

**California Public Utilities Commission**  
**Pipeline Safety and Reliability Project –**  
**New Natural Gas Line 3602 and De-rating Line 1600 (PSRP)**

**Appendix F**  
**Special Status Plants and Wildlife with a Potential to Occur in the**  
**Biological Resources Survey Area**  
for  
CEQA Master Environmental Assessment

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**Appendix F: Special Status Plants and Wildlife with a Potential to Occur in the Biological Resources Survey Area**

**Special Status Plants with a Potential to Occur in the Biological Resources Survey Area**

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Ashy spike-moss ( <i>Selaginella cinerascens</i> )	4.1	This perennial rhizomatous herb occurs often in "red clay" soils in coastal scrub and chaparral communities ranging from 60 to 2,100 feet in elevation.	<i>Present:</i> This species was observed on MCAS Miramar and nearby between MP 41 and MP 46.6, primarily within Diegan coastal sage scrub, southern mixed chaparral, and chamise chaparral communities. The number of individuals of this species observed within the BRSA was estimated at 33,000. Individuals were observed within the temporary workspace and permanent ROW. This species was also documented in the CNDDDB in 2015, with San Diego barrel cactus in Black Mountain Open Space Park and between Beeler Canyon and Poway Road.
Blochman's dudleya ( <i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> )	1B.1	This perennial herb occurs on rock and clay or serpentine soil substrates in coastal bluff scrub, coastal scrub, chaparral, and valley and foothill grassland communities ranging from 10 to 1,480 feet in elevation.	<i>None:</i> While there is suitable chaparral habitat within or near the BRSA, this species has not been documented near the BRSA, and historic occurrences are restricted to the coastal zone. This species is not known to occur within the BRSA.
Bottle liverwort ( <i>Sphaerocarpos drewei</i> )	1B.1	This ephemeral liverwort occurs on soil in openings in chaparral and coastal scrub communities from 295 to 1,970 feet in elevation.	<i>Not Expected:</i> There is suitable habitat for this species within or near the BRSA, but the species was not observed during surveys, and there are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Brewer's calandrinia ( <i>Calandrinia breweri</i> )	4.2	This annual herb species occurs on sandy and loamy soil in chaparral, coastal scrub, and desert dune habitats, from 240 to 5,250 feet in elevation. Blooms March to June.	<i>Present:</i> 121 individual plants were observed within the BRSA on MCAS Miramar near MP 46 within temporary workspace and the permanent ROW.
California adolphia ( <i>Adolphia californica</i> )	2B.1	Occurs in Diegan coastal sage scrub communities, chaparral, and valley and foothill grassland, especially in clay-dominant soils from 100 to 7,900 feet in elevation. Blooms December to May.	<i>Present:</i> There have been 21 documented CNDDDB-documented occurrences of this species throughout the past 20 years within 3 miles of the BRSA. Hundreds of individuals were observed during the 2015 surveys in a patch of coastal sage scrub south of Lake Hodges/San Dieguito River. The individuals were observed outside the temporary workspace and permanent ROW.
California orcutt grass ( <i>Orcuttia californica</i> )	1B.1, FE, CE, MSCP, NCCP	All known localities are associated with vernal pools, specifically southern basaltic clay pan alkaline vernal pools between 50 and 2,150 feet in elevation.	<i>Possible:</i> Suitable vernal pool habitat is present near MCAS Miramar and there have been two CNDDDB-documented occurrences of this species within the past 20 years, both in close proximity to MCAS Miramar. Drought conditions in recent years may have suppressed germination, but a heavy rainy season may yield suitable germination conditions. This species has been documented at MCAS Miramar immediately west of Highway 163, and west of the MCAS Miramar runways.
California screw moss ( <i>Tortula californica</i> )	1B.2	Found in sandy soils throughout chenopod scrub and valley and foothill grasslands, between 30 and 5,340 feet.	<i>Possible:</i> Suitable habitat for this species is present within or near the BRSA, and there is one recent CNDDDB documented occurrence of this species within 3 miles of the BRSA in 2001, in the Santa Margarita Ecological Reserve.
Campbell's liverwort ( <i>Geothallus tuberosus</i> )	1B.1	Occurs within mesic areas of sage scrub habitat and vernal pools often associated with clay soils. 30 to 2,000 feet in elevation.	<i>Not Expected:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. There is suitable sage scrub and vernal pool habitat within or near the BRSA.
Cedros Island oak ( <i>Quercus cedrosensis</i> )	1B.1	This perennial evergreen tree occurs in closed-cone coniferous forest, chaparral, and coastal scrub communities ranging from 830 to 3,150 feet in elevation. Blooms April to May.	<i>Not Expected:</i> Suitable habitat for this species exists within the BRSA, but there have been no documented CNDDDB-documented occurrences of this species within or near the BRSA. Most documented occurrences of this species within San Diego County are farther south than the proposed project area, along the United States-Mexico border. This species was not observed during 2015 surveys.
Chaparral beargrass ( <i>Nolina cismontana</i> )	1B.2, MSCP	This shrub occurs in dry chaparral communities in coastal mountains, at elevations ranging from 600 to 4,270 feet in elevation.	<i>Possible:</i> This species was not observed within the BRSA, but there is a recent CNDDDB-documented occurrence of this species with Robinson's pepper-grass, approximately 0.25 miles east of Pala del Norte Road in the community of Pala. There are multiple documented CalFlora occurrences of this species mapped in the northern portion of the proposed project, though many occurrences are historic. There is suitable chaparral habitat for this species throughout the BRSA.
Chaparral nolina ( <i>Nolina cismontane</i> )	1B.2	Occurs in chaparral, coastal scrub /sandstone or gabbro between 450 to 4,200 feet in elevation.	<i>Not Expected:</i> There are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, though suitable chaparral and scrub habitat is present within or near the BRSA.
Chaparral ragwort ( <i>Senecio aphanactis</i> )	2B.2	Occurs in chaparral, cismontane woodland, and coastal scrub communities, ranging from 50 to 2,600 feet in elevation. Often associated with alkaline soils. Blooms January to May.	<i>Not Expected:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, though suitable habitat is present within the BRSA. Drought conditions in recent years may have suppressed germination, but a heavy rain season may yield suitable germination conditions.
Chaparral sand-verbena ( <i>Abronia villosa</i> var. <i>aurita</i> )	1B.1, MSCP	Occurs in chaparral and coastal scrub with sandy areas from 250 to 5,250 feet elevation. Blooms January to September.	<i>Possible:</i> There are three recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA. Two occurrences were noted opposite the near the Santa Margarita River at approximately MP 2, and the third within the Pechanga Indian Reservation approximately 2.5 miles northeast of MP 0.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Coastal triquetrella ( <i>Triquetrella californica</i> )	1B.2	This moss species occurs in coastal bluff scrub and coastal scrub, primarily from 30 to 440 feet in elevation, though one occurrence at 650 feet in elevation has been observed.	<i>Not Expected:</i> While there is suitable habitat for this species within or near the BRSA, it was not observed during surveys, and there are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Coulter's goldfields ( <i>Lasthenia glabrata</i> ssp. <i>Coulteri</i> )	1B.1	Occurs in moist habitats, such as marshes, swamps (coastal salt), playas, and vernal pools, at elevations ranging from sea level to 4,000 feet in elevation. Blooms February to June.	<i>Not Expected:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA, though suitable habitat was observed on the northern shore of Lake Hodges/San Dieguito River.
Coulter's saltbush ( <i>Atriplex coulteri</i> )	1B.2	Occurs in coastal salt marshes, playas, valley and foothill grassland, vernal pools. Usually found on alkaline soils in playas, sinks, and grasslands between sea level to 4,600 feet in elevation.	<i>Not Expected:</i> This species was not observed during vegetation surveys, and there have been no recent CNDDDB documented occurrences of this species within 3 miles of the BRSA, but suitable vernal pool and alkaline marsh habitat is present.
Cuyamaca larkspur ( <i>Delphinium hesperium</i> ssp. <i>cuyamacae</i> )	CR 1B.2	This perennial herb occurs in mesic areas in lower montane coniferous forests, grasslands, yellow-pine forests, meadows, seeps, and vernal pools ranging from 4,000 to 5,350 feet in elevation. Blooms May to July.	<i>None:</i> This species occurs at elevations significantly higher than those that exist within or near the BRSA. It is known to occur primarily in the Cuyamaca Mountains, more than 20 miles east of the southern half of the proposed project, though has been known from the Palomar Mountain area, approximately 10 miles east of the northernmost portion of the proposed project. There are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and it was not observed within the BRSA.
Cuyamaca raspberry ( <i>Rubus glaucifolius</i> var. <i>ganderi</i> )	3.1, MSCP	This shrub occupies openings and gaps in forested communities, especially yellow-pine forests from 2,600 to 6,890 feet in elevation, within the Cuyamaca Mountains. It has characteristic raspberry-like berries, and blooms June to July.	<i>None:</i> This species occurs at elevations significantly higher than those that exist within or near the BRSA. It is known to occur primarily in the Cuyamaca Mountains, more than 20 miles east of the southern half of the proposed project, though has been known from the Palomar Mountain area, approximately 10 miles east of the northernmost portion of the proposed project. There are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and it was not observed within the BRSA.
Davidson's saltscale ( <i>Atriplex serenana</i> var. <i> davidsonii</i> )	1B.2, MSCP	This annual herb occurs in coastal sage scrub, riparian, and wetland communities within or near the coastal zone, especially on bluffs less than 250 feet in elevation. Blooms April to October.	<i>None:</i> While there are coastal sage scrub, riparian, and wetland communities within the BRSA, this species occupies these community types within the coastal zone. The BRSA does not contain any coastal zone habitat.
Dean's milkvetch ( <i>Astragalus deanei</i> )	1B.1	This perennial herb species occurs in chaparral, cismontane woodland, coastal scrub, and riparian forest communities ranging from 240 to 2,280 feet in elevation. Blooms February to May.	<i>Not Expected:</i> There is suitable habitat for this species within the BRSA, and the BRSA is within this species' known range, but it was not observed during surveys, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA.
Decumbent goldenbush ( <i>Isocoma menziesii</i> var. <i>decumbens</i> )	1B.2, MSCP	All known localities are restricted to cismontane woodlands from 50 to 1,600 feet in elevation. Blooms August to October.	<i>Present:</i> There have been eight recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA. There is suitable cismontane woodland habitat for this species throughout the BRSA. This species was observed in the BRSA during vegetation surveys; however no individuals were observed within the temporary workspace or permanent ROW.
Dehesa beargrass ( <i>Nolina interrata</i> )	1B.1, NCCP, MSCP	This perennial herb occurs in chaparral and foothill communities on gabbro soils in southwestern San Diego County, at elevations from 650 to 2,300 feet in elevation. Blooms June to July.	<i>None:</i> While there is suitable habitat for this species within the BRSA, and the BRSA is within a suitable elevation range for this species, recent and historic occurrences on the CalFlora and iNaturalist databases are all from within or south of the Dehesa Valley, more than 10 miles southeast of the proposed project.
Delicate clarkia ( <i>Clarkia delicata</i> )	1B.2, MSCP	This annual herb occurs in gabbroic substrates in chaparral and foothill oak woodland communities below 3,300 feet in elevation. Blooms April to June.	<i>Possible:</i> There are three recent CNDDDB-documented occurrences of this species, most recently in 2012. This species has been documented at MCAS Miramar, and suitable cismontane and chaparral communities are present throughout and near the BRSA. Germination may have been stunted during surveys due to droughts in 2014–2015, but a heavy rainy season may promote germination.
Del Mar manzanita ( <i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> )	1B.1, FE, NCCP, MSCP	Found in both maritime and sandy chaparral sites, from sea level to 1,200 feet in elevation. Blooms December to June.	<i>Possible:</i> There have been 13 documented occurrences of this species within 3 miles of the BRSA within the past 20 years, many directly on MCAS Miramar. There is suitable habitat throughout MCAS Miramar.
Dunn's mariposa lily ( <i>Calochortus dunnii</i> )	1B.2, NCCP	This perennial bulbiferous herb occurs on ridges in rocky gabbroic and metavolcanic substrates in closed-cone coniferous forest, yellow-pine forest, chaparral, and valley and foothill grassland from 600 to 6,000 feet in elevation.	<i>Not Expected:</i> Suitable habitat exists for this species throughout the BRSA, but it is known from southern San Diego County, outside of the BRSA. It was not observed during surveys, and there are no nearby documented CNDDDB-documented occurrences.
Encinitas baccharis ( <i>Baccharis vanessae</i> )	1B.1, FE/CE, NCCP, MSCP	Occurs in maritime chaparral and cismontane woodland at an elevation range between 200 and 2,360 feet in elevation. This species is commonly found in sandstone substrate. The blooming period is August to November.	<i>Possible:</i> There is one documented CNDDDB-documented occurrence of this plant within 3 miles of the BRSA in the last 20 years, south of Lake Hodges/San Dieguito River. The species was not observed during vegetation surveys in the BRSA, but suitable soils and habitat are present within or near the BRSA, especially within Kit Carson Park and San Dieguito River Park.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Engelmann oak ( <i>Quercus engelmannii</i> )	4.2	This perennial deciduous tree occurs in chaparral, cismontane woodland, riparian woodland, and valley and foothill grasslands between 160 and 4,265 feet in elevation. Blooms March to June.	<i>Present:</i> This species was observed in multiple locations within the BRSA in urban areas throughout much of the BRSA. Surveys documented 67 individuals within the BRSA and 1 individual within the temporary workspace.
Felt-leaved monardella ( <i>Monardella hypoleuca</i> ssp. <i>lanata</i> )	1B.2, MSCP, NCCP	This perennial rhizomatous herb occurs in understory in mixed chaparral, chamise chaparral, and southern oak woodland; sandy soil; and between 1,000 and 5,150 feet in elevation. Blooms April to September.	<i>Not Expected:</i> Suitable habitat is present throughout the BRSA; however, this species generally prefers higher elevations and peaks that are not present in the BRSA. There are no recent CNDDDB documented occurrences of this species within 3 miles of the BRSA.
Gambel's watercress ( <i>Nasturtium [Rorippa] gambelii</i> )	1B.1, MSCP	This perennial herb occurs in marshes, streambanks, and along lake margins at elevations below 1,150 feet in elevation. Blooms May to August.	<i>Not Expected:</i> While there is suitable habitat for this species within and near the BRSA, it was not observed during surveys, and there are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Gander's pitcher sage ( <i>Lepechinia ganderi</i> )	1B.3, NCCP	This perennial shrub occurs exclusively on gabbroic or metavolcanic substrates in closed-cone coniferous forest, chaparral, coastal scrub, and valley and foothill grassland communities between 1,000 and 3,300 feet in elevation.	<i>None:</i> While suitable vegetation communities exist for this species within and near the BRSA, this species requires gabbroic or metavolcanic soils that have not been documented within the BRSA. In southern San Diego County known occurrences are restricted to mountainous areas.
Gander's ragwort ( <i>Packera ganderi</i> )	1B.2, MSCP, NCCP	This perennial herb occurs on rocky outcrops with gabbroic soils, often in recently burned areas from 1,310 to 3,950 feet in elevation. Blooms April to June.	<i>None:</i> This species primarily occurs at higher elevations than those present within the BRSA. It has no recent CNDDDB-documented occurrences within 3 miles of the BRSA in the last 20 years, and was not observed during surveys. The closest historic CalFlora accounts of this species are from just north of San Vicente Reservoir, with other occurrences restricted to mountain sites.
Golden-rayed pentachaeta ( <i>Pentachaeta aurea</i> ssp. <i>aurea</i> )	4.2	This annual herb occurs in chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, riparian woodland, and valley and foothill grasslands, ranging from 260 to 6,070 feet in elevation. Blooms March to July.	<i>Present:</i> This species was observed within the BRSA in multiple locations on MCAS Miramar. Approximately 5,800 individuals were documented within the BRSA during surveys. Individuals were documented within the temporary workspace and within the permanent ROW between MP 43 and 46.6. It is known to occur throughout San Diego County.
Golden-spined cereus ( <i>Bergerocactus emoryi</i> )	2B.2	This species occurs in sandy soils primarily in maritime succulent scrub communities, but occasionally in closed cone coniferous forest, chaparral communities, and coastal scrub communities ranging from 10 to 1,300 feet in elevation. Blooms May to June.	<i>None:</i> This species was not observed within the BRSA, and there are no recently documented CNDDDB-documented occurrences within 3 miles of the BRSA. The BRSA does not provide the coastal habitat that golden-spined cereus requires.
Golden violet ( <i>Viola purpurea</i> ssp. <i>aurea</i> )	2B.2	This perennial herb occurs on sandy substrates (often sloped) in Great Basin scrub, pinyon and juniper woodland, and sagebrush communities from 3,280 to 8,200 feet in elevation. Blooms April to June.	<i>None:</i> There is no suitable habitat for this species within or near the BRSA. While this species has been known to occur within and near the Palomar Mountains, it prefers elevations significantly higher than those present within the BRSA.
Graceful tarplant ( <i>Holocarpha virgata</i> ssp. <i>elongata</i> )	4.2	This annual herb occurs in chaparral, cismontane woodland, coastal shrub, and especially in valley and foothill grassland communities, and often occupies disturbed sites. Occurs at elevations from 190 to 3,610 feet in elevation. Blooms May to November.	<i>Present:</i> Approximately 600 individual representatives of this species were observed within the BRSA during surveys on MCAS Miramar. Individuals were observed between MP 44 and MP 46 within temporary workspace and permanent ROW.
Hall's monardella ( <i>Monardella macrantha</i> ssp. <i>hallii</i> )	1B.3	This perennial rhizomatous herb occurs in broad-leaf upland forest, chaparral, cismontane woodland, lower montane coniferous forest, and valley and foothill grassland between 2,400 to 7,200 feet in elevation. Blooms June to October.	<i>None:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and it was not observed in the BRSA. While this species has been known to occur within and near the Palomar Mountains along the border with Riverside County, it is restricted to mountainous regions.
Heart-leaved pitcher sage ( <i>Lepechinia cardiophylla</i> )	1B.2, NCCP	This perennial shrub is found in closed cone coniferous forest, chaparral, and cismontane woodland communities from 1,700 to 4,500 feet in elevation. Blooms April to July.	<i>Not Expected:</i> There are two CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years. It generally prefers higher elevations than those observed within the BRSA, and is known to exist in a geographically isolated area approximately 6 miles east of the BRSA.
Intermediate monardella ( <i>Monardella hypoleuca</i> ssp. <i>intermedia</i> )	1B.3	This perennial rhizomatous herb occurs in chaparral, cismontane woodland, and lower montane coniferous forest habitats from 1,310 to 4,100 feet in elevation. Blooms April to September.	<i>Not Expected:</i> There is suitable habitat for this species within and near the BRSA, but this species occurs at elevations higher than those within the BRSA, and is specifically known to occur in the Santa Ana and Palomar mountains. Intermediate monardella was not observed during surveys, and there are no nearby recent CNDDDB-documented occurrences of this species.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Jacumba milkvetch ( <i>Astragalus douglasii</i> var. <i>perstrictus</i> )	1B.2, MSCP	This perennial herb occurs in rocky areas in chaparral, valley grassland, and open foothill woodland communities from 2,800 to 3,940 feet in elevation. Blooms April to June.	<i>None:</i> While there is suitable habitat for this species within and near the BRSA, it was not observed during surveys and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA. Current and historic CalFlora-documented occurrences of this species indicate that it is known from mountainous areas in southeastern San Diego County.
Jaeger's milk-vetch ( <i>Astragalus pachypus</i> var. <i>Jaegeri</i> )	1B.1	Occurs in either sandy or rocky soils in chaparral, cismontane woodland, coastal scrub, or valley and foothill grasslands between 1,200 and 3,200 feet in elevation. Blooms December to June.	<i>None:</i> There are no recent CNDDDB-documented occurrences of Jaeger's milk-vetch within 3 miles of the BRSA. The most recent CNDDDB-documented occurrence of this species is from 1881. This species is not known to occur in San Diego County, and the southernmost known extent of this species' range is in Temecula.
Laguna Mountain goldenbrush ( <i>Ericameria cuneata</i> var. <i>macrocephala</i> )	1B.3, MSCP	This perennial herb occupies rock crevices, especially in chaparral communities from 3,940 to 6,000 feet in elevation. It is geographically isolated to the Laguna Mountain area. Blooms September to November.	<i>None:</i> This species is geographically isolated to the Laguna Mountain area, more than 30 miles east of the proposed project.
Lakeside ceanothus ( <i>Ceanothus cyaneus</i> )	1B.2, NCCP	This perennial evergreen shrub occurs on ridges and on sloped closed-cone coniferous forest and chaparral communities from 770 to 2,480 feet in elevation. Blooms April to June.	<i>Not Expected:</i> While suitable chaparral habitat is present within and near the BRSA, there are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and it was not observed during surveys. This species is known to occur primarily in the community of Lakeside, 10 miles east of the proposed project.
La Purisima viguiera ( <i>Viguiera purisimae</i> )	2B.3, MSCP	This shrub occurs in coastal sage scrub communities below 2,460 feet in elevation. Blooms April to October.	<i>Not Expected:</i> There is suitable habitat for this species within and near the BRSA, but it was not observed in the BRSA, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA. CalFlora documents occurrences of this species approximately 10 miles northwest of the start of the proposed project, along the boundary between San Diego and Riverside Counties.
Little mouseltail ( <i>Myosurus minimus</i> ssp. <i>apus</i> )	3.1, NCCP	This annual herb occurs in alkaline vernal pools, coastal sage scrub, freshwater wetlands, and wetland-riparian communities ranging from 65 to 2,100 feet in elevation. Blooms March to June.	<i>Possible:</i> There is suitable habitat for this species on MCAS Miramar, and it has been documented on MCAS Miramar. While not observed during surveys, it has been documented in vernal pools in Los Peñasquitos Canyon Preserve.
Lemon lily ( <i>Lilium parryi</i> )	1B.2	This perennial bulbiferous herb occurs in mesic areas, meadows, and streams in montane conifer forest communities from 4,000 to 9,000 feet in elevation. Blooms July to August.	<i>None:</i> This species occurs at elevations significantly higher than those that exist within or near the BRSA. Documented CalFlora occurrences of this species are all from mountain ranges at least 10 miles east of the proposed project. There are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and it was not observed during surveys.
Long-spined spineflower ( <i>Chorizanthe polygonoides</i> var. <i>longispina</i> )	1B.2, MSCP	Occurs in chaparral, coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools, often associated with clay soils, at elevations between 100 and 5,000 feet in elevation. Blooms April to July.	<i>Present:</i> This species was documented along the aqueduct road at MCAS Miramar in the 2015 BRSA surveys between MP 45 and MP 46.6, as well as multiple times in the CNDDDB within the last 20 years. It has eight recent CNDDDB-documented occurrences within 3 miles of the BRSA, and approximately 1,350 individuals were observed during 2015 surveys. Individuals were observed in the temporary workspace and permanent ROW. There is suitable habitat within and near the BRSA.
Many-stemmed dudleya ( <i>Dudleya multicaulis</i> )	1B.2, NCCP	This perennial occurs in chaparral, coastal scrub, and valley and foothill grassland communities on clay substrates, ranging between 50 and 2,600 feet in elevation. Blooms April to July.	<i>Not Expected:</i> While suitable habitat for this species is present, the nearest documented occurrence of this species is 15 miles from the BRSA, and it was not observed during surveys.
Mesa horkelia ( <i>Horkelia cuneata</i> var. <i>puberula</i> )	1B.1	Found in maritime chaparral, cismontane woodland, and coastal scrub, in either sandy or gravelly soils, at elevations ranging from 200 to 2,650 feet in elevation. Blooms February to September.	<i>Not Expected:</i> There are no CNDDDB documented occurrences of this species within or near the BRSA in the last 20 years. Suitable habitat is present in chaparral, cismontane, and coastal scrub communities.
Mexican flannelbush ( <i>Fremontodendron mexicanum</i> )	1B.1 FE, CR	This species occurs on gabbroic, metavolcanic, or serpentinite soils in closed-cone coniferous forest, chaparral, and cismontane woodland from 30 to 2,350 feet in elevation.	<i>Not Expected:</i> Suitable chaparral and cismontane woodland habitat is present within or near the BRSA, but the species was not observed during surveys. There are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Mojave tarplant ( <i>Deinandra</i> [ <i>Hemizonia</i> ] <i>mohavensis</i> )	1B.3, MSCP	This annual herb occurs in moist substrates within openings in chaparral, desert scrub, and woodland (often Joshua tree) communities from 1,500 to 5,250 feet in elevation. Blooms May to June.	<i>Not Expected:</i> While this species was not observed during surveys, there is suitable habitat for this species within or near the BRSA. There are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, but there are documented CalFlora occurrences of this species less than 15 miles east of the northernmost portion of the proposed project, along the border with Riverside County.
Morena currant ( <i>Ribes canthariforme</i> )	1B.3, MSCP	This shrub species occurs in chaparral communities from 1,640 to 3,940 feet in elevation. Blooms February to April.	<i>Not Expected:</i> While there is suitable habitat for this species within and near the BRSA, it was not observed within the BRSA, and there have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. There are historic and recent occurrences of this species documented on the CalFlora database approximately 15 miles east of the proposed project, near the El Capitan Reservoir.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Mountain Springs bush lupine ( <i>Lupinus excubitus</i> var. <i>medius</i> )	1B.3, MSCP	This shrub occurs in desert washes, in creosote bush scrub and pinyon-juniper woodland communities below 3,300 feet in elevation. It is known to exist primarily in the southeastern portion of San Diego County. Blooms March to April.	<i>None:</i> This species was not observed within the BRSA, and there are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. Current and historic CalFlora-documented occurrences of this species are isolated to eastern and southeastern San Diego County.
Mud nama ( <i>Nama stenocarpa</i> )	2B.2	This annual or perennial herb occurs in marshes, swamps, and intermittently wet areas such as riverbanks and along the edges of lakes, from 10 to 1,640 feet in elevation. Blooms January to July.	<i>Not Expected:</i> While suitable habitat for this species exists along the shores of Lake Hodges/San Dieguito River and perennial riparian bodies, it was not observed during surveys, and there have been no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Munz's onion ( <i>Allium munzii</i> )	1B.1	Found in mesic and clay soils in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, and valley and foothill grassland from 950 to 3,510 feet in elevation. Blooms March to May.	<i>None:</i> There are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA. The southernmost boundary of its known geographic range is 6 miles north of the proposed project.
Munz's sage ( <i>Salvia munzii</i> )	2B.2	This perennial evergreen shrub occurs in chaparral and coastal scrub communities ranging from 370 to 3,500 feet in elevation. Blooms February to April.	<i>Not expected:</i> There is suitable habitat for this species within the BRSA, but the northernmost extent of its range is in southern San Diego County, south of the proposed project. This species was not observed during surveys, and there have been no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years, though there is a documented 2013 CalFlora-documented occurrence of this species approximately 3 miles west of the BRSA, near Lake Hodges/San Dieguito River.
Nevin's barberry ( <i>Berberis nevinii</i> )	1B.1, FE/CE, NCCP	This perennial evergreen shrub occurs in sandy or gravelly substrates in chaparral, cismontane woodland, coastal scrub, riparian scrub, and washes from 900 to 2,710 feet in elevation. Blooms March to April.	<i>Not Expected:</i> While there is suitable habitat for this species throughout the BRSA, it was not observed within the BRSA, and there have been no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Nuttall's scrub oak ( <i>Quercus dumosa</i> )	1B.1, MSCP	This perennial evergreen shrub occurs within closed-cone coniferous forest, sage scrub, and especially coastal chaparral communities. It is usually associated with sandy, clay loam soils under 1,300 feet in elevation.	<i>Present:</i> There have been 22 CNDDDB documented occurrences of this species within 3 miles of the BRSA within the last 20 years. This species has been documented at MCAS Miramar. The BRSA surveys documented more than 300 individuals of this species, though some may have hybridized with common scrub oak ( <i>Quercus berberidifolia</i> ). No individuals were observed within the temporary workspace or permanent ROW.
Oil neststraw ( <i>Stylocline citroleum</i> )	1B.1	This annual herb occurs in chenopod scrub, coastal scrub, and valley and foothill grassland between 160 and 1,600 feet in elevation, generally in clay soils. Blooms March to April.	<i>None:</i> While there is suitable habitat for this species within and near the BRSA, there are no documented recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and it is presumed extirpated from San Diego County.
Orcutt's brodiaea ( <i>Brodiaea orcuttii</i> )	1B.1, MSCP, NCCP	This perennial bulbiferous herb occurs in closed-cone coniferous forest, chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools, in mesic, clay, and occasionally serpentinite soils, ranging from 100 to 5,500 feet in elevation. Blooms May to July.	<i>Present:</i> There are 27 documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, most recently in 2015. There is suitable habitat throughout the BRSA for this species, and it has been observed at MCAS Miramar, and approximately 2,300 individuals of this species were observed in the BRSA during 2015 surveys. Individuals were observed between MP 44 and MP 46 and were within temporary workspace and permanent ROW.
Orcutt's Hazardia ( <i>Hazardia orcuttii</i> )	1B.1, FE/CT	This perennial evergreen shrub occurs on clay soils in maritime chaparral and coastal scrub communities from 260 to 280 feet in elevation.	<i>Not Expected:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and it was not observed during surveys. There is suitable chaparral and coastal scrub habitat within or near the BRSA, but this species generally occupies coastal areas to the west of the proposed project.
Orcutt's linanthus ( <i>Linanthus orcuttii</i> )	1B.3	This annual herb occurs in openings in chaparral, pine forest, desert scrub, and pinyon and juniper woodland communities ranging from 3,000 to 7,040 feet in elevation. Blooms May to June.	<i>None:</i> This species was not observed in the BRSA, and there have been no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. It is known to occur in and around Palomar Mountain, near the start of the proposed project, but this species prefers elevations much higher than those within the BRSA.
Orcutt's spineflower ( <i>Chorizanthe orcuttiana</i> )	1B.1, MSCP, NCCP	Found in sandy openings in closed-cone coniferous forests, chaparral (maritime), and coastal scrub ecosystems, from 10 to 400 feet in elevation. Blooms from March to May.	<i>Not Expected:</i> There are no recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and this species was not observed in the BRSA. There is some potential habitat within coastal scrub and chaparral communities in the BRSA, though this species generally does not occur as far inland as the BRSA.
Parish's meadowfoam ( <i>Limnanthes alba</i> ssp. <i>parishii</i> )	1B.2, FE/CE, MSCP	This annual herb is restricted to vernal mesic areas in lower montane coniferous forest, meadows and seeps, wet meadows, along the edges of ephemeral streams, and in vernal pools from 1,960 to 6,560 feet in elevation. Blooms April to June.	<i>Not Expected:</i> While there is suitable vernal pool habitat within or near the BRSA, this species generally occurs at higher elevations than those within the BRSA. There are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and it was not observed during surveys.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Palmer's frankenia ( <i>Frankenia palmeri</i> )	2B.1	This perennial herb occurs in coastal dunes, coastal salt marshes and swamps, alkali marshes, and playas, at elevations below 30 feet in elevation. It primarily occupies coastal communities. Blooms May to June.	<i>Not Expected:</i> While there is suitable alkali marsh habitat for this species within the BRSA near Lake Hodges/San Dieguito River, this species generally occupies coastal areas. It was not observed within the BRSA, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA.
Palmer's goldenbush ( <i>Ericameria palmeri</i> var. <i>palmeri</i> )	1B.1, NCCP	This perennial evergreen shrub occurs in chaparral and coastal scrub with mesic soils, up to 2,000 feet in elevation. Blooms September to November.	<i>Not Expected:</i> There have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years. While not observed during vegetation surveys in the BRSA, this species has been observed at MCAS Miramar, and suitable chaparral and coastal scrub habitat are present within or near the BRSA.
Palmer's grapplinghook ( <i>Harpagonella palmeri</i> )	4.2, NCCP	Annual that blooms March through May. This species is found in coastal sage scrub, chaparral, and grassland communities between 65 and 3,140 feet elevation.	<i>Not Expected:</i> This species has been documented at MCAS Miramar, though not necessarily within the BRSA. There have been no CNDDDB-documented occurrences within 3 miles of the BRSA in the last 20 years, though there is suitable habitat present within 3 miles of the BRSA.
Parish's brittlescale ( <i>atriplex parishii</i> )	1B.1	This annual herb occurs on alkaline soils in chenopod scrub, playas, and vernal pools, ranging from 80 to 6,240 feet in elevation. Blooms June to October.	<i>Not Expected:</i> While this species has no documented CNDDDB-documented occurrences within 3 miles of the BRSA and was not observed within the BRSA during surveys, there is suitable vernal pool habitat on MCAS Miramar.
Parish's meadowfoam ( <i>Linnanthus alba</i> ssp. <i>parishii</i> )	CE 1B.2	This annual herb occurs in vernal mesic areas in lower montane coniferous forest, meadows and seeps, along the edges of ephemeral streams, and in vernal pools from 1,960 to 6,560 feet in elevation. Blooms April to June.	<i>None:</i> This species occurs at elevations much higher than those throughout the BRSA. It was not observed during surveys, and there are no nearby CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. There are two documented iNaturalist occurrences of this species, both from near Cuyamaca Rancho State Park, approximately 25 miles east of the proposed project.
Parry's spineflower ( <i>Chorizanthe parryi</i> var. <i>parryi</i> )	1B.1	This annual herb occurs on sandy or rocky substrates in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland communities from 900 to 4,000 feet in elevation. Blooms April to June.	<i>None:</i> This species occurs north of the proposed project. It is not known to occur in San Diego County, and there are no nearby CNDDDB-documented occurrences of this species. The southernmost extent of this species is Temecula, approximately 6 miles north of the start of the proposed project.
Parry's tetraococcus ( <i>Tetraococcus dioicus</i> )	1B.2, MSCP, NCCP	This perennial deciduous shrub occurs on dry slopes in chaparral and coastal scrub communities, at elevations ranging from 540 to 3,280 feet in elevation. Blooms April to May.	<i>Present:</i> There have been 16 CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, most recently in 2016, west of the I-15 corridor, just north of the junction of Hardell Lane and El Paso Alto. Approximately 50 individuals were observed during the 2015 BRSA surveys on a drainage on the southern end of Rainbow Hills Road at approximately MP 3. All individuals were outside the temporary workspace or permanent ROW.
Pendleton button-celery ( <i>Eryngium pendletonense</i> )	1B.1	This perennial herb occupies clay soils in vernal mesic areas in coastal bluff scrub, vernal pool, and valley and foothill grassland communities below 365 feet in elevation.	<i>None:</i> This species exists only within or near Camp Pendleton, 15 miles west of the proposed project. Historical CalFlora-documented occurrences are also isolated to the Camp Pendleton area. There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Prostrate vernal pool navarretia ( <i>Navarretia prostrata</i> )	1B.1, MSCP	This annual herb occurs in coastal scrub, meadows and seeps, alkaline floodplains, alkaline valley and foothill grassland, and vernal pools, generally in mesic soils, ranging from 50 to 3,970 feet in elevation. Blooms April to July.	<i>Not Expected:</i> Suitable habitat and elevation ranges are present within or near the BRSA, but there are no CNDDDB documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and the species was not observed within the BRSA. Drought conditions in winter 2015 may have prevented germination, however, a heavy rainy season may produce more suitable germination conditions.
Purple stemodia ( <i>Stemodia durantifolia</i> )	2B.1	This perennial herb occurs in riparian-wetland habitats, often on drying streambeds or on set sand or rocks below 1,300 feet in elevation. Blooms year-round.	<i>Not Expected:</i> There have been four CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. Suitable habitat and elevation ranges are present within and near the BRSA, but it was not observed during 2015 vegetation surveys.
Rainbow manzanita ( <i>Arctostaphylos rainbowensis</i> )	1B.1, MSCP	This perennial evergreen shrub is restricted to chaparral communities and granite outcroppings from 670 to 2,200 feet in elevation. Blooms January to February.	<i>Possible:</i> There have been 19 CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, most recently in 2016. There is suitable chaparral habitat for this species within and near the BRSA, but it was not observed within the BRSA during surveys. This species primarily occurs near and north of the community of Rainbow.
Ramona horkelia ( <i>Horkelia truncate</i> )	1B.3	This perennial herb is found in chaparral and cismontane woodland, in clay and gabbroic soils at elevations from 1,300 to 4,270 feet in elevation. Blooms May to June.	<i>Not Expected:</i> There are three CNDDDB-documented occurrence of this species within 3 miles of the BRSA in the past 20 years, two in San Marcos and one in Pala Mesa. There is suitable habitat for this species, though it typically occurs at higher-elevation habitat sites than those that occur within the BRSA.
Robinson's pepper-grass ( <i>Lepidium virginicum</i> var. <i>robinsonii</i> )	4.3, MSCP	This annual herb occurs in dry, often disturbed chaparral, meadows, and coastal scrub communities below 2,900 feet of elevation. Blooms January to July.	<i>Possible:</i> There are 16 CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. While not observed in the BRSA, this species has been documented at MCAS Miramar, and there is suitable habitat throughout the BRSA.
Round-leaved filaree ( <i>California macrophylla</i> )	1B.1	This annual herb occurs on clay and occasionally serpentine soils in cismontane woodland and valley and foothill grassland communities between 50 to 3,940 feet in elevation. Blooms March to May.	<i>Not Expected:</i> While there is suitable habitat present within the BRSA, this species was not observed during surveys, and has not been documented in the CNDDDB within 3 miles of the BRSA in the last 20 years.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
San Bernardino aster ( <i>Symphyotrichum defoliatum</i> )	1B.2	This perennial rhizomatous herb occupies disturbed areas in grasslands, coastal scrub, cismontane woodland, lower montane coniferous forest, meadows and seeps, and valley and foothill grassland communities. It is known to occupy ditches. This species generally occupies areas up to 6,700 feet in elevation, and in San Diego County it is known to occur at elevations higher than 3,900 feet. Blooms July to November.	<i>None:</i> This species occurs at elevations much higher than those within or near the BRSA. It was not observed within the BRSA, and there are no nearby CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
San Bernardino bluegrass ( <i>Poa atropurpurea</i> )	1B.2, MSCP	This rhizomatous perennial grass occurs in moist meadows within yellow pine forest communities between 4,920 to 7,220 feet in elevation. Blooms April to June.	<i>None:</i> This species occurs at high elevations in mountains in San Diego County. While this species has been known to occur at Palomar Mountain near the start of the proposed project, the BRSA does not contain a suitable elevation range for this species.
San Diego ambrosia ( <i>Ambrosia pumila</i> )	1B.1, FE/-, MSCP, NCCP	Occurs in chaparral, coastal scrub, valley and foothill grassland, and vernal pools, often in disturbed areas. Generally in sandy loam or clay soils, at elevations from 65 to 1,361 feet in elevation. Blooms April to October.	<i>Possible:</i> There are six CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. While not observed within the BRSA, there is suitable habitat for this species within or near the BRSA. Critical habitat for this species is found within 5 miles of the proposed project.
San Diego barrel cactus ( <i>Ferocactus viridescens</i> )	2B.1, MSCP, NCCP	This perennial stem succulent is found in rocky and sandy areas in chaparral, coastal scrub, valley and foothill grassland and vernal pool communities, at elevations from 10 to 1,400 feet in elevation. Blooms May to June.	<i>Present:</i> Also referred to as the coast barrel cactus, this species is well-documented in the CNDDDB, with 58 documented occurrences within 3 miles of the BRSA in the past 20 years, including an occurrence in 2016 and multiple occurrences in 2015. One individual San Diego barrel cactus was observed during the 2015 surveys at MP 47, and the species is present on MCAS Miramar.
San Diego button-celery ( <i>Eryngium aristulatum</i> var. <i>parishii</i> )	1B.1, FE/CE, MSCP, NCCP	This annual or perennial herb occurs in mesic soils in coastal scrub, valley and foothill grassland, freshwater wetlands, and vernal pools, at elevations below 2,000 feet in elevation. Blooms April to June.	<i>Possible:</i> There are 17 CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years, and there is suitable habitat present within or near the BRSA. It is present on MCAS Miramar, but outside the BRSA.
San Diego County viguiera ( <i>Bahiopsis [Viguiera] laciniata</i> )	4.2	This perennial shrub species occurs in chaparral and coastal sage scrub communities, especially on slopes, and ranges from 190 to 2,460 feet in elevation.	<i>Present:</i> This species was observed on the southern end of Pomerado Road in Scripps Ranch. They appear to have been planted. Approximately 1,300 individuals were observed. Suitable habitat for this species exists throughout the BRSA.
San Diego goldenstar ( <i>Bloomeria clevelandii</i> )	1B.1, NCCP	This bulbiferous herb occurs in clay soils in chaparral, coastal scrub, valley and foothill grassland, and vernal pools communities below 400 feet in elevation. Blooms April to May.	<i>Present:</i> Suitable habitat for this species is present within or near the BRSA, and is present on MCAS Miramar. There have been 31 documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and approximately 4,000 individuals were observed within the BRSA between MP 44 and MP 47 within the temporary workspace and permanent ROW.
San Diego gumplant ( <i>Grindelia hallii</i> )	1B.2, MSCP	This perennial herb occurs in chaparral, lower montane coniferous forest, meadows and seeps, dry slopes, open pine/oak woodland, and valley and foothill grassland, from 600 to 5,730 feet in elevation. Blooms July to October.	<i>Possible:</i> There is one recently documented CNDDDB-documented occurrence of this species in 2008, near Beeler Canyon in Poway. There is suitable habitat for this species within 3 miles of the BRSA, but it was not observed within the BRSA.
San Diego marsh-elder ( <i>Iva hayesiana</i> )	2B.2	This perennial herb is found in marshes, alkaline flats, streambanks, swamps, and playas, at elevations between 10 to 1,640 feet in elevation. Blooms April to October.	<i>Possible:</i> There are six CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, five of which are documented from 2015. There is suitable marsh habitat for this species within or near the BRSA.
San Diego mesa mint ( <i>Pogogyne abramsii</i> )	1B.1, FE/CE, MSCP, NCCP	All known localities of this annual herb are restricted to vernal pools (especially coastal terrace) at elevations from 300 to 660 feet in elevation. Blooms March to July.	<i>Possible:</i> There are six recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA area in the past 20 years. This species has been documented at MCAS Miramar and in Mission Trails Regional Park, and suitable habitat is present throughout the BRSA.
San Diego milk-vetch ( <i>Astragalus oocarpus</i> )	1B.2	This perennial herb occurs in openings in chaparral communities and in cismontane woodland communities (especially oak) from 1,000 to 5,000 feet in elevation. Blooms May to August.	<i>Not Expected:</i> While there is suitable habitat for this species present within the BRSA, there are no CNDDDB-documented occurrences within 3 miles of the BRSA in the past 20 years. The nearest recent occurrences are from approximately 25 miles east of the BRSA, in mountainous habitat. A historic CalFlora-documented occurrence from 1927 near the community of Fallbrook indicates that this plant occurred approximately 3 miles west of the proposed project.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
San Diego sagewort ( <i>Artemisia palmeri</i> )	4.2	This perennial, deciduous shrub occurs in moist drainages and mesic, sandy soils in San Diego County and Baja California. It occupies chaparral, coastal scrub, riparian scrub, and riparian woodland communities from 50 to 3,000 feet in elevation. Blooms May to September.	<i>Present:</i> 37 individual representatives of this species were observed within the BRSA between MP 39.5 and the southern end of Pomerado Road in Poway by MP 44, and this species has been documented on MCAS Miramar. There have been six recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. All individuals were observed outside the temporary workspace and permanent ROW.
San Diego sunflower ( <i>Hulsea californica</i> )	1B.3	Occurs in disturbed, open, and burned areas in chaparral and in both lower and upper montane coniferous forests between 3,000 to 9,500 feet in elevation.	<i>None:</i> This species occurs at significantly higher elevations than those observed within the BRSA. While it has been known to occur on Palomar Mountain in northern San Diego County, there are no recent CNDDDB documented occurrences of this species within 3 miles of the BRSA.
San Diego thorn-mint ( <i>Acanthomintha ilicifolia</i> )	1B.1, FE/CE MSCP, NCCP	This perennial herb occurs in openings within chaparral, coastal scrub, valley and foothill grassland, and vernal pools, generally in clay soils at elevations between 10 and 3,150 feet in elevation. Blooms April to June.	<i>Possible:</i> Suitable habitat is present throughout the BRSA, and there have been seven recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. This species was not observed within the BRSA, but drought conditions in recent years may have suppressed germination. A heavy rainy season may provide suitable germination conditions. Critical habitat for this species is found within 5 miles of the proposed project.
San Felipe monardella ( <i>Monardella nana</i> ssp. <i>laptosiphon</i> )	1B.3	This perennial herb occurs in chaparral and lower montane coniferous forest communities from 3,930 to 6,090 feet in elevation.	<i>None:</i> This species occurs at elevations much higher than those within or near the BRSA. While it has been known to occur on Palomar Mountain in northern San Diego County, it was not observed in the BRSA, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA.
San Miguel savory ( <i>Clinopodium chandleri</i> )	1B.2, NCCP	A perennial shrub that occurs on rocky, gabbroic, or metavolcanic soils in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland communities from 390 to 3,530 feet in elevation. Blooms March to July.	<i>Possible:</i> While suitable habitat for this species is present within the BRSA, it was not observed during surveys, and there are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. There is potential that this species is present in riparian areas that were inaccessible to surveyors in 2015.
Sand-loving wallflower ( <i>Erysimum ammodium</i> )	1B.2	This perennial herb occurs in sandy substrate in maritime chaparral and coastal scrub communities less than 200 feet in elevation. Blooms February to June.	<i>Not Expected:</i> There is no suitable coastal zone habitat for this species within or near the BRSA, and there are no recent CNDDDB-documented occurrences. There is a 2007 CalFlora-documented occurrence west of the community of Pala, approximately 7 miles east of the proposed project, and there is a 2015 iNaturalist-documented occurrence in the community of Bonsall, approximately 4 miles west of the proposed project. Both of these occurrences are outside of the BRSA, and are not in the species' standard range.
Santa Rosa basalt brodiaea ( <i>Brodiaea santarosae</i> )	1B.2	This perennial bulbiferous herb occurs in basaltic soils in valley and foothill grassland communities from 1,850 to 3,430 feet in elevation. It is restricted to Santa Rosa Basalt substrates. Blooms May to June.	<i>None:</i> This species occurs approximately 7 miles north of the northernmost portion of the proposed project. It is geographically isolated to the Santa Rosa Plateau in the Santa Ana Mountains, in Riverside County.
Shevock's copper moss ( <i>Schizymerium shevockii</i> )	1B.2	This moss is found in cismontane woodland communities between 2,400 to 4,600 feet in elevation, in rocky metamorphic and mesic soils.	<i>None:</i> There are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years. This species generally occurs at higher elevations than those within the BRSA survey area.
Singlewhorl burrobrush ( <i>Ambrosia monogyra</i> )	2B.2	Occurs in sandy soils in chaparral, Sonoran desert scrub washes, and dry riverbeds below 1,600 feet in elevation. Blooms August to November.	<i>Not Expected:</i> There are no recently documented CNDDDB-documented occurrences of this species within or near the BRSA. This species was not observed in the BRSA, but there is suitable chaparral habitat for this species within and near the BRSA. There is a documented CalFlora occurrences of this species south of MCAS Miramar, near Mission Trails Regional Park.
Slender-horned spineflower ( <i>Dodecahema leptoceras</i> )	1B.1, FE/CE	This annual herb is found in sandy substrates in chaparral, cismontane woodland, and coastal scrub (alluvial fan), at elevations ranging from 650 to 2500 feet in elevation. Blooms April to June.	<i>Possible:</i> There have been no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. While suitable habitat for this species exists within the BRSA, it was not observed in the BRSA. There is a documented CalFlora occurrence of this species approximately 3 miles northeast of the proposed project start, near the intersection of Pala Road and Pechanga Road, though generally, the southernmost extent of this species is Temecula, approximately 6 miles north of the proposed project.
Small-flowered microseris ( <i>Microseris douglasii</i> ssp. <i>platycarpa</i> )	4.2	This annual herb species occurs in inland clay soils in cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pool communities from 50 to 3,510 feet in elevation. Blooms March to May.	<i>Present:</i> This species has been observed within vernal mesic communities on MCAS Miramar near MP 45. Individuals were observed within the temporary workspace and permanent ROW.
Smooth tarplant ( <i>Centromadia pungens</i> ssp. <i>laevis</i> )	1B.1, MSCP	This annual herb is found in alkaline soils in disturbed areas, banks and streambeds, chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland, from 300 to 1,640 feet in elevation. Blooms April to September.	<i>Possible:</i> There have been two CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years, both near the San Dieguito River. Additional suitable habitat with alkaline soils exists in wetland areas throughout the BRSA, including areas south of the San Luis Rey River, and on the northern shore of Lake Hodges/San Dieguito River. iNaturalist-documented occurrences of this species are primarily centered around areas near the community of Fernbrook, east of the proposed project. This species was not observed within the BRSA, but drought conditions in recent years may have suppressed germination. A heavy rainy season may yield more suitable germination conditions.
Southern mountains skullcap ( <i>Scutellaria bolanderi</i> ssp. <i>austromontana</i> )	1B.2	This perennial rhizomatous herb occurs in mesic soils in chaparral, cismontane woodland, and lower montane coniferous forest communities, ranging from 1,390 to 6,560 feet in elevation.	<i>None:</i> In San Diego County, this species is restricted to elevations much higher than those that occur within or near the BRSA. There are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and it was not observed in the BRSA. There have been documented CalFlora occurrences of this species on and near Palomar Mountain in northern San Diego County, but these are outside of the BRSA.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
Southern tarplant ( <i>Centromadia parryi</i> ssp. <i>Australis</i> )	1B.1, MSCP	Occurs in chaparral, coastal prairie, meadows and seeps, marshes and swamps (coastal salt), and valley and foothill grassland (vernally mesic), generally in alkaline soils. Found at elevations ranging from sea level to 1,380 feet in elevation. Blooms May to November.	<i>Possible:</i> There have been two documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 year. Additional suitable habitat is present within or near the BRSA. This species was not observed within the BRSA, but drought conditions in recent years may have suppressed germination. A heavy rainy season may yield more suitable germination conditions.
Southwestern spiny rush ( <i>Junctus acutus</i> ssp. <i>leopoldii</i> )	4.2	This perennial rhizomatous herb occurs in wet saline places, including alkaline seeps, salt marshes, coastal dunes, marshes (including coastal) and swamps, from sea level to 2,950 feet in elevation. Blooms March to June.	<i>Present:</i> This species was observed in intermittent drainages in the southern portion of the BRSA between MP 39 and MP 44. No individuals were observed within the temporary workspace or the permanent ROW.
Spreading navarretia ( <i>Navarretia fossalis</i> )	1B.1, FT/CE, MSCP, NCCP	This annual herb species is found in chenopod scrub, marshes and swamps (assorted shallow freshwater), playas, vernal pools, and ditches, at elevations from 100 to 4,270 feet in elevation. Blooms April to June.	<i>Possible:</i> There have been five CNDDDB-documented occurrences of this species within 3 miles the BRSA in the last 20 years, and suitable habitat is present. While the species was not observed within the BRSA, according to CNDDDB records, this species has been documented at MCAS Miramar north of the runways and south of Rose Canyon, and south of the intersection of Nobel Drive and Highway 805. Critical habitat for this species is found within 5 miles of the proposed project
Summer holly ( <i>Comarostaphylis diversifolia</i> ssp. <i>Diversifolia</i> )	1B.2, MSCP	This annual herb occurs in chaparral and cismontane woodland communities, at elevations between 330 to 1,800 feet in elevation. Blooms April to June.	<i>Present:</i> There have been 15 recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and there is sufficient suitable habitat present to sustain this species. One individual of this species was observed within the BRSA during 2015 surveys near MP 17.5 outside the temporary workspace and permanent ROW, and this species has been documented in the CNDDDB south of Lake Hodges/San Dieguito River, and at MCAS Miramar north of Rose Canyon and near the fish pond.
Sticky dudleya ( <i>Dudleya viscida</i> )	1B.2, NCCP	This perennial herb occurs on rocky substrates in coastal bluff scrub, chaparral, cismontane woodland, and coastal scrub communities ranging from 30 to 1,810 feet in elevation. Blooms May to June.	<i>Not Expected:</i> While suitable habitat for this species is present within or near the BRSA, it was not observed during surveys, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA.
Tecate Cyprus ( <i>Hesperocyparis forbesii</i> )	1B.1, NCCP	This perennial evergreen tree occurs in clay, gabbroic, and metavolcanic soils in closed-cone coniferous forest and chaparral communities from 1,470 to 4,900 feet in elevation.	<i>Possible:</i> Suitable habitat for this species is present within or near the BRSA, but it was not observed during surveys, and there are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. iNaturalist-documented occurrences of this species within San Diego County are primarily restricted to mountain areas, though there is a documented CalFlora occurrence of this species from 2004, approximately 3 miles east of the proposed project, near the community of Hidden Meadows.
Thread-leaved brodiaea ( <i>Brodiaea filifolia</i> )	1B.1, FT/CE, MSCP, NCCP	This perennial bulbiferous herb occurs in clay soils in chaparral (openings), cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools, between 80 to 3,680 feet in elevation. Blooms March to June.	<i>Possible:</i> There have been four CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, most recently in 2015. Suitable habitat, soils, and elevation ranges are present. It was not observed during 2015 surveys and has not been documented at MCAS Miramar, but it has been documented at nearby MCAS Camp Pendleton. Critical habitat for this species is found within 5 miles of the proposed project
Vail lake ceanothus ( <i>Ceanothus ophiocilus</i> )	1B.1, FT/CE	This perennial evergreen shrub occurs on rocky slopes in gabbroic or pyroxenite-rich chaparral outcrops from 1,900 to 3,500 feet in elevation. Blooms February to March.	<i>No Potential:</i> There have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years. This species generally exists at higher elevations than those present within the BRSA, and the southernmost extent of its range occurs a few miles north, in Temecula.
Variiegated dudleya ( <i>Dudleya variegata</i> )	1B.2, MSCP, NCCP	This perennial herb is found in clay soils in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools, often on dry hillsides and mesas below 1000 feet in elevation. Blooms from April to June.	<i>Possible:</i> While not observed during 2015 surveys, this plant is small and can be difficult to detect. Suitable habitat and soils are present throughout the BRSA, and there are 18 CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. This species has been documented at MCAS Miramar. Populations are known to be smaller during drought years, so dry conditions in winter 2015 years may have suppressed germination. A heavy rainy season may yield more suitable germination conditions.
Vernal pool monkeyflower ( <i>Mimulus latidens</i> )	MSCP	This annual herb occurs in vernal wet depressions in valley grasslands, foothill woodlands, and wetland-riparian communities below 2,950 feet in elevation. Blooms April to June.	<i>Possible:</i> This species was not observed in the BRSA, though unidentified <i>Mimulus</i> spp. have been documented in the CNDDDB within 3 miles of the BRSA in the last 20 years. There is suitable habitat for this species in the BRSA.
Wart-stemmed ceanothus ( <i>Ceanothus verrucosus</i> )	2B.2, MSCP, NCCP	All known localities of this perennial evergreen shrub are restricted to chaparral communities on rocky slopes at elevations below 1,150 feet in elevation. Blooms December to May.	<i>Possible:</i> There have been eight CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. While it was not observed in BRSA surveys, chaparral stands can be dense and difficult to access. According to the CNDDDB record, this species has been observed at MCAS Miramar south of Miramar Road.
Western dichondra / Western ponysfoot ( <i>Dichondra occidentalis</i> )	4.2	This perennial rhizomatous herb occurs under rocks and shrubs in woodland, coastal sage scrub, and chaparral communities, ranging from 160 to 1,640 feet in elevation. Blooms January to July.	<i>Present:</i> There is suitable habitat for this species within the BRSA, and 580 individual representatives of this species were observed during surveys, in the understory of trees along Pomerado Road between MP 43 and MP 44, and beneath Nuttall's scrub oak on MCAS Miramar at MP 46. It has been documented in CNDDDB in a 2015 occurrence in a coastal sage scrub community within Black Mountain Open Space Park. The individuals along Pomerado road were within the BRSA, but not the temporary workspace or permanent ROW. The individuals on MCAS Miramar are within the temporary workspace.

Special Status Plants with a Potential to Occur in the Biological Resources Survey Area

Species	Rare Plant Rank	Habitat Description	Potential to Occur
White rabbit-tobacco ( <i>Pseudognaphalium leucocephalum</i> )	2B.2	This perennial herb occurs in sandy and gravelly substrates in coastal scrub, chaparral, cismontane woodland, and riparian communities, often in dry streambeds or canyon bottoms, at elevations below 1,640 feet in elevation. Blooms July to December.	<i>Not Expected:</i> There is suitable habitat for this species present within or near the BRSA, but it was not observed during surveys. There have been no CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. There are recent occurrences of this species documented on the CalFlora database west of the community of Rainbow, but they are all more than 3 miles from the proposed project.
Willow monardella ( <i>Monardella viminea</i> )	1B.1, FE/CE, MSCP, NCCP	This perennial herb is found in alluvial soils in ephemeral washes (often rocky), in chaparral, coastal scrub, riparian forest, riparian scrub, and riparian woodlands. Occurs at elevations 1,300 feet in elevation. Blooms June to August.	<i>Possible:</i> There have been 14 CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. While not observed during 2015 surveys, suitable habitat for this species is present within and near the BRSA. Critical habitat for this species is found within 5 miles of the proposed project
Woven-spored lichen ( <i>Texosporium sancti-jacobi</i> )	3	This lichen occurs in chaparral, on soil, small mammal pellets, dead twigs, and epiphytically on <i>Selaginella</i> spp. at elevations from 200 to 2,160 feet.	<i>Not Expected:</i> There have been three CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. This species was not observed during 2015 surveys.

Sources (for full references, see MEA Section 3.4, Biological Resources): CalFlora 2017a, 2017b; CDFW 2017b, 2017d; CNDDDB 2017; CNPS 2017; County of San Diego 1998; iNaturalist 2017; Insignia 2015a, 2015b, 2017a, 2017b; MCAS Miramar 2011; USFWS 2017a; University of California Berkeley 2017

† Special status plant designations used are defined as follows:

FE: Federally Endangered

FT: Federally Threatened

CE: California Endangered

CT: California Threatened

MSCP: Sensitive plants on List A of the County of San Diego Multiple Species Conservation Plan Covered Species List

CNPS Rare Plant Ranks

– 1A: Presumed extinct in California

– 1B: Rare, threatened, or endangered in California and elsewhere

– 2B: Rare, threatened, or endangered in California, but more common elsewhere

– 3: Plants about which we need more information—A review list

– 4: Plants of limited distribution—A watch list

CNPS Rare Plant Ranks further subcategorized by threat ranks:

– 0.1: Seriously threatened in California

– 0.2: Moderately threatened in California

– 0.3: Not very threatened in California

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
<b>Invertebrates</b>			
Alkali skipper ( <i>Pseudocopaeodes eunus eunus</i> )	--/--, MSCP	This species occupies alkaline habitats that support desert saltgrass ( <i>Distichlis spicata</i> var. <i>stricta</i> ), the caterpillar host plant, especially alkali flats and desert seeps.	<i>Not Expected:</i> There are alkaline communities within and near the BRSA, and saltgrass, the caterpillar host plant, was observed within the BRSA during surveys, though the subspecies was not indicated. <i>Distichlis spicata</i> var. <i>stricta</i> occurs in alkali areas throughout San Diego County. This species has not been documented in CNDDDB within 3 miles of the BRSA in the last 20 years.
Harbison's dun skipper ( <i>Euphyes vestris harbisoni</i> )	--/--, MSCP	Occurs in scattered areas throughout western and northern San Diego County, and is known to occupy riparian oak woodland, chamise chaparral, and southern mixed chaparral communities, that provide partial shade and that support San Diego sedge ( <i>Carex spissa</i> ), the caterpillar host plant.	<i>Not Expected:</i> While there are suitable chaparral and oak woodland communities for this species within and near the BRSA, the caterpillar host plant San Diego sedge ( <i>Carex spissa</i> ) was not observed during surveys. There is a recent (2005) CalFlora-documented occurrence of San Diego sedge on Nandina Road, near the community of Hidden Meadows, approximately 0.7 miles east of the BRSA, and San Diego sedge has been documented in CNDDDB approximately 1.5 miles east of the BRSA in Poway.
Hermes copper butterfly ( <i>Lycaena hermes</i> )	FC/--	Found in mixed woodlands, chaparral, and coastal sage scrub. Caterpillar host plants are spiny redberry, in the buckthorn family. Restricted range from San Diego County to Baja California Norte.	<i>Possible:</i> There have been two recent (since 2003) CNDDDB-documented occurrences of this species, both in or near Mission Trails Regional Park, between 2 and 3 miles southeast of the proposed project terminus at MCAS Miramar. Spiny redberry plants occur sporadically throughout the BRSA, including individuals of about 12 years old on MCAS Miramar, and more mature plants in the City of Poway.
Western monarch butterfly ( <i>Danaus plexippus plexippus</i> )	--/--	This species overwinters in coastal sites in San Diego County, where it clusters, roosts, and breeds in the branches, leaves, and occasionally trunks of eucalyptus, western sycamore, and coast live oak trees from October to March. Females lay eggs on milkweed, the larval host plant.	<i>Not expected:</i> This species is known to overwinter in coastal San Diego County, but have been observed inland. Milkweed has been known to occur in the BRSA, but monarchs rarely overwinter within 3 miles of the BRSA.
Two-tailed swallowtail ( <i>Papilio multicaudatus</i> )	--/--, MSCP	This species occupies riparian areas, near streams in valleys and canyons. In California, the primary caterpillar host plant is California hoptree ( <i>Ptelea crenulata</i> ), and is otherwise associated with chokecherry, bitter cherry, Arizona rosewood, single-leaf ash, and Arizona sycamore. Rarely occupies urban areas in California, which are more commonly occupied by the western tiger swallowtail.	<i>None:</i> This species' primary caterpillar host plant in the state of California was not observed in the BRSA and is not documented in the CNDDDB. Secondary host plants also were not observed in the BRSA. While this species has a large range with many known occurrences, no iNaturalist occurrences have been documented in San Diego County.
Quino checkerspot butterfly ( <i>Euphydryas editha quino</i> )	FE/--	Occurs in sunny openings within chaparral and coastal sage shrublands in parts of Riverside and San Diego Counties. Hills and mesas near the coast. Needs high densities of food plants, primarily dwarf plantain and exerted Indian paintbrush.	<i>Possible:</i> There has been one recent (2005) CNDDDB-documented occurrence of this species within 3 miles of the BRSA, approximately 1.5 miles south of the proposed project terminus, though suitable habitat occurs throughout the BRSA, where dwarf plantain or exerted Indian paintbrush are present. This species was not observed during protocol-level surveys in spring of 2015. This species has been documented by MCAS Miramar 2 miles east of the BRSA along Spring Canyon Firebreak Road on MCAS Miramar. Additional surveys for Quino checkerspot butterfly conducted between February and May 2016 were also negative.
Riverside fairy shrimp ( <i>Streptocephalus woottoni</i> )	FE/--, NCCP	Restricted to deep, warm vernal pools in grasslands, often with clay substrates in Southern California and northwestern Baja California.	<i>Presumed Present:</i> Suitable habitat is present in the vernal pools located on MCAS Miramar, near the BRSA. This species has been documented in similar vernal pool complexes in the same geographic area, but not within the BRSA. There have been three documented CNDDDB-documented occurrences in last 20 years, within 3 miles of the BRSA. No protocol surveys were conducted, but presence is presumed.
San Diego fairy shrimp ( <i>Branchinecta sandiegonensis</i> )	FE/--, NCCP	Occur in groups of vernal pools and other non-vegetated ephemeral basins in coastal Southern California and northwestern Baja California.	<i>Presumed Present:</i> Suitable habitat present in the vernal pools located on MCAS Miramar. This species has been documented in similar vernal pool complexes in the same geographic area, but not within the BRSA. There have been 34 documented CNDDDB-documented occurrences of the species in last 20 years within 3 miles of the BRSA. Portions of the BRSA overlap with designated critical habitat for this species; however critical habitat for San Diego fairy shrimp is exempt within MCAS Miramar boundaries (USFWS 2007) <sup>(a)</sup> . No protocol surveys were conducted, but presence is presumed.
Vernal Pool Fairy Shrimp ( <i>Branchinecta lynchi</i> )	FT/--	Occurs in ephemeral, cool vernal pools and playas, especially with alkaline water in Southern California and northwestern Baja California.	<i>Not Expected:</i> Suitable habitat is present throughout the BRSA, including on MCAS Miramar, but there are no recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
<b>Fish</b>			
Arroyo chub ( <i>Gila orcuttii</i> )	--/--, SSC	Commonly associated with slow-moving southern coastal streams at least 15 feet deep, with low oxygen concentrations, gravel or sand substrate and some emergent vegetation. Spawning season is generally June and July, but can occur from February through August.	<i>Not Expected:</i> There have been four documented CNDDDB-documented occurrences of this species within the last 20 years (most recently 1998). Suitable habitat is present within the BRSA, in Rainbow Creek, though the portion of Rainbow Creek within the BRSA appears to be an intermittent or perennial drainage, with a depth of approximately 12 inches in the spring of 2015.
<b>Amphibians</b>			
Arroyo toad ( <i>Bufo californicus</i> )	FE/--, SSC, NCCP	Associated with semi-arid regions near washes or intermittent streams, including valley-foothill and desert riparian, desert wash, rivers with sandy banks, willows, cottonwoods, and sycamores; loose, gravelly areas of streams in drier parts of range. Breeds from March to July in the riparian corridor while there is water present, then migrates to upland habitat (loose soils that often support cottonwoods) to burrow and aestivate through the dry season.	<i>Possible:</i> Potential habitat present in the San Luis Rey River and its tributaries, as well as at Lake Hodges/San Dieguito River and its tributaries. Arroyo Toad was not observed during 2015 surveys or 2016 surveys, but areas surrounding the San Luis Rey River within the BRSA contain suitable habitat for arroyo toad. There have been three recent CNDDDB-documented occurrences within 3 miles of the BRSA. One CNDDDB-documented occurrence was immediately east of the BRSA, south of Dunlin Road. All four sightings have been north of the community of Hidden Meadows. Populations of arroyo toad have been documented 1.1 miles upstream and 0.4 miles downstream from the BRSA at the San Luis Rey River. Additionally, portions of the BRSA overlap with designated critical habitat for this species.
California red-legged frog ( <i>Rana aurora draytonii</i> )	FE/--, SSC, NCCP	Occurs in quiet streams, marshes, and ponds with dense shoreline vegetation up to approximately 3,950 feet in elevation. Generally inhabits water bodies at least 3 feet deep. Lays eggs on emergent plants in permanent water bodies. Known to travel far from home water bodies during rain events, but generally otherwise remain near their habitat site.	<i>Not Expected:</i> There are few sufficient water bodies for this species within or near the BRSA. It was not observed during surveys, and there are no recent CNDDDB or iNaturalist-documented occurrences of this species within 3 miles of the BRSA.
Southern mountain yellow-legged frog ( <i>Rana mucosa</i> )	FE/CE, WL, MSCP	In Southern California, this species occurs on rocks or in grass within a few feet of streams, lakes, and ponds, often in montane riparian, ponderosa pine, and montane hardwood-conifer habitats between 1,200 and 7,500 feet in elevation. Breeds March to May, and lays 200 to 300 (sometimes more) eggs in shallow water on gravelly substrates. Ranges are generally approximately 30 feet or less. Adults feed on aquatic and terrestrial invertebrates, and tadpoles feed on algae.	<i>Not Expected:</i> While there is suitable habitat for this species near streams and wetland areas in the northern portion of the proposed project, this species was not observed in the BRSA, and there have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Western Spadefoot Toad ( <i>Spea hammondi</i> )	--/--, SSC, NCCP	Occupies sandy and gravelly areas with open vegetation, often short grasses. Generally occurs in washes, floodplains, and flats, but has been known to occur in mountainous and hilly areas. It remains in underground burrows year-round, emerging during and after rain to breed in shallow, temporary pools.	<i>Present:</i> There are 13 recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and suitable habitat is present. One individual was observed near MP 15, adjacent to Staging Area/Laydown Yard #4, during arroyo toad surveys.
<b>Reptiles</b>			
Belding's orange-throated whiptail ( <i>Aspidoscelis hyperythra beldingi</i> )	--/--, WL, NCCP	Uncommon to fairly common over much of its range in San Diego County. Generally occurs at elevations ranges from sea level to 3,400 feet in elevation. Occurs in coastal scrub, chamise-redshank chaparral, mixed chaparral, and valley-foothill hardwood habitats; prefers washes and other sandy areas with patches of brush and rocks.	<i>Present:</i> Suitable habitat present throughout the BRSA. Orange-throated whiptails were observed within the BRSA, adjacent to Moosa Creek and two of its tributaries; in upland habitats just north of the Lake Hodges/San Dieguito River; and along Pomerado Road. There have been 24 documented CNDDDB-documented occurrences in last 20 years, within 3 miles of the BRSA.
Coast horned lizard, also known as Blainville's horned lizard ( <i>Phrynosoma blainvillii</i> )	--/--, SSC, NCCP	Uncommon to common in valley-foothill hardwood, conifer and riparian habitats, as well as pine-cypress, juniper and annual grassland communities. Inhabits open country, especially sandy areas, washes, and floodplains; found mainly below 3,000 feet in elevation in the southern part of its range.	<i>Present:</i> Suitable habitat present throughout BRSA, including MCAS Miramar as well as in urban portions of the BRSA. The species was observed on MCAS Miramar in spring of 2015. There have been 18 CNDDDB-documented occurrences of this species in the last 20 years, within 3 miles of the BRSA.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Coast patch-nosed snake ( <i>Salvadora hexalepis virgulata</i> )	--/--, SSC	Formerly common, increasingly uncommon in southern coastal areas due to habitat loss from development and grazing activities. Occupies dry areas with relatively loose soil. Is known to climb bushes while hunting for lizards, small mammals, and nesting birds. Lays eggs May to August.	<i>Possible:</i> This species was not observed within the BRSA, and there have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. There is a documented iNaturalist occurrence of this species approximately 2.6 miles west of the proposed project, north of Gopher Canyon Road, two iNaturalist-documented occurrences between approximately 0.7 and 2.75 miles east of the proposed project in Poway at approximately MP 35, and there are multiple documented iNaturalist occurrences of this species within Mission Trails Regional Park.
Coastal whiptail ( <i>Aspidoscelis tigris stejnegeri</i> )	--/--, SSC	Found in dense chaparral and sage scrub communities, as well as in desert scrub, alkali scrub, annual grassland, valley-foothill riparian, and mixed conifer sites. Prefers sites near sandy washes and streambeds supporting dense vegetation. It is most abundant in desert areas.	<i>Possible:</i> There have been five CNDDDB-documented occurrences of coastal whiptail within 3 miles of the BRSA in the last 20 years. It was not observed in the BRSA, though suitable habitat is present.
Coronado skink ( <i>Plestiodon skiltonianus interparietalis</i> )	--/--, WL, NCCP	In Southern California, this species inhabits early successional zones with moist soils in coastal mountain areas. It generally avoids densely vegetated areas, and it forages through leaf litter. Feeds on insects, insect eggs, and larvae.	<i>Possible:</i> Suitable habitat is present throughout the BRSA, and this species has been detected on MCAS Miramar, though not necessarily within the BRSA. There have been four CNDDDB-documented occurrences in last 20 years, within 3 miles of the BRSA.
Red-diamond rattlesnake ( <i>Crotalus ruber</i> )	--/--, SSC, NCCP	Inhabits chaparral, woodland, grassland, and desert areas. Occurs in rocky areas and dense vegetation. Needs rodent burrows, cracks in rocks or surface cover objects.	<i>Possible:</i> Suitable habitat is present throughout the BRSA, and this species has been detected on MCAS Miramar, though not necessarily the BRSA. There have been five CNDDDB-documented occurrences in last 20 years, within 3 miles of the BRSA.
San Diego banded gecko ( <i>Coleonyx variegatus abbotii</i> )	--/--, SSC, MSCP, NCCP	Occupies rocky outcrops in coastal and cismontane communities, and occasionally in chaparral and coastal scrub habitats, especially on granite or rocky outcrops. It occurs throughout the county, but not in the immediate coastal zone. Feeds on insects and larvae, and breeds April to May.	<i>Not Expected:</i> While there is suitable cismontane habitat for this species within or near the BRSA, this species was not observed within the BRSA, and there are no documented CNDDDB-documented occurrences within 3 miles of the BRSA.
Two-striped gartersnake ( <i>Thamnophis hammondi</i> )	--/--, SSC, NCCP	Occurs from sea to about 7,000 feet in elevation. Highly aquatic, found in or near permanent fresh water, often along streams with rocky beds and riparian growth.	<i>Possible:</i> Suitable habitat for the species is present within the BRSA, primarily along named rivers and drainages (i.e., Rainbow Creek, the San Luis Rey River, Escondido Creek, Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek). This species also has been detected on MCAS Miramar in the past, although not necessarily within the BRSA. There have been four documented CNDDDB-documented occurrences of two-striped gartersnake in the BRSA within the past 20 years.
Western pond turtle ( <i>Emys marmorata</i> )	--/--, SSC, MSCP	Associated with permanent or nearly permanent water; Uncommon to common in suitable aquatic habitat throughout California; elevation ranges from near sea level to 4,700 feet in elevation. Requires basking sites such as partially submerged logs, rocks, mats of floating vegetation, or open mud banks.	<i>Present:</i> Suitable habitat occurs throughout BRSA, mostly within named rivers and drainages (e.g. Rainbow Creek, the San Luis Rey River, Escondido Creek, Lake Hodges/San Dieguito River, Poway Creek, Beeler Creek, and Carroll Canyon Creek). The species was observed at the edge of the BRSA at MP 14. There have been two CNDDDB-documented occurrences of western pond turtle, within 3 miles of the BRSA.
<b>Birds</b>			
Allen's Hummingbird ( <i>Selasphorus sasin</i> )	--/--, BCC	This migrant (January to July) species is relatively common along the California coast, often breeding in coastal scrub, valley foothill riparian habitats, and occasionally in urban areas. Seeks cover in shrubs and trees near sufficient foraging areas, relying primarily on nectar, but also occasionally consuming insects and spiders.	<i>Possible:</i> This species is known to occur in San Diego while migrating. There is suitable foraging and breeding habitat for this species within or near the BRSA, and there are multiple documented eBird occurrences of this species within or near entirety of the BRSA. This species can also occupy urban areas, which occur throughout the BRSA.
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	--/CE, FP, BCC, NCCP, BGEPA	Generally a winter migrant in Southern California; requires large bodies of water and flowing rivers with abundant food sources (fish, occasionally small mammals and rarely carrion) and high, sturdy perches, most commonly in somewhat open canopies.	<i>Possible:</i> This species requires a large, contiguous range with sufficient food resources. While suitable habitat is present throughout the entirety of the BRSA, much of the area is fragmented, though there are multiple documented eBird occurrences of this species near the BRSA, especially near Lake Hodges/San Dieguito River just south of Escondido, near other water bodies that can provide suitable food sources, and in Mission Trails Regional Park, southeast of the proposed project terminus. Given the large range of this species and its capacity to travel large distances, it is not restricted to isolated areas.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Bank Swallow ( <i>Riparia riparia</i> )	--/CT, MSCP	This neotropical migrant occupies riparian sites and lowland areas in California during spring and fall. It is more common in interior riparian sites than in coastal riparian sites, with occasional winter occurrences in Southern California. Forages on insects primarily in riparian sites and open water/wetlands with fine, sandy soils, but has been known to forage in grasslands and over agricultural fields. Nests in cliffs and river banks, and occasionally on logs, shoreline vegetation, and on telecommunications lines.	<i>Not Expected:</i> This species is rare in San Diego County. It is restricted to riparian and coastal banks and has been primarily extirpated from the area after the channelization of rivers. It was not observed in the BRSA, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA.
Belding's Savannah Sparrow ( <i>Rasserculus sanwicensis ssp. beldingi</i> )	--/CE, MSCP, NCCP	A year-round occupant of southern coastal wetlands (generally saline emergent). Feeds on seeds, grass, and invertebrates. Nest is a cup of grasses and sedges in a hollow in the ground.	<i>None:</i> There is no suitable coastal wetland habitat for this species within or near the BRSA.
Bell's Sage Sparrow ( <i>Artemisiospiza belli belli</i> )	--/--, BCC, WL	An uncommon, localized resident, and breeder, in cismontane Southern California. Preferred habitat includes low, dense chaparral (typically chamise dominant) in interior foothills, as well as coastal sage scrub (often with white sage).	<i>Possible:</i> There have been four CNDDDB-documented occurrences within 3 miles of the BRSA observed in 2000 and 2001. Suitable habitat is present within the BRSA, and there are documented eBird occurrences near the I-15 corridor on the southern side of Lake Hodges/San Dieguito River.
Black-Chinned Sparrow ( <i>Spizella breweri</i> )	--/--, BCC	An uncommon summer resident in relatively dense, mixed chaparral and sagebrush communities throughout San Diego County, especially in arid, mountainous areas. Forages and seeks cover in open to moderately dense chaparral communities, feeding on seeds, insects, and fruits. This species is known to be associated with ceanothus, manzanita, sagebrush, and chamise vegetation.	<i>Possible:</i> This species occupies vegetation communities known to occur within or near the BRSA, and is associated with vegetation species that are known to occur within the BRSA. There are multiple documented eBird occurrences of this species within or near the BRSA, especially in and near Poway.
Black Skimmer ( <i>Rynchops niger</i> )	--/--, SSC, MSCP	A colony resides year-round in San Diego Bay, though the Salton Sea population are migrants from June to October, though more commonly migrate south to Mexico prior to October. Seeks cover on sandy beaches or gravel bars. Nests in hollows on gravel bars, but has been known to nest in disturbed sites, such as coastal dredged areas and dikes.	<i>None:</i> In San Diego County, this species is only known to occur in San Diego Bay. Both San Diego Bay and other suitable coastal zones are more than 3 miles from the proposed project.
Brewer's Sparrow ( <i>Spizella breweri</i> )	--/--, BCC	Found in treeless shrub habitats with moderate canopy cover, particularly in sagebrush communities. Nest is generally a small cup of dry grasses in the center of a shrub.	<i>Possible:</i> There have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA, and the species was not observed in the BRSA. There is suitable habitat present within or near the BRSA, and there are multiple documented eBird occurrences near the BRSA, including an occurrence at Scripps Ranch.
California Brown Pelican ( <i>Pelcanus occidentalis ssp. californicus</i> )	--/--, FP, MSCP, NCCP	Occurs along the Southern California coast from June to October, and in the Salton Sea from July to September. Occupies estuary, marine subtidal, and pelagic waters, and feeds primarily on fish, though occasionally on crustaceans. Rests on open water, rocks, mudflats, beaches, and manmade structures, and nest is composed primarily of sticks and often on the ground, though occasionally in bushes.	<i>Not Expected:</i> This species primarily occurs in coastal and pelagic waters, though it is known to occasionally occur in inland areas. It was not observed within the BRSA, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA.
California Least Tern ( <i>Sterna antillarum browni</i> )	FE/CE, FP, NCCP	This spring migrant species occupies marine and estuarine shores with an abundance of small fish (especially anchovy, silversides, and shiners). Often congregates in lagoons and at the mouth of bays. Nests on sandy or gravelly soils near water, and requires nesting territories without human disturbance. Occasionally predated upon by burrowing owls.	<i>None:</i> The BRSA does not overlap with shoreline California Least Tern habitat. The species was not observed within the BRSA, and there are no CNDDDB or eBird occurrences of the species within 3 miles of the BRSA within the last 20 years.
California Spotted Owl ( <i>Strix occidentalis occidentalis</i> )	--/--, SSC, BCC	This year-round resident generally breeds from February to September. It roosts and nests in old-growth forested and woodland habitats with full canopies, including montane hardwood, montane hardwood-conifer, and coastal oak woodland.	<i>Not Expected:</i> There have been no documented CNDDDB or eBird occurrences of this species within 3 miles of the BRSA, and the species was not observed in the BRSA. There is some suitable habitat present within or near the BRSA, in the form of coastal oak woodland.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Coastal Cactus Wren ( <i>Campylorhynchus brunneicapillus sandiegensis</i> )	--/--, SSC, BCC, NCCP	Found in Southern California coastal sage scrub. Coastal Cactus Wrens require tall, dense stands of prickly pear cactus ( <i>Opuntia oricola</i> ) or coastal cholla ( <i>Cylindropuntia prolifera</i> ) for nesting and roosting. Range is generally larger than 1 acre.	<i>Possible:</i> There have been three CNDDDB-documented occurrences within 3 miles of the BRSA in the last 20 years, and there are many documented eBird occurrences of this species within or near the BRSA, including multiple occurrences at Lake Hodges/San Dieguito River, many as recently as 2017. One small stand of prickly pear cactus was observed within the BRSA in association with a stand of disturbed coastal sage scrub, and another stand of sage scrub was found dominated by coastal cholla. These two stands comprise a total of 0.6 acres of land, which is generally smaller than the preferred range size of the Coastal Cactus Wren.
Coastal California Gnatcatcher ( <i>Poliophtila californica californica</i> )	FE/--, SSC, NCCP	Obligate, permanent resident of coastal sage scrub (especially in association with California buckwheat and pricklypear) below 1,500 feet in elevation in Southern California, and known to occur in coastal foothills and within the Tijuana River Valley in San Diego County. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied. Nest is a small deep cup constructed 2-3 feet above the ground, made from plant fibers and occasionally spider silk.	<i>Present:</i> Five Coastal California Gnatcatcher pairs, three individuals, and seven fledglings were observed during 2015 surveys. Three of the five pairs were observed with fledglings. Coastal California Gnatcatcher and Gnatcatcher-use areas have been documented at MCAS Miramar since 2009, including at sites near the BRSA. There have been 59 CNDDDB-documented occurrences in the last 20 years within 3 miles of the BRSA, and there are many documented eBird occurrences of the species. The species has been observed throughout the BRSA, in/near MCAS Miramar, near Lake Hodges/San Dieguito River, near Van Dam Peak, near Black Mountain, and near Pala Mesa. Portions of the BRSA overlap with designated critical habitat for this species.
Cooper's Hawk ( <i>Accipiter cooperii</i> )	--/--, WL, NCCP	An uncommon, though increasing, breeding resident species in cismontane Southern California. Forages over a broad variety of woodland and shrub communities. Nests within a variety of woodland habitats, such as riparian or oak woodlands, but in recent years has shown a tolerance for developed areas.	<i>Possible:</i> There have been six CNDDDB-documented occurrences within 3 miles of the BRSA within the last 20 years. The BRSA crosses multiple potential habitats for Cooper's Hawk, and the Cooper's Hawk is known to tolerate developed areas. There are many documented eBird occurrences of this species along all portions of the BRSA, including the I-15 corridor.
Costa's Hummingbird ( <i>Calypte costae</i> )	--/--, BCC	Occupies desert washes, the fringes of desert riparian and valley foothill riparian habitats, coastal scrub, desert scrub, desert succulent shrub, lower-elevation chaparral, and palm oasis. Feeds on the flower nectar from herbaceous and woody plants, and occasionally eats spiders and insects. Nests in trees, cacti, shrubs, and woody forbs occasionally water, but more commonly in arid sites.	<i>Possible:</i> There have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA within the past 20 years. While the species was not observed in the BRSA, there are many documented eBird occurrences of this species within or near the BRSA, including sightings from 2017, near Lake Hodges/San Dieguito River. There is some suitable habitat present within or near the BRSA, in the form of chaparral and riparian habitats.
Ferruginous Hawk ( <i>Buteo regalis</i> )	--/--, BCC, WL, MSCP, NCCP	Winter migrant resident in grasslands, sagebrush flats, desert scrub, foothills, pinyon-juniper, and agricultural areas in lower-elevation Southern California, especially in the Coast Ranges. Forages in open areas for rodents, birds, reptiles, and amphibians. Nests on elevated structures near open areas. Present in California from September to mid-April.	<i>Possible:</i> There is suitable habitat for this species within or near the BRSA in the form of grasslands, sagebrush, and agricultural areas. This species was not observed within the BRSA, and there are no recently documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA, but there are recent occurrences documented on eBird, especially near Lake Hodges/San Dieguito River.
Golden Eagle ( <i>Aquila chrysaetos</i> )	--/--, WL, FP, BCC, BGEPA, NCCP	Uncommon permanent resident and migrant throughout California, and ranges from sea level to 11,500 feet in elevation. Habitats generally include rolling foothills, mountain areas, sage-juniper flats, and desert. Typically finds cover in large trees on or near cliffs with overhanging ledges. Requires open areas to forage and hunt.	<i>Possible:</i> There has been one recent CNDDDB-documented occurrence of this species within 3 miles of the BRSA, approximately one mile west of the community of Pala. There are multiple documented eBird occurrences within or near the BRSA, including multiple sightings from 2016 and 2017. Suitable breeding habitat features including high cliffs and hills are present in the northern portion of the proposed project, however given the limited size of these features, breeding eagles are unlikely to occur. Suitable foraging habitat is present throughout the BRSA, especially near water bodies such as Lake Hodges/San Dieguito River. Given the large range of this species and its capacity to travel large distances, it is not restricted to isolated areas.
Grasshopper Sparrow ( <i>Ammodramus savannarum</i> )	--/--, SSC, MSCP, NCCP	An uncommon summer breeding resident in San Diego County from March to May, generally occupying tall grasses and forbs, as well as shrubs in dry areas. Prefers hillsides and mesas in Southern California, but has been known to breed in the San Jacinto Mountains at elevations to 5,000 feet. Forages on insects and seeds in low-lying vegetation, leaf litter, and on the ground. Clutch is usually 4 to 5 eggs, in a nest made of grasses and forbs on the ground.	<i>Possible:</i> This species was not observed during surveys, but there is a recent CNDDDB documented occurrences of this species in the Los Peñasquitos Canyon Preserve.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Gray Vireo ( <i>Vireo vicinior</i> )	--/--, SSC, BCC, S, MSCP	A summer resident in San Diego County, generally from late March to August. Generally occupies high-elevation dry pinyon-juniper and chamise-redshank chaparral habitats, between 2,000 and 6,500 feet in elevation. Feeds on insects, and nest is a cup of leaves, plant material, and sometimes spider silk hung from twigs or situated in a forked branch of a small shrub or tree. In San Diego County, this species is known to breed in oaks, often on slopes.	<i>Not Expected:</i> There is suitable habitat for this species within and near the BRSA, though it generally occupies elevations higher than those present. There are no recent CNDDDB-documented occurrences of this species, and the closest recent occurrence of this species documented on eBird was near Lake Sutherland, approximately 15 miles east of the proposed project. It is otherwise known from mountain areas in San Diego County.
Gull-billed Tern ( <i>Gelochelidon nilotica</i> )	--/--, SSC	A summer resident in San Diego County on estuaries near the Mexican border from March to September, though more commonly known to occur on the Salton Sea. Forages in fresh and saline emergent wetlands, lakes, mudflats, croplands, and grasslands. Nests on sandy beaches.	<i>None:</i> The BRSA does not overlap with Gull-billed Tern habitat. The species was not observed within the BRSA, and there are no CNDDDB-documented occurrences of the species within 3 miles of the BRSA within the last 20 years, and there are no nearby documented eBird occurrences. There is a small breeding population in San Diego County, in estuaries near the Mexican border.
Large-billed Savannah sparrow ( <i>Passerculus sandwichensis ssp. rostratus</i> )	--/--, SSC, MSCP, NCCP	A winter migrant to saline emergent wetlands, both along the southern coast and the Salton Sea. Feeds on seeds, grass, and invertebrates. Nest is a cup of grasses and sedges in a hollow in the ground	<i>None:</i> This species occupies saline environments, in particular those near the Salton Sea and along the coast. It is not known to occur within or near the BRSA.
Lawrence's Goldfinch ( <i>Carduelis lawrencei</i> )	--/--, BCC	Present generally from April through September in open oak or other dry woodland and chaparral communities in close proximity to water. Generally prefers inland valley foothill hardwood, desert riparian, and lower montane habitats, and is associated with chamise as a food source.	<i>Possible:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the past 20 years. The species was not observed within the BRSA, but there are multiple documented eBird occurrences of this species within or near the BRSA, many as recent as 2016 and 2017.
Least Bell's Vireo ( <i>Vireo bellii pusillus</i> )	FE/CE, NCCP	Summer resident of Southern California in low riparian habitat or in dry river bottoms below 2000 feet in elevation. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, mesquite, and other shrubs.	<i>Present:</i> There have been 12 recent CNDDDB and multiple recent eBird occurrences within 3 miles of the BRSA, observed in the last 20 years. Suitable habitat is present within and near the BRSA, mostly within named rivers and drainages (including Rainbow Creek, the San Luis Rey River, Escondido Creek, the Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek). Least Bell's Vireo was observed within the BRSA, foraging and breeding in multiple riparian systems in the project area. The species has also been observed on MCAS Miramar, in 2011, in San Clemente Canyon and Elanus Canyon. Portions of the BRSA overlap with designated critical habitat for this species.
Least Bittern ( <i>Ixobrychus exilis hesperis</i> )	--/--, SSC	Rare to uncommon April to September in large, fresh emergent wetlands of cattails and tules in San Diego County. Hunts in small openings in dense, emergent vegetation. Rests, roosts, and hides in dense, emergent vegetation.	<i>Possible:</i> There are six CNDDDB-documented occurrences observed within 3 miles of the BRSA. Suitable habitat is present in the form of freshwater marsh and cismontane alkali marsh, mostly within named rivers and drainages (including Rainbow Creek, the San Luis Rey River, Escondido Creek, the Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek). Least Bittern was not observed during surveys of the BRSA, but there are multiple eBird occurrences of this species within or near the BRSA.
Lewis' Woodpecker ( <i>Melanerpes lewis</i> )	--/--, BCC, MSCP	A winter Southern California resident in open oak savannas, broken deciduous, and coniferous communities with brushy understories. Breeds on eastern-facing slopes in mountain areas. In winter, feeds primarily on stored nuts/seeds, and occasionally insects. Nests in tree cavities.	<i>Possible:</i> There is suitable habitat for this species within or near the BRSA, but it was not observed within the BRSA. While there have been no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, there are two recent eBird occurrences, one near Rainbow and the other near Fallbrook.
Light-footed Ridgeway's Rail ( <i>Rallus obsoletus levipes</i> )	FE/CE, FP, NCCP	Occupies coastal saline emergent wetlands year-round, and inland in freshwater and brackish emergent wetlands from April through September. Frequently forages in marsh vegetation (often with picklewood, cordgrass, and bulrushes) along mudflats.	<i>Not Expected:</i> The species was not observed within the BRSA, and there are no CNDDDB or eBird occurrences of the species within 3 miles of the BRSA within the last 20 years. There is potential suitable habitat for the Light-footed Ridgeway's Rail near the BRSA in the form of coastal and valley freshwater marsh.
Loggerhead Shrike ( <i>Lanius ludovicianus</i> )	--/--, SSC, BCC, MSCP	A common resident and winter occupant of lowland and foothill areas, especially those supporting riparian, juniper, and woodland communities offering open areas and sufficient perches (shrubs, trees, posts, etc.). Uses perches to search for prey, such as invertebrates, reptiles, amphibians, fish, small mammals, and other birds. Known to cache prey on thorns or wires. Nests in dense shrubs or trees.	<i>Possible:</i> There is suitable habitat for this species within or near the BRSA, but it was not observed within the BRSA. While there have been no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, there are recent eBird occurrences between Rainbow and Pala Mesa, surrounding Lake Hodges/San Dieguito River, and on Kearny Villa Road.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Long-billed Curlew ( <i>Numenius americanus</i> )	--/--, BCC, WL, NCCP	An uncommon to locally common visitor from July through April across the majority of the California coast, as well as some inland territories, with the largest inland populations in the Central and Imperial valleys. Often occupies coastal estuaries with mudflats, upland herbaceous areas, and croplands.	<i>Not Expected:</i> The species was not observed within the BRSA, and there are no CNDDDB or eBird occurrences of the species within 3 miles of the BRSA in the last 20 years. There is potential suitable habitat in upland herbaceous areas.
Long-eared Owl ( <i>Asio otus</i> )	--/--, SSC, MSCP	An uncommon winter visitor in Southern California deserts, and an uncommon year-round resident statewide. Restricted to riparian habitats, often in live oak thickets and conifer stands, near open areas (often meadows) for foraging. Feeds primarily on small rodents. Utilizes other species' nests, often crow, hawk, or squirrel. Breeds March to July.	<i>Not Expected:</i> There is suitable habitat for this species within and near the BRSA, but it was not observed during surveys, and there are no recent CNDDDB or eBird occurrences of this species within 3 miles of the BRSA.
Lucy's Warbler ( <i>Vermivora luciae</i> )	--/--, SSC, BCC, MSCP	A rare transient species in coastal San Diego County, occurring more commonly as a summer (March to August) resident and breeder in desert wash, desert riparian, and saltcedar habitats, associated in particular with mesquite thickets. Nest is a small cup in a concealed area off the ground. Feeds on insects.	<i>None:</i> This species occupies desert habitats, and occasionally migrates along the coast in San Diego County. It is not known to occur in the non-desert interior habitats within or near the BRSA.
Marbled Godwit ( <i>Limosa fedoa</i> )	--/--, BCC	This winter migrant (August to May) species is rare in non-coastal San Diego County, but has been known to occur inland. Occupies emergent wetlands, foraging in mud, sand, and shallow water for invertebrates.	<i>Possible:</i> While uncommon in inland areas, this species has been known to occasionally occupy inland San Diego County. There is one documented eBird occurrences of this species near the BRSA, near Lake Hodges/San Dieguito River.
Northern Harrier ( <i>Circus cyaneus</i> )	--/--, SSC, MSCP, NCCP	A reduced breeding population along the southern coast. Generally relies on wetlands, native grasslands, and moist meadows. Seeks cover in tall grasses and forbs, and nests on the ground. Nest is composed of a mound of sticks near water resources, and a small dry grass cup farther from water resources.	<i>Present:</i> The Northern Harrier was observed within the BRSA on MCAS Miramar in April 2015. There is also suitable habitat present, especially in the northern portions of the BRSA, primarily in the form of perennial grasslands featuring vernal pools, and freshwater marshes.
Nuttall's Woodpecker ( <i>Picoides nuttalli</i> )	--/--, BCC	Occupies in low-elevation riparian deciduous and oak habitats with sufficient tree cavities and foliage for cover. Commonly associated with willow, sycamore, cottonwood, alder, and occasionally oak.	<i>Present:</i> Nuttall's Woodpecker was observed during field surveys of the BRSA in 2015. There is suitable habitat for this species throughout the BRSA, in the form of southern cottonwood-willow riparian forests, southern sycamore alder riparian woodlands, and some oak communities.
Oak Titmouse ( <i>Baeolophus inornatus</i> )	--/--, BCC	Occupies montane hardwood-conifer, montane hardwood, blue, valley, and coastal oak woodlands, and montane and valley foothill riparian habitats. Seeks cover in oak and pine-oak woodlands, and occasionally in riparian communities. Nests are high (generally less than 33 feet from the ground), and are made of grass, mud, feathers, and moss.	<i>Possible:</i> There are no CNDDDB-documented occurrences of this species within 3 miles of the BRSA within the last 20 years, but there is some suitable habitat present in oak woodland communities near the BRSA. There are multiple recent eBird occurrences of this species within or near the BRSA.
Olive-sided Flycatcher ( <i>Contopus cooperi</i> )	--/--, SCC, BCC	Occupies many forest and woodland communities at elevations below 9000 feet throughout California, often in mixed conifer, montane, hardwood-conifer, Douglas-fir, redwood, red fir, and lodgepole pine habitats. Generally roosts and nests on high branches, in close proximity to water sources.	<i>Possible:</i> There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, and the species was not observed during surveys. There are multiple recent eBird occurrences of this species within or near the BRSA, at Lake Hodges/San Dieguito River, Los Peñasquitos Canyon Preserve north of MCAS Miramar, and at Mission Trails Regional Park. Conifer woodland habitats within or near the BRSA are minimal.
Osprey ( <i>Pandion haliaetus</i> )	--/--, MSCP	An uncommon visitor in coastal Southern California, restricted to habitats near large, open bodies of water supporting sufficient fish populations. Requires tall trees—often ponderosa pine—with branches, snags, and open tops for nesting. Migrates from mountains in California to South America starting in October, arriving March to April.	<i>Possible:</i> While not observed during surveys, there is a CNDDDB-documented occurrences of this species near the San Luis Rey River, and there are many documented eBird occurrences of this species throughout San Diego County, including occurrences within or near the BRSA.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Peregrine Falcon ( <i>Falco peregrinus</i> )	--/--, FP, BCC, NCCP	Uncommon; occupies a wide geographic range statewide year-round, but San Diego residents are generally winter migrant populations. Prefers to nest on high cliffs, ledges, banks, and occasionally even manmade structures near water. Occupies woodland and forest habitats in close association with wetlands, as well as coastal habitats.	<i>Possible:</i> There have been no documented CNDDDB-documented occurrences of the Peregrine Falcon within 3 miles of the BRSA in the last 20 years, there are many documented occurrences near the BRSA on the Cornell eBird database. This species is characterized by its capacity to cover long distances very quickly, so it is likely that it may cross over the BRSA while traveling or foraging.
Prairie Falcon ( <i>Falco mexicanus</i> )	--/--, WL, BCC, MSCP	A permanent resident in deserts in southeastern California, as well as in grasslands (generally perennial), meadows, savannahs, desert scrub, and often agricultural sites. Feeds on small mammals, birds, and reptiles. Requires sheltered cliffs near open areas (canyons, outcrops) for nesting and cover, occasionally utilizing nests made by other species. Breeds February to September.	<i>Possible:</i> There is suitable habitat for this species within or near the BRSA, but it was not observed within the BRSA. While there have been no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA, there are recent eBird occurrences in Pala, Lake Hodges/San Dieguito River, and Mission Trails Regional Park.
Purple Martin ( <i>Progne subis</i> )	--/--, SSC, MSCP	A rare breeding resident in coastal and mountain Southern California, present in California from March to September. Primarily occupies open forest, woodland, montane hardwood, and riparian areas supporting grassland, wet meadow, and emergent wetland communities. Often associated with Douglas fir, ponderosa pine, and Monterey pine near water. Feeds on insects primarily from flight, but occasionally on the ground.	<i>Not Expected:</i> While there is suitable habitat for this species within and near the BRSA, it was not observed within the BRSA, and there are no recent CNDDDB or eBird occurrences of this species within 3 miles of the BRSA.
Red-shouldered Hawk ( <i>Buteo lineatus</i> )	--/--, MSCP	A common yearlong resident in Southern California woodlands, often occurring in riparian woodlands below 5,000 feet in elevation, near swamp and emergent wetland communities for foraging. Nests in trees in riparian habitats, occasionally utilizing nests of other species. Breeds February to July.	<i>Possible:</i> This species was not observed during surveys and has not been recently documented in CNDDDB within 3 miles of the BRSA, but there are many eBird occurrences of this species throughout San Diego County, including sites in and around the BRSA.
Sage Thrasher ( <i>Oreoscoptes montanus</i> )	--/--, BCC	A very uncommon winter migrant to southern coastal regions, this species generally occupies shrub like habitats, especially those dominated by sage scrub.	<i>Possible:</i> While this species visits southern coastal regions minimally, there is suitable sage scrub habitat within or near the BRSA. There have been no documented CNDDDB-documented occurrences within 3 miles of the BRSA in the last 20 years. There is a documented sighting on the eBird database, approximately 0.5 miles from the BRSA in 2011, near Lake Hodges/San Dieguito River.
Sharp-shinned Hawk ( <i>Accipiter striatus</i> )	--/--, WL, MSCP	A winter resident in Southern California, often on slopes in mountain areas near water sources, preferably riparian. Breeds in ponderosa pine, black oak, riparian deciduous, and mixed conifer habitats with proximity to open areas for foraging. Feeds on small birds, reptiles, amphibians, mammals, and insects. Nest is a platform or cup in a main tree branch, often in dense, shaded areas.	<i>Possible:</i> This species was not observed during surveys, but suitable habitat is present within and near the BRSA, and Sharp-shinned Hawk was observed and documented in CNDDDB near Moosa Canyon.
Short-Billed Dowitcher ( <i>Limnodromus griseus</i> )	--/--, BCC	This spring (late March to mid-May) and fall (mid-July to October) migrant species is common in coastal areas of San Diego County, and rare in non-coastal areas, but has been known to occur inland. Occupies shallow ponds and wetlands, foraging for small crustaceans in the mud.	<i>Possible:</i> While uncommon in inland areas, this species has been known to occasionally occupy inland San Diego County. There are two documented eBird occurrences of this species near the BRSA, near Lake Hodges/San Dieguito River.
Short-eared Owl ( <i>Asio flammeus</i> )	--/--, SSC	An uncommon winter migrant in coastal Southern California; generally occupies densely vegetated communities such as grasslands, prairies, dunes, meadows, irrigated lands, and saline and fresh emergent wetlands with minimal tree cover, but with some elevated perches. As a coastal winter migrant, it primarily feeds on smaller birds, and occasionally reptiles, amphibians, and arthropods.	<i>Possible:</i> There have been no documented CNDDDB-documented occurrences within 3 miles of the BRSA in the last 20 years. There is a documented sighting on the eBird database, approximately 1 mile from the BRSA in 2012, near Lake Hodges/San Dieguito River. There is suitable habitat for this species throughout the BRSA, particularly in grassy wetland and marsh areas.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Southern California Rufous-crowned sSparrow ( <i>Aimophila ruficeps canescens</i> )	--/--, WL, NCCP	A fairly common resident, and breeder, in cismontane Southern California. Prefers relatively steep, often rocky hillsides, with dominant vegetation ranging from grasses and forbs, to a moderate shrub cover (including coastal sage scrub or sparse chaparral communities).	<i>Possible:</i> There have been 27 documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA within the last 20 years. There is suitable coastal sage scrub and chaparral habitat throughout the BRSA.
Southwestern Willow Flycatcher ( <i>Empidonax traillii extimus</i> )	FE/CE, NCCP	Small, olive-gray flycatcher that breeds in dense riparian habitats along rivers, streams, or other wetlands dominated by willows and other small trees. May also nest in tamarisk and Russian olive. Requires dense foliage less than 20 yards from water or saturated soil. Feeds on flying insects.	<i>Present:</i> Suitable habitat is present throughout the BRSA, mostly in named rivers and drainages (including Rainbow Creek, the San Luis Rey River, Escondido Creek, Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek). Protocol-level surveys for this species in 2015 resulted in a single observation of a migrant Willow Flycatcher, although the subspecies could not be confirmed. Breeding was not documented during surveys. There have been two CNDDDB documented occurrences of the Southwestern Willow Flycatcher within or near the BRSA in the past 20 years: one along the San Dieguito River east of Lake Hodges/San Dieguito River, and the other 2 miles northeast of Pala Mesa, in the northern part of the proposed project. Portions of the BRSA overlap with designated critical habitat for this species.
Swainson's Hawk ( <i>Buteo swainsoni</i> )	FE/CT, BCC, NCCP	A fairly rare, though increasing, spring and fall transient in Southern California. Has been extirpated for years (from most of the region) as a breeder. Forages over a variety of open habitats, including grasslands, rangeland, agricultural fields.	<i>Not expected:</i> There are no recent CNDDDB-documented occurrences within 3 miles of the BRSA. Swainson's Hawks are not known to nest in this part of Southern California, preferring spaces next to expansive, open foraging habitat. There is one documented eBird sighting of Swainson's Hawk in 2017, along the I-15 corridor in northern Escondido.
Tricolored Blackbird ( <i>Agelaius tricolor</i> )	--/CESA Candidate, SSC, BCC, MSCP, NCCP	Small blackbird characterized by red-and-white shoulder patch. Highly colonial species, most numerous in the Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few miles of the colony.	<i>Possible:</i> A group of Tricolored Blackbirds was documented in CNDDDB within the BRSA along the eastern side of the I-15 corridor northwest of Keys Canyon, south of Pala Mesa, and there are multiple documented eBird occurrences. There is suitable habitat throughout the BRSA.
Vermilion Flycatcher ( <i>Pyrocephalus rubinus flammeus</i> )	--/--, SSC, MSCP	A summer resident in small, isolated patches in San Diego County, associated with desert riparian trees such as cottonwood, willow, and mesquite for cover and nesting, often near agricultural fields and irrigation ditches. Prefers thicketed riparian areas near open areas. Feeds on insects, primarily bees. Breeds April to May.	<i>None:</i> This species was not observed within the BRSA, and there are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA. There are documented eBird occurrences of Vermilion Flycatcher near the BRSA, but they are not necessarily of this particular subspecies, which is known to occur in the Imperial and Coachella valleys, and along the Colorado River.
Western Bluebird ( <i>Sialia Mexicana</i> )	--/--, SSC, NCCP	A yearlong resident in lowland regions of San Diego County. Mountain populations are known to retreat to lowland areas in winter. Primarily associated with mature valley foothill and montane hardwood, valley foothill hardwood-conifer, and coniferous forests near open areas for foraging. Feeds on insects, worms, snails, and small arthropods during the breeding season, and has been known to eat berries during the non-breeding season. Nests in tree cavities.	<i>Possible:</i> There is suitable habitat for this species within the BRSA, though it was not observed during surveys or recently documented in CNDDDB within 3 miles of the BRSA. There have been multiple recent eBird sightings of this species within or near the BRSA.
Western Snowy Plover ( <i>Charadrius alexandrinus nivosus</i> )	FT/--, SSC, BCC, NCCP	Coastal populations are found on sandy and estuarine shores, but inland populations can occupy sandy or gravelly soil near water sources (often alkali lakes and salt ponds). Breeds from April through August, most commonly on the coast. Nest directly on the ground. Coastal residents feed on insects and small marine invertebrates, and inland residents feed primarily on brine flies.	<i>Not Expected:</i> The species was not observed within the BRSA, and there are no CNDDDB-documented occurrences of the species within 3 miles of the BRSA within the last 20 years, nor are there any documented eBird occurrences nearby. While there is some suitable habitat within or near the BRSA in the form of alkali marshes, there is no preferred coastal estuary habitat near the BRSA.
Western Burrowing Owl ( <i>Athene cunicularia hypugaea</i> )	--/--, SSC, BCC NCCP	Inhabits open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	<i>Possible:</i> There are no recent CNDDDB-documented occurrences of this species within 3 miles of the BRSA. California ground squirrel burrows were observed in multiple locations within the BRSA, typically in grassland or other open habitats, and primarily in the northern portion of the proposed project. While Burrowing Owl was not observed during surveys, surveys were not conducted during breeding season, and Burrowing Owl has been documented on MCAS Miramar in the past. There has been one recently documented (2016) eBird occurrence of this species near the BRSA, approximately 2 miles west of the start of the proposed project, near Margarita Glen and north of Rainbow Creek.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Western Yellow-billed Cuckoo ( <i>Coccyzus americanus occidentalis</i> )	FT/CE, BCC	Inhabits extensive deciduous riparian thickets, forests with dense, low-level, or understory foliage, and which abut on slow-moving watercourses, backwaters, or seeps. Willow usually a dominant component of the vegetation.	<i>Possible:</i> Suitable habitat is present within the larger named drainages within the BRSA, such as the San Luis Rey River. There is one CNDDDB-documented occurrence, from 2011, within 3 miles of the BRSA, in the Elliott Chaparral Reserve. Recent eBird occurrences of this species within or near the BRSA include multiple sightings immediately south of the intersection of Highway 76 and Gird Road west of Pala Mesa, approximately 2 miles west of the proposed project, and multiple sightings along either side of I-15 along the Lake Hodges/San Dieguito River.
White-faced Ibis ( <i>Plegadis chihh</i> )	--/--, WL, NCCP	Generally, an uncommon, though increasing, transient and winter visitor to Southern California; also occurs as a very local summer resident and breeder. Foraging birds occur in flooded agricultural fields, marshes, flood control ditches, etc.; breeders typically require fairly extensive, and undisturbed, marshes, with cattails, bulrush.	<i>Present:</i> There are six documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA, less than 2 miles west of I-15 and south of SR-78, near west Escondido. The White-faced Ibis was observed during 2015 wildlife surveys within the BRSA.
White-tailed Kite (Elanus leucurus)	--/--, WL, FP	Common to uncommon, yearlong resident in coastal and valley lowlands, and rarely found away from agricultural areas. Known to use trees with dense canopies for cover, and in Southern California also roosts in saltgrass and Bermudagrass.	<i>Present (foraging):</i> There is one documented recent CNDDDB-documented occurrence from 2007, within 3 miles of the BRSA. Suitable habitat is present within the BRSA for nesting and foraging, primarily within the northern portion of the BRSA, near the communities of Fallbrook and Rainbow. This species was observed during surveys within southern willow scrub stands near Lake Hodges/San Dieguito River.
Yellow-breasted Chat (Icteria virens)	--/--, SSC	Summer resident; inhabits riparian thickets of willow and other brushy tangles near watercourses. Nests in low, dense riparian, consisting of willow, blackberry, wild grape; forages and nests within 10 feet of ground.	<i>Present.</i> Species was observed within the BRSA within the Lake Hodges/San Dieguito River area, and to the north within riparian habitat associated with an unnamed tributary to the San Dieguito River located parallel to Bear Valley Parkway. Yellow-breasted Chat was also detected on MCAS Miramar during surveys, although not necessarily within the BRSA. Suitable habitat is present within the BRSA, mostly within named rivers and drainages (i.e., the Rainbow Creek, the San Luis Rey River, Escondido Creek, the Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek). There are six documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Yellow Warbler ( <i>Setophaga petechia</i> )	--/--, SSC, BCC	Breeds in several Southern California mountain ranges and throughout most of San Diego. Gleans and hovers in upper canopy of deciduous trees and shrubs, feeding on insects and spiders, and occasionally berries. Breeds in montane chaparral and mixed conifer communities. Usually found in riparian deciduous habitats with dense understories in summer breeding season from April to August, and in migration, visits more open woodland and shrub habitats.	<i>Present:</i> Suitable riparian habitat is present in scattered locations throughout the BRSA, most notably within named rivers and drainages (i.e., Rainbow Creek, the San Luis Rey River, Escondido Creek, Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek). This species was observed within the survey area in an unnamed tributary to Rainbow Creek; within the San Luis Rey River; within Moosa Creek and an associated tributary; within the riparian area north of the Lake Hodges/San Dieguito River area along Bear Valley Parkway; and within the riparian habitat associated with the Lake Hodges/San Dieguito River. This species has also been observed during MCAS Miramar surveys, although not necessarily within the BRSA. There are six recent CNDDDB-documented occurrences within 3 miles of the BRSA, and there are multiple eBird occurrences of this species within or near the BRSA.
<b>Mammals</b>			
American badger ( <i>Taxidea taxus</i> )	--/--, SSC, NCCP	Uncommon, permanent resident found throughout most of the state. Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Dig burrows in friable soil for cover.	<i>Not Expected:</i> Suitable habitat present throughout the BRSA, in the form of grasslands, parklands, farms, and other treeless areas. Scarce in San Diego County and never documented on MCAS Miramar. There are two CNDDDB records within 3 miles of the BRSA; however, these records are assumed to be more than 20 years old.
Big free-tailed bat ( <i>Nyctinomops macrotis</i> )	--/--, SSC	Roosts in buildings, caves, crevices in high cliffs and rock outcrops, and occasionally in holes in trees. Often caught foraging over open water.	<i>Possible:</i> Foraging habitat present in the BRSA in multiple locations. Rocky outcrops located within Kit Carson Park, as well as buildings present in the BRSA may provide roosting sites. There have been nine CNDDDB-documented occurrences within 3 miles of the BRSA in the last 20 years.
Dulzura pocket mouse ( <i>Chaetodipus californicus femoralis</i> )	--/--, SSC, NCCP	A year-round occupant of coastal scrub, chamise-redshank, montane chaparral, sagebrush, annual grassland, valley foothill hardwood (including conifer), and montane-hardwood habitats from sea level to 7875 feet in elevation. It seeks cover in brushy areas near chaparral sites, and births young in soft soil burrows.	<i>Not Expected:</i> Suitable habitat is present within the BRSA, though there have been no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Hoary bat ( <i>Lasiurus cinereus</i> )	--/--, SSC	This widespread species winters in coastal Southern California, and occasionally breeds inland. It occupies any densely foliated woodlands or forest communities with medium-to-large trees, from sea level to high mountain elevations. Prefers woodland habitats within reasonable proximity to open space, for foraging (feeds primarily on moths). Roosts underneath the foliage in large trees.	<i>Possible:</i> There have been ten recent documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA, within Mission Trails Regional Park, and along Los Peñasquitos Creek. There is sufficient foresting and roosting habitat within the BRSA.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Los Angeles pocket mouse ( <i>Perognathus longimembris brevinasus</i> )	--/--, SSC, MSCP	Occur in lower elevation grassland, alluvial sage scrub, and coastal sage scrub; elevation ranges from 550 to 2,650 feet in elevation. Typically hibernate from October to February.	<i>Not Expected:</i> Suitable habitat, in the form of grassland and coastal sage scrub communities, are present within the project; however, the species current geographic distribution does not overlap with the BRSA. There are no documented recent CNDDB-documented occurrences of this species within 3 miles of the BRSA, within the past 20 years.
Mexican long-tongued bat ( <i>Choeronycteris Mexicana</i> )	--/--, SSC	Distribution in California is limited mainly to San Diego County. Occurs in a wide variety of habitats from arid thorn scrub to tropical deciduous forest and mixed oak-conifer forest. Roosting sites include mines, caves and rock fissures.	<i>Not Expected:</i> Suitable habitat is present in the BRSA, in the form of manmade structures and rock formations. There are no CNDDB-documented occurrences in the last 20 years within 3 miles of the BRSA.
Mountain Lion ( <i>Puma concolor</i> )	--/--, MSCP, NCCP	Present in many habitats and communities, especially riparian communities that support large mammal prey (primarily mule deer), often near rocky outcrops. Seeks cover in caves, thickets, and dense brush. Ranges for an individual mountain lion are large, covering multiple square miles.	<i>Possible:</i> While mountain lions occupy a range of habitats, including those present within or near the BRSA, mountain lions were not observed during surveys, and there have been no documented CNDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. Mountain lions require large, undeveloped spaces for their individual ranges. While most of the BRSA is not suitable to mountain lions, northern portions of the proposed project could support mountain lions, and they have been known to occur within this region, though not necessarily within the BRSA.
Northwestern San Diego pocket mouse ( <i>Chaetodipus fallax fallax</i> )	--/--, SSC, NCCP	Occurs in sandy, herbaceous areas, coastal scrub, chamise-redshank and mixed chaparral, sagebrush, desert scrub, pinyon-juniper, and annual grassland. In San Diego County, occurs mainly in arid coastal and desert border areas. Burrows often excavated in gravelly or sandy soils.	<i>Not Expected:</i> Suitable habitat is present throughout the BRSA in the form of coastal sage scrub, desert scrub, chaparral, and annual non-native grassland. The species was not detected on MCAS Miramar in the past during surveys conducted in 2000. There are no documented CNDDB-documented occurrences of this species within 3 miles of the BRSA within the last 20 years.
Pacific pocket mouse ( <i>Perognathus longimembris pacificus</i> )	FE/--, NCCP	Increasingly rare in Southern California. Occupies desert riparian, desert scrub, desert wash, coastal scrub, and sagebrush habitats in Southern California from sea level to approximately 5,580 feet in elevation. Burrows in sandy soils	<i>Not Expected:</i> There is suitable habitat for this species within the BRSA, but there have not been any documented CNDDB-documented occurrence of this species within 3 miles of the BRSA within the past 20 years.
Pallid bat ( <i>Antrozous pallidus</i> )	--/--, SSC	Inhabits chaparral and shrub steppe vegetation; roosts in cliff and rock outcrops and shallow caves, and manmade structures. Feeds on flying insects.	<i>Not Expected:</i> There is suitable habitat present within the BRSA, including cliffs and rocky areas, grasslands, shrub lands, and woodlands, but there are no CNDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Pocketed free-tailed bat ( <i>Nyctinomops femorosaccus</i> )	--/--, SSC	Occurs in pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, alkali desert scrub, Joshua tree habitats. Reproduces in rock crevices, caverns or buildings and usually roosts in rock crevices in cliffs.	<i>Possible:</i> There have been eight documented CNDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years, within Mission Trails Regional Park. Habitat for this species in the form of riparian habitats, palm trees, cliffs, and alkali scrub (i.e., tamarisk scrub and cismontane alkali marsh) is present within the BRSA. This species has also been detected on MCAS Miramar in the past, but not necessarily within the BRSA.
San Diego black-tailed jackrabbit ( <i>Lepus californicus bennettii</i> )	--/--, SSC, NCCP	Common throughout the state, especially in grasslands and agricultural lands, though occasionally in sparse sage scrub. It generally does not occupy chaparral.	<i>Present:</i> This species was observed in multiple locations within the BRSA on MCAS Miramar in late 2014 and early 2015 within the BRSA during habitat assessments and drainage mapping. There are nine documented CNDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
San Diego desert woodrat ( <i>Neotoma lepida intermedia</i> )	--/--, SSC, NCCP	Occurs primarily in annual and perennial grassland communities, but also known to occur in coastal scrub or sagebrush with sparse canopy cover. Burrows often abandoned pocket gopher burrows. Nocturnal.	<i>Possible:</i> Habitat is present for this species within the BRSA in mixed chaparral throughout the BRSA. This species has been observed on MCAS Miramar in the past, although not necessarily within the BRSA. There are six documented CNDDB-documented occurrences of this species within 3 miles of the BRSA, in the last 20 years.
Southern mule deer ( <i>Odocoileus hemionus fuliginata</i> )	--/--, MSCP, NCCP	Occurs throughout San Diego County, often along riparian corridors and in mountain areas supporting forest, woodland, and brush communities. Feeds of forbs and grasses in spring, acorns in fall, and shrubs in summer and winter. Seeks cover in bushes and thickets. Southern mule deer are a common source of prey for mountain lions.	<i>Present:</i> There is suitable habitat for this species within the BRSA. Though there are no recently documented CNDDB-documented occurrences of this species within 3 miles of the BRSA, mule deer signs (scat) were observed during surveys, and there have been documented iNaturalist occurrences of this species throughout the BRSA.
Stephens' kangaroo rat ( <i>Dipodomys stephensi</i> )	FE/CT, NCCP	Occurs throughout the northern portion of San Diego County, especially in annual and perennial grassland habitats with firm soils, including disturbed somewhat open areas, though also occasionally in coastal scrub or sagebrush with minimal canopy; generally associated with buckwheat, chamise, brome grass, and filaree as food sources. Build their own nests by lining burrows with dried plants, and occasionally occupy abandoned burrows from other species.	<i>Not Expected:</i> There is suitable habitat for this species within and near the BRSA, in the form of coastal sage scrub, non-native grasslands, and disturbed areas, though this species was not observed in the BRSA, and there are no documented CNDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. No Stephens' kangaroo rats were observed during targeted surveys of four staging areas/laydown yards for the proposed project in September 2015. A small, isolated population of Stephens' kangaroo rat is known to occur in Fallbrook, approximately 5.5 miles west of the northern portion of the proposed project.

**Special Status Wildlife with a Potential to Occur in the Biological Resources Survey Area (BRSA)**

Species	Status (Federal/California/County of San Diego)	Habitat Description	Potential to Occur
Townsend's big-eared bat ( <i>Corynorhinus townsendii</i> )	--/--, SSC	Found throughout California, though considered uncommon, and most abundant in mesic habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Maternity roosts found in caves, tunnels, mines, and buildings.	<i>Not Expected:</i> Suitable habitat exists throughout the BRSA for this species, including in tunnels and large drainage culverts, some of which are in fairly undisturbed sites. There are no documented CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years.
Western mastiff bat ( <i>Eumops perotis californicus</i> )	--/--, SSC	Occurs in many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, annual and perennial grasslands, palm oases, chaparral, desert scrub, and urban. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	<i>Possible:</i> There have been multiple CNDDDB-documented occurrences of this species within 3 miles of the BRSA in the last 20 years. Tall trees and tall buildings were observed in scattered locations throughout the BRSA. This species has been detected at MCAS Miramar in the past, not necessarily within the BRSA.
Western red bat ( <i>Lasiurus blossevillii</i> )	--/--, SSC	Roosting habitat includes forests and woodlands from sea level up through mixed conifer forests. Feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. Not found in desert areas. Roosts primarily in trees, less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas.	<i>Possible:</i> There have been multiple documented CNDDDB-documented occurrences within 3 miles of the BRSA within the last 20 years. Habitat for this species is present within the BRSA, most notably within named rivers and drainages (i.e., Rainbow Creek, the San Luis Rey River, Escondido Creek, Lake Hodges/San Dieguito River, Beeler Creek, and Poway Creek) and other tributaries that provide water for this species.

**Source** (for full references, see MEA Section 3.4, Biological Resources): CDFW 2017a, 2017b, 2017c; California Herps 2017; CNDDDB 2017; County of San Diego 1998; eBird 2017; iNaturalist 2017; Insignia 2015a, 2015d, 2015e, 2016a, 2016b, 2017a; Lotts and Naberhaus 2017; MCAS Miramar 2011; Rocks Biological 2015a, 2015b, 2016; SDNHM 2002, 2017; SDG&E 2014; Scott Tremor Biological Consulting 2016; Tierra Data, Inc. 2011; USFWS 2008; USFWS and the County of Riverside 2003; The Xerxes Society for Invertebrate Conservation 2016, 2017.

**Note:**

(a) USFWS. 2007. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the San Diego Fairy Shrimp (*Branchinecta sandiegonensis*) (50 CFR Part 17). Vol. 72, No. 238. pp. 70648-70714. Dec. <https://www.fws.gov/policy/library/2007/07-5972.html>. Accessed February 7, 2018.

† Special status wildlife designations used are defined as follows:

- FE: Federally Endangered
- FT: Federally Threatened
- CE: California Endangered
- CT: California Threatened
- FC: Candidate species proposed for listing under FESA
- FP: CDFW Fully Protected
- EL: CDFW "Watch List"
- SSC: CDFW Species of Special Concern
- BCC: USFWS Birds of Conservation Concern
- NCCP: SDG&E Subregional Natural Community Conservation Plan
- MSCP: Sensitive animals in Group 1 on the County of San Diego Multiple Species Conservation Plan Covered Species List