Power Engineers

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Species Habitat Assessment

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1.0 INTRODUCTION

In order to evaluate the potential impacts to sensitive bird species associated with the Riverside Transmission Reliability Project (RTRP)(project) habitat assessment surveys and focused surveys are required by the Riverside County Multiple Species Habitat Conservation Plan (MSHCP). This report describes the findings of a focused habitat assessment survey for western burrowing owl (burrowing owl)(*Athene cunicularia hypugaea*) and three riparian bird species, least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax traillii extimus*), and yellow-billed cuckoo (*Coccyzus americanus*). This survey covered an area of approximately 2750 acres in Riverside and San Bernardino Counties, California. This habitat assessment survey was conducted on several alternate routes proposed for the 230 kV kilovolt (kV) power line that will comprise the project.

1.1 PROJECT DESCRIPTION

The RTRP is a Riverside Public Utilities (RPU) project that will provide the City of Riverside with a new 230 kilovolt power line, substation, and associated 69 kV power lines. The proposed 230 kV power line will extend from the existing Southern California Edison (SCE) 230 kV power line north of the City of Riverside to the proposed Jurupa substation, which will be located on the south side of the Santa Ana River, approximately one mile east of Van Buren Boulevard. Southern California Edison will build the new 230 kV power line. Power Engineers has been contracted by RPU to design and manage the construction of the new power lines. TRC Essex has been subcontracted by Power Engineers to conduct the biological surveys for the project.

2.0 SETTING

2.1 PROJECT AREA (Figure 1)

The proposed project is located within the Riverside and San Bernardino Counties, California. The project generally lies south of Interstate 10, east of Interstate 15, west of Intrastate 215, and north of Arlington Avenue. Residential communities surround the entire project area with commercial and industrial properties bordering the northeast, northwest, and south central sections of the project area. Within the project area, there are extensive areas occupied by residential communities, with some industrial and commercial areas extending into the project area from bordering areas. There are a few agricultural fields located on the west side of the project area, as well as area of designated open space located north of Highway 60 and south of Interstate 10. The Santa Ana River borders the southern and eastern sides of the project area.

3.0 METHODS

3.1 LITERATURE REVIEW

Prior to the survey, a review was conducted of the California Natural Diversity Data Base (CNDDB) and other documentation relevant to the project site (CNDDB, 2006). The CNDDB records for the Corona, Fontana, Guasti, Riverside East, Riverside West, and San Bernardino U.S. Geological Survey (USGS) quadrangles were reviewed for information on sensitive wildlife species occurrences that have been documented in the vicinity of the project site.

Sensitive species include all listed federal and state endangered and threatened species as well as federal and state species of concern. A sensitive species was considered a potential inhabitant of the project site either if its known geographical distribution encompasses part of the project site or if its distribution was near the site and general habitat requirements of the species were present (e.g., roosting, nesting, or foraging habitat, specific soil type, or a permanent water source). A list of sensitive species with the potential to occur was developed, and surveyors considered the habitat requirements of each species during the surveys.

3.2 SENSITIVE WILDLIFE ACCOUNTS

Least Bell's Vireo

The least Bell's vireo (*Vireo bellii pusillus*) is a federally listed endangered species sensitive to changes in riparian vegetation. Preferred habitat for this species is dense willow-dominated riparian habitat with lush under story vegetation. The CNDDB documents sightings of least Bell's vireo within the project area along the Santa Ana River, 0.5 mile east and west of Van Buren Boulevard. Because the least Bell's vireo is a federally listed endangered species, the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) requires focused surveys for this species if suitable habitat is present in the project area.

During the initial project site assessment and reconnaissance surveys it was determined that suitable habitat existed for the coastal least Bell's vireo along portions of the proposed project route located near the Santa Ana River. Habitat assessment surveys for the least Bell's vireo were conducted along the project route in those areas with potential to support this species.

Southwestern Willow Flycatcher

The southwestern willow flycatcher (*Empidonax traillii extimus*) is a federally listed endangered species sensitive to changes in riparian vegetation. The southwestern willow flycatcher breeds in dense riparian habitats along rivers, streams, or other wetlands. Preferred habitat for this species is dense willow-dominated riparian habitat with lush under story vegetation. Because the southwestern willow flycatcher is a federally listed endangered species, the MSHCP requires focused surveys for the southwestern willow flycatcher if suitable habitat is present within the project area.

During the initial project site assessment and reconnaissance surveys it was determined that suitable habitat existed for the southwestern willow flycatcher along portions of the proposed project route located near the Santa Ana River. Habitat assessment surveys for the southwestern willow flycatcher were conducted along the project route in those areas with potential to support this species.

Yellow-billed cuckoo

The yellow-billed cuckoo (*Coccyzus americanus*) is slender, long-tailed bird that has brown head, nape, back, and upper wings and a white chin, breast, and belly. Both sexes have a yellow orbital ring and a brown upper tail that has black outer tail feathers with white tips. The yellow-billed cuckoo is a state listed endangered species sensitive to changes in riparian vegetation. Yellow-billed cuckoos, often found in areas of riparian vegetation, prefer open woodlands with clearings and a dense shrub layer. Because the

yellow-billed cuckoo is a state listed endangered species, the MSHCP requires focused surveys for the yellow-billed cuckoo if suitable habitat for this species exists within the project area.

During the initial project site assessment and reconnaissance surveys it was determined that suitable habitat existed for the yellow-billed cuckoo along portions of the proposed project route located near the Santa Ana River. Habitat assessment surveys for the yellow-billed cuckoo were conducted along the project route in those areas with potential to support this species.

Western Burrowing Owl

The western burrowing owl (*Athene cunicularia hypugaea*) is currently listed as a Species of Special Concern in the state of California. The burrowing owl typically use burrows made by fossorial mammals and inhabit a wide array of natural and modified habitats, including but not limited to native and non-native grasslands, fallow fields, washes, arroyos, areas of low-density cover, vacant lots, and road embankments. Because this species as listed as a Species of Special Concern, the Riverside Multiple Species Habitat Conservation Plan (MSHCP) requires focused surveys for the burrowing owl if appropriate habitat for burrowing owl exists within the project area.

During the initial project site assessment and reconnaissance surveys it was determined that suitable habitat existed for the western burrowing owl along large portions of the proposed project route. Habitat assessment surveys for the burrowing owl were conducted along the project route in those areas with potential to support this species.

3.3 FIELD SURVEY

Burrowing owl, least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo habitat assessment surveys were conducted between September 19 and October 5, 2006. Surveys began at approximately 8:30 a.m. and ended at approximately 3:00 p.m. Weather conditions varied from clear and sunny to overcast. Temperatures ranged from approximately 67 to 98 degrees Fahrenheit and winds ranged from approximately 0 to 5 miles per hour. All routes were surveyed on foot. Two biologists (Leslie Nelson and Paula Potenza, TRC Essex) conducted the survey. Using the proposed transmission line route as the centerline, a 150-meter buffer zone was walked and the presence or absence of potential burrowing owl habitat was recorded. In areas where the proposed transmission line is located adjacent to a roadway, the width of the buffer zone was kept as wide as possible without entering the road. Several sections of the proposed transmission line route transverse dense or inaccessible riparian areas along the Santa Ana River, extend through active homeless camps, or extend onto property upon which TRC Essex was not authorized to enter. In these cases, the buffer zone was surveyed using binoculars. Wildlife species and their sign were identified and potential habitat suitable for sensitive wildlife species was noted. Locations of sensitive species observed during surveys were recorded.

4.0 FINDINGS

The majority of the proposed project route is located along existing city streets dominated by residential neighborhoods and other developed areas. Habitat within the project area consists of remnant parcels of Riversidian coastal sage scrub, vacant and/or disked fields, graded lots, residential communities with ornamental vegetation, road shoulders with disturbed or ornamental vegetation, and previously disturbed parcels with disturbed vegetation. Disturbed plant communities found along the roadsides and the disturbed parcels in the project area are dominated by non-native weedy species. These areas have been significantly disturbed by agriculture, construction, other land-clearing activities, or off-road vehicle traffic. The Santa Ana River, dominated by southern cottonwood willow riparian forest, riparian scrub, and non-native species, runs along the southern border of the project area and then curves northeast along the eastern border of the project area. A large concrete-lined flood control channel, which runs north to south, is located adjacent to Bain Street on the western side of the project area. For the purposes of this survey the proposed route was subdivided geographically into twelve segments, which are described separately. The segment order is arranged to describe the proposed route in a generally west to east direction starting at the northwest corner of the project area and finishing at the northeast corner.

Segment A [Links 13, 14, 16, 17] (Figure 2)

This portion of the proposed route is located along Cantu-Galleano (Galena) Avenue in an area of existing commercial development, agricultural fields, and ongoing construction. Commercial developments with ornamental vegetation are located on the north side of this segment. Agricultural fields bordered by earth berms and rubbish piles are located on the south side of Cantu-Galleano Avenue. The berms contained California ground squirrel (*Spermophilus beecheyi*) burrows. West of the intersection of Galena Avenue and Wineville Road, there is active construction on both the north and south sides of Galena Avenue. Disturbed lots dominated by non-native grasses, including ripgut grass (*Bromus diandrus*), foxtail barley (*Hordeum jubatum*), and red-stem filaree (*Erodium cicutarium*) are located on the north and south sides of the road near the intersection of Cantu-Galleano Avenue and Etiwanda Avenue. Disturbed vegetation, dominated by black mustard (*Brassica nigra*), Russian thistle (*Salsola tragus*), horseweed (*Conyza canadensis*), castor bean (*Ricinus communis*), and cheeseweed (*Malva parvifolia*) are located along the roadsides in this area. The portion of this segment located between Etiwanda Avenue and Bain Street has a sports complex with ornamental vegetation and a disturbed lot on the south side of Galena Avenue. A large paved parking area with commercial buildings (MetroLink station) and ornamental vegetation occupy the north side of Cantu-Galleano Avenue between Etiwanda Avenue and Bain Street. On the northwest corner of the intersection of Bain Street and Cantu-Galleano Avenue is a large disturbed lot dominated by non-native grasses, including ripgut grass, foxtail barley, and red-stem filaree, with clumps of mule fat (*Baccharis salicifolia*) located on the southwestern corner of the lot. This area has been used as dumpsite and contains piles of furniture, concrete, and other rubbish which wildlife are using for shelter. Because burrowing owls will utilize rock or concrete piles or other man-made discards, it is recommended that focused surveys for burrowing owl be conducted in this area as well as in all disturbed areas along this segment.

Although no burrowing owls were observed in Segment A during this habitat assessment survey, burrowing owls were observed on multiple occasions in the disturbed lot located on the northwest corner of the intersection of Bain Street and Cantu-Galleano Avenue during project sensitive plant and invertebrate surveys. These sightings included four burrowing owls observed on July 14, 19, and 24, 2006 by Ellen Schafhauser (Osborne Biological Consulting). On July 19, 2006, two burrowing owls were observed around a catch basin and associated spillway on the southwest corner of the lot by Roger Overstreet (TRC Essex). Ken Osborne and Alex Van Dam (Osborne Biological Consulting) observed one owl around the catch basin on July 28 and 30, 2006, respectively, and on August 9 and 27, 2006, two burrowing owls were observed in the same area by Alex Van Dam and Rick Rogers (Osborne Biological Consulting). Alex Van Dam also observed burrowing owls on the western portion of the lot on September 17, 2006.

Segment B [Link 10 from Bellegrave Avenue to Limonite Avenue] (Figures 2, 3, and 4)

This portion of the proposed route is located adjacent to the east shoulder of Bain Street, between the road and a large, fenced concrete flood control channel that runs the length of Bain Street. The proposed buffer zone encompasses mainly the hard-packed dirt shoulder of Bain Street, Bain Street, and the fenced concrete flood control channel. Bellegrave Avenue and Limonite Avenue border this portion of the proposed route on the north and south, respectively. Bare ground is located on the east side of Bain Street and disturbed areas are located on west side Bain Street between Van Buren Boulevard and Bellegrave Avenue. The area between Bellegrave Avenue and Limonite Avenue consists of residential developments and a school interspersed with vacant lots. The embankment leading down to the concrete flood control channel consists of hard-packed soil that contains multiple ground squirrel burrows. Two active burrowing owl burrows were observed in the area between 58th Street and 60th Street. A total of three burrowing owls were observed with two occupying a single burrow and a single owl occupying a second burrow. Both whitewash and feathers were observed around the mouths of both burrows. Although the proposed route is located between Bain Street and the flood control channel in an area of bare ground and sparse disturbed vegetation, it is recommended that focused surveys for burrowing owl be conducted on this segment of the proposed route.

Ken Osborne (Osborne Biological Consulting) also reported observing one burrowing owl within the fenced concrete flood control channel area near 58th Street on July 28, 2006.

Segment C [Links 8, 11, 12 and 15] (Figures 2, 3, and 4)

This portion of the proposed route extends from Etiwanda Avenue southeast to Clay Street along the northeast side of Van Buren Boulevard. The centerline of the buffer zone runs along the approximately twenty-five-foot-wide swath of land located between Van Buren Boulevard and the railroad tracks to the east for the entire length of the segment. Starting at the northwestern end of the segment, between Etiwanda and Bellegrave Avenue, there are long narrow stretches of disturbed area on both sides of Van Buren Boulevard. There is a disturbed lot located on the southwest corner of the intersection Van Buren Boulevard and Bain Street that shows evidence of discontinued

irrigation. Small areas of ornamental vegetation remain in this area and ground squirrel burrows can be found scattered throughout both the disturbed lots and the stretches of disturbed area on both sides of Van Buren Boulevard. From Bellegrave Avenue southeast to Jurupa Avenue the proposed project route travels adjacent to commercial development on the northeast side and residential development on the southwest side of Van Buren Boulevard. There is a recently disked lot located on the northeast corner of the intersection of Van Buren Boulevard and Bellegrave Avenue. Large disturbed areas dominated by non-native species including ripgut grass, Russian thistle, horseweed, red-stem filaree, black mustard, and tocalote (*Centaurea melitensis*) are located on both the northeast and southwest sides of Van Buren Boulevard. Ground squirrels were observed in the disturbed areas. The centerline area of the buffer zone located between Van Buren Boulevard and the railroad tracks consists of disturbed areas and ornamental vegetation. Evidence of ground squirrel occupation was also observed in these areas.

From Jurupa Avenue southeast to Clay Street the proposed project route travels adjacent to residential and commercial development, disturbed areas, disked areas, ornamental vegetation, a few scattered native shrubs and a concrete drainage. The eastern side of Van Buren Boulevard has mostly continuous disturbed areas along the road with increased encroachment by residential and commercial developments as Van Buren Boulevard intersects at Limonite Avenue. Pyrite Channel, a channelized concrete drainage, surrounded by Fremont cottonwood (*Populus fremontii* ssp. *fremontii*) and willow *(Salix* sp.), crosses under Van Buren Boulevard between 54th Street and 56th Street. Because this is an isolated drainage with fragmented cover surrounded by developed areas, this area is not considered suitable habitat for least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo. The disturbed areas on both the east and west sides of Van Buren Boulevard are dominated by non-native species including ripgut grass, Russian thistle, horseweed, red-stem filaree, black mustard, tocalote, castor bean, and cheeseweed. The centerline area of the buffer zone located between Van Buren Boulevard and the railroad tracks consists of disturbed areas. From Limonite Avenue to Clay Street the proposed route travels adjacent to mixed residential and commercial development and disturbed areas. Because suitable habitat exists throughout this segment for burrowing owl, it is recommended that focused burrowing owl surveys are conducted in Segment C.

Segment D [Links 6, 7, 9, and 10 from Limonite Avenue to southeast terminus] (Figure 4)

This segment of the proposed route starts south of the intersection of Limonite Avenue and Bain Street and extends southeast along the Santa Ana River to the intersection of the Santa Ana River and Van Buren Boulevard. The proposed project route runs through a dirt access area which is adjacent to the west side of the large, fenced concrete flood control channel that extends the length of Bain Street continues approximately 250 feet south of Limonite Avenue. One potentially active burrowing owl burrow was observed within the fenced concrete drainage area. Whitewash and feathers were observed in and around the burrow entrance. No owls were observed. Ground squirrels were observed in the area within and outside of the fenced concrete flood control channel area.

Following the north side of the Santa Ana River, the proposed route extends through the southern edge of commercial, private, and City of Riverside property, including a water treatment facility, poultry farm, horse ranch, Paradise Knolls golf course, and a

community park. Paved, developed or disturbed areas, and bare ground occupy the portion of the proposed route that crosses the water treatment facility, poultry farm, horse ranch, and golf course. Along this portion, dense monotypic stands of giant reed (*Arundo donax*) border the buffer zone to the south of the proposed route. East of the golf course, the proposed route crosses the southern edge of a community park and then continues to follow the north side of the Santa Ana River drainage. The proposed route extends through non-native grasslands and disturbed areas located between the Santa Ana River drainage and the southern edge of a residential development. These areas are dominated by non-native species including ripgut grass, red-stem filaree, foxtail chess, Russian thistle, black mustard, tocalote, and tree tobacco (*Nicotiana glauca*). Multiple burrows were observed on the steep south-facing slope that exists between the disturbed areas and the riparian corridor. Ground squirrels were also observed. Due to the large number of burrows observed and the available foraging habitat in this area, it is recommended that burrowing owl surveys be conducted, starting from the eastern edge of the golf course to Van Buren Boulevard, where there is disturbed habitat and/or burrows present.

The riparian area located south of the proposed route along this section consists of southern cottonwood willow riparian forest interspersed with dense sprawling areas of giant reed. Because the riparian area contains scattered patches of tall Fremont cottonwoods with a fairly dense under story, it is recommended that least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo surveys be conducted in the areas, starting from the eastern edge of the golf course to Van Buren Boulevard, that contain dense patches of southern cottonwood willow riparian forest. As the proposed route approaches Van Buren Boulevard, there is a large open lot that is currently under construction and a residential area to the northwest. At this point, there is a short leg of the proposed route that transverses this lot and connects to Segment C on Van Buren Boulevard. This area does not contain suitable habitat for least Bell's vireo, southwestern willow flycatcher, yellow-billed cuckoo, or burrowing owl.

Approximately one-half mile west of Van Buren Boulevard, the proposed route splits, with one proposed route crossing the Santa Ana River and then turning east. The buffer zone for this stretch of the proposed route extends through southern cottonwood willow riparian forest. Because the riparian area contains scattered patches of tall Fremont cottonwoods with a fairly dense under story, it is recommended that least Bell's vireo and southwestern willow flycatcher surveys be conducted in the areas that contain denser patches of southern cottonwood willow riparian forest.

Segment E [Links 1, 2, 3, 4, 5, 18] (Figures 4 and 5)

This segment of the proposed route starts at the intersection of Van Buren Boulevard and the Santa Ana River and travels on both the north and south sides of the river east to the proposed Jurupa substation location. At this point the proposed route on the north side of the river crosses the river and merges with the route on the south side of the river for the remainder of the segment from the Jurupa substation east to the intersection of the river and the railroad trestle that spans the Santa Ana River.

Following the north side of the river from Van Buren Boulevard east, the proposed route crosses a large non-native grassland and disturbed area dominated by ripgut grass, red-stem filaree, foxtail chess, Russian thistle, horseweed, black mustard, and tocalote.

Scattered and patchy elements of Riversidean sage scrub occur among the non-native species, including California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), brittlebush (*Encelia farinosa*), black sage (*Salvia mellifera*), and blue elderberry (*Sambucus mexicana*). Following the south side of the river, the proposed route is located adjacent to a bike path, between the bike path and the river. The buffer zone of this section of the proposed route includes riparian areas to the north and developed areas, including a water treatment plant, and disturbed areas to the south.

The riparian area along this section consists of southern cottonwood willow riparian vegetation interspersed with dense sprawling areas of giant reed and open sand bars. The riparian vegetation becomes less dense with a sparser under story as it reaches the south side of the river. Because of the openness, decreased under story, and the large patches of giant reed, which is not used by foraging least Bell's vireo and southwestern willow flycatcher, it is unlikely that these species will be found in this area. However, it is recommended that focused surveys for least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo be conducted in the areas that contain denser patches of southern cottonwood willow riparian vegetation.

No burrows, ground squirrels, or suitable substrate for burrows or burrowing owls was observed in the area of the proposed route adjacent to the water treatment plant. The disturbed area adjacent to the water treatment plant and west of Jurupa substation contains suitable burrows and ground squirrels were observed in the area.;therefore, it is recommended that focused burrowing owl surveys be conducted in this area. From Jurupa substation, the proposed route continues along the south side of the river, through disturbed areas and adjacent to commercial developments, to the train trestle that spans the Santa Ana River. The disturbed areas in this portion of the proposed route contain suitable burrows and ground squirrel activity. Therefore, it is recommended that burrowing owl surveys be conducted in this area.

Segment F [Links 19, 20,21,22, 23, 24, 25, and 26] (Figures 5 and 6)

From the train trestle crossing on the south bank of the Santa Ana River, Segment F branches out into three proposed alternate routes with one route extending east through riparian area [Links 20 and 22], one extending south adjacent to the train tracks on the west and Anza Narrows Park on the east [Link 19], and one extending east and then south, traveling along the east side of Anza Narrows Park [Links 20 and 21].

The buffer zone of the branch of Segment F that extends east [Link 22] crosses an expansive area of southern cottonwood willow riparian vegetation with sandy and gravelly well drained soils, open sand bars, and patches of dense giant reed. The riparian vegetation tends to be thicker and have more substantial under story in the area closer to the river. It is recommended that focused surveys for least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo be completed in sections of the proposed route that pass through these denser riparian areas. The riparian area then gives way to dense stands of arrowweed (*Pluchea sericea*), disturbed areas, and a former landfill that is regularly mowed. Segment F terminates at the eastern end of a former landfill. No burrows or ground squirrels were observed in the disturbed areas located between the stands of arrowweed, in addition, sandy soils make this area unlikely burrowing owl habitat. The adjacent former landfill is fenced and consists of

mowed non-native vegetation. Although no burrows were observed at the time of the survey, ground squirrels were observed in the area and foraging habitat is available nearby. Therefore, it is recommended that focused surveys for burrowing owl be completed in this area [Links 26].

The buffer zone of the branch of Segment F that extends south between the train tracks and Anza Narrows Park [Link 19] transverses ornamental vegetation and paved areas. The buffer zone of the branch of segment F that extends east and then south along the eastern border of Anza Narrows Park [Links 20 and 21] transverses ornamental vegetation, disturbed areas, and southern cottonwood willow riparian vegetation interspersed with ornamental and non-native vegetation. Some sufficient understory exists within the southern cottonwood willow riparian vegetation that may support least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo. A focused survey for these species is recommended in this area. This area was not suitable for burrowing owl.

Both branches of the proposed route that border Anza Narrows Park [Links 19 and 21] meet up on the south end of the park and stretch to the east [Link 23], crossing through ornamental vegetation, southern cottonwood willow riparian forest, and disturbed areas. Some sufficient understory exists within the southern cottonwood willow riparian forest that may support least Bell's vireo and southwestern willow flycatcher. A focused survey for these species is recommended in this area. The disturbed area east of the southern cottonwood willow riparian forest borders a residential development to the south [Links 24 and 25]. The disturbed area appears to have been disked recently. Remaining burrows around clumps of shrubs, several eucalyptus trees, and fallen logs still provide possible shelter for burrowing owls, as does a bordering embankment between the disturbed area and the residential development to the south. Multiple burrows and ground squirrels were observed on the embankment. Due to the number of burrows observed and the availability of foraging habitat nearby, it is recommended that focused surveys for burrowing owl be conducted within the disturbed areas.

Segment G (Figure 6)

Segment G of the proposed route starts on the eastern edge of a former landfill at Tequesquite Road and extends north to Buena Vista Avenue. This segment of the proposed route follows the southern side of the Santa Ana River and crosses through disturbed areas, Riversidean sage scrub, southern cottonwood willow riparian forest, and ornamental vegetation. From the eastern edge of the former landfill, heading northeast, the proposed route crosses a disturbed area adjacent to the Santa Ana River. The disturbed areas are dominated by stands of arrowweed and other non-native species including ripgut grass, foxtail chess, Russian thistle, horseweed, red-stem filaree, black mustard, and tocalote. The proposed route intersects with a paved bike path that runs adjacent to the proposed route for the remainder of the segment. As the proposed route continues east it runs adjacent to Mt. Rubidoux City Park, an area of non-native grasses and Riversidean coastal sage scrub dominated by California sagebrush, California buckwheat, brittlebush, and matchweed (*Gutierrezia* sp.). Because the disturbed areas and sage scrub habitat within this segment of the proposed route contain suitable burrows and ground squirrel activity, it is recommended that burrowing owl surveys be conducted in this area.

Segment H (Figures 6 and 7)

Segment H begins on the south side of the Santa Ana River at Buena Vista Avenue and heads northeast along the river for approximately 0.3 mile before dividing into two alternate proposed routes. One of the proposed alternate routes crosses the Santa Ana River and follows the north side of the river and the other alternate route follows the south side of the river. This segment of the proposed route terminates at the intersection of the Santa Ana River and Market Street, where the southern alternate route crosses the river to meet up with the northern alternate route on the northern side of the river.

The southern of the two alternate proposed routes travels adjacent to a disturbed area bordered by an area of southern cottonwood willow riparian forest and a residential development. Both burrows and ground squirrels were observed in this area. At the southeast corner of the intersection of Highway 60 and the Santa Ana River is Fairmont Park Golf Course. Adjacent to the centerline of the proposed route along this section is a large berm with multiple burrows. The area beyond is ornamental vegetation. Because multiple burrows are present and there is available foraging habitat in the area, it is recommended that focused surveys be conducted for both the disturbed areas within this segment and the above-mentioned berm adjacent to the golf course.

Continuing on the south side of the Santa Ana River, between Highway 60 and Market Street, the southern proposed alternate route travels adjacent to commercial developments. The section of river that borders the proposed route on this branch of the segment is composed of mostly open sand bars with scattered riparian scrub. This area is not considered suitable habitat for least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo.

The second of the two alternate proposed routes for this segment spans the Santa Ana River, passing through open sandy areas and scattered clumps of riparian scrub. This area of the river is not considered suitable habitat for least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo. After spanning the river, the proposed route then travels northeast along the river, running adjacent to a former landfill and a commercial development, between the river and the developments. The former landfill consists of a fenced mound, with high banks, that appears to be mowed frequently. The adjacent disturbed area showed evidence of occupation by ground squirrels, as burrows were present in the area. Because the disturbed areas within this branch of the proposed route contain suitable burrows, ground squirrel activity, and available foraging habitat, it is recommended that burrowing owl surveys be conducted in this area. The section of the river adjacent to this alternate route of this segment is not considered suitable habitat for least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo.

Segment I (Figures 7 and 8)

Segment I of the proposed route extends from the intersection of Market Street and the Santa Ana River northeast along the north side of the river to Riverside Avenue. A short leg extends across the Santa Ana River just east of Market Street and terminates on the south side of the river where the proposed route connects with Segment H. The stretch of the proposed route extending northeast along the north side of the river crosses

through disturbed areas, bare ground, ornamental vegetation, and commercial developments. Traveling northeast from Market Street, the proposed route passes through an area of bare ground and disturbed vegetation, including Russian thistle, horseweed, black mustard, and tocalote. The route continues through disturbed areas as it passes through mixed ornamental and disturbed vegetation between commercial developments and the river and then through a large vacant lot. Although the foraging area is fragmented and marginal in quality, usable burrows were observed scattered throughout this stretch. Therefore, it is recommended that focused surveys for burrowing owl be conducted in this area. Northeast of the vacant lot, the proposed route crosses a disturbed area adjacent to commercial development and then continues through open disturbed areas adjacent to private property with a small junkyard, and an abandoned horse track. The area is dry, with large patches of bare ground, piles of dirt, rock, and other debris. Multiple ground squirrels were observed in the area and burrows are abundant in patches. Because these disturbed areas contain suitable burrows, ground squirrel activity, and available foraging habitat, it is recommended that burrowing owl surveys be conducted in this area.

In portions of this segment were riparian area is within the buffer zone; southern cottonwood willow riparian forest is present. However, the cover is fragmented with patches of denser vegetation that may have sufficient understory vegetation to support least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo. Therefore, focused surveys for least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo are recommended in areas along this stretch where southern cottonwood willow habitat falls within the buffer zone of the proposed route. The stretch of the proposed route extending across the Santa Ana River just east of Market Street and terminating on the south side of the river passes through open sandy areas and scattered clumps of riparian scrub. This area of the river is not considered suitable habitat for least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo.

Segment J (Figure 8)

Segment J extends along the north and south sides of the river from Riverside Avenue northeast to where the proposed route intersects the existing 230kV transmission line near the northeastern edge of the project area. Starting at the northeast corner of the intersection of Riverside Avenue and the Santa Ana River, Segment J immediately divides into two alternate routes or branches, with one branch extending along the north side of the Santa Ana River to connect with the 230kV transmission line to the northeast and the second branch stretching to the east, across the river, and then following the southeast side of the river until it also connects with the 230kV transmission line to the northeast. Following the proposed route's northwest branch, the buffer zone crosses through an extensive tract of vacant, disturbed areas, with narrow, fragmented patches of southern cottonwood willow vegetation and areas of bare ground. The disturbed areas are made up of non-native species including ripgut grass, foxtail chess, Russian thistle, red-stem filaree, black mustard, and tocalote. The disturbed areas contain piles of dirt and debris and there is a large berm that may be suitable for burrowing owl, although little ground squirrel activity was observed. Although there is not currently ground squirrel activity, some usable burrows are available in the area and suitable foraging areas exist nearby. Therefore, it is recommended that focused burrowing owl surveys be conducted in this area. The riparian vegetation is scattered and lacks an understory sufficient for foraging by least Bell's vireo, southwestern willow flycatcher, or yellow-

billed cuckoo. To the northeast of the disturbed areas, the proposed route adjacent to several concrete water retention ponds, at which point the proposed route connects with another 230kV transmission line.

Following the proposed route's southeast branch, the buffer zone crosses over the Santa Ana River, which has large sand bars interspersed with narrow areas of southern cottonwood willow vegetation with a sparse understory. This area does not have sufficient habitat to support least Bell's vireo, southwestern willow flycatcher, or yellow-billed cuckoo. The entire stretch of the southeastern branch extends through disturbed areas dominated by non-native species including ripgut grass, Russian thistle horseweed, red-stem filaree, black mustard, and tocalote. Patches of Riversidean sage scrub and scattered elements of sage scrub occur throughout the area. This area has been utilized extensively as an illegal off-road vehicle recreation area and there is an extensive network of dirt roads throughout this area. This area has also been used as a dumpsite, with scattered piles of concrete, furniture, and debris located in various areas within and near the buffer zone of the proposed route.

As the proposed route extends northeast, it bifurcates, with one alternate route or branch remaining along the south side of the Santa Ana River and the other alternate route or branch diverting to the east for approximately 0.3 miles before it turns north to connect with the 230kV transmission line. The branch following the south side of the Santa Ana River continues through disturbed areas and patches of Riversidean sage scrub dominated by California encelia (*Encelia californica*), California sagebrush, and California buckwheat, and brittlebush. The sage scrub becomes thicker with dense areas of brittlebush in the valley located just south of the proposed route's connection point with the existing 230kV transmission line. Following the eastern branch, the proposed route continues up a steep southwestern facing slope of disturbed areas and Riversidean sage scrub. The route continues down the opposite slope, heading north through denser areas of California encelia with patches of non-native vegetation.

Burrows and ground squirrel activity were noted in several areas including disturbed vegetation, patchy or scattered sage scrub vegetation, dirt embankments adjacent to the river, and around debris piles. It is recommended that focused burrowing owl surveys be conducted in these areas. Areas of dense sage scrub are not likely to support burrowing owl due to the height and thickness of the cover and a lack of available burrows. However, patches of disturbed areas within the sage scrub habitat may support burrowing owls and focused surveys in these areas are recommended as well.

Segment K (Figures 7 and 8)

Segment K consists of one continuous route starting on the northeast corner of the intersection of Market Street and the Santa Ana River and traveling north on east side of Market Street to the intersection of Market Street and Agua Mansa Road. At this point the proposed route turns northeast and follows Agua Mansa road past Riverside Avenue to connect with an existing 230kV transmission line.

Heading north from the intersection of Market Street and the Santa Ana River, the proposed route travels adjacent to Market Street, crossing through a disturbed lot (described in Segment I) and past multiple commercial developments with mixed disturbed areas and ornamental vegetation. Disturbed areas are dominated by non-

native species including ripgut grass, Russian thistle, red-stem filaree, foxtail chess, horseweed, black mustard, cheeseweed, and tocalote. At the corner of Market Street and Agua Mansa Road, the proposed route transverses a large paved lot turning east along Agua Mansa Road. The proposed route continues through the paved area for approximately 0.1 mile where it then crosses Agua Mansa Road and travels adjacent to the north side of the road crossing through a large area of mixed disturbed and Riversidean sage scrub adjacent to an old quarry. The Riversidean sage scrub is dominated by California encelia, California sagebrush, California buckwheat, and brittlebush. Continuing northeast, the proposed route transverses disturbed and disked lots. Survey permission was not granted for some parcels in this area, all of which consisted of disturbed vegetation. For these areas, binoculars were used to assess the habitat type and suitability for sensitive species. At Holly Street, the proposed route crosses over Agua Mansa Road again and follows the south side of Agua Mansa Road past several commercial developments through roadside disturbed areas, bare ground, and small patches of ornamental vegetation. The proposed route then crosses back to the north side of Agua Mansa Road. East of Riverside Avenue on the north side of Agua Mansa Road, the proposed route passes through roadside disturbed vegetation adjacent to commercial development, Agua Mansa Memorial Cemetery, and a large vacant parcel where the proposed route connects with the existing 230kV transmission line. Suitable burrows, ground squirrel activity, and foraging habitat were observed in multiple areas of disturbed vegetation along this portion of the route. Therefore, it is recommended that focused surveys for burrowing owl be completed in all disturbed areas in Segment K.

Segment L (Figure 8)

Segment L consists of one continuous route starting on the northeast corner of the intersection of Riverside Avenue and the Santa Ana River and traveling north approximately 0.7 mile where the proposed route turns northeast, passing through commercial and disturbed areas, to connect with the existing 230kV transmission line. From the intersection of Riverside Avenue and the Santa Ana River, the proposed route passes through a large disturbed area (described in Segment J) and through roadside disturbed areas and small areas of ornamental vegetation. Approximately 0.1 mile south of the intersection of Agua Mansa Road and Riverside Avenue, the proposed route turns northeast, crossing through a paved commercial lot, a large graded dirt lot, a lot currently storing chipped wood debris, and small patches of disturbed, paved, and graded areas before connecting to the existing 230kV transmission line. Because burrows and ground squirrel activity were observed and substantial foraging habitat exists nearby, focused surveys for burrowing owl are recommended in disturbed areas along this route. The graded areas along this route were made up of hard packed soil that lack berms or debris piles that may be used by burrowing owls. Therefore, these areas are not likely to support burrowing owl.

5.0 SUMMARY OF RESULTS

Field reconnaissance and habitat assessment surveys, and existing documentation were used to help determine the potential presence and location of sensitive biological resources within the project area and the immediate project vicinity. Habitat suitable for burrowing owl, least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo is present within the project area, therefore, focused surveys should be

conducted for these species in those areas described in the above discussions regarding each project segment.

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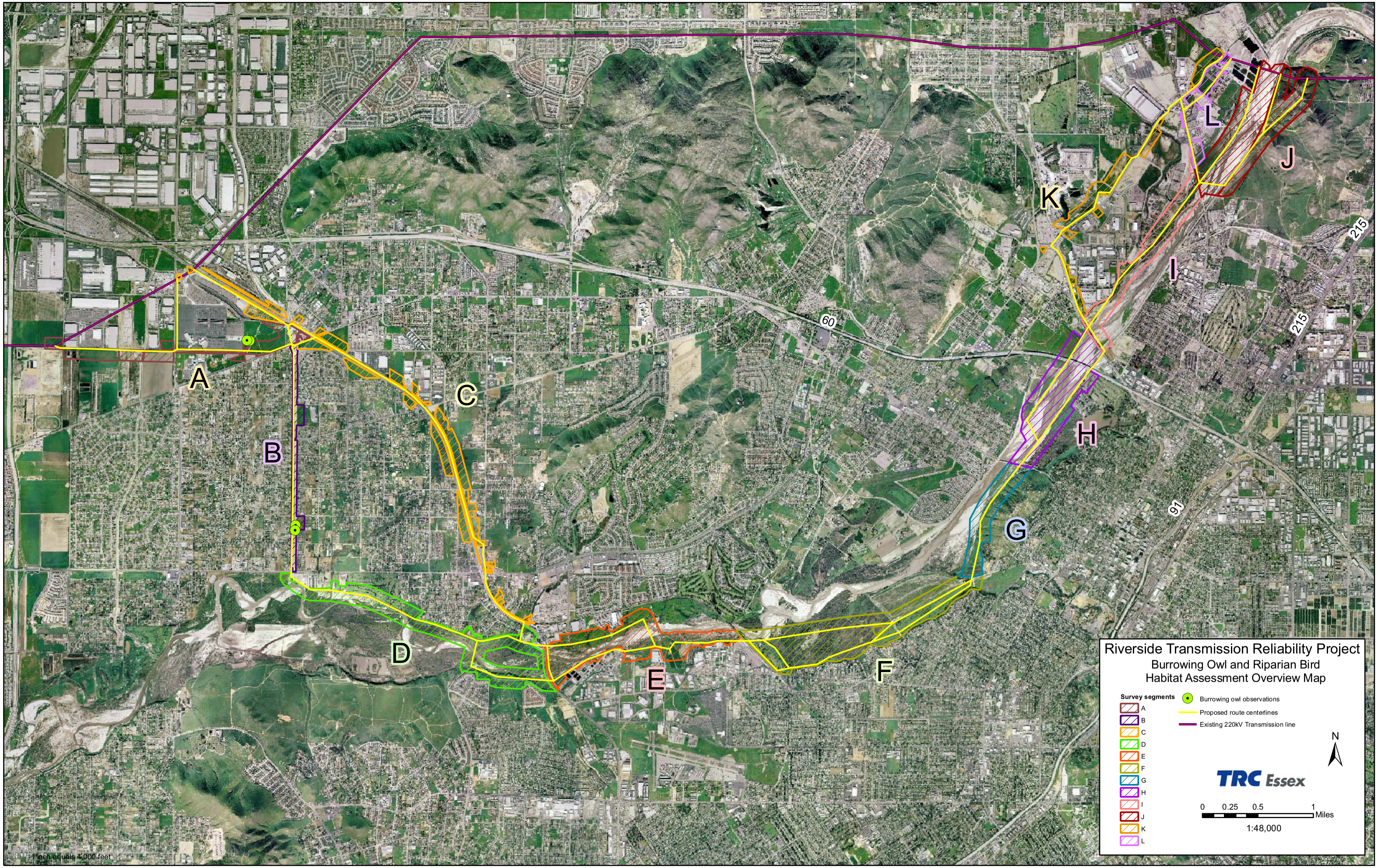
A
B
C
D
E
F
G
H
I
J
K
L
60
215
215
91
1 inch equals 4,000 feet
Riverside Transmission Reliability Project
Burrowing Owl and Riparian Bird
Habitat Assessment Overview Map
Survey segments
A
B
C
D
E
F
G
H
I
J
K
L
Burrowing owl observations
Proposed route centerlines
Existing 220kV Transmission line
N
TRC Essex
0 0.25 0.5 1
Miles
1:48,000

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Habitat Assessment

Map 1 of 7

Survey segments

- A
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- G
- H
- I
- J
- K
- L

- Burrowing owl observations
- Proposed route centerlines
- Existing 220kV Transmission line

N

TRC Essex

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet 1:12,000

1 inch equals 1,000 feet

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Habitat Assessment

Map 2 of 7

Survey segments

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L

- Burrowing owl observations
- Proposed route centerlines
- Existing 220kV Transmission line

N

TRC Essex

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet 1:12,000

Galena
Country
Bellegrave
Galena
Valley Forge
Rifle
Millbrook
Woodbridge
48th
Birmingham
Derby
Poinsetta
Bay Meadow
Newcastle
Athens
Brookhollow
Felspar
Glen
Chris
Sire
Galena
Bold Ruler
Filly
Sheiland
Dapple
Thorobred
Roundtable
Might
Mare
Sally Ann
Jurupa
50th
Webb
Canter
Cedar
Hill
Castro
Shire
Palomino
51st
52nd
Dunwood
Dubont
B
Allison
Steve
53rd
Cedar
Dunwood
C
Agate
Miramar
Stone
Bridle Path
Terrie
Martingale
Kim
Greg
54th
Serendipity
Pamela
Marlatt
Clydesdale
Appaloosa
Rutile
Crowley View
Cedar
Chifney
Linda Vista
Agate
Indian Palms
Starview
Swing
Golf
Greens
56th
Troth
Dodd
Voge
Bain
Oak Tree
Rutile
Sea Horse
West Rim
Big Ridge
Felspar
Claubert
Pedley
Fagan
Running Gait
Rocking Horse
County
Country Lane
58th
Ash
57th
Big Meadow
Tomal
Angela
Trailhead Point
Van Buren
59th
Beach
Tumbleweed
Stirrup
Horse Canyon
Snowgrass
Natchez
Gray Mare
3rd
60th
Appaloosa
Homestead
Spur
Saguaro
Belden
Azurite
Scheelite
Hudson
Baldwin
Pacer
Tamarind
Arrow
Dennis
61st
Main
Collins
Yearling

1 inch equals 1,000 feet


B
C
D
E
Riverside Transmission Reliability Project
Burrowing Owl and Riparian Bird Habitat Assessment
Map 3 of 7
Survey segments
A
B
C
D
E
F
G
H
I
J
K
L
Burrowing owl observations
Proposed route centerlines
Existing 220kV Transmission line
N
TRC Essex
0
500
1,000
2,000
Feet
1:12,000

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Habitat Assessment

Map 4 of 7

Survey segments

- A
- B
- C
- D
- E
- F
- G
- H
- I
- J
- K
- L

Burrowing owl observations

Proposed route centerlines

Existing 220kV Transmission line

N

TRC Essex

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet 1:12,000

E

F

Lakeside
Fayela
Sebastian
Font
Via Escalante
Skyview
Limonite
Vista del Verde
Vista del Caballero
Cahuilla
Avenue Juan Batista
Peralta
Rio
Canyon Terrace
Helmcrest
Camino Real
Winncliff
Maria
Nina
Palencia
Quiroz
Williamsburg
Lynn
General
Shenandoah
Star
Fagin
Janie
Tayo
Jane
East
Linares
Cascade
Sterling
Lakaren
Darcee
Karianne
Reagan
Marcia
Courtney
Rochelle
El Palomino
Wendover
Calle
Townsend
Carlyle
Lansing
Oso
Brian
Easton
Thunder Bay
Grand Valley
High Prairie
Candlelight
Indian Camp
Pheasant Run
Cross River
Pico
Martinez
Vega
Alvarado
Moraga
Alviso
Sandoval
Avenue Juan Diaz
Riverview
Kern
Kip
Anabel
Sepulveda
Tequesquite
Rubidoux
Old Ranch
Industrial
Griffith
Ordway
Republic
Fremont
Jurupa
Ed Perkic
Payton
RERC
Orangewood
Winterhaven
Acorn
Wilderness
Dates
Columbus
Jasmine
Essex
Chester
Vera
Vanessa
Florence
William
Anita
Sheppard
Tucson
Mountain View
Clifton
Benecia
Burlingame
Wisteria
Willard
Dean
Maybelle
Kitty Hawk
Havilland
Victoria
Longfellow
Hillside
Phoenix
Rayann
Antioch
Baywood
Coresiega
Goldenrod
Rhonda
Lantana
Streeter
Grassy Trail
Sunland
Deerfield
Greenbrier
Old Mill
Wroxton
Banner
Sheridan
Mead
Stearns
Correll
Dewey
Lawndale
Nidever
La Mirada
Del Mar
Carlo
Merrill
Arch
Carlingford
Dover
Val Vista
Grand
Wilton
Normandie
Meadowbrook
Beverly
Greenfield
Tower
Wiehe
Cover
Gardena
Appleton
Raleigh
Van Buren
Central
Rexford
Agnes
Beatty

1 inch equals 1,000 feet

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Habitat Assessment

Map 5 of 7

Survey segments

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- B
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- D
- E
- F
- G
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- L

- Burrowing owl observations
- Proposed route centerlines
- Existing 220kV Transmission line

N

TRC Essex

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet 1:12,000

H

G

F

Limonite Noyer Sky Meadow Briggs Leigh Pontiac Rubidoux Molino Arora Wilcox Odell 35th 34th Water Legion Dexter Mill Creek Aero Helix Tilton Fort Twining Mennes Wallace Mission 37th Daly 36th Crestmore Lake Hill Lakehill Indian Hill Beacon Ladera Buena Vista 4th 3rd 2nd Cedar 5th Main Riverview Jensen Ranch Riverbend Greystone Blue Springs Sexton 42nd Carol Driving Range Hangar Caparay Westerfield Sierra Cross Mission Rock Ruis Osage Gontay Armistice Oldenburg Wenatchee Ponca Quapaw Mandan Tewa Surfolk Triesan Halfinger Konic Loring Ranch Palamina 46th Arlon Loring Mission Inn University Fairmount Chestnut 6th 9th 11th 12th Locust Mount Rubidoux Allis Miramonte Glenwood Isabella Rio Palo Verde Gregory Elderwood Maxwell San Andreas Broemar Wong Palm Pine El Dorado Tequesquite Brockton 14th Almond Market Hidalgo Whittier 10th 13th Orange Lemon Lime 11th 9th Mulberry Riverside Alta Vista Homewood Norton Rice Magnolia Prospect Orange Grove Olivewood 91 15th Vine Cottage Pleasant Park Howard Commerce Cridge City College Saunders Riverside Fairfax Terracina Ramona Larchwood Chapman Beechwood Elmwood Bandini Linwood Oakwood Old Ranch Glorietta Grand Hardwicke Tower Rodeo Milford Pinehurst Brighton Cliffside Kendall Highland Tequesquite Rubidoux

1 inch equals 1,000 feet

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Habitat Assessment

Map 6 of 7

Survey segments

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- K
- L

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- Proposed route centerlines
- Existing 220kV Transmission line

N

TRC Essex

0 500 1,000 2,000 Feet

1 inch equals 1,000 feet 1:12,000

K

H

I

20th
Van Dell
25th
24th
Agua Mansa
Wilson
Via Ricardo
Via Cerro
Fleetwood
Holly
Rivera
Garner
Alamo
Snake River
Spirit
Carter
Witt
Salmon River
Wabash
Waterbury
Coppermine
Pace
Greenwich
Marymount
American
Weyer
Strawberry
Boise
Hale
Honeysuckle
Arthur
Sunup
Nick
Kirkwood
Fairmount
Finly
Nut Tree
Turney
Elm
Dublin
Keamey
Geary
Columbia
Clark
Nash
Lofton
Sutter
Powell
Post
Elliotta
Strong
Stansell
Shamrock
Stoddard
Tairgrounds
Latham
Keats
Lafler
Atlas
Allstate
Edelweiss
Cote
Castaic
Tidal
Mulberry
Hillcrest
Davies
Marsh
Knoll
Ia Cadena
Orange
Vista
Oakley
Connector
Russell
Charles
Ogden
Fairmount
Northbend
Spruce
Banks
Locust
Legion
Redwood
Bowling Green
Dexter
Circle Lazy J
La Paz
Field
Paloma
Bell
El Rio
Hall
Rubidoux
Avalon
26th
28th
29th
Newton
Lotus
Kenwood
Bella
Taos
30th
Demeter
Razor
Canal
Alta
Frontage
Market
Reye
Paula
Pioneer
Pontiac
36th
34th
Wallace
Packard
Minten
Arora
Wilcox
Mission
Crestmore
Molino
Fort
Twining
Tennessee
Odell
37th
35th
Daly
Water
60
215

1 inch equals 1000 feet

Riverside Transmission Reliability Project

Burrowing Owl and Riparian Bird Habitat Assessment

Map 7 of 7

Survey segments

- A
- B
- C
- D
- E
- F
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- I
- J
- K
- L

Burrowing owl observations

Proposed route centerlines

Existing 220kV Transmission line

N

TRC Essex

0 500 1,000 2,000 Feet

1:12,000

L

J

K

I

Hall

Rubidoux

15th

Brown

Agua Mansa

Avalon

1 inch equals 1,000 feet

Appendix A: Burrowing Owl and Ripararian Bird Species Habitat Assessment APNs

Route Segment	APN	County
A	156050008	Riverside
	156200033	Riverside
	156210011	Riverside
	156210012	Riverside
	156210064	Riverside
	156210065	Riverside
	156210067	Riverside
	156210082	Riverside
	156340025	Riverside
	156350020	Riverside
	156350021	Riverside
	156350025	Riverside
	156350026	Riverside
	156350037	Riverside
	159020005	Riverside
	159020007	Riverside
	159020009	Riverside
	159020010	Riverside
	160040001	Riverside
	160060038	Riverside
	160060039	Riverside
	160060041	Riverside
	160060042	Riverside
	160060046	Riverside
	160060046	Riverside
	170330004	Riverside
	170330016	Riverside
	170330024	Riverside
	170330025	Riverside
	170330026	Riverside
	170330027	Riverside
	170330028	Riverside
	179330009	Riverside
B	162020001	Riverside
	162110001	Riverside
	162170006	Riverside
	162170007	Riverside
	162170008	Riverside
	162170036	Riverside
	162200014	Riverside
	162200024	Riverside
	162200026	Riverside
	162200027	Riverside
	167020010	Riverside
	167020014	Riverside

Route Segment	APN	County
B	167041012	Riverside
	167042001	Riverside
	167042012	Riverside
	167063001	Riverside
	167352008	Riverside
	167363001	Riverside
	167371011	Riverside
	170330008	Riverside
	170330029	Riverside
	170330030	Riverside
C	156200005	Riverside
	156200030	Riverside
	156200039	Riverside
	156200040	Riverside
	156200043	Riverside
	156200045	Riverside
	156210006	Riverside
	156210007	Riverside
	156210078	Riverside
	156210082	Riverside
	156210087	Riverside
	156210089	Riverside
	156210091	Riverside
	156210092	Riverside
	156210094	Riverside
	163042024	Riverside
	163080023	Riverside
	163202003	Riverside
	163202004	Riverside
	163202005	Riverside
	163202006	Riverside
	163202011	Riverside
	163202013	Riverside
	163211001	Riverside
	163220006	Riverside
	163220007	Riverside
	163220008	Riverside
	163220015	Riverside
	163230001	Riverside
	163230002	Riverside
	163300001	Riverside
	163400002	Riverside
	163400003	Riverside
	165030006	Riverside
	165030007	Riverside
	165050011	Riverside
	165050016	Riverside

Route Segment	APN	County
C	165080001	Riverside
	165080002	Riverside
	165080003	Riverside
	165080004	Riverside
	165080005	Riverside
	165091001	Riverside
	165091015	Riverside
	165091018	Riverside
	165091019	Riverside
	165140003	Riverside
	165140004	Riverside
	165140007	Riverside
	165140008	Riverside
	165140027	Riverside
	165140028	Riverside
	165140029	Riverside
	165140030	Riverside
	165150020	Riverside
	165150021	Riverside
	165150022	Riverside
	165185004	Riverside
	165185005	Riverside
	165190034	Riverside
	165190039	Riverside
	165190043	Riverside
	165190044	Riverside
	165190045	Riverside
	167110002	Riverside
	167110003	Riverside
	167110029	Riverside
	167160005	Riverside
	167160008	Riverside
	167160009	Riverside
	167160010	Riverside
	167160019	Riverside
	167160020	Riverside
	167160021	Riverside
	167160037	Riverside
	167160038	Riverside
	167160039	Riverside
	167233003	Riverside
	167330001	Riverside
	167330002	Riverside
	167330003	Riverside
	167330005	Riverside
	167330006	Riverside
	167330007	Riverside

Route Segment	APN	County
C	167330010	Riverside
	167330011	Riverside
	169290002	Riverside
	169290003	Riverside
	169290004	Riverside
	169290005	Riverside
	169290006	Riverside
	169290008	Riverside
	169290010	Riverside
	169290034	Riverside
	169300002	Riverside
	169300004	Riverside
	169300011	Riverside
	169300012	Riverside
	169300013	Riverside
	169300014	Riverside
	169300015	Riverside
	170320001	Riverside
	170320003	Riverside
	170320004	Riverside
	170320010	Riverside
	170320011	Riverside
	170330001	Riverside
	170330002	Riverside
	170330009	Riverside
	170330010	Riverside
	170330011	Riverside
	170330012	Riverside
	170330013	Riverside
	170330014	Riverside
	170340017	Riverside
	170340018	Riverside
D	162230005	Riverside
	162240005	Riverside
	162240006	Riverside
	162240008	Riverside
	162240011	Riverside
	163140015	Riverside
	163140018	Riverside
	163230016	Riverside
	163230017	Riverside
	163260006	Riverside
	163260007	Riverside
	163260008	Riverside
	163260009	Riverside
	163260010	Riverside
	163260011	Riverside

Route Segment	APN	County
D	163260013	Riverside
	163290001	Riverside
	163290002	Riverside
	163290003	Riverside
	163290005	Riverside
	163290006	Riverside
	163290008	Riverside
	163290009	Riverside
	163290010	Riverside
	163290011	Riverside
	163300002	Riverside
	163300007	Riverside
	163300008	Riverside
	163300009	Riverside
	163300010	Riverside
	163300021	Riverside
	163300022	Riverside
	154200022	Riverside
	155040004	Riverside
	155060026	Riverside
	155421011	Riverside
	155421012	Riverside
	155421013	Riverside
	155453018	Riverside
	155453031	Riverside
	155464009	Riverside
	157020003	Riverside
	157020009	Riverside
	157020012	Riverside
	162220001	Riverside
	162220002	Riverside
	162220003	Riverside
	162220004	Riverside
	162220005	Riverside
	162220006	Riverside
	162220010	Riverside
	162220011	Riverside
	162220013	Riverside
	162220016	Riverside
	162220017	Riverside
	162230001	Riverside
	162230003	Riverside
	162230004	Riverside
E	155070031	Riverside
	163300005	Riverside
	163300006	Riverside
	163300011	Riverside

Route Segment	APN	County
E	163300013	Riverside
	163300014	Riverside
	163400012	Riverside
	163400013	Riverside
	163400014	Riverside
	163400017	Riverside
	163400018	Riverside
	185210005	Riverside
	187210001	Riverside
	189021005	Riverside
	189051016	Riverside
	189090001	Riverside
	189090002	Riverside
	189090006	Riverside
	189100004	Riverside
	189100006	Riverside
	189100009	Riverside
	189110001	Riverside
	189110002	Riverside
	189110003	Riverside
	189110004	Riverside
	189110005	Riverside
	189110006	Riverside
	189110008	Riverside
	189110009	Riverside
	189110010	Riverside
	189110011	Riverside
	189110012	Riverside
	189120001	Riverside
	189120002	Riverside
	189120003	Riverside
	189120005	Riverside
	189120006	Riverside
	189120007	Riverside
F	187111014	Riverside
	187111016	Riverside
	187111017	Riverside
	187111019	Riverside
	187111026	Riverside
	187120013	Riverside
	187120014	Riverside
	187130001	Riverside
	187130002	Riverside
	187130003	Riverside
	187130004	Riverside
	187140009	Riverside
	187140010	Riverside

Route Segment	APN	County
F	187140044	Riverside
	187151001	Riverside
	187151033	Riverside
	187171002	Riverside
	187171014	Riverside
	187171015	Riverside
	187171016	Riverside
	187171034	Riverside
	187171035	Riverside
	187191001	Riverside
	187191002	Riverside
	187191004	Riverside
	187191011	Riverside
	187191012	Riverside
	187191015	Riverside
	187201001	Riverside
	187210002	Riverside
	187210004	Riverside
	187210006	Riverside
	187210007	Riverside
	187220028	Riverside
	217170011	Riverside
	217211001	Riverside
	217211002	Riverside
	217211003	Riverside
	186270006	Riverside
	186270008	Riverside
	186270009	Riverside
	186270010	Riverside
	186270011	Riverside
	186270012	Riverside
	186270013	Riverside
	187080005	Riverside
	187080006	Riverside
	187080008	Riverside
	187090001	Riverside
	187090002	Riverside
	187090010	Riverside
	187101001	Riverside
	187101002	Riverside
	187101003	Riverside
	187101004	Riverside
	187101005	Riverside
	187101006	Riverside
	187101007	Riverside
	187101008	Riverside
	187101009	Riverside

Route Segment	APN	County
F	187101010	Riverside
	187101011	Riverside
	187101012	Riverside
	187101013	Riverside
	187101014	Riverside
	187111009	Riverside
	187111011	Riverside
	187111013	Riverside
G	181220007	Riverside
	181220008	Riverside
	181220009	Riverside
	181220010	Riverside
	181220016	Riverside
	187020003	Riverside
	187020004	Riverside
	187020005	Riverside
	187080001	Riverside
	187080002	Riverside
	187080010	Riverside
	187080012	Riverside
	187080014	Riverside
	187080015	Riverside
H	178290001	Riverside
	178290006	Riverside
	178290007	Riverside
	178290008	Riverside
	178290010	Riverside
	178290011	Riverside
	178290013	Riverside
	179310001	Riverside
	179310002	Riverside
	179310003	Riverside
	179310005	Riverside
	179340001	Riverside
	179340003	Riverside
	179340004	Riverside
	179340005	Riverside
	207050001	Riverside
	207050002	Riverside
	207060002	Riverside
	207060005	Riverside
	207060009	Riverside
	207060012	Riverside
	207090001	Riverside
	207090002	Riverside
	207090011	Riverside
	207190002	Riverside

Route Segment	APN	County
H	207190004	Riverside
I	178050007	Riverside
	178050008	Riverside
	178050009	Riverside
	178050010	Riverside
	178050011	Riverside
	178050013	Riverside
	178050018	Riverside
	178050031	Riverside
	178050033	Riverside
	178050034	Riverside
	178050045	Riverside
	178050046	Riverside
	178350014	Riverside
	178350015	Riverside
	178350022	Riverside
	178350023	Riverside
	178350024	Riverside
	178350025	Riverside
	178350026	Riverside
	207180001	Riverside
	207180054	Riverside
	26013100	San Bernardino
	26013104	San Bernardino
	26013106	San Bernardino
	26013108	San Bernardino
	26013111	San Bernardino
	26013114	San Bernardino
	26013115	San Bernardino
	27702104	San Bernardino
	27702105	San Bernardino
	27702111	San Bernardino
	27702117	San Bernardino
J	16335101	San Bernardino
	16335125	San Bernardino
	16335127	San Bernardino
	26008120	San Bernardino
	26008121	San Bernardino
	26008122	San Bernardino
	26008123	San Bernardino
	26009123	San Bernardino
	26009176	San Bernardino
	26009177	San Bernardino
	27505119	San Bernardino
	27505122	San Bernardino
	27701107	San Bernardino
	27701124	San Bernardino

Route Segment	APN	County
J	27701126	San Bernardino
	27701127	San Bernardino
	27702242	San Bernardino
	27702275	San Bernardino
	116701101	San Bernardino
K	175170007	Riverside
	175180001	Riverside
	175180002	Riverside
	175180012	Riverside
	175180016	Riverside
	175190029	Riverside
	175200006	Riverside
	175210020	Riverside
	175210021	Riverside
	175210022	Riverside
	175210023	Riverside
	175210024	Riverside
	175210026	Riverside
	175210027	Riverside
	175210028	Riverside
	175210034	Riverside
	175210035	Riverside
	175210037	Riverside
	175210039	Riverside
	178330004	Riverside
	178340003	Riverside
	178340004	Riverside
	178340007	Riverside
	178340009	Riverside
	178340010	Riverside
	178340011	Riverside
	178340012	Riverside
	178340013	Riverside
	178340014	Riverside
	178350017	Riverside
	178350018	Riverside
	178350027	Riverside
	175170004	Riverside
	26002203	San Bernardino
	26006114	San Bernardino
	26006115	San Bernardino
	26006118	San Bernardino
	26006121	San Bernardino
	26006126	San Bernardino
	26006127	San Bernardino
	26006127	San Bernardino
	26006132	San Bernardino

Route Segment	APN	County
K	26006136	San Bernardino
	26006139	San Bernardino
	26006140	San Bernardino
	26006141	San Bernardino
	26006142	San Bernardino
	26006143	San Bernardino
	26006144	San Bernardino
	26011301	San Bernardino
L	26002204	San Bernardino
	26008110	San Bernardino
	26009116	San Bernardino
	26009128	San Bernardino
	26009131	San Bernardino
	26009135	San Bernardino
	26009179	San Bernardino
	26009180	San Bernardino
	26009181	San Bernardino
	26009182	San Bernardino
	26009183	San Bernardino
	26009184	San Bernardino
	26013118	San Bernardino

APPENDIX B: WILDLIFE SPECIES OBSERVED

INVERTEBRATES

Cabbage white (*Artogeia rapae*)
Common buckeye (*Junonia coenia*)
Red admiral (*Vanessa atalanta*)
Western tiger swallowtail (*Papilio rutulus*)

REPTILES

Side-blotched lizard (*Uta stansburiana*)
Western fence lizard (*Sceloporus occidentalis*)

BIRDS

Acorn woodpecker (*Melanerpes formicivorus*)
American coot (*Fulica americana*)
American crow (*Corvus brachyrhynchos*)
American goldfinch (*Carduelis tristis*)
American kestrel (*Falco sparverius*)
Anna's hummingbird (*Calypte anna*)
Ash-throated flycatcher (*Myiarchus cinerascens*)
Bewick's wren (*Thryomanes bewickii*)
Black-crowned night heron (*Nycticorax nycticorax*)
Black phoebe (*Sayornis nigricans*)
Bushtit (*Psaltriparus minimus*)
California quail (*Callipepla californica*)
California towhee (*Pipilo crissalis*)
Cassin's kingbird (*Tyrannus vociferans*)
Cinnamon teal (*Anas cyanoptera*)
Cliff swallow (*Petrochelidon pyrrhonata*)
Common raven (*Corvus corax*)
Common yellowthroat (*Geothlypis trichas*)
Cooper's hawk (*Accipiter cooperii*)
Great blue heron (*Ardea herodias*)
Great egret (*Ardea alba*)
Greater roadrunner (*Geococcyx californianus*)
Green heron (*Butorides virescens*)
House finch (*Carpodacus mexicanus*)
House sparrow (*Passer domesticus*)
House wren (*Troglodytes aedon*)
Killdeer (*Charadrius vociferus*)
Lark sparrow (*Chondestes grammacus*)
Lesser goldfinch (*Carduelis psaltria*)
Loggerhead shrike (*Lanius ludovicianus*)
Mallard (*Anas platyrhynchos*)
Mourning dove (*Zenaida macroura*)
Northern flicker (*Colaptes auratus*)
Northern mockingbird (*Mimus polyglottos*)
Red-tailed hawk (*Buteo jamaicensis*)
Say's phoebe (*Sayornis saya*)
Song sparrow (*Melospiza melodia*)
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*)

BIRDS (Continued)
Spotted towhee (*Pipilo maculatus*)
Turkey vulture (*Cathartes aura*)
Western bluebird (*Sialia mexicana*)
Western burrowing owl (*Athene cunicularia hypugaea*)
Western kingbird (*Tyrannus verticalis*)
Western scrub-jay (*Aphelocoma californica*)
White-tailed kite (*Elanus leucurus*)
Wilson's warbler (*Wilsonia pusilla*)
Wrentit (*Chamaea fasciata*)

MAMMALS
Botta's pocket gopher (*Thomomys bottae*)
California ground squirrel (*Spermophilus beecheyi*)
Coyote (*Canis latrans*) (sign)
Desert cottontail (*Sylvilagus audubonii*)
Long-tailed weasel (*Mustela frenata*)
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)
Virginia opossum (*Didelphis virginiana*)