

FINAL

**BIOLOGICAL RESOURCES SURVEY REPORT
FOR THE SAN DIEGO SECTOR BORDER WALL PROTOTYPE
U.S. CUSTOMS AND BORDER PROTECTION
SAN DIEGO COUNTY, CALIFORNIA**



October 2017

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Prepared for

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
2.0	LOCATION.....	1
3.0	PROJECT CORRIDOR.....	3
4.0	SURVEY AREA.....	3
5.0	SURVEY METHODS.....	3
6.0	RESULTS	5
6.1	Site-Wide Pedestrian Surveys	5
6.1.1	Site Conditions.....	5
6.1.2	General Wildlife and Botanical Observations	13
6.1.3	Sensitive Natural Resources	15
6.1.3.1	Burrowing Owl	15
6.1.3.2	Coastal California Gnatcatcher (CAGN)	16
6.1.3.3	Quino Checkerspot Butterfly	16
6.1.3.4	San Diego Fairy Shrimp.....	19
6.1.3.5	Riverside Fairy Shrimp	19
6.1.3.6	Vernal Pools.....	20
7.0	CONCLUSION AND DISCUSSION	21
8.0	REFERENCES.....	21

LIST OF FIGURES

Figure 1. Project Location Map	2
Figure 2. SDC Border Wall Prototype Project Corridor.....	4
Figure 3. Biological Survey Findings Map Index.....	6
Figure 4. Biological Survey Findings Map 1	7
Figure 5. Biological Survey Findings Map 2.....	11
Figure 6. Biological Survey Findings Map 3.....	12
Figure 7. Critical Habitat Associated with the SDC Border Wall Prototype Project	18

LIST OF TABLES

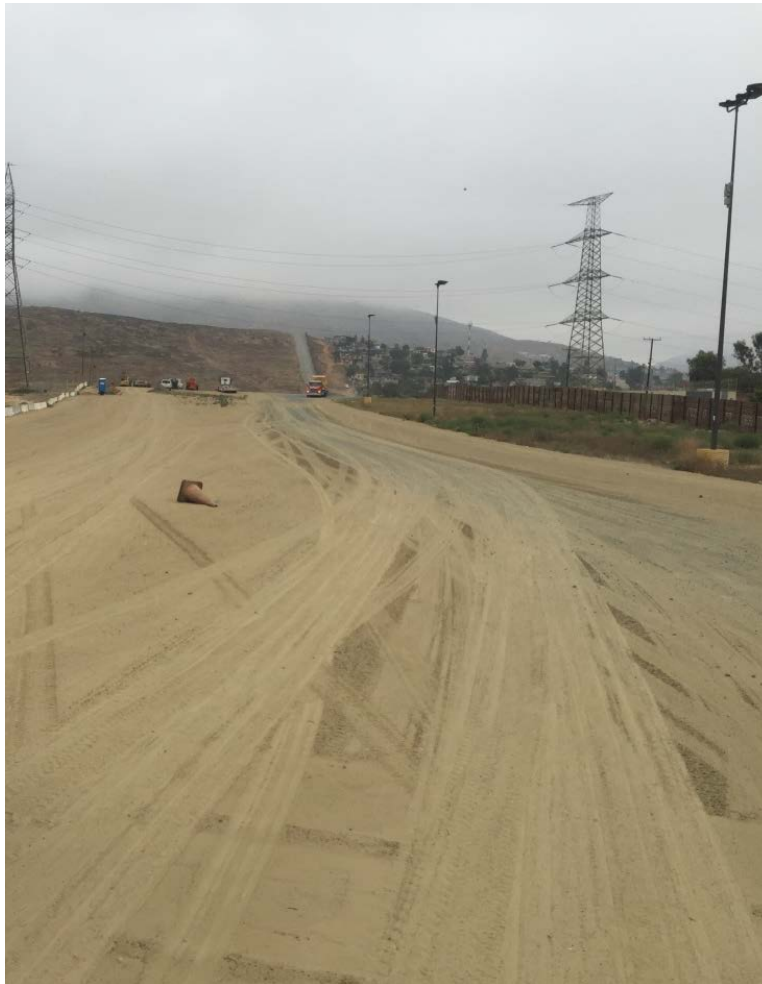
Table 1. Wildlife Observed During the SDC Border Wall Prototype Project Biological Resources Surveys.....	13
Table 2. Plants Observed During SDC Border Wall Prototype Project Biological Resources Surveys	14

LIST OF PHOTOGRAPHS

Photograph 1. SDC Border Wall Prototype Project construction area.....	1
Photograph 2. The 10-acre staging area (GSA Lot) is heavily disturbed with non-native grassland and shrub mix.....	8
Photograph 3. A heavily disturbed non-native wetland habitat adjacent to the 10-acre staging area.	8
Photograph 4. The proposed exit survey area consists of a developed roadway lined with disturbed non-native shrub and grass habitat.....	9
Photograph 5. The Guillen Easement is heavily disturbed and nearly devoid of vegetation. Disturbed non-native grassland habitat occurs to the east.	9
Photograph 6. The enforcement zone survey area connecting the construction footprint and access points is heavily disturbed and consists of non-native grassland habitat with mixed non-native forbs.	10
Photograph 7. The SDC Border Wall Prototype Project construction area, which is characterized as heavily disturbed non-native grassland and mixed herbaceous species habitat.	13
Photograph 8. Burrowing owl	16
Photograph 9. Coastal California gnatcatcher.....	17
Photograph 10. Quino checkerspot butterfly.....	17
Photograph 11. Typical SDFS.....	19
Photograph 12. Riverside fairy shrimp.....	20
Photograph 13. Typical vernal pool habitat.	20

1.0 INTRODUCTION

U.S. Customs and Border Protection (CBP) contracted Gulf South Research Corporation (GSRC), Contract Number GS10F0058K – Task Order HSBP1017F00134, to conduct biological resources surveys for the presence of sensitive and protected species, their suitable habitats, and general floral and faunal species occurrences within the proposed San Diego Sector (SDC) Border Wall Prototype project corridor (Project Corridor). The majority of the Project Corridor has been previously disturbed by border enforcement activities and construction of border enforcement infrastructure (Photograph 1). This survey report will assist CBP in minimizing impacts on natural resources as part of CBP's environmental stewardship.



Photograph 1. SDC Border Wall Prototype Project construction area.

2.0 LOCATION

The Project Corridor is approximately 2.1 miles in length, and is located between the Otay Mesa Land Port of Entry (LPOE) and Tin Can Hill in San Diego County, California, immediately north of the U.S./Mexico International Border (Figure 1). The Project Corridor is approximately 10 miles southeast of Chula Vista, California, and approximately 25 miles southeast of San Diego, California. The Project Corridor currently serves as a border enforcement zone with

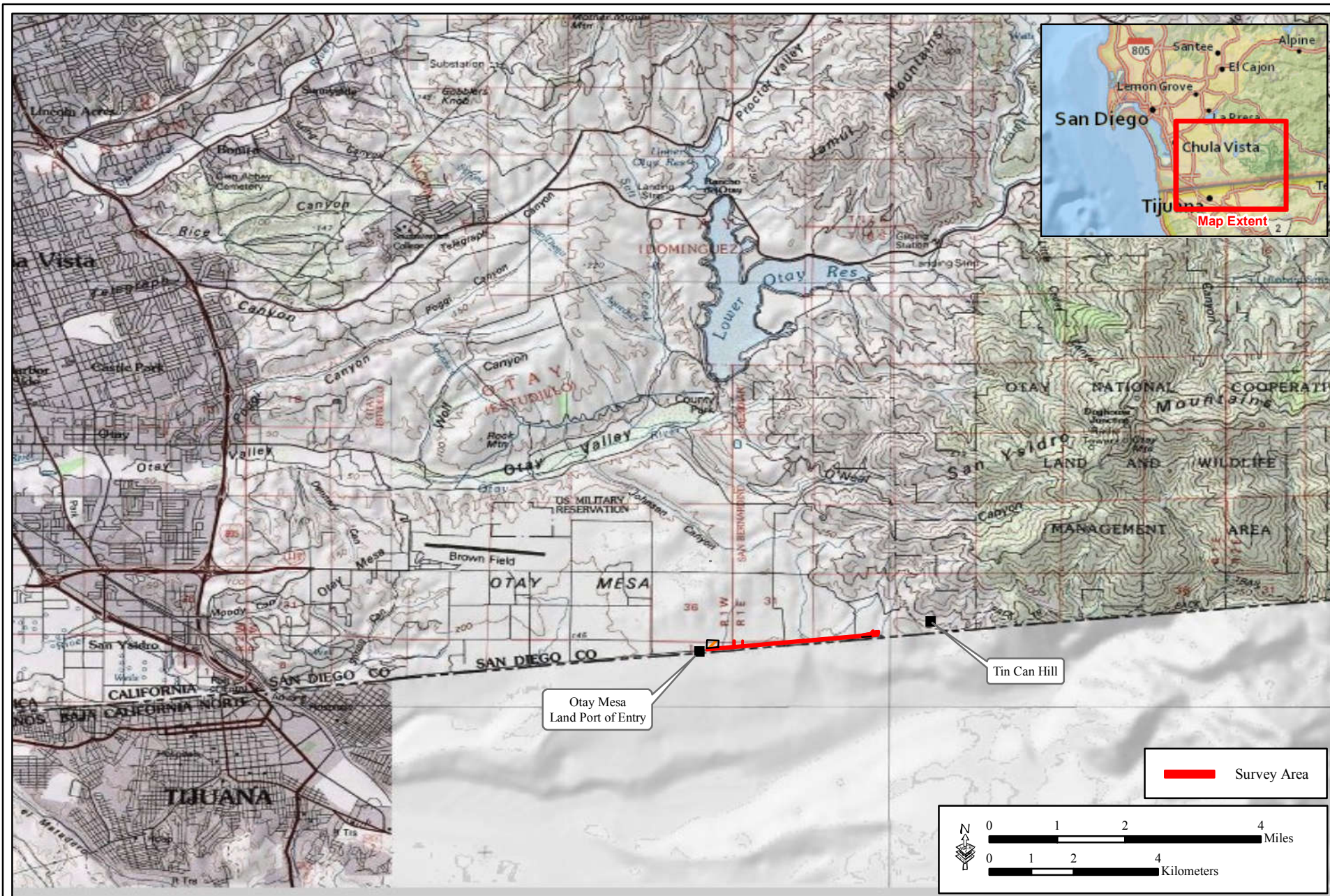


Figure 1. Project Location Map

primary and secondary border fences, an all-weather road, and border lighting and surveillance technology.

3.0 PROJECT CORRIDOR

The Project Corridor consists of a 10-acre staging area (General Service Administration [GSA] Lot), three access roads, the border wall prototype construction footprint (Construction Footprint), an all-weather road, and a staging area (concrete washout area) within the border enforcement zone (Figure 2). The Construction Footprint is an approximately 120-foot by 1,000-foot area located in the extreme eastern portion of the Project Corridor. Access to the Construction Footprint is along the border road from the west and via two north-south roads near the Otay Mesa LPOE. These access roads may need to be repaired or improved to support the transport of heavy trucks and equipment to the Construction Footprint.

4.0 SURVEY AREA

Biological resource surveys were performed across the entire Project Area (Figure 2). The Project Area is situated on a mesa and has very little relief. The landscape slopes down gradually from northeast to southwest. Elevations in the Project Area range from 520 feet to 570 feet above mean sea level.

All of the landscapes within the Project Corridor have been heavily disturbed by past and ongoing actions including, but not limited to, mowing, commercial development, vehicular traffic, and grading. The Project Corridor and Construction Footprint are bound to the north by disturbed non-native grassland and commercial development. The 10-acre staging area (GSA Lot) and access roads are surrounded by industrial and commercial buildings and border infrastructure.

5.0 SURVEY METHODS

On August 23, 2017, GSRC biologists (b) (6) surveyed approximately 54 acres encompassing the Project Corridor. An additional survey was conducted by (b) (6) on September 19, 2017, to include an additional 3.5 acres in the eastern part of the Project Area (Figure 2). The GSRC biologists conducted pedestrian transect surveys throughout the entire Project Area. GSRC prepared field notes during the biological surveys to document all findings and observations. GSRC utilized a handheld Trimble™ global positioning system (GPS) unit and digital cameras to gather images and locations of significant observations. Photographs were collected to show typical habitat conditions and to depict significant changes in plant communities and habitat types across the survey area. GSRC did not conduct species-specific protocol surveys for California gnatcatcher (*Polioptila californica* [CAGN]), Quino checkerspot butterfly (*Euphydryas editha quino* [QCB]), Otay tarplant (*Deinandra conjugens*), San Diego fairy shrimp (*Branchinecta sandiegonensis* [SDFS]), Riverside fairy shrimp (*Streptopcephalus woottoni* [RSFS]), or any other threatened or endangered species within the survey area.

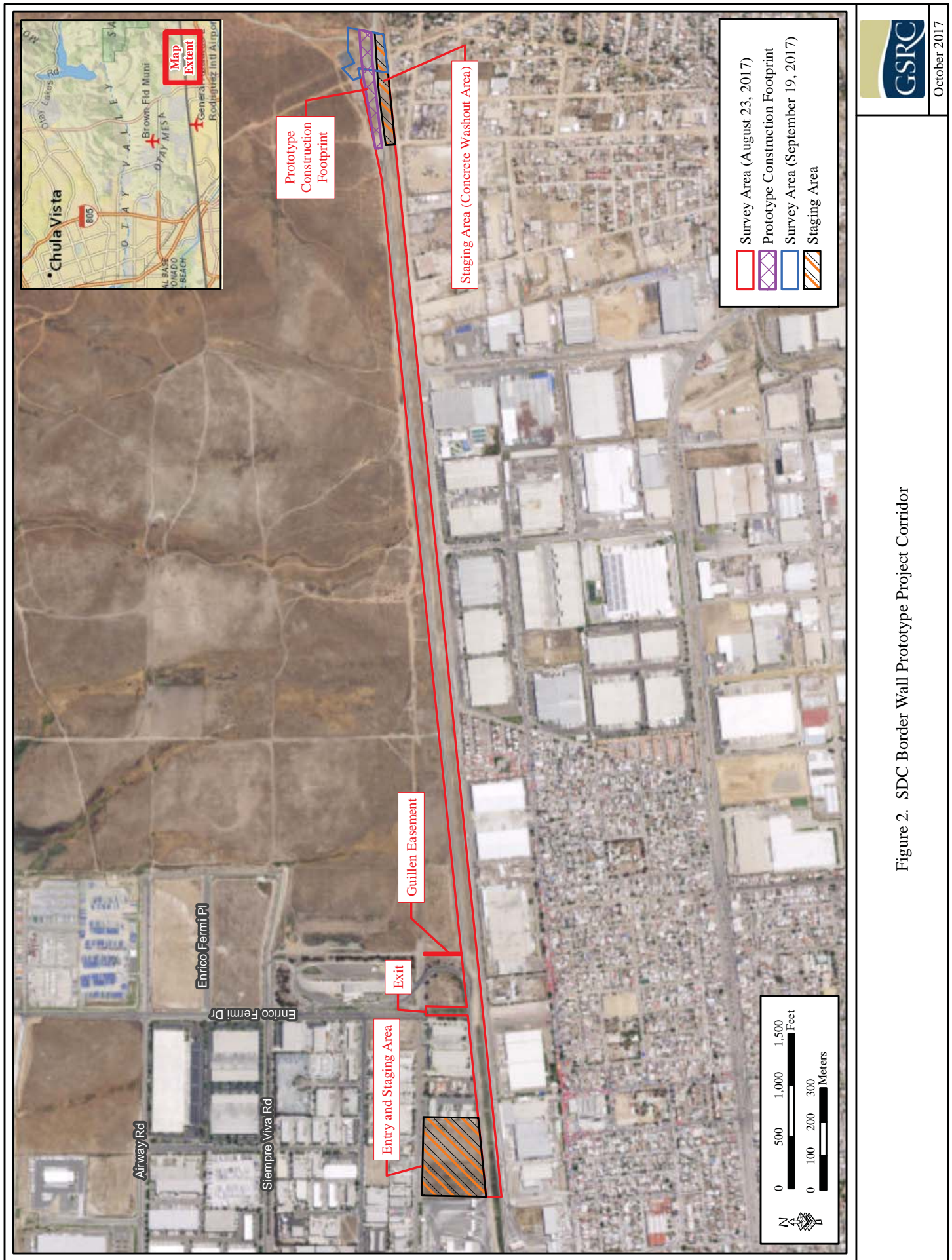


Figure 2. SDC Border Wall Prototype Project Corridor

6.0 RESULTS

6.1 Site-Wide Pedestrian Surveys

6.1.1 Site Conditions

All of the landscapes within the Project Area are heavily disturbed. There were no intact coastal sage brush communities or other native habitat communities observed in the survey area. Much of the Project Area is dominated by overgrown non-native grasses and scrubs, as well as forbs that had at one time been under a regular mowing regime. There are multiple paved roads and other border enforcement infrastructure throughout the Project Area.

Entry and 10-Acre Staging Area

The 10-acre staging area in the GSA Lot is heavily disturbed (Figures 3 and 4). Vegetation in the area is dominated by non-native species and includes Russian thistle (*Salsola tragus*), crown daisy (*Glebionis coronaria*), prickly lettuce (*Lactuca serriola*), soft brome (*Bromus hordeaceus*), compact brome (*B. madritensis*), and Italian rye grass (*Festuca perennis*) (Photograph 2). This area appears to have been graded, leveled, and mowed frequently. Immediately south of the GSA Lot, within the enforcement zone, is a low area that conveys some stormwater runoff. This area has hydrology and vegetation that is consistent with wetland habitat (Figure 4). This area too shows evidence of frequent mowing and other disturbances. Dominant plant species included Bermuda grass (*Cynodon dactylon*), cattails (*Typha* sp.), willow (*Salix* sp.), crimson fountaingrass (*Pennisetum setaceum*), tall flatsedge (*Cyperus eragrostis*), knotgrass (*Paspalum distichum*), and barnyard grass (*Echinochloa crus-galli*) (Photograph 3).

Exit Area

The Exit Area is an improved road extending from Enrico Fermi Road to the secondary border enforcement fence (Figures 3 and 4). The road is bound by industrial buildings to the west and a stormwater collection basin to the east. The vegetation community in the immediate vicinity of the access road is described as non-native grassland with mixed forbs and shrubs dominated by brome grass, Russian thistle, prickly lettuce, tamarisk (*Tamarisk* sp.), and Australian saltbush (*Atriplex semibaccata*). There is a line of large non-native Eucalyptus trees (*Eucalyptus* sp.) along the western edge of the access road (Photograph 4).

Guillen Easement Area

The Guillen Easement Area is an unpaved heavily disturbed roadway area trending south of Via de La Amistad to the secondary border fence (see Figures 3 and 4). This area is bound by industrial buildings and border enforcement infrastructure to the west, disturbed non-native grassland to the east, and the border enforcement zone to the south. The vegetation community in the immediate vicinity is described as non-native grassland with mixed forbs and shrubs. The survey area is completely disturbed and is nearly devoid of vegetation (Photograph 5).

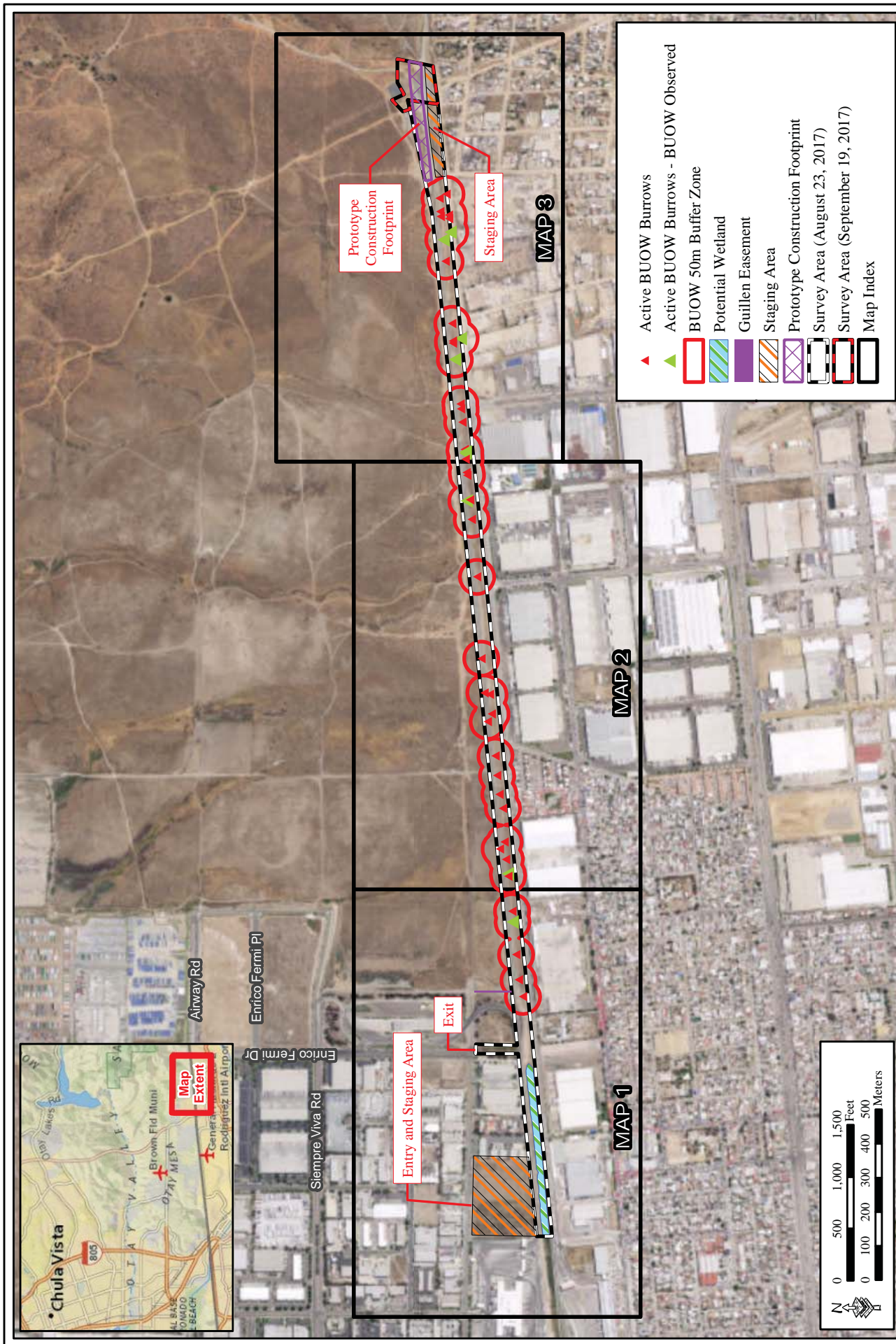


Figure 3. Biological Survey Findings Map Index

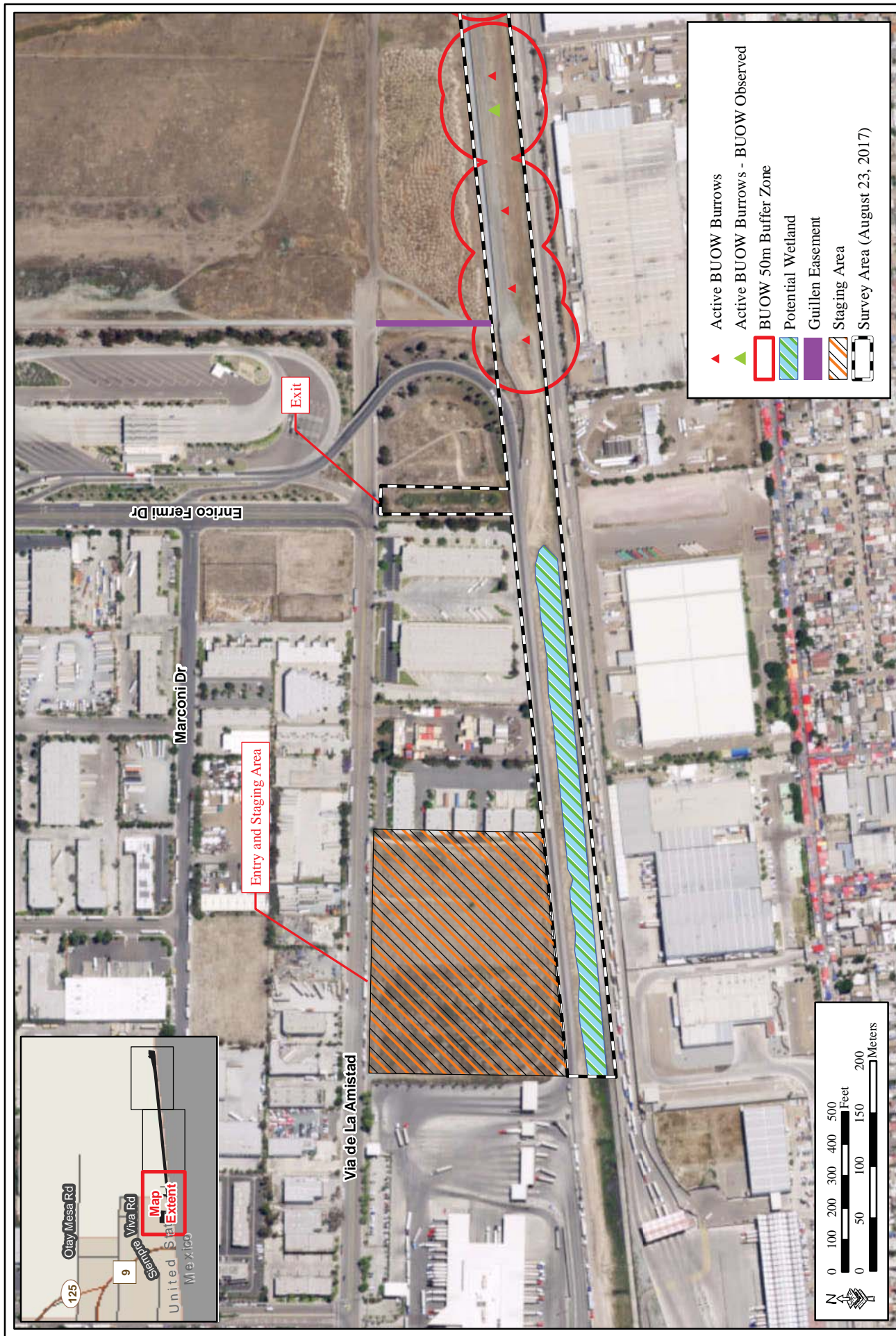


Figure 4. Biological Survey Findings Map 1



Photograph 2. The 10-acre staging area (GSA Lot) is heavily disturbed with non-native grassland and shrub mix.



Photograph 3. A heavily disturbed non-native wetland habitat adjacent to the 10-acre staging area.



Photograph 4. The proposed exit survey area consists of a developed roadway lined with disturbed non-native shrub and grass habitat.



Photograph 5. The Guillen Easement is heavily disturbed and nearly devoid of vegetation. Disturbed non-native grassland habitat occurs to the east.

Enforcement Corridor Area

The enforcement corridor is heavily disturbed and currently serves as a border enforcement zone with primary and secondary border fences, all-weather road, and border lighting and surveillance technology (see Figure 3 and Figure 5). Disturbances include frequent mowing of vegetation and vehicular traffic (Photograph 6). The vegetation community in the immediate vicinity is described as non-native grassland with mixed non-native forbs dominated by brome grass, Russian thistle, prickly lettuce, and Australian saltbush.



Photograph 6. The enforcement zone survey area connecting the construction footprint and access points is heavily disturbed and consists of non-native grassland habitat with mixed non-native forbs.

SDC Border Wall Prototype Project Footprint

The SDC Border Wall Prototype construction site consists of mostly cleared ground (see Figure 3 and Figure 6). The vegetation present in this area is located adjacent to the existing border wall and is dominated by Russian thistle, Australian saltbush, cheeseweed mallow (*Malva parviflora*), foxtail grass (*Hordeum* sp.), black mustard (*Brassica nigra*), and crown daisy (Photograph 7).

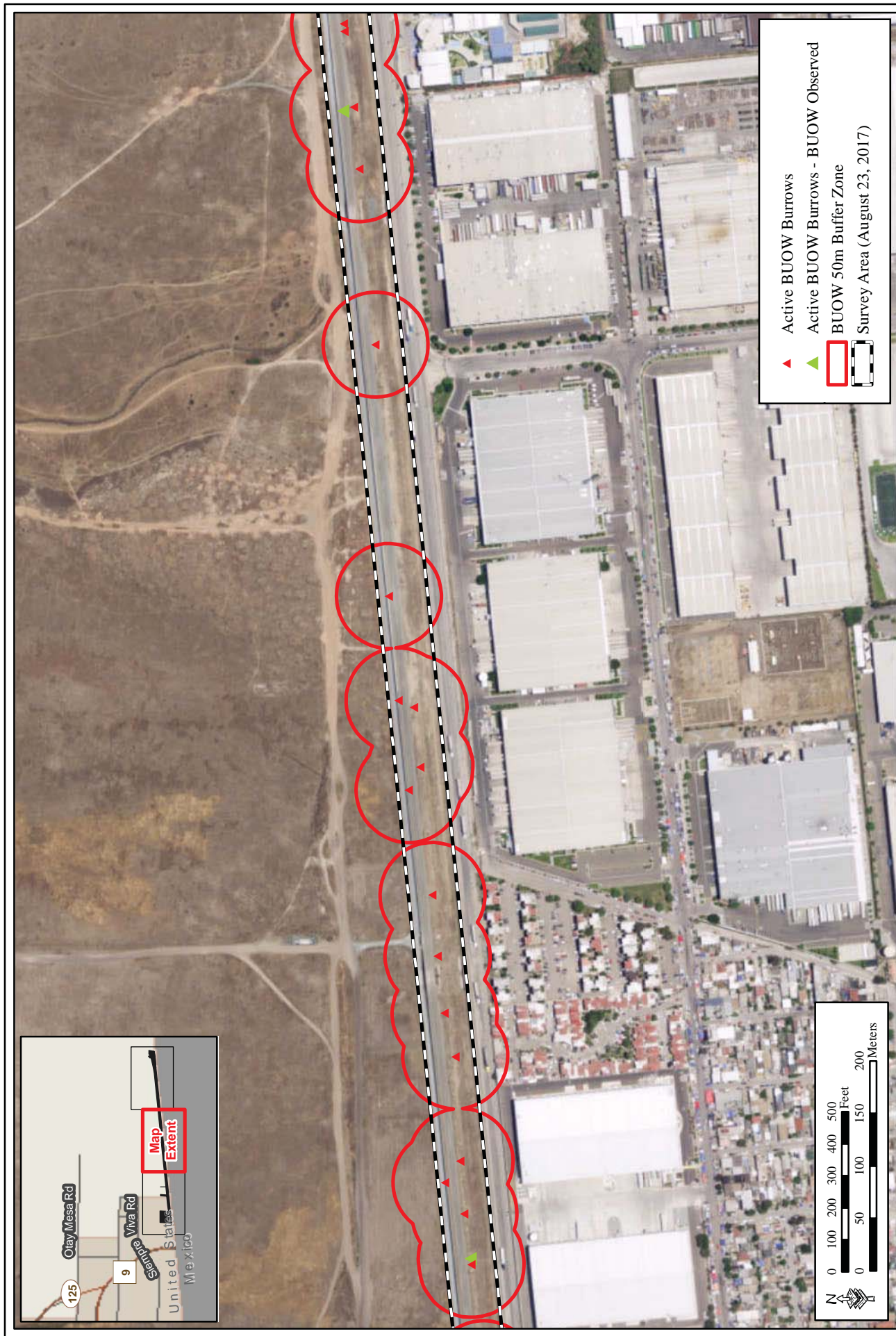


Figure 5. Biological Survey Findings Map 2

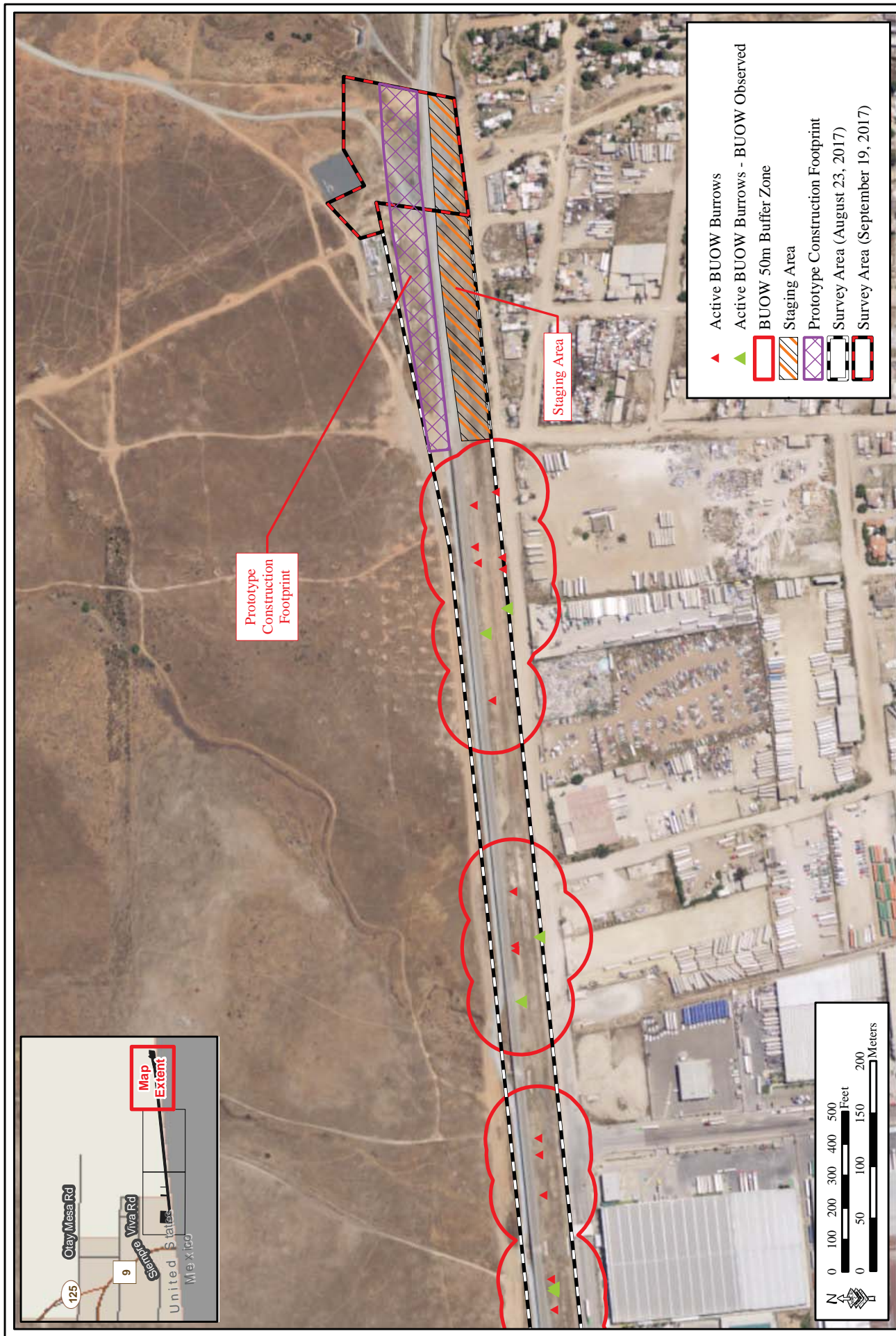


Figure 6. Biological Survey Findings Map 3



Photograph 7. The SDC Border Wall Prototype Project construction area, which is characterized as heavily disturbed non-native grassland and mixed herbaceous species habitat.

6.1.2 General Wildlife and Botanical Observations

GSRC biologists identified 12 species of wildlife, either through direct observations or through observations of signs such as tracks, scat, and burrows. GSRC identified 45 individual plant types during the site surveys. There were no Federally listed species observed. One California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC), western burrowing owl (*Athene cunicularia hypogea*, [BUOW]), was observed during the surveys. No California Native Plant Society (CNPS) SSC were observed (CDFW 2017, CNPS 2017). Summaries of wildlife and botanical observations can be found in Tables 1 and 2, respectively. No actively nesting birds or bird nests were observed within or adjacent to the Project Area.

Table 1. Wildlife Observed During the SDC Border Wall Prototype Project Biological Resources Surveys

Common Name	Scientific Name	Special Status	Type of Detection
American kestrel	<i>Falco sparverius</i>	None	Observed
House finch	<i>Haemorhous mexicanus</i>	None	Observed, Heard
Common raven	<i>Corvus corax</i>	None	Observed
European starling	<i>Sturnus vulgaris</i>	None	Observed
Western burrowing owl	<i>Athene cunicularia hypogea</i>	CDFW SSC	Observed
Red-tailed hawk	<i>Buteo jamaicensis</i>	None	Observed

Table 1, continued

Common Name	Scientific Name	Special Status	Type of Detection
Northern mockingbird	<i>Mimus polyglottos</i>	None	Observed
Say's phoebe	<i>Sayornis saya</i>	None	Observed
Side-blotched lizard	<i>Uta stansburiana</i>	None	Observed
Coyote	<i>Canis latrans</i>	None	Scat, tracks
California ground squirrel	<i>Spermophilus beecheyi</i>	None	Burrows
Audubon's cottontail	<i>Sylvilagus audubonii</i>	None	Observed

SSC=Species of Special Concern
Source: GSRC and CDFW (2017)

Table 2. Plants Observed During SDC Border Wall Prototype Project Biological Resources Surveys

Common Name	Scientific Name	Special Status CNPS/ESA
Ragweed	<i>Ambrosia psilostachya</i>	None
Menzies' fiddleneck	<i>Amsinckia menziesii</i>	None
California sagebrush	<i>Artemisia californica</i>	None
Russian thistle	<i>Salsola tragus</i>	None
Australian saltbush	<i>Atriplex semibaccata</i>	None
Wild oat	<i>Avena fatua</i>	None
Desert broom baccharis	<i>Baccharis sarothroides</i>	None
Black mustard	<i>Brassica nigra</i>	None
Foxtail brome	<i>Bromus madritensis</i>	None
Island morning glory	<i>Calystegia macrostegia</i>	None
Tocalate	<i>Centaurea melitensis</i>	None
Tall flatsedge	<i>Cyperus eragrostis</i>	None
Doveweed	<i>Croton setigerus</i>	None
Bermuda grass	<i>Cynodon dactylon</i>	None
Jimsonweed	<i>Datura wrightii</i>	None
Barnyard grass	<i>Echinochloa crus-galli</i>	None
Spikerush	<i>Eleocharis</i> sp.	None
Bush sunflower	<i>Encelia californica</i>	None
California buckwheat	<i>Eriogonum fasciculatum</i>	None
Mediterranean stork's bill	<i>Erodium botrys</i>	None
Redstem stork's bill	<i>Erodium cicutarium</i>	None
Italian rye grass	<i>Festuca perennis</i>	None
Sweet fennel	<i>Foeniculum vulgare</i>	None
Crown daisy	<i>Glebionis coronaria</i>	None
Common sunflower	<i>Helianthus annuus</i>	None
Telegraph weed	<i>Heterotheca grandiflora</i>	None
Smooth cat's ear	<i>Hypochaeris glabra</i>	None
Menzies' goldenbush	<i>Isocoma menziesii</i>	None
Prickly lettuce	<i>Lactuca serriola</i>	None

Table 2, continued

Common Name	Scientific Name	Special Status CNPS/ESA
Cheeseweed mallow	<i>Malva parviflora</i>	None
Annual yellow sweetclover	<i>Melilotus indicus</i>	None
Tree tobacco	<i>Nicotiana glauca</i>	None
Knotgrass	<i>Paspalum distichum</i>	None
Crimson fountaingrass	<i>Pennisetum setaceum</i>	None
Willow	<i>Salix</i> sp.	None
Wild radish	<i>Raphanus sativus</i>	None
Castor bean	<i>Ricinus communis</i>	None
Curly dock	<i>Rumex crispus</i>	None
Silver nightshade	<i>Solanum elaeagnifolium</i>	None
Prickly sow thistle	<i>Sonchus asper</i> ssp. <i>asper</i>	None
Common sow thistle	<i>Sonchus oleraceus</i>	None
Wreath-plant	<i>Stephanomeria</i> sp.	None
Salt cedar	<i>Tamarix ramosissima</i>	None
Clover	<i>Trifolium</i> sp.	None
California fan palm	<i>Washingtonia filifera</i>	None

Source: GSRC and CNPS 2017

6.1.3 Sensitive Natural Resources

During the biological surveys, GSRC did not observe any protected species listed under the Endangered Species Act (ESA); however, one species (BUOW), a CDFW special status species, was observed numerous times. GSRC did identify one area that could potentially be a wetland but did not observe any potential vernal pools within the Project Area. Sensitive species and habitats with the potential to occur in or adjacent to the Project Area are discussed in the following sections.

6.1.3.1 Burrowing Owl

BUOW is listed as a CDFW SSC. The BUOW is a small, brown-colored bird that inhabits open areas containing mammal burrows within sparsely vegetated arid and semi-arid environments such as native prairies, pastures, fallow fields, and even urban environments such as campuses, golf courses, and airports (Photograph 8). The BUOW occurs throughout much of California where suitable habitats exist. They are opportunistic feeders and will prey on a variety of arthropods, small mammals, birds, amphibians, and reptiles. BUOWs require small mammal burrows or similar structures for rearing and fledging young and for refuge. On August 23, 2017, GSRC biologists observed approximately 19 BUOWS and 37 active BUOW burrows in the enforcement zone corridor between the SDC Border Wall Prototype construction area and the construction exit (see Figures 3, 4, 5, and 6). Of the 19 BUOWs observed, 12 were observed at burrow entrances. An absolute count of BUOWs was difficult to obtain as a result of multiple owls flying up and down the survey corridor. The locations of all active burrows and burrows with owls observed were recorded with a GPS unit. CDFW recommends a 50-meter buffer around active BUOW burrows during the non-breeding season (September 1 through January 31) (CDFG 1995, California Burrowing Owl Consortium [CBOC] 1993) (see Figures 3, 4, 5, and 6).



Photograph 8. Burrowing owl

6.1.3.2 Coastal California Gnatcatcher (CAGN)

The coastal California gnatcatcher (*Poliophtila californica*, [CAGN]) is a small non-migratory passerine that occurs in coastal sage scrub and coastal succulent scrub communities along the Pacific coast of southern California and northern Baja California, Mexico (Photograph 9). The CAGN was Federally listed as threatened under the ESA on March 20, 1993 (USFWS 1993a). Critical Habitat was designated for this species in 2000 and revised in 2007. The Project Area is within 1 mile of designated Critical Habitat for CAGN (Figure 7). No CAGN or suitable habitat for CAGN were observed within or adjacent to the Project Area.

6.1.3.3 Quino Checkerspot Butterfly

The Quino checkerspot butterfly (*Euphydryas editha quino*, [QCB]) is Federally listed as endangered (USFWS 1997a) (Photograph 10). The QCB is found in several plant communities, from scrub on coastal bluffs, coastal sage, chaparral, and oak woodlands to desert pinyon-juniper woodlands. However, it is only found in openings within those plant communities having a sufficient cover of larval food plants and annual forbs that provide nectar for adults. Adults tend to disperse from late February through April.



Photograph 9. Coastal California gnatcatcher (Photograph Credit: USFWS).



Photograph 10. Quino checkerspot butterfly.

The eastern portion of the Project Area extends into designated Critical Habitat for QCB (see Figure 7) (USFWS 2008). No QCBs were observed during the biological resource surveys, and no individuals of the QCB host plant, California plantain (*Plantago erecta*), were observed within or adjacent to the project boundary.

6.1.3.4 San Diego Fairy Shrimp

The San Diego fairy shrimp (*Branchinecta sandiegonensis*, [SDFS]) was Federally listed as endangered on February 3, 1997 (USFSW 1997b). The SDFS is a small aquatic crustacean that is generally restricted to vernal pools in southern California and northwestern Baja California (Photograph 11). The Project Area extends into designated Critical Habitat for SDFS (see Figure 7) (USFWS 2007). No SDFS were observed on the site during the investigation and no vernal pool habitat was observed.



Photograph 11. Typical SDFS (Photograph Credit: Aaron Ambos)

6.1.3.5 Riverside Fairy Shrimp

The Riverside fair shrimp (RSFS) was Federally listed as endangered on August 3, 1993 (USFWS 1993b). The RSFS is a small aquatic crustacean that is generally restricted to deeper vernal pools that retain water for extended periods (Photograph 12). Critical Habitat for RSFS occurs within 1.0 mile of the Project Area (see Figure 7) (USFWS 2012). No RSFS were observed on the site during the investigation, and no vernal pool habitat was detected within the Project Area.



Photograph 12. Riverside fairy shrimp (Photograph Credit: USFWS).

6.1.3.6 Vernal Pools

Vernal pools are a unique and ecologically important habitat type. Vernal pools are a type of temporary wetland that consists of depressions in areas where a hard underground layer prevents rainwater from draining downward (Photograph 13). Rainwater typically fills the pools in winter and spring and gradually evaporates from late spring to summer. Vernal pools are some of the most ecologically important and distinct habitats in California, supporting a diversity of flora and fauna, including species found only in these habitats such as San Diego mesa mint (*Pogogyne abramsii*), SDFS, and RSFS. No vernal pools were observed during the biological resources surveys of the Project Area. However, vernal pools are known to occur north of the Project Area.



Photograph 13. Typical vernal pool habitat.

7.0 CONCLUSION AND DISCUSSION

The habitat within and adjacent to the Project Area is heavily disturbed and dominated by non-native plant species.

- No suitable habitat for CAGN was observed within or adjacent to the Project Area. However, the Project Area is within 1 mile of designated Critical Habitat for CAGN. The observance of general best management practices (BMPs) during the project would eliminate any potential for impacts on CAGN and its designated Critical Habitat.
- The eastern portion of the Project Area extends into designated QCB Critical Habitat. No QCB or their primary host plants were observed during the surveys. The observance of general BMPs during the project would eliminate any potential for impacts on the QCB and its designated Critical Habitat.
- The Project Area extends into SDFS designated Critical Habitat and within 1 mile of designated Critical Habitat for RSFS; however, no SDFS or RSFS were observed during the surveys, and no fairy shrimp habitat (i.e., vernal pools) was observed within the Project Area. Adherence to basic BMPs during the project would eliminate the potential for any impacts on SDFS and RSFS and their designated Critical Habitat.
- There was no evidence of vernal pool habitat present in the Project Area; however, vernal pools are known to occur north of the Project Area. Adherence to basic BMPs during the project would eliminate the potential for any impacts on vernal pool habitats.
- GSRC biologists identified a potential jurisdictional wetland area south of the entry and GSA Lot within the border enforcement zone. This area should be avoided during construction activities; therefore, no impacts on wetlands would occur.
- GSRC biologists identified multiple active BUOW burrows and BUOWs within the border enforcement zone. These areas were mapped and given a 50-meter buffer zone. Adherence to basic BMPs during the project should eliminate the potential for any impacts on BUOWs present in the Project Area. To avoid disturbance of the BUOWs and BUOW burrows, care should be taken to keep all construction activity and equipment staging outside of the 50-meter BUOW buffer zones. Construction traffic through this area should be limited to the all-weather road, and traffic should be restricted to 25 miles per hour. All construction personnel should be made aware of the protected status of BUOWs and general knowledge of this species identification and biology prior to admittance to the site.

8.0 REFERENCES

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