July 26, 2022 JN 188524

REDLANDS SUMMIT, LLC
Attn: Mr. Patrick Meyer
1705 Oak Grove Ave
San Marino, CA 91108

SUBJECT: Results of a Burrowing Owl (*Athene cunicularia*) Focused Survey for The Neighborhoods at Lugonia Village – City of Redlands, San Bernardino County, California

Dear Mr. Meyer:

This report contains the findings of Michael Baker International's (Michael Baker) focused burrowing owl (*Athene cunicularia*; [BUOW]) survey conducted during the 2022 breeding season for The Neighborhoods at Lugonia Village (project) located in the City of Redlands, San Bernardino County, California. Based on the results of Michael Baker's initial review of California Natural Diversity Database RareFind 5 (CDFW 2022) occurrence records, the project site is located within an area that is or was previously known to be occupied by BUOW, and during a general biological resources assessment field survey conducted in April 2022, it was determined that the project site also provides suitable nesting and foraging habitat. As such, focused BUOW surveys were conducted in accordance with the *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game [CDFG] 2012). The focused BUOW surveys were conducted on four (4) separate days during the 2022 breeding season to document the presence/absence of BUOW within the project site and suitable habitat within 500 feet (survey area).

Project Location

The project site is generally located north of West Lugonia Avenue, east of Interstate 210, south of West San Bernardino Avenue, and west of Karon Street in the City of Redlands, County of San Bernardino, California (refer to Figure 1, *Regional and Project Vicinity*). The project site is depicted in Section 21 of Township 1 South, Range 3 West, on the U.S. Geological Survey's (USGS) *Redlands, California* 7.5-minute quadrangle. Specifically, the project site totals approximately 24.43 acres and encompasses Assessor's Parcel Numbers (APN) 0167-171-04, 0167-171-05 and 0167-171-06.

Project Description

The proposed project includes the construction of high-density residential developments which includes 70 residential condominium units fronting Pennsylvania Avenue, 20 single family detached houses, fronting Karon Street, and a 430-unit multi-family apartment complex fronting Lugonia Avenue.

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Background

Burrowing Owl

The BUOW is a grassland specialist distributed throughout western North America, where it is known to occupy a wide variety of arid and semi-arid open areas within shrub, desert, and grassland environments. The California Department of Fish and Wildlife (CDFW) currently lists the BUOW as a California Species of Special Concern. BUOWs require large open, sparsely vegetated areas, on rolling or level terrain with an abundance of fossorial mammal burrows (> 4 inches in diameter). In addition, BUOWs require open vegetation allowing open line-of-sight of the surrounding habitat to forage as well as watch for predators. BUOWs are dependent upon the presence of burrowing mammals (e.g., California ground squirrel [*Otospermophilus beecheyi*], coyote [*Canis latrans*], American badger [*Taxidea taxus*]) whose burrows are used for roosting and nesting (Haug et al. 1993). The presence or absence of fossorial mammal burrows is often a major factor that limits the presence or absence of BUOW. Where mammal burrows are scarce, BUOWs have been observed digging their own burrows in soft, friable soil and have been observed utilizing man-made cavities such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. Additionally, BUOWs may burrow beneath rocks and debris or large, heavy objects such as abandoned cars, concrete blocks, or concrete pads. Large, hard objects at burrow entrances stabilize the entrance from collapse and may inhibit excavation by predators.

Adult BUOWs are small owls (approximately 7.5 to 9.8 inches) with long legs and short tails that are speckled brown and white, with yellow eyes and yellow bill. A bold white throat and eyebrows are also typical distinguishing features for BUOWs. Juvenile BUOWs are usually less mottled than adults, with buffy-yellow underparts. BUOWs have crepuscular (dawn and dusk) hunting habits but are often observed perched in or near the burrow entrance during the day. One burrow is typically selected for use as the main nest burrow, however, BUOWs also utilize satellite burrows that are often located within the immediate vicinity of the main nest burrow. BUOWs prey upon invertebrates and small vertebrates through the low growing vegetation which allows for foraging visibility (Thomsen 1971). They typically forage in short-grass, mowed, or overgrazed pasture, golf courses and airports (Thomsen 1971). Based on the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), the BUOW breeding season in California extends from February 1 through August 31. BUOWs in California may migrate southerly, but often remain in their breeding area during the non-breeding months. The BUOW was once abundant and widely distributed within southern California, but it has declined precipitously in counties such as Los Angeles, Orange, San Diego, Riverside, and San Bernardino.

Regulatory Framework

The BUOW is a resident and migratory bird species protected by international treaty under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA reflects agreements made between the U.S., England, Mexico, the former Soviet Union, and Japan to protect all of North America's migratory bird populations. The MBTA protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and collection. The other prohibitions (i.e., capture, pursue, hunt, and kill) of the MBTA are inapplicable to nests. The regulatory definition of take, as defined in Title 50 Code of Federal Regulations (C.F.R.) Part 10.12, means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect. Only the verb "collect" applies to nests. It is illegal to collect, possess, or by any means transfer possession of any migratory bird nest. The MBTA prohibits the destruction of a nest when it contains birds or eggs, and no possession shall occur during the destruction of

unoccupied nests (U.S. Fish and Wildlife Service 2017). Certain exceptions to this prohibition are included in Title 50 C.F.R. Section 21. Pursuant to Section 3513 of the California Fish and Game Code (CFGC), CDFW enforces the MBTA consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Additionally, BUOW is protected under Sections 3503, 3503.3, 3511, and 3513 of the CFGC which prohibit the take, possession, or destruction of birds, their nests, or eggs. Implementation of the take provisions requires that project-related disturbance at active nesting territories be reduced or eliminated during critical phases of the nesting cycle (generally March 1 - August 15, annually). Section 3503.5 of the CFGC protects birds in the orders Falconiformes or Strigiformes (birds of prey, such as hawks and owls, including BUOWs) which makes it unlawful to take, possess, or destroy their nests or eggs.

Methodology

Focused BUOW surveys were conducted by Michael Baker's qualified biologists Lauren Mapes and Trina Ming on four (4) separate days during the 2022 breeding season. Please refer to Table 1 below for a summary of the survey dates, timing, surveyors, and weather conditions for each of the surveys.

Table 1: Survey Dates, Timing, Surveyors, and Weather Conditions

Date	Time (start / finish)	Surveyors	Temperature (°F) (start / finish)	Average Wind Speed (mph)
April 7, 2022	0620 / 0930	LM, TM	63 clear skies / 77 sunny	3 – 5
May 19, 2022	0710 / 0915	LM, TM	53 clear skies / 66 sunny	1 – 2
June 9, 2022	0600 / 0720	LM, TM	68 sunny / 72 sunny	0 – 2
June 30, 2022	0630 / 0730	LM, TM	71 sunny / 74 sunny	0 – 1
* LM: Lauren Mapes, TM: Trina Ming				

The BUOW focused surveys were conducted during the 2022 breeding season (February 1 through August 31) in accordance with the survey guidelines and protocols provided in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). Areas providing suitable habitat for BUOWs were surveyed for suitable, occupied, and remnant burrows consisting of natural and non-natural substrates. Survey transects were conducted at 3- to 6-meter (approximately 10- to 20-foot) intervals to ensure 100% visual coverage of all areas in suitable habitat, as applicable based on on-site topography and access. Binoculars were used to scan areas that were inaccessible due to lack of right-of-entry to observe and identify distant birds; identify any suitable, occupied, and remnant burrows consisting of natural and non-natural substrates; and identify any activity around potential suitable habitat for BUOW. Methods to detect the presence of BUOWs included direct observation, aural detection, and signs of presence (i.e., pellets, white wash, feathers, or prey remains, particularly around burrows). The location of all suitable habitat, potential burrows, sign, and BUOWs observed within the survey area were recorded and mapped with a hand-held Global Positioning System (GPS) unit. Surveys were not conducted during rain, high winds, dense fog, or high temperatures.

Results

Existing Conditions

After a review of Google Earth historic imagery and results from the field survey, it was determined that the survey area is comprised of developed land and areas of disturbed habitat and bare ground which consist of heavily disturbed/compacted soils. Google Earth historic imagery from 1985 through 2021 also shows

that the survey area has continually been exposed to routine weed abatement activities (i.e., disking, tilling) throughout the non-developed portions of the survey area, which have eliminated any natural vegetation communities and resulted in heavily disturbed and compacted surface soils. As such, the undeveloped portions of the survey area, which includes the project site and vacant land to the west, north, and southeast, are generally characterized as disturbed habitat that is dominated by ruderal/weedy, low-growing plant species. Developed areas were also observed within the survey area; residential land use is located in the eastern portion of the survey area, and commercial land use is located in the southwestern portion of the survey area. Please refer to Attachment B for representative photographs taken throughout the survey area.

Common bird species detected during the focused surveys included American crow (*Corvus brachyrhynchos*), house finch (*Haemorhous mexicanus*), northern mockingbird (*Mimus polyglottos*), house sparrow (*Passer domesticus*), Say's phoebe (*Sayornis saya*), and European starling (*Sturnus vulgaris*). Please refer to Attachment C for a complete list of wildlife species observed during the surveys.

According to the CNDDB, there are four (4) occurrence records for burrowing owl within the USGS *Harrison Mountain, Redlands, San Bernardino North, San Bernardino South* and *Yucaipa, California* 7.5-minute quadrangle. The closest extant occurrence (Occurrence Number 314) was recorded in 1983, approximately 2.25 miles northwest of the project site; there was an undetermined amount of burrowing owls using the burrow site (CDFW 2022). Additionally, another occurrence (Occurrence Number 1784) was recorded in 2006, approximately 3.45 miles to the northwest of the project site; six adults and 3 juveniles were detected within 0.25 miles of one another (CDFW 2022). In addition, there is a large number of records of this species in the eBird database, both within and just outside of a 5-mile radius from the project site (eBird 2022). It should be noted that most of these were at the San Bernardino International Airport to the northwest of the project site and a lack of records in eBird over the last five years would indicate local extirpation.

Burrowing Owl Focused Survey Results

No BUOWs or BUOW sign (i.e., pellets, white wash, feathers, or prey remains) were observed during any of the four (4) focused surveys. Suitable foraging habitat and line of site opportunities were observed throughout the survey area, as well as over 200 suitable burrows (> 4 inches in diameter) capable of providing roosting and nesting opportunities for BUOW (refer to Figure 2, *Survey Results*, in Attachment A). However, at some point between the second and third surveys the 500-foot buffer on the west side of the project was disked, thus removing all of the burrows noted during the first survey in this area as shown in Figure 2. The soils located within the southern portion of the survey area across West Lugonia Avenue were heavily compacted, did not contain any suitable burrows, and did not provide any nesting/roosting opportunities for BUOW. However, this area would still be suitable for BUOW to forage in if present.

Conclusions and Recommendations

No BUOWs, sign, occupied burrows, or remnant BUOW burrows were observed within the survey area. Therefore, project-related activities are not expected to result in any direct or indirect impacts to BUOWs or occupied burrows within the survey area.

Although BUOWs were not observed during the focused survey, the survey area does contain suitable foraging and nesting habitat for BUOW. Additionally, the closest known occurrence of BUOW is over 2 miles away (CDFW 2022). Due to the presence of suitable foraging habitat for BUOW and the proximity

of the survey area to existing occurrence records for BUOW, pre-construction BUOW clearance surveys should be conducted by a qualified biologist to ensure that BUOWs remain absent from the project site and impacts to BUOWs do not occur. In accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012), two (2) pre-construction clearance surveys should be conducted 14-30 days and 24 hours prior to any vegetation removal or ground disturbing activities to confirm the presence/absence of BUOWs and ensure impacts to any BUOWs or occupied burrows do not occur. The clearance survey shall be conducted by a qualified biologist in accordance with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) and cover all suitable habitat within the project impact area, including adjacent suitable habitat within a 500-foot buffer (as accessible). Following completion of the clearance survey, the qualified biologist shall prepare and submit a final report documenting the methods and results of the survey. If no BUOWs or occupied burrows are detected, project activities may begin, and no additional avoidance and minimization measures would be required. If an occupied burrow is found within the project impact area during pre-construction clearance surveys, a BUOW exclusion plan shall be prepared and submitted to the CDFW for approval prior to initiating project activities. The exclusion plan shall include proposed mitigation for direct and permanent impacts to nesting, occupied and satellite burrows, and/or BUOW habitat such that the habitat acreage, number of burrows, and impacted BUOWs are replaced as consistent with the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). If an occupied burrow is found within adjacent habitat that may be indirectly impacted by project activities, the burrow shall be buffered following the distances recommended in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). The biologist shall monitor the burrow, adjust the buffer area as needed, and shall have the authority to stop construction activities to prevent take.

Please do not hesitate to contact Ryan Winkleman at (949) 533-0918 or ryan.winkleman@mbakerintl.com or Lauren Mapes at (714) 519-9922 or lauren.mapes@mbakerintl.com should you have any questions or require further information about this report or survey effort.

Sincerely,

Ryan Winkleman
Senior Biologist

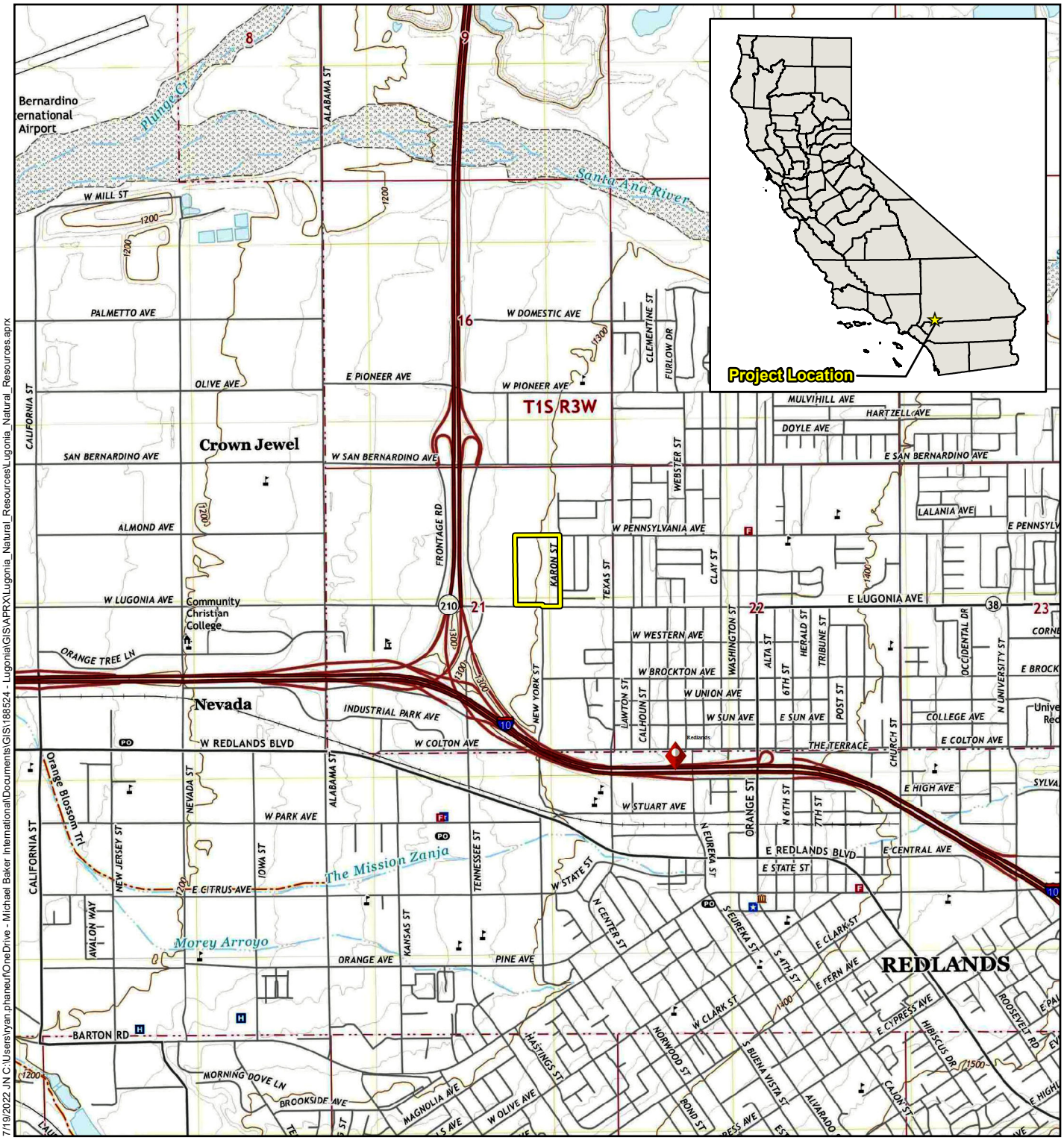
Lauren Mapes
Biologist

Attachments:

A. Project Figures
B. Site Photographs
C. Wildlife Species Observed List
D. References

Attachment A

Project Figures



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Legend

Project Site

Michael Baker INTERNATIONAL

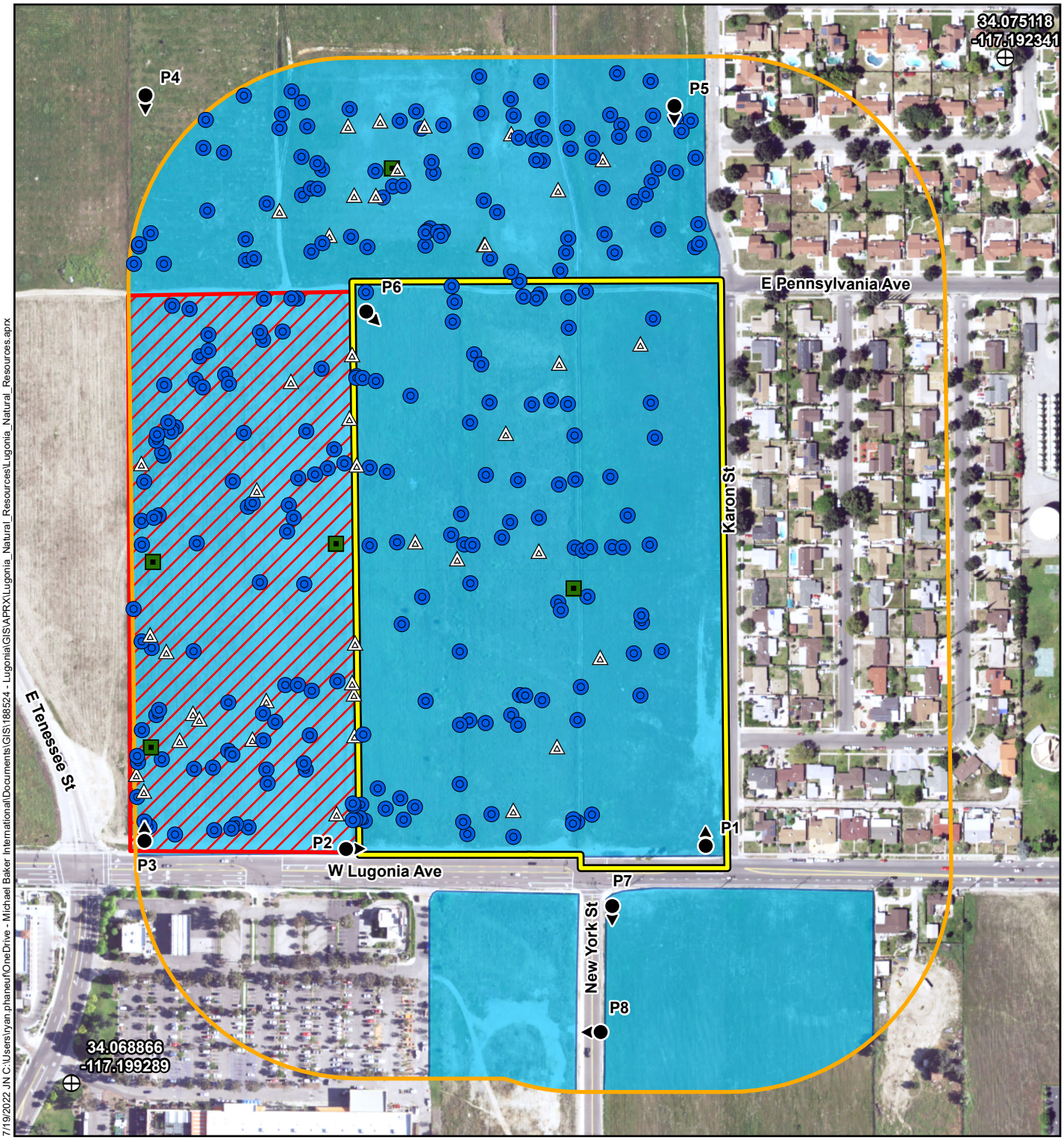
0 0.25 0.5 Miles

Source: USGS 7.5-Minute topographic quadrangle maps: *Redlands, California (2021)*

THE NEIGHBORHOODS AT LUGONIA VILLAGE
BURROWING OWL FOCUSED SURVEY REPORT

Regional and Project Vicinity

Figure 1



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Legend

- Project Site
- Reference Point
- Photograph Point and Direction
- Survey Area (500-foot Buffer)
- Disked Area
- Suitable Habitat (61.55 acres)

Suitable Burrows

- 1 Burrow
- 2 to 5 Burrows
- 6 to 10 Burrows

Michael Baker INTERNATIONAL

0 160 320 Feet

Source: NAIP (2020)

THE NEIGHBORHOODS AT LUGONIA VILLAGE
BURROWING OWL FOCUSED SURVEY REPORT

Survey Results

Figure 2

Attachment B

Site Photographs

Photograph 1: Standing in the southeast corner of the project site, facing north overlooking disturbed habitat.

Photograph 2: Standing at southwest corner of project boundary, facing east overlooking disturbed habitat.

Photograph 3: Standing in the southwest corner of the survey area, facing north overlooking disturbed habitat.

Photograph 4: Standing in the northwest corner of the survey area, facing south overlooking disturbed habitat.

Photograph 5: Standing along the northern edge of the survey area, facing south overlooking disturbed habitat.

Photograph 6: Standing in the northwest corner of the project site facing southeast overlooking disturbed habitat.

Photograph 7: Standing in the southeast corner of the survey area, facing south overlooking disturbed habitat.

Photograph 8: Standing at New York Street, facing west overlooking disturbed habitat within the 500-foot buffer.

Attachment C

Wildlife Species Observed List

Table C-1: Wildlife Species Observed List

Scientific Name*	**Common Name**	**Special-Status Rank**
Birds		
Buteo jamaicensis	red-tailed hawk	
Calypte anna	Anna's hummingbird	
Corvus brachyrhynchos	American crow	
Falco sparverius	American kestrel	
Haemorhous mexicanus	house finch	
Minus polyglottos	northern mockingbird	
*Passer domesticus**	house sparrow	
Passerculus sandwichensis	savannah sparrow	
Sayornis nigricans	black phoebe	
Sayornis saya	Say's phoebe	
Stelgidopteryx serripennis	northern rough-winged swallow	
*Streptopelia decaocto**	Eurasian collared dove	
*Sturnus vulgaris**	European starling	
Tyrannus vociferans	Cassin's kingbird	
Zenaida macroura	mourning dove	
Mammals		
Canis latrans	coyote	
*Canis lupus familiaris**	domestic dog	
*Felis catus**	domestic cat	
Mustela sp.	weasel sp.	
Otospermophilus beecheyi	California ground squirrel	
Sylvilagus audubonii	desert cottontail	
Reptiles		
Uta stansburiana	side-blotched lizard	

* **Non-native species**

Attachment D

References

California Department of Fish and Game (CDFG). 2012. *Staff Report on Burrowing Owl Mitigation*. State of California Natural Resources Agency, Department of Fish and Game.

California Department of Fish and Wildlife (CDFW). 2022. RareFind 5, California Natural Diversity Data Base, California. Data base report on threatened, endangered, rare or otherwise sensitive species and communities for the USGS *Harrison Mountain, Redlands, San Bernardino North, San Bernardino South*, and *Yucaipa, California* 7.5-minute quadrangles.

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Thomsen, L. 1971. *Behavior and ecology of Burrowing Owls in the Oakland Municipal Airport*. Condor 73: 177-192.

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