraging. Suitable habitats in the Survey Area include, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association for nesting and roosting and <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, Developed – Non native forbs, <i>Eriogonum fasciculatum</i> Association and <i>Rhus ovata</i> Association for foraging where they occur near nesting and roosting habitat.	Suitable nesting habitat for long-eared owls occurs in Segment 15-2E. Long-eared owls may forage in the Survey Area where suitable nesting habitat occurs nearby.
<i>Athene cunicularia</i> Burrowing Owl	CDFW Species of Special Concern, BLM Sensitive	Found in open habitats, including grassland, prairies, agricultural land, airfields, golf courses, vacant lots, industrial parks and similar habitats. Found in association with burrowing rodents like California ground squirrels (<i>Otospermophilus beecheyi</i>) and will use their burrows as nesting and roosting sites. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum</i>	Suitable open habitat with burrows suitable for nesting was not observed in the Survey Area. However, suitable open habitat with burrows for nesting is present in areas near Segments 15-2C, 15-2D, 15-2G and 15-2H and

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>fasciculatum</i> Association, Developed – Non native forbs, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association where suitable existing burrows are present.	burrowing owls may forage in those segments.
<i>Empidonax traillii extimus</i> Southwestern Willow Flycatcher	Federal Endangered, California Endangered	Breeds in riparian tree and shrub vegetation found along rivers, swamps, lakes and reservoirs. Will nest in native and non-native vegetation. Suitable habitats in the Survey Area include <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association.	There is potential for Southwestern Willow-flycatcher to be present in the Survey Area in Segments 15-2B and 15-2E.
<i>Lanius ludovicianus</i> Loggerhead Shrike	CDFW Species of Special Concern	Open areas of woodland, grassland, or desert with few scattered trees or large shrubs. Suitable habitats in the Survey Area include, <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	There is potential for loggerhead shrikes to occur in appropriate habitats in the Survey Area from Segment 15-2A to 15-2H.
<i>Vireo bellii pusillus</i> Least Bell's Vireo	Federal Endangered, California Endangered	Obligate riparian breeder. Cottonwood willow, oak woodlands, and mule fat scrub along watercourses. Suitable habitats in the Survey Area include <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association.	Least Bell's vireo has potential to occur in the Survey Area in Segment 15-2B.
<i>Vireo vicinior</i> Gray vireo	CDFW Species of Special Concern, BLM Sensitive	Occur in pinyon-juniper, mesquite, oak scrub and chaparral habitats. Preferred habitats have dense brush from the ground up to 6 feet. Suitable Habitat in the Survey Area may be found in <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association and <i>Ceanothus leucodermis</i> Association.	The gray vireo has potential to occur in the Survey Area in Segments 15-2B, 15-2E and 15-2F. This is an uncommon bird in San Diego County.
<i>Eremophila alpestris actis</i> California Horned Lark	CDFW: Watch List	Coastal regions, chiefly from Sonoma County to San Diego County. Found in grasslands, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, and alkali flats. Suitable habitats in the Survey Area include, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Agave deserti</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance and	California horned larks have been observed in the Survey Area in Segment 15-2G. Additionally, they have potential to occur in Segment 15-2A to 15-2F and 15-2H.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.	
<i>Polioptila californica californica</i> Coastal California Gnatcatcher	Federal Threatened, CDFW Species of Special Concern	Obligate, permanent resident of coastal sage scrub in southern California. Low, coastal sage scrub in arid washes, mesas and slopes. Not all areas classified as coastal sage scrub are occupied. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Eriogonum fasciculatum</i> Association and <i>Rhus ovata</i> Association.	Coastal California gnatcatchers have potential to occur in the Survey Area in Segments 15-2A, 15-2B and 15-2D.
<i>Setophaga petechia</i> Yellow Warbler	CDFW: Species of Special Concern	Summer resident, nesting in riparian coastal woodlands. Suitable habitat in the Survey Area can be found in <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation communities.	Yellow warblers have potential to occur in the Survey Area in Segments 15-2B and 15-2E.
<i>Icteria virens</i> Yellow-breasted Chat	CDFW: Species of Special Concern	Summer resident, occurring in riparian areas with an open canopy, very dense understory, and trees for song perches. Nests in thickets of willow, blackberry, and wild grape. Suitable habitat in the Survey Area can be found in <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation communities.	Yellow-breasted chat have potential to occur in the Survey Area in Segments 15-2B and 15-2E.
<i>Aimophila ruficeps canescens</i> Southern California Rufous-crowned Sparrow	CDFW Watch List	A resident species that is closely associated with coastal sage scrub, steep rocky hillsides, burned chaparral, and openings in mature chaparral. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association and <i>Rhus ovata</i> Association, though presence in some of these vegetation communities may depend on overall vegetation structure.	Southern California rufous crowned sparrow have potential to occur in the Survey Area in Segments 15-2A to 15-2F.
<i>Spizella atrogularis</i> Black-chinned Sparrow	BLM Sensitive	Found on steep slopes in chaparral habitat in eastern San Diego County. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i> , <i>Artemisia californica</i> , <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum</i>	Black-chinned sparrows have potential to occur in the Survey Area in Segments 15-2A to 15-2H.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		<p><i>fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.</p>	
<p><i>Agelaius tricolor</i> Tricolored Blackbird</p>	<p>State Threatened, CDFW Species of Special Concern, BLM Sensitive</p>	<p>Preferred nesting habitat includes cattails, bulrushes, Himalayan berry, and agricultural silage along canals and ponds with deep water and adequate density for nesting. Suitable habitats in the Survey Area can be found in <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation communities.</p>	<p>Tricolored blackbirds are unlikely to nest in the Survey Area. Suitable nesting habitat occurs in Segment 15-2B in Oak-Willow riparian vegetation, but the site lacks deep water and other characteristics required for nesting. Suitable habitat occurs near Segments 15-2A, 15-2E and 15-2G, but outside the Survey Area. There is potential that tricolored blackbirds may forage in these areas.</p>
Mammals			
<p><i>Macrotus californicus</i> California Leaf-nosed Bat</p>	<p>CDFW Species of Special Concern, BLM Sensitive, Western Bat Working Group High Priority</p>	<p>Favors temperate desert zones with caves and mines available to support roosting. Species active throughout year and primarily forages in washes and floodplains of large creeks. Suitable foraging habitat in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association, and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association. Suitable roosting habitat is not dictated by vegetation communities, but no suitable roosting habitat was observed in the Survey Area.</p>	<p>This species is unlikely to occur in the Survey Area. Presence of this species in the Survey Area is dependent on the presence of suitable roosting habitat in or near the Survey Area. The closest suitable known roosting habitat is 14 km northwest of the western terminus of the Survey Area.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
<p><i>Myotis ciliolabrum</i> Western small-footed myotis</p>	<p>BLM Sensitive, Western Bat Working Group Medium Priority</p>	<p>Associated with the chaparral and montane zone in San Diego County and found near wet rocky riparian areas. Roosts in rocky crevices, caves, mines, tree snags, buildings and bridges. Suitable habitats can be found in the Survey Area in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.</p>	<p>Western small-footed myotis have potential to roost and forage within the Survey Area in Segments 15-2A to 15-2F.</p>
<p><i>Myotis evotis</i> Long-eared myotis</p>	<p>BLM Sensitive, Western Bat Working Group Medium Priority</p>	<p>Occurs primarily in oak woodlands and pine forests, but also chaparral and riparian habitats. They roost in rock crevices and both tree and rock cavities. Will also make use of buildings, bridges and mines. Suitable habitat in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.</p>	<p>Long-eared myotis have potential to roost in Segments 15-2E and 15-2F and has potential to forage in Segments 15-2A to 15-2F.</p>
<p><i>Myotis yumanensis</i> Yuma myotis</p>	<p>BLM Sensitive, Western Bat Working Group Low-Medium Priority</p>	<p>Roosts in bridges, buildings, cliffs crevices, caves, mines and tree hollows in habitats near water sources. Forages over and around water sources for caddis flies, flies, midges, small moths and small beetles. Suitable foraging habitat in the Survey Area can be found in <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation communities. Suitable roosting habitat is also present in <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association vegetation, and in nearby cliff crevices.</p>	<p>Yuma myotis have potential to occur in Survey Area Segments 15-2A and 15-2B due to suitable roosting and foraging area within or adjacent to the Survey Area within average foraging distance.</p>
<p><i>Lasiurus blossevillii</i> Western Red Bat</p>	<p>CDFW Species of Special Concern,</p>	<p>A tree roosting solitary species utilizing open freshwater bodies and drainage systems for foraging, often preferring to visit the same foraging habitat regularly within one Kilometer from its roosting</p>	<p>Western red bats have potential to occur in the Survey Area in Segments 15-2A, 15-2 b, and 15-2F</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
	Western Bat Working Group High Priority	habitat. Suitable roosting and foraging habitat in the Survey Area can be found in <i>Quercus agrifolia – Salix lasiolepis</i> Association vegetation communities.	due to suitable roosting and foraging area within or adjacent to the Survey Area within average foraging distance.
<i>Corynorhinus townsendii</i> Townsend's Big-eared Bat	CDFW Species of Special Concern, BLM Sensitive, Western Bat Working Group High Priority	This cave-roosting obligate species may utilize natural caves, and large tree hollows as well as manmade structures that provide cave-like cover. This species prefers riparian corridors, forested areas, and will forage at the forest edges especially near water sources. This species tends to avoid open grasslands. Suitable roosting and foraging habitat in Survey Area can be found in <i>Quercus agrifolia – Salix lasiolepis</i> Association vegetation communities.	Townsend's big-eared bats have potential to roost in the Survey Area. Suitable roosting habitat was noted in Segments 15-2E and near 15-2A. There is potential that Townsend's big-eared bats forage throughout the Survey Area in Segments 15-2A to 15.2h.
<i>Antrozous pallidus</i> Pallid Bat	CDFW Species of Special Concern, BLM Sensitive, Western Bat Working Group High Priority	Day roosts are in caves, rock crevices, mines, and occasionally in hollow trees, bark fissures, and buildings. Most often associated with grasslands and open arid scrub and may use agricultural lands for forage. Suitable roosting and foraging habitat in the Survey Area can be found in <i>Adenostoma fasciculatum – (Eriogonum fasciculatum, Artemisia californica, Salvia melifera)</i> Association, <i>Adenostoma fasciculatum – Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum – annual grass-forb</i> , <i>Adenostoma sparsioflum</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica – Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata – Artemisia californica – Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii – Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia – Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia – Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri – Rhus ovata</i> Association communities.	Pallid bats have potential to roost in the Survey Area. Suitable roosting habitat was noted in Segments 15-2A and 15-2B, and 15-2E to 15-2H. It is likely that pallid bats forage throughout the Survey Area in Segments 15-2A to 15.2h. A known pallid bat roost is located close to Segment 15-2G but is not in the Survey Area.
<i>Nyctinomops femorosaccus</i> Pocketed Free-tailed Bat	CDFW Species of Special Concern, Western Bat Working Group Medium Priority	Associated with preferred roosting habitat of rocky outcrops, quarries, and vertical cliffs with no preference for foraging habitat. Suitable foraging habitat in the Survey Area can be found in <i>Adenostoma fasciculatum – (Eriogonum fasciculatum, Artemisia californica, Salvia melifera)</i> Association, <i>Adenostoma fasciculatum – Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum – annual grass-forb</i> , <i>Adenostoma sparsioflum</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica – Eriogonum fasciculatum</i> Association, <i>Bahiopsis</i>	Pocketed free-tailed bats have potential to roost in the Survey Area. Suitable roosting habitat was noted in Segments 15-2A and 15-2B, and 15-2E to 15-2H. It is likely that pocketed free-tailed bats forage throughout the Survey Area in Segments 15-2A to 15.2h.

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SUVEY AREA
		<p><i>laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association communities.</p>	
<p><i>Nyctinomops macrotis</i> Big Free-tailed Bat</p>	<p>CDFW: Species of Special Concern, Western Bat Working Group: Medium-High Priority</p>	<p>Occurs rarely in low-lying arid areas, including desert scrub, woodlands, and evergreen forests. Requires high cliffs or rocky outcrops for roosting sites. Suitable foraging habitat in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association communities.</p>	<p>Big free-tailed bats have potential to roost in the Survey Area. Segment 15-2E and 15-2H have suitable roosting habitat, though no specific roost sites were observed during survey s. There is potential that big free-tailed bats will forage throughout the Survey Area in Segments 15-2A to 15-2H.</p>
<p><i>Eumops perotis</i> Western Mastiff Bat</p>	<p>CDFW Species of Special Concern, BLM Sensitive, Western Bat Working Group High Priority</p>	<p>Found in a wide variety of open, arid and semi-arid habitats. Distribution appears to be tied to large rock structures, which provide suitable roosting sites, including cliff crevices and cracks in boulders. Suitable foraging habitat in the Survey Area can be found in <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, Developed – Non native forbs,</p>	<p>There is no potential for western mastiff bats to roost in the Survey Area. Suitable roosting habitat is not present in any of the survey segments. It is likely that they will forage throughout the Survey Area from Segment 15-2A to 15-2H.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<p><i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association communities.</p>	
<p><i>Lepus californicus bennettii</i> San Diego Black-tailed Jackrabbit</p>	<p>CDFW Species of Special Concern</p>	<p>Found in open or grassy habitats with varying amounts of shrub cover. Suitable habitat in the Survey Area include open structure areas of <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, Developed – Non native forbs, <i>Eriogonum fasciculatum</i> Association and <i>Rhus ovata</i> Association vegetation communities.</p>	<p>The San Diego black-tailed jackrabbit is unlikely to occur in the Survey Area. Black-tailed jackrabbits occurring in the Survey Area are expected to be <i>L. c. deserticola</i> and not the sensitive subspecies found in more coastal habitats to the west.</p>
<p><i>Chaetodipus californicus femoralis</i> Dulzura Pocket Mouse</p>	<p>CDFW Species of Special Concern</p>	<p>Found in open and thick chaparral in gravelly soils, generally towards the edges of the vegetation. Also sometimes found in sage, oak woodland and grassland edges. Suitable habitat types in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.</p>	<p>The Delzura pocket mouse has potential to occur in the Survey Area in Segments 15-2A to 15-2F in appropriate habitats.</p>
<p><i>Chaetodipus fallax pallidus</i> Pallid San Diego Pocket Mouse</p>	<p>CDFW Species of Special Concern</p>	<p>Western San Diego County in a variety of habitats, primarily in coastal sage scrub and grasslands, and minor occurrences in chaparral and woodland habitats. Prefers sandy, herbaceous areas, usually in association with rocks or coarse gravel. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association,</p>	<p>The pallid San Diego pocket mouse has potential to occur in the Survey Area in Segments 15-2G and 15-2H. There is potential it could be present in segments further west, but the actual transition between <i>C. f. fallax</i> and <i>C. f. pallidus</i> is unclear along the Survey Area.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
		<p><i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Quercus agrifolia</i> – <i>Salix lasiolepis</i> Association, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association and <i>Rhus ovata</i> Association.</p>	
<p><i>Neotoma bryanti</i> [= <i>N. lepida intermedia</i>] Bryant's Woodrat [= San Diego Desert Woodrat]</p>	<p>CDFW Species of Special Concern</p>	<p>They are typically found in areas with adequate cover in coastal sage, chaparral and pinyon-juniper habitats. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.</p>	<p>Bryant's woodrat has potential to occur in the Survey Area. Suitable habitats may be found in Segments 15-2A, 15-2B, 15-2G and 15-2H.</p>
<p><i>Onychomys torridus</i> Southern Grasshopper Mouse</p>	<p>CDFW Species of Special Concern</p>	<p>Often associated with open grasslands and coastal sage scrub, desert scrub and gently sloping terrain with friable soils for burrowing. Suitable habitats in the Survey Area include <i>Adenostoma fasciculatum</i> – (<i>Eriogonum fasciculatum</i>, <i>Artemisia californica</i>, <i>Salvia melifera</i>) Association, <i>Adenostoma fasciculatum</i> – <i>Eriogonum fasciculatum</i> Association, <i>Adenostoma fasciculatum</i> – annual grass-forb, <i>Adenostoma sparsifolium</i> Association, <i>Agave deserti</i> Association, <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Bahiopsis laciniata</i> – <i>Artemisia californica</i> – <i>Eriogonum fasciculatum</i> Association, <i>Ceanothus greggii</i> – <i>Adenostoma fasciculatum</i> Association, <i>Ceanothus leucodermis</i> Association, <i>Ericameria teretifolia</i> Association, <i>Eriogonum fasciculatum</i> Association, <i>Larrea tridentata</i> Association, <i>Prunus fremontii</i> Alliance, <i>Quercus berberidifolia</i> Association, <i>Quercus berberidifolia</i> – <i>Adenostoma fasciculatum</i> Association, <i>Rhus ovata</i> Association and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.</p>	<p>The southern grasshopper mouse has potential to occur in the Survey Area. Suitable habitats are most likely found in Segment 15-2A, 15-2B, 15-2G and 15-2H.</p>

NAME	STATUS	HABITAT	POTENTIAL TO OCCUR IN THE SURVEY AREA
<p><i>Taxidea taxus</i> American badger</p>	<p>CDFW Species of Special Concern</p>	<p>Found in open areas vegetation communities including grasslands, alluvial fans, meadows and desert scrub. Suitable habitats in the Survey Area include <i>Larrea tridentata</i> Association, <i>Agave deserti</i> Association, <i>Ericameria teretifolia</i> Association, <i>Prunus fremontii</i> Alliance and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.</p>	<p>American badgers have potential to occur in Segments 15-2G and 15-2H in appropriate habitats.</p>
<p><i>Ovis canadensis nelsoni</i> Peninsular bighorn sheep</p>	<p>Federal Endangered, California Threatened, CDFW Fully Protected, BLM Sensitive</p>	<p>Desert slopes of the Peninsular Ranges. Associated with steep, rugged terrain with sparse vegetation. Will also use canyon bottoms, alluvial fans and sandy washes to find water and forage. Suitable habitat types in the Survey include <i>Larrea tridentata</i> Association, <i>Agave deserti</i> Association, <i>Ericameria teretifolia</i> Association, <i>Prunus fremontii</i> Alliance and <i>Quercus cornelius-mulleri</i> – <i>Rhus ovata</i> Association.</p>	<p>Peninsular bighorn sheep have potential to occur in Segment 15-2H.</p>

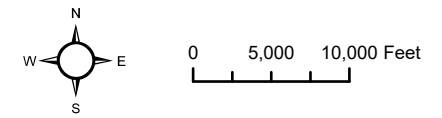
KEY

- US-Mexico Border
- Project Area



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N

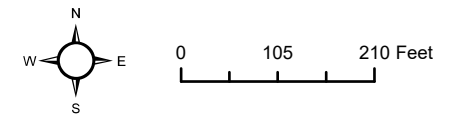


- KEY**
- US-Mexico Border
 - Project Area**
 - 15-2 A (0.35 mi)



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N



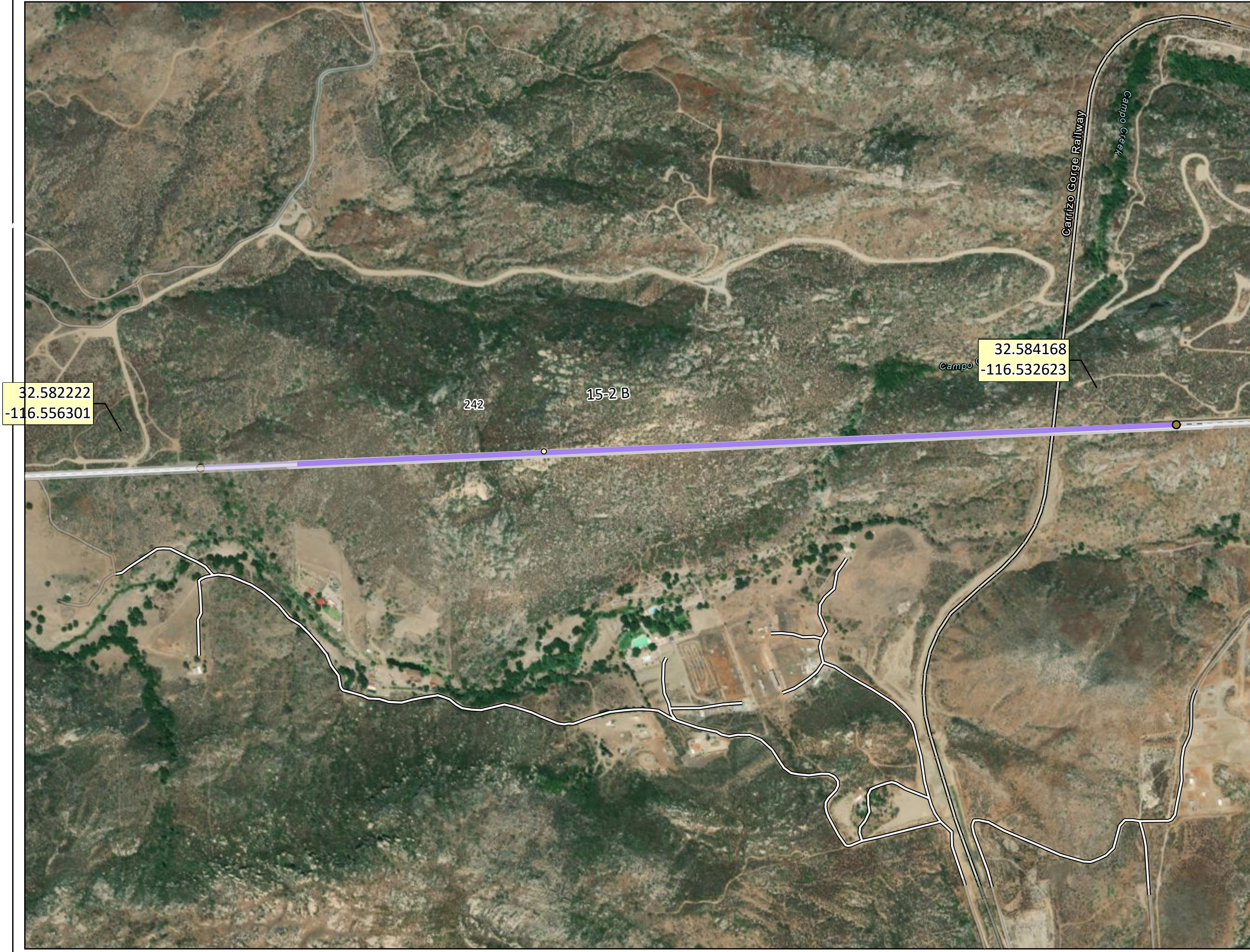
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○ Border Monument

--- US-Mexico Border

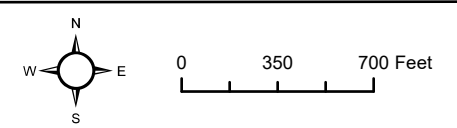
Project Area

15-2 B (1.39 mi)



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N



KEY

- Border Monument
- US-Mexico Border

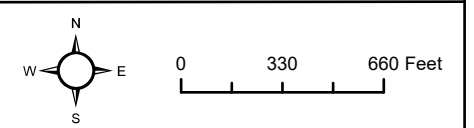
Project Area

- 15-2 C (0.30 mi)
- 15-2 D (0.59 mi)



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N



FY 2020-284 Wall, San Diego 15
Primary Fence Replacement Project
San Diego, California

Figure
5

Date
September 2020

KEY

US-Mexico Border

Project Area

15-2 E (0.55 mi)

32.593228
-116.421692

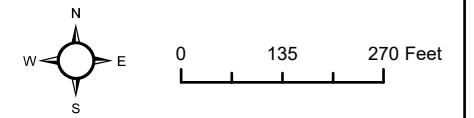
15-2 E

32.593982
-116.412406



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N



FY 2020-284 Wall, San Diego 15
Primary Fence Replacement Project
San Diego, California

Figure
6

Date
September 2020

KEY

○ Border Monument

--- US-Mexico Border

Project Area

█ 15-2 F (2.16 mi)



32.606098
-116.261873

15-2 F

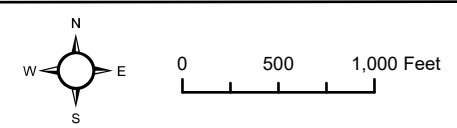
234

32.609032
-116.225067



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N



KEY

○ Border Monument

--- US-Mexico Border

Project Area

15-2 G (0.51 mi)

15-2 H (1.11 mi)

32.61507
-116.148981

32.615753
-116.140342

232

15-2 G

32.617714
-116.115477

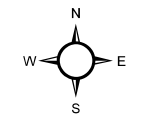
32.619207
-116.096494

15-2 H



Source(s)
Bio Studies, Inc, DAWSON, CBP, Esri

Projection
WGS 1984 UTM Zone 12N



0 500 1,000 Feet



KEY

○ Border Monument

--- US-Mexico Border

Survey Area

Vegetation Association

Adenostoma fasciculatum -
Eriogonum fasciculatum Association

Adenostoma fasciculatum -annual
grass-forb

Bahiopsis laciniata-Artemisia
californica-Eriogonum fasciculatum
Association

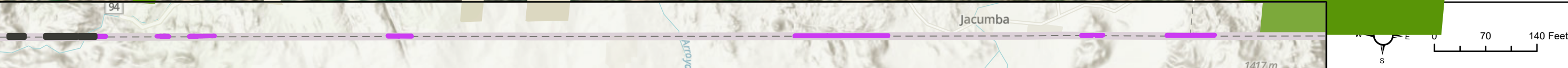
Ceanothus leucodermis Association

Quercus agrifolia - Salix lasiolepis
Association

Association



Source(s)
DAWSON, CBP, Esri
Projection
UTM Zone 12N

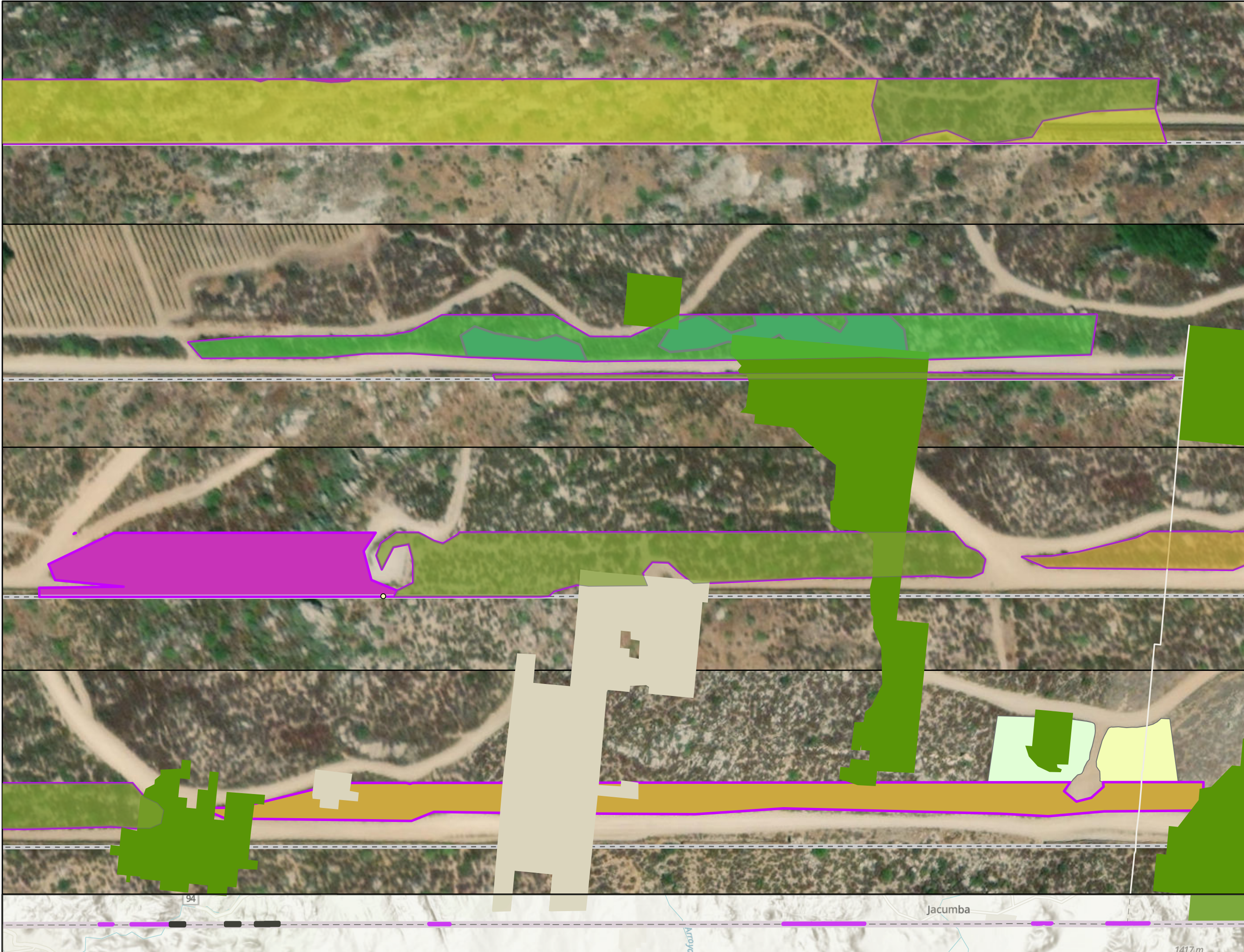


Vegetation Survey
Fence Replacement Project
San Diego, California

Figure
9

Date
September 2020

- KEY**
- Border Monument
 - US-Mexico Border
 - ▭ Survey Area
- Vegetation Association**
- Adenostoma fasciculatum* - (*Eriogonum fasciculatum*, *Artemisia californica*, *Salvia mellifera*) Association
 - Adenostoma fasciculatum* - *Eriogonum fasciculatum* Association
 - Adenostoma fasciculatum* - annual grass-forb
 - Artemisia californica* - Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Artemisia californica* - *Artemisia californica* - *Artemisia californica* Association
 - Keckia* - *Keckia* Shrubland Alliance
 - Lotus scoparius* Shrubland Alliance, Deer weed scrub (MCV2)



Source(s)
DAWSON, CBP, Esri
Projection
UTM Zone 12N

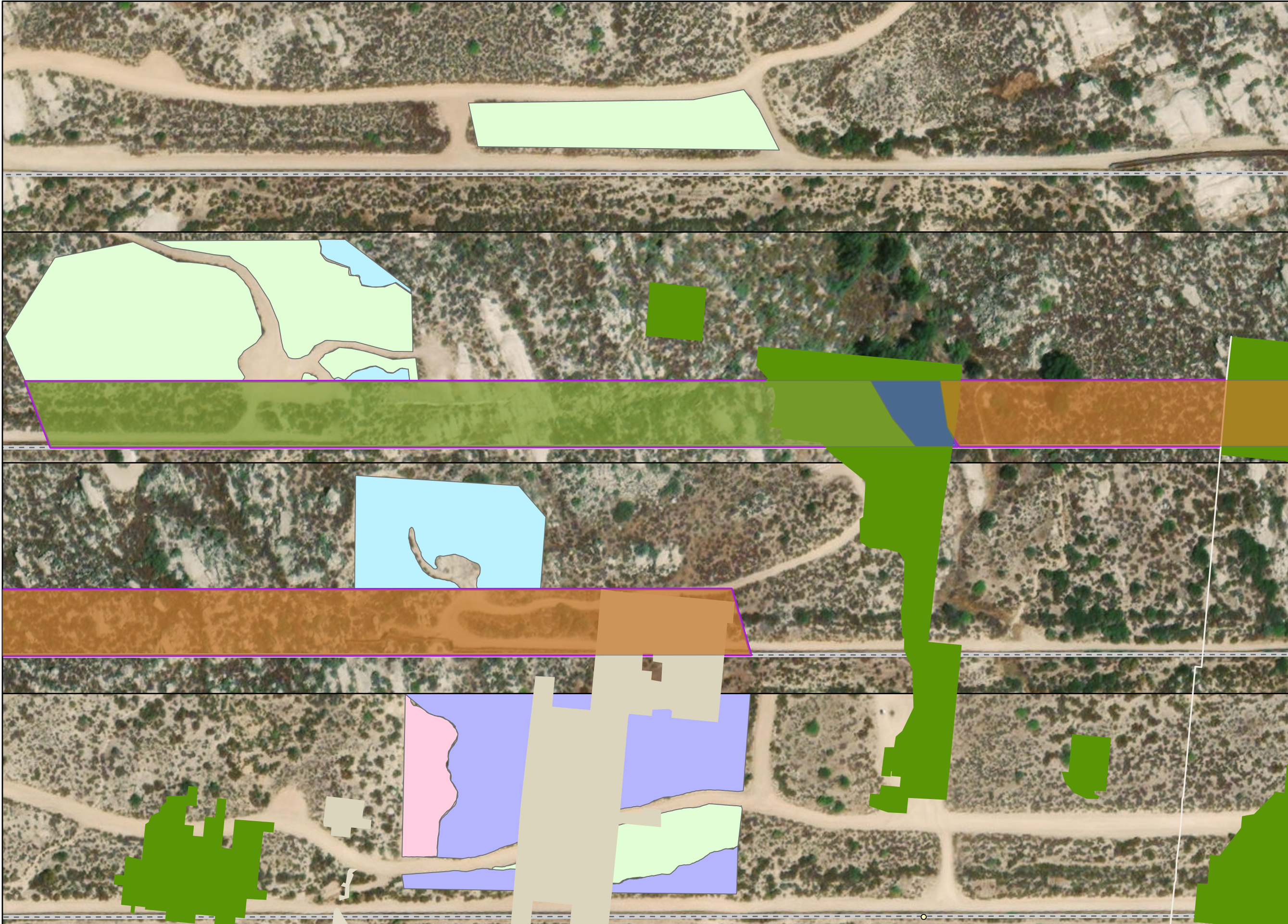


KEY

- Border Monument
- US-Mexico Border
- ▭ Survey Area

Vegetation Association

- ▭ *Adenostoma fasciculatum* - *Eriogonum fasciculatum* Association
- ▭ *Eriogonum fasciculatum* Association
- ▭ *Quercus agrifolia* - *Salix lasiolepis* Association
- ▭ *Adenostoma fasciculatum* - *Quercus berberidifolia* Shrubland
- ▭ *Arctostaphylos glauca* Chaparral
- ▭ *Arctostaphylos glauca* - *Ceanothus velutinus* - *Ceanothus tomentosus* Chaparral Alliance
- ▭ *Adenostoma fasciculatum* - *Quercus agrifolia* - *Salix lasiolepis* Association



Source(s)
DAWSON, CBP, Esri
Projection
UTM Zone 12N

94

Jacumba

1417m



KEY

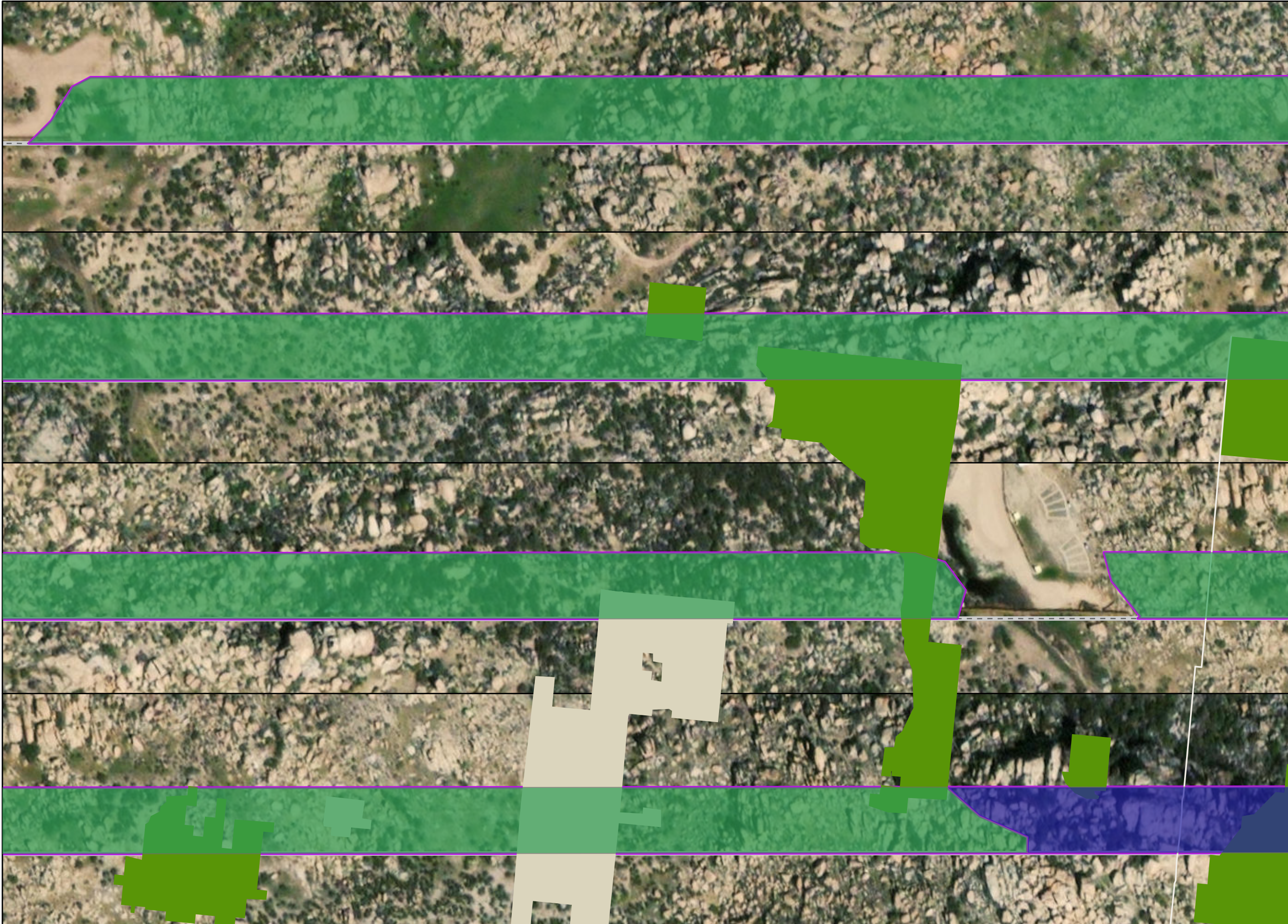
--- US-Mexico Border

Survey Area

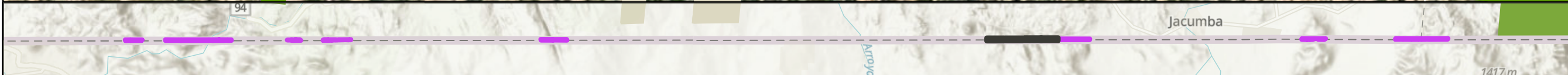
Vegetation Association

Adenostoma sparsifolium Association

Quercus berberidifolia Association



Source(s)
DAWSON, CBP, Esri
Projection
UTM Zone 12N





KEY

- Border Monument
- US-Mexico Border
- ▭ Survey Area

Vegetation Association

- ▭ *Adenostoma sparsifolium* Association
- ▭ *Agave deserti* Association
- ▭ *Ericameria teretifolia* Association
- ▭ *Eriogonum fasciculatum* Association
- ▭ *Larrea tridentata* Association
- ▭ *Prunus fremontii* Alliance
- ▭ *Quercus berberidifolia* Association
- ▭ *Quercus dumicola* - *Rhus* Association
- ▭ *Quercus dumicola* - *Rhus* Shrubland Alliance
- ▭ *Quercus dumicola* - *Rhus* Shrubland Alliance
- ▭ *Quercus dumicola* - *Rhus* Shrubland Alliance
- ▭ *Quercus dumicola* - *Rhus* Shrubland Alliance

Source(s)
DAWSON, CBP, Esri
Projection
UTM Zone 12N

1417m

KEY

--- US-Mexico Border

Survey Area

Vegetation Association

Quercus cornelius-mulleri - Rhus ovata Association

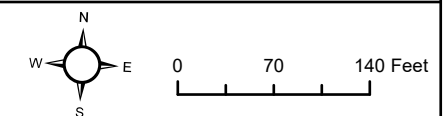


Data Source(s)

Bio-Studies, Inc, DAWSON, CBP, Esri

Projection

WGS 1984 UTM Zone 12N



APPENDIX B

Air Emissions Calculations

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Air Quality Calculations

Appendix B

ASSUMPTIONS

Assumptions	Impacted Area	Notes
Border wall length (miles):	19.08	Equivalent to 100,742 feet
Total number of panels:	12,578	Assume 659.20 panels per mile. (659.20 panels/mile x 19.08 miles)
Total construction area (square feet):	302,227	(100,742 feet of fence x 3 feet of fence width)
Estimated distance from wall to neraby town (miles):	10	Estimated distance (one way) from Jacumba to mid-point of Project segment
Construction duration (days):	312	Construction is assumed to last 1 year. (52 weeks x 6 days per week)

Air Quality Calculations

Appendix B

ESTIMATED EQUIPMENT USAGE*

Type of Equipment	Quantity	Total Days	Number of Trips	Total Usage	Total Usage Units	Comments
Loader	1	312	-	3744	hours	Assumed to be used 12 hours per day, 6 days per week, 52 weeks per year for 1 year.
Dozer	1	89	-	1070	hours	Assume dirt to be removed = 19.08 mi x (5280 ft/mi) x (3 ft wide) = 302,227 ft ² = 6.94 acres 302,227 ft ² x 6 ft deep = 1,813,363 ft ³ . Assume spread and leveling dirt** at 48 m ³ /hour and 12-hour days = 576 m ³ /day (or 20,341.2 ft ³ /day). Total impacted volume (1,813,363 ft ³) / rate of spread and leveling (20,341 ft ³ /day) = 89 12-hour days = 1,070 hours.
Excavator	1	107	-	1284	hours	Assume dirt to be removed = 19.08 mi x (5280 ft/mi) x (3 ft wide) = 302,227 ft ² = 6.94 acres 302,227 ft ² x 6 ft deep = 1,813,363 ft ³ . Assume digging*** 40 m ³ /hour and 12-hour days = 480 m ³ /day (or 16,951 ft ³ /day). Total impacted volume (1,813,363 ft ³) / rate of spread and leveling (16,951 ft ³ /day) = 107 12-hour days = 1,284 hours.
Crane	1	312	312	3744	hours	Assumed to be used 12 hours per day, 6 days per week, 52 weeks per year for 1 year.
Water Truck	1	-	312	5953	miles	Assume water truck stays at project site and drives 19.08 miles in the project corridor every day. 312 trips x 19.08 miles = 5,953 total miles Based on round trip from Jacumba Hot Springs to midpoint of Project segment (10 miles one way).
Delivery Truck	1	-	2516	50312	miles	Assume necessary for construction. Assume 5 panels per trip. 12,578 total panels/5 panels per trip = 2,516 trips. 2,516 trips x 20 round trip miles = 50,312 miles.

Air Quality Calculations
Appendix B

Hauling Truck	1	-	140	2795	miles	<p>Based on round trip from Jacumba Hot Springs to midpoint of Project segment (10 miles one way). Assume 12,578 panels at 550 lbs per panel are needed for construction. Assume flat bed truck with 50,000-lb capacity. $50,000\text{lbs}/550\text{lbs} = 90$ panels per truck $12,578\text{ panels}/90\text{ panels per trucks} = 140$ truck loads. $140\text{ truck loads} \times 20\text{ round trip miles} = 2,795$ miles. Based on estimated distance between batch plant and midpoint of Project segment (10 miles one way). Assume 8-yd³ concrete capacity per delivery. Assume wall footing = 27.5ft x 1ft x 2ft = 55ft³ x 5280ft/mi = 290,400 ft³ of cement per mile of footing. $290,400\text{ ft}^3/\text{mile} \times 19.08\text{ mi} = 5,540,832\text{ ft}^3$ of cement for all footing.</p>
Cement Truck	1	-	25700	534003	miles	<p>Assume 8 poles per 10-ft panel of fence and poles are 0.5-ft (6 in) x 0.5-ft (6 in) x 18-ft = 4.5 ft³*8 poles = 36 ft³. Assume poles filled half-capacity with cement to account for rebar = $36\text{ ft}^3/2 = 18\text{ ft}^3$ of cement per panel. $18\text{ft}^3 \times 12,578\text{ panels} = 226,404\text{ ft}^3$ of cement for panels. $5,540,832\text{ ft}^3 + 226,404\text{ ft}^3 = 5,767,236\text{ ft}^3 = 213,601\text{ yd}^3$ of cement. $213,601\text{ yd}^3$ total of cement / 8-yd³ capacity per trip = 26,700 trips. $26,700\text{ trips} \times 20\text{ round trip miles} = 534,003$ miles. Based on round trip from Calexico to midpoint of Project segment (10 miles one way).</p>
Passenger Car (Worker Commute)	7	-	312	43680	miles	<p>Assume one operator, two riggers, and one safety representative for crane; one operator and one assistant for all other equipment; 3 other construction site workers (e.g., foreman).</p>
Passenger Truck (Worker Commute)	8	-	312	49920	miles	<p>Assume 7 passenger cars (7 vehicles x 200 miles x 312 days = 65,520) and 8 passenger trucks (8 vehicles x 10 miles x 312 days = 74,880 miles).</p>

* Equipment usage is based off estimates from the Environmental Stewardship Plan For the Proposed Yuma Wall Replacement Project (https://www.cbp.gov/sites/default/files/assets/documents/2019-Jun/Yuma%20Primary%20Fence%20Replacement_Environmental%20Stewardship%20Plan.pdf)

Air Quality Calculations

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** Excavation production and removal rates extracted from <https://www.methvin.org/construction-production-rates/excavation/bulk-excavation> to estimate PM10 for excavation using equation 4-4 from Air Emissions Guide for Air Force Transitory Sources, Methods for Estimating Emissions of Air Pollutants for Transitory Sources at U.S. Air Force Installations, August 2018 (<http://solutionenv.com/Documents/2018%20TransitorySourceGuide.pdf>)

***Spread and level (Average) rate for grading extracted from: <https://www.methvin.org/construction-production-rates/excavation/spread-and-level> - Dozer, 1.2m³ bucket, 50-200m², Sand/Soil Slow: 43.5 Average: 48.0 Fast: 52.6 Unit: m³/hr to estimate PM 10 using equation 4-4 from Air Emissions Guide (see previous bullet point).

Air Quality Calculations

Appendix B

EQUIPMENT EMISSION RATES

Equipment	Horsepower (hp)	Emission Rate*								Unit
		VOC	CO	CO2e	NOx	SO2	PM2.5	PM10		
Crane	300	0.14773	0.21564	-	1.01555	2.74E-03	3.90E-02	4.02E-02	g/hp-hr per day	
Excavator	175	0.13668	0.2279	-	0.55829	2.65E-03	3.45E-02	3.56E-02	g/hp-hr per day	
Dozer	175	0.14123	0.28219	-	0.7193	2.69E-03	4.89E-02	5.04E-02	g/hp-hr per day	
Loader	100	0.58932	3.9348	-	3.03713	4.03E-03	0.51927	0.53533	g/hp-hr per day	
Water Truck	-	6.45E-04	3.97E-03	6.79E-02	1.12E-03	5.69E-07	3.36E-06	3.66E-06	lbs/mi	
Cement Truck	-	5.73E-04	1.05E-03	8.48E-03	0	6.98E-08	3.05E-07	3.32E-07	lbs/mi	
Hauling Truck	-	5.73E-04	1.05E-03	8.48E-03	0	6.98E-08	3.05E-07	3.32E-07	lbs/mi	
Delivery Truck	-	5.73E-04	1.06E-03	8.48E-03	0	6.98E-08	3.05E-07	3.32E-07	lbs/mi	

Equipment	Type of PM Emission	Emission Rate*								Unit
		VOC	CO	CO2e	NOx	SO2	PM2.5	PM10		
Passenger Truck		-	1.72E-04	7.28E-03	-	0.000132	6.60E-06	-	-	lbs/mi
	Primary Exhaust						9.10E-06	1.03E-05		lbs/mi
	Tirewear Particulate						3.38E-05	2.25E-05		lbs/mi
	Brakewear Particulate						1.67E-05	0.000134		lbs/mi
Passenger Car		-	1.06E-04	5.79E-03	-	7.80E-05	5.41E-06	-	-	lbs/mi
	Primary Exhaust						6.26E-06	7.07E-06		lbs/mi
	Tirewear Particulate						3.38E-06	2.25E-05		lbs/mi
	Brakewear Particulate						8.05E-05	1.01E-05		lbs/mi

* Emission rates extracted from the Environmental Stewardship Plan For the Proposed Yuma Wall Replacement Project

(<https://www.cbp.gov/sites/default/files/assets/documents/2019->

Jun/Yuma%20Primary%20Fence%20Replacement_Environmental%20Stewardship%20Plan.pdf) which were originally acquired from USEPA's Motor Vehicle Emission Simulator (MOVES).

FUGITIVE DUST EMISSIONS

Equipment	Type of PM Emission	Acreage	Emission Rate*		Unit
			PM2.5**	PM10	
Excavator	Fugitive Dust	6.94	2	20 lb/ac-day	
Dozer	Fugitive Dust	6.94	2	20 lb/ac-day	

* Emission rates extracted from Air Emissions Guide for Air Force Transitory Sources, Methods for Estimating Emissions of Air Pollutants for Transitory Sources at U.S. Air Force Installations, August 2018 (<http://solutioenv.com/Documents/2018%20TransitorySourceGuide.pdf>)

** PM2.5 was calculated using PM10 conversion factor of 0.1 acquired from Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors (<https://www3.epa.gov/ttn/chief/ap42/ch13/bgdocs/b13s02.pdf>)

Air Quality Calculations
Appendix B

EQUIPMENT EMISSIONS

Equipment	Total Emissions (lbs/year)*						
	VOC	CO	CO2e	NOx	SO2	PM2.5**	PM10**
Crane	365.81568	533.9775	-	2514.7507	6.7849	96.5736	99.5451
Excavator	67.69401	112.8729	-	276.5064	1.3125	1501.9245	14866.0072
Dozer	58.29016	116.4689	-	296.8783	1.1102	1257.5594	12394.5737
Loader	486.43358	3247.8430	-	2506.8927	3.3264	428.6133	441.8694
Water Truck	3.83758	23.6553	404.3369	6.6697	0.0034	0.0200	0.0218
Cement Truck	305.73827	563.2667	4530.8581	0.0000	0.0373	0.1630	0.1771
Hauling Truck	1.60025	2.9482	23.7148	0.0000	0.0002	0.0009	0.0009
Delivery Truck	28.80563	53.5722	426.8822	0.0000	0.0035	0.0154	0.0167
Passenger Truck	8.59922	363.4026	-	6.5820	0.3293	2.9755	8.3174
Passenger Car	4.61130	252.7980	-	3.4065	0.2363	3.9364	1.7321
TOTAL	1331.42569	5270.8053	5385.7921	5611.6862	13.1440	3291.7817	27812.2614

* Total emissions for Crane, Excavator, Dozer, and Loader were calculated using the following formula: Total emission (lbs) = Emission rate (g/hp-hr per day) * Hours equipment is used (hrs) * Horsepower of equipment (hp) * g to lb conversion factor

Total emissions for Water Truck, Cement Truck, Hauling Truck, Delivery Truck were calculated using the following formula: Total Emission (lbs) = Emission rate (lbs/mi) * Total miles driven (mi)

** PM emission values for Excavator and Dozer include primary exhaust and fugitive dust emission rates.

PM emission values for Passenger Truck and Car include primary exhaust, tirewear particulate, and brakewear particulate emission rates.

Air Quality Calculations
Appendix B

SUMMARY

Type of Emission	VOC	CO	CO2e	NOx	SO2	PM2.5	PM10
Project Emissions (tons/year)	0.665713	2.635403	2.692896	2.805843	0.006572	1.645891	13.90613
Significance Threshold (tons/year)*	50	100	27557	100	100	70	70

*Threshold data acquired from 40 CFR 93.153(b)(1) and Gulf South Research Corporation (GSRC) model projections
(https://ecfr.io/Title-40/pt40.22.93#se40.22.93_1153)

APPENDIX C

Waters of the U.S. Jurisdictional Assessment

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WETLANDS AND WATERS OF THE US
ASSESSMENT FOR PRIMARY AND
REPLACEMENT BORDER WALL PROJECTS
IN SAN DIEGO COUNTY, CALIFORNIA

Prepared for:

Paul Enriquez, Acquisition, Real Estate, and Environmental Director
Program Management Office Directorate
U.S. Customs and Border Protection

Prepared by:



DAWSON

November 2020

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Appendix B	Survey Area Maps

ACRONYMS AND ABBREVIATIONS

BLM	Bureau of Land Management
CBP	U.S. Customs and Border Protection
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
CFR	Code of Federal Regulations
GPS	Global Positioning System
IBL	International Boundary Line
IBWC	International Boundary and Water Commission
NRCS	Natural Resources Conservation Science
OHWM	Ordinary High Water Mark
U.S.	United States
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency

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1.0 INTRODUCTION

1.1 PROJECT DESCRIPTION

United States (U.S.) Customs and Border Protection (CBP) proposes to replace and maintain approximately 14 miles of bollard wall and to construct and maintain approximately 5 miles of bollard wall along the U.S./Mexico international border within the U.S. Border Patrol San Diego Sector in California. The project will include the installation and maintenance of a linear ground detection system, road construction or refurbishment, and the installation of a fiber optic cable and lighting.

1.2 PROJECT LOCATION

The Project Area is split into 25 segments across approximately 27 miles within southeastern San Diego County (see **Figure 1-1**). Project coordinates are found in **Appendix A**.

The Survey Area for the subject delineation stretches 100 feet north of the International Boundary Line (IBL) across each of the 13 Project segments. The Survey Area includes the Roosevelt Reservation, which is the 60-foot-wide strip of land owned by the Federal Government along the U.S. side of the U.S./Mexico international border in Arizona, California, and New Mexico. The main patrol road is parallel to the IBL and generally runs through the Roosevelt Reservation.

1.3 PURPOSE OF THE ASSESSMENT

Portions of the Survey Area cross or are adjacent to potentially regulated water and wetland features under the jurisdiction of the U.S. Army Corps of Engineers (USACE) and the California Department of Fish and Wildlife (CDFW). The purpose of this delineation report is to identify and evaluate these potentially regulated features to ensure the proposed project activities comply with state and federal law, namely Section 404 of the Clean Water Act (CWA).

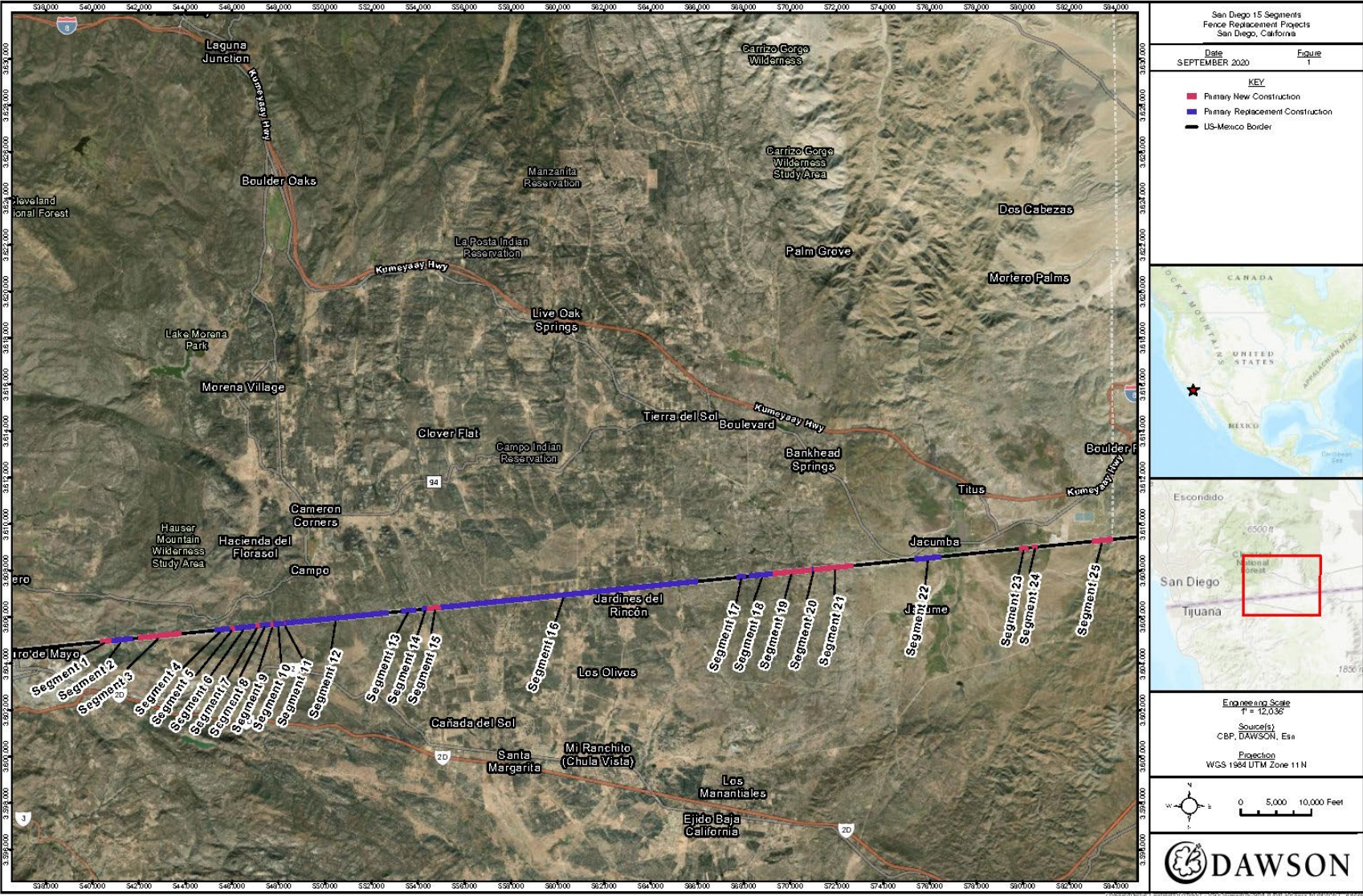
1.4 REGULATORY FRAMEWORK

1.4.1 CLEAN WATER ACT SECTION 404

Section 404 of the Clean Water Act gives the U.S. Environmental Protection Agency (USEPA), California Regional Water Quality Control Boards, and USACE regulatory and permitting authority regarding discharge of dredged or fills material into “navigable waters of the United States”. Section 502(7) of the CWA defines navigable waters as “waters of the United States, including territorial seas.” Section 328 of Chapter 33 in the Code of Federal Regulations (CFR) applies to the jurisdictional limits of USACE authority under CWA to “waters of the United States” which are defined as:

- Waters used for commerce;

Figure 1-1. Map of Project Area



- Interstate waters and wetlands;
- “Other waters” such as intrastate lakes, rivers, streams, and wetlands;
- Impoundments of waters;
- Tributaries to the above waters;
- Territorial seas; and
- Wetlands adjacent to waters.

The limits of USACE jurisdiction under Section 404 of the CWA as given in 33 CFR Section 328.4 are as follows:

- Territorial seas: three nautical miles in a seaward direction from the baseline;
- Tidal waters of the U.S.: high tide line or to the limit of adjacent non-tidal waters;
- Non-tidal waters of the U.S.:
 - Ordinary high water mark (OHWM) or to the limit of adjacent wetlands;
 - Wetlands: to the limit of the wetland.

USACE requires the use of the *U.S. Army Corps of Engineers Wetlands Delineation Manual* (USACE Manual) to be used for delineating wetlands and waters of the U.S. (Environmental Labs 1987). Waters of the U.S. are delineated based upon the limited of the OHWM as determined by erosion, deposition of vegetation or debris, and changes in vegetation structure within rivers and streams.

Should the results of this assessment be used for a jurisdictional determination, these results may change under legislation effective June 22, 2020 as defined in the Final Rule defining “Navigable Waters of the United States”, Section 120.2 (DOD and EPA 2020).

1.4.2 CLEAN WATER ACT SECTION 401

Whenever a Section 404 permit is used or given, a Section 401 certification must be provided for the use of that permit. This is for oversight by the USEPA on the 404 program. USEPA has given the California State Water Resources Control Board and Regional Water Quality Control Board the authority to waive, deny, and grant water quality certification for individual and nationwide permits under Section 401 of the CWA.

1.4.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE – FISH AND GAME SECTION 1602

Fish and Game Code Section 1602 requires any entity to notify CDFW before beginning an activity that substantially diverts or obstructs natural water flow, substantially changes or uses any material from a water body, or deposits and disposes material containing

crumbled, flaked, or ground pavement where it may pass into a water body. Notification to CDFW is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state not located on federal property. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. CDFW jurisdiction generally spans from top of bank of either side of the stream, or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater.

2.0 SITE DESCRIPTION

2.1 ENVIRONMENTAL SETTING

The Survey Area is located along the U.S./Mexico international border. Parts of the Survey Area located outside the Roosevelt Reservation traverse Bureau of Land Management and private lands. The landscape within the Survey Area is a generally undeveloped, open landscape.

The Survey Area is located within the Southern California/Northern Baja Coast Ecoregion and two Level IV Ecoregions: Diegan Western Granitic Foothills and Morena/Boundary Mountain Chaparral (Griffith et al. 2016). To the west the ecoregion is characterized by low hills at intermediate elevations and includes parts of the lower Peninsular Ranges. A few valleys occur in the ecoregion and can be narrow to broad. The ecoregion is mildly influenced by marine air. The ecoregion to the eastern part of the Survey Area is transitional between the Southern California/Northern Baja Coast Ecoregion to the west and south, and the Southern California Mountains to the east. The topographical relief in this area is less dramatic than in the Southern California Mountains and it lacks the hardwood and conifer woodlands. Characteristic vegetation is mixed chaparral and chamise.

2.2 VEGETATION

Plant species were identified in the Survey Area using survey and study results provided by Bio-Studies (Bio-Studies 2020). The following vegetation communities were identified across the Survey Area:

- *Adenostoma fasciculatum* – (*Eriogonum fasciculatum*, *Artemisia californica*, *Salvia melifera*) Association,
- *Adenostoma fasciculatum* – *Eriogonum fasciculatum* Association,
- *Adenostoma fasciculatum* – annual grass-forb Association,
- *Adenostoma sparsifolium* Association,
- *Agave deserti* Association,
- *Artemisia californica* – *Eriogonum fasciculatum* Association,
- *Bahiopsis laciniata* – *Artemisia californica* – *Eriogonum fasciculatum* Association,
- *Ceanothus leucodermis* Association,
- Developed – Non native forbs,
- *Ericameria teretifolia* Association,
- *Eriogonum fasciculatum* Association,
- *Larrea tridentata* Association,

- *Prunus fremontii* Alliance,
- *Quercus agrifolia* – *Salix lasiolepis* Association,
- *Quercus berberidifolia* Association,
- *Quercus berberidifolia* – *Adenostoma fasciculatum* Association,
- *Rhus ovata* Association,
- *Quercus cornelius-mulleri* – *Rhus ovata* Association,
- *Eriogonum fasciculatum* Shrubland Alliance,
- *Eriogonum fasciculatum* – *Salvia apiana* Xeric Scrub Alliance,
- *Keckiella antirrhinoides* Shrubland Alliance,
- *Lotus scoparius* [*Acmispon glaber*] Shrubland Alliance.

2.3 SOILS

The NRCS Web Soil Survey was used to research soil types within the Survey Area. The Survey Area consists primarily of excessively drained soils, such as gravelly coarse sandy loam and loamy coarse sand. There are four soils classifications that are classified as “farmland of statewide importance:” Calpine coarse sandy loam, Kitchen Creek loamy coarse sand, Mottsville loamy coarse sand, Rositas loamy coarse sand. All other soils in the Survey Area are classified as “not prime farmland” (NRCS 2020a). The following soil types are found within the Survey Area:

- Acid igneous rock land
- Calpine coarse sandy loam, eroded
- Kitchen Creek loamy coarse sand
- La Posta loamy coarse sand, eroded
- La Posta loamy coarse sand, severely eroded
- La Posta rocky loamy coarse sand
- La Posta rocky loamy coarse sand, eroded
- Las Posas stony fine sandy loam
- Mottsville loamy coarse sand
- Rositas loamy coarse sand
- Stony land
- Tollhouse rocky coarse sandy loam, eroded
- Tollhouse rocky coarse sandy loam

3.0 METHODS

In preparation for the on-site assessment, applicable reference materials were reviewed during desktop analysis. Following the desktop review, biologists conducted an evaluation of wetland and waters indicators in the Survey Area between March and April 2020. The evaluation included driving and walking along sections of proposed border wall system and identifying any drainage along the route that displayed a clear active channel. Photographs were taken to document any potentially jurisdictional waters encountered in the Survey Area.

The following sources were consulted prior to the site visit:

- Google Earth aerial photography (Google Earth 2020)
- National Wetland Inventory Interactive website (USFWS 2020)
- Natural Resources Conservation Science (NRCS) Web Soil Survey (NRCS 2020a)
- NRCS National List of Hydric Soils (NRCS 2020b)

Delineation of potentially jurisdictional wetlands and non-wetland waters is based on the USACE Manual, the *Regional Supplement to the U.S. Army Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Supplement)* (USACE 2008), and the *U.S. Army Corps of Engineers Regulatory Guidance Letter No. 05-05* (USACE 2005).

3.1 WETLANDS

Section 328.3 of the CFR defines wetlands as “areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The three parameters used to delineate wetlands are the presence of: (1) hydrophytic vegetation, (2) hydric soils, and (3) wetland hydrology. According to the USACE Manual, at least one positive wetland indicator from each parameter must be present in order to make a positive wetland determination.

If an area is determined to be a wetland based on the three-parameter approach, its boundary would be mapped using sub-meter accuracy global positioning system (GPS) equipment.

3.2 NON-WETLAND WATERS

Non-wetland waters subject to USACE jurisdiction include lakes, rivers, and streams (including intermittent streams) in addition to all areas below the high tide line in areas subject to tidal influence. Jurisdiction in non-tidal areas extends to the OHWM, which is

defined as, “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (Federal Register Vol. 51, No. 219, Part 328.3 (e). November 13, 1986).

USACE has issued specific guidance for delineation of streams in the arid west region (Lichvar and McColley 2008, Curtis and Lichvar 2010). This guidance applies to “low-gradient, alluvial, ephemeral/intermittent channel forms” that may have a broad lateral extent and are often referred to as “washes” or “dry washes.” The OHWM boundaries of dry washes would be delineated using sub-meter accuracy GPS equipment or digitally mapped using aerial photography. The areas of potential jurisdictional non-wetland waters would be measured digitally using ArcGIS software.

3.3 POTENTIAL CDFW – FISH AND GAME CODE SECTION 1602

The Survey Area is located on federal lands located within the Roosevelt Reservation. The majority of the Survey Area is bordered by BLM land as well as some private properties. Projects undertaken on federal land and managed by federal agencies are not required to follow CDFW Section 1602 jurisdiction. Some agencies elect to follow CDFW Section 1602 regulations, therefore Section 1602 jurisdiction was identified in the field however only features that were potentially jurisdictional under the CWA are presented in this report. Issues related to CDFW Section 1602 are not discussed again in this report.

4.0 RESULTS

Dawson biologists conducted an assessment of potentially regulated waters and wetlands between March and April 2020. The results of the delineation are provided below.

4.1 WETLANDS

Dawson biologists did not observe an indicator from all three parameters – hydrophytic vegetation, hydric soils, and wetland hydrology. Indicators from all three parameters are necessary to qualify a given area as a wetland within the Survey Area.

4.2 NON-WETLAND WATERS

The Survey Area contains one designated category of non-wetlands waters – ephemeral streams. Ephemeral streams are episodic stream channels that appear to convey flows only during and immediately after precipitation events. Across the Survey Area, the majority of these features are shallow bottomed narrow channels and well-established riparian corridors. The general directionality of all features across the Survey Area run in a north and south direction and bisect the Survey Area. The topographic features dictate the localized direction of flow.

Not all ephemeral streams across the Survey Area are considered potentially jurisdictional based on direction of flow, feature isolation, or connectivity to navigable waters of the U.S. Figures in **Appendix B** show all potential waters of the U.S. occurring within the Survey Area.

Biologists identified 30 features within the Survey Area as potential jurisdictional waters. The total area of these waters within the Survey Area is approximately 1.94 acres. The total area of these waters within the Project Area, which covers the land only within the Roosevelt Reservation, is 1.2 acres.

5.0 REFERENCES

- Bio-Studies 2020 Bio-Studies. 2020. Environmental Support Services for FY 2020-284 Wall, San Diego 15, San Diego County, California.
- Curtis and Lichvar 2010 Curtis, Katherine E. and Robert W. Lichvar, 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Wetlands Regulatory Assistance Program. U.S. Army Corps of Engineers, Engineer Research and Development Center ERDC/CCREL TN-10-1.
- DOD and EPA 2020 Department of Defense (DoD) and Environmental Protection Agency (EPA). 2020. The Navigable Waters Protection Rule: Definition of "Waters of the United States." Federal Register, Vol 85. 77: 22250-22342.
- Environmental Laboratory 1987 Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. Technical Report Y-87-1. 207 p. Available online: <https://www.cpe.rutgers.edu/Wetlands/1987-Army-Corps-Wetlands-Delineation-Manual.pdf>.
- Griffith et al. 2016 Griffith, G.E., Omernik, J.M., Smith, D.W., Cook, T.D., Tallyn, E., Moseley, K., and Johnson, C.B. 2016. Ecoregions of California (poster). U.S. Geological Survey Open-File Report 2016–1021, with map, scale 1:1,100,000. Available online; <http://dx.doi.org/10.3133/ofr20161021>. Accessed online October 2020.
- Lichvar and McColley 2008 Lichvar, R.W., and McColley, S.M. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual. USACE ERDC/CRREL TR-08-12.
- NRCS 2020a Natural Resources Conservation Service, United States Department of Agriculture (USDA). Web Soil Survey. Available online: <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>. Accessed online October 2020.
- NRCS 2020b Natural Resources Conservation Service. 2019. National List of Hydric Soils. Available online: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/>. Accessed online October 2020.
- USACE 2005 United States Army Corps of Engineers (USACE). 2005. U.S. Army Corps of Engineers Regulatory Guidance Letter No. 05-05. <https://www.nap.usace.army.mil/Portals/39/docs/regulatory/rgls/rgl05-06.pdf>. Accessed online October 2020.
- USACE 2008 USACE. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). JS Wakeley, RW Lichvar, and CV Noble (eds). ERDC/EL TR-08-28. Vicksburg, MS.

U.S. Climate
Data 2020

U.S. Climate Data. 2019. Your Weather Service. Available
online: [https://www.usclimatedata.com/climate/arizona/united-
states/3172](https://www.usclimatedata.com/climate/arizona/united-states/3172) Accessed online October 2020.

USFWS 2020

United States Fish and Wildlife Service. 2020. National Wetlands
Inventory website. U.S. Department of the Interior, USFWS,
Washington, D.C. <http://www.fws.gov/nwi/> Accessed online
October 2020.

Appendix A

Project Area Coordinates

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Section	Latitude	Longitude	Length	Fence Type
San Diego 15 Segment 1 Start	32.5811480570001	-116.57022369	0.32 miles	New Primary
San Diego 15 Segment 1 Stop	32.5815878010001	-116.564842826		
San Diego 15 Segment 2 Start	32.5815878010001	-116.564842826	0.55 miles	Replacement Primary
San Diego 15 Segment 2 Stop	32.5823996080001	-116.5553837		
San Diego 15 Segment 3 Start	32.5826533440001	-116.55269952	1.15 miles	New Primary
San Diego 15 Segment 3 Stop	32.584282751	-116.533133648		
San Diego 15 Segment 4 Start	32.58546482	-116.517663415	0.44 miles	Replacement Primary
San Diego 15 Segment 4 Stop	32.586049062	-116.51012619		
San Diego 15 Segment 5 Start	32.586049062	-116.51012619	0.08 miles	New Primary
San Diego 15 Segment 5 Stop	32.586169329	-116.508836		
San Diego 15 Segment 6 Start	32.586169329	-116.508836	0.56 miles	Replacement Primary
San Diego 15 Segment 6 Stop	32.5869539	-116.499285423		
San Diego 15 Segment 7 Start	32.5869539	-116.499285423	0.13 miles	New Primary
San Diego 15 Segment 7 Stop	32.5871308530001	-116.496984		
San Diego 15 Segment 8 Start	32.5871308530001	-116.496984	0.29 miles	Replacement Primary
San Diego 15 Segment 8 Stop	32.5875513	-116.491975		
San Diego 15 Segment 9 Start	32.5875513	-116.491975	0.08 miles	New Primary
San Diego 15 Segment 9 Stop	32.58765888	-116.490663		
San Diego 15 Segment 10 Start	32.58765888	-116.490663	0.27 miles	Replacement Primary

San Diego 15 Segment 10 Stop	32.5880071560001	-116.486043953		
San Diego 15 Segment 11 Start	32.5880071560001	-116.486043953	0.05 miles	New Primary
San Diego 15 Segment 11 Stop	32.5880872870001	-116.485211816		
San Diego 15 Segment 12 Start	32.5880872870001	-116.485211816	2.75 miles	Replacement Primary
San Diego 15 Segment 12 Stop	32.5919069390001	-116.438264027		
San Diego 15 Segment 13 Start	32.5924100610001	-116.432051218	0.37 miles	Replacement Primary
San Diego 15 Segment 13 Stop	32.592924069	-116.425676158		
San Diego 15 Segment 14 Start	32.5931786150001	-116.422629586	0.14 miles	Replacement Primary
San Diego 15 Segment 14 Stop	32.5933647730001	-116.420295338		
San Diego 15 Segment 15 Start	32.5933647730001	-116.420295338	0.37 miles	New Primary
San Diego 15 Segment 15 Stop	32.593884115	-116.413913066		
San Diego 15 Segment 16 Start	32.593884115	-116.413913066	6.88 miles	Replacement Primary
San Diego 15 Segment 16 Stop	32.603376762	-116.296389625		
San Diego 15 Segment 17 Start	32.604799535	-116.278557823	0.25 miles	Replacement Primary
San Diego 15 Segment 17 Stop	32.6051473540001	-116.274302873		
San Diego 15 Segment 18 Start	32.60527259	-116.272846877	0.65 miles	Replacement Primary
San Diego 15 Segment 18 Stop	32.6061627610001	-116.261786206		
San Diego 15 Segment 19 Start	32.6061627610001	-116.261786206	1.05 miles	New Primary
San Diego 15 Segment 19 Stop	32.607516479	-116.243807312		
San Diego 15 Segment 20 Start	32.607516479	-116.243807312	0.05 miles	Replacement Primary
San Diego 15 Segment 20 Stop	32.607568746	-116.242975031		

San Diego 15 Segment 21 Start	32.607568746	-116.242975031	1.05 miles	New Primary
San Diego 15 Segment 21 Stop	32.609046634	-116.225056573		
San Diego 15 Segment 22 Start	32.6112678170001	-116.196810148	0.7 miles	Replacement Primary
San Diego 15 Segment 22 Stop	32.6122293110001	-116.184901444		
San Diego 15 Segment 23 Start	32.6150326870001	-116.148892658	0.23 miles	New Primary
San Diego 15 Segment 23 Stop	32.6153404460001	-116.145009402		
San Diego 15 Segment 24 Start	32.6155272300001	-116.142999769	0.13 miles	New Primary
San Diego 15 Segment 24 Stop	32.6157129790001	-116.140843498		
San Diego 15 Segment 25 Start	32.6176753510001	-116.115477828	0.54 miles	New Primary
San Diego 15 Segment 25 Stop	32.618404281	-116.106242754		

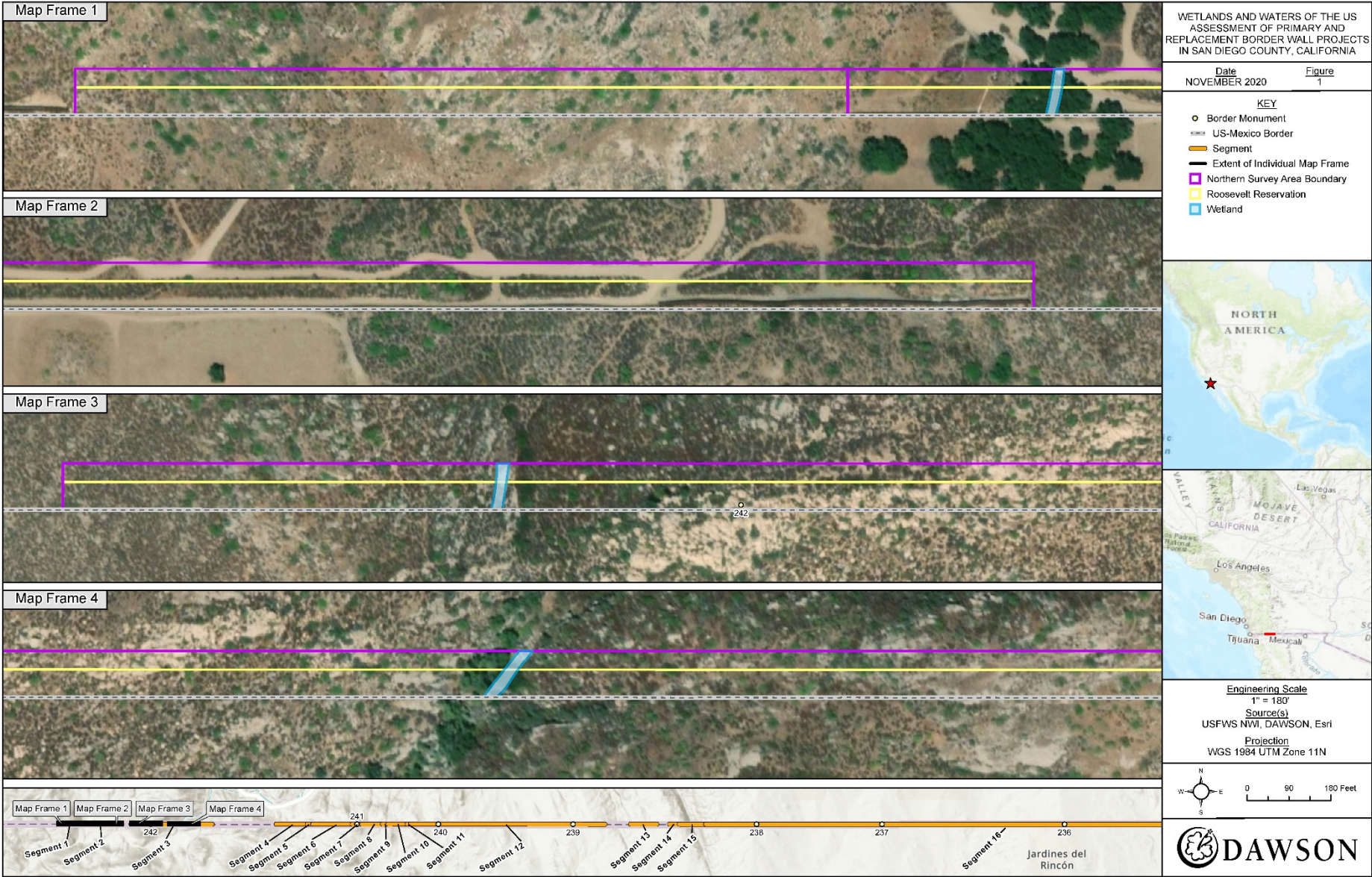
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Appendix B

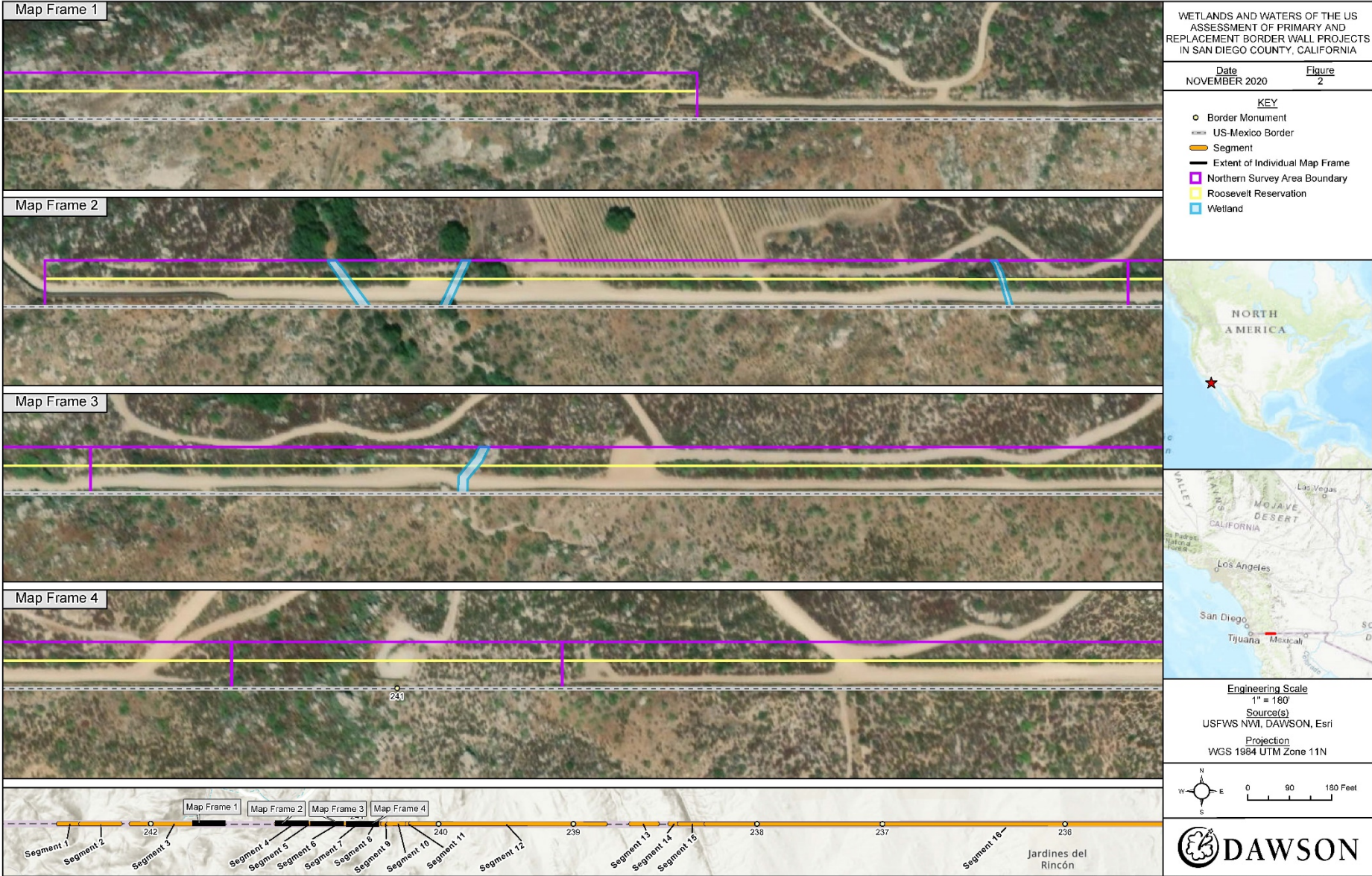
Survey Area Maps

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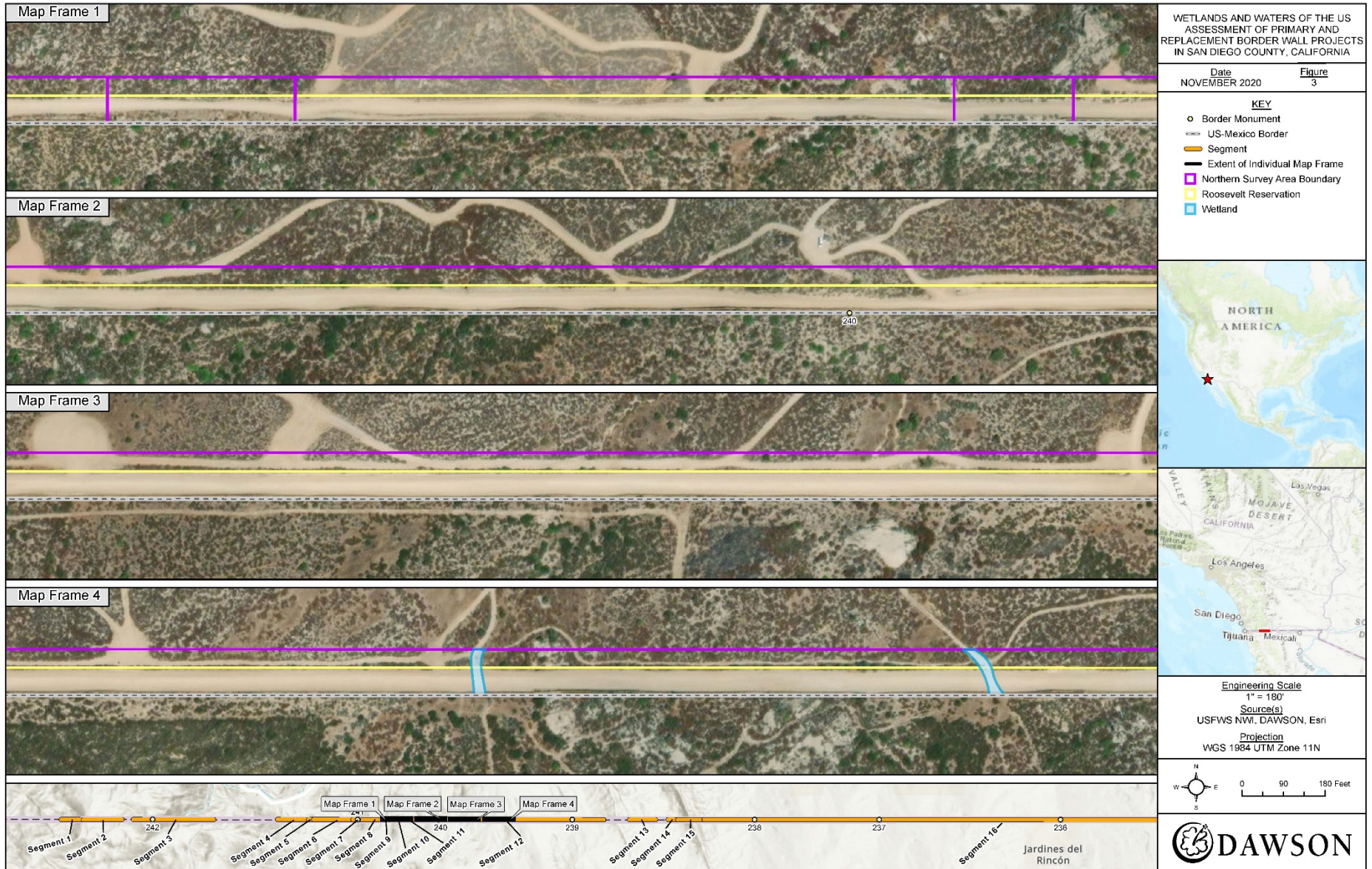
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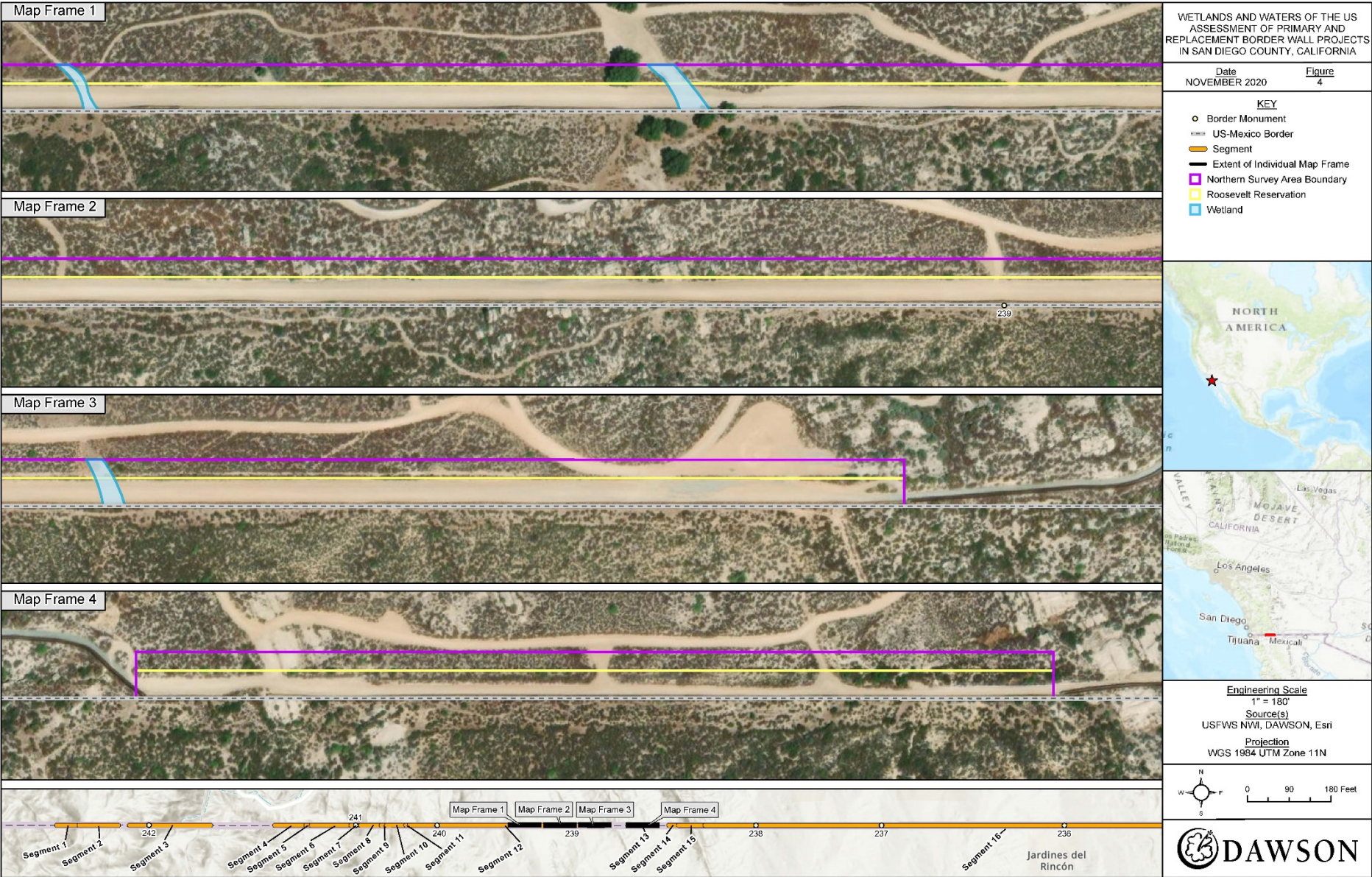
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Wetlands and Waters of the U.S. Assessment



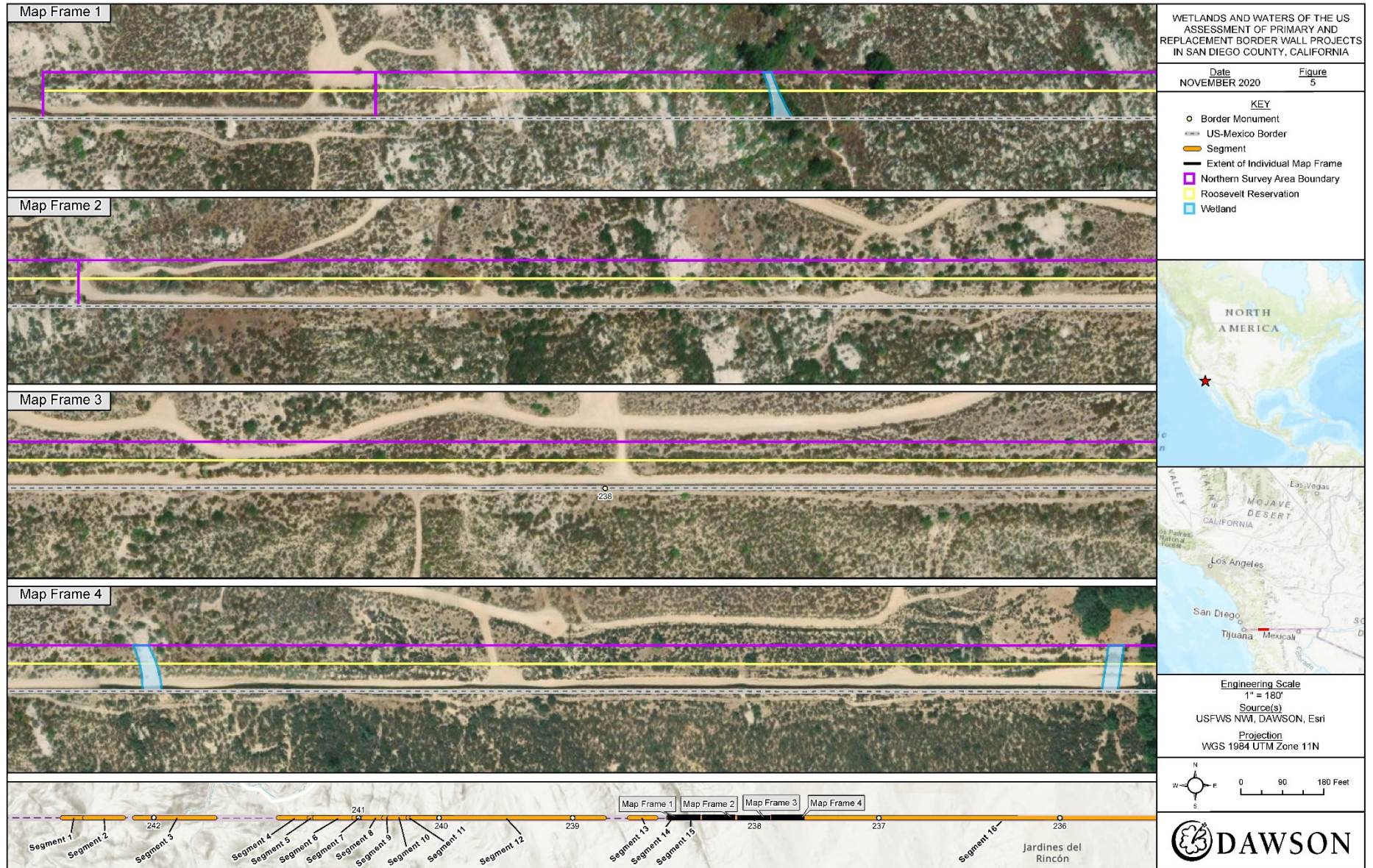
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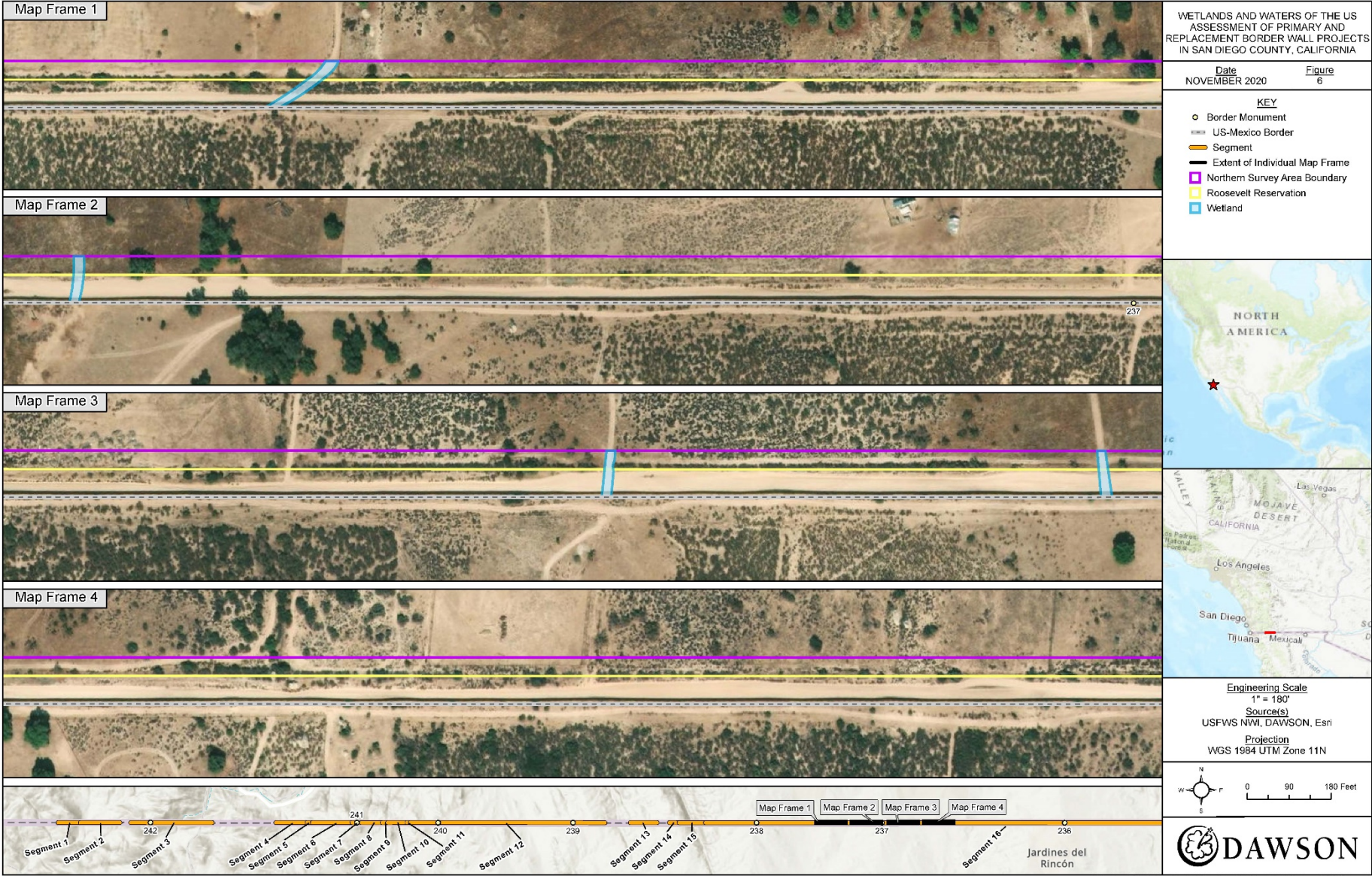
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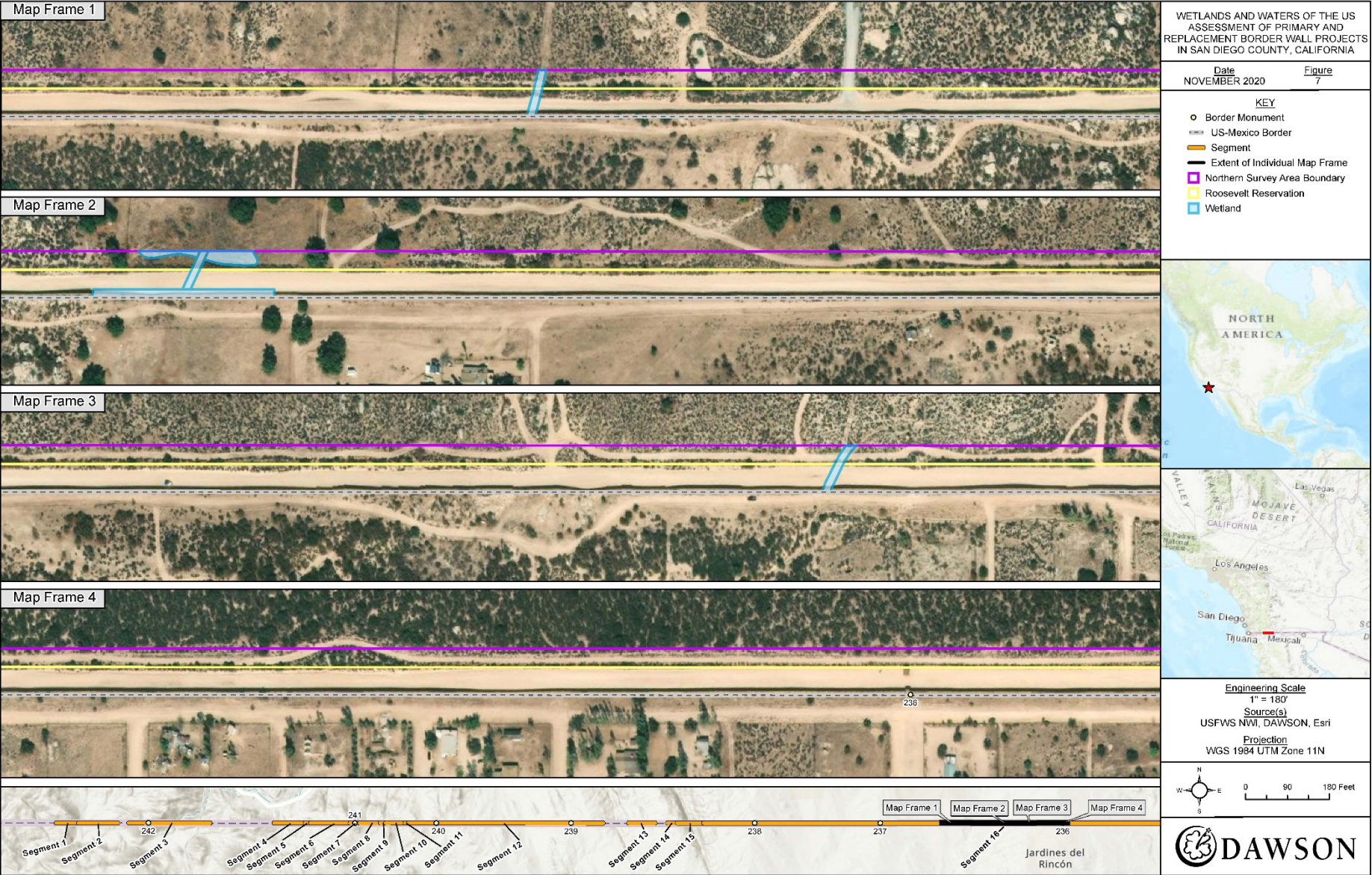
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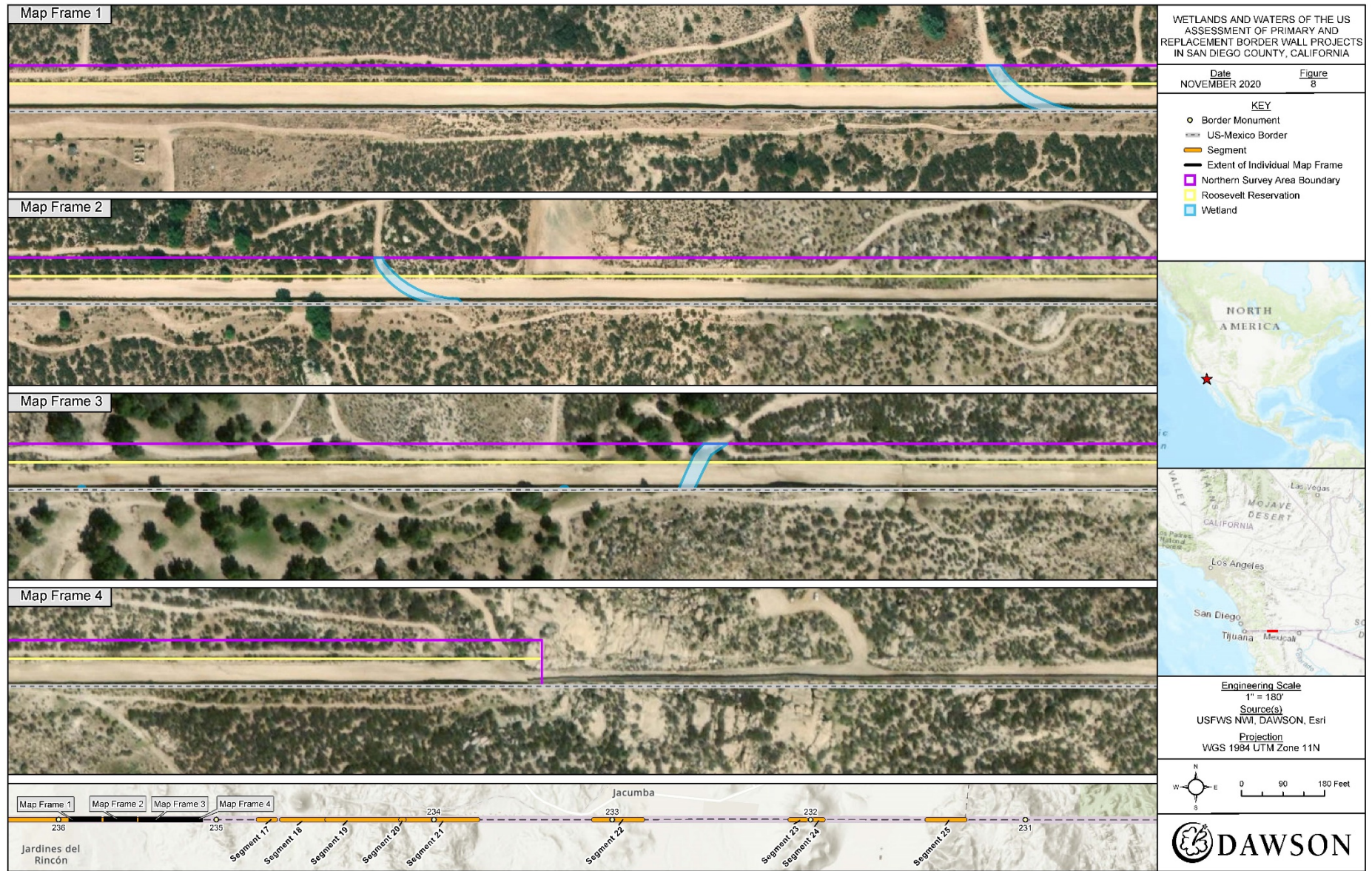
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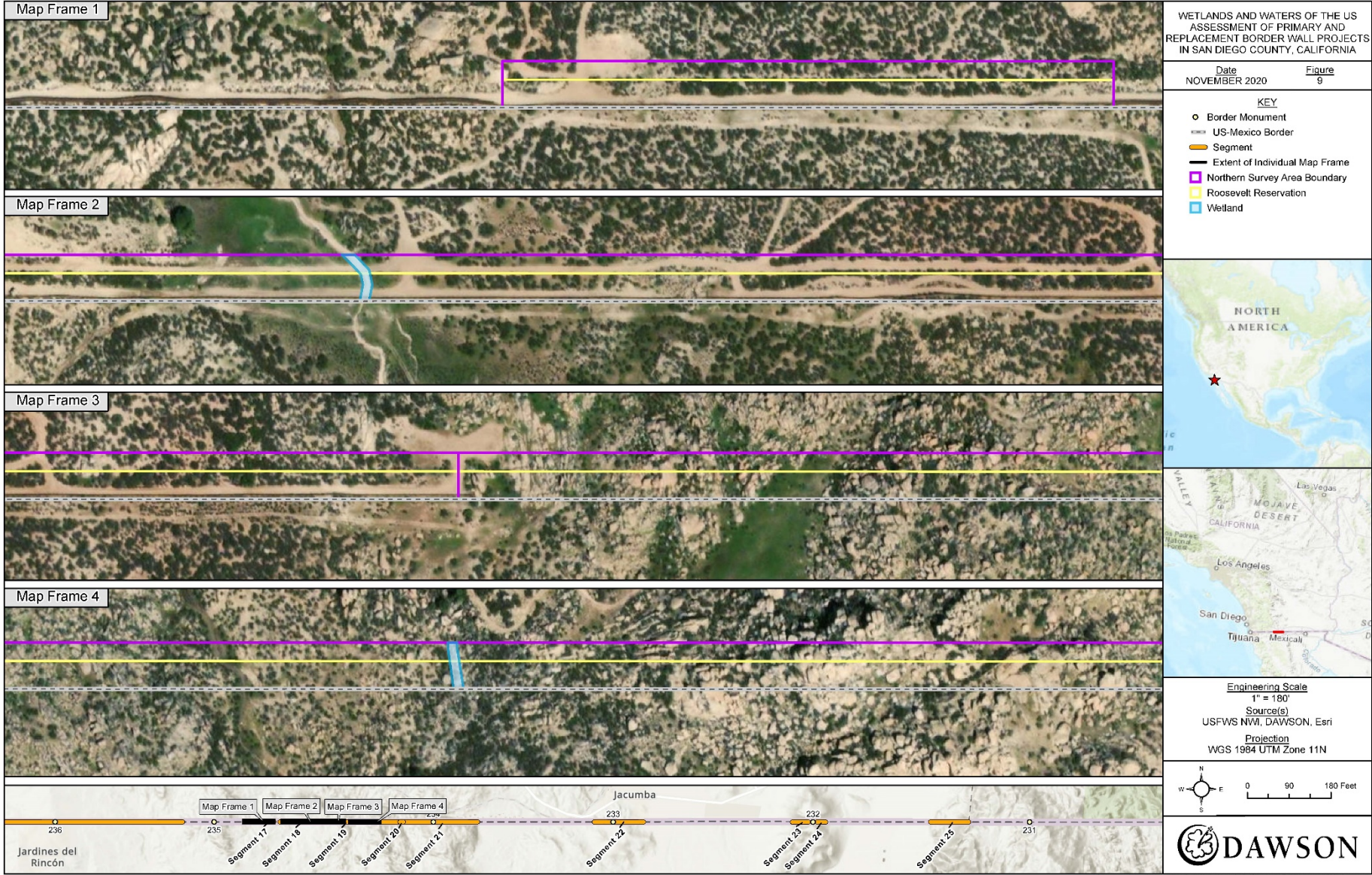
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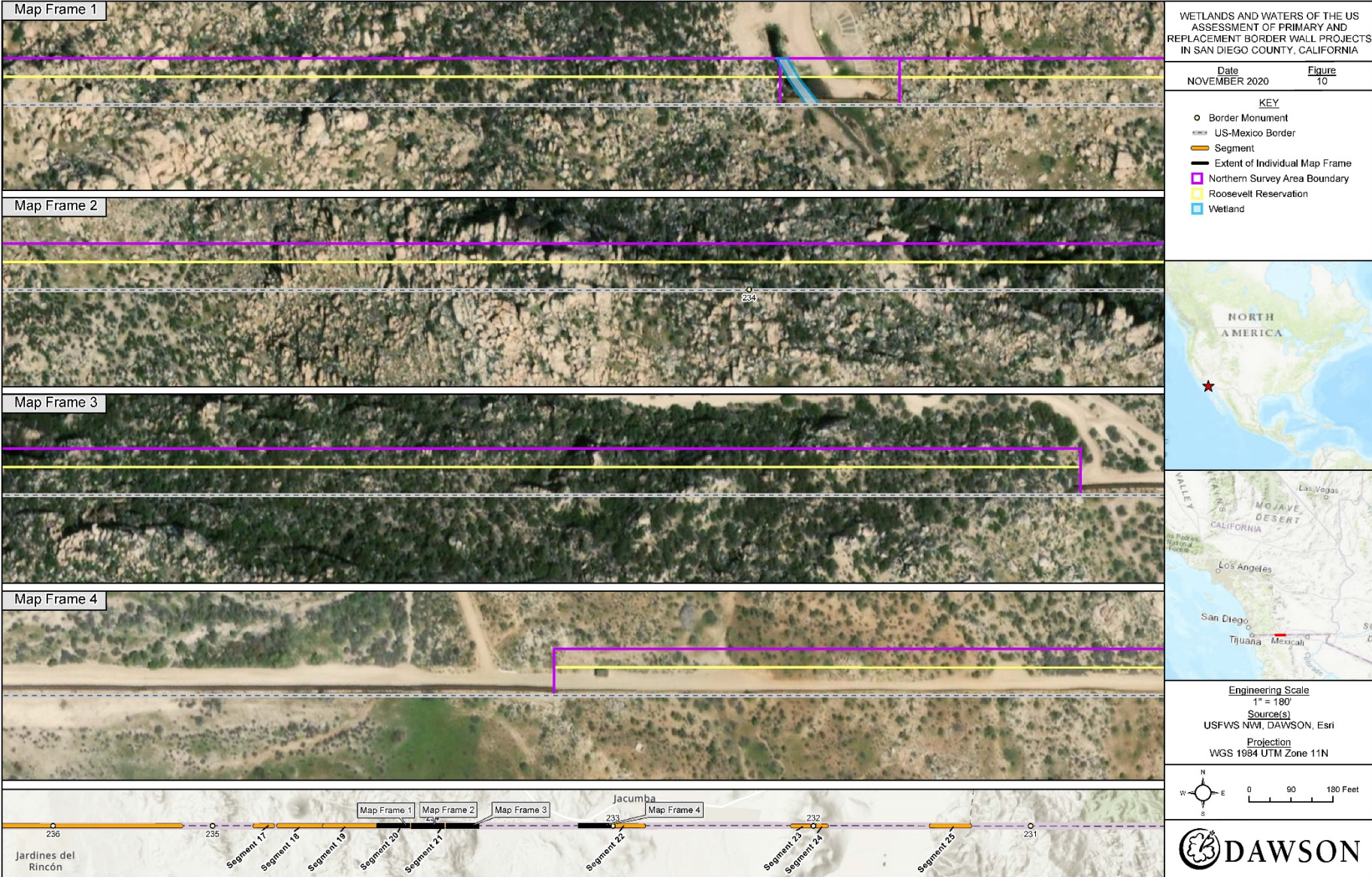


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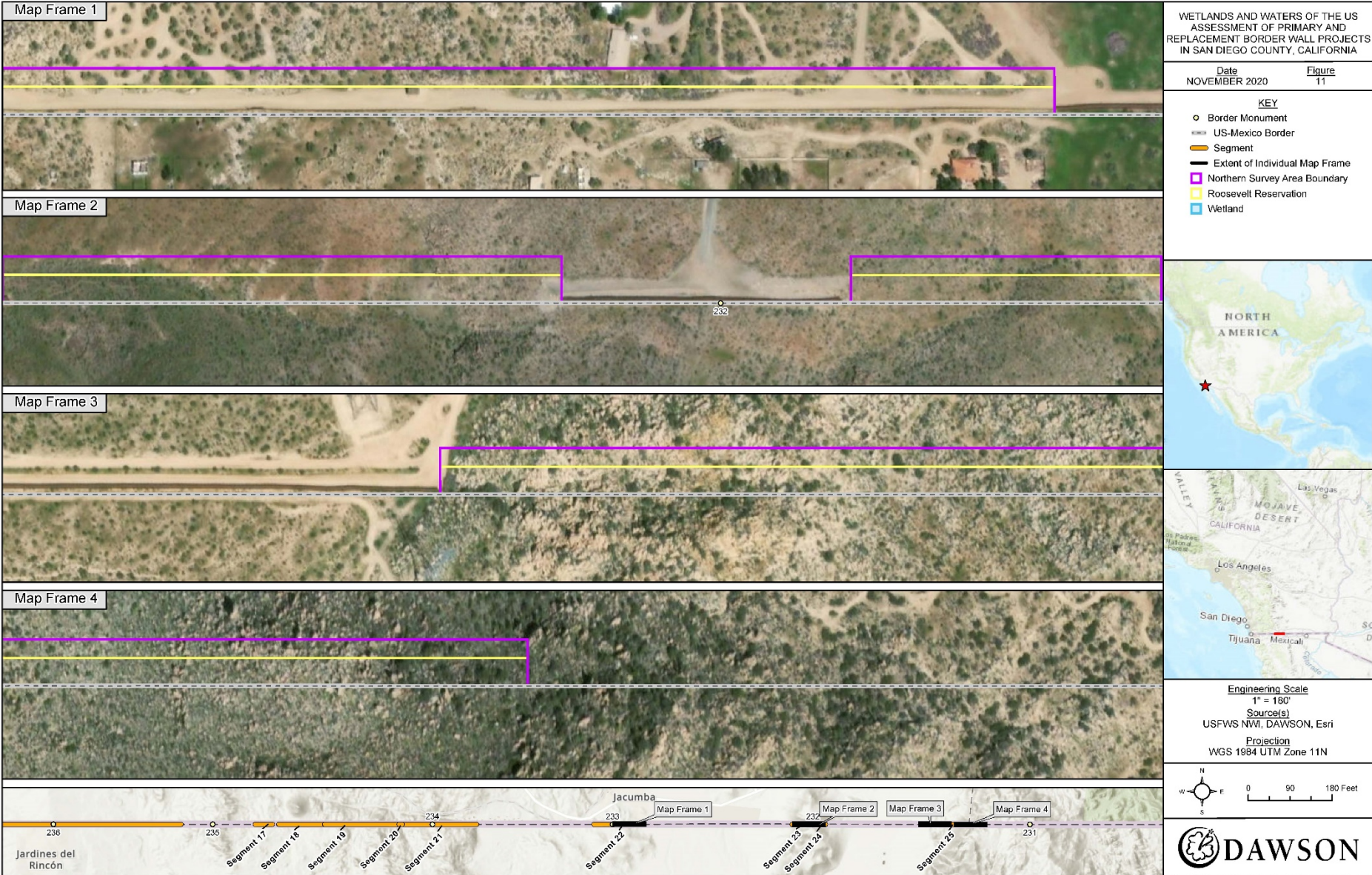


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APPENDIX D

Cultural Resources Survey Report

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