Appendix F

Burrowing Owl Habitat Assessment and Focused Survey Results

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Project No: 24-17116

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Via email: AAguirre@mwdh2o.com

Subject: Burrowing Owl Habitat Assessment and Focused Survey Results for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project, Riverside County, California

Dear Mr. Aguirre,

This report documents the findings of a western burrowing owl (*Athene cunicularia hypugaea*) habitat assessment and focused burrow surveys conducted by Rincon Consultants, Inc. (Rincon) for the Casa Loma Siphon No. 1 and San Jacinto Pipeline Project (Project). As of September 9, 2025, western burrowing owl is a candidate endangered species under CESA, affording it full interim protection equivalent to a listed species. The California Fish and Game Commission is currently reviewing its final listing recommendation. The purpose of the habitat assessment and focused surveys was to identify the location and extent of suitable habitat for western burrowing owl and determine the presence/absence of the species within the Project site.

Project Location and Description

The Project site encompasses an approximately 6.7-acre area located within and adjacent to the San Jacinto River, between Soboba Road and State Street, near the city of San Jacinto in unincorporated Riverside County, California (Figure 1 and Figure 2). The site is depicted on the United States Geological Survey *San Jacinto, California,* 7.5-minute topographic map within Township 4 South, Range 1 West, Section 15, San Bernardino Baseline and Meridian (33.820600°, -116.969914°). For purposes of this report, the survey area encompassed a larger, 20-acre Project area (inclusive of the current, smaller Project site) and a 500-foot survey buffer.

Immediately downstream of the Colorado River Aqueduct (CRA) San Jacinto Diversion Structure in the San Jacinto area, the CRA branches into three different pipelines (CRA Casa Loma Siphon No. 1, CRA Casa Loma Siphon No. 2, and the San Jacinto Pipeline). Approximately 1,000 feet west of the diversion structure, the three pipelines cross underneath the San Jacinto River. Within the San Jacinto River channel, there is currently inadequate cover material over the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline. In both 2019 and 2023, emergency work was undertaken by Metropolitan to reinstall soil cover and protect the CRA Casa Loma Siphon No. 1 and San Jacinto Pipeline.

Construction of the proposed Project would occur over an approximately eight-month period, anticipated to begin as early as fall 2026. The proposed Project includes the encasement of approximately 320 feet of the CRA Casa Loma Siphon No. 1 and approximately 295 feet of the San Jacinto Pipeline. The encasement would consist of concrete poured around the existing pipelines with a width of 16 feet and a depth of 13 feet for CRA Casa Loma Siphon No. 1 and a width of 12.5 feet and a depth of 10.7 feet for the San Jacinto Pipeline. Both encasements would be reinforced with steel rebar placed both horizontally and vertically to ensure structural integrity. The proposed concrete encasements would be placed on a compacted base and surrounded by riprap for erosion protection. Underneath the riprap, a non-woven geotextile fabric would be installed to prevent soil migration while maintaining drainage. Construction of the concrete encasement would require excavation above and adjacent to both sides of each pipeline to allow for placement of the concrete forms and steel reinforcement. The top of the fill would be graded to match the existing surface elevation.

Existing conduit protection structures that were previously installed in 2023 for temporary protection (e.g., concrete k-rails, riprap) would be either removed or relocated within the Project site. K-rails would be removed and re-located to a portion of the Project site outside the streambed, and portions of riprap interfering with the proposed protection structure would be removed and salvaged, as feasible. The Project would not result in the addition of new above-ground components or appurtenances.

The maximum depth of ground disturbance would be approximately 15 feet. Ground disturbance would involve approximately 3,900 cubic yards of soil cut, approximately 600 cubic yards of soil fill, and the export of approximately 3,300 cubic yards of soil material from the Project site. Construction activities would involve the transport and delivery of approximately 1,600 cubic yards of ready-mix concrete, approximately 1,600 cubic yards of riprap, and reinforcing steel.

Figure 1 Regional Location Map

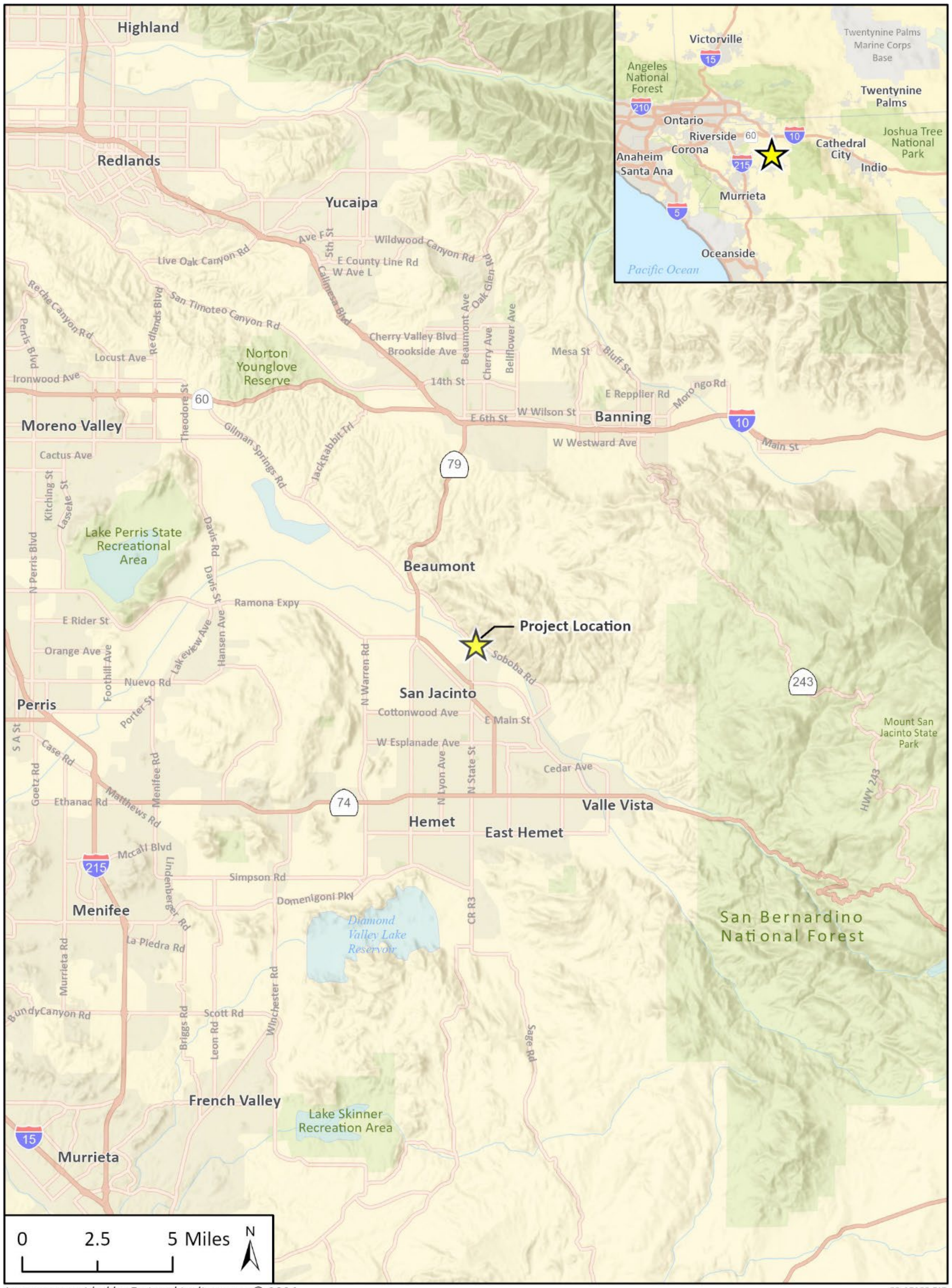

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Fig 1 Regional Location

Figure 2 Project Location Map

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Fig X Project Location

Burrowing Owl Natural History

Primarily restricted to the western United States and Mexico, western burrowing habitat includes dry, open, short-grass areas often associated with fossorial (adapted for burrowing or digging) mammals, such as California ground squirrel (*Otospermophilus beecheyi*) and American badger (*Taxidea taxus*). The western burrowing owl is crepuscular (active primarily during dusk and dawn) and perches during daylight hours at the entrance to its burrow or on low posts. Nesting typically occurs from March through August. Burrowing owls form a pair-bond for more than one year and exhibit high site fidelity, reusing the same burrow year after year. The female remains inside the burrow during most of the egg laying and incubation periods and is fed by the male through the brooding period. Western burrowing owls are opportunistic feeders, consuming a diet that includes arthropods, small mammals, birds, and occasionally amphibians and reptiles (Shuford and Gardali 2008). Typical burrowing owl signs include, but are not limited to, feathers, white-wash, and pellets.

The western burrowing owl was once abundant and widely distributed in coastal southern California, but it has declined in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino. Urbanization has greatly reduced the amount of suitable habitat for this species. Other contributions to the decline of burrowing owls include habitat destruction, insecticide poisoning, rodenticide for squirrels and prairie dogs, and collisions with automobiles (Shuford and Gardali 2008).

Methodology

Focused burrowing owl surveys were conducted on April 15 (including the habitat assessment), May 14, June 10 and June 24, 2025, by Rincon biologists Robert Weber, Nick Julier, Molly Morrissey, and Kaitlyn Weaver, who have knowledge of burrowing owl life history and experience identifying burrowing owls and their signs. The surveys were conducted according to guidelines outlined in the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012). Focused breeding season burrowing owl surveys were conducted by systematically searching for burrowing owl individuals, as well as signs of their presence, within potential foraging and nesting habitat throughout the Project site and a 500-foot survey buffer (i.e., the Survey Area). The 500-foot survey buffer is required by the *Staff Report on Burrowing Owl Mitigation* protocol (150 meters) to ensure that burrowing owls potentially occupying areas outside the Project footprint, but still subject to direct or indirect impacts, are detected and considered during surveys (CDFW 2012). The area above Soboba Road was surveyed using binoculars to cover adjoining habitat. The Survey Area was assessed on foot by the biologists walking transects spaced approximately 20 meters apart, appropriately adjusted to allow for 100 percent visual coverage of the ground surface. The Survey Area was systematically scanned using binoculars and spotting scopes, and all potential burrow features were examined for evidence of recent or historical owl use.

Surveys were scheduled and conducted to avoid precipitation, ensuring no portion of the survey was performed during rainfall. Transects were only walked when the Survey Area was dry and visibility was unobstructed, ensuring optimal conditions for detecting burrowing owls and signs of their presence. Survey dates and weather conditions are noted in Table 1.

Table 1 Survey Dates and Site Conditions

Date	Time (24-hour)	Surveyors	Air Temp (°F)	Wind Speed (mph)	Weather Notes	Type of Survey Conducted
April 15, 2025	0700 – 930	Nick Julier, Kaitlyn Weaver	53 – 58	0 – 2	100% cloud cover, foggy, 0.5 mile of visibility, 0.01 inch (in.) precipitation	Habitat Assessment and 1st Focused Breeding Season Survey
May 13, 2025	0730 – 1030	Rob Weber, Nick Julier	52 – 56	0 – 2	80% cloud cover, 4 miles of visibility, 0 in. precipitation	2nd Focused Breeding Season Survey
June 10, 2025	0745 – 1045	Rob Weber, Nick Julier	68 – 70	0	70% cloud cover, 4 miles of visibility, 0 in. precipitation	3rd Focused Breeding Season Survey
June 24, 2025	0730 – 1030	Nick Julier, Molly Morrissey	64 – 72	0 – 2	100% cloud cover, 3 miles of visibility, 0 in. precipitation	4th Focused Breeding Season Survey

Existing Site Conditions

The Survey Area is located within and adjacent to the San Jacinto River at approximately 1,500 feet above mean sea level and contains relatively flat terrain. The area receives an average of 13 inches of precipitation annually, primarily between December and March, with temperatures ranging from 45°F to 80°F (Western Regional Climate Center 2023). Portions of the site, including the existing storage area and southern access road, are disturbed by vehicle activity, resulting in soil compaction.

The Survey Area includes a segment of the San Jacinto River, which is classified as an intermittent Riverine System by the National Wetlands Inventory (United States Fish and Wildlife 2023). The riverbed, approximately 150 feet wide, was dry at the time of the survey, consistent with the region's dry season. These intermittent flow conditions shape the site's drainage patterns and influence the structure of surrounding vegetation and habitats.

Four soil types occur within the Project boundary (Natural Resources Conservation Service 2025): Dello loamy sand, 0 to 5 percent slopes (DgB); Riverwash (RsC); Tujunga loamy sand, channeled, 0 to 8 percent slopes (TvC); and Soboba cobbly loamy sand, 2 to 25 percent slopes (SrE). Riverwash is the dominant soil type mapped on the Project site. These sandy, well-drained soils are typical of alluvial environments. Riverwash soils mapped within the San Jacinto River are unconsolidated and lack the structural stability needed to support or maintain burrows, making the soils generally unsuitable for burrowing owls.

Vegetation Communities and Land Cover Types

Vegetation communities documented in the Survey Area during the field reconnaissance survey conducted on July 15, 2024, in support of the Biological Resource Assessment (Rincon 2024) include Fremont cottonwood woodland (*Populus fremontii* Woodland Alliance), upland mustards (*Brassica nigra* Herbaceous Semi-Natural Alliance), and fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance). Developed/disturbed as well as disturbed fourwing saltbush scrub were the other land cover types documented in the Survey Area. The developed/disturbed areas in the southern portion of the Project site provide low-quality conditions for burrowing owls, particularly due to the presence of an access road and high disturbance. The Fremont cottonwood woodland may serve as marginal foraging habitat but lacks the structure necessary for burrow establishment. Areas dominated by upland mustard and fourwing saltbush scrub exhibit dense vegetation and high ground cover, which may support foraging activity but are generally unsuitable for burrowing. Although the survey covered the entire site, particular focus was placed on the edges of the Fremont cottonwood woodland and transitions between upland mustard and areas with sparse vegetation cover where conditions were more suitable for potential burrowing owl foraging activity.

Surrounding Land Use

Land uses surrounding the Project site include open space to the north, a commercial recreation park (e.g., paintball, paragliding, biking, hiking, camping) to the east, open space (City of San Jacinto's planned San Jacinto River Park) to the south, and open space and agricultural land to the west. The San Jacinto River bisects the southern end of the Project site from northwest to southeast. The nearest residences as well as Temple Beth Am, a synagogue, are located approximately 0.2 mile to the west.

Summary of Findings

No burrowing owls or diagnostic signs such as feathers, whitewash, pellets, or tracks were observed during the surveys. In addition to the absence of burrowing owls, no suitable burrows were identified within the Survey Area. While a few small mammal burrows were present, they lacked the appropriate size, depth, or activity level to be considered suitable for burrowing owl occupation. No artificial structures or anthropogenic features resembling suitable burrows were observed.

Photographs of the Survey Area observed during the four surveys are provided in Attachment 1. Overall avian activity was low during the surveys and some common species expected to occur within the region were observed (Table 2). Taxonomic nomenclature of avian species follows the American Ornithological Union's (2021) Checklist of North American Birds.

Table 2 Avian Species Observed

Scientific Name	Common Name
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
Columba macroura	Mourning dove
Corvus brachyrhynchos	American crow
Corvus corax	Common raven
Dryobates nuttallii	Nuttall's woodpecker
Haemorhous mexicanus	House finch
Melozone crissalis	California towhee
Psaltriparus minimus	Bushtit
Sayornis nigricans	Black phoebe
Thryomanes bewickii	Bewick's wren
Troglodytes aedon	Northern house wren

Predation

Potential predators of burrowing owls are present within the Project area. Observations included coyote (*Canis latrans*) scat observed during all surveys, domestic dogs (*Canis lupus familiaris*), and raptors. A leashed dog was observed on May 13, 2025, and a local officer reported the presence of unleashed dogs. Red-tailed hawks (*Buteo jamaicensis*) were recorded on multiple occasions, although no nests were confirmed. A pair of Cooper's hawks (*Accipiter cooperii*) was observed in a southern cottonwood tree on June and July 2024 by Rincon biologist Jared Reed during the least Bell's vireo protocol surveys. Other raptors known in the region, such as great horned owl (*Bubo virginianus*) and American kestrel (*Falco sparverius*), may also occur. Reptile sign was minimal, but gopher snakes (*Pituophis catenifer*) have potential to occur. Together, these factors likely minimize the potential for burrowing owl occupancy within the site.

Conclusion

No burrowing owls or signs of their presence were observed during focused surveys on the Project site. The site lacks essential habitat features such as natural or artificial burrows, and the Riverwash soils within the San Jacinto River are not conducive to burrow formation. No evidence of fossorial mammal activity, such as ground squirrels, was observed. As a result, the Project site does not currently provide suitable conditions to support nesting or long-term occupancy by burrowing owls.

Although breeding owls were not observed, the Project site's proximity to open space and nearby agricultural lands may offer limited foraging opportunities for opportunistic or overwintering burrowing owls. However, while there is some burrowing owl habitat in nearby open spaces and agricultural fields, breeding typically requires contiguous suitable habitat (CDFW 2012). The areas adjacent to the Project site, including road and river corridors, limit the continuity of suitable habitat available to support breeding burrowing owls. Prey availability in the surrounding landscape could attract individuals in search of food during the non-breeding season. The dense herbaceous vegetation and the absence of protective, suitable burrows reduce the Project site's potential to support overwintering. However, given the presence of suitable plant communities and the mobility of the species, the potential for the Project site to support individual, overwintering owls in the future cannot be ruled out.

This survey was conducted during the burrowing owl breeding season and under favorable weather conditions, ensuring both comprehensiveness and high detection probability in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFW 2012).

Thank you for the opportunity to support Metropolitan with this important Project. If you have any questions, please contact Andrea Maben at amaben@rinconconsultants.com.

Sincerely,
Rincon Consultants, Inc.

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Biologist

Andrea Maben
Project Manager/Senior Biologist

Steven J. Hongola
Principal Biologist

Attachments

Attachment 1 Representative Site Photographs

References

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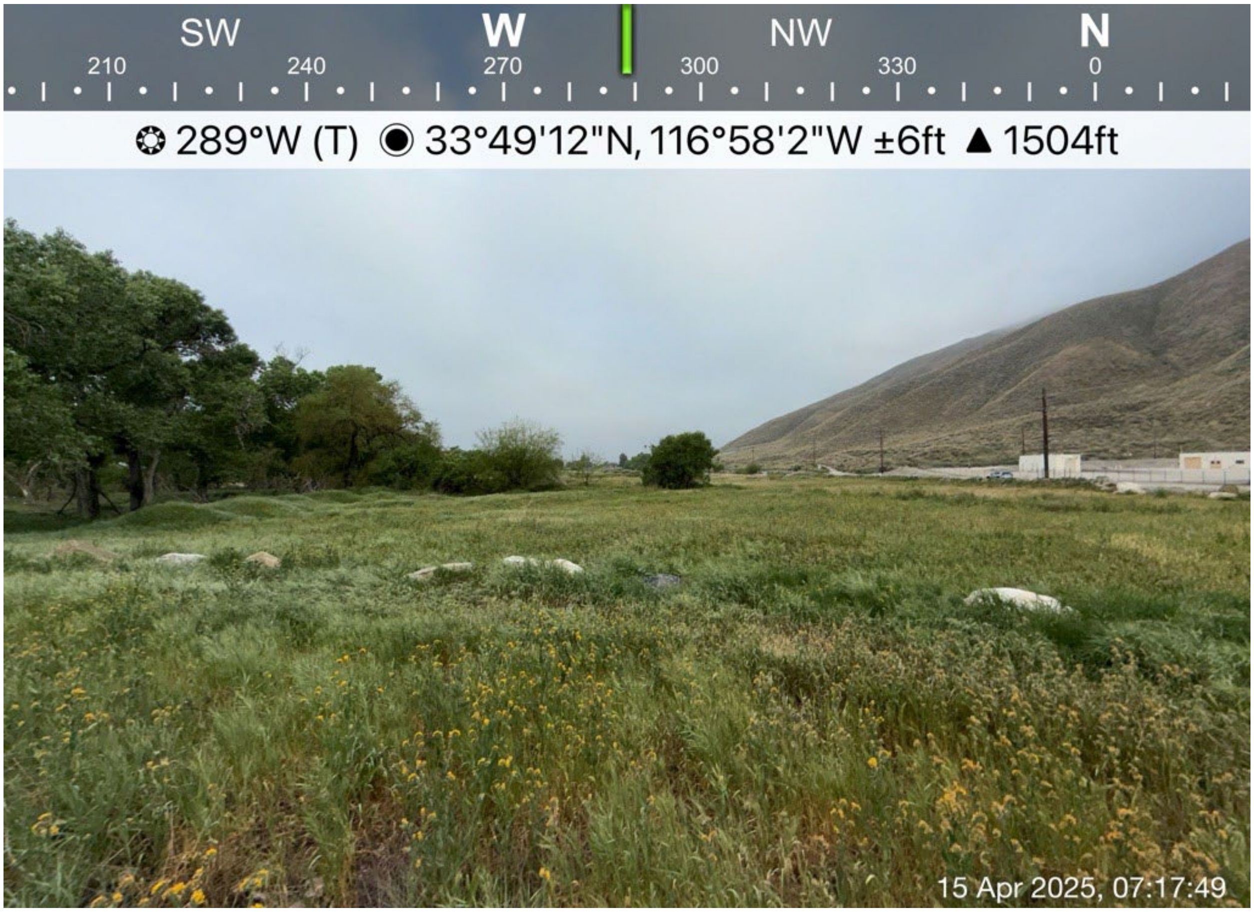
Attachment 1

Representative Site Photographs



Photograph 1. View of the northern part of the Survey Area facing northwest, looking at upland mustard habitat. April 15, 2025.

Photograph 2. View of the dirt mounds in the center of the Survey Area, facing northwest. May 13, 2025.

Photograph 3. View of the central portion of the Survey Area, facing east. May 13, 2025.

Photograph 4. View of the southern portion of the Survey Area, facing south. Looking at representative Fremont cottonwood woodland. May 13, 2025.

Photograph 5. View of the southern portion of the Survey Area, specifically the access road, facing southeast. June 10, 2025.

Photograph 6. View of the northern portion of the Survey Area, facing north, with representative fourwing saltbush scrub habitat. May 13, 2025.