

Appendix B-2

Burrowing Owl Survey

Nance Street Trailer Storage & Maintenance
Yard

NOREAS Environmental Engineering and Science
May 2024

Nance Street Trailer Storage & Maintenance Yard Project

May 2024

BURROWING OWL SURVEY

Perris United States Geological Survey
7.5-Minute Topographic Quadrangle Map

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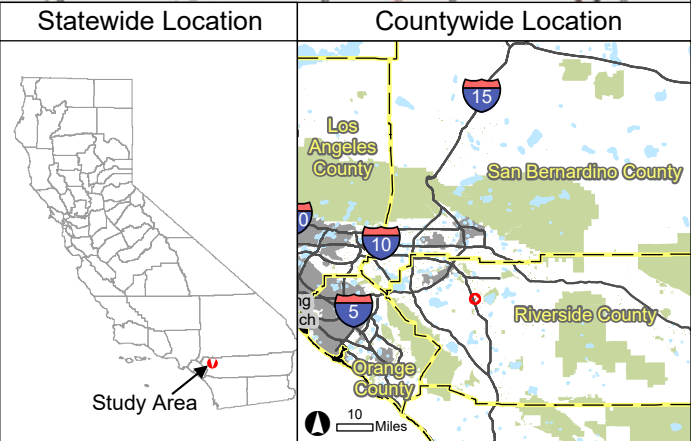
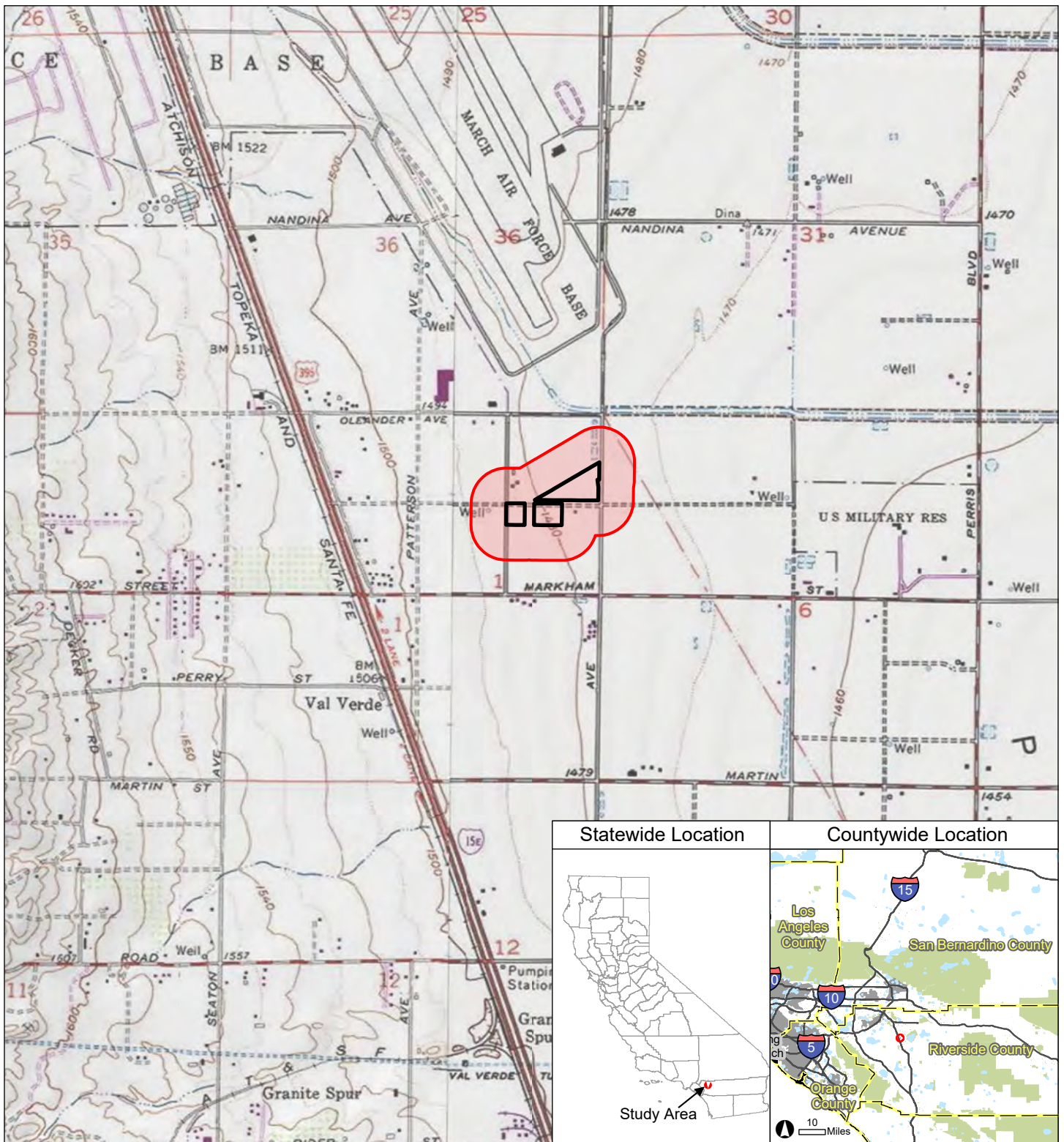
1.0 SUMMARY / INTRODUCTION








Lake Creek Industrial (LCI) is proposing to develop the Nance Street Trailer Storage & Maintenance Yard Project (hereafter referred to as the Project). The Project is located South of Harley Knox Boulevard, and west of North Webster Avenue in Riverside County, California. This report provides the methods, assumptions, and results of focused surveys for Burrowing Owl (*Athene cunicularia*). The Project is located within Township 04 South and Range 04 West, within Section 01, of the Perris United States Geological Survey (USGS) 7.5-Minute Topographic Quadrangle Map (USGS 1984).

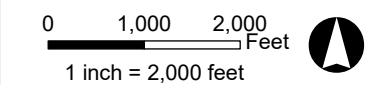
The Project occurs at an approximate elevation of 1,600 ft. above mean sea level (msl). Land use in the vicinity of the Project includes commercial, agriculture, and industrial endeavors. Agricultural activities were historically operated within the Project's proposed ground disturbance footprint (Project Site). There is also evidence of recent disking, and trash from illegal dumping throughout the Project Site.

For the purposes of this report, the "study area" includes the Project Site, plus a 500-foot buffer where practical (Figures 1 and 2). The Project is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), Mead Valley Area Plan. According to the Regional Conservation Authority (RCA) MSHCP Information Map, the Project Site is also within a predetermined survey area for the Burrowing Owl.

No Burrowing Owls were detected nesting, foraging, or dispersing within the study area during any of the 2023 survey events. Numerous low quality potential burrows and burrow complexes were detected (Figure 3). The burrows observed lacked evidence of owl sign (i.e., tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, and nest burrow decoration materials). The lack of Burrowing Owl within the study area is likely a result of the depauperate landscape, and the presence of owl predators. Although the Project has the potential to impact lands that could be utilized by Burrowing Owl as habitat – under the appropriate suite of environmental conditions, surveys for the species are negative. Therefore, there is no presumption that Project implementation would result in the loss of individual Burrowing Owls, or that it would adversely affect local or regional populations of them.



-  Project Site
-  Study Area
-  Interstate or State Highway (inset)
-  County Boundary (inset)
-  Urban Area (inset)
-  Park or National Forest (inset)
-  Water Body (inset)



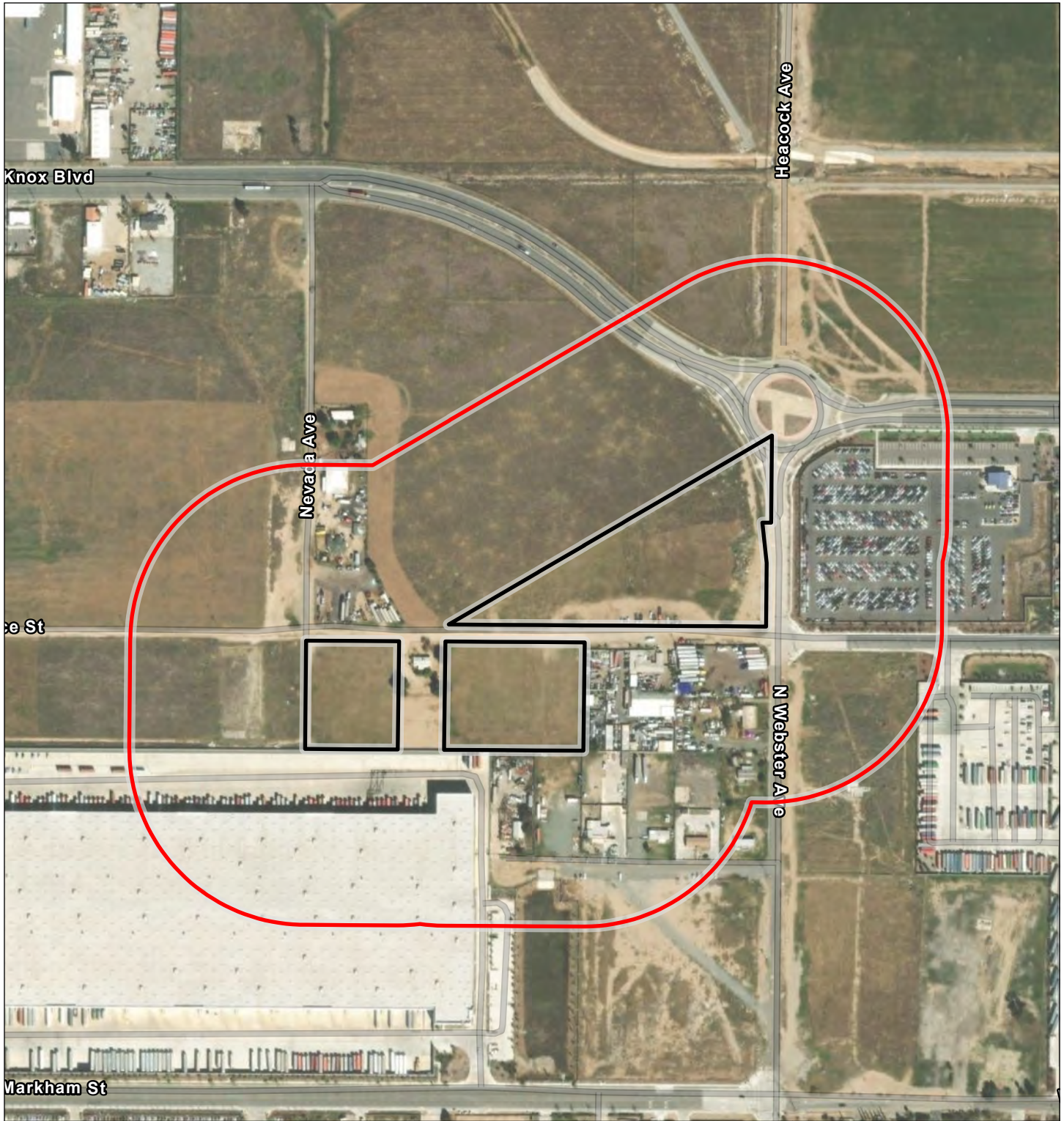
Data Sources:
 - Bureau of Land Management Cadastral GIS 2015
 - USGS 7.5-minute quadrangle map
 - ESRI US Topo Maps accessed Mar 2024
 Map Prepared: 3-12-24

The Study Area is located in Riverside County on the Perris USGS 7.5-minute quadrangle map; San Bernardino Meridian, Township 4S, Range 4W, in Section 01.
 Center coordinates (WGS 1984): 117.247°W 33.853°N

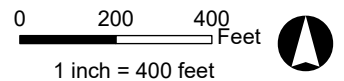
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Figure 1. Regional Location



- Project Site (10.27 ac)
- Study Area (74.38 ac)



Data Sources:
 - ESRI World Imagery accessed May 2024,
 imagery date: 2/26/2022

Map Prepared: 5-21-24

Prepared by:
NOREAS
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Figure 2. Site Vicinity

2.0 BURROWING OWL BACKGROUND

The Burrowing Owl has been designated by the California Department of Fish and Wildlife (CDFW) as a species of special concern. “State Species of Special Concern” status applies to animals not listed for protection under the federal Endangered Species Act or the California Endangered Species Act. The designation denotes that a species is declining at a rate that could result in State listing or that a species has historically occurred in low numbers and known threats to their persistence currently exist. The designation is intended to result in “special consideration” for these animals during the environmental review and discretionary permitting processes. In addition, the designation is also intended to focus research and management attention on poorly-known, potentially at-risk species, by stimulating the collection of additional information on their biology, distribution and status.

Burrowing Owls prefer open, dry annual or perennial grasslands, agricultural and rangelands, deserts, and scrublands characterized by low-growing vegetation. Burrowing Owls also prefer areas inhabited by small mammals as they predominately depend on mammal burrows (particularly ground squirrels) for subterranean nesting. Owls can be found at elevations ranging from 200 ft. below sea level to 9,000 ft. above (CDFG 1995). Burrowing Owls commonly perch on fence posts or on mounds outside their burrows. Northern populations of Burrowing Owls are usually migratory, while more southern populations may move short distances or not at all (Haug et al. 1993, Botelho 1996). Little is known about the winter ranges of migratory populations, although migratory Burrowing Owls are believed to mix with resident populations in California during the winter months (Coulombe 1971, Haug et al. 1993).

Burrowing Owls tend to be resident where food sources are stable and available year-round (Rosenberg et al. 1998). Typically, they disperse or migrate south in areas when food becomes seasonally scarce. Burrowing Owls tend to be opportunistic feeders. Large arthropods, mainly beetles and grasshoppers, comprise a substantial portion of their diet (Rosenberg et al. 1998). Small mammals, especially mice, rats, gophers, and ground squirrels, are also important food items. Other prey animals include reptiles and amphibians, scorpions, young cottontail rabbits, bats, and birds such as sparrows and Horned Larks. Consumption of insects increases during the breeding season. Burrowing Owls hover while hunting; after catching their prey they return to perches on fence posts or the ground. Burrowing Owls are primarily active at dusk and dawn, but, if necessary, will hunt at any time of day (CBOC 1993, CDFG 1995; Rosenberg et al. 1998).

The breeding season for Burrowing Owls is March to late August; the season tends to last later in the northern part of the range (CBOC 1993, CDFG 1995, Klute et al. 2003). Clutch size (number of birds hatched at the same time) ranges from 1 to 12 and averages about 7 (Ehrlich 1988). The incubation period is 28–30 days (Ehrlich 1988). The female performs all the incubation and brooding (sitting on eggs to hatch them by the warmth of the body) and is believed to remain continually in the burrow while the male does all the hunting (Rosenberg et al. 1998). The young fledge (take their first flight out of the nest) at 44 days but remain near the burrow and join the adults in foraging flights at dusk (Ehrlich 1988). The maximum life span recorded for a banded bird in the wild is approximately 8.5 years (Rosenberg et al. 1998).

In resident populations, nest site fidelity is common, with many adults nesting each year in their previous year’s burrow; young from the previous year often establish nest sites near (<900 ft) their natal sites (Trulio 1997, Rosenberg et al. 1998). Burrowing Owls in migratory populations also often nest in the same burrow, particularly if the previous year’s breeding was successful (Belthoff and King 1997). Other birds in the same population may move to burrows near their previous year’s burrow. The species is threatened primarily by loss, degradation, and fragmentation of habitat, although they do readily inhabit

anthropogenic landscapes such as agricultural fields, golf courses, and airport grasslands (Korfanta et al. 2005).

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3.0 METHODS

Prior to beginning field surveys, resource specialists were consulted and available information (i.e., resource management plans and relevant documents) was reviewed to determine the locations and types of resources that have the potential to exist within - and adjacent to, the study area. Resources were evaluated within several miles of the Project. The materials reviewed included, but were not limited to, the following:

- U.S. Fish and Wildlife Service (USFWS) Critical Habitat Mapper and File Data (USFWS 2023a);
- USFWS Carlsbad Field Office Species List for Riverside County (USFWS 2023b);
- California Natural Diversity Database maintained by the CDFW (CDFW 2023);
- 1993 California Burrowing Owl Consortium (CBOC) Burrowing Owl Survey Protocol and Mitigation Guidelines;
- 2012 California Department of Fish and Game (CDFG) Staff Report on Burrowing Owl Mitigation;
- Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP 2003); and
- Aerial Photographs (Microsoft Corporation 2023).

A Burrowing Owl habitat suitability assessment and burrow survey, were conducted on 07 June 2023, in accordance with the *29 March 2006 Western Riverside County MSHCP Burrowing Owl Survey Instructions*. Natural and non-natural substrates were examined for potential burrow sites. All potential burrows encountered were examined for shape, size, molted feathers, whitewash, cast pellets and/or prey remains. Disturbance characteristics and all other animal sign encountered within the study area were documented to the greatest extent practical as well.

Since suitable habitat was detected for Burrowing Owl within the study area, four (4) additional surveys were performed (details are presented within *TABLE NO. 1 - SUMMARY OF SURVEY CONDITIONS FOR SURVEYS*). A hand-held, global positioning system (GPS) unit with sub meter accuracy was used to survey predetermined transects that were prepared within a Geographic Information System (Figure 3). Survey transects were spaced at appropriate intervals to allow for complete visual coverage of the Project Site and study area. Where necessary, transect spacing was reduced or expanded in the field - to account for differences in terrain, vegetation density, visibility and access considerations (i.e., private property). Where access was limited, observations were made from the nearest appropriate vantage points by means of public rights-of-way with the use of binoculars, and spotting scopes. The presence of a species was based on direct observations of individual(s), sign, and/or vocalization. Avian scientific nomenclature and common names follows Sibley (2000).

Field surveys were conducted when weather conditions were conducive to observing birds. Surveys were not performed during rain, extreme temperatures, high winds (> 25 miles per hour), or dense fog. Targeted owl surveys were conducted on 08 and 14 June, and 07 and 28 July 2023. Surveys were performed from approximately 1 hour before sunrise to 2 hours after sunrise, when weather conditions were conducive to observing owls outside of burrows.

4.0 BURROWING OWL SURVEY RESULTS

The majority of the study area consists of heavily disturbed ruderal vegetation with no substantial native stands of vegetation. Agricultural activities were historically operated within the Project Site. There is also evidence of recent disking, and trash from illegal dumping throughout the Project’s proposed disturbance footprint.

No Burrowing Owls were detected nesting, foraging, or dispersing within the study area during the 2023 survey events. Nonetheless, potential burrows and burrow complexes – albeit low quality, were detected (Figure 3). The burrows observed lacked evidence of owl tracks, molted feathers, cast pellets, prey remains, egg shell fragments, owl white wash, or nest burrow decoration materials. The presence of several burrows and burrow complexes >11 cm in diameter (height and width), and >150 cm in depth warranted recording and reporting; even though the aforementioned burrows lacked owl sign or owls. Survey conditions during the field events are presented in Table No. 1.

TABLE NO. 1 - SUMMARY OF SURVEY CONDITIONS FOR SURVEYS

Survey Dates	Surveyors	Survey Type	Time ¹ Start/End	Temperature °Fahrenheit Start/End	Wind Speed (MPH)	Start/End Cloud Cover (%)	Date of last precipitation prior to survey
6/07/23	Lincoln Hulse	Burrow Survey	0730 - 1600	58/72	0-05	100/100	5/31/23
6/08/23	Lincoln Hulse	Crepuscular BUOW (Morning) Survey 1)	0500- 1130	59/63	0-05	100/50	5/31/23
6/14/23	Lincoln Hulse	Crepuscular BUOW (Morning) Survey 2)	0515- 1130	55/64	0-05	75/25	5/31/23
7/07/23	Jill Coumoutso	Crepuscular BUOW (Morning) Survey 3)	0515- 1130	57/75	0-10	Clear/Clear	5/31/23
7/28/23	Jill Coumoutso	Crepuscular BUOW (Morning) Survey 4)	0515- 1100	70/87	0-05	Clear/Clear	5/31/23
BUOW = Burrowing Owl MPH = Miles Per Hour							

The lack of Burrowing Owls within the study area is likely a result of the depauperate landscape, and the presence of owl predators (e.g., Red-Tailed Hawk [*Buteo jamaicensis*] and Cooper’s hawk [*Accipiter cooperii*]). Although the Project has potential to impact lands that could be utilized by Burrowing Owl as habitat – under the appropriate suite of environmental conditions, surveys for the species are negative.

¹ While targeted owl surveys were limited to the hours before sunrise and after sunrise; the start and end times presented within this table detail all time spent within the study area on any given day - which include setup, reporting and demobilization activities.

Therefore, there is no presumption that Project implementation would result in the loss of individual Burrowing Owl, or that it would adversely affect local or regional populations of them.

Representative photographs of the study area are provided below, and wildlife detected during the surveys are provided within Table No. 2.



Photograph 1. Facing Northwest.



Photograph 2. Facing East.



Photograph 3. Facing South.



Photograph 4. Potential Burrow

TABLE NO. 2 – WILDLIFE DETECTED DURING FIELD SURVEYS

Scientific Name	Common Name
Birds	
<i>Accipiter cooperii</i>	Cooper's hawk
<i>Buteo jamaicensis</i>	Red-Tailed hawk
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Common Raven
<i>Calypte anna</i>	Anna's hummingbird
<i>Corvus brachyrhynchos</i>	American crow
<i>Sturnus vulgaris</i>	European Starling
<i>Carpodacus mexicanus</i>	House Finch
<i>Charadrius vociferus</i>	Killdeer
<i>Hirundo rustica</i>	Barn swallow
<i>Icterus cucullatus</i>	Hooded oriole
<i>Columba livia</i>	Rock Pigeon
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
<i>Zonotrichia leucophrys</i>	White-crowned sparrow
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Sayornis saya</i>	Say's phoebe
<i>Passer domesticus</i>	House Sparrow
<i>Sayornis nigricans</i>	Black phoebe
<i>Streptopelia decaocto</i>	Eurasian collared dove
<i>Tyrannus vociferans</i>	Cassin's kingbird
<i>Quiscalus quiscula</i>	Common Grackle
<i>Zenaida macroura</i>	Mourning Dove
Mammals	
<i>Otospermophilus beecheyi</i>	California ground squirrel
Reptiles	
<i>Uta stansburiana</i>	Common Side-blotched Lizard

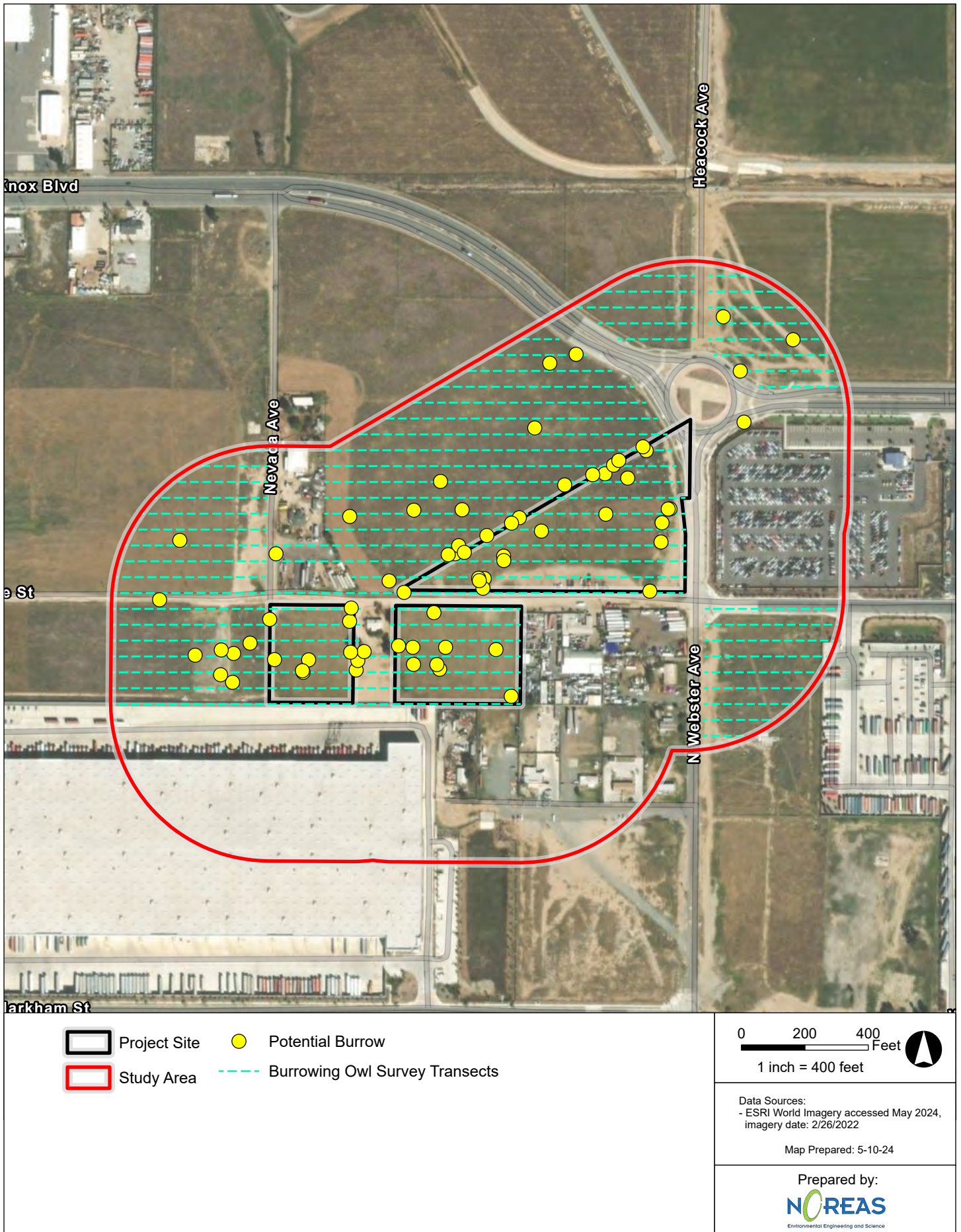


Figure 3. Burrowing Owl Potential Burrows

5.0 RECOMMENDED MEASURES TO AVOID AND MINIMIZED IMPACTS TO NESTING BIRDS

The following measures are recommended as a means of avoiding and minimizing adverse impacts to nesting birds that have the potential to occur within the Project Site, and on adjacent lands:

- Due to the presence of potentially suitable Burrowing Owl habitat within the Project Site, a 30-day pre-construction survey for owls is warranted prior to initial ground-disturbing activities (including vegetation clearing, clearing and grubbing, tree removal, site watering, equipment staging, grading, etc.). This is an MSHCP requirement, as it safeguards that no owls have colonized the Project Site in the days - or weeks, preceding the ground-disturbing activities.
 - If Burrowing Owls have colonized the Project Site prior to the initiation of ground-disturbing activities, the Project shall immediately inform the RCA and the appropriate wildlife agencies, to coordinate regarding the need for a Project specific Burrowing Owl Protection, Management and/or Relocation Plan.
 - If ground-disturbing activities occur, but the Project Site is left undisturbed for more than 30 days, a pre-construction survey will again be warranted to safeguard that Burrowing Owl has not colonized the Project Site since it was last disturbed. If Burrowing Owl is found, the same coordination described above is necessary
- In order to comply with Section 10 of the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code, any vegetation clearing within the Project Site should take place outside of the typical avian nesting season (e.g., March 15th until September 1st) – to the maximum extent practical. If work needs to take place between March 15th and September 1st, a pre-activity survey for nesting birds would be warranted prior to the onset of Project activities. To the maximum extent practicable, a buffer zone from occupied nests should be maintained during physical ground disturbing activities. Once nesting has ended, the buffer may be removed.
- Limits of grading and Project activities shall be clearly delineated with temporary construction staking, flagging, or similar materials.
- To avoid attracting predators and nuisance species, the Project Site shall be clear of debris, where possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the Project.

6.0 CERTIFICATION

The services performed and documented in this report have been conducted in a manner consistent with the level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations are either expressed or implied and no warranty or guarantee is included or intended in this report. Opinions relating to presence, absence, or potential for occurrence of biological resources are based on limited data and actual conditions may vary from those encountered at the times and locations where the data were obtained despite due professional care.

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

DATE: May 21, 2024

SIGNED: 
Lincoln Hulse

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