

**APPENDIX BR-3**  
**Burrowing Owl Habitat Assessment and Wintering Owl Surveys**



AECOM  
2020 L Street, Suite 300  
Sacramento, CA 95811  
T +1-916.414.5800  
F+ 1-916.414.5850

Kim Crawford  
Environmental Project Manager  
SMUD  
P.O. Box 15830  
Sacramento, CA 95852

February 10, 2025

**Subject: Oveja Ranch Solar Project Burrowing Owl Surveys, Sacramento County, CA**

Dear Ms. Crawford,

This memorandum presents the results of burrowing owl surveys conducted for the Oveja Ranch Solar Project (the Project; Figures 1 and 2). These surveys were initiated to obtain additional information about the potential for burrowing owls to winter or nest at the project site. All surveys were conducted in accordance with the California Burrowing Owl Consortium's *Burrowing Owl Survey Protocol and Mitigation Guidelines* (California Department of Fish and Game, DFG 1993).

Before initiating biological surveys, AECOM biologists reviewed relevant historical and biological survey reports, the biological resources report prepared for the project (AECOM 2024), along with Geographic Information System (GIS) data. Burrow surveys were conducted on January 15, 2025, in the southern portion of the project site and on January 23, 2025, in the northern portion of the project site. Non-breeding season surveys for western burrowing owls (*Athene cunicularia*) were conducted on January 23, 2025, across both areas of the project site (see Figure 2).

During the January 15, 2025, burrow surveys, 13 occupied burrows were identified at four distinct locations within the southern portion of the project site. Owls were observed perching on fence posts while foraging and using fossorial mammal burrows for shelter. Given the presence of burrowing owls and suitable habitat, an additional survey was conducted on January 23, 2025, to assess potential occupancy of other burrows on the property. Through these efforts, an estimated 5 to 7 burrowing owls were found overwintering in earthen burrows throughout the southern portion of the project. No suitable habitat, occupied burrows, or burrowing owls were observed in the northern portion of the project site.

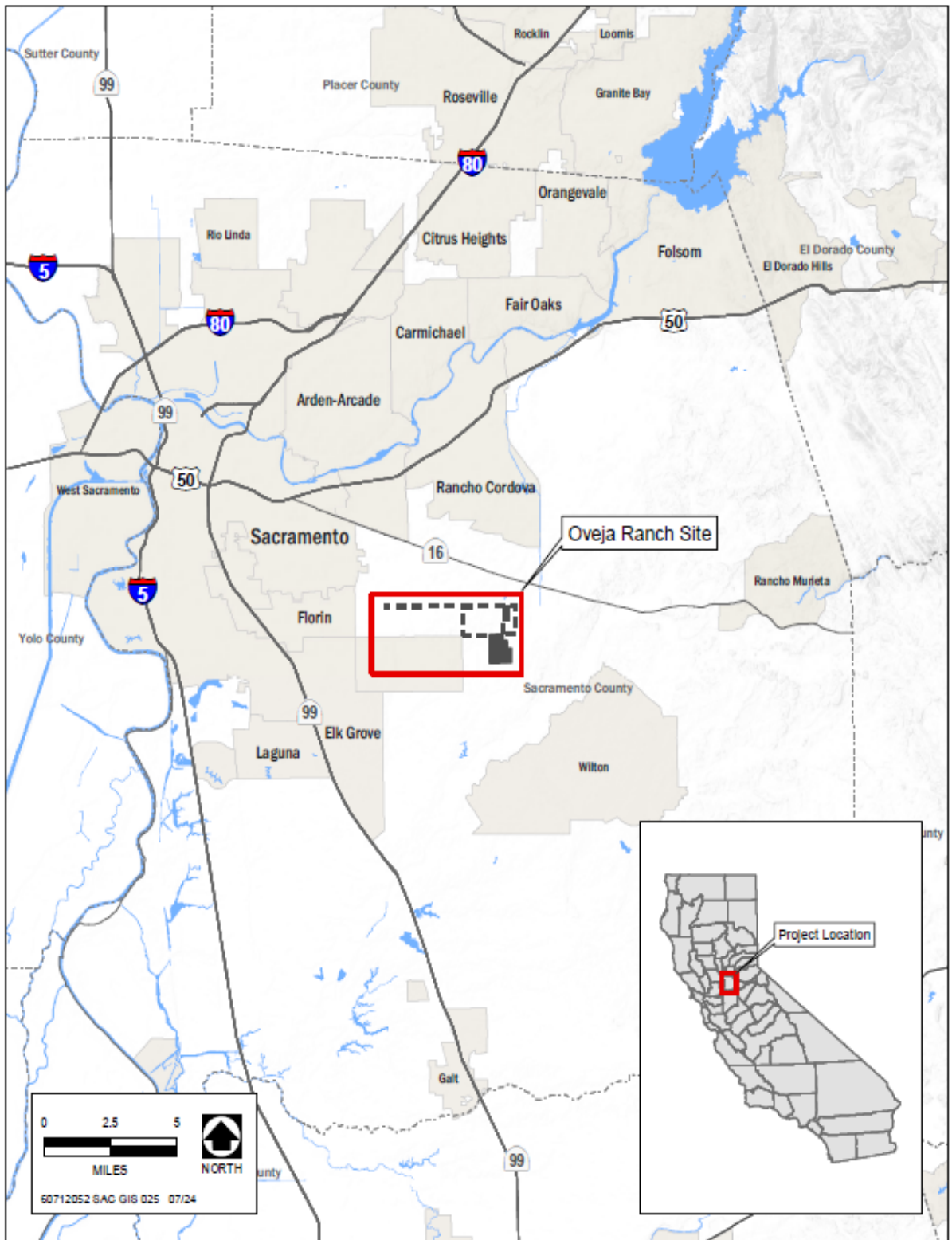


Figure 1: Regional Map

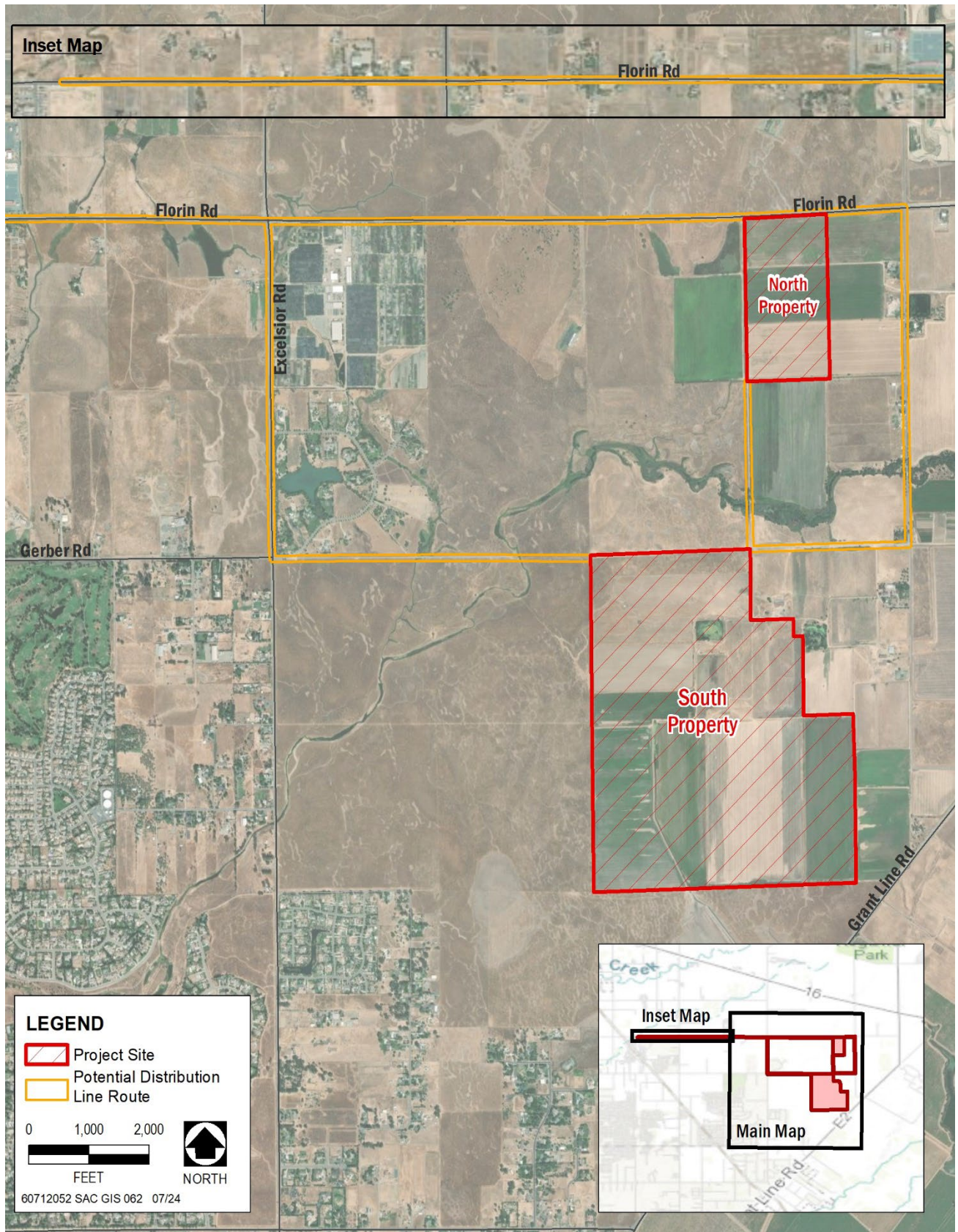


Figure 2: Oveja Ranch Solar Project Area



## Survey Methods

AECOM biologists conducted a habitat assessment, burrow survey, and wintering resident survey for western burrowing owl and potential owl burrows within the northern and southern portions of the project site. Surveys were not conducted on the potential distribution line routes (Figure 2). Surveys followed methodologies outlined in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (DFG 2013). Biologists walked transects spaced 160-feet apart across agricultural fields of the southern and northern portions of the project site to assess the suitability of habitat and to document suitable owl burrows. Occupied burrows, burrowing owl individuals, and suitable habitat were mapped using the ArcGIS Field Map application.

The occupancy of a burrow was verified by an observation of at least one burrowing owl or by sign(s) of activity, including feathers, pellets, prey remains, and excrement. Binoculars were utilized to assist with distant observations and where access was not possible.

## Survey History

### January 15, 2025: Burrow Survey- Southern Portion of the Project Site

On January 15, 2025, AECOM biologists Renee Richardson, Gabi Patterson, and Ryan Mendoza conducted a habitat assessment of the southern portion of the project site.

#### **Observations:**

- Suitable habitat for the burrowing owl was identified along agricultural field fences, earthen berms, and access roads of the southern portion of the project site. All suitable burrows and culverts, including those without sign, were mapped for future reference or surveys. The location of all mapped features is shown in Figure 3.

### January 23, 2025: Burrowing Owl Survey- Southern Portion of the Project Site

On January 23, 2025, AECOM biologists Gabi Patterson, Ryan Mendoza, and Shannon Rocha conducted a survey for winter residents to confirm burrowing owl presence within the southern portion of the project site.

#### **Observations:**

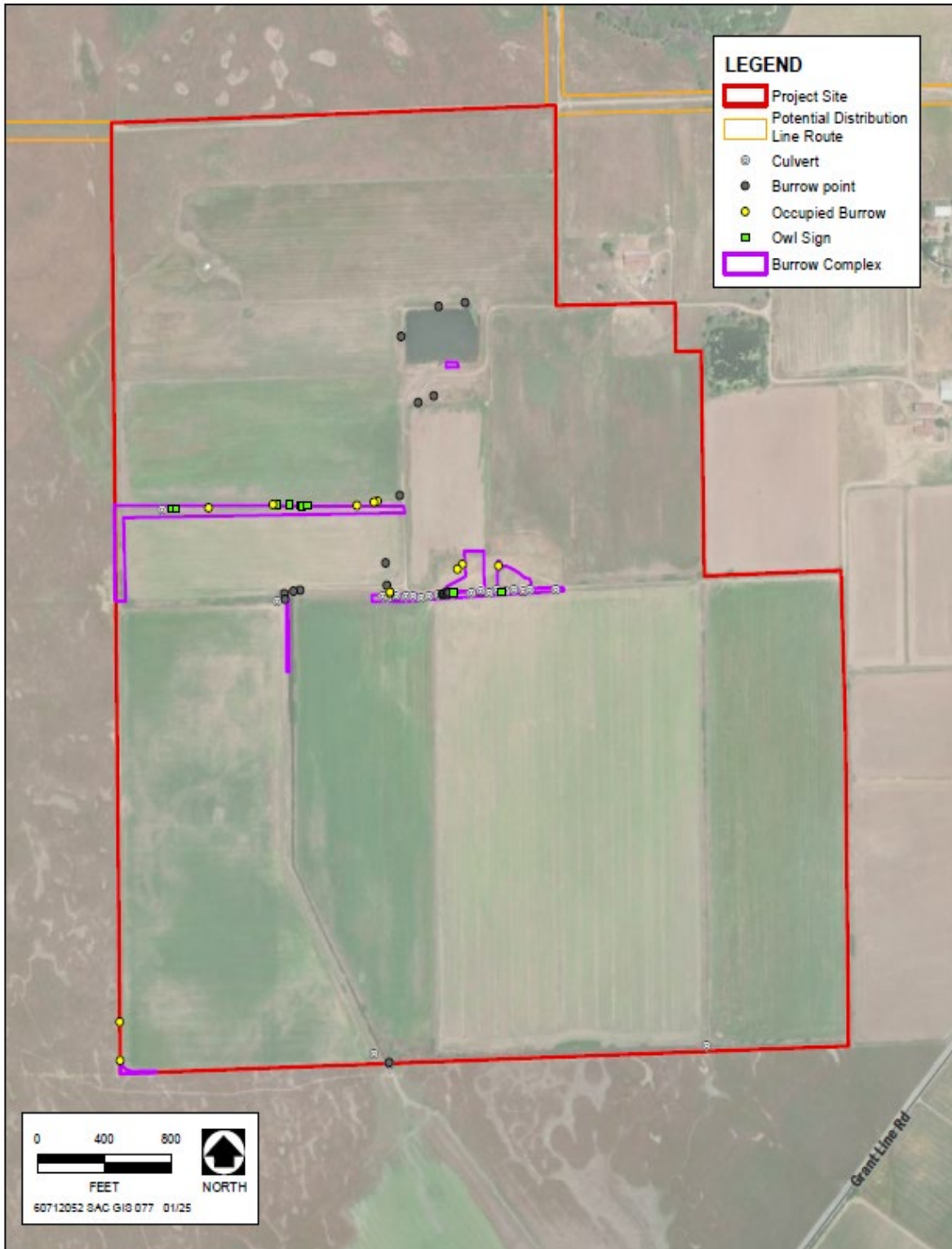
- Thirteen occupied burrows were identified along berms and access roads within the southern property of the project site. Recorded signs of occupancy included feathers, pellets, and excrement. It was estimated that 5 to 7 owls are occupying these thirteen burrows.
- Attachment A contains representative photographs of observed owls and owl sign.
- Attachment B provides a list of all avian species observed during the survey.

### January 23, 2025: Burrow Survey- Northern Portion of the Project Site

On January 23, 2025, AECOM biologists Gabi Patterson, Ryan Mendoza, and Shannon Rocha conducted a habitat assessment of the northern portion of the project site.

#### **Observations:**

- No suitable burrowing owl habitat was observed at the northern property.



Source: AECOM 2025

Figure 3. Survey Data Map

We appreciate the opportunity to assist SMUD in developing this renewable energy project in alignment with California's renewable energy goals. Please feel free to reach out with any questions.

Sincerely,

A handwritten signature in blue ink that reads "Petra Unger". The signature is written in a cursive, flowing style.

Petra Unger

AECOM Project Manager

## References

**AECOM. 2024.** *Oveja Ranch Solar and Battery Energy Storage Project Draft Biological Resources Survey Report. Prepared for Sacramento Municipal Utility District. (In preparation). September 2024.*

**California Department of Fish and Game (DFG). 2013.** *Staff Report on Burrowing Owl Mitigation.* California Department of Fish and Wildlife, Sacramento, CA. Available at: <https://wildlife.ca.gov>



## Attachment A: Representative Photographs

**Photograph 1.** Burrow complexes in the southern portion of the project site. AECOM 01.15.2025



**Photograph 2.** Example of an occupied burrow. AECOM 01.15.2025





**Photograph 3.** Inactive culverts  
found on-site. AECOM 01.15.2025



**Photograph 4.** Burrowing Owl.  
AECOM 01.23.2025



## Attachment B: Avian Species Observed in the Project Area

Common Name	Scientific Name
American crow	<i>Corvus brachyrhynchos</i>
American kestrel	<i>Falco sparverius</i>
Belted kingfisher	<i>Megaceryle alcyon</i>
Black phoebe	<i>Sayornis nigricans</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
Bufflehead	<i>Bucephala albeola</i>
Burrowing owl	<i>Athene cunicularia</i>
California quail	<i>Callipepla californica</i>
Canada goose	<i>Branta canadensis</i>
Common raven	<i>Corvus corax</i>
Great blue heron	<i>Ardea herodias</i>
Great egret	<i>Ardea alba</i>
House finch	<i>Haemorhous mexicanus</i>
Killdeer	<i>Charadrius vociferus</i>
Mourning dove	<i>Zenaida macroura</i>
Northern harrier	<i>Circus hudsonius</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Say's phoebe	<i>Sayornis saya</i>
Song sparrow	<i>Melospiza melodia</i>
Turkey vulture	<i>Cathartes aura</i>
Western meadowlark	<i>Sturnella neglecta</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>