

Appendix 3.4-5

**Methods and Results of 2022 Raptor Surveys for the Las
Camas Solar Park Project Site and Mitigation Site**



June 27, 2022

Subject: Methods and Results of 2022 Raptor Surveys for the Las Camas Solar Park Project Site and Mitigation Site, Merced County

The Las Camas Solar Park (Project Site) is located west of Interstate 5, north of Billy Wright Road and south of the Highway 152, approximately 6 miles west of the City of Los Banos (Attachment 1). The mitigation lands for this project (Mitigation Site) are located west of Interstate 5, and south and east of Los Banos Creek Reservoir (Attachment 2). Both sites are in unincorporated land in western Merced County, California. The sites, while large, are primarily annual grassland with very few trees suitable for Swainson's hawk nests. The buffer areas around the sites contain cottonwood and eucalyptus trees which can provide nesting habitat as well as transmission towers, dwellings and ornamental trees.

Several ICF biologists working in teams conducted nesting surveys for raptors including Swainson's hawk (*Buteo swainsoni*), hereafter referred to as SWHA, at the Project Site and Mitigation Site, including a 0.5-mile buffer surrounding both sites. This report summarizes the methods and results of those surveys.

Methods

Surveys for SWHA methods generally followed the Swainson's Hawk Technical Advisory Committee's *Recommended Timing and Methodology for Swainson's Hawks Nesting Surveys in California's Central Valley*¹ (survey guidelines). In accordance with the survey guidelines and Mitigation Measure, surveys were conducted between March 22 and April 20, 2022. All surveys were conducted by ICF wildlife biologists Seth Taylor, Sean O'Brien, Kara Martinusen, and Andrew Manning. Surveys were conducted by vehicle and on foot between 0700 and 1000 during the first survey period (March 20 to April 5) and between 0830 and 1200 during the second survey period (April 5 to April 20). In total twelve surveys were conducted, six at the Project Site and six at the Mitigation Site, with two biologists present for each survey to ensure that the entire site was covered. All accessible suitable nesting substrates (trees, lattice power structures, and large shrubs) within the Project Site and Mitigation Site, including a 0.5-mile buffer area around each site were searched for raptor nests. The biologists searched for nest structures and Swainson's hawks by scanning with the naked eye, binoculars, and a spotting scope to look for nest occupancy. When Swainson's hawk territorial behavior was observed (i.e., defensive displays, calling, pair interaction), hawks were followed to the extent possible to identify the location of the nest. The biologists recorded locations of all potential Swainson's hawk nest structures using GPS.

Results

In total five Swainson's hawk nests were found, all on the Project Site or within its 0.5-mile buffer. In addition, two great horned owl nests and four red-tailed hawk nests were also discovered at the Project

¹ Swainson's Hawk Technical Advisory Committee. 2000. *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys for the California Central Valley*. Available from <http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html#Birds>

Site. The nests and their locations are listed in Table 2, and their locations are mapped out in Attachment 1. At the Mitigation Site, two great horned owl and two red-tailed hawk nests were found. Their locations are listed in Table 2, and their locations are mapped out in Attachment 2. Large amounts of bird activity were observed in both sites and multiple passerine nests were also discovered. The timing and weather conditions of each survey is listed in Table 3.

Table 1: Nests on the Las Camas Site

Nest ID	Species	Coordinates	Location within Project	Status as of final Survey
SWHA 1	Swainson's hawk	37.050862°, -121.012231°	On project, northwest corner	Active- incubating
SWHA 2	Swainson's hawk	37.038148°, -120.968927°	450 yards south of project	Active- incubating
SWHA 3	Swainson's hawk	37.050984°, -120.957908°	550 yards east of project	Active- incubating
SWHA 4	Swainson's hawk	37.059090°, -120.998378°	300 yards north of project	Active- incubating
SWHA 5	Swainson's hawk	37.034913°, -120.981242°	On project, southern boundary	Active- incubating
RTHA 1	Red-tailed hawk	37.039914°, -120.967453°	250 yards south of project	Active- incubating
RTHA 2	Red-tailed hawk	37.047739°, -120.960250°	120 yards east of project	Active- incubating
RTHA 3	Red-tailed hawk	37.058220°, -121.018573°	900 yards NW of project	Active- incubating
RTHA 4	Red-tailed hawk	37.035531°, -120.970379°	800 yards south of project	Active- incubating
GHOW 1	Great-horned owl	37.050855°, -120.957828°	550 yards east of project	Inactive- fledged
GHOW 2	Great-horned owl	37.037574°, -120.969402°	550 yards south of project	Inactive- fledged

Table 2: Nests on the Mitigation Site

Nest ID	Species	Coordinates	Location within Project	Status as of final Survey
RTHA 1	Red-tailed hawk	36.986092°, -120.932277°	500 yards north of project	Active- incubating
RTHA 2	Red-tailed hawk	37.000738°, -120.913554°	200 yards east of project	Active- incubating
GHOW 1	Great-horned owl	36.984577°, -120.934149°	500 yards north of project	Unknown
GHOW 2	Great-horned owl	36.980511°, -120.949724°	500 yards NW of project	Active- brooding

Table 3: Survey Timing and Conditions

Date	Survey Period	Location	Weather Conditions
3/22	1	Project Site	clear, 47-63°F, 0-3 mph winds
3/23	1	Project Site	clear, 53-68°F, 0-5 mph winds
3/24	1	Mitigation Site	10% cloud cover, 49-66, 0-5 mph winds
3/25	1	Project Site	clear, 47-60°F, 5 mph winds
3/29	1	Project Site	50% cloud cover, 47-58, 5 mph winds
3/30	1	Mitigation Site	clear, 48-58°F, 5-10 mph winds
3/31	1	Mitigation Site	80% cloud cover, 42 – 58°F, 5 mph winds
4/7	2	Mitigation Site	clear, 61-77°F, 5 mph winds
4/8	2	Project Site	clear, 47-69°F, 5 mph winds
4/12	2	Mitigation Site	clear, 49-73°F, 5-10 mph winds

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4/13	2	Project Site	clear, 52-79°F, 5 mph winds
4/14	2	Mitigation Site	50% cloud cover, 46-89°F, 5 mph winds
4/20	2	Project Site	5% cloud cover 52-66°F, 0-5 mph winds

Sincerely,

A handwritten signature in cursive script, appearing to read "Steve Avery".

Steve Avery
Principal Wildlife Biologist

Attachment 1 - Figure 1. Nesting Bird Survey for the Las Camas Project Site

Attachment 2 - Figure 2. Nesting Bird Survey for the Las Camas Mitigation Site

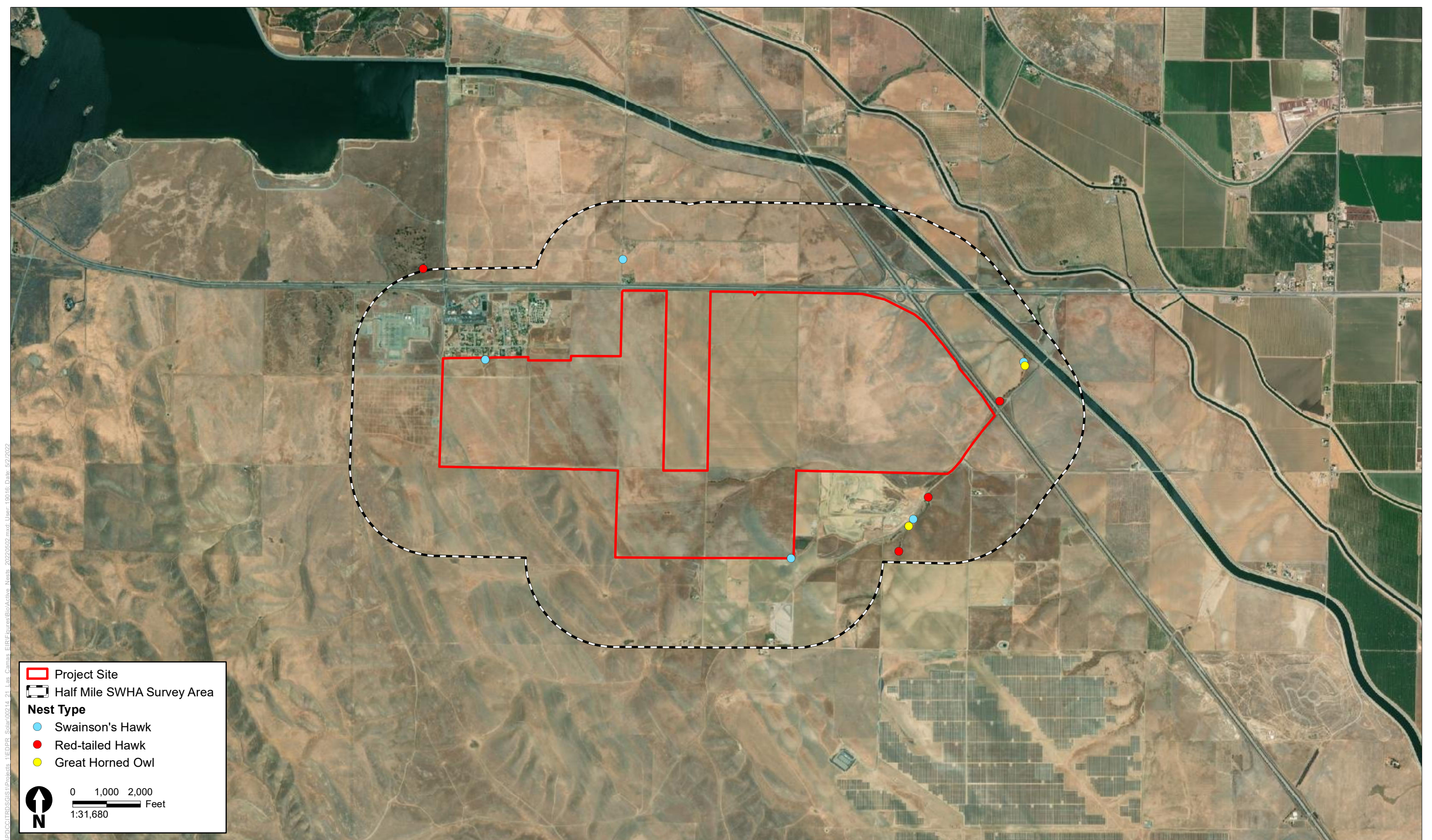


Figure 1
Nesting Bird Survey
for the Las Camas Project Site

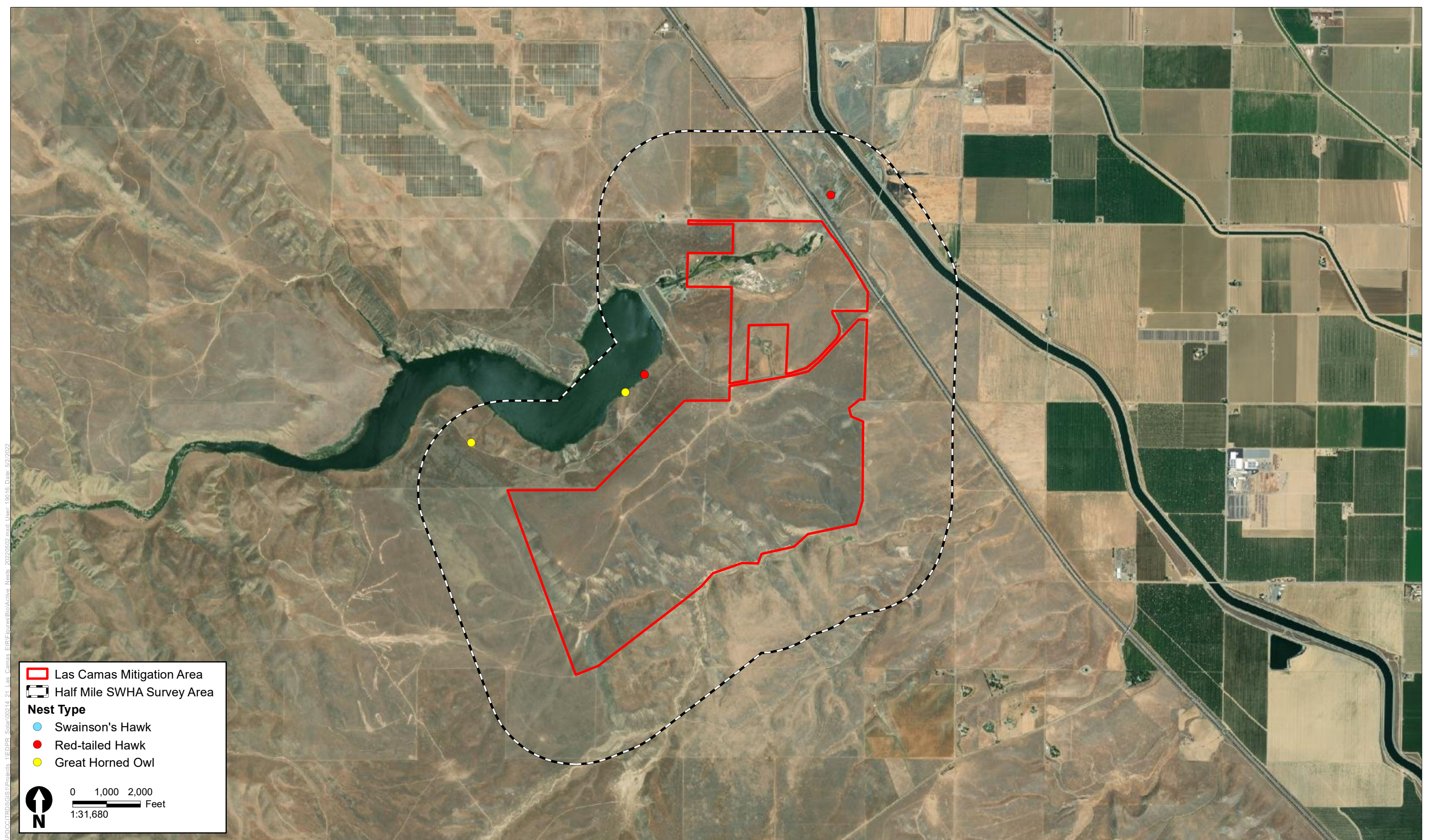


Figure 2
Nesting Bird Survey
for the Las Camas Mitigation Site