SAN DIEGO GAS & ELECTRIC COMPANY AND SOUTHERN CALIFORNIA GAS COMPANY'S

PIPELINE SAFETY & RELIABILITY PROJECT
BIOLOGICAL RESOURCES TECHNICAL REPORT ADDENDUM
ALTERNATIVE ROUTES

SEPTEMBER 2017

PREPARED FOR:

SDGE
A Sempra Energy utility®

SoCalGas
A Sempra Energy utility

PREPARED BY:

INSIGNIA ENVIRONMENTAL

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1 – INTRODUCTION

San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas)[1] filed a Proponent's Environmental Assessment (PEA) on September 30, 2015, and a PEA Supplement on March 20, 2016, for a Certificate of Public Convenience and Necessity to construct and operate the proposed Pipeline Safety & Reliability Project (Proposed Project) (Insignia 2015b). On September 29, 2015, Insignia Environmental (Insignia) submitted a Biological Resources Technical Report (BRTR) that summarized the 2015 biological resources assessment results for the Proposed Project (Insignia 2015a). Following the submittal of the report, the California Public Utilities Commission (CPUC), the United States (U.S.) Fish and Wildlife Service (USFWS), and the California Department of Fish and Wildlife (CDFW)[2] requested additional biological resources data for three route segment alternatives and one alternative route.

In 2017, Insignia biologists conducted a biological resources assessment of the alternative routes. This approximately 1,085-acre area is referred to hereinafter as the Addendum Biological Resources Survey Area (BRSA). Location details of the Addendum BRSA are provided in Section 1.2 Survey Location and Setting. This BRTR Addendum (Addendum) provides the survey methods and results of the biological resources assessment for the three route segment alternatives and one alternative route, as well as a portion of the Spring Canyon Firebreak Route Segment Alternative that was surveyed in 2015, but not reported in the BRTR.

1.0 BACKGROUND

The purpose of this Addendum is to satisfy the CPUC request in the spring of 2017 for additional biological resources surveys. The CPUC requested biological resources data for the following three route segment alternatives:

- Kearny Villa Road,
- West of Aqueduct Road, and
- Spring Canyon Firebreak.

The CPUC also requested data for the Scripps Poway Parkway, Sycamore Canyon, and Santee portion of the Rainbow to Santee Non-Miramar Alternative (Non-Miramar Alternative). The Applicants proposed using existing data for the Non-Miramar Alternative; however, the CPUC and Wildlife Agencies requested 2017 field surveys of the three route segment alternatives and the Non-Miramar Alternative.

1.1 PROJECT OVERVIEW

The Proposed Project involves construction, operation, and maintenance of an approximately 47-mile-long, 36-inch-diameter natural gas transmission pipeline that will carry natural gas from the existing Rainbow Metering Station to the pipeline's terminus on Marine Corps Air Station

[1] SDG&E and SoCalGas are hereinafter referred to as "the Applicants."
[2] The USFWS and the CDFW are hereinafter referred to as "the Wildlife Agencies."

(MCAS) Miramar. A more detailed description of the Proposed Project is provided in the PEA and PEA Supplement.

1.2 SURVEY LOCATION AND SETTING

The Addendum BRSA is located in San Diego County, California; and it crosses the cities of Poway, San Diego, and Santee, as well as unincorporated areas of San Diego County. The Addendum BRSA is located within three U.S. Geological Survey 7.5-minute series quadrangles, including the Poway, La Mesa, and San Vicente Reservoir quadrangles.

The Addendum BRSA is composed of several smaller BRSAs related to each alternative, which are described in the following subsections and presented in Table 1: Addendum BRSA Location and Area, Figure 1: Alternatives Overview Map, and Attachment A: Vegetation Communities Map.

Table 1: Addendum BRSA Location and Area

BRSA	Location	Approximate Area (acres)
Route Segment Alternatives		
Kearny Villa Road	Milepost (MP) 43.0 west along Pomerado Road, west under Interstate (I-) 15, and south along Kearny Villa Road to an existing pipe connection within MCAS Miramar	189.4
West of Aqueduct Road	West of the Proposed Project route within MCAS Miramar	70.5
Spring Canyon Firebreak[3]	East along Spring Canyon Road, south along an unnamed dirt road that west of Spring Canyon to State Route (SR-) 52[4]	276.0
Alternative		
Non-Miramar Alternative	Scripps Poway Parkway to the City of Santee	549.1

1.2.0 Route Segment Alternatives

Kearny Villa Road Route Segment Alternative

The Kearny Villa Road Route Segment Alternative BRSA is approximately four miles in length, and crosses the City of San Diego and unincorporated San Diego County. The route segment alternative leaves the Proposed Project near MP 43.0, follows Pomerado Road west, and then travels northwest through private property. The route segment alternative then heads west under

[3] Insignia surveyed the northern two-thirds of the route segment alternative in 2015 and the southern one-third of the route segment alternative in 2017.

[4] This route segment alternative continues through Mission Trails Regional Park south of SR-52; however, that portion of the route was not surveyed in 2017.

I-15 to Kearny Mesa Road, south to Miramar Road, and then west until its intersection with Kearny Villa Road. The BRSA continues south along Kearny Villa Road, then southeast through MCAS Miramar to an existing pipe connection. The alternative terminus veers west off of Kearny Villa Road at Harris Plant Road. The alignment for this route segment alternative is primarily located within Kearny Villa Road.

West of Aqueduct Road Route Segment Alternative

The West of Aqueduct Road Route Segment Alternative BRSA is located approximately 100 feet west of the Proposed Project route that continues through MCAS Miramar. The approximately 7.5-mile route segment alternative begins on the northern boundary of MCAS Miramar that is west of Aqueduct Road and includes a portion of the University of California, San Diego's Elliott Chaparral Reserve. The alignment for this route segment alternative is located primarily within undeveloped native vegetation.

Spring Canyon Firebreak Route Segment Alternative

The Spring Canyon Firebreak Route Segment Alternative BRSA is approximately seven miles in length. The route segment alternative leaves the Proposed Project near MP 40.3, continues west along Spring Canyon Road for approximately 2.2 miles, and then heads south along an unnamed, unpaved road for approximately 4.8 miles. The route segment alternative continues through Mission Trails Regional Park and south of SR-52, but the BRSA ends just north of SR-52.[5] The alignment for this route segment alternative is primarily within paved and unpaved roads.

Rainbow to Santee Non-Miramar Alternative

The Non-Miramar Alternative would follow the northern portion of the Proposed Project from the Rainbow Metering Station to the north of MCAS Miramar, where the route would veer to the east, avoiding MCAS Miramar and traveling south until its termination in the City of Santee.

The Non-Miramar Alternative BRSA includes an approximately 13-mile segment[6] from Scripps Poway Parkway to its termination in the City of Santee. The segment begins at the intersection of Pomerado Road and Scripps Poway Parkway, travels along Scripps Poway Parkway for approximately 3.5 miles, and then heads southeast along Sycamore Canyon Road for approximately 0.4 mile. The segment then continues south over steep, rough terrain through Goodan Ranch Sycamore Canyon Preserve,[7] then south along Fanita Parkway and east of Santee Lakes to Carlton Oaks Drive. The segment heads west along Carlton Oaks Drive beyond West Hills Parkway and into an undeveloped, non-native field east of SR-52, where it ends at a pipeline terminus in the City of Santee. This segment would cross approximately six miles of privately owned land. The alignment for this alternative route is primarily within undeveloped native vegetation.

[5] The portion of the route segment alternative that travels south of SR-52 was not surveyed in 2017. In addition, Insignia surveyed the northern two-thirds of the route segment alternative in 2015 and the southern one-third in 2017.

[6] The 2017 segment was updated since the PEA's submittal in 2015.

[7] The Goodan Ranch Sycamore Canyon Preserve is within a conservation easement.

2 – METHODOLOGY

2.0 HABITAT ASSESSMENT

Prior to conducting field surveys, a list of potentially occurring special-status plant and wildlife species was developed by compiling all species that the California Natural Diversity Database (CNDDB) (CDFW 2017a) documents as occurring within one mile[8] of the Proposed Project, as well as special-status species listed as occurring within MCAS Miramar (U.S. Marine Corps [USMC] 2014) and special-status wildlife listed as occurring within Goodan Ranch Sycamore Canyon Preserve (City of San Diego 2013). The results of the CNDDB search and MCAS Miramar and Goodan Ranch Sycamore Canyon Preserve special-status species lists were evaluated for species' potential to occur within the BRSA. The plant and wildlife species lists were updated based on 2017 field conditions and the lists in the Proposed Project BRTR. Special-status wildlife species—along with their life history, listing status, and potential to occur within the alternatives—are presented in Attachment B: Special-Status Wildlife Species with the Potential to Occur. All potential to occur designations are consistent with the descriptions presented in Section 3.0.1 Special-Status Species in the BRTR. Special-status plant species—along with their life history, listing status, and potential to occur within the alternatives—are presented in Attachment B: Special-Status Plant Species with the Potential to Occur in the Proposed Project's Special-Status Plant Species Survey Report Addendum.

Insignia biologists Nick Wagner and Melissa Tu conducted the surveys of the Addendum BRSA from May to July 2017. During the surveys, the biologists focused their habitat assessment on natural areas where ground disturbance is proposed, walking much of the survey area except areas that were too steep to traverse and areas that were developed (e.g., public roads, private homes, or businesses). Areas that were too steep to traverse were assessed using binoculars and aerial imagery. During the habitat assessment, the biologists mapped vegetation communities, surveyed for hydrological features (e.g., potentially jurisdictional drainages, wetland features, and vernal pools[9]), assessed habitat for special-status plant and wildlife species, and documented plant and wildlife species observed within the survey area. The presence of diagnostic habitat elements was noted, and it was determined that there was potential for special-status plant and wildlife species to occur. A list of wildlife species observed during the 2017 surveys is provided in Attachment C: Wildlife Species Observed during the 2017 Surveys.

Table 2: Survey Schedule and Conditions presents the dates and times of the surveys, as well as the weather conditions.

[8] The use of a one-mile buffer is intended to capture all known occurrences within the vicinity and surrounding areas of the Proposed Project. A larger buffer typically includes many species that will not actually occur within the Proposed Project area, and a smaller buffer may omit species with larger geographic ranges from the potential to occur lists.

[9] All vernal pools described in this report are considered potential vernal pools. Potential vernal pools that were mapped contained vernal pool indicator plant species. Vernal pool indicator plant species are listed in Section 3.3.0: Vernal Pool Mapping in the Preliminary Wetlands and Waters Assessment Addendum (Insignia 2017b). However, due to the limitations described in Section 4.1.1: Wetlands Mapping of the Preliminary Wetlands and Waters Assessment (Insignia 2015c), no soil pits were dug. Therefore, soil composition could not be verified, and potential vernal pools could not be confirmed.

Table 2: Survey Schedule and Conditions

Biologist(s)	BRSA	Dates
Melissa Tu and Nick Wagner	West of Aqueduct Road Route Segment Alternative	May 1, 2017
	West of Aqueduct Road Route Segment Alternative	May 2, 2017
	Spring Canyon Firebreak Route Segment Alternative	May 3, 2017
	Kearny Villa Road Route Segment Alternative	May 4, 2017
	Kearny Villa Road Route Segment Alternative	May 5, 2017
	Kearny Villa Road and West of Aqueduct Road Route Segment Alternatives	May 10, 2017
	West of Aqueduct Road Route Segment Alternative	May 11, 2017
	Kearny Villa Road and West of Aqueduct Road Route Segment Alternatives	May 12, 2017
	Spring Canyon Firebreak Route Segment Alternative (southern portion)[10]	May 16, 2017
	Spring Canyon Firebreak Route Segment Alternative (southern portion)	May 17, 2017
Nick Wagner	Non-Miramar Alternative	May 19, 2017
Melissa Tu and Nick Wagner	Non-Miramar Alternative	May 22, 2017
	Non-Miramar Alternative	May 23, 2017
Melissa Tu	Non-Miramar Alternative	May 24, 2017
Melissa Tu and Nick Wagner	Non-Miramar Alternative	May 25, 2017
Melissa Tu and Nick Wagner	Kearny Villa Road Route Segment Alternative	May 26, 2017
Melissa Tu and Nick Wagner	Non-Miramar Alternative	May 30, 2017
Melissa Tu and Nick Wagner	Non-Miramar Alternative	May 31, 2017
Melissa Tu and Nick Wagner	West of Aqueduct Road Route Segment Alternative	June 9, 2017
Melissa Tu and Nick Wagner	Non-Miramar Alternative	June 13, 2017
Melissa Tu	West of Aqueduct Road Route Segment Alternative	July 4, 2017
Melissa Tu and Nick Wagner	West of Aqueduct Road Route Segment Alternative	July 7, 2017
Nick Wagner	Kearny Villa Road Route Segment Alternative	July 10, 2017
Melissa Tu and Nick Wagner	West of Aqueduct Road Route Segment Alternative	July 11, 2017
Melissa Tu and Nick Wagner	Non-Miramar Alternative	July 12, 2017
Melissa Tu	Non-Miramar Alternative	July 13, 2017
Melissa Tu	Non-Miramar Alternative	July 14, 2017

[10] Insignia surveyed the northern two-thirds of the Spring Canyon Firebreak Route Segment Alternative in 2015.

Biologist(s)	BRSA	Dates
Melissa Tu	Spring Canyon Firebreak Route Segment Alternative (southern portion)	July 17, 2017
Melissa Tu	Non-Miramar Alternative	July 18, 2017
Melissa Tu	Non-Miramar Alternative	July 19, 2017

2.1 VEGETATION MAPPING

Vegetation within the northern portion of the Spring Canyon Firebreak Route Segment Alternative BRSA was previously mapped in 2015, and the results are included in this Addendum. The northern portion begins approximately 1.5 miles north of SR-52 and ends at the intersection of Spring Canyon Road and Pomerado Road.

Vegetation mapping for the remaining Addendum BRSA was conducted concurrently with the habitat assessment in the spring and summer of 2017. Biologists noted vegetation communities and boundaries on a hard-copy field map printed at a scale of one foot to 200 feet. All boundaries and vegetation community names were later recorded as a geographic information system shapefile using ArcMap software. Sensitive natural communities were also recorded.

The vegetation classification conforms to Oberbauer et al. (2008). Vegetation community descriptions are also derived from Oberbauer et al. (2008) with additional information on wildlife habitat preferences from CDFW's Wildlife Habitats – California Wildlife Habitat Relationship System (CDFW 2017b). Vegetation codes provide a hierarchy for organizing vegetation communities by physiognomic group (e.g., woodlands) and general habitat type (e.g., oak woodland). Definitions of terms applying to species cover, species frequency stratum cover, and the distinction between stratum (i.e., tree, shrub, and herbaceous) classes conform to the Vegetation Classification Manual for Western San Diego County (San Diego Association of Governments [SANDAG] 2011). Key terms (e.g., dominant, trace, etc.) used in the vegetation descriptions are also from the Vegetation Classification Manual for Western San Diego County. The definitions for sensitive natural communities are provided in Section 3.0.0 Sensitive Natural Communities in the BRTR.

3 – RESULTS

The following subsection describes the results of the Addendum BRSA surveys and includes a list of the vegetation communities mapped; the area covered by each vegetation community within the Addendum BRSA; wildlife species observed during the surveys; and an analysis of the potential for special-status wildlife species to occur.

Attachment A: Vegetation Communities Map shows the Addendum BRSA and the vegetation communities within the Addendum BRSA for the route segment alternatives and the alternative route.

3.0 VEGETATION COMMUNITIES AND LAND COVER TYPES

In addition to disturbed and developed/urban areas, 27 vegetation communities were documented within the Addendum BRSA during the 2017 surveys. Table 3: Vegetation Communities and Area within the Addendum BRSA presents the approximate areas of vegetation communities observed within the Addendum BRSA.

Table 3: Vegetation Communities and Area within the Addendum BRSA

General Habitat Type	Vegetation Community or Other Land Cover Type	Approximate Area within the BRSA (acres)
Kearny Villa Road Route Segment Alternative		
Disturbed or Developed Habitat	Disturbed Habitat	4.4
	Urban/Developed	78.1
Scrub and Chaparral	Diegan Coastal Sage Scrub*	3.7
	Diegan Coastal Sage Scrub (disturbed) *	6.4
	Diegan Coastal Sage Scrub: *Baccharis*-dominated*	28.9
	Diegan Coastal Sage Scrub: *Baccharis*-dominated (disturbed)*	28.0
	Southern Mixed Chaparral*	0.9
Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Non-Native Grassland (annual grassland)	19.2
	Vernal Pool*	0.2
	Freshwater Seep*	0.2
Bog and Marsh	Coastal and Valley Freshwater Marsh*	<0.1
	Emergent Wetland*	0.1
Riparian and Bottomland Habitat	Southern Riparian Woodland*	<0.1
	Southern Willow Scrub*	1.8
	Non-Vegetated Floodplain or Channel	1.7
Woodland	Eucalyptus Woodland	15.7
West of Aqueduct Road Route Segment Alternative		
Disturbed or Developed Habitat	Urban/Developed	0.7
Scrub and Chaparral	Diegan Coastal Sage Scrub*	4.3
	Diegan Coastal Sage Scrub (disturbed) *	10.8
	Southern Mixed Chaparral*	38.4
	Chamise Chaparral	10.1
	Coastal Sage-Chaparral Transition (disturbed)*	2.8
Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Non-Native Grassland (Annual Grassland)	2.0
	Vernal Pool*	<0.1

General Habitat Type	Vegetation Community or Other Land Cover Type	Approximate Area within the BRSA (acres)
Bog and Marsh	Coastal and Valley Freshwater Marsh*	<0.1
Riparian and Bottomland Habitat	Southern Riparian Woodland*	<0.1
	Mule Fat Scrub*	0.3
	Non-Vegetated Floodplain or Channel	0.9
Woodland	Eucalyptus Woodland	0.2
Spring Canyon Firebreak Route Segment Alternative		
Disturbed or Developed Habitat	Disturbed Habitat	10.2
	Urban/Developed	16.0
	Ornamental	0.1
Scrub and Chaparral	Diegan Coastal Sage Scrub*	12.6
	Diegan Coastal Sage Scrub (disturbed) *	47.7
	Diegan Coastal Sage Scrub (open) *	0.5
	Southern Mixed Chaparral*	114.5
	Chamise Chaparral	50.2
	Coastal Sage-Chaparral Transition*	22.9
Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Non-Native Grassland (Annual Grassland)	0.7
Riparian and Bottomland Habitat	Non-Vegetated Floodplain or Channel	<0.1
Woodland	Eucalyptus Woodland	0.7
Non-Miramar Alternative		
Disturbed or Developed Habitat	Disturbed Habitat	26.7
	Urban/Developed	193.5
	Intensive Agriculture – Dairies, Nurseries, Chicken Ranches	2.9
Scrub and Chaparral	Diegan Coastal Sage Scrub*	35.6
	Diegan Coastal Sage Scrub (disturbed) *	16.8
	Diegan Coastal Sage Scrub: *Baccharis*-dominated*	3.2
	Southern Mixed Chaparral*	172.2
	Coastal Sage-Chaparral Transition*	4.0

General Habitat Type	Vegetation Community or Other Land Cover Type	Approximate Area within the BRSA (acres)
Grasslands, Vernal Pools, Meadows, and Other Herb Communities	Valley Needlegrass Grassland*	2.2
	Non-Native Grassland (Annual Grassland)	52.1
	Vernal Pool*	<0.1
Bog and Marsh	Emergent Wetland*	1.1
Riparian and Bottomland Habitat	Southern Coast Live Oak Riparian Forest*	7.0
	Southern Riparian Woodland*	1.3
	Southern Riparian Woodland (disturbed)*	3.7
	Southern Willow Scrub*	3.4
	Southern Willow Scrub (disturbed) *	0.2
	Mule Fat Scrub*	0.2
	Fresh Water	5.1
	Non-Vegetated Floodplain or Channel	13.5
	Non-Native Riparian	<0.1
	Arundo-Dominated Riparian	1.2
Woodland	Eucalyptus Woodland	3.3

Notes: * = Sensitive natural community

Most vegetation communities and land cover types observed within the Addendum BRSA were also observed along the Proposed Project route and were presented in the Proposed Project BRTR. Descriptions of each vegetation community and land cover types are provided in the Proposed Project BRTR. Therefore, descriptions of each vegetation community and land cover type are not included in this Addendum. Section 5.1.0 Vegetation Community/Land Cover Descriptions in the Proposed Project BRTR provides a detailed description of each vegetation community and land cover type shown in Attachment A: Vegetation Communities Map.

Southern riparian woodland was not observed during the 2015 surveys and was not included in the Proposed Project BRTR, but was observed during the 2017 surveys. Southern riparian woodland consists of moderate-density, broad-leaf trees that are small in size and winter deciduous. The habitat is dominated by western sycamore (*Platanus racemosa*) and Fremont cottonwood (*Populus fremontii*). Other characteristic species include broom baccharis (*Baccharis sarothroides*), willows (*Salix* spp.), and elderberry (*Sambucus* spp.). These stands rarely form closed canopies. Southern riparian woodland occurs on major river systems where flood scour occurs and smaller major tributaries are present. Riparian forest habitats provide food, water, migration, and dispersal corridors; and escape, nesting, and thermal cover for an abundance of wildlife. At least 50 amphibians and reptiles are known to occur in lowland riparian systems. Many are permanent residents; others are transient or temporal visitors (CDFW 2017b). In general, riparian communities in Southern California support numerous aquatic insects, such as mayflies (Order *Ephemeroptera*), damsel flies (Suborder *Zygoptera*), and beetles (Order *Coleoptera*); terrestrial insects, such as mosquitos (Family *Culicidae*) and butterflies (Order *Lepidoptera*); native and introduced fish; amphibians and reptiles, such as tree frogs (Family *Hylidae*) and side-blotched lizard (*Uta stansburiana*); and breeding birds (USFWS 1989).

Disturbed southern riparian woodland stands were mapped where the presence of non-native species was noted in greater than trace amounts (e.g., greater than five percent). Non-native species within these stands included Mexican fan palm (*Washingtonia robusta*), canary island date palm (*Phoenix canariensis*), eucalyptus (*Eucalyptus* sp.), and salt cedar (*Tamarix ramosissima*).

The following subsections describe the locations of each vegetation community within each component of the Addendum BRSA.

3.0.0 Kearny Villa Road Route Segment Alternative

Disturbed and Developed Habitat

Developed lands comprised the majority of the Kearny Villa Road Route Segment Alternative BRSA. Developed lands were observed covering approximately 78.1 acres and included Pomerado Road, Kearny Villa Road, and Harris Plant Road, as well as large, urbanized areas near the intersection of Pomerado Road and Kearny Villa Road. Disturbed habitat accounted for approximately 4.4 acres and was observed in patches along Kearny Villa Road, as well adjacent to SR-163.

Scrub and Chaparral

stands accounted for approximately 56.9 acres within the Kearny Villa Road Route Segment Alternative. Coastal sage scrub – *Baccharis*-dominated stands were observed along Kearny

Villa Road and within MCAS Miramar. Coastal sage scrub accounted for approximately 10.1 acres and was observed on a north-facing slope approximately 360 feet northeast of the intersection of I-15 and Pomerado Road. Other stands of coastal sage scrub were observed near the intersection of Harris Plant Road and Kearny Villa Road and within MCAS Miramar. One stand of mixed chaparral was observed on a south-facing slope adjacent to an unnamed, intermittent drainage south of Harris Plant Road.

Grasslands, Vernal Pools, Meadows, and Other Herb Communities

Non-native grassland accounted for approximately 19.2 acres and was also observed in large stands along Kearny Villa Road, north of Pomerado Road, and along SR-163. Freshwater seeps were observed covering approximately 0.2 acre and were surrounded by eucalyptus woodland south of Pomerado Road, as well as within a depression located approximately 820 feet northeast of the intersection of Kearny Villa Road and Harris Plant Road. Vernal pools accounted for approximately 0.2 acre and were observed in low-lying areas along Kearny Villa Road and Harris Plant Road. Vernal pools were also observed in large complexes within MCAS Miramar on the north and south sides of H Avenue. Many of these depressions occurred in abandoned building foundations and other artificial depressions.

Bog and Marsh

Emergent wetlands accounted for approximately 0.1 acre and were observed along Kearny Villa Road, as well as within the stands of eucalyptus woodland south of Pomerado Road. One coastal and valley freshwater marsh was observed in a depression south of Harris Plant Road and covered less than 0.1 acre.

Riparian and Bottomland Habitat

Southern willow scrub accounted for approximately 1.8 acres and was observed adjacent to an unnamed intermittent drainage, approximately 0.3 mile north of the intersection of Kearny Villa Road and Miramar Way, as well as within a depression adjacent to the intersection of Kearny Villa Road and Harris Plant Road. One stand of southern riparian woodland was observed adjacent to San Clemente Canyon Creek on the east side of Kearny Villa Road and covered less than 0.1 acre.

Woodland

Eucalyptus woodland accounted for approximately 15.7 acres. Stands of eucalyptus woodland were observed west of the intersection of Pomerado Road and Avenue of Nations, north of Kearny Mesa Road, and adjacent to an unnamed intermittent drainage. Another large stand of eucalyptus woodland was observed adjacent to San Clemente Canyon Creek.

3.0.1 West of Aqueduct Road Route Segment Alternative

Disturbed or Developed Habitat

Green Farm Road and H Avenue comprised the only developed lands within the West of Aqueduct Road Route Segment Alternative. These covered approximately 0.7 acre.

Scrub and Chaparral

Chaparral comprised the majority of the West of Aqueduct Road Route Segment Alternative BRSA. Mixed chaparral accounted for approximately 38.4 acres, and chamise chaparral accounted for approximately 10.1 acres. Mixed chaparral and chamise chaparral were observed on many of the hillsides and ridges within the West of Aqueduct Road Route Segment Alternative BRSA. Coastal sage scrub accounted for approximately 15.1 acres within the West of Aqueduct Road Route Segment Alternative BRSA. These stands were mostly observed on north-facing slopes and adjacent to San Clemente Canyon Creek.

Grasslands, Vernal Pools, Meadows, and Other Herb Communities

Non-native grassland covered approximately two acres. These stands were observed in areas that had potentially burned or suffered physical disturbance due to access road maintenance. Non-native grassland was also observed within and adjacent to the floodplains of several ephemeral drainages. Vernal pools accounted for less than 0.1 acre and were observed on a hilltop within the University of California, San Diego's Elliott Chaparral Reserve. Vernal pools were also observed on a ridge approximately 0.3 mile north of Green Farm Road and on a hilltop approximately one mile south of H Avenue.

Bog and Marsh

One coastal and valley freshwater marsh was observed adjacent to an ephemeral drainage located approximately 580 feet south of the northern boundary of the West of Aqueduct Road Route Segment Alternative BRSA. This marsh covered less than 0.1 acre.

Riparian and Bottomland Habitat

Southern riparian woodland accounted for less than 0.1 acre and mulefat scrub accounted for approximately 0.3 acre. Both stands were observed directly adjacent to San Clemente Canyon Creek.

Woodland

One stand of eucalyptus woodland was observed on a hilltop approximately 0.5 mile north of Green Farm Road and accounted for approximately 0.2 acre.

3.0.2 Spring Canyon Firebreak Route Segment Alternative

Developed and Disturbed Habitat

Developed lands were observed along the unnamed access road, along Spring Canyon Road, and near the intersection of Spring Canyon Road and Pomerado Road. In total, developed lands covered approximately 16 acres. Disturbed habitat was also observed along the northern end of Spring Canyon Road and covered approximately 10 acres.

Scrub and Chaparral

Mixed chaparral and chamise chaparral comprised the majority of the Spring Canyon Firebreak Route Segment Alternative BRSA. Mixed chaparral covered approximately 114.5 acres, and chamise chaparral covered approximately 50.2 acres. This included both east-facing and west-facing slopes along the ridgeline. Coastal sage scrub accounted for approximately 60.7 acres.

These stands were observed within large erosional features that occurred downslope of the access road on both west-facing and east-facing slopes. Coastal sage scrub was also observed on a south-facing slope on the southern end of the Spring Canyon Firebreak Route Segment Alternative BRSA, directly north of SR-52. Coastal sage scrub was also observed in a large stand beginning approximately 120 feet north of SR-52. Coastal sage scrub-chaparral transition occurred on ridgelines adjacent to Spring Canyon Road and the unnamed access road, and covered approximately 22.9 acres.

Grasslands, Vernal Pools, Meadows, and Other Herb Communities

One stand of non-native grassland was observed on a west-facing slope approximately 0.9 mile north of SR-52 and accounted for approximately 0.7 acre. Stands of non-native grassland occurred in areas that may have previously experienced disturbance from access road maintenance or fire.

Riparian and Bottomland Habitat

Unvegetated streambeds were observed on the bottom of several ravines on the edges of the Spring Canyon Firebreak Route Segment Alternative BRSA and covered less than 0.1 acre.

Woodland

Eucalyptus woodland accounted for approximately 0.7 acre. One stand of eucalyptus woodland was observed near the intersection of Spring Canyon Road and Pomerado Road, surrounded by developed lands. Another stand of eucalyptus woodland was observed on the west side of the unnamed access road, approximately 1.6 miles north of SR-52.

3.0.3 Rainbow to Santee Non-Miramar Alternative

Developed and Disturbed Habitat

Developed lands were observed along Scripps Poway Parkway, Sycamore Canyon Road, Fanita Parkway, and Carlton Oaks Drive. Developed lands covered approximately 193.5 acres. Disturbed habitat occurred in large patches along Scripps Poway Parkway, near its intersection with Pomerado Road, as well as near its intersection with Sycamore Canyon Road. Disturbed lands covered approximately 26.7 acres. Intensive agricultural areas in the form of horse pastures were observed on the west side of Sycamore Canyon Road, immediately south of the intersection with Scripps Poway Parkway.

Scrub and Chaparral

Mixed chaparral was observed south of Sycamore Canyon Road in large stands. Mixed chaparral was also observed along the hillsides and ridges within Goodan Ranch Sycamore Canyon Preserve. In total, mixed chaparral accounted for approximately 172.2 acres. Coastal sage scrub was observed along Scripps Poway Parkway and on hillsides within the Sycamore Canyon Preserve. Coastal sage scrub and coastal sage scrub-chaparral transition were also observed in small stands on the hillsides and ridges within Goodan Ranch Sycamore Canyon Preserve. In total, coastal sage scrub accounted for approximately 52.4 acres and coastal sage scrub transition accounted for approximately four acres. Coastal sage scrub – *Baccharis*-dominated stands were observed in the Sycamore Canyon Preserve in areas that may have

previously experienced physical disturbance. In total, coastal sage scrub – *Baccharis*-dominated stands accounted for approximately 3.2 acres.

Grasslands, Vernal Pools, Meadows, and Other Herb Communities

Non-native grassland was observed in multiple stands within the Goodan Ranch Sycamore Canyon Preserve near Santee Lakes, and in areas that may have experienced historic disturbance, such as livestock grazing or road maintenance. Non-native grassland covered approximately 52.1 acres. Valley needlegrass grassland was observed along the top of a road cut on the south end of Scripps Poway Parkway, approximately 250 feet southeast of the intersection of Scripps Poway Parkway and General Atomics Way. The area appeared to have been actively restored from previous physical disturbance. Valley needlegrass grassland covered approximately 2.2 acres. One vernal pool was observed surrounded by non-native grassland, approximately 0.4 mile southwest of the Padre Dam Municipal Water District water recycling plant. The vernal pool covered less than 0.1 acre.

Bog and Marsh

Several emergent wetlands were observed in an artificial settling pond that was directly adjacent to SR-52. They were also observed within the Sycamore Canyon Preserve and north of Santee Lakes in areas that may have experienced previous physical disturbance from access road maintenance. These wetlands accounted for approximately 1.1 acres.

Riparian and Bottomland Habitat

Southern willow scrub accounted for approximately 3.5 acres. Stands were observed within ephemeral and intermittent drainages, as well adjacent to the southern extent of Sycamore Canyon Creek in the Goodan Ranch Sycamore Canyon Preserve. In addition, stands were observed along a concrete-lined channel within the Santee Lakes Recreation Preserve and adjacent to unnamed, intermittent and perennial drainages along Mast Boulevard. Southern riparian woodland was observed along an ephemeral drainage, as well as along Sycamore Canyon Creek in the Goodan Ranch Sycamore Canyon Preserve.

Southern riparian woodland was also observed along concrete-lined flood control channels east of and within Santee Lakes Recreational Preserve. Southern riparian woodland accounted for approximately 4.9 acres. Coast live oak riparian forest was observed along Sycamore Canyon Creek, as well as along an unnamed, intermittent tributary to Clark Canyon Creek in the Goodan Ranch Sycamore Canyon Preserve. One stand was observed within an ephemeral drainage along a driveway near the intersection of Sycamore Canyon Road and Scripps Poway Parkway. In total, coast live oak riparian forest accounted for approximately seven acres. Arundo-dominated riparian habitat was observed within the Sycamore Canyon Preserve and north of Santee Lakes. Arundo-dominated riparian habitat accounted for approximately 1.2 acres.

3.1 HYDROLOGIC FEATURES

Hydrologic features in the form of wetlands, drainages, and riparian vegetation were observed within the Addendum BRSA. Hydrologic features are presented and discussed in the Preliminary Wetlands and Waters Assessment Alternatives Addendum.

3.2 WILDLIFE OBSERVATIONS

During the 2017 surveys, 55 common bird species were observed in sensitive habitats and disturbed areas, including common raven (*Corvus corax*), red-tailed hawk (*Buteo jamaicensis*), Anna's hummingbird (*Calypte anna*), and mourning dove (*Zenaida macroura*). Seven common reptiles—including western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard—were observed throughout the Addendum BRSA. Six common mammal species were observed in the Addendum BRSA, especially in the West of Aqueduct Road Route Segment Alternative BRSA, the Spring Canyon Firebreak Route Segment Alternative BRSA, and the Non-Miramar Alternative BRSA. A complete list of all wildlife species observed is presented in Attachment B: Special-Status Wildlife Species with the Potential to Occur. Two federally listed bird species, one special-status bird species, one special-status mammal species, one special-status amphibian species, and three special-status reptile species were observed during the 2017 surveys and are described in Section 3.4 Special-Status Wildlife Species.

3.3 SPECIAL-STATUS PLANT SPECIES

Seventeen special-status plant species were observed during the 2017 focused rare plant surveys. These species are presented and discussed in the Special-Status Plant Species Survey Report Addendum.

3.4 SPECIAL-STATUS WILDLIFE SPECIES

Based on the background research for the 2015 and 2017 field surveys, 54 special-status wildlife species have a potential to occur in the Addendum BRSA. A list of these species is included in Attachment C: Wildlife Species Observed during the 2017 Surveys. In addition, 14 special-status fauna were observed during the field surveys within the Addendum BRSA, and are presented in Table 4: Special-Status Wildlife Species Occurrences within the Addendum BRSA. The following subsections describe the special-status wildlife species observations in each component of the Addendum BRSA.

Most special-status wildlife species share a similar potential to occur throughout the BRSA. However, Riverside fairy shrimp (*Streptocephalus woottoni*) and San Diego fairy shrimp (*Branchinecta sandiegonensis*) are completely dependent on vernal pool habitat. Vernal pools did not occur within the Spring Canyon Firebreak Route Segment Alternative BRSA; therefore, Riverside fairy shrimp and San Diego fairy shrimp have no potential to occur in the Addendum BRSA. Vernal pools are presented in Attachment A: Vegetation Communities Map and Table 3: Vegetation Communities and Area within the Addendum BRSA.

Table 4: Special-Status Wildlife Species Occurrences within the Addendum BRSA

Species Name	Listing Status[11]	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Least Bell's vireo (*Vireo bellii pusillus*)	FE, CE	--	Present	--	Present
Coastal California gnatcatcher (*Polioptila californica californica*)	FT, SSC	Present	Present	Present	Present
Western spadefoot (*Spea hammondii*)	SSC	--	--	--	Present
Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*)	SSC	Present	Present	--	Present
Coast horned lizard (*Phyrnosoma blainvillii*)	SSC	--	Present	--	
Coast patch-nose snake (*Salvadora hexalepis virgultea*)	SSC	--	--	--	Present
Coastal whiptail (*Aspidoscelis tigris stejnegeri*)	SSC	--	--	--	Present
Cooper's hawk (*Accipiter cooperii*)	SSC	--	--	--	Present
Grasshopper sparrow (*Ammodramus savannarum*)	SSC	--	--	--	Present
Red diamond rattlesnake (*Crotalus ruber*)	SSC	--	--	--	Present

[11] Explanation of state and federal listing status:

Federal listing codes:

- FE: Federally Endangered Species
- FT: Federally Threatened Species

California listing codes:

- CE: State-listed as Endangered
- SSC: Species of Special Concern
- WL: Watch List species

Species Name	Listing Status[11]	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)	SSC	Present	Present	--	Present
Two-striped gartersnake (*Thamnophis hammondii*)	SSC	--	Present	--	--
Horned lark (*Eremophila alpestris*)	WL	--	Present	--	--
Osprey (*Pandion haliaetus*)	WL	--	--	--	Present

3.4.0 Kearny Villa Road Route Segment Alternative

Within the Kearny Villa Road Route Segment Alternative BRSA, the following special-status species were observed:

- Coastal California gnatcatcher (*Polioptila californica californica*) was observed on multiple occasions near the southern end of the alignment, near the gate to East Miramar. Multiple individuals and potential family groups were observed in coastal sage scrub – *Baccharis*-dominated stands. Several individuals were also observed in coastal sage scrub near the intersection of Harris Plant Road and Kearny Villa Road.

- Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*) was observed throughout the Kearny Villa Road Route Segment Alternative BRSA in chaparral and coastal sage scrub on multiple dates.

- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) was observed on May 26 on the southern end of the Kearny Villa Road Route Segment Alternative BRSA in coastal sage scrub, which is approximately 0.3 mile south of the entrance to MCAS Miramar between Kearny Villa and I-15.

3.4.1 West of Aqueduct Road Route Segment Alternative

The following special-status species were observed within the West of Aqueduct Road Route Segment Alternative:

- Biologists observed Belding's orange-throated whiptail on multiple occasions in chaparral and coastal sage scrub on multiple dates.

- Horned lark (*Eremophila alpestris*) was observed along the edge of the access road in mixed chaparral and disturbed areas throughout route segment on multiple dates.

- Coast horned lizard (*Phyrnosoma blainvillii*) was observed in mixed chaparral approximately 0.3 mile south of Green Farm Road on May 2. Another individual was observed in mixed chaparral approximately 0.3 mile south of Alliant International University within University of California, San Diego's Elliott Chaparral Reserve on May 11.

- One male least Bell's vireo (*Vireo bellii pusillus*) was heard and observed along San Clemente Canyon Creek in southern willow scrub on July 14 One coastal California gnatcatcher was heard near the northern end of the alignment in coastal sage scrub on May 11. In addition, one individual was heard in coastal sage scrub south of San Clemente Canyon Creek.

- Two San Diego black-tailed jackrabbit individuals were observed on May 18 in mixed chaparral.

- On July 7, one coast patch-nose snake (*Salvadora hexalepis virgultea*) was observed in a puddle in San Clemente Canyon Creek approximately 260 feet north of Green Farm Road.

3.4.2 Spring Canyon Firebreak Route Segment Alternative

Within the Spring Canyon Firebreak Route Segment Alternative BRSA, one coastal California gnatcatcher was heard in coastal sage scrub, approximately two miles southwest of Sycamore Test Road on May 19.

3.4.3 Rainbow to Santee Non-Miramar Alternative

Within the Non-Miramar Alternative, the following special-status species were observed:

- Coastal California gnatcatcher was observed on multiple occasions. Several individuals were heard and observed in coastal sage scrub north of Scripps Poway Parkway on multiple occasions. In addition, multiple individuals were observed in coastal sage scrub on a ridge approximately 0.6 mile southeast of Sycamore Canyon Road. Coastal California gnatcatcher was also heard and observed within coastal sage scrub near Santee Lakes.

- Ten western spadefoot (*Spea hammondii*) tadpoles and metamorphs were observed in a small pool in Sycamore Canyon Creek near the Goodan Ranch Center on multiple occasions.

- Belding's orange-throated whiptail was observed within chaparral on multiple occasions.

- Multiple San Diego black-tailed jackrabbits were observed in mixed chaparral near Santee Lakes and within the Goodan Ranch Sycamore Canyon Preserve on multiple occasions.

- One coast patch-nose snake was observed within coastal sage scrub near Santee Lakes on May 24.

- Multiple grasshopper sparrows (*Ammodramus savannarum*) were observed foraging in non-native grassland north of Santee Lakes on May 24.

- One red diamond rattlesnake (*Crotalus ruber*) was observed in a rock outcrop within coastal sage scrub near Santee Lakes on May 24.

- On June 1, two coastal whiptail (*Aspidoscelis tigris stejnegeri*) individuals were observed in non-native grassland on the southern end of Goodan Ranch Sycamore Canyon Preserve, approximately 0.3 mile south of the Goodan Ranch Center. In addition, three coastal whiptail individuals were observed in mixed chaparral in the Goodan Ranch Sycamore Canyon Preserve, west of the Goodan Ranch Center, on July 12.

- One Cooper's hawk (*Accipiter cooperii*) was observed in coast live oak riparian forest near the Goodan Ranch Center on July 12.

- Least Bell's vireo was also heard in dense southern willow scrub northwest of Santee Lakes on July 14 and 19.

3.5 CRITICAL HABITAT

Critical habitat occurs within the Addendum BRSA for the following species:

- coastal California gnatcatcher,
- least Bell's vireo,
- San Diego fairy shrimp (*Branchinecta sandiegonensis*), and
- Willowy monardella (*Monardella viminea*).

Critical habitat within the Addendum BRSA is presented in Attachment D: Critical Habitat Within the Addendum BRSA. Table 5: Critical Habitat within the Addendum BRSA presents the critical habitat within the Addendum BRSA.

Table 5: Critical Habitat within the Addendum BRSA

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Coastal California gnatcatcher	--	--	--	Present
Least Bell's vireo	--	--	--	Present
San Diego fairy shrimp	Present	Present	--	
Willowy monardella	--	--	--	Present

3.5.0 Kearny Villa Road Route Segment Alternative

Critical habitat for San Diego fairy shrimp has been designated in vernal pool complexes within MCAS Miramar.

3.5.1 West of Aqueduct Road Route Segment Alternative

Critical habitat for San Diego fairy shrimp has been designated in vernal pool complexes within MCAS Miramar.

3.5.2 Rainbow to Santee Non-Miramar Alternative

Critical habitat for coastal California gnatcatcher has been designated within Sycamore Canyon and in the foothills to the east of Sycamore Canyon. Designated critical habitat for least Bell's vireo is located within the riparian corridor of the San Diego River and several unnamed tributaries, which are within the Addendum BRSA. Critical habitat for willowy monardella has been designated within Clark Canyon and Sycamore Canyon.

4 – CONCLUSION

A habitat assessment was conducted for three route segment alternatives that cross MCAS Miramar and one alternative that avoids MCAS Miramar. The BRSA varied depending on physical constraints, but was generally 200 feet on either side of the alternative alingments. Impacts to vegetation communities were not calculated since none of the alternatives have been engineered. Therefore, acreages of each vegetation community reflect vegetation types within the BRSA. A summary of the data collected in the BRSAs follows.

4.0 KEARNY VILLA ROAD ROUTE SEGMENT ALTERNATIVE

The Kearny Villa Road Route Segment Alternative BRSA was comprised of approximately 84.5 acres of developed land and disturbed habitat. Scrub and chaparral accounted for approximately 67.9 acres. Coastal sage scrub – *Baccharis*-dominated stands comprised approximately 56.9 acres of scrub and chaparral habitat. Belding's orange-throated whiptail, coastal California gnatcatcher, and San Diego black-tailed jackrabbit were observed within the Kearny Villa Road Route Segment Alternative BRSA. In addition, the following species have a high potential to occur:

- Bell's sage sparrow (*Artemisiospiza belli*)
- Coast horned lizard
- coastal whiptail
- Cooper's hawk
- Coronado skink (*Plestiodon skiltonianus interparietalis*)
- Dulzura pocket mouse (*Chaetodipus californicus femoralis*)
- grasshopper sparrow
- horned lark
- northern harrier (*Circus cyaneus*)
- northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*)
- prairie falcon (*Falco mexicanus*)
- red diamond rattlesnake
- Riverside fairy shrimp
- San Diego desert woodrat (*Neotoma lepida intermedia*)
- San Diego fairy shrimp
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canenscens*)
- two-striped gartersnake (*Thamnophis hammondii*)
- western small-footed myotis (*Myotis ciliolabrum*)
- western yellow bat (*Lasiurus xanthinius*)
- white-tailed kite (*Elanus leucurus*)
- yellow warbler (*Setophaga petechia*)
- yellow-breasted chat (*Icteria virens*)

Critical habitat for San Diego fairy shrimp has been designated within the Kearny Villa Road Route Segment Alternative BRSA.

4.1 WEST OF AQUEDUCT ROAD ROUTE SEGMENT ALTERNATIVE

Approximately 66.4 acres of scrub and chaparral habitat were observed within the West of Aqueduct Road Route Segment Alternative BRSA. Developed land and disturbed habitat accounted for approximately 0.7 acre. Least Bell's vireo, coastal California gnatcatcher, Belding's orange-throated whiptail, coast horned lizard, two-striped gartersnake, horned lark, and San Diego black-tailed jackrabbit were observed. In addition, the following species have a high potential to occur:

- Bell's sage sparrow
- coastal whiptail
- Coronado skink
- Dulzura pocket mouse
- grasshopper sparrow
- Hermes copper butterfly (*Lycaena hermes*)
- northwestern San Diego pocket mouse
- prairie falcon
- red diamond rattlesnake
- Riverside fairy shrimp
- San Diego desert woodrat
- San Diego fairy shrimp
- western spadefoot
- western yellow bat
- white-tailed kite
- yellow warbler
- yellow-breasted chat

Critical habitat for San Diego fairy shrimp has been designated within the West of Aqueduct Road Route Segment Alternative BRSA.

4.2 SPRING CANYON FIREBREAK ROUTE SEGMENT ALTERNATIVE

Scrub and chaparral habitat accounted for approximately 248.4 acres within the Spring Canyon Firebreak Route Segment Alternative BRSA. Developed and disturbed habitat comprised approximately 26.3 acres. Coastal California gnatcatcher was observed within the Spring Canyon Firebreak Route Segment Alternative BRSA. In addition, the following species have a high potential to occur:

- Belding's orange-throated whiptail
- coastal whiptail
- Coronado skink
- Dulzura pocket mouse
- Hermes copper butterfly
- horned lark
- northwestern San Diego pocket mouse
- Quino checkerspot butterfly (*Euphydryas editha quino*)

- red diamond rattlesnake
- San Diego black-tailed jackrabbit
- San Diego woodrat
- Southern California rufous-crowned sparrow

No critical habitat has been designated within the Spring Canyon Firebreak Route Segment Alternative.

4.3 RAINBOW TO SANTEE NON-MIRAMAR ALTERNATIVE

Approximately 231.8 acres of scrub and chaparral habitat were observed within the Non-Miramar Alternative BRSA. Developed land and disturbed habitat accounted for approximately 223.1 acres. Non-native grassland also accounted for approximately 52.1 acres. Least Bell's vireo, coastal California gnatcatcher, western spadefoot, Belding's orange-throated whiptail, coastal whiptail, red diamond rattlesnake, San Diego black-tailed jackrabbit, osprey, coast patch-nose snake, grasshopper sparrow, and Cooper's hawk were observed within the Non-Miramar Alternative BRSA. In addition, the following species have a high potential to occur:

- Bell's sage sparrow
- coast horned lizard
- Coronado skink
- Dulzura pocket mouse
- Hermes copper butterfly
- horned lark
- northern harrier
- northwestern San Diego pocket mouse
- pocketed free-tailed bat
- prairie falcon
- Quino checkerspot butterfly
- San Diego desert woodrat
- southern California rufous-crowned sparrow
- two-striped rattlesnake
- western small-footed myotis
- western yellow bat
- yellow warbler
- yellow-breasted chat

Critical habitat for coastal California gnatcatcher, least Bell's vireo, and willowy monardella have been designated within the Non-Miramar Alternative.

5 – REFERENCES

CDFW. 2017a. CNDDB Maps and Data. Online. https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp. Site visited May 2017.

CDFW. 2017b. Wildlife Habitats – California Wildlife Habitat Relationship System. Online. https://www.dfg.ca.gov/biogeodata/cwhr/wildlife_habitats.asp#Shrub. Site visited September 2017.

City of San Diego. 2013. Sycamore Canyon and Goodan Ranch Preserve Resource Management Plan. Online. http://www.sandiegocounty.gov/content/dam/sdc/parks/RMD/RMPs%20and%20Trails/Stoneridge_RMP_Final.pdf. Site visited August 2017.

Insignia. 2015a. San Diego Gas & Electric Company and Southern California Gas Company's Pipeline Safety & Reliability Project Biological Resources Technical Report.

Insignia. 2015b. San Diego Gas & Electric Company and Southern California Gas Company's Pipeline Safety & Reliability Project Proponent's Environmental Assessment.

Insignia. 2015c. San Diego Gas & Electric Company and Southern California Gas Company's Pipeline Safety & Reliability Project Preliminary Wetlands and Waters Assessment.

Insignia. 2017a. San Diego Gas & Electric Company and Southern California Gas Company's Pipeline Safety & Reliability Project Biological Resources Technical Addendum.

Insignia. 2017b. San Diego Gas & Electric Company and Southern California Gas Company's Pipeline Safety & Reliability Project Preliminary Wetlands and Waters Assessment Addendum.

Oberbauer, Thomas, Meghan Kelly, and Jeremy Buegge. 2008. Draft Vegetation Communities of San Diego County. Based on "Preliminary Descriptions of the Terrestrial Natural Communities of California," Robert F. Holland, Ph.D., October 1986.

SANDAG. 2011. Vegetation Classification Manual for Western San Diego County, First Edition.

Shuford, W.D., and Gardali, T. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California.

USFWS. 1989. The Ecology of Riparian Habitats of the Southern California Coastal Region: A Community Profile. Online. http://www.nwrc.usgs.gov/techrpt/85-7-27.pdf. Site visited September 2017.

USMC. 2014. Integrated Natural Resources Management Plan. Online. http://www.miramar-ems.marines.mil/Divisions/NaturalResourcesDivision/NaturalResources.aspx. Site visited June 2017.

ATTACHMENT A: VEGETATION COMMUNITIES MAP

ATTACHMENT B: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR

ATTACHMENT B: SPECIAL-STATUS WILDLIFE SPECIES WITH THE POTENTIAL TO OCCUR

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Kearny Villa Road Route Segment Alternative			
Invertebrates			
Hermes copper butterfly	*Lycaena hermes*	FC	**Low Potential**
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	**Low Potential**
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	**High Potential**
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	**High Potential**
Amphibians			
Western spadefoot	*Spea hammondii*	SSC	**Moderate Potential**
Reptiles			
Belding's orange-throated whiptail	*Aspidoscelis hyperythra beldingi*	SSC	**Present**
California glossy snake	*Arizona elegans occidentalis*	SSC	**Low Potential**
Coast horned lizard (=Blainville's horned lizard)	*Phrynosoma blainvillii*	SSC	**High Potential**
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC	**Moderate Potential**
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC	**High Potential**
Coronado skink	*Plestiodon skiltonianus interparietalis*	SSC	**High Potential**

[1] Explanation of state and federal listing status:

Federal listing codes:

- FE: Federally Endangered Species
- FT: Federally Threatened Species
- FC: Federal Endangered Species Act Candidate Species
- BGEPA: Bald and Golden Eagle Protection Act
- BLM: S: Bureau of Land Management (BLM) Sensitive Species
- BCC: United States Fish and Wildlife Service Bird of Conservation Concern

California listing codes:

- CE: State-listed as Endangered
- CT: State-listed as Threatened
- CC: Candidate for State-listing
- FP: Fully Protected species
- SSC: Species of Special Concern
- WL: Watch List species

[2] Only species with a potential to occur are included in this attachment. The Biological Resources Technical Report (BRTR) includes additional species and habitat detail for each species in Table 6: Special-Status Wildlife Species with Potential to Occur. All potential to occur designations are consistent with the descriptions presented in Section 3.0.1: Special-Status Species in the BRTR.

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Red diamond rattlesnake	*Crotalus ruber*	SSC	**High Potential**
Two-striped gartersnake	*Thamnophis hammondii*	SSC	**High Potential**
Birds			
Bell's sage sparrow	*Artemisiospiza belli*	BCC WL	Nesting: **High Potential** Foraging: **High Potential**
Coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	SSC	Nesting: **Low Potential** Foraging: **Low Potential**
Coastal California gnatcatcher	*Polioptila californica californica*	FT SSC	Nesting: **High Potential** Foraging: **Present**
Cooper's hawk	*Accipiter cooperii*	WL	Nesting: **Moderate Potential** Foraging: **High Potential**
Golden eagle	*Aquila chrysaetos*	BGEPA FP	Nesting: **No Potential** Foraging: **Moderate Potential**
Grasshopper sparrow	*Ammodramus savannarum*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Horned lark	*Eremophila alpestris*	WL	Nesting: **High Potential** Foraging: **High Potential**
Least Bell's vireo	*Vireo bellii pusillus*	FE CE	Nesting: **Low Potential** Foraging: **Moderate Potential**
Least bittern	*Ixobrychus exilis hesperis*	SSC	Nesting: **Moderate Potential** Foraging: **Moderate Potential**
Northern harrier	*Circus cyaneus*	SSC	Nesting: **Moderate Potential** Foraging: **High Potential**
Prairie falcon	*Falco mexicanus*	WL BCC	Nesting: **Low Potential** Foraging: **High Potential**
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	WL	Nesting: **High Potential** Foraging: **High Potential**
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE CE	Nesting: **Low Potential** Foraging: **Low Potential**
Swainson's hawk	*Buteo swainsoni*	CT BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Tricolored blackbird	*Agelaius tricolor*	CC SSC BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**
Vaux's swift	*Chaetura vauxi*	SSC	Nesting: **No Potential** Foraging: **Low Potential**
Western burrowing owl	*Athene cunicularia hypugaea*	SSC	Nesting: **Low Potential** Foraging: **Moderate Potential**
White-tailed kite	*Elanus leucurus*	FP	Nesting: **Moderate Potential** Foraging: **High Potential**
Yellow warbler	*Setophaga petechia*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Yellow-breasted chat	*Icteria virens*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Mammals			
American badger	*Taxidea taxus*	SSC	**Low Potential**
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	SSC	**High Potential**
Mexican long-tongued bat	*Choeronycteris mexicana*	SSC	**Low Potential**
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SSC	**High Potential**
Pallid bat	*Antrozous pallidus*	SSC	**Low Potential**
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	SSC	**Present**
San Diego desert woodrat	*Neotoma lepida intermedia*	SSC	**High Potential**
Stephens' kangaroo rat	*Dipodomys stephensi*	FE, CT	**Low Potential**
Townsend's big-eared bat	*Corynorhinus townsendii townsendii*	CC, SSC	**Moderate Potential**
Western mastiff bat	*Eumops perotis californicus*	SSC	**Low Potential**
Western red bat	*Lasiurus blossevillii*	SSC	**Moderate Potential**
Western small-footed myotis	*Myotis ciliolabrum*	BLM: S	**High Potential**
Western yellow bat	*Lasiurus xanthinus*	SSC	**High Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
West of Aqueduct Road Route Segment Alternative			
Invertebrates			
Hermes copper butterfly	*Lycaena hermes*	FC	**High Potential**
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	**Low Potential**
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	**High Potential**
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	**High Potential**
Amphibians			
Western spadefoot	*Spea hammondii*	SSC	**High Potential**
Reptiles			
Belding's orange-throated whiptail	*Aspidoscelis hyperythra beldingi*	SSC	**Present**
California glossy snake	*Arizona elegans occidentalis*	SSC	**Low Potential**
Coast horned lizard (=Blainville's horned lizard)	*Phrynosoma blainvillii*	SSC	**Present**
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC	**Moderate Potential**
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC	**High Potential**
Coronado skink	*Plestiodon skiltonianus interparietalis*	SSC	**High Potential**
Red diamond rattlesnake	*Crotalus ruber*	SSC	**Moderate Potential**
Two-striped gartersnake	*Thamnophis hammondii*	SSC	**Present**
Birds			
Bell's sage sparrow	*Artemisiospiza belli*	BCC WL	Nesting: **High Potential** Foraging: **High Potential**
Coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	SSC	Nesting: **Low Potential** Foraging: **Low Potential**
Coastal California gnatcatcher	*Polioptila californica californica*	FT SSC	Nesting: **High Potential** Foraging: **Present**
Cooper's hawk	*Accipiter cooperii*	WL	Nesting: **Low Potential** Foraging: **Moderate Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Golden eagle	*Aquila chrysaetos*	BGEPA FP	Nesting: **Low Potential** Foraging: **Moderate Potential**
Grasshopper sparrow	*Ammodramus savannarum*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Horned lark	*Eremophila alpestris*	WL	Nesting: **High Potential** Foraging: **Present**
Least Bell's vireo	*Vireo bellii pusillus*	FE CE	Nesting: **High Potential** Foraging: **Present**
Least bittern	*Ixobrychus exilis hesperis*	SSC	Nesting: **Low Potential** Foraging: **Low Potential**
Northern harrier	*Circus cyaneus*	SSC	Nesting: **Moderate Potential** Foraging: **Moderate Potential**
Prairie falcon	*Falco mexicanus*	WL BCC	Nesting: **Low Potential** Foraging: **High Potential**
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	WL	Nesting: **High Potential** Foraging: **High Potential**
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE CE	Nesting: **Low Potential** Foraging: **Low Potential**
Swainson's hawk	*Buteo swainsoni*	CT BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**
Tricolored blackbird	*Agelaius tricolor*	CC SSC BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**
Vaux's swift	*Chaetura vauxi*	SSC	Nesting: **No Potential** Foraging: **Low Potential**
Western burrowing owl	*Athene cunicularia hypugaea*	SSC	Nesting: **Low Potential** Foraging: **Moderate Potential**
White-tailed kite	*Elanus leucurus*	FP	Nesting: **Moderate Potential** Foraging: **High Potential**
Yellow warbler	*Setophaga petechia*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Yellow-breasted chat	*Icteria virens*	SSC	Nesting: **High Potential** Foraging: **High Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Mammals			
American badger	*Taxidea taxus*	SSC	**Low Potential**
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	SSC	**High Potential**
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SSC	**High Potential**
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	SSC	**Present**
San Diego desert woodrat	*Neotoma lepida intermedia*	SSC	**High Potential**
Stephens' kangaroo rat	*Dipodomys stephensi*	FE CT	**Low Potential**
Western red bat	*Lasiurus blossevillii*	SSC	**Moderate Potential**
Western yellow bat	*Lasiurus xanthinus*	SSC	**High Potential**
Yuma myotis	*Myotis yumanensis*	BLM: S	**Moderate Potential**
Spring Canyon Firebreak Route Segment Alternative			
Invertebrates			
Hermes copper butterfly	*Lycaena hermes*	FC	**High Potential**
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	**High Potential**
Reptiles			
Belding's orange-throated whiptail	*Aspidoscelis hyperythra beldingi*	SSC	**High Potential**
California glossy snake	*Arizona elegans occidentalis*	SSC	**Low Potential**
Coast horned lizard (=Blainville's horned lizard)	*Phrynosoma blainvillii*	SSC	**Moderate Potential**
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC	**Moderate Potential**
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC	**High Potential**
Coronado skink	*Plestiodon skiltonianus interparietalis*	SSC	**High Potential**
Red diamond rattlesnake	*Crotalus ruber*	SSC	**High Potential**
Silvery legless lizard	*Anniella pulchra pulchra*	SSC	**Moderate Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Birds			
Bell's sage sparrow	*Artemisiospiza belli*	BCC WL	Nesting: **Moderate Potential** Foraging: **Moderate Potential**
Coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	SSC	Nesting: **Low Potential** Foraging: **Low Potential**
Coastal California gnatcatcher	*Polioptila californica californica*	FT SSC	Nesting: **Moderate Potential** Foraging: **Present**
Cooper's hawk	*Accipiter cooperii*	WL	Nesting: **No Potential** Foraging: **Low Potential**
Golden eagle	*Aquila chrysaetos*	BGEPA FP	Nesting: **Low Potential** Foraging: **Moderate Potential**
Grasshopper sparrow	*Ammodramus savannarum*	SSC	Nesting: **Moderate Potential** Foraging: **Moderate Potential**
Horned lark	*Eremophila alpestris*	WL	Nesting: **High Potential** Foraging: **High Potential**
Northern harrier	*Circus cyaneus*	SSC	Nesting: **Low Potential** Foraging: **Low Potential**
Prairie falcon	*Falco mexicanus*	WL BCC	Nesting: **Low Potential** Foraging: **Low Potential**
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	WL	Nesting: **High Potential** Foraging: **High Potential**
Swainson's hawk	*Buteo swainsoni*	CT BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**
Vaux's swift	*Chaetura vauxi*	SSC	Nesting: **No Potential** Foraging: **Low Potential**
Western burrowing owl	*Athene cunicularia hypugaea*	SSC	Nesting: **Low Potential** Foraging: **Moderate Potential**
White-tailed kite	*Elanus leucurus*	FP	Nesting: **No Potential** Foraging: **Moderate Potential**
Mammals			
American badger	*Taxidea taxus*	SSC	**Low Potential**
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	SSC	**High Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SSC	**High Potential**
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	SSC	**High Potential**
San Diego desert woodrat	*Neotoma lepida intermedia*	SSC	**High Potential**
Non-Miramar Alternative			
Invertebrates			
Hermes copper butterfly	*Lycaena hermes*	FC	**High Potential**
Quino checkerspot butterfly	*Euphydryas editha quino*	FE	**High Potential**
Riverside fairy shrimp	*Streptocephalus woottoni*	FE	**Low Potential**
San Diego fairy shrimp	*Branchinecta sandiegonensis*	FE	**Low Potential**
Amphibians			
Arroyo toad	*Anaxyrus californicus*	FE SSC	**Low Potential**
Western spadefoot	*Spea hammondii*	SSC	**Present**
Reptiles			
Belding's orange-throated whiptail	*Aspidoscelis hyperythra beldingi*	SSC	**Present**
California glossy snake	*Arizona elegans occidentalis*	SSC	**Low Potential**
Coast horned lizard (=Blainville's horned lizard)	*Phrynosoma blainvillii*	SSC	**High Potential**
Coast patch-nosed snake	*Salvadora hexalepis virgultea*	SSC	**Present**
Coastal whiptail	*Aspidoscelis tigris stejnegeri*	SSC	**Present**
Coronado skink	*Plestiodon skiltonianus interparietalis*	SSC	**High Potential**
Red diamond rattlesnake	*Crotalus ruber*	SSC	**Present**
Two-striped gartersnake	*Thamnophis hammondii*	SSC	**High Potential**
Silvery legless lizard	*Anniella pulchra pulchra*	SSC	**Moderate Potential**
Western pond turtle	*Actinemys marmorata*	SSC	**Moderate Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Birds			
Bell's sage sparrow	*Artemisiospiza belli*	BCC WL	Nesting: **High Potential** Foraging: **High Potential**
Coastal cactus wren	*Campylorhynchus brunneicapillus sandiegensis*	SSC	Nesting: **Low Potential** Foraging: **Low Potential**
Coastal California gnatcatcher	*Polioptila californica californica*	FT SSC	Nesting: **High Potential** Foraging: **Present**
Cooper's hawk	*Accipiter cooperii*	WL	Nesting: **High Potential** Foraging: **Present**
Golden eagle	*Aquila chrysaetos*	BGEPA FP	Nesting: **Low Potential** Foraging: **Moderate Potential**
Grasshopper sparrow	*Ammodramus savannarum*	SSC	Nesting: **High Potential** Foraging: **Present**
Horned lark	*Eremophila alpestris*	WL	Nesting: **High Potential** Foraging: **High Potential**
Least Bell's vireo	*Vireo bellii pusillus*	FE CE	Nesting: **High Potential** Foraging: **Present**
Least bittern	*Ixobrychus exilis hesperis*	SSC	Nesting: **Moderate Potential** Foraging: **Moderate Potential**
Northern harrier	*Circus cyaneus*	SSC	Nesting: **Moderate Potential** Foraging: **High Potential**
Osprey	*Pandion haliaetus*	WL	Nesting: **Moderate Potential** Foraging: **Present**
Prairie falcon	*Falco mexicanus*	WL BCC	Nesting: **Low Potential** Foraging: **High Potential**
Southern California rufous-crowned sparrow	*Aimophila ruficeps canescens*	WL	Nesting: **High Potential** Foraging: **High Potential**
Southwestern willow flycatcher	*Empidonax traillii extimus*	FE CE	Nesting: **Low Potential** Foraging: **Low Potential**
Swainson's hawk	*Buteo swainsoni*	CT BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**

Common Name	Scientific Name	Listing Status[1]	Potential to Occur[2]
Tricolored blackbird	*Agelaius tricolor*	CC SSC BCC BLM: S	Nesting: **Low Potential** Foraging: **Low Potential**
Vaux's swift	*Chaetura vauxi*	SSC	Nesting: **No Potential** Foraging: **Low Potential**
Western burrowing owl	*Athene cunicularia hypugaea*	SSC	Nesting: **Low Potential** Foraging: **Moderate Potential**
White-tailed kite	*Elanus leucurus*	FP	Nesting: **Moderate Potential** Foraging: **Present**
Yellow warbler	*Setophaga petechia*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Yellow-breasted chat	*Icteria virens*	SSC	Nesting: **High Potential** Foraging: **High Potential**
Mammals			
American badger	*Taxidea taxus*	SSC	**Low Potential**
Dulzura pocket mouse	*Chaetodipus californicus femoralis*	SSC	**High Potential**
Mexican long-tongued bat	*Choeronycteris mexicana*	SSC	**Low Potential**
Northwestern San Diego pocket mouse	*Chaetodipus fallax fallax*	SSC	**High Potential**
Pallid bat	*Antrozous pallidus*	SSC	**Low Potential**
Pocketed free-tailed bat	*Nyctinomops femorosaccus*	SSC	**High Potential**
San Diego black-tailed jackrabbit	*Lepus californicus bennettii*	SSC	**Present**
San Diego desert woodrat	*Neotoma lepida intermedia*	SSC	**High Potential**
Stephens' kangaroo rat	*Dipodomys stephensi*	FE CT	**Low Potential**
Townsend's big-eared bat	*Corynorhinus townsendii townsendii*	SSC	**Moderate Potential**
Western mastiff bat	*Eumops perotis californicus*	SSC	**Moderate Potential**
Western red bat	*Lasiurus blossevillii*	SSC	**Moderate Potential**
Western small-footed myotis	*Myotis ciliolabrum*	BLM: S	**High Potential**
Western yellow bat	*Lasiurus xanthinus*	SSC	**High Potential**
Yuma myotis	*Myotis yumanensis*	BLM: S	**Moderate Potential**

ATTACHMENT C: WILDLIFE SPECIES OBSERVED DURING THE 2017 SURVEYS

ATTACHMENT C: WILDLIFE SPECIES OBSERVED DURING THE 2017 SURVEYS

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Amphibians				
American bullfrog (*Lithobates catesbeianus*)				X
Baja California treefrog (*Pseudacris hypochondriacahypochondriaca***)**		X		X
Western spadefoot (tadpoles/metamorphs)[1] (*Spea hammondii*)				X
Reptiles				
Belding's orange-throated whiptail[1] (*Aspidoscelis hyperythrus beldingi*)	X	X		X
Coast horned lizard[1] (*Phrynosoma blainvillii*)		X		
Gopher snake (*Pituophis catenifer*)				X
Red diamond rattlesnake[1] (*Crotalus ruber*)				X
Red racer (coachwhip) (*Masticophis flagellum piceus*)				X
Red-eared slider (*Trachemys scripta elegans*)				X
San Diegan tiger whiptail[1] (*Aspidoscelis tigris stejnegeri*)				X
San Diego nightsnake (*Hypsiglena ochrorhyncha klauberi*)		X		X
Southern alligator lizard (*Elgaria multicarinata*)				X

[1] California Department of Fish and Wildlife (CDFW) Species of Special Concern

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Southern Pacific rattlesnake (*Crotalus oreganus helleri*)		X		
Two-striped gartersnake[1] (*Thamnophis gigas*)		X		
Western fence lizard (*Sceloporus occidentalis*)	X	X	X	X
Western side-blotched lizard (*Uta stansburiana elegans*)	X	X	X	X
Birds				
Acorn woodpecker (*Melanerpes formicivorus*)				X
Allen's hummingbird (*Selasphorus sasin*)				X
American coot (*Fulica americana*)				X
American crow (*Corvus brachyrhynchos*)	X	X	X	X
American kestrel (*Falco sparverius*)		X		X
Anna's hummingbird (*Calypte anna*)	X	X		X
Ash-throated flycatcher (*Myiarchus cinerascens*)				X
Barn owl (*Tyto alba*)				X
Bewick's wren (*Thryomanes bewickii*)		X		X
Black phoebe (*Sayornis nigricans*)	X	X		X
Blue grosbeak (*Passerina caerulea*)		X		X
Blue-gray gnatcatcher (*Polioptila caerulea*)		X	X	X
Brewer's blackbird (*Euphagus cyanocephalus*)				X
Bushtit (*Psaltriparus minimus*)	X	X	X	X
California (Western) scrub-jay (*Aphelocoma californica*)		X		X

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
California quail (*Callipepla californica*)		X	X	X
California thrasher (*Toxostoma redivivum*)		X	X	X
California towhee (*Pipilo crissalis*)	X	X	X	X
Caspian tern (*Hydroprogne caspia*)				X
Cassin's kingbird (*Tyrannus vociferans*)		X		X
Cliff swallow (*Petrochelidon pyrrhonota)*				X
Coastal California gnatcatcher[2] (*Polioptila californica californica*)	X	X	X	X
Common raven (*Corvus corax*)		X	X	X
Common yellowthroat (*Geothlypis trichas*)		X		X
Cooper's hawk[3] (*Accipiter cooperii*)				X
Double-crested cormorant (*Phalacrocorax auritus*)				X
European starling (*Sturnus vulgaris*)				X
Grasshopper sparrow[1] (*Ammodramus savannarum*)				X
Great blue heron (*Ardea herodias*)				X
Great egret (*Ardea alba*)				X
Great horned owl (*Bubo virginianus*)			X	X
Greater roadrunner (*Geococcyx californianus*)				X
Great-tailed grackle (*Quiscalus mexicanus*)				X
Hooded oriole (*Icterus cucullatus*)		X		X

[2] Federally listed as threatened
[3] CDFW Watch List species

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Horned lark[3] (*Eremophila alpestris*)		X		
House finch (*Carpodacus mexicanus*)	X	X		X
House sparrow (*Passer domesticus*)				X
House wren (*Troglodytes aedon*)		X		X
Killdeer (*Charadrius vociferus*)				X
Lark sparrow (*Chondestes grammacus*)		X		
Least Bell's vireo[4] (*Vireo bellii pusillus*)		X		X
Lesser goldfinch (*Carduelis psaltria*)	X	X		X
Lesser nighthawk (*Chordeiles acutipennis*)	X	X		
Mallard (*Anas platyrhynchos*)				X
Mourning dove (*Zenaida macroura*)	X	X	X	X
Northern flicker (*Colaptes auratus*)		X		X
Northern mockingbird (*Mimus polyglottos*)	X	X		X
Northern rough-winged swallow (*Steigodopteryx serripennis*)			X	
Nuttall's woodpecker (*Picoides nuttallii*)				X
Olive-sided flycatcher (*Contopus cooperi*)		X		
Osprey[3] (*Pandion haliaetus*)				X
Phainopepla (*Phainopepla nitens*)				X
Red-shouldered hawk (*Buteo lineatus*)				X
Red-tailed hawk (*Buteo jamaicensis*)	X	X	X	X

[4] Federally and state-listed as endangered

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Red-winged blackbird (*Agelaius phoeniceus*)				X
Ruddy duck (*Oxyura jamaicensis*)				X
Say's phoebe (*Sayornis saya*)		X		
Song sparrow (*Melospiza melodia*)		X		
Spotted towhee (*Pipilo maculatus*)		X		X
Turkey vulture *Cathartes aura*	X	X	X	X
Western bluebird (*Sialia mexicana*)				X
Western grebe (*Aechmophorus occidentalis*)				X
Western kingbird (*Tyrannus verticalis*)				X
Western meadowlark (*Sturnella neglecta*)		X		X
Western wood-pewee (*Contopus sordidulus*)		X		
White-tailed kite[5] (*Elanus leucurus*)		X		
White-throated swift (*Aeronautes saxatalis*)			X	
Wrentit *Chamaea fasciata*)	X	X		X
Yellow-rumped warbler (*Dendroica coronata*)		X		
Mammals				
Brush rabbit (*Sylvilagus bachmani*)	X	X	X	X
California ground squirrel (*Spermophilus beecheyi*)	X	X		X
Coyote (*Canis latrans*)				X
Kangaroo rat (dead) (*Dipodomys* sp.)[6]				X

[5] CDFW Fully Protected species
[6] The kangaroo rat had decomposed to the point where it was impossible to identify to the species-level.

Species	Kearny Villa Road Route Segment Alternative	West of Aqueduct Road Route Segment Alternative	Spring Canyon Firebreak Route Segment Alternative	Non-Miramar Alternative
Mule deer (*Odocoileus hemionus*)			X	X
Pocket mouse (dead) (*Chaetodipus* sp.)[7]				X
San Diego black-tailed jackrabbit[1] (*Lepus californicus bennettii*)	X	X		X

[7] The pocket mouse had decomposed to the point where it was impossible to identify to the species-level.

ATTACHMENT D: CRITICAL HABITAT WITHIN THE ADDENDUM BRSA