

**Draft FOCUSED SURVEY FOR THE BURROWING OWL  
EASTSIDE WATER TREATMENT FACILITY AND BRINELINE PROJECT  
CITIES OF CHINO AND ONTARIO IN SAN BERNARDINO COUNTY, CALIFORNIA**



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## 1.0 INTRODUCTION

At the request of Albert A. Webb Associates (Webb), Wood Environment & Infrastructure Solutions, Inc. (Wood) conducted a focused survey for the burrowing owl (*Athene cunicularia*). The survey was conducted in support of the proposed Eastside Water Treatment Facility and Brineline Project (project) and its alternative. The biological study area (BSA) for this survey included the project site plus a 500 foot buffer around it and included portions of the Cities of Chino and Ontario in San Bernardino County, California (see Figure 1).

## 2.0 PROJECT BACKGROUND/SITE DESCRIPTION

The proposed project includes a four-mile dual six-inch brine pipeline between the Chino I Desalter Facility (CIDF) and the Eastside Water Treatment Facility (EWTF). The pipeline would generally follow existing roads and previously disturbed areas, utilizing a route that would follow Kimball Avenue east from the CIDF, Euclid Avenue north, Merrill Avenue east, Bon View Avenue north, and Schaefer Avenue west to the EWTF. An alternative would have one of the dual pipelines leave Bon View at Edison Avenue, heading west, then north to the EWTF on conceptual Campus Avenue, an undeveloped street. The project also includes upgrades to the CIDF, which is on the south side of Kimball Avenue, west of Euclid Avenue in Chino. The EWTF is on the south side of Schaefer Avenue, west of Bon View Avenue in Ontario. See Figure 1.

Project elevations range from approximately 590 feet (180 meters) at the CIDF to 755 feet (230 meters) at the EWTF. Despite the elevational change, the slope is gentle with the project area appearing flat. The alignment passes through a wide variety of conditions, from undeveloped to agriculture and vacant lots and from residential to commercial and industrial areas, but is dominated by dairy farms.

## 3.0 BURROWING OWL SURVEY

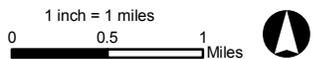
### 3.1 Burrowing Owl Background

The burrowing owl is a small, tan, short-tailed, ground-dwelling owl that occupies underground burrows. A member of the Strigidae (typical owls family), this species is associated with grasslands and other arid open terrain, throughout much of the western United States. Burrowing owls are opportunistic in their selection of burrows, typically utilizing the burrows of small mammals (*e.g.*, ground squirrels, kit fox (*Vulpes macrotis*), but also use desert tortoise burrows, drain pipes, culverts, and other suitable natural or manmade cavities at or below ground level. In California, the species often occurs in association with colonies of the California ground squirrel (*Spermophilus beecheyi*), where it makes use of the squirrel's burrows. The entrance of the burrow is often adorned with animal dung, feathers, debris, and other small objects. The species is active both day and night, and may be seen perching conspicuously on fence posts or standing at the entrance of their burrows. Due to the characteristic fossorial habits of burrowing owls, nest burrows are a critical component of their habitat.

In southern California, burrowing owls are not only found in undisturbed natural areas, but also follow agricultural fields, margins of active agricultural areas, livestock farms, airports, and vacant lots. In spite of their apparent tolerance to human activities, burrowing owl populations in California are clearly declining and, if declines continue, the species may qualify for listing under the state and/or federal Endangered Species Acts (California Department of Fish and Game [CDFG] 1995). The declines in Burrowing Owl populations are attributed to loss and degradation of habitat, to ongoing residential and commercial development, and to rodent control programs. The burrowing owl is currently designated a California Species of Concern (CSC) by the CDFG (note that the CDFG changed their name in 2013 to the California Department of Fish and Wildlife [CDFW]), managed as a Bird of Conservation Concern by the U.S. Fish and Wildlife Service (USFWS), is considered "sensitive" by the U. S. Bureau of Land



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- Alternative Alignment
- Preferred Alignment
- Burrowing Owl Survey Area

**FIGURE 1**  
Project Vicinity and Regional Location  
Eastside Water Treatment  
Facility and Brineline Project  
San Bernardino County, CA

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Management (BLM), and protected by the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code Sections 3503, 3503.5, 3513, and 3800.

The California Burrowing Owl Consortium (CBOC) developed the Burrowing Owl Survey Protocol and Mitigation Guidelines to meet the need of uniform standards when surveying burrowing owl populations and evaluating impacts from development projects (CBOC 1993). In 1995 the CDFG issued the Staff Report on Burrowing Owl Mitigation to all of its regional managers to ensure consistency in standards, policies, and regulatory mandates relating to the burrowing owl (CDFG 1995). Due to the continued decline of burrowing owl populations statewide and as an attempt to reverse this trend, the CDFG issued more effective, viable, coordinated and concerted approach to burrowing owl conservation actions with the release of an updated Staff Report on Burrowing Owl Mitigation (CDFG 2012).

### 3.2 Burrowing Owl Survey Methods

Habitat was assessed for the burrowing owl by Wood senior biologist John F. Green on 29 March 2019. The habitat assessment included visually inspecting and mapping all areas of the site and adjacent areas (a 500 foot buffer around the site) for components of burrowing owl habitat (i.e., sparsely vegetated areas). Habitat was present, so the burrow survey and the first of four focused surveys was conducted on 11 April 2019 by Wood biologists Dale Hameister and Carla Sanchez. That survey visit and the subsequent surveys were conducted between morning civil twilight sunrise and 10:00 AM (Pacific Standard Time [PST]). Focused survey visit two was conducted by Hameister, and surveys three and four were conducted by Green. Access was granted to the alternative route in July, and it was surveyed on foot a single time by Green on 15 July, the last day of the protocol breeding season survey period.

Straight line transects spaced no more than 20 meters apart (ten meters apart on the project site) were walked throughout all suitable areas of the site and buffer area in order to identify occupiable habitat. Where access to the buffers was not possible, binoculars were used to scan for owls and habitat. Burrows suitable for burrowing owl occupation were recorded with a Global Positioning System (GPS), and closely monitored and inspected during each subsequent visit for evidence of burrowing owl use (i.e., whitewash, pellets, feathers and other adornments). Binoculars were used to identify birds and to survey perches and potential burrows prior to closer approach. A handheld anemometer was used to record temperatures and wind speeds. Survey dates, times, and weather conditions are presented in Table 1 below.

**Table 1. Burrowing Owl Survey Data**

Date	Time (PST)	Sky (% cloud cover)	Temperature (°F)	Wind (mph)
<sup>^</sup> 29 March 2019	0825-1205	35	69	2-10
11 April 2019	0430-0920	0-70	45-67	0-3
3 May 2019	0446-0650	100-70	62-68	0-3
24 May 2019	0605-0910	Clear-5	53-64	0-2
24 June 2019	0710-0845	100	65-67	0-2
<sup>*</sup> 15 July 2019	1645-1755	Clear	92-90	1-7

<sup>^</sup> Habitat assessment

<sup>\*</sup> Survey of alternative only

PST = Pacific Standard Time

F = Fahrenheit

mph = miles per hour

### 3.3 Burrowing Owl Survey Results

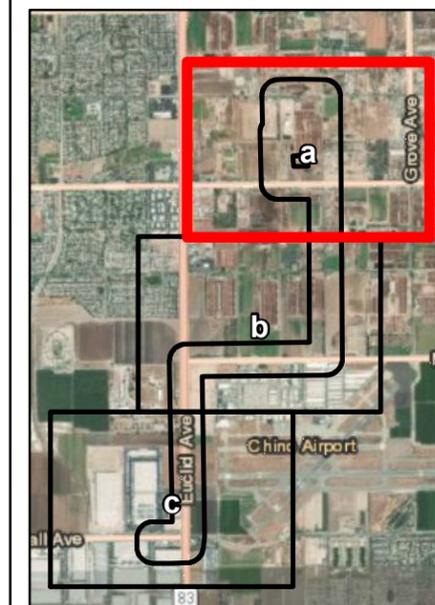
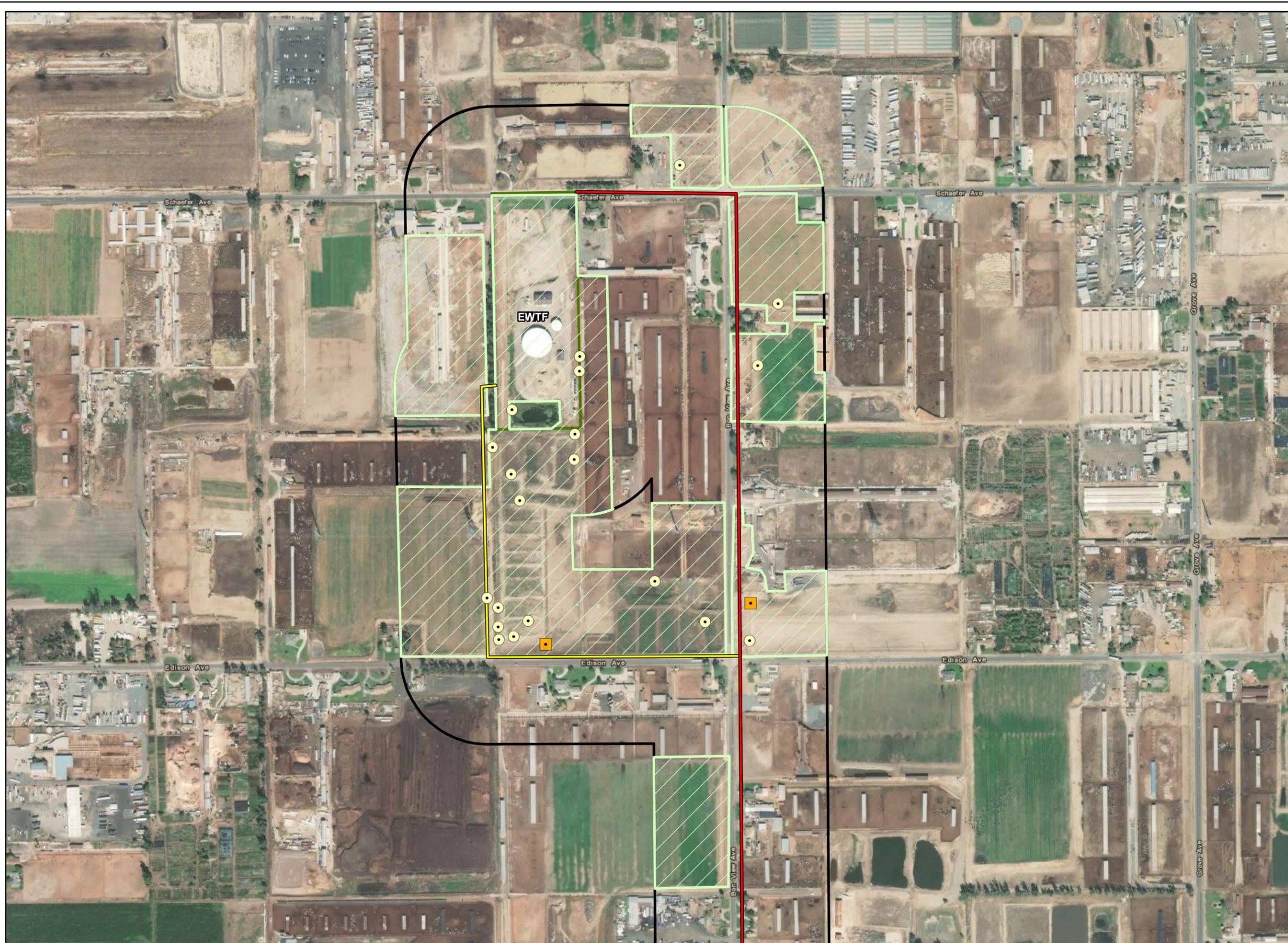
The burrow survey/first focused survey detected numerous burrows that were potentially suitable for burrowing owl occupation (see Figure 2). The third focused survey detected at least four burrowing owls at one of those sites, on the east side of Bon View Avenue, north of Edison Avenue (see Figure 2). During the final survey, at least three of those owls continued. The survey of the alternative route discovered two additional burrowing owls despite damage to the habitat by road and berm grading early on the same day. No burrowing owls or their sign were detected at any other location.

### 3.4 Discussion of Burrowing Owl Survey Results

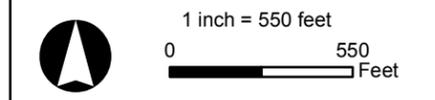
The results of the breeding season focused survey indicate that the burrowing owl currently occupies at least one area adjacent to the project route where owls could be disturbed by project activities. The project area also contains widespread suitable habitat for burrowing owls which is currently unoccupied. The potential remains for the species to occur on or adjacent to the site in additional locations in the future. In accordance with the Staff Report on Burrowing Owl Mitigation (CDFG 2012), a “take avoidance survey” for the burrowing owl should be conducted no less than 14 days prior to the initiation of ground disturbance activities and a final survey should also be conducted within 24 hours prior to ground disturbance. If no burrowing owls are detected during the take avoidance surveys, implementation of ground disturbance activities could proceed without further consideration of this species. If burrowing owls are detected during the take avoidance survey, avoidance and minimization measures would then be required, under the guidance of the CDFW.

## 4.0 LITERATURE CITED AND REFERENCES

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- BUOW Observation
- Potential BUOW Burrow(s)
- Alternative Alignment
- Preferred Alignment
- ▨ BUOW Suitable Habitat
- BUOW Survey Area

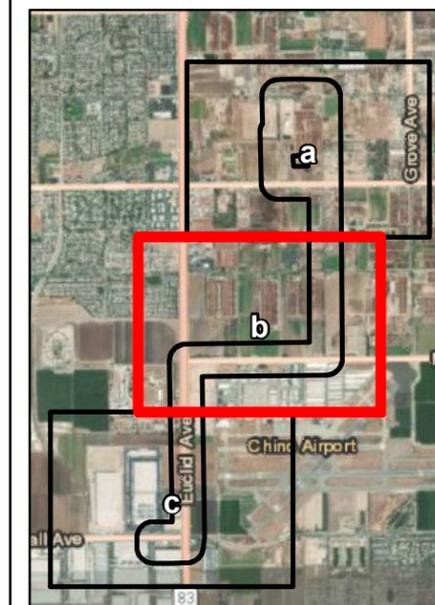
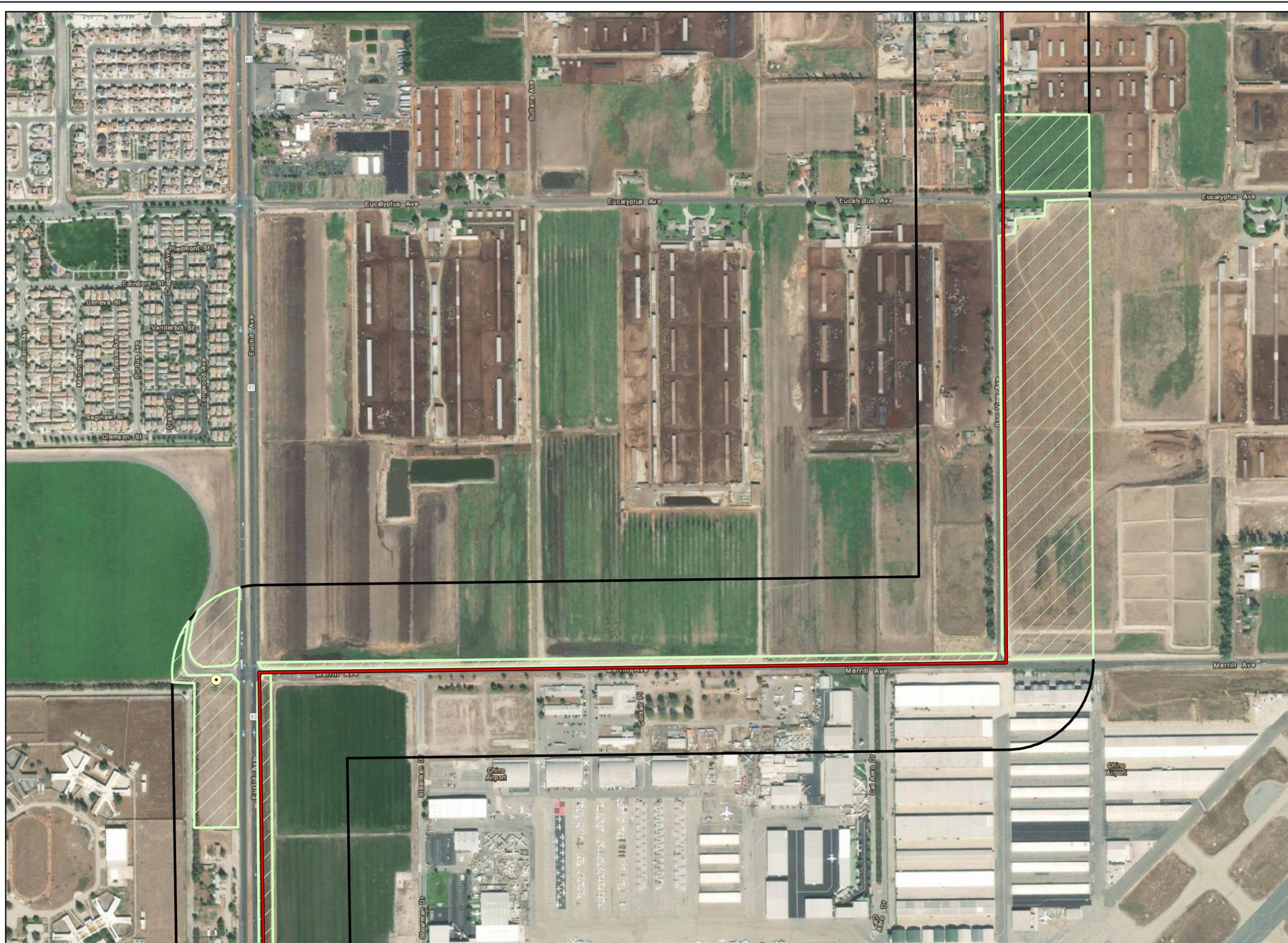


**FIGURE 2a**  
 Burrowing Owl (BUOW)  
 Survey Results  
 Eastside Water Treatment Facility  
 and Brineline Project  
 San Bernardino County, CA

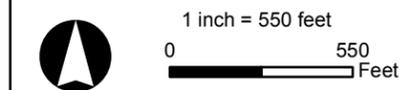


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- Potential BUOW Burrow(s)
- Preferred Alignment
- BUOW Suitable Habitat
- BUOW Survey Area

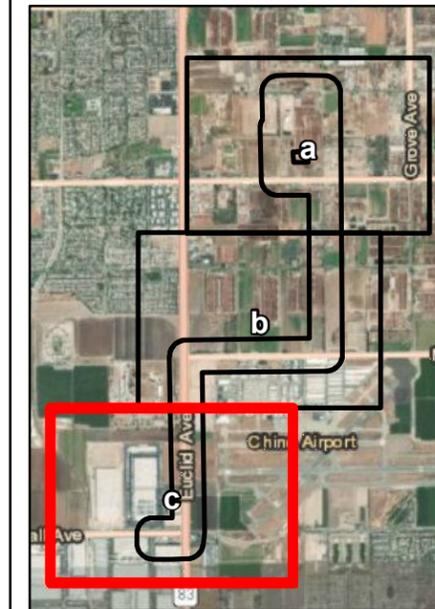


**FIGURE 2b**  
 Burrowing Owl (BUOW)  
 Survey Results  
 Eastside Water Treatment Facility  
 and Brineline Project  
 San Bernardino County, CA

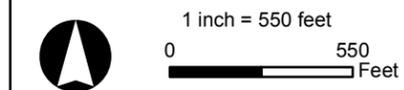


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- Preferred Alignment
- ▨ BUOW Suitable Habitat
- BUOW Survey Area



**FIGURE 2c**  
 Burrowing Owl (BUOW)  
 Survey Results  
 Eastside Water Treatment Facility  
 and Brineline Project  
 San Bernardino County, CA



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# **Appendix A      Site Photographs**



Photo 1. California ground squirrel burrows suitable for burrowing owl occupation, here in the vicinity of Merrill and Euclid Avenues. Report cover photo shows a burrowing owl within the project BSA along Bon View Avenue north of Edison Avenue.



Photo 2. Open habitat suitable for burrowing owls, here south of the EWTF and east of the alternative route. Burrowing owls were found in the background area of this photo.

# **Appendix B      Vertebrate Wildlife**

## VERTEBRATE ANIMALS LIST

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This list reports only vertebrate animal species observed during site visits for this project. Other species may have been overlooked or undetectable due to their activity patterns. Nomenclature and taxonomy for fauna observed on site follows the California Bird Records Committee Official California Checklist (2019) for birds and CDFW (2016) for herpetofauna and mammals.

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### SYMBOLS AND ABBREVIATIONS:

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- \* Non-native species
  - \*\* Sensitive species (State or federally listed as endangered, threatened, or candidate; state species of special concern/watchlist/tracked; USFWS bird of conservation concern; Bureau of Land Management and/or USFS sensitive)
  - sp. Identified only to genus; species unknown (plural = spp.)
- 

### **REPTILES**

#### **Phrynosomatidae**

*Sceloporus occidentalis*

#### **Spiny Lizards**

western fence lizard

### **BIRDS**

#### **Anatidae**

*Branta canadensis*

*Spatula cyanoptera*

*Anas americana*

*Anas platyrhynchos*

#### **Ducks, Geese, and Swans**

Canada goose

cinnamon teal

American wigeon

mallard

#### **Columbidae**

*Columba livia*\*

*Streptopelia decaocto*\*

*Zenaida macroura*

#### **Pigeons and Doves**

rock pigeon

Eurasian collared-dove

mourning dove

#### **Apodidae**

*Aeronautes saxatalis*

#### **Swifts**

white-throated swift

#### **Trochilidae**

*Calypte anna*

*Selasphorus sasin*

#### **Hummingbirds**

Anna's hummingbird

Allen's hummingbird

#### **Rallidae**

*Fulica americana*

#### **Rails, Gallinules, and Coots**

American coot

#### **Recurvirostridae**

*Himantopus mexicanus*

#### **Stilts and Avocets**

black-necked stilt

#### **Charadriidae**

*Charadrius vociferus*

#### **Lapwings and Plovers**

killdeer

#### **Scolopacidae**

*Numenius americanus*

#### **Sandpipers, Phalaropes, and Allies**

long-billed curlew

#### **Laridae**

*Larus californicus*

#### **Gulls, Terns, and Skimmers**

California gull

**Ardeidae**

*Ardea herodias*  
*Ardea alba*  
*Bubulcus ibis*

**Threskiornithidae**

*Plegadis chihi*\*\*

**Cathartidae**

*Cathartes aura*

**Accipitridae**

*Accipiter cooperii*\*\*  
*Buteo jamaicensis*

**Strigidae**

*Athene cunicularia*\*\*

**Falconidae**

*Falco sparverius*  
*Falco peregrinus*\*\*

**Tyrannidae**

*Myiarchus cinerascens*  
*Tyrannus vociferus*  
*Tyrannus verticalis*  
*Empidonax traillii*\*\*  
*Sayornis nigricans*  
*Sayornis saya*

**Corvidae**

*Corvus brachyrhynchos*  
*Corvus corax*

**Hirundinidae**

*Hirundo rustica*

**Aegithalidae**

*Psaltriparus minimus*

**Troglodytidae**

*Troglodytes aedon*  
*Thryomanes bewickii*

**Turdidae**

*Catharus ustulatus*

**Mimidae**

*Mimus polyglottos*

**Sturnidae**

*Sturnus vulgaris*\*

**Passeridae**

*Passer domesticus*\*

**Fringillidae**

*Haemorhous mexicanus*  
*Spinus psaltria*

**Hérons and Egrets**

great blue heron  
great egret  
cattle egret

**Ibises and Spoonbills**

white-faced ibis

**New World Vultures**

turkey vulture

**Hawks and Relatives**

Cooper's hawk  
red-tailed hawk

**Typical Owls**

burrowing owl

**Caracaras and Falcons**

American kestrel  
peregrine falcon

**Tyrant Flycatchers**

ash-throated flycatcher  
Cassin's kingbird  
western kingbird  
willow flycatcher  
black phoebe  
Say's phoebe

**Jays, Crows, Ravens, Magpies**

American crow  
common raven

**Swallows**

barn swallow

**Long-tailed Tits and Bushtits**

bushtit

**Wrens**

house wren  
Bewick's wren

**Thrushes**

Swainson's thrush

**Mockingbirds, Thrashers, and Allies**

northern mockingbird

**Starlings**

European starling

**Old World Sparrows**

house sparrow

**Finches**

house finch  
lesser goldfinch

**Passerelliidae**

*Passerculus sandwichensis*  
*Melospiza melodia*  
*Zonotrichia leucophrys*

**Icteridae**

*Sturnella neglecta*  
*Agelaius phoeniceus*  
*Molothrus ater*  
*Euphagus cyanocephalus*  
*Quiscalus mexicanus*

**Parulidae**

*Setophaga petechia\*\**  
*Setophaga coronata*  
*Cardellina pusilla*

**MAMMALS**

**Leporidae**

*Sylvilagus audubonii*

**Geomyidae**

*Thomomys bottae*

**Sciuridae**

*Otospermophilus beecheyi*

**Canidae**

*Canis latrans*

**Towhees, New World Sparrows**

savannah sparrow  
song sparrow  
white-crowned sparrow

**Blackbirds, Meadowlarks, Orioles**

western meadowlark  
red-winged blackbird  
brown-headed cowbird  
Brewer's blackbird  
great-tailed grackle

**Wood-Warblers**

yellow warbler  
yellow-rumped warbler  
Wilson's warbler

**Rabbits and Hares**

Audubon's (desert) cottontail

**Pocket Gophers**

Botta's pocket gopher

**Squirrels**

California ground squirrel

**Foxes, Wolves and Relatives**

coyote