APPENDIX 5.4 BIG-1

BIOLOGICAL RESOURCES TECHNICAL REPORT

*PART 6

BIG SWHA Survey #5 - Day 1

Date: 6/25/2024
Biologists: AG, GM

Start: 1600, 102F, 3-5 mph wind, 0% CC
End: 2005, 89F, 5-10 mph winds, 0% CC

Sunset: 2005

Species Observed:
Reptiles: desert iguana
Birds: MODO CORA HOSP EUCD EUST WEKI BLPH LOSH HOLA HOFI LENI
Mammals: AGS

Survey Notes:

- No SWHA or potential SWHA nests were observed within the project site or survey buffer.
- Observed both nesting SWHA adults off the nest and foraging in the adjacent alfalfa fields; two downy and alert chicks were observed in the nest

AL	Sam's	Hesperis	Brown	sky	8/25
GM	845	82	3-5	10%	
	1030	88	8-10	1%	
CORA	HORSE	ANTH	NUMO	LOSA*	CACW
CAQU	MODO	HOSP			
CAGS; New Cornid digs; AGS!					
SBLi; Cowbirds; GBumps; Yellow breasted spp.					
LOSA; 34.4 8/25			~~34.~~ 117.38 0106		
CACW; west, 4 individuals					

AL	Big Swift		West	visit	6/25
GM	1230	10PF	5-8	1%	

- Arrived on Dixie Rd. Observed 2 SWIFT in flight above farm. In flight with multiple CORA. Farm to west being harvested by tractor. ~~West~~ East farm has sprinklers on
- at least 1 chick in nest
- spoke to property owner, ok with birding at any time

MC Big SWHA surv day 1 #5 6/25

Com 1600 103 3-8 Ir.

Corn Hosp MODO EUCD EUST WEKR
LOSH# CRAN

Roadkill surv

Most: dead in road
EUCO / CORA

MC Big Swha surv
Cat Roadkill day 2 #5 6/26

	0645	80	3-8	Oi.
	1030	93	3-5	Ok

Hosp CORA EUCO CATSP HOUS GEKO
WWDO CRAN ATFL

Roadkill: kitten on main st

BIG SWHA Survey #5 - Day 2

Date: 6/26/2024
Biologists: AG, GM

Start: 645, 80F, 3-8 mph wind, 0% CC
End: 1030, 93F, 3-5 mph winds, 0% CC

Sunrise: 535

Species Observed:
Reptiles: yellow-backed spiny lizard
Birds: HOSP EUCD LASP HOLA GRRO WWDO NOMO ATFL CAQU MODO LOSH
Mammals: AGS, CAGS

Survey Notes:

- No SWHA or potential SWHA nests were observed within the project site or survey buffer.

AG Big SWTH Surv 1/2 7/17

HS 0800 103 1-5 25%
2000 99 3-8 10%
COEA EUCD HOSP RUBI HOFI HOLA*
LOSH* WEKI Thrasher. CLSW

Sunset 2001

HOLA - everywhere
LOSH* - 34.849040 117.170117

No SWTH, No active nests. No new nests

~~AG~~ Big SWTH Surv 2/2 7/18
SH 0630 78 1-3 10%
1030 93 3-8 40%
COEA HOSP MODO EUCD SWTH*
Hummingbird sp. WEKI EAST AMKE
RTHA LBVI

~~No Nest or SWTH~~

Nest is gone. Large Monsoon passed over the weekend.
- 4 SWTH obs. in tree and flowering ads to hum to nest
Screw beam resighted 34.810650, 117.2008558

Sunset 5:4

7/17 BIG SWHA ~~HOSK~~
12:45 pm-

	TIME	TEMP	WIND	CC
START	4:00pm	103	1-5	25%
END	8:00pm	99	3-8	10%

W/ WOLFE
~~COKA~~, EUCA, HOSP, ~~KOPA~~
~~HOLA~~, LOSH*, WEKA, ~~WETA~~*
CUSW,

NO SWHA, NO ACTIVE NESTS,
NO NEW NESTS

~~*PERCHED IN TAMARIX~~
~~* PERCHED IN DEAD TREE &~~
~~FLUSHED AWAY. 75% CONFIDENT~~
~~IN ID. OCCUPIED BLUE &~~
~~RANGE~~

7/18 BIG SWITCH DAWN

	TIME	TEMP	WIND	CC
START	6:30AM	78	1-3	5%
END	10:30AM	93	3-8	40%

WILDLIFE:
COBA, HOSP, SWITA*, HUMMINGBIRD SP, EUCD, WEKA, EAST, AMKE, RTHA, LEN1,

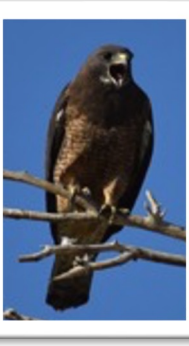
* 4 INDIVIDUALS OBSERVED PERCHED ON ADJACENT TREE / UTILITY POLE TO NEST. ALL 4 OBSERVED FLYING. LIKELY 2 FLEDGLINGS 2 ADULTS

SUNRISE 5:46AM

ATTACHMENT CC

BARSTOW INTERNATIONAL GATEWAY PROJECT PROTOCOL PRESENCE/ABSENCE 2025 SURVEY REPORT FOR SWAINSON'S HAWK (*BUTEO SWAINSONI*)

ROCKS
BIOLOGICAL CONSULTING


BARSTOW INTERNATIONAL GATEWAY PROJECT

PROTOCOL PRESENCE/ABSENCE 2025 SURVEY REPORT FOR SWAINSON'S HAWK (*Buteo swainsoni*)

San Bernardino County, California

August 29, 2025

Prepared for:
Kimley-Horn and Associates
1100 W Town and Country Road, Suite 700
Orange, CA 92868
(619) 234-9411

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107
(619) 701-6798

TABLE OF CONTENTS

1 Summary 1
2 Introduction 1
2.1 Project Description 1
2.2 Project Location 1
2.3 Swainson's Hawk Natural History 2
3 Methods 2
3.1 Field Surveys 2
3.2 Regional Foraging Habitat Desktop Analysis 3
4 Results 4
4.1 Existing Conditions & Habitat Assessment 4
4.2 Field Survey Results 5
4.3 Regional Foraging Habitat Desktop Analysis Results 8
5 Avoidance and Minimization Measures 9
6 Conclusions 9
7 References 10

TABLES

Table 1. Swainson's Hawk Survey Dates, Times, and Conditions 5
Table 2. 2025 Swainson's Hawk Survey Results 7

FIGURES

Figure 1. Project Location
Figure 2. Swainson's Hawk Survey Results
Figure 3. Foraging/Nest Field Survey Area (10-Mile Buffer)
Figure 4. Swainson's Hawk Foraging Habitat

APPENDICES

Appendix A – Site Photographs
Appendix B – Bird Species Observed
Appendix C – California Natural Diversity Database Online Field Survey Form Reports
Appendix D – Surveyor Field Notes

1 SUMMARY

This report provides a detailed analysis of the habitat assessment and focused Swainson's hawk (*Buteo swainsoni*) nesting surveys conducted by Rocks Biological Consulting (RBC) for the Burlington Northern Santa Fe Railway (BNSF) Barstow International Gateway (BIG) Project (project) located in and adjacent to the City of Barstow, San Bernardino County, California. During 2024 focused species and protocol nest surveys, Swainson's hawk was recorded nesting one mile north of the project site near active alfalfa fields (RBC 2024). As a result, RBC conducted a second year of focused species surveys in 2025 in accordance with the guidelines set forth in the California Energy Commission and Department of Fish and Game's 2010 *Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California* to further assess presence/absence of nesting Swainson's Hawk within the project footprint and surrounding areas.

Multiple Swainson's hawks were observed migrating through the project impact footprint and 10-mile buffer (survey area) and one active nest was documented within the survey area (Figure 1). The nest was located in Hinkley, California, approximately one mile north of the project site near active alfalfa (*Medicago sativa*) and Teff grass (*Eragrostis tef*) fields (Figure 2C). Due to the presence of potentially suitable habitat within the project site and presence of nesting Swainson's hawk in the vicinity, measures to avoid and/or minimize potential impacts on nesting Swainson's hawks during project implementation are recommended.

2 INTRODUCTION

2.1 PROJECT DESCRIPTION

The project includes the construction of an approximately 4,300-acre rail yard with an intermodal facility, a block swap yard, and a transload warehouse center. The intermodal facility would be used to transfer goods between trains and trucks, with trucks either picking up containers from arriving trains or delivering containers to departing trains. The block swap yard would be used for transferring a block of train cars between trains without re-classification at the rail yard. In effect, the entire block of cars remains coupled together and would be moved en masse to another train. The transload warehouse center would be used to transfer goods from 40-foot international containers to 53-foot short-haul domestic containers.

Additionally, to serve the proposed rail yard and transload warehouse center, BNSF proposes off-site rail improvements including lead track extensions and offsite non-rail improvements including roadways and infrastructure.

2.2 PROJECT LOCATION

The project site, including off-site improvements, occurs primarily within unincorporated San Bernardino County and partially within City of Barstow (Figure 1). The project site is generally bounded by the Mojave River to the north, Route 66 (National Trails Highway) to the south, Lenwood Road to the east, and Hinkley Road to the west. Additionally, the project site is located

within five U.S. Geological Survey (USGS) 7.5-minute quadrangles: Barstow, Barstow SE, Hinkley, Hodge, and Wild Crossing.

2.3 SWAINSON'S HAWK NATURAL HISTORY

Swainson's hawk is listed as threatened by the California Fish and Game Commission under California Endangered Species Act (CESA). Historically common, populations in southern California have diminished largely due to the destruction of nesting habitat. Current breeding occurs in the Central Valley in sparsely foliated juniper-sage flats, riparian areas, planted windbreaks, ornamental shade trees near residences, solitary oaks, and oak savannahs, and throughout the Klamath Basin, Northeastern Plateau, Lassen County, and Antelope Valley in open desert, grasslands, alfalfa fields, and livestock pastures with scattered tree coverage. Infrequent breeding also occurs across Lanfair Valley, Owens Valley, Fish Lake Valley, and the Mojave Desert in similar habitats. Swainson's hawk migrates south from North America to Argentina in August and September, returning to the northern hemisphere March through August to breed. Swainson's hawk migrates through central and southern California in September and October while southbound and March through May while northbound (Zeiner et al. 1988-1990).

Nesting occurs in proximity to foraging sites in trees or shrubs and less frequently, on top of utility poles (Cornell University 2025). In urban areas across the Central Valley, Swainson's hawk prefers mature coniferous trees (England et al. 1995). In southern California, nesting is known to occur in cottonwoods (*Populus* spp.), sycamores (*Platanus* spp.), conifers, native oaks (*Quercus* spp.), and Eucalyptuses (*Eucalyptus* spp.) (Cornell University 2025; England 1995, 1997; Unitt, 2004). Swainson's hawks typically have high nest fidelity and are likely to use the same nest site each year (California Energy Commission et al. 2010). Proximity to suitable foraging habitat is positively correlated with nesting, particularly in urban areas (England et al. 1995; Estep 1989). Grasslands, open desert, or agricultural fields with sparsely dispersed trees are essential for hunting prey, which include rodents, lagomorphs, ground squirrels, and arthropods. Roosting occurs in large trees, if available, or within grasses near foraging grounds (Zeiner et al. 1988-1990). Swainson's hawks are primarily threatened by loss of mature riparian breeding habitats, conversion of high-quality foraging habitat to incompatible land uses, and pesticide poisoning (Woodbridge 1998).

3 METHODS

RBC performed both field and desktop analyses to evaluate foraging and nesting habits of Swainson's hawk in the region and vicinity of the BIG project site. Habitat assessment and field survey methodology are discussed in Section 3.1 below and regional foraging habitat desktop analysis methodology is discussed in Section 3.2

3.1 FIELD SURVEYS

RBC biologists Alec Goodman, Kelsey Woldt, Ian Hirschler, Imran Badar, Brenna Ogg, and Melissa Tamarkin conducted six focused Swainson's hawk surveys between March 20 and July 17, 2025, to assess Swainson's hawk nesting activity, nesting potential, foraging activity, and species presence/absence within the project site and surrounding 10-mile radius (i.e., survey area). In accordance with the California Energy Commission and Department of Fish and Game's 2010

Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California two surveys were conducted during Period I (January 1 – March 31), one survey was conducted during Period II (April 1 – April 30), and three surveys were conducted during or after Period V (June 1 – July 15).

Period I occurs prior to Swainson's hawk arrival from wintering grounds and allows surveyors to determine potential nesting locations. Period II is typically when Swainson's hawks return to their nesting territories and begin displaying courtship and other nesting behaviors, while Period V is typically prior to fledging when nestlings are active and visible within nests. The survey area was defined as the project impact footprint plus a 10-mile buffer (Figure 3).

A combination of pedestrian and windshield surveys were conducted throughout the survey area where property access was granted. The majority of each survey was conducted via windshield on paved and unpaved public roadways with speed limits varying between 10 to 55 miles per hour (mph). Two to four biologists conducted each survey to ensure sufficient visual coverage during windshield surveys. While driving, passenger biologists scanned for perched or soaring raptors and potential nests within the survey area. Additionally, biologists drove with windows down while driving slower than 25 mph to listen for raptor vocalizations. The vehicle made frequent stops to scan trees and structures (e.g., electric distribution poles or transmission towers) within the survey area that could be used for nesting. Potential nesting trees/structures that could not be sufficiently surveyed from afar using binoculars or a spotting scope were approached on foot if property access was granted. If located, Swainson's hawk behavior was monitored and recorded to better understand foraging grounds, nesting territories, and potential use of the BIG project site.

Binoculars with a minimum 10x42 magnification and a spotting scope with 45x65 magnification were used to aid in identification of bird species, determine nest status, track foraging activity, and visually examine areas where vehicle or pedestrian access was limited. During each survey, biologists recorded all Swainson's hawk individuals, Swainson's hawk nests, bird species encountered, and special-status species observed. If a raptor nest was located, it was examined to determine species and nesting status. Nests were considered active if any of the following were observed: (1) adults incubating or perching on the nest; (2) adults carrying food or nesting material to the nest; or (3) eggs and/or chicks visible in the nest. Nests were classified as active until all chicks were fledged and no longer present within the nest tree/structure (i.e., no longer dependent on the nest). Foraging location, prey type, and foraging habitat type were recorded to better understand the territory of nesting and migrating Swainson's hawk. No call playback or other forms of harassment were used during these surveys. Field observations and associated data were recorded using the ArcGIS application Field Maps.

3.2 REGIONAL FORAGING HABITAT DESKTOP ANALYSIS

To evaluate the extent of potential Swainson's hawk foraging habitat near the BIG project site and impacts associated with project construction on foraging Swainson's hawk in the region, in particular the active nest located approximately one mile north of the site, RBC used aerial imagery and GIS tools to identify unsuitable and suitable foraging habitat for Swainson's hawk within 10 miles of the BIG project site. The CDFW recommends a 10-mile radius for analysis of potential development impacts to Swainson's hawk foraging habitat (CDFW 1994). Lands within 10 miles of

active nest sites are considered most crucial for foraging based on typical Swainson's hawk foraging ranges. The following list of vegetation communities and land covers was developed based on Central Valley and Antelope Valley Swainson's hawk populations, as summarized in CDFW 1994 and CDFW 2010, to analyze the suitable versus unsuitable Swainson's hawk foraging habitats within the project area and 10-mile radius (combined making up the Analysis Area):

Suitable Habitats:

- Grasslands
- Dry land
- Irrigated pasture
- Alfalfa, hay crops and cereal grain crops
- Ruderal and fallow fields
- Low growing row or field crops
- New orchards
- Desert scrub habitats and dunes that support a suitable prey base (small mammals and insects)
- Joshua tree woodlands
- Riparian

Unsuitable Habitats/Land Covers:

- Mature orchards
- Vineyards
- Developed/disturbed areas (roads, highways, etc.)
- Barren areas (mining sites, borrow pits)
- Urban and residential areas

Site specific vegetation mapping and CDFW VegCAMP mapping data (2011-2012) was used to classify the extent of suitable and unsuitable habitats within the Analysis Area. Regional vegetation mapping data was updated via review of recent aerial photography to confirm classifications and adjust them accordingly. The following vegetation communities/land cover types were found in the Analysis Area: inactive agricultural fields, active agricultural fields, desert scrub and dunes, riparian, barren, urban, and developed/disturbed. Developed/disturbed, urban, and barren areas within the Analysis Area are considered unsuitable for Swainson's hawk foraging. The other vegetation communities and land cover types present (inactive agricultural fields, active agricultural fields, desert scrub, and riparian), provide potential foraging opportunities for Swainson's hawk. The California Natural Diversity Database (CNDDB) was queried for Swainson's hawk records within a 25-mile radius of the project site (CDFW 2025).

4 RESULTS

4.1 EXISTING CONDITIONS & HABITAT ASSESSMENT

The survey area is primarily composed of agricultural land, creosote bush scrub, allscale scrub, disturbed land, developed land, and dune habitat with large mature trees suitable for raptor nesting scattered throughout these habitats. Suitable nesting trees included, but were not limited to, salt cedar (*Tamarix* spp.), cottonwood (*Populus fremontii*), Chinese elm (*Ulmus parvifolia*), and ornamental trees, such as pines (*Pinus* spp.), typically associated with private residences. Additionally, the project site occurs adjacent to a portion of the Mojave River that contains patches of tall, dense salt cedar with large cottonwoods intermixed.

Active agricultural land offered the highest quality foraging habitat observed throughout the survey area. Crops included alfalfa and Teff grass amongst other species. Active agricultural land attracts gophers (*Thomomys* spp.), voles (*Microtus californicus*), and other rodent prey which may otherwise be absent or less prolific in the surrounding native desert scrub. The survey area also includes sparsely distributed scrub habitat that is suitable for foraging raptors. A wide variety of potential prey species for Swainson's hawk were observed throughout the project site, including grasshoppers, western fence lizard (*Sceloporus occidentalis*), yellow-backed spiny lizard (*Sceloporus uniformis*), California ground squirrel (*Otospermophilus beecheyi*), desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), and Botta's pocket gopher (*Thomomys bottae*).

RBC biologists identified a particularly suitable site approximately one mile north of the project site near the intersection of Lenwood Road and Community Boulevard with high-quality agricultural habitat (Figure 2c). This site was composed of active alfalfa and Teff grass fields with numerous mature ornamental trees, making it highly suitable for Swainson's hawk foraging and nesting. Swainson's hawk was documented nesting in a Chinese elm tree in this area in 2024 by RBC during the first year of focused Swainson's hawk surveys (RBC 2024).

4.2 FIELD SURVEY RESULTS

All surveys were conducted during times of the day that typically coincide with high Swainson's hawk activity and during high visibility conditions with no precipitation. Surveys took place from dawn to 13:00 and from 16:00 to dusk. All survey dates, times, and conditions are provided in Table 1, below.

Table 1. Swainson's Hawk Survey Dates, Times, and Conditions

Survey Number	Date	Surveyors	Time (Start- End)	Temp. (F) (Start- End)	Cloud Cover (%) (Start- End)	Wind Range (mph) (Start; End)	Precip. (Low, Med, High) (Start- End)	Visibility (Low, Med, High) (Start; End)
1	3/20/2025	AG, KW, IB	0640-1300	40-70	0-0	0-3; 8-10	None; None	High; High
1	3/20/2025	AG, KW, IB	1600-1900	78-50	40-100	5-8; 15-20	None; None	High; High
1	3/21/2025	AG, KW, IB	700-1000	41-55	5-60	1-3; 1-3	None; None	High; High
2	3/28/2025	MT, KW, IB	0650-1340	52-77	70-60	3-5; 5-8	None; None	High; High
2	3/28/2025	MT, KW, IB	1600-1920	76-66	10-10	10-15; 18-20	None; None	High; High
2	3/29/2025	MT, KW, IB	0630-1010	50-58	50-70	20-23; 20-23	None; None	High; High
3	4/3/2025	IH, MT, IB	0640-1400	37-60	0-10	1-3; 2-5	None; None	High; High
3	4/3/2025	IH, MT, IB	1600-1910	63-61	30-10	2-5; 1-3	None; None	High; High
3	4/4/2025	AG, MT, IB	0630-1020	39-57	0-0	1-3; 1-3	None; None	High; High
4	6/12/2025	AG, KW, IB, MT	0700-1300	70-97	20-15	2-5; 4-7	None; None	High; High

4	6/12/2025	AG, KW, IB, MT	1600-1900	101-91	0-0	8-10; 8-12	None; None	High; High
4	6/13/2025	AG, KW, IB, MT	0515-1000	70-84	20-20	1-3; 8-10	None; None	High; High
5	6/25/2025	AG, KW, IB, MT	0545-1000	70-84	20-20	1-3; 8-10	None; None	High; High
5	6/25/2025	AG, KW, IB, MT	0815-1305	74-92	0-0	3-5; 1-3	None; None	High; High
5	6/26/2025	AG, KW, IB, MT	1600-1930	93-91	0-0	3-5; 3-5	None; None	High; High
6	7/16/2025	AG, KW, IB, MT	0630-1300	72-96	5-1	3-5; 1-3	None; None	High; High
6	7/16/2025	AG, KW, IB, MT	1630-1930	100-93	0-0	8-10; 10-15	None; None	High; High
6	7/17/2025	AG, KW, IB, MT, BO	0615-1030	72-86	30-20	0-2; 3-5	None; None	High; High
Surveyors: AG=Alec Goodman, Brenna Ogg, IH: Ian Hirschler, IB: Imran Badar, KW=Kelsey Woldt, MT=Melissa Tamarkin								

Table 2 below provides a summary of 2025 Swainson's hawk survey results. No Swainson's hawks were observed in the survey area during the first survey in Period I. During the second survey in Period I, at least 13 and up to 15 unique individual Swainson's hawks were observed in the high-quality agricultural habitat near the intersection of Community Boulevard and Lenwood Road (Figure 2C). During the dawn to afternoon survey window, nine individuals were observed perching on a sprinkler system, periodically foraging in the associated agricultural field (Figure 2C). During the dusk survey window, 13 to 15 individual Swainson's hawks were observed kettling above an agricultural field in the same area, near Dixie Lane. During the third survey, which took place during Period II, a maximum of seven Swainson's hawks were observed on sprinkler systems in agricultural fields off Dixie Lane, in the high-quality agricultural habitat. During the fourth survey, one active nest (discussed in detail below) was recorded in a Chinese elm tree on an agricultural property within the same high quality foraging grounds. Only two adult Swainson's hawks, (i.e., the breeding pair) were observed during surveys four through six, all of which took place during or after Period IV. During these final three surveys, the female Swainson's hawk consistently perched in the nest tree, foraged in the adjacent alfalfa and Teff grass fields, and delivered prey to the nest. The male was often recorded perching in a tree snag near Dixie Lane, fending off ravens (*Corvus corax*), and foraging in the nearby agricultural fields. During the fifth survey, biologists were able to identify two chicks in the nest using binoculars. Three chicks were recorded and banded on June 28, 2025, during banding operations led by Dr. Pete Bloom.

The aforementioned active Swainson's hawk nest was found on June 12, 2025, in a large Chinese elm tree immediately adjacent to active alfalfa fields in the high-quality foraging habitat described above (Figure 2C). The nest was located in the same Chinese elm tree as documented in 2024. The breeding adults were observed foraging and establishing their nesting territory throughout Periods I and II; active nesting was confirmed during Period IV, with the first chick being observed on June 25, 2025. Biologists noted that the breeding female was banded with alphanumeric code

J2, indicating that she was banded by Peter Bloom (SCP-#000221, MB20431) as a nestling in Antelope Valley in 2018 and was the same female that was recorded using this nesting territory during 2024 focused surveys. On June 30, 2025, the three chicks from the active nest were banded by Peter Bloom. Chicks were placed back into the nest after banding. On July 17, 2024, one fledgling was observed branching near the nest and a second fledgling was observed perching on a sprinkler system in agricultural fields adjacent to the historical nest. The third fledgling was not observed.

All agricultural lands and open expanses of desert scrub within a ten mile radius of the project site were surveyed for foraging or nesting Swainson's hawk. Swainson's hawk was not observed foraging outside of the Lenwood Road and Community Boulevard high quality agricultural habitat described above. Four Swainson's hawk were incidentally observed soaring above the BIG project site during rare plant surveys late March through early April 2025 (Figure 2A and 2B). No additional nesting pairs were recorded throughout the survey area.

Representative photographs were taken during surveys (Appendix A). A total of 45 bird species were observed during surveys (Appendix B). All special-status species observations were submitted to the California Natural Diversity Database (CNDDB; Appendix C), and all observations of special status species and nests were recorded in ArcGIS Field Maps and detailed in field notes (Appendix D).

Table 2. 2025 Swainson's Hawk Survey Results

Survey Number	Date	Approximate Maximum Number of Swainson's Hawks Observed	Observed Behaviors (Adults)	Nesting/Nest Status
1	3/20/2025 – 3/21/2025	0 adults	-	-
2	3/28/2025 – 3/29/2025	13-15 adults	Foraging; kettling; perching	No nesting behavior/nests observed
3	4/3/2025 – 4/4/2025	7 adults	Foraging; perching	No nesting behavior/nests observed
4	6/12/2025 – 6/13/2025	2 adults	Nest building; foraging; kettling; perching	1 nest recorded
5	6/25/2025 – 6/26/2025	2 adults; 2 chicks	Foraging; feeding chicks; perching; mobbing	3-4 weeks old chicks in nest
Chick Banding	6/28/2025	2 adults; 3 chicks	Foraging; perching; mobbing	3-4 weeks old chicks in nest
6	7/16/2025 – 7/17/2025	2 adults; 2 fledglings	Foraging; perching; mobbing	1 fledgling in nest tree; 1 fledgling left nest

4.3 REGIONAL FORAGING HABITAT DESKTOP ANALYSIS RESULTS

The Analysis Area (project site plus 10-mile buffer) covers a total of 432,475 acres. Based on the vegetation data and aerial photography review, approximately 78% of the project area is suitable Swainson's hawk foraging habitat (4,370 acres) and 22% of the project area is unsuitable for foraging (1,248 acres) (Figure 4). The 10-mile radius contains approximately 94% suitable foraging habitat (401,933 acres) and 6% of these lands are unsuitable for foraging (24,924 acres) (Figure 4). Assuming complete conversion of the project area to urban/developed land, the project would remove 4,370 acres of potential foraging habitat out of 406,303 total suitable acres in the Analysis Area, which equates to 0.01% of the total amount of suitable habitat within the Analysis Area. Therefore, more than 99.99% of the suitable habitat within Analysis Area will remain and the project is not likely to have a significant impact on Swainson's hawk foraging habitat in the region.

Ornamental trees are the primary nesting habitats for Swainson's hawk in the region. As previously discussed, one active Swainson's hawk nest occurs in a Chinese elm tree immediately adjacent to active agricultural fields approximately one mile north of the BIG project site (Figure 2C). These agricultural fields are planted with alfalfa, which is a preferred crop for foraging Swainson's hawks given its low stature and the plentiful rodent and insect prey populations it supports (Bechard 2010, Babcock 1995). Swainson's hawks have successfully nested at this location, hatching three chicks (two of which successfully fledged), in both 2024 and 2025.

Proximity of suitable foraging habitat to potential nest trees is an important factor for Swainson's hawk nest site selection. Nest sites are generally adjacent to or within easy flying distance to alfalfa or other habitats or agricultural crops which provide an abundant and available prey source (CDFW 1994). The only active agricultural fields within the Analysis Area are adjacent to and in the immediate vicinity of the active nest site one a mile away from the BIG project site. No active agricultural fields are present within the BIG project site. Former agricultural areas on the BIG project site have been left fallow, overgrown with invasive mustards (e.g., *Brassica nigra*) and tumbleweeds (*Salsola* spp.), and based on historic aerial photo review have not been cultivated or irrigated since 2015. Although Swainson's hawks have been observed flying over the BIG project site they have not been observed foraging on site during the two years of focused survey efforts. However, RBC biologists have made numerous observations in 2024 and 2025 of the nesting pair foraging within the active agricultural fields immediately adjacent to the nest site one mile to the north. Dr. Pete Bloom, renowned raptor biologist with nearly 100 publications including Swainson's hawk studies, banded the Swainson's hawk chicks at the nest tree in both 2024 and 2025. Although the nesting pair's exact movement patterns have not been monitored via affixed transmitters, in personal communications with the project team, he has stated the Swainson's hawk pair is likely to focus foraging efforts near the nest since there are such high-quality, active agricultural lands/foraging grounds (alfalfa fields) surrounding the nest tree compared to the lower quality foraging grounds (desert scrub, dunes, idle agricultural fields) on the BIG project site across the Mojave River (Dr. Pete Bloom, pers. comm. 2025).

The presence of the alfalfa fields with an adjacent tree suitable for nest building likely determined this nest site selection, as largely disturbed desert scrub habitat such as what is present on BIG, does not provide the prolific prey base needed to support a nesting pair and their chicks in this

desert setting. The irrigated alfalfa and Teff grass fields located one mile to the north will not be affected by the BIG project.

No other active Swainson's hawk nests have been documented within the survey area and other recorded observations of Swainson's hawk nests in the larger region are primarily associated with agricultural areas of the Antelope Valley over 20 miles to the west (CDFW 2025).

Given that foraging activities associated with the Swainson's hawk nest one mile away are focused on the agricultural lands immediately adjacent, the loss of the project lands as potential foraging habitat for this pair will not have a significant impact on the success of the nest site.

5 AVOIDANCE AND MINIMIZATION MEASURES

Due to the presence of suitable nesting habitat for Swainson's hawk within the project site and confirmed Swainson's hawk nesting in the project vicinity, pre-construction Swainson's hawk surveys are recommended. Swainson's hawk nest surveys should be conducted and provided to the City of Barstow for the breeding season immediately prior to start of construction activities. Surveys should be conducted within the BIG footprint plus a 0.5-mile buffer by agency-approved Species-Specific BMs following the protocol outlined in the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (Swainson's Hawk Technical Advisory Committee, 2000). The Species-Specific BM should be familiar with Swainson's hawk identification and life history and be approved to conduct surveys by CDFW.

If active Swainson's hawk nests are found during nest surveys, the Species-Specific BM should establish an appropriate avoidance buffer around each nest in consultation coordination with CDFW. No construction activities should occur within the buffer until a Species-Specific BM confirms that Swainson's hawk nests are no longer active.

6 CONCLUSIONS

Multiple Swainson's hawks were observed foraging within the survey area during 2025 surveys. Thirteen to fifteen Swainson's hawks were observed migrating through the survey area, foraging in the high-quality agricultural habitat located approximately one mile north of the project site. One active Swainson's hawk nest was documented within the same nest tree as confirmed in 2024. Foraging activity of migrating and nesting Swainson's hawks was restricted to the high-quality agricultural habitat mentioned above. Foraging and nesting activity on the BIG project site was not observed. Considering the high quality agricultural habitat which exists outside of the BIG project footprint, Swainson's hawks are unlikely to prioritize foraging efforts on the BIG project site where disturbed desert scrub offers a lower prey density; as such, Swainson's hawk foraging activity is unlikely to be affected by BIG project implementation. Due to the presence of suitable nesting habitat for Swainson's hawk within the project site and confirmed Swainson's hawk nesting in the vicinity, pre-construction Swainson's hawk nest surveys are recommended prior to initiation of project activities.

7 REFERENCES

Babcock, K.W. 1995. Home range and habitat use of breeding Swainson's hawks in the Central Valley of California. Journal of Raptor Research 29:193197.

Bechard, M. J., C. S. Houston, J. H. Saransola and A. S. England. (2010). Swainson's Hawk (*Buteo swainsoni*), version 2.0. In The Birds of North America (P. G. Rodewald, editor). Cornell Lab of Ornithology, Ithaca, New York.

California Department of Fish and Wildlife (CDFW). 1994. Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California

__. (2025). California Natural Diversity Database. Retrieved August 2025 from https://wildlife.ca.gov/Data/CNDDB.

California Energy Commission, California Department of Fish and Game. (2010). Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California.

Cornell University. 2025. All About Birds. Retrieved August 2025, from https://www.allaboutbirds.org/guide/Swainsons_Hawk/lifehistory

Dr. Pete Bloom, personal communication (pers. comm.) via email to Rocks Biological Consulting on August 19, 2025.

England, S., Estep, J., & Holt, W. (1995). Nest site selection and reproductive performance of urban nesting Swainson's hawks in the Central Valley of California. Journal of Raptor Research, 29(3), 179-186. Retrieved August 2023, from https://sora.unm.edu/sites/default/files/journals/jrr/v029n03/p00179-p00186.pdf.

England, A. S., M. J. Bechard, and C. S. Houston. 1997. Swainson's Hawk (Buteo swainsoni). In The Birds of North America, No. 265 (A. Poole and F. Gill, eds.). The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington D.C. https://doi.org/10.2173/tbna.265.p

Estep, J. A. 1989. Biology, movements and habitat relationships of the Swainson's Hawk in the Central Valley of California, 1986-87. Report for the California Department of Fish and Game, Nongame Bird and Mammal Section.

Rocks Biological Consulting (RBC). 2024. Barstow International Gateway Project Swainson's Hawk Survey Report.

Swainson's Hawk Technical Advisory Committee. (2000). Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Retrieved from https://nrm.ddfg.ca.gov.

Unitt. (2004). *San Diego County Bird Atlas*. Proceedings of the San Diego Natural History Museum, No. 39. Ibis Publishing, Vista, CA. 644 pages.

Vegetation Classification and Mapping Program [VegCAMP]. 2011-2012. Program Lead, California Department of Fish and Wildlife (CDFW), Biogeographic Data Branch, 1700 9th Street, 4th Floor, (916) 324-9765, VegCAMP@wildlife.ca.gov.

Woodbridge, B. (1998). Swainson's Hawk (*Buteo swainsoni*). In The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html

Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer, and M. White, editors. (1988-1990). California's Wildlife. Vol. I-III. California Depart. of Fish and Game, Sacramento, California.

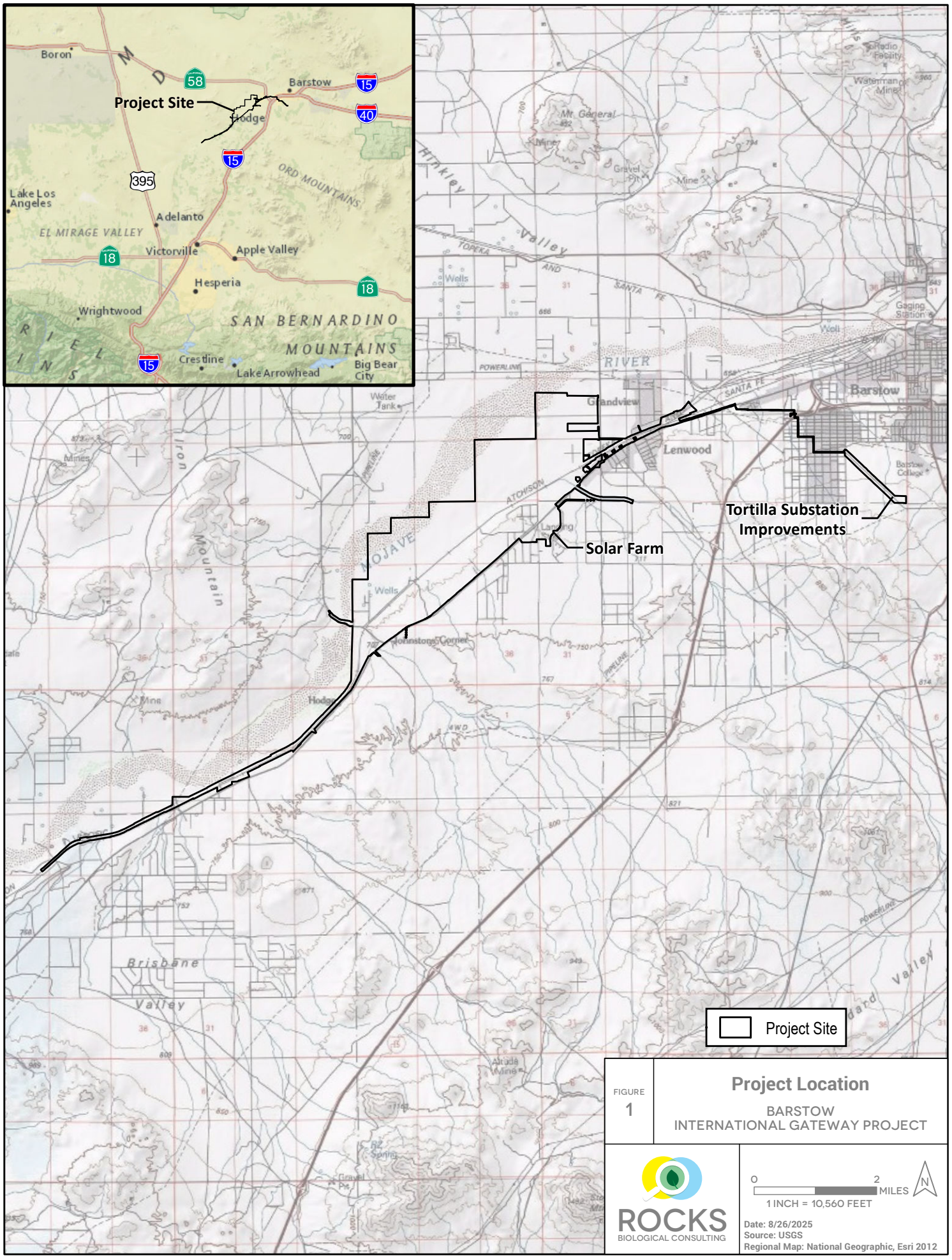


FIGURE 1

Project Location

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 2 MILES
1 INCH = 10,560 FEET

Date: 8/26/2025
Source: USGS
Regional Map: National Geographic, Esri 2012

Project Site

Observations

- Swainson's Hawk 5/2023
- Swainson's Hawk 4/2023

Hillview Truck Trl

Wheeler Rd

Indian Trl

Mojave River

Wild Rd

1 Fly over

1 Fly over

Hodge Rd

National Trails Hwy

Key Map

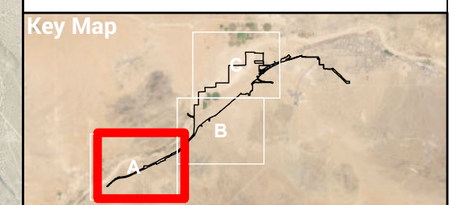


FIGURE 2A

Swainson's Hawk Survey Results

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 2,000 FEET

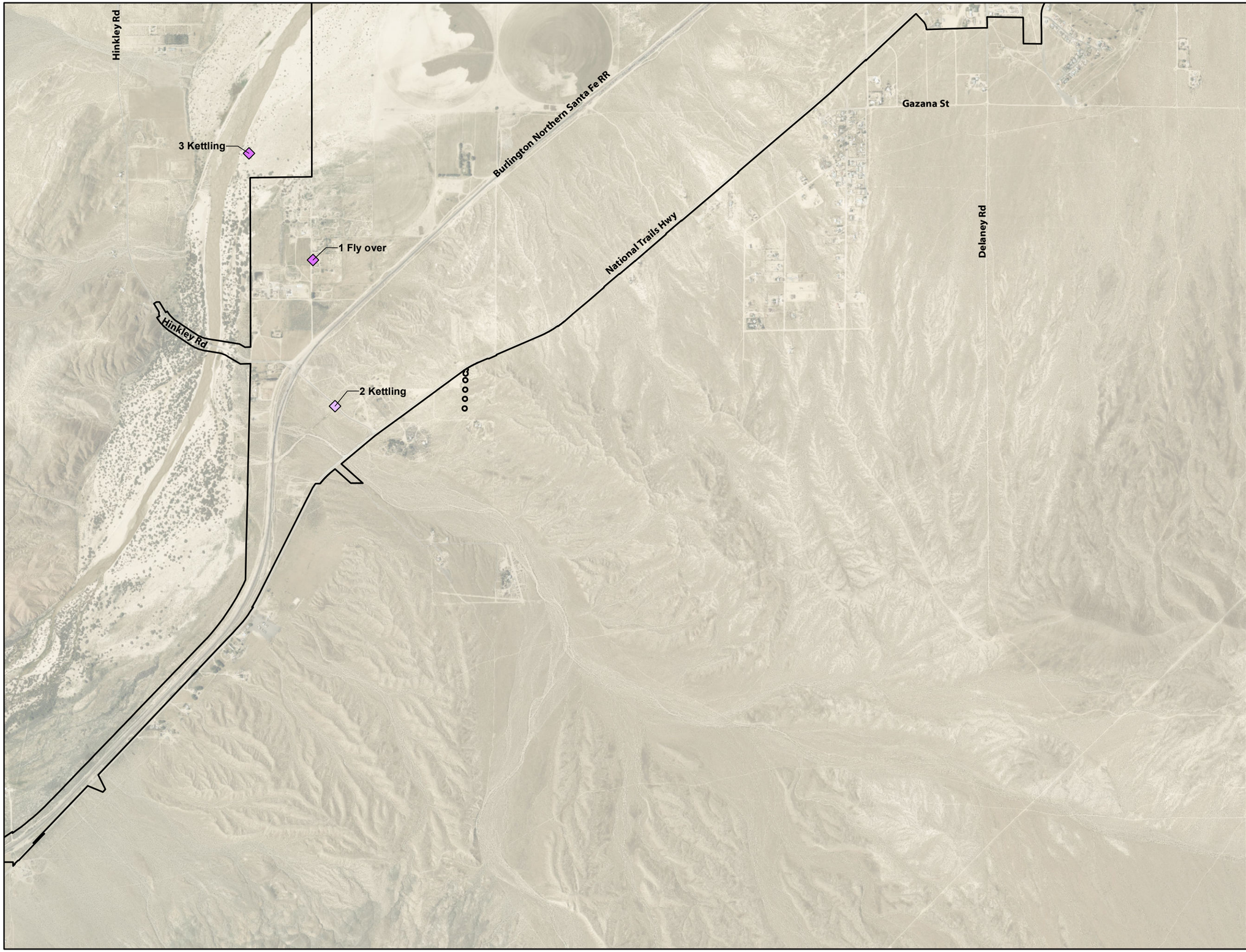
1 INCH = 2,000 FEET

N

Date: 8/26/2025

Aerial Photo: Maxar, Esri 2020

Regional Map: National Geographic, Esri 2012



Project Site

Observations

- Swainson's Hawk 4/2024
- Swainson's Hawk 3/2024

Key Map

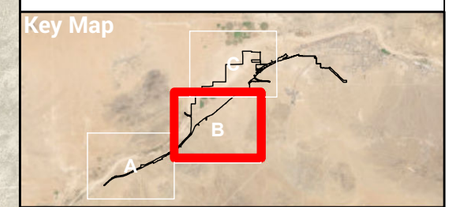


FIGURE
2B

Swainson's Hawk Survey Results

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 2,000 FEET

1 INCH = 2,000 FEET

Date: 8/26/2025
Aerial Photo: Maxar, Esri 2020
Regional Map: National Geographic, Esri 2012

Community Blvd

2 Perched

1 Perched
1 Perched
1 Perched

1 Perched
1 Perched
1 Perched
2 Perched

4 Perched, 2 Foraging
1 Perched
1 Perched, 2 Foraging
2 Perched
1 Perched
2 Incubating, 3 Nesting Chicks
1 Perched
1 Perched
1 Perched
1 Perched
1 Kettling

1 Perched
1 Perched
1 Perched

1 Perched
2 Kettling
2 Perched
1 Perched
1 Perched
1 Perched

Mojave River

Lenwood Rd

1 Perched

1 Kettling
1 Kettling

1 Kettling
1 Kettling

Oak Grove Rd

Cannae Rd

1 Fly Over

Sweeten Ln

Mojave River

Project Site

Observations

- Swainson's Hawk 7/2025
- Swainson's Hawk 6/2025
- Swainson's Hawk 4/2025
- Swainson's Hawk 3/2025
- Swainson's Hawk 7/2024
- Swainson's Hawk 6/2024
- Swainson's Hawk 4/2024
- Swainson's Hawk 3/2023
- Swainson's Hawk Nest

Key Map

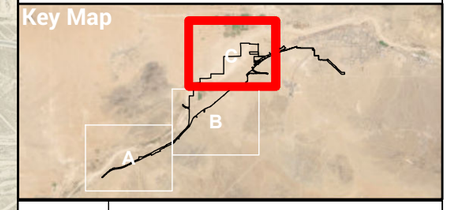


FIGURE
2C

Swainson's Hawk Survey Results

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 2,000 FEET
1 INCH = 2,000 FEET

Date: 8/26/2025
Aerial Photo: Maxar, Esri 2020
Regional Map: National Geographic, Esri 2012

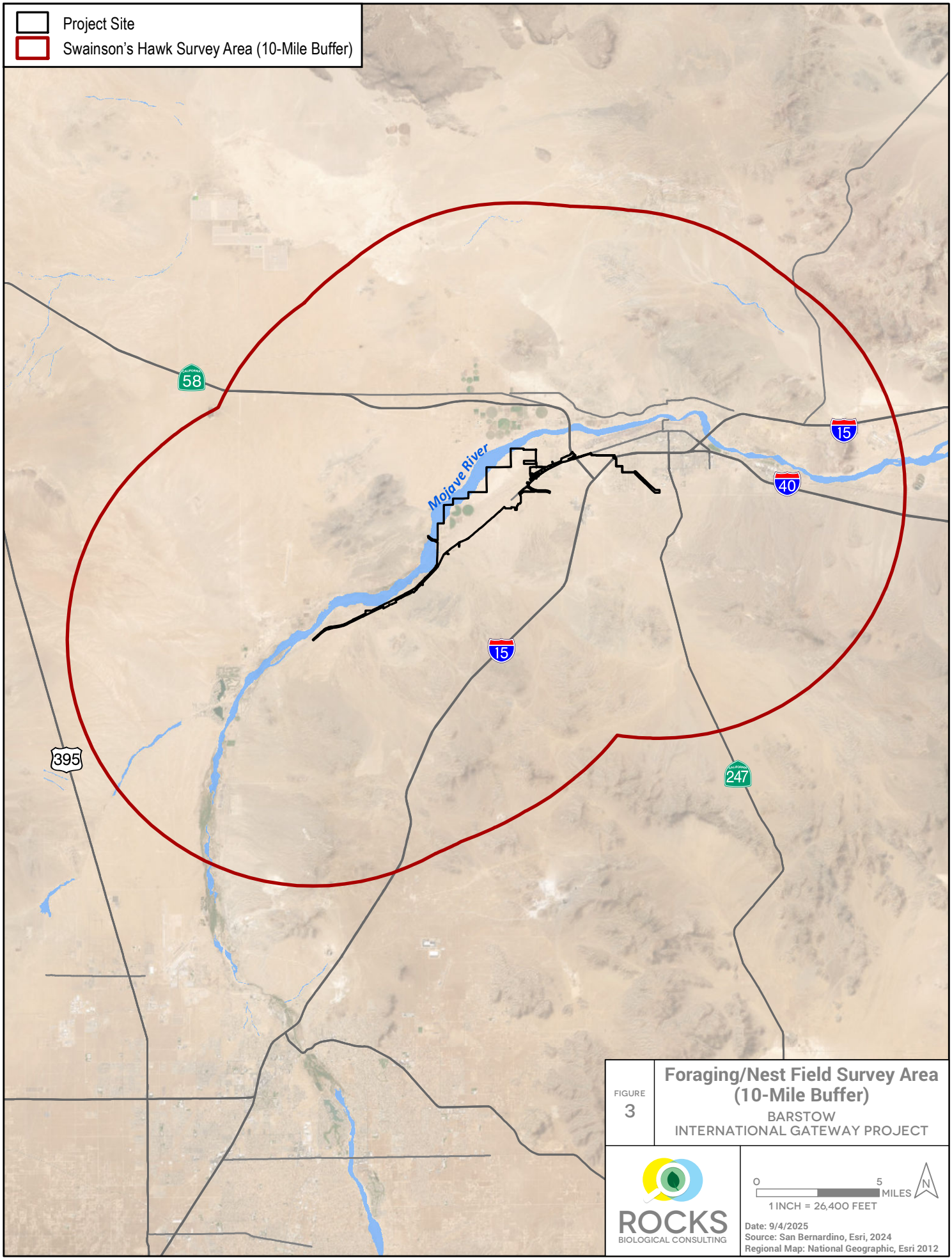


FIGURE 3

Foraging/Nest Field Survey Area (10-Mile Buffer)

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 5 MILES

1 INCH = 26,400 FEET

N

Date: 9/4/2025
Source: San Bernardino, Esri, 2024
Regional Map: National Geographic, Esri 2012

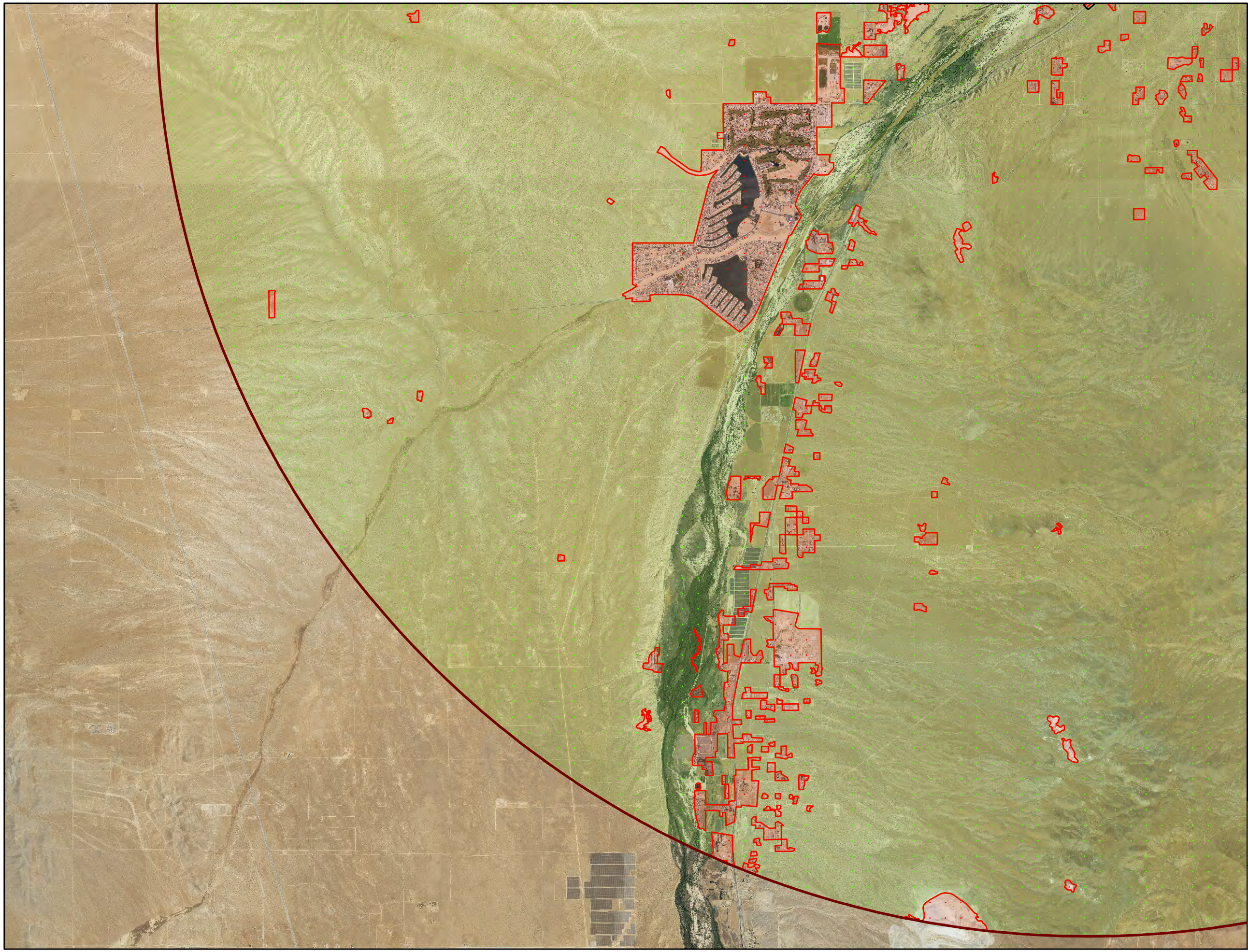


FIGURE 4A

Swainson's Hawk Foraging Habitat

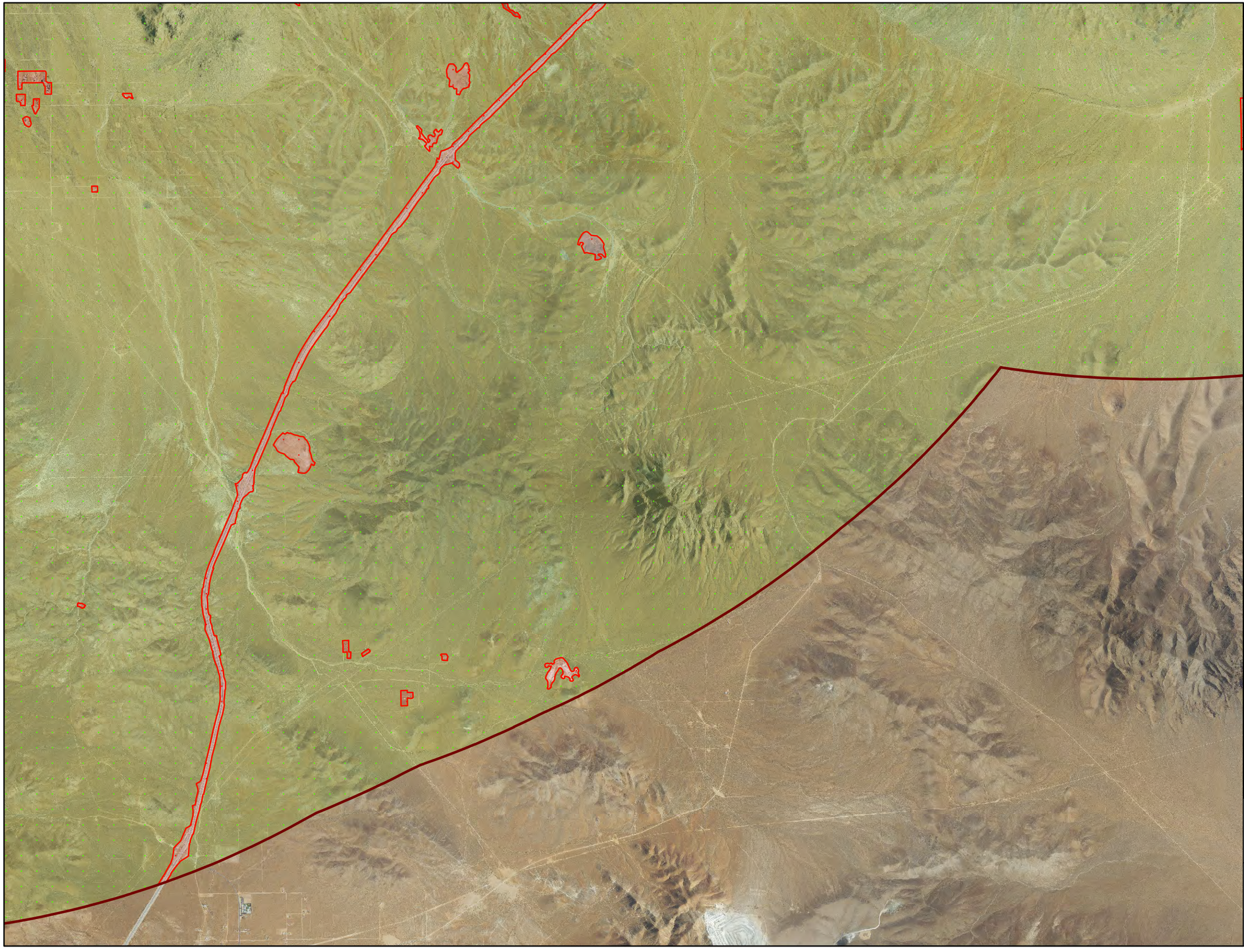
BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 1 MILE

1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012



Survey Area 10-mile Buffer

Project Survey Area

Unsuitable Swainson Hawk Foraging Habitat - within Project Survey Area

Unsuitable Swainson Hawk Foraging Habitat

Suitable Swainson Hawk Habitat - Foraging within Project Survey Area

Suitable Swainson Hawk Foraging Habitat

Key Map

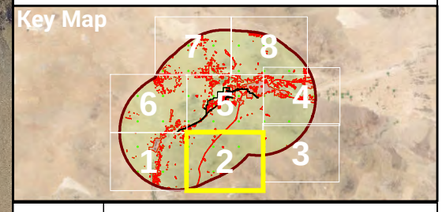


FIGURE
4B

Swainson's Hawk Foraging Habitat

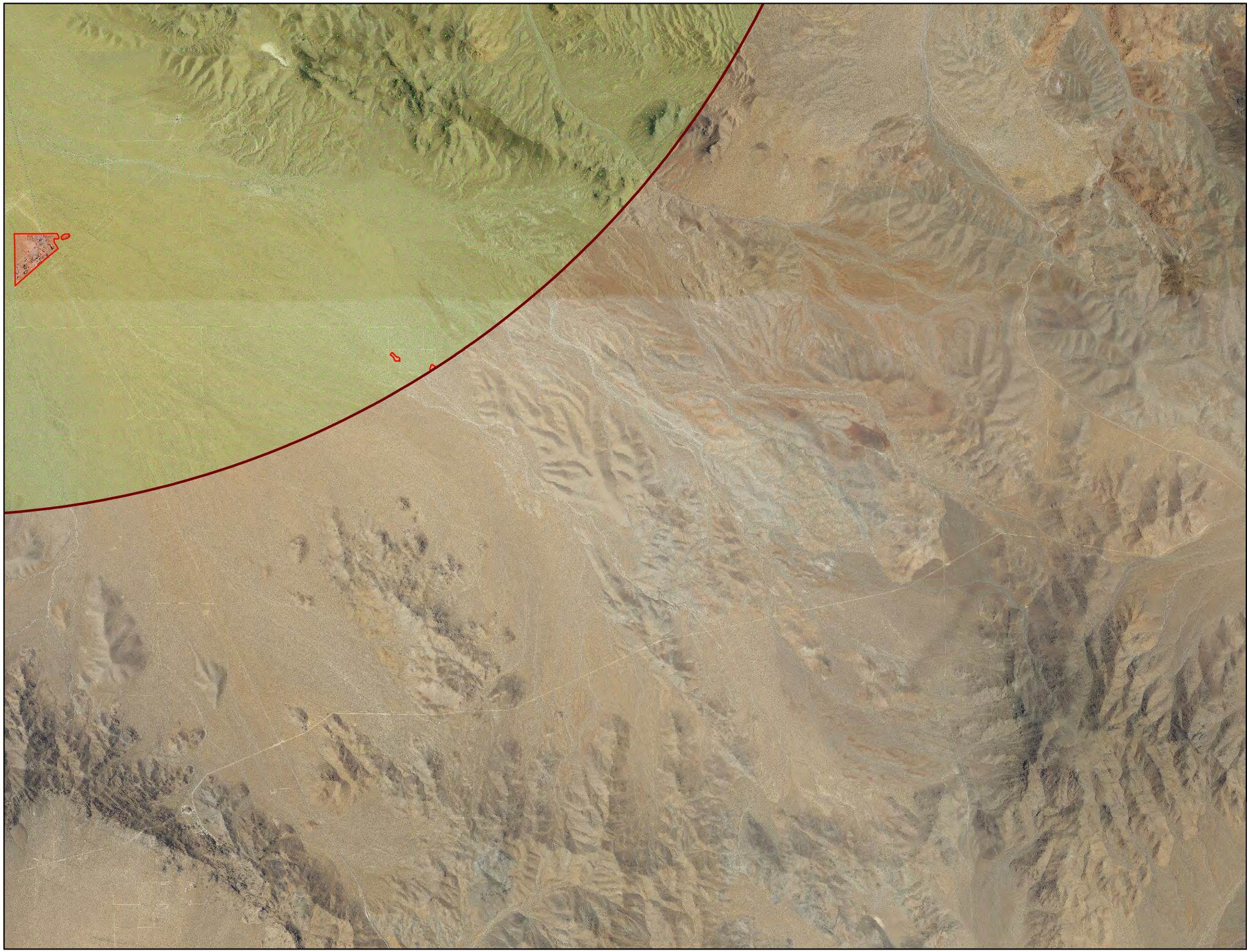
BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

N

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012



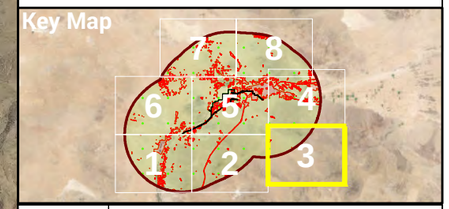


FIGURE
4C

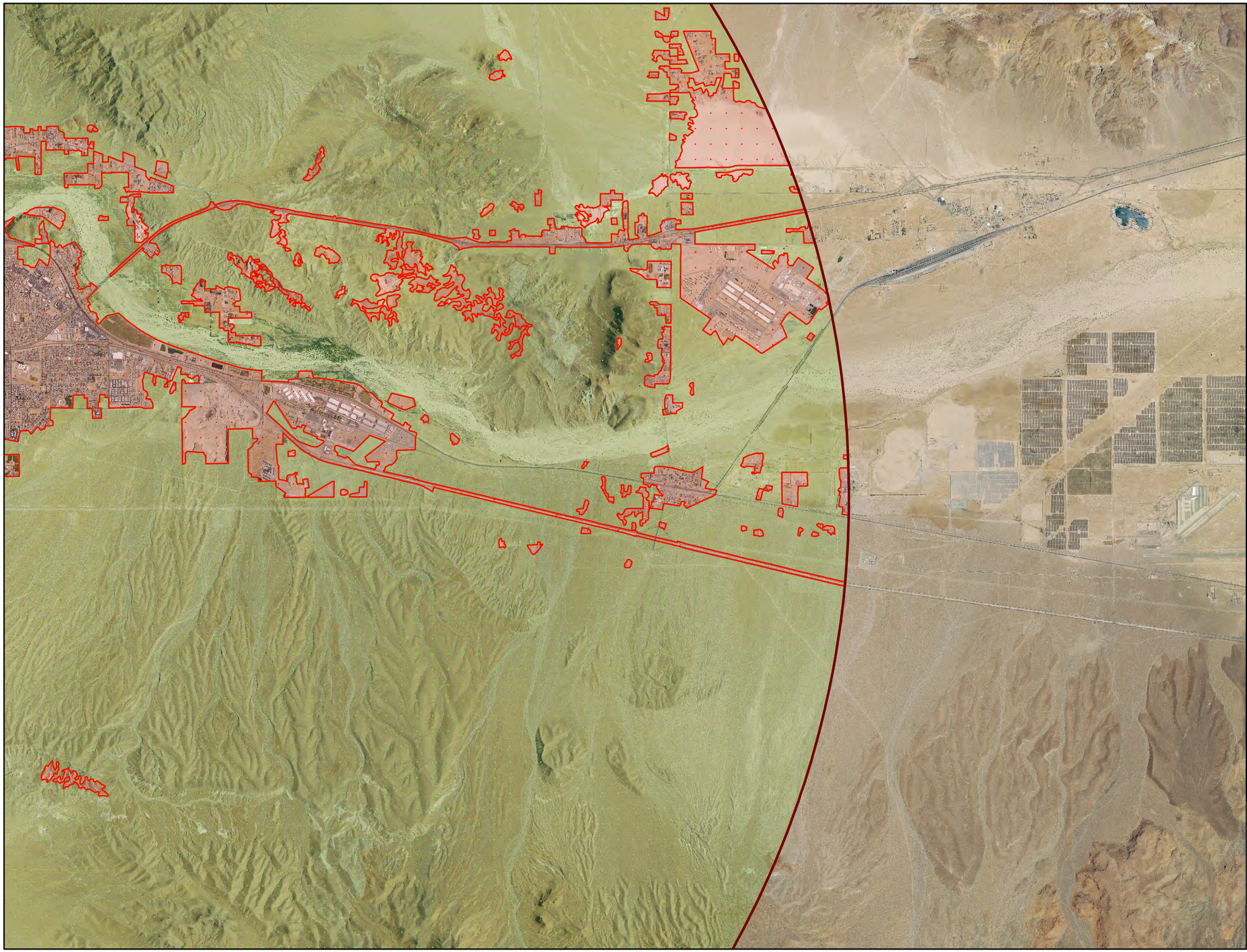
Swainson's Hawk Foraging Habitat

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012



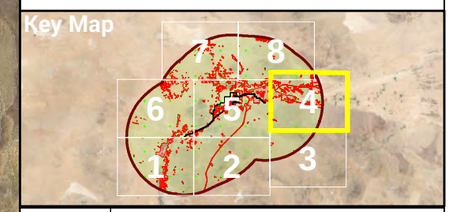


FIGURE
4D

Swainson's Hawk Foraging Habitat

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012

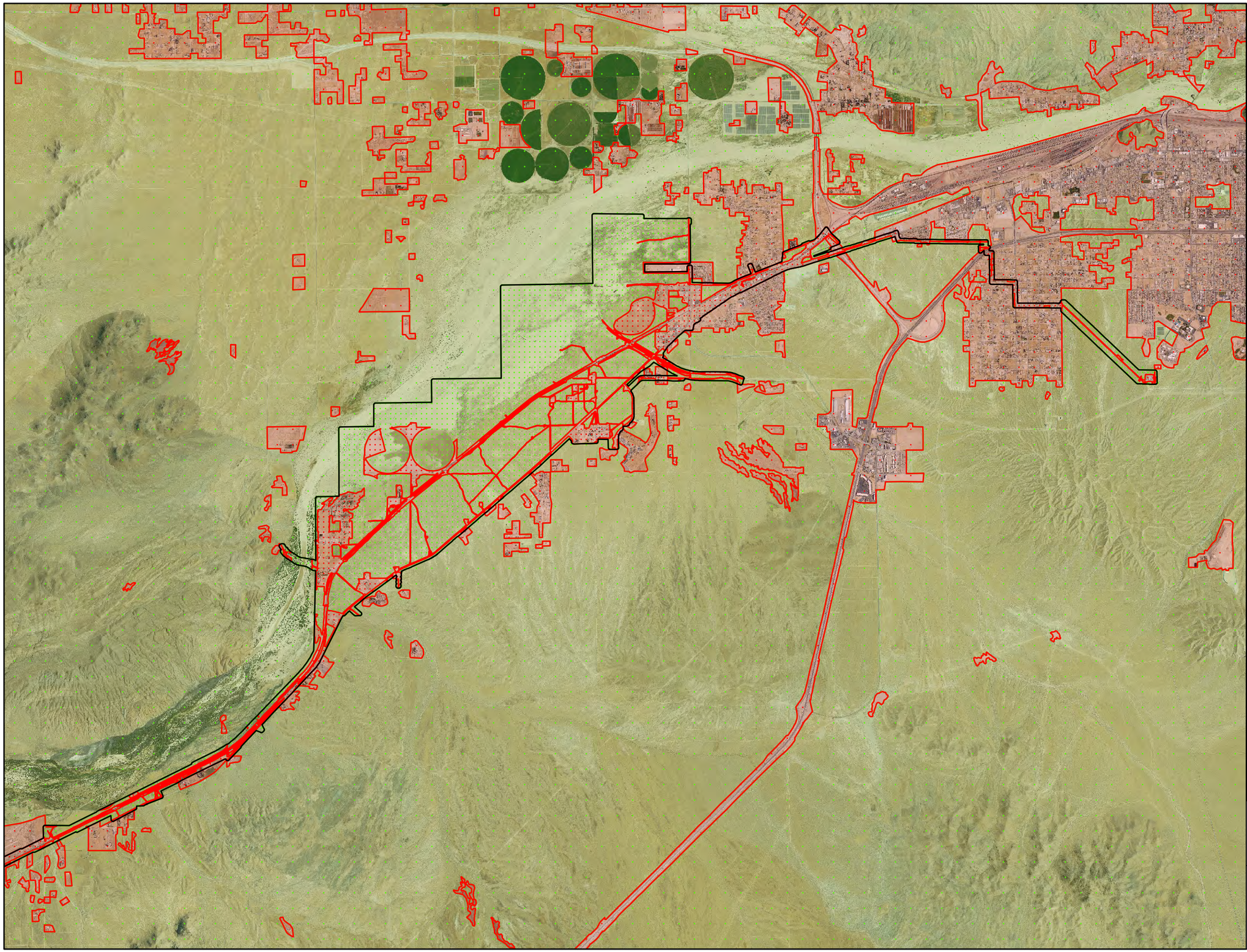


FIGURE
4E

Swainson's Hawk Foraging Habitat

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012

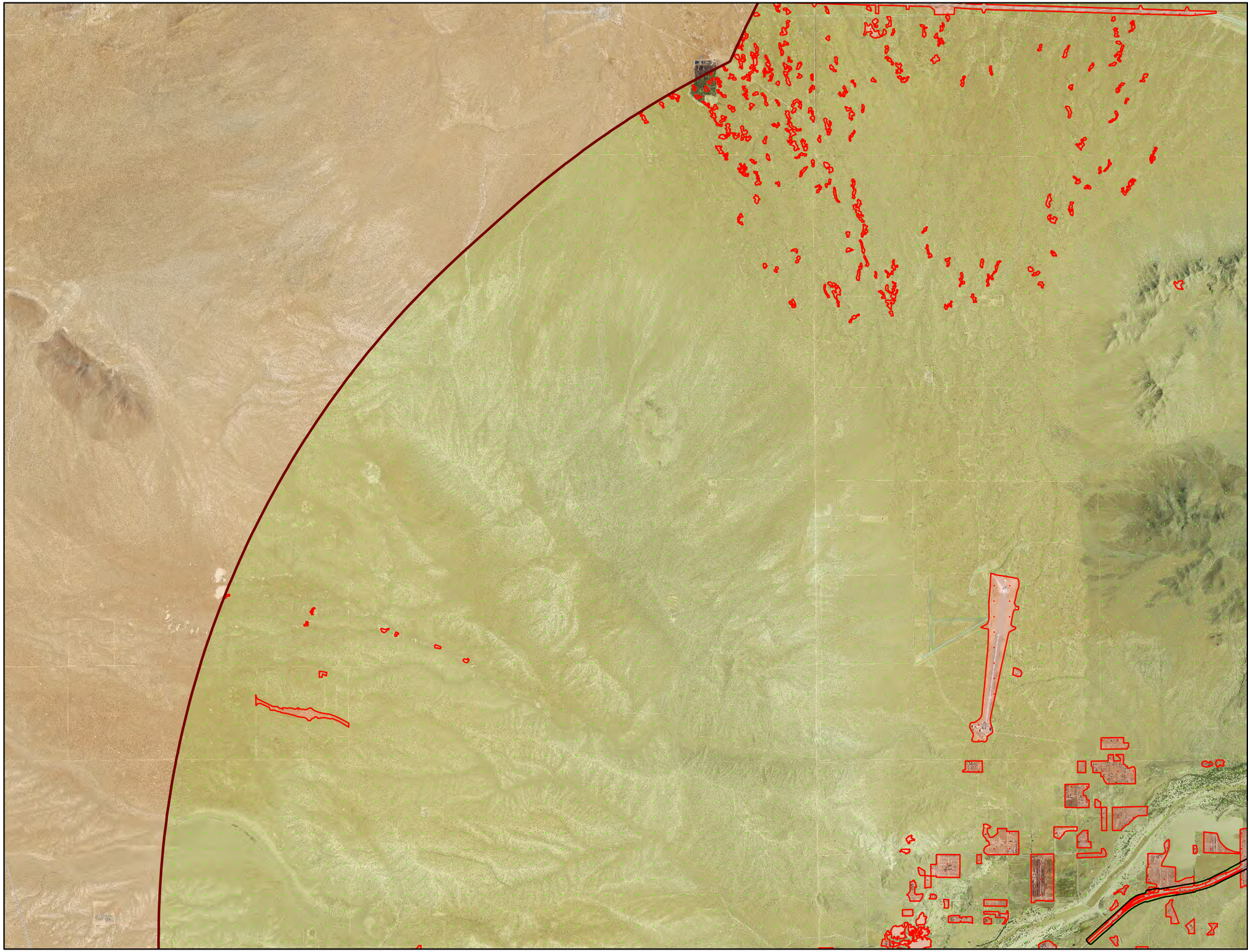


FIGURE
4F

Swainson's Hawk Foraging Habitat

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012

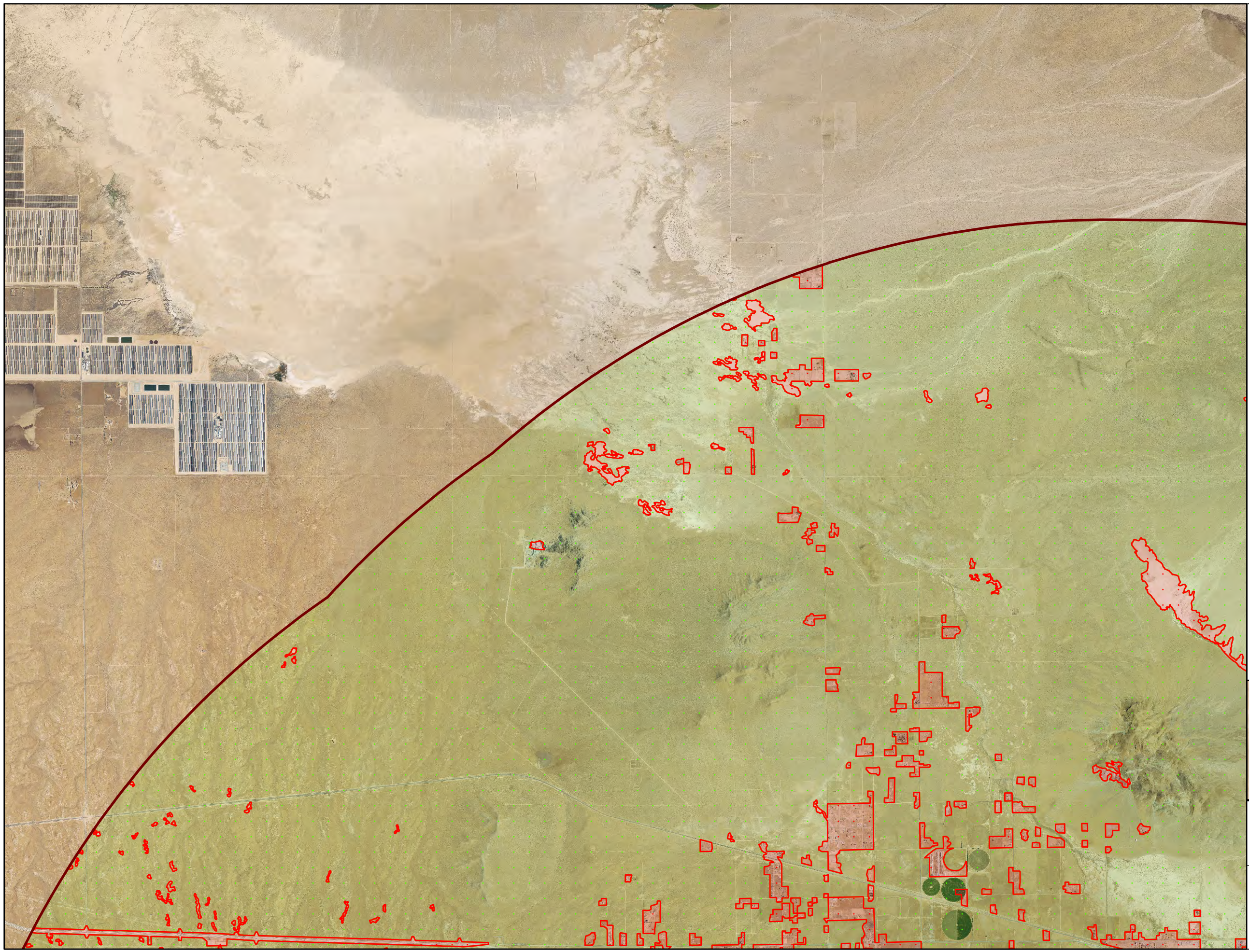


FIGURE
4G

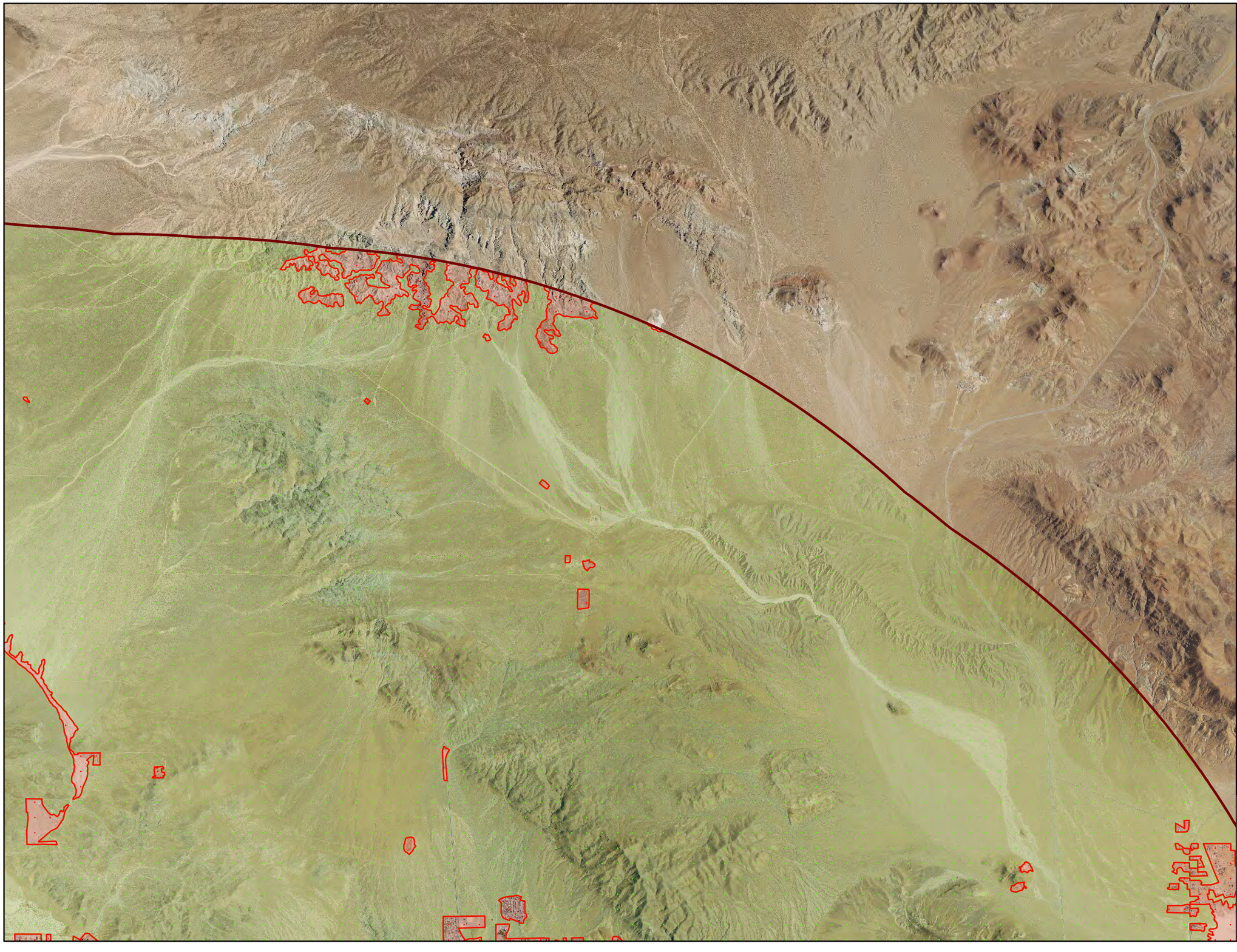
Swainson's Hawk Foraging Habitat

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012



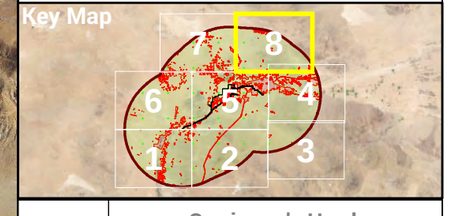


FIGURE
4H

Swainson's Hawk Foraging Habitat

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 1 MILE
1 INCH = 1 mile

Date: 8/26/2025
Aerial Photo: NAIP 2024
Regional Map: National Geographic, Esri 2012

Attachment A

Site Photographs



Photo 1. View of non-native grassland (former agriculture) in the southwest portion of the proposed transload warehouse center, facing northeast. March 20, 2025.



Photo 2. View of desert saltbush scrub (foreground) and non-native grassland (former agriculture) (background) on the project site, facing northwest. April 13, 2022.



Photo 3. Representative photo of creosote bush (white bursage) scrub habitat on the project site, facing southwest. July 29, 2025.



Photo 4. Alfalfa fields and three Swainson's hawks (circled in red) perched on irrigation structure approximately one mile north of the project site, facing southwest. March 27, 2025.



Photo 5. Active red-tailed hawk nest and female red-tailed hawk (circled) located on an electric distribution pole transformer approximately 1.3 miles southwest of the nest tree. March 27, 2025.



Photo 6. Swainson's hawk kettling above alfalfa fields approximately one mile north of the project site. March 27, 2025.



Photo 7. Swainson's hawk breeding pair perching in a defoliated tree west of nest tree, approximately one mile north of the project site. July 16, 2025.



Photo 8. Location of the Swainson's hawk nest in a Chinese elm adjacent to alfalfa fields, approximately one mile north of the project site, facing northwest. June 30, 2025.



Photo 9. View of active Swainson's hawk nest in Chinese elm tree and Swainson's hawk nestling (circled), approximately one mile north of the project site. July 16, 2025.



Photo 10. Three Swainson's hawk chicks banded by Pete Bloom, at active nest approximately one mile north of the project site. June 30, 2025.

Attachment B

Bird Species Observed

Common Name	Scientific Name
American kestrel	*Falco sparverius*
American pipit	*Anthus rubescens*
Anna's hummingbird	*Calypte anna*
Brewer's blackbird	*Euphagus cyanocephalus*
Brown-headed cowbird*	*Molothrus ater*
Bullock's oriole	*Icterus bullockii*
California kingbird	*Tyrannus verticalis*
California quail	*Callipepla californica*
Cliff swallow	*Petrochelidon pyrrhonota*
Common raven	*Corvus corax*
Cooper's hawk[3]	*Accipiter cooperii*
Costa's hummingbird[6]	*Calypte costae*
Eurasian collared-dove*	*Streptopelia decaocto*
European starling*	*Sturnus vulgaris*
Ferruginous hawk[3]	*Buteo regalis*
Great egret	*Ardea alba*
Great-tailed grackle	*Quiscalus mexicanus*
Horned lark	*Eremophila alpestris*
House finch	*Haemorhous mexicanus*
House sparrow*	*Passer domesticus*
Killdeer	*Charadrius vociferus*
Lark sparrow	*Chondestes grammacus*
Loggerhead shrike[2]	*Lanius ludovicianus*
Long-eared owl[2, 6]	*Asio otus*
Mallard	*Anas platyrhynchos*
Mourning dove	*Zenaida macroura*
Northern harrier[2, 6]	*Circus hudsonius*
Northern rough-winged swallow	*Stelgidopteryx serripennis*
Peregrine falcon[4]	*Falco peregrinus*
Prairie falcon[3]	*Falco mexicanus*
Red-tailed hawk	*Buteo jamaicensis*
Red-winged blackbird	*Agelaius phoeniceus*
Rock pigeon*	*Columba livia*

Common Name	Scientific Name
Say's phoebe	*Sayornis saya*
Savannah sparrow	*Passerculus sandwichensis*
Song sparrow	*Melospiza melodia*
Swainson's hawk[1, 5]	*Buteo swainsoni*
Turkey vulture	*Cathartes aura*
Vesper sparrow	*Pooecetes gramineus*
Violet-green swallow	*Tachycineta thalassina*
Western kingbird	*Tyrannus verticalis*
Western meadowlark	*Sturnella neglecta*
White-crowned sparrow	*Zonotrichia leucophrys*
White-faced ibis[3]	*Plegadis chihi*
Yellow-rumped warbler	*Setophaga coronata*

Notes:

* Non-native/introduced species

[1] Bureau of Land Management (BLM) Sensitive (S)

[2] California Department of Fish and Wildlife (CDFW) Species of Special Concern (SSC)

[3] CDFW Waitlist Species (WL)

[4] California Department of Forestry and Fire Protection (CDF) Sensitive (S)

[5] State Threatened (ST) under the California Endangered Species Act (CESA)

[6] United States Fish and Wildlife Service (USFWS) Birds of Conservation Concern (BCC)

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOO25F0029
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Lanius ludovicianus*

Common name: loggerhead shrike

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alec Goodman

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: alec@rocksbio.com

Phone: (909) 565-7197

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Potentially nesting in tamarisk

What was the observed behavior? Hopping around tamarisk

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

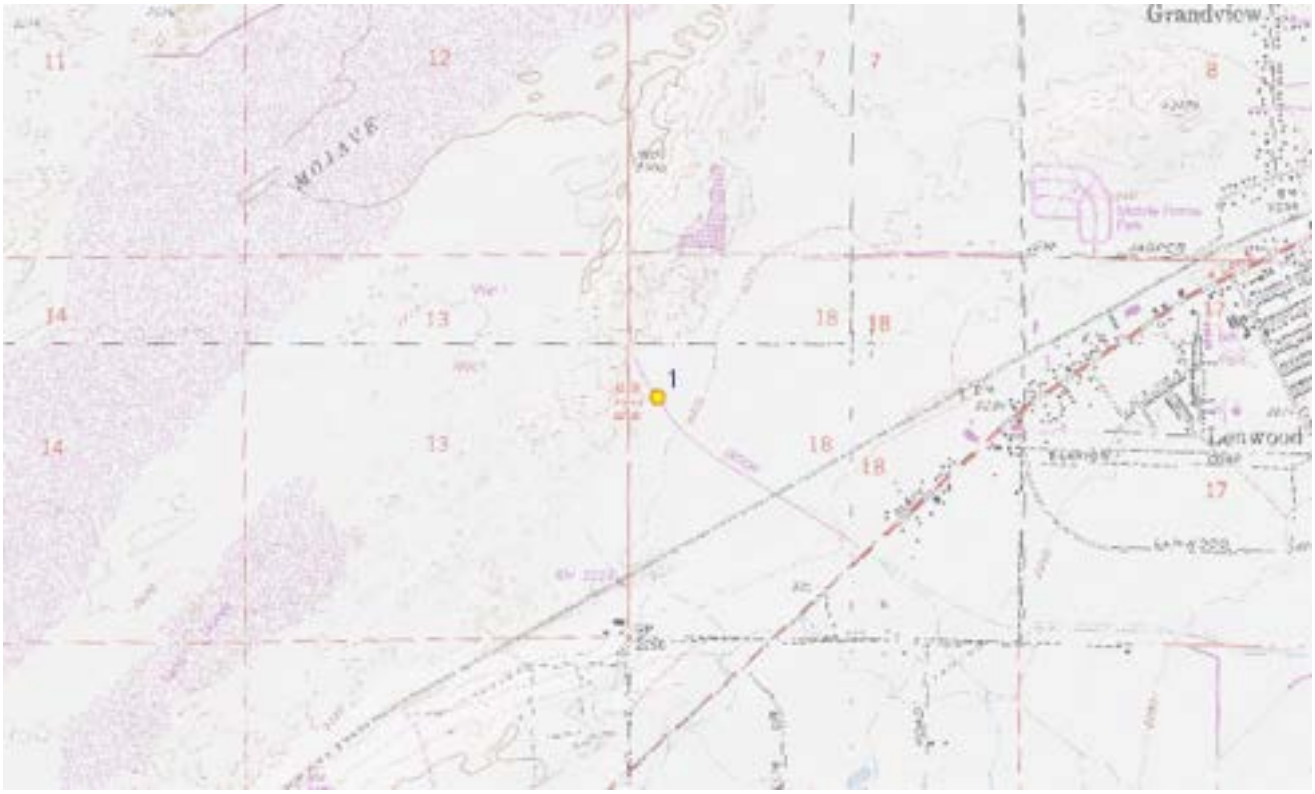
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2220	34.87301	-117.13482	487678	3858969	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 18							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile Application

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0014
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Flying over ag field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

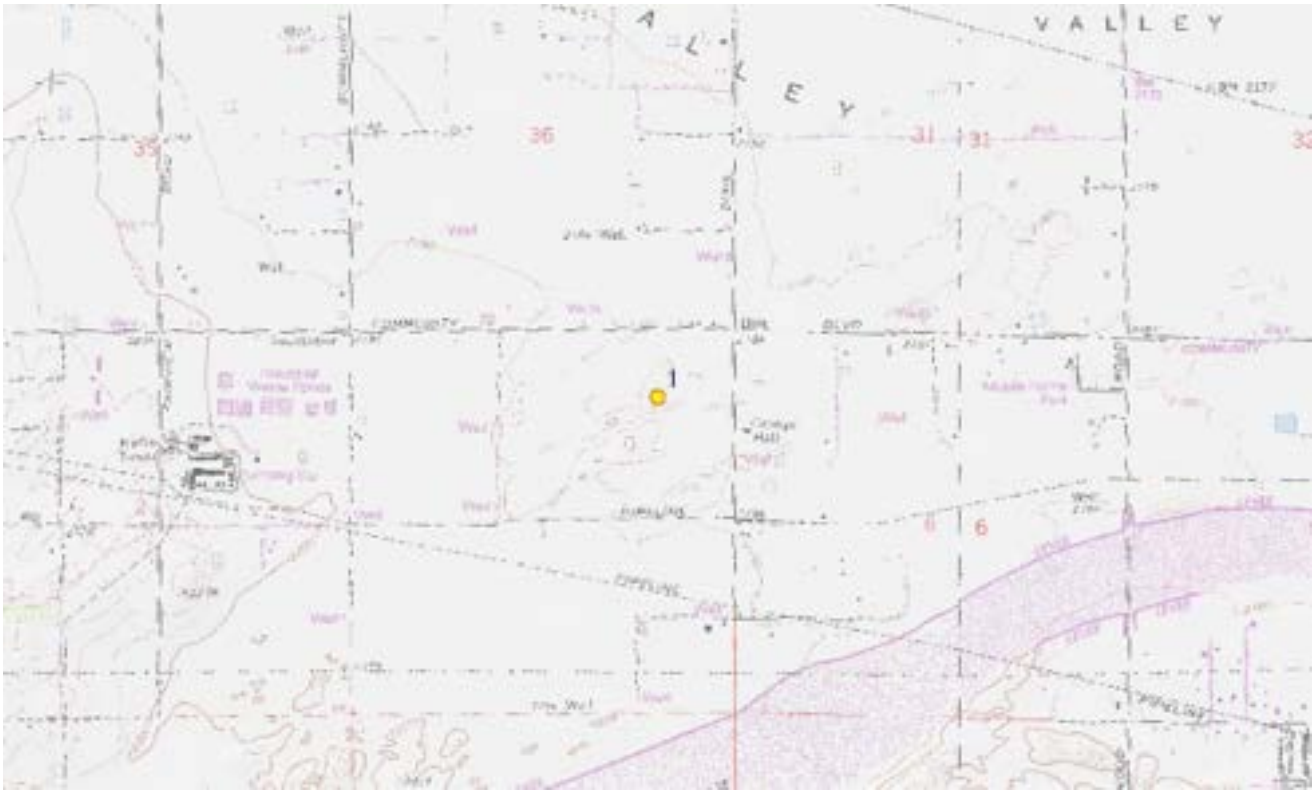
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2191	34.90488	-117.13975	487232	3862504	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0013
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 03-28-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? The pair was seen flying over agriculture field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

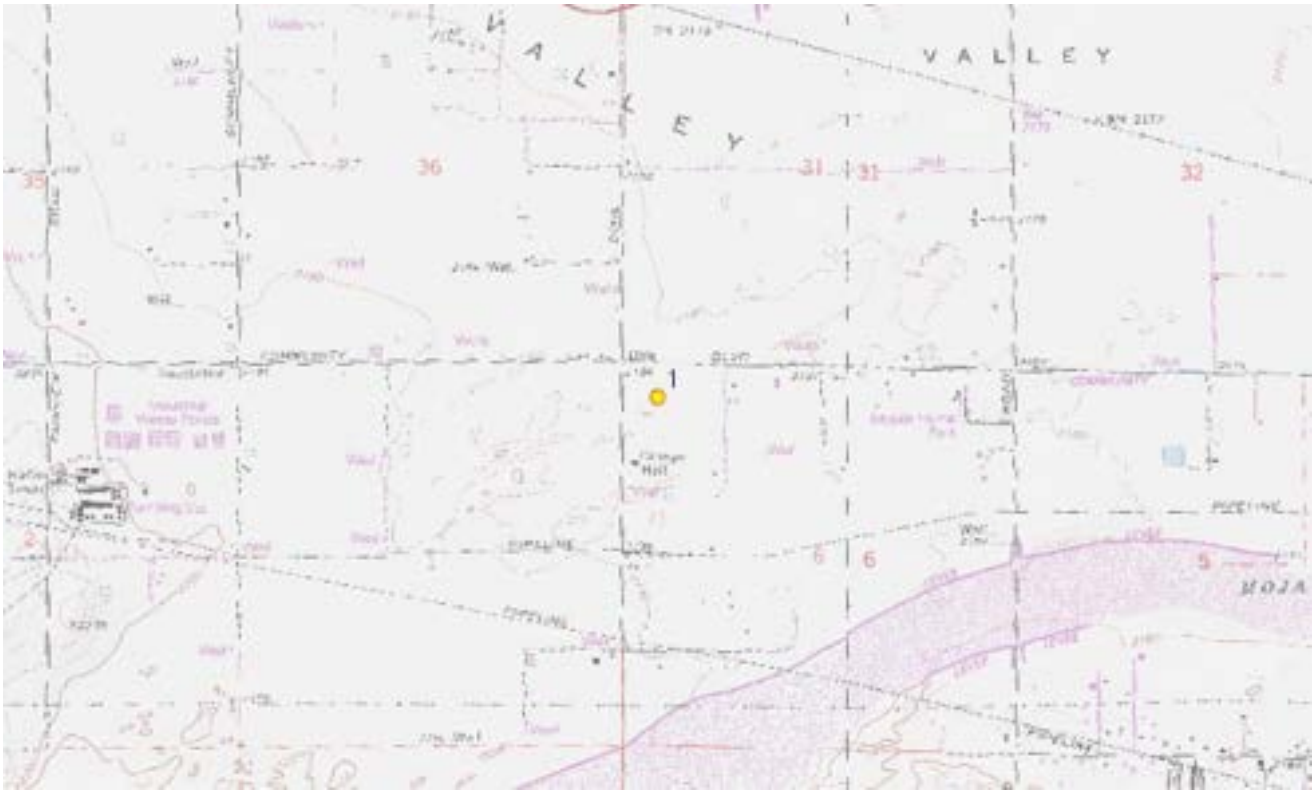
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.90610	-117.13461	487702	3862638	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0014
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Flying over agricultural field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

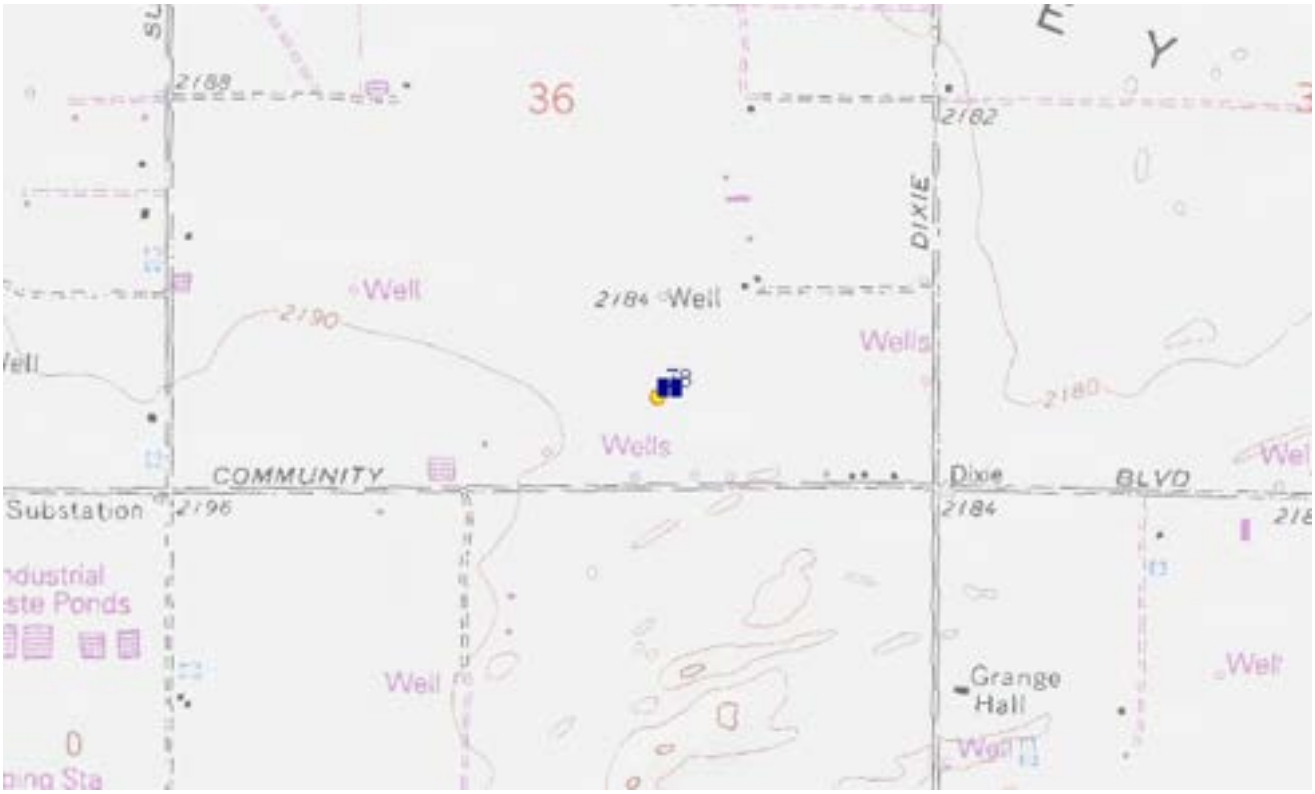
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.90912	-117.14262	486971	3862975	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0012
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo regalis*

Common name: ferruginous hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? perched on transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

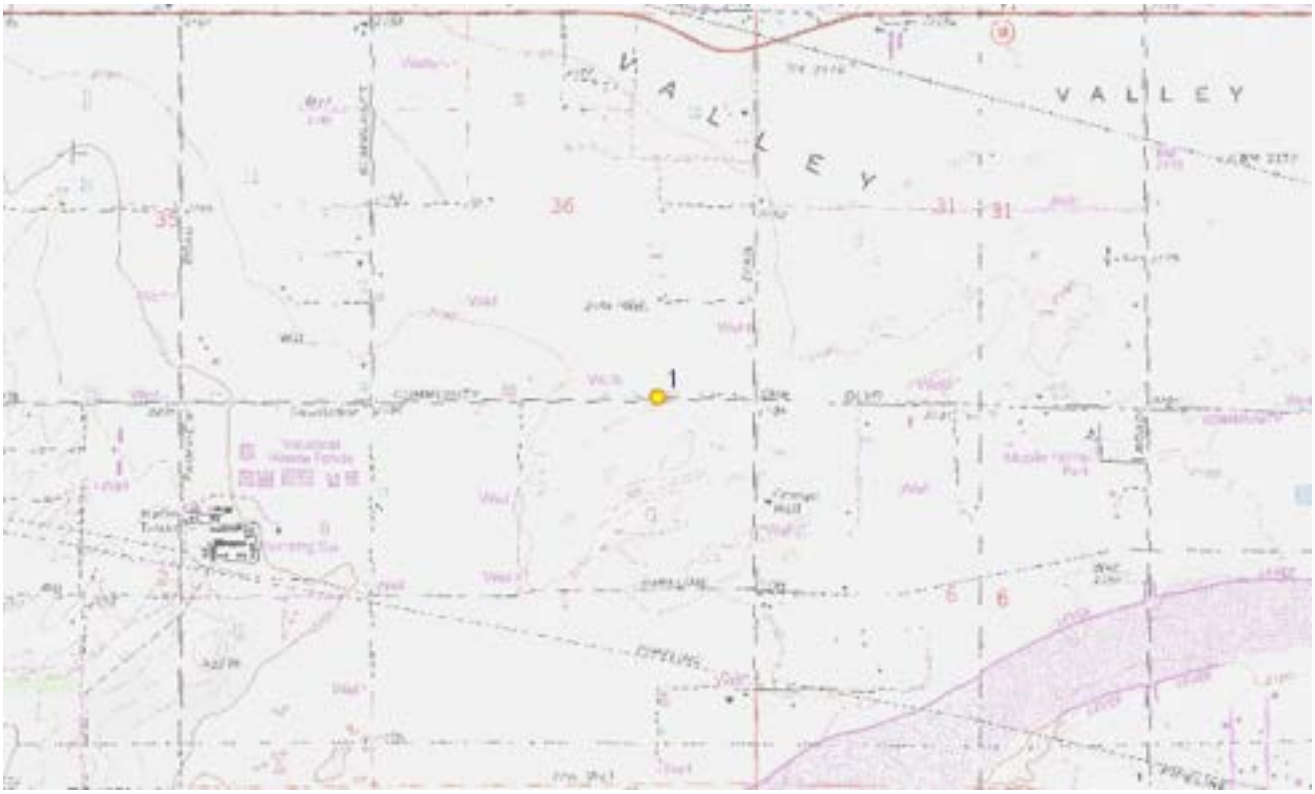
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90755	-117.14073	487144	3862801	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0011
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo regalis*

Common name: ferruginous hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? perching on transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

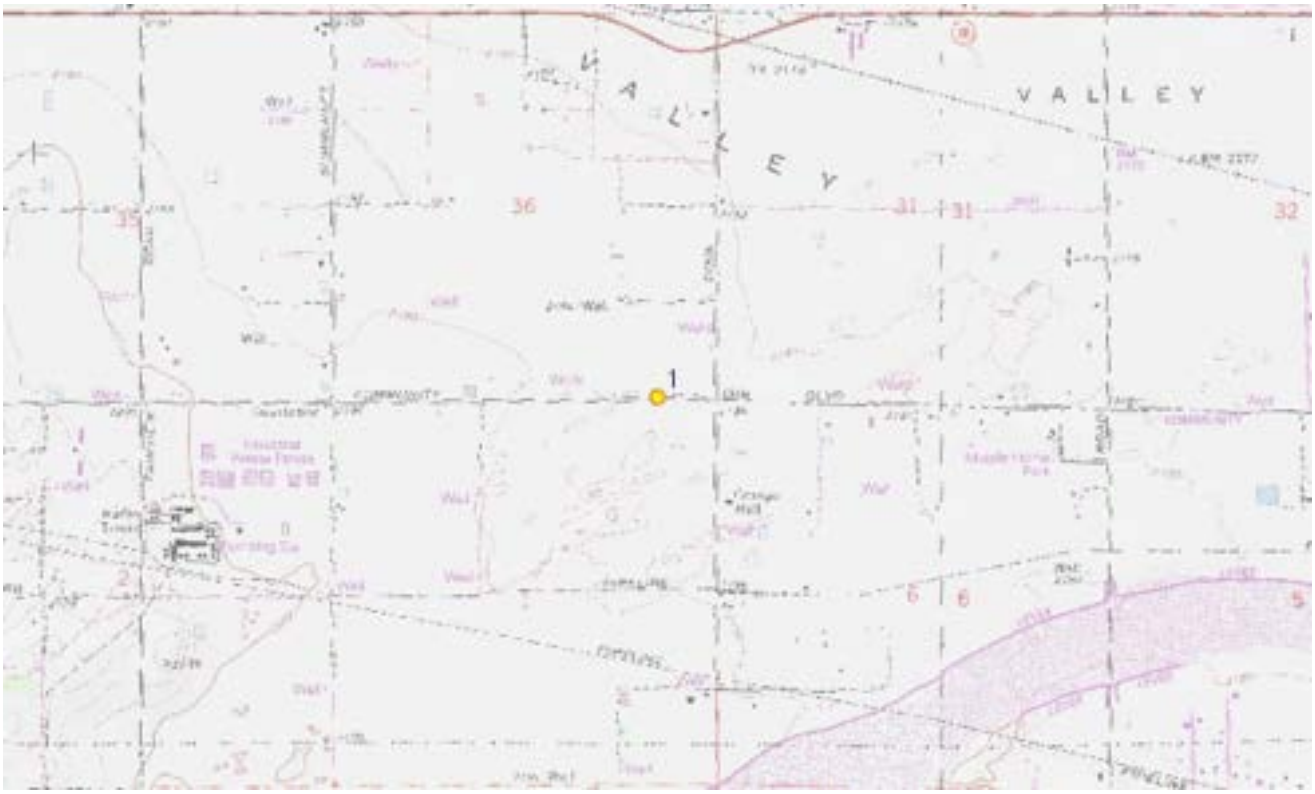
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90756	-117.13894	487307	3862801	11
	Public Land Survey	**Feature Comment**						
1	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOO25F0030
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Falco mexicanus*

Common name: prairie falcon

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alec Goodman

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: alec@rocksbio.com

Phone: (909) 565-7197

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching on top of transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

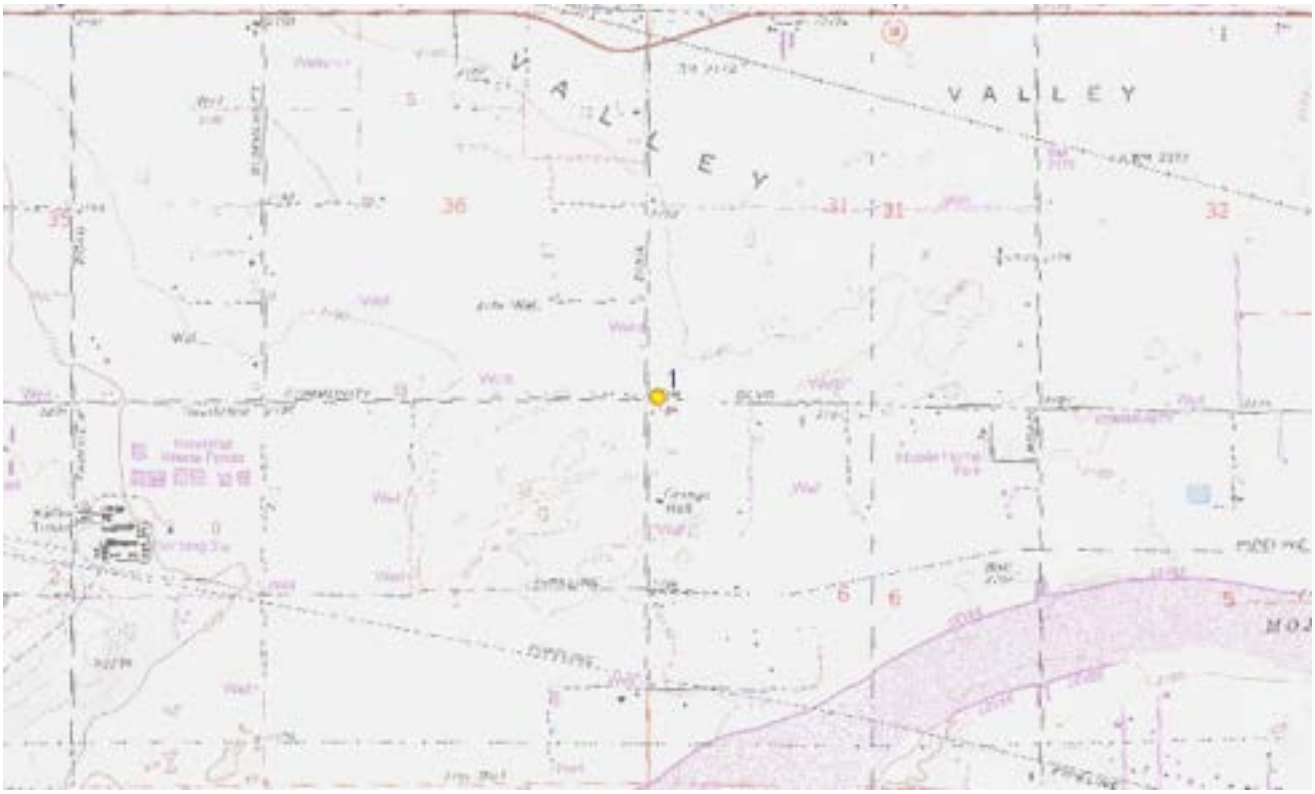
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.90753	-117.13576	487597	3862798	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R02W 31							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0010
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Flying over agricultural field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

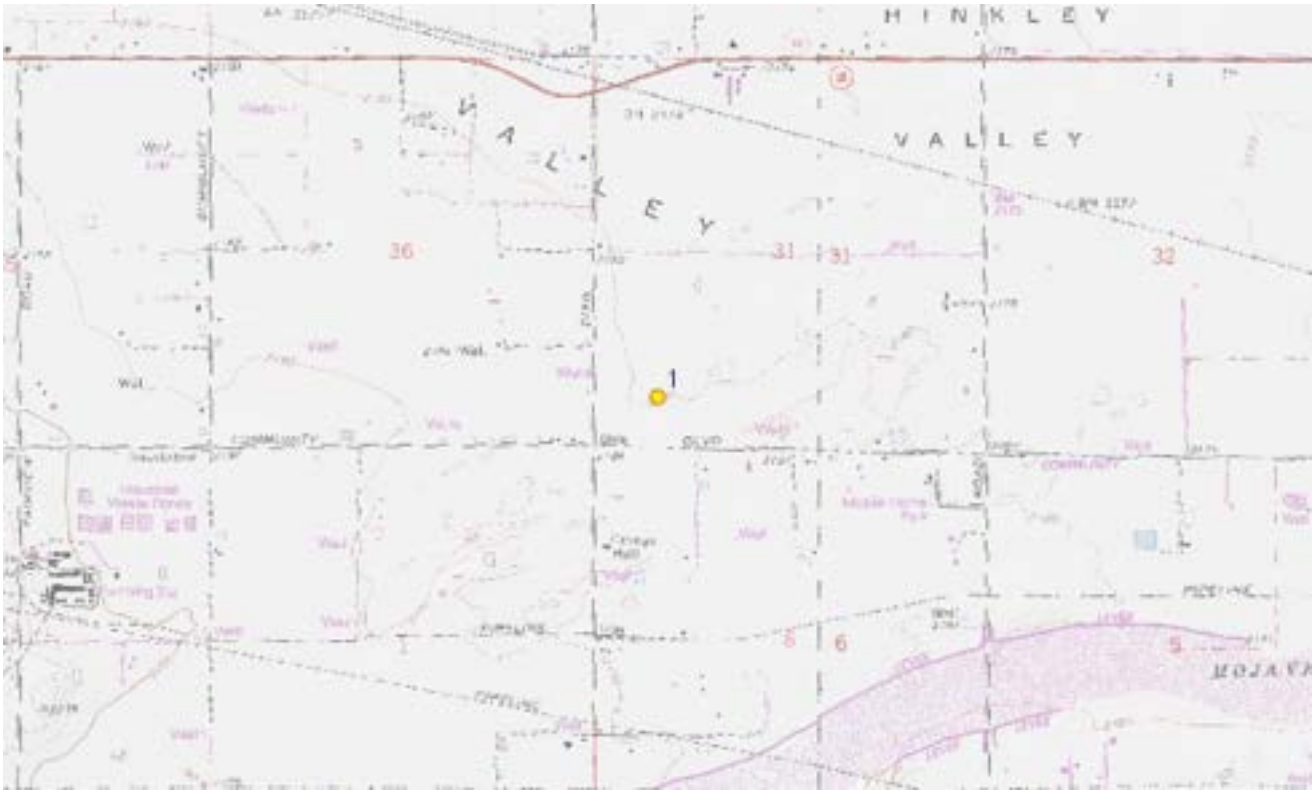
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2185	34.90925	-117.13331	487821	3862988	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R02W 31							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0009
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Falco mexicanus*

Common name: prairie falcon

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching on top of transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

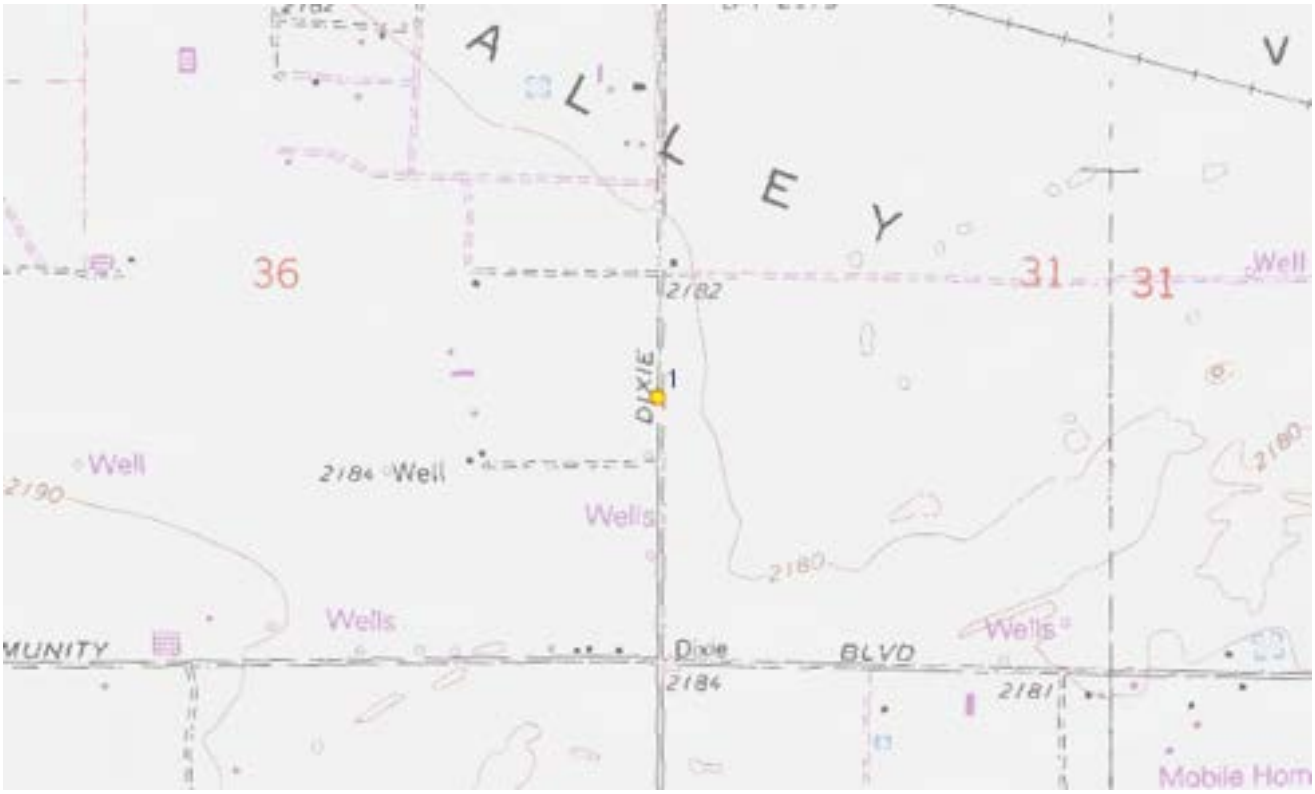
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.91239	-117.13629	487550	3863337	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0006
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Falco mexicanus*

Common name: prairie falcon

Date of field work (mm-dd-yyyy): 06-13-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching on transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.91239	-117.13629	487550	3863337	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0007
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Falco mexicanus*

Common name: prairie falcon

Date of field work (mm-dd-yyyy): 07-17-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching on transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2186	34.91452	-117.13631	487548	3863573	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile Application

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0008
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: Melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Foraging in Ag Fields

What was the observed behavior? flying

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	San Bernardino	Hinkley	2194	34.90293	-117.14803	486476	3862289	11
	Public Land Survey	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0005
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging in dunes

What was the observed behavior? Flying low in dunes

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

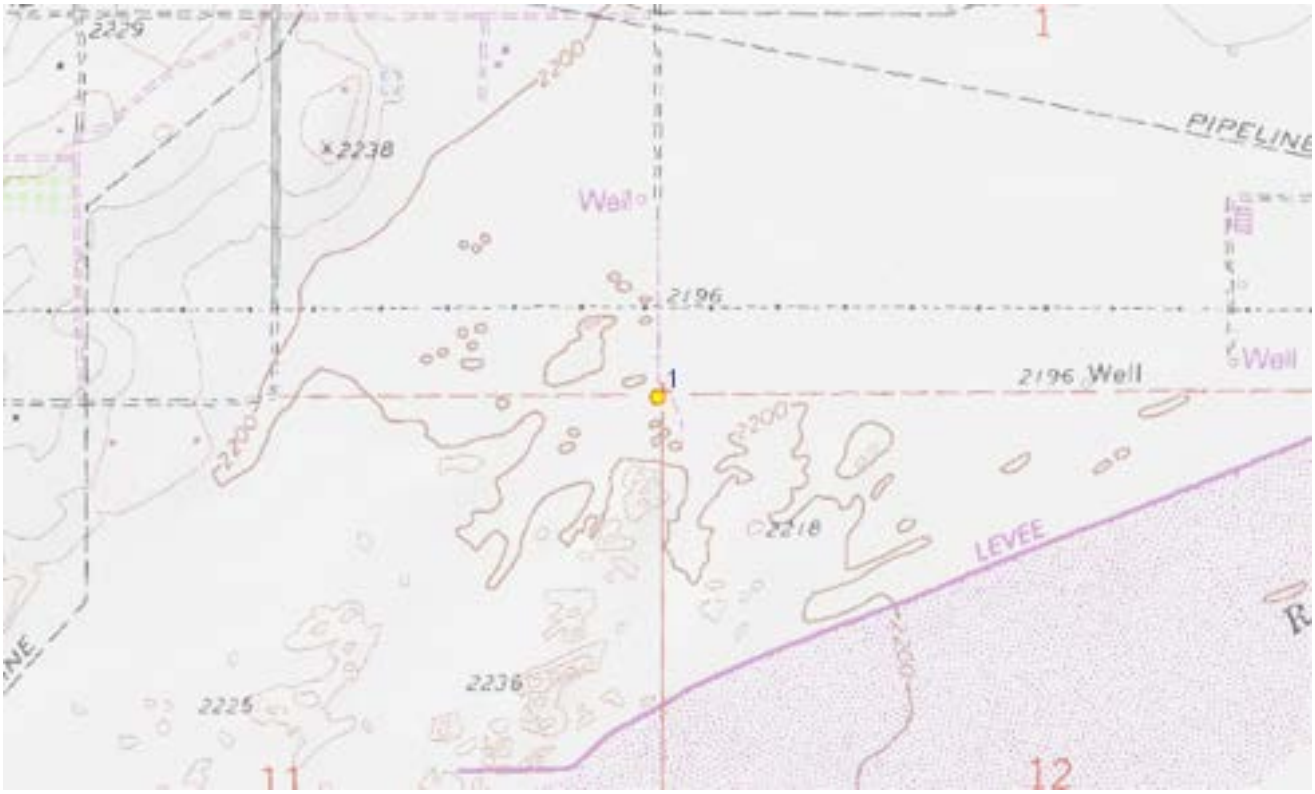
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2196	34.89285	-117.15383	485944	3861172	11
	Public Land Survey	**Feature Comment**						
1	S T09N R03W 11							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0007
Quad code 3411781
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Foraging

What was the observed behavior? Flying

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

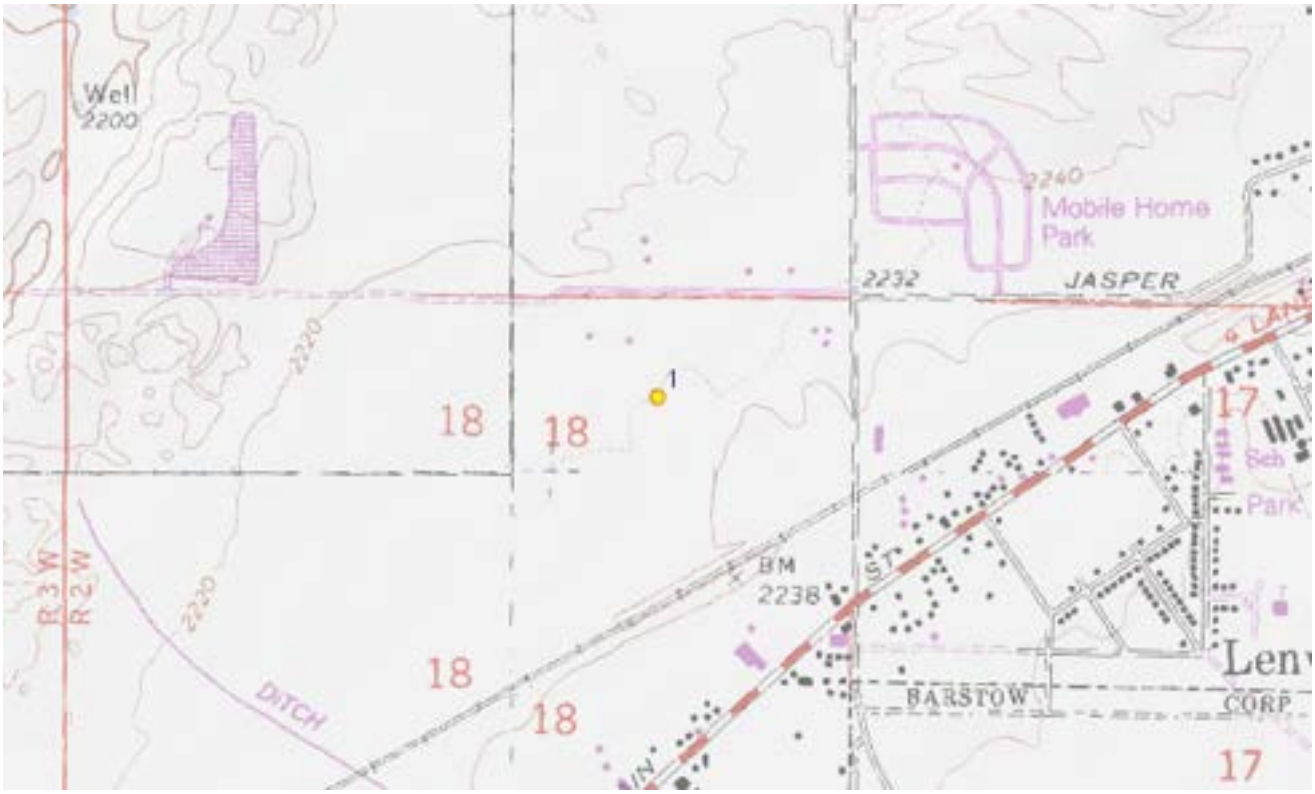
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Barstow	2229	34.87642	-117.12254	488801	3859346	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 18							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0016
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? soaring over ag field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2194	34.90293	-117.14802	486477	3862288	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0015
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? flying over ag field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

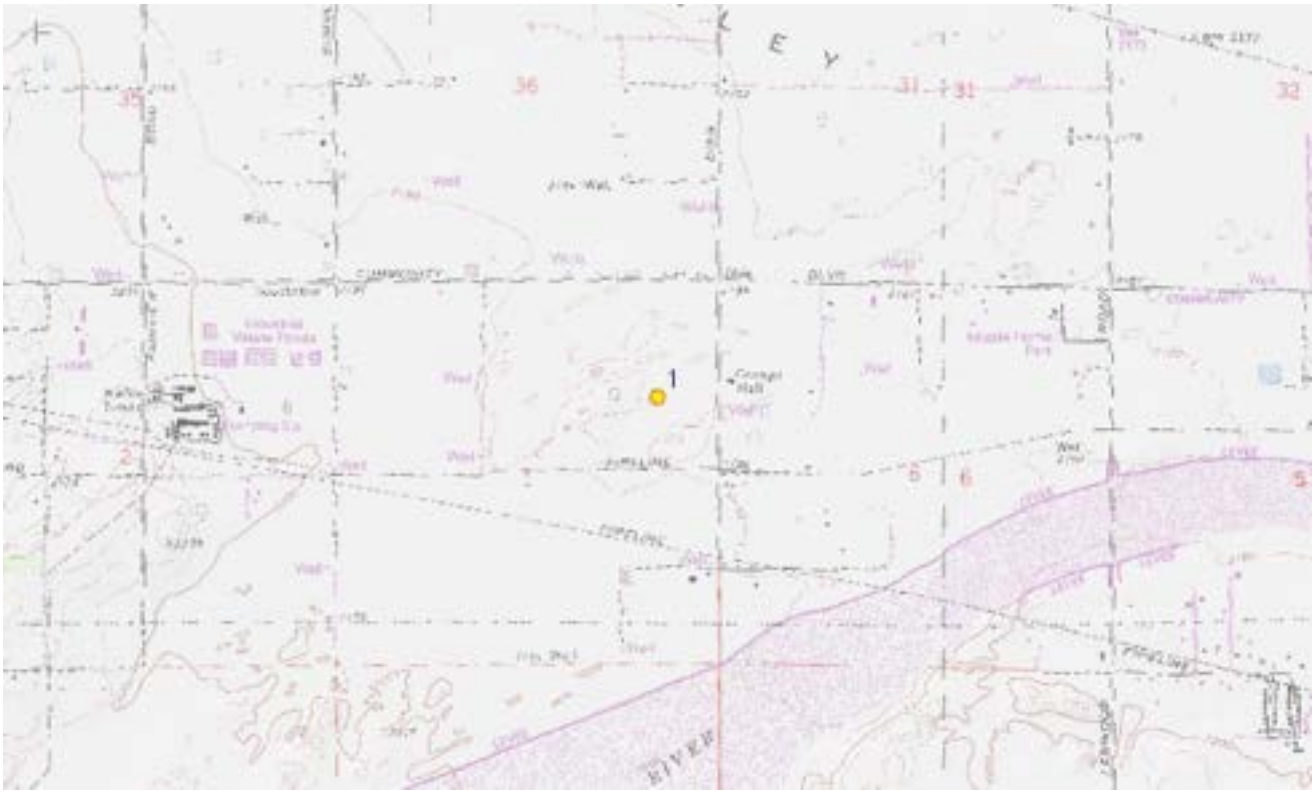
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2191	34.90302	-117.13903	487298	3862298	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0039
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 07-17-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 4

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2	2			

Age class comment:

Bird site use:

☑ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Nesting and foraging

What was the observed behavior? One juvenile seen still in nest, one juvenile in alfalfa field, and parents seen flying, perching, and foraging.

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

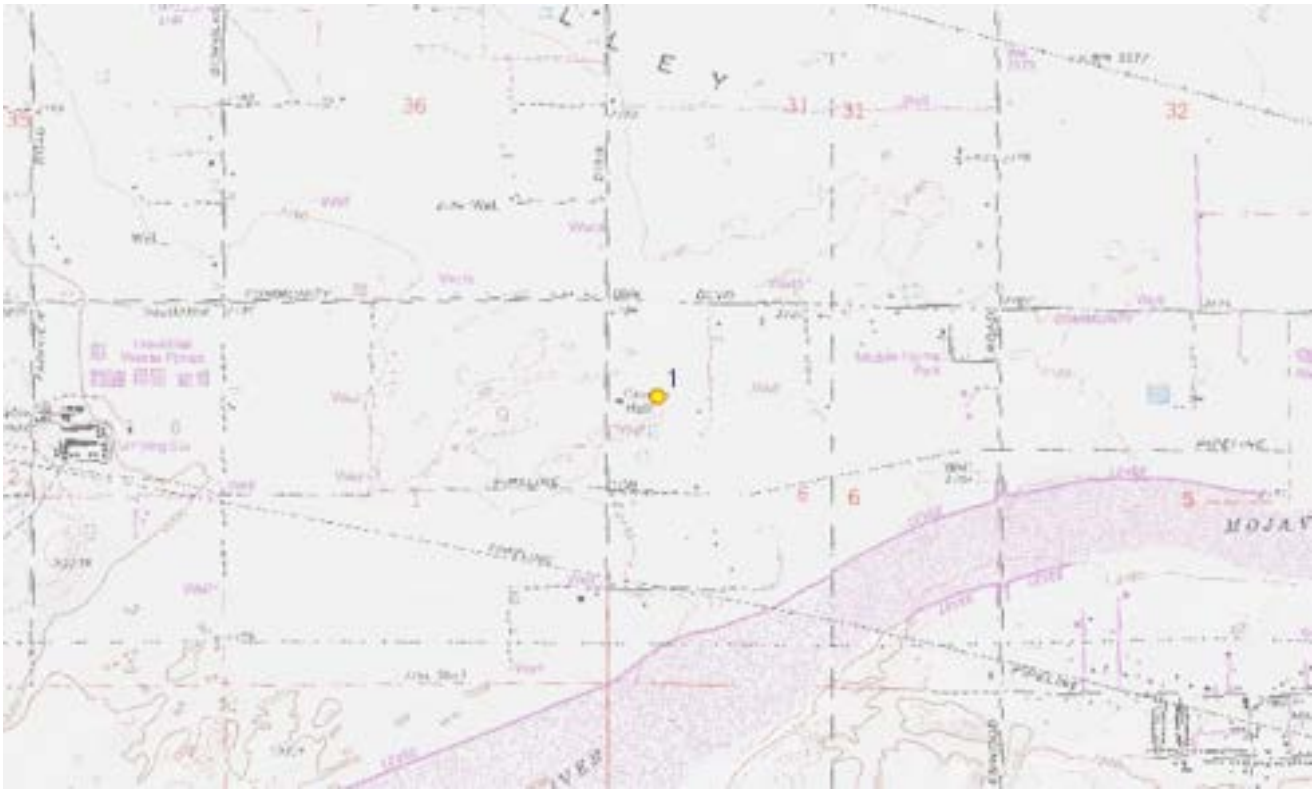
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2189	34.90379	-117.13391	487766	3862382	11
	Public Land Survey	**Feature Comment**						
1	S T09N R02W 6							

The mapped feature is accurate within: 100 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0038
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 06-16-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
				1

Age class comment: Unknown age class

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Perching in tamarisk near agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

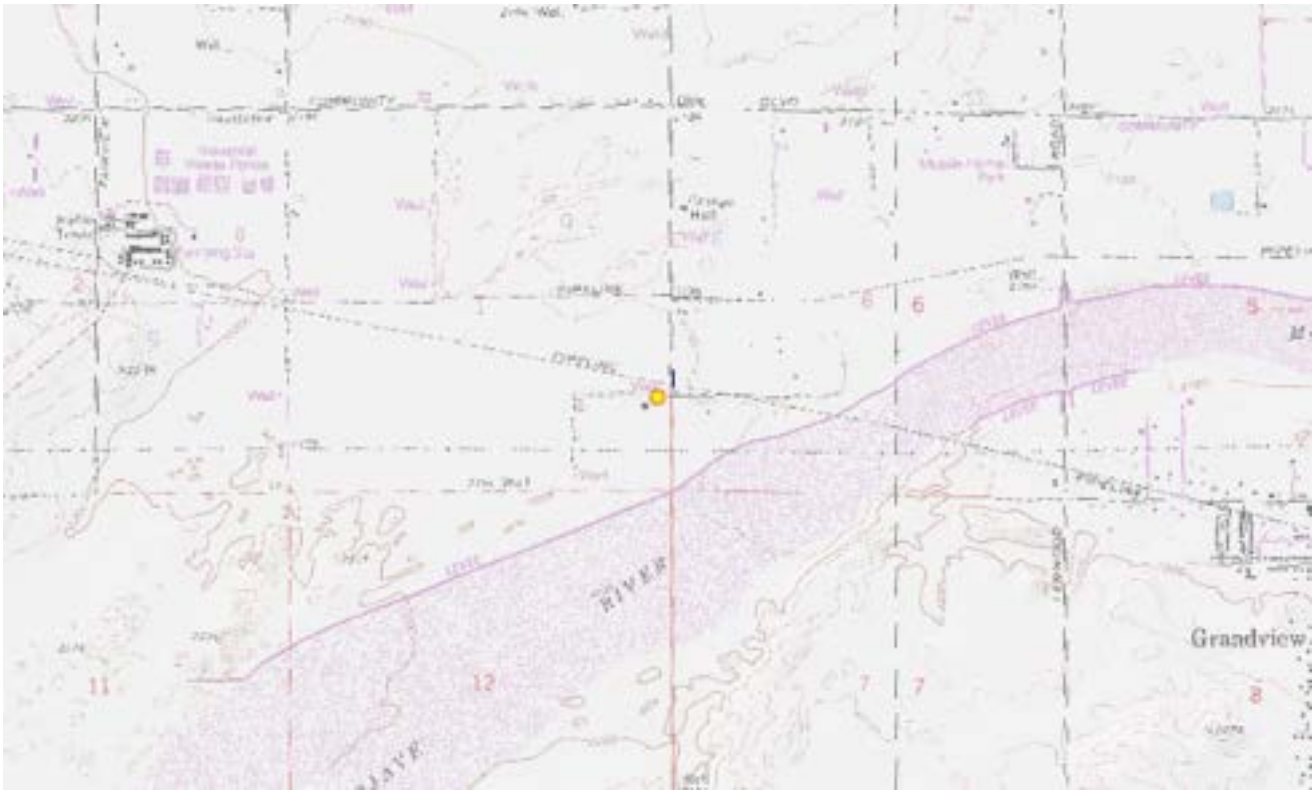
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2197	34.89651	-117.13685	487496	3861575	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0037
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 07-16-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Foraging

What was the observed behavior? Perching in tree and within alfalfa fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

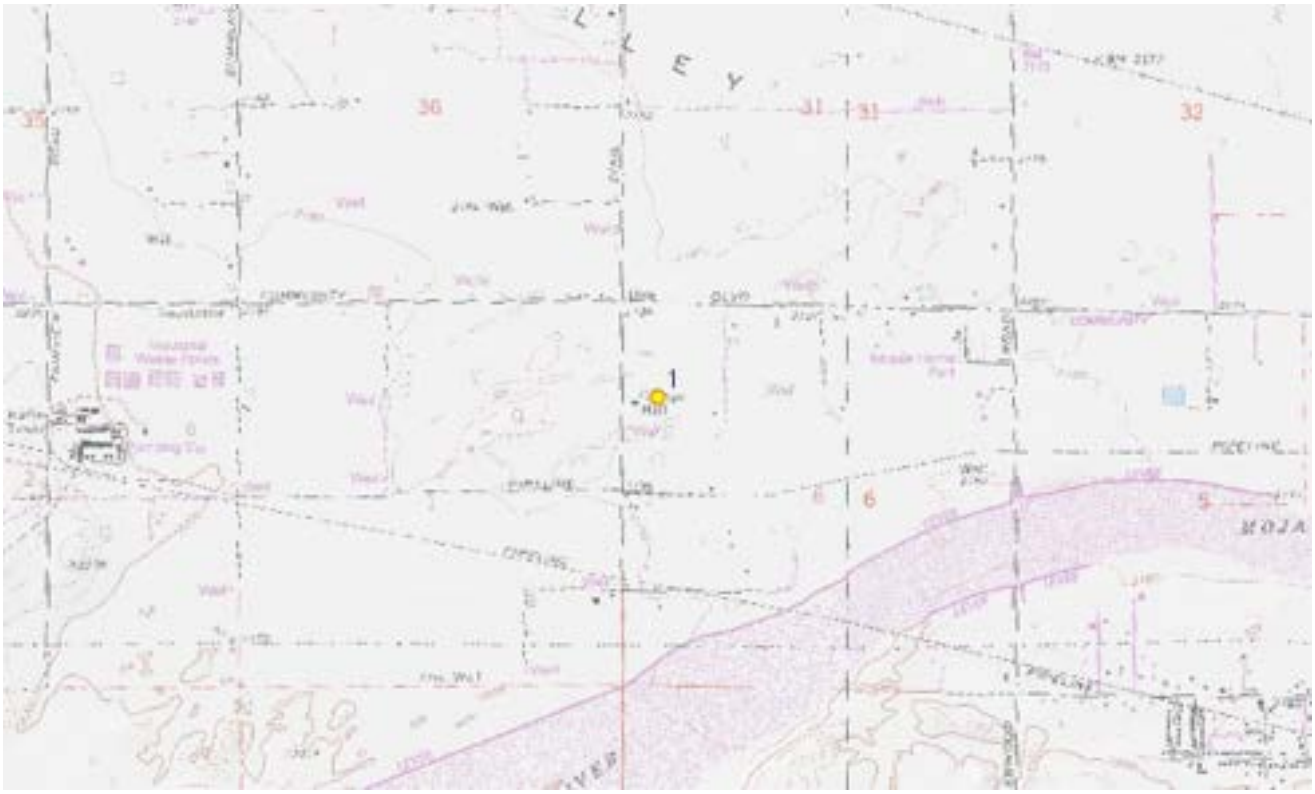
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90383	-117.13461	487702	3862387	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0014
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 06-26-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☑ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Nesting and foraging

What was the observed behavior? Seen foraging and over nest in Chinese elm tree

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

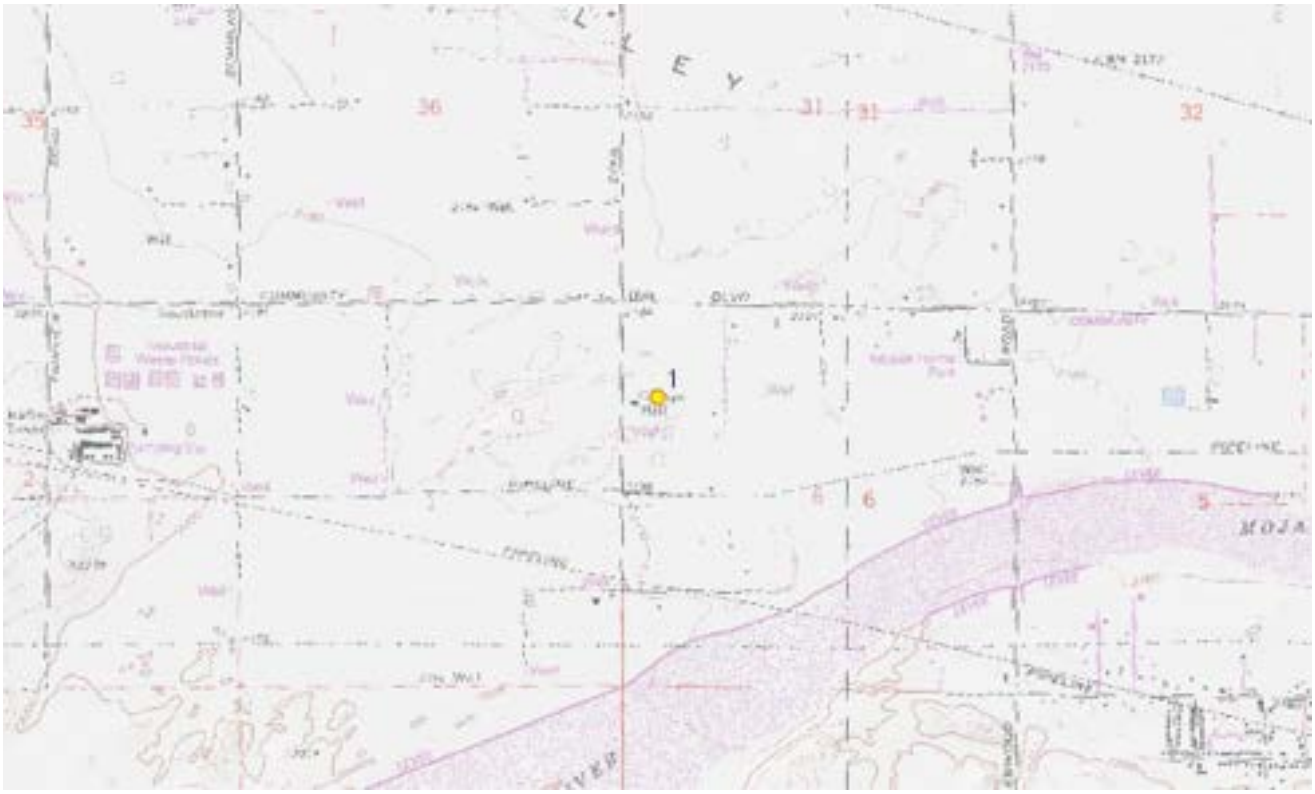
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90384	-117.13460	487703	3862389	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0024
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 06-25-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 995-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 5

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2	3			

Age class comment:

Bird site use:

☑ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging and nesting

What was the observed behavior? Parents seen near nest in Chinese elm tree. 3 chicks in nest. Parents forage in adjacent alfalfa fields.

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90382	-117.13394	487763	3862386	11
	Public Land Survey	**Feature Comment**						
1	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0036
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 06-13-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Perching in trees near adjacent alfalfa fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90382	-117.13460	487703	3862386	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0023
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 06-12-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☑ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? One individual seen nest building in Chinese elm tree, another individual seen foraging and perching in defoliated tree.

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

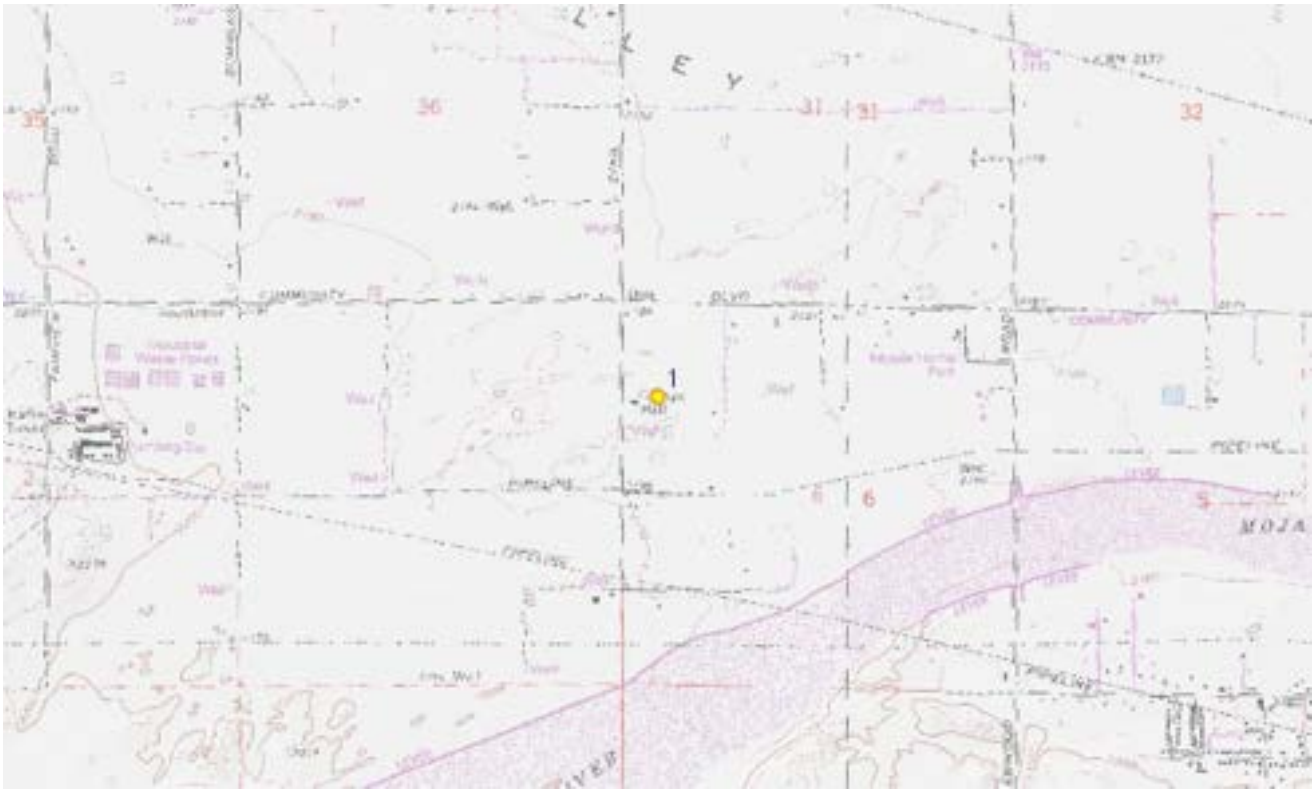
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90383	-117.13459	487704	3862387	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0022
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 11

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
11				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely for forage

What was the observed behavior? Individuals seen perching on irrigation structure within alfalfa field, occasionally flying over fields, and occasionally dropping onto the ground

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

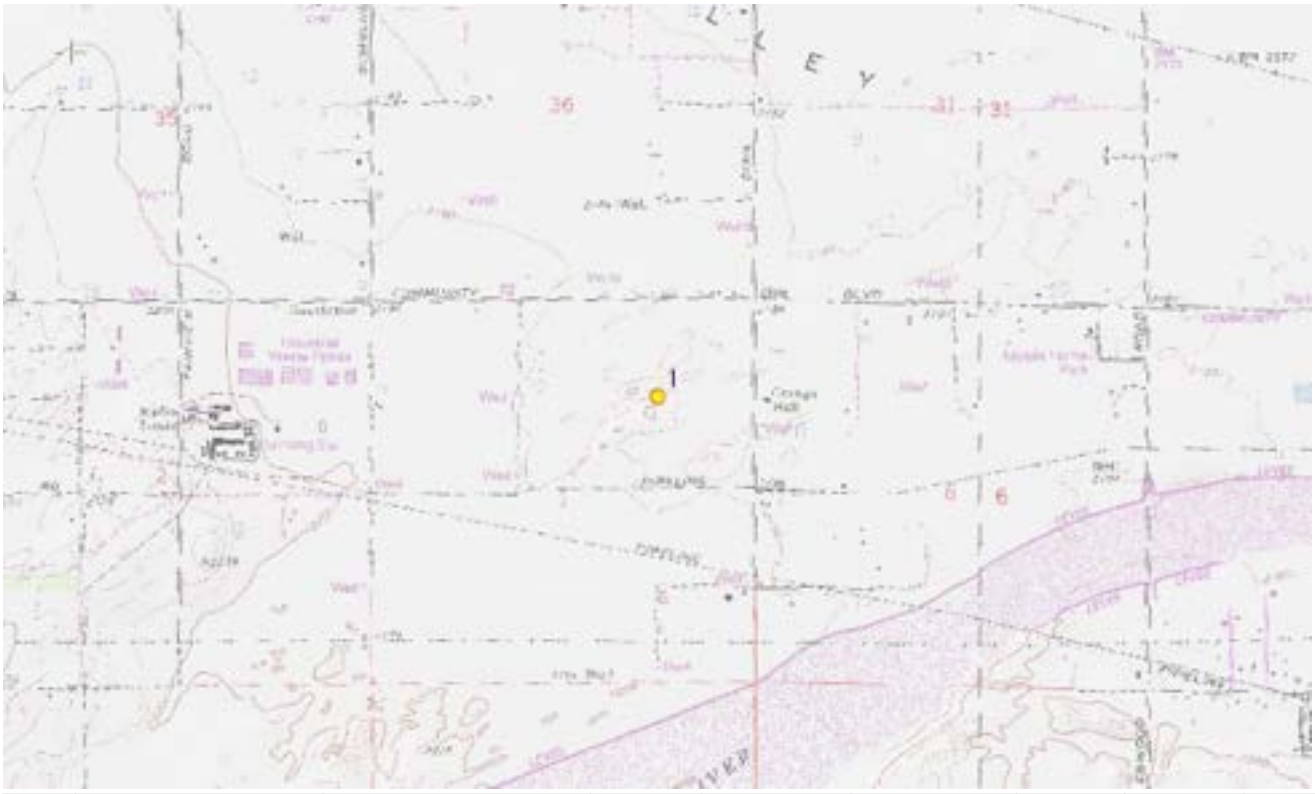
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2192	34.90375	-117.14068	487148	3862379	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0021
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Perched on pole and then flew over alfalfa fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

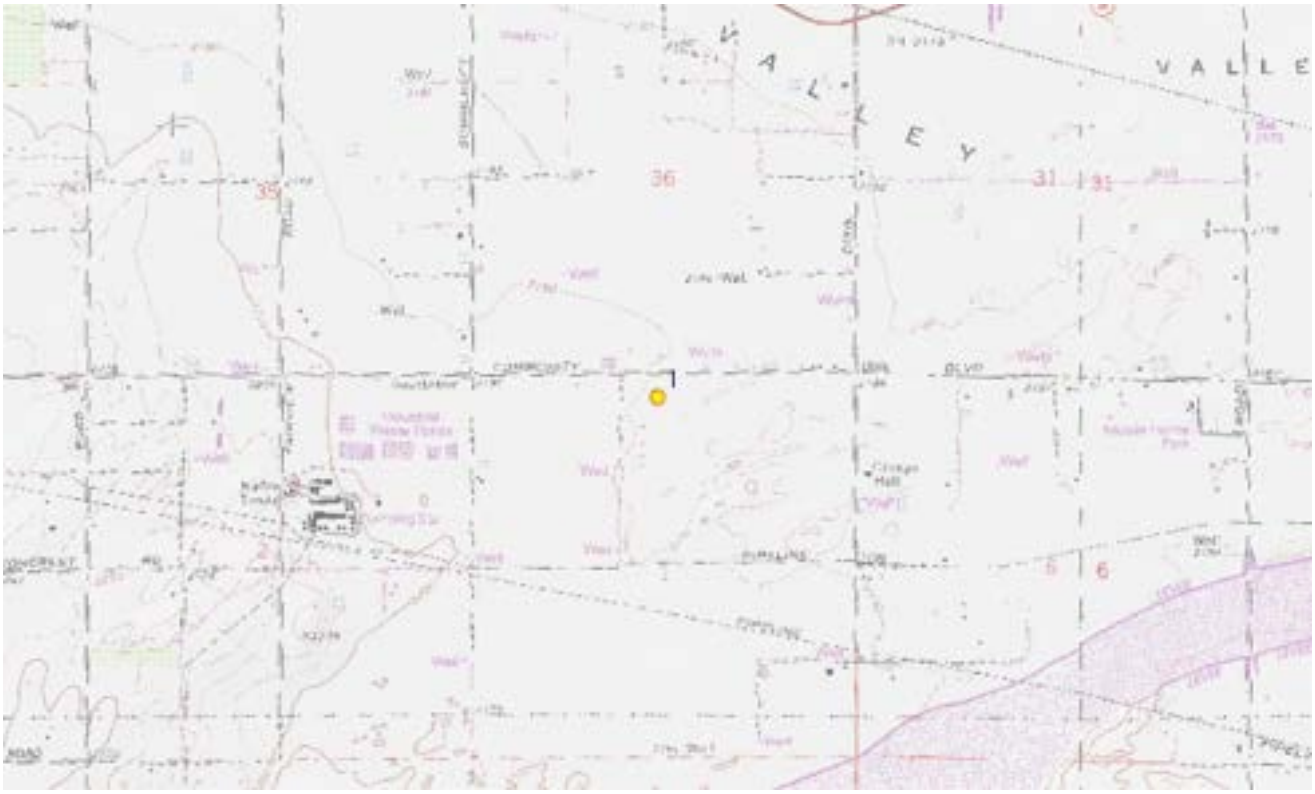
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90651	-117.14532	486724	3862686	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0020
Quad code 3411782
Occ. no.
EO index no.
Map index no.

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely for foraging

What was the observed behavior? Perching on transmission structure adjacent to alfalfa fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

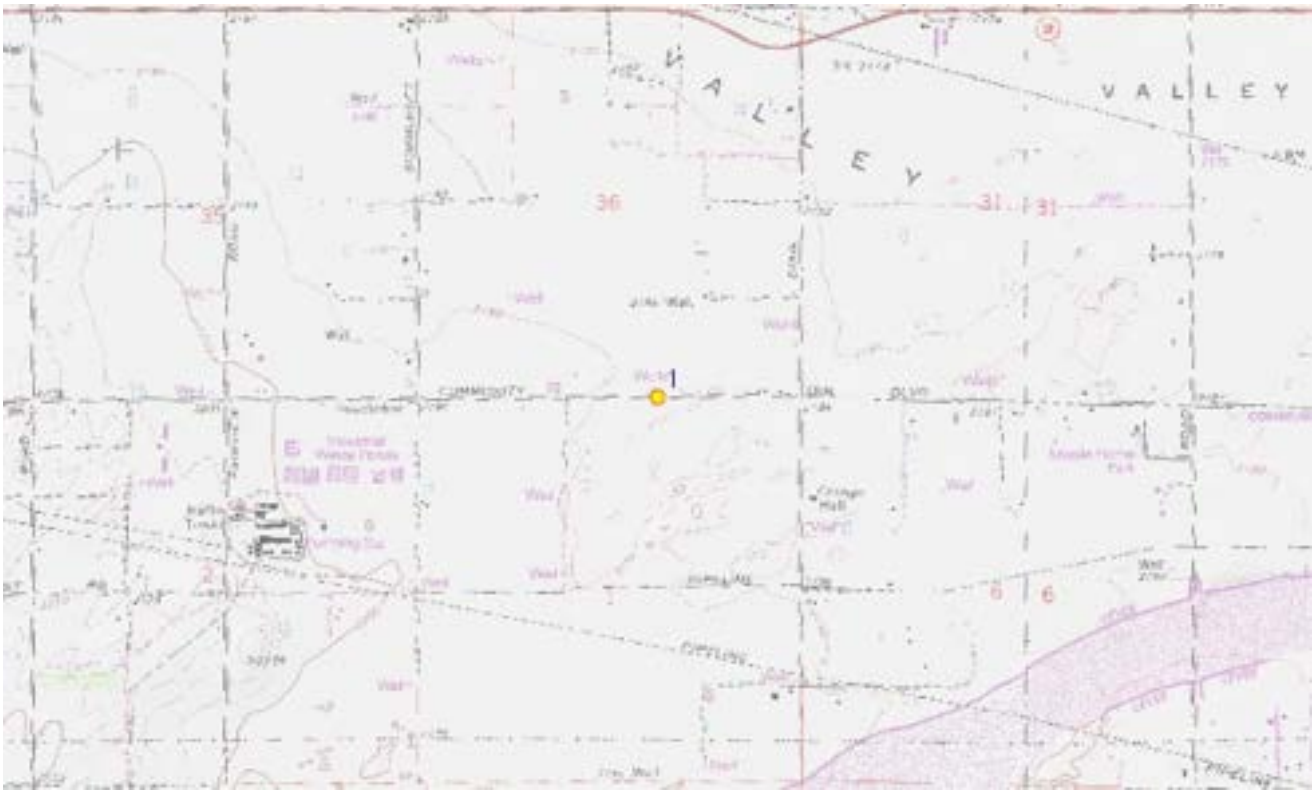
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90743	-117.14281	486953	3862787	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOO25F0034
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alec Goodman

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: alec@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 4

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
4				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Flying around alfalfa fields and perching on irrigation structure in alfalfa field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

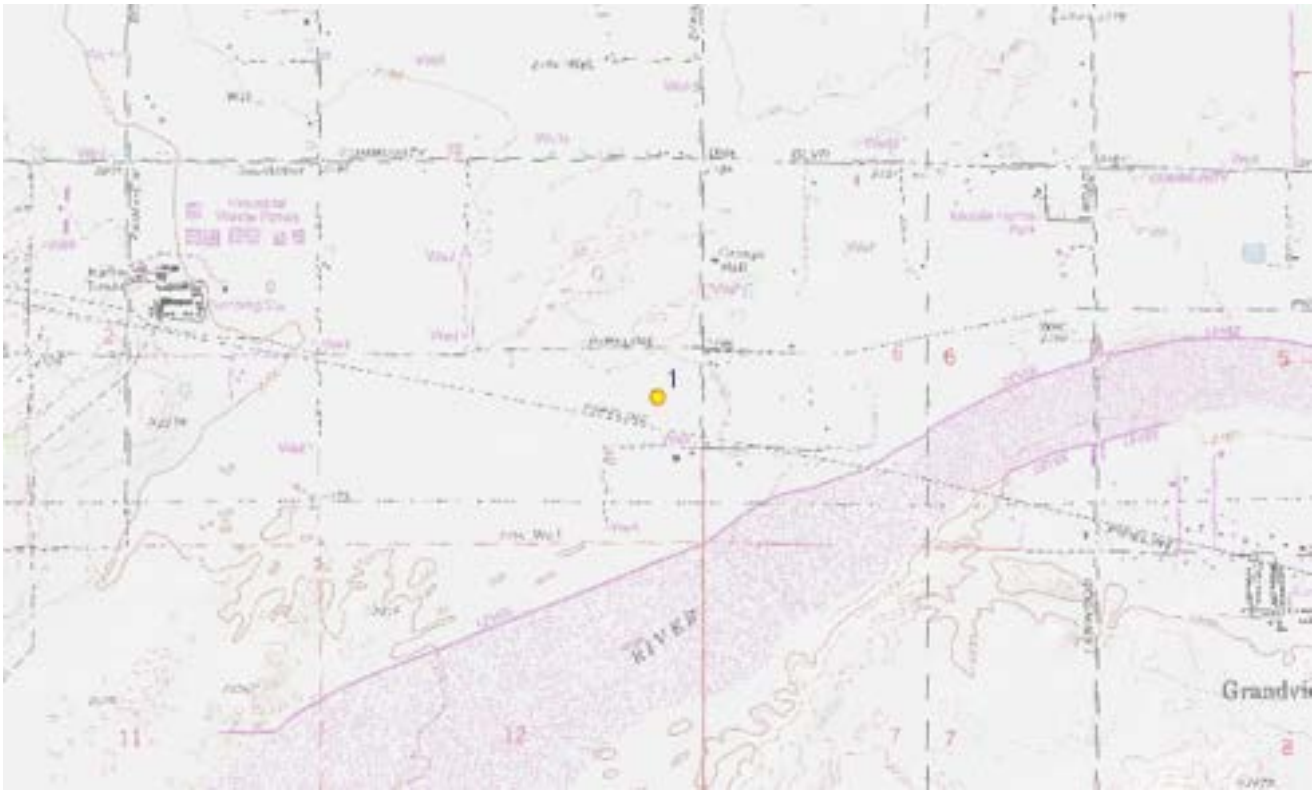
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2194	34.89847	-117.13828	487366	3861793	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOO25F0033
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alec Goodman

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: alec@rocksbio.com

Phone: (909) 565-7197

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely used for foraging

What was the observed behavior? Perching in Chinese elm tree

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

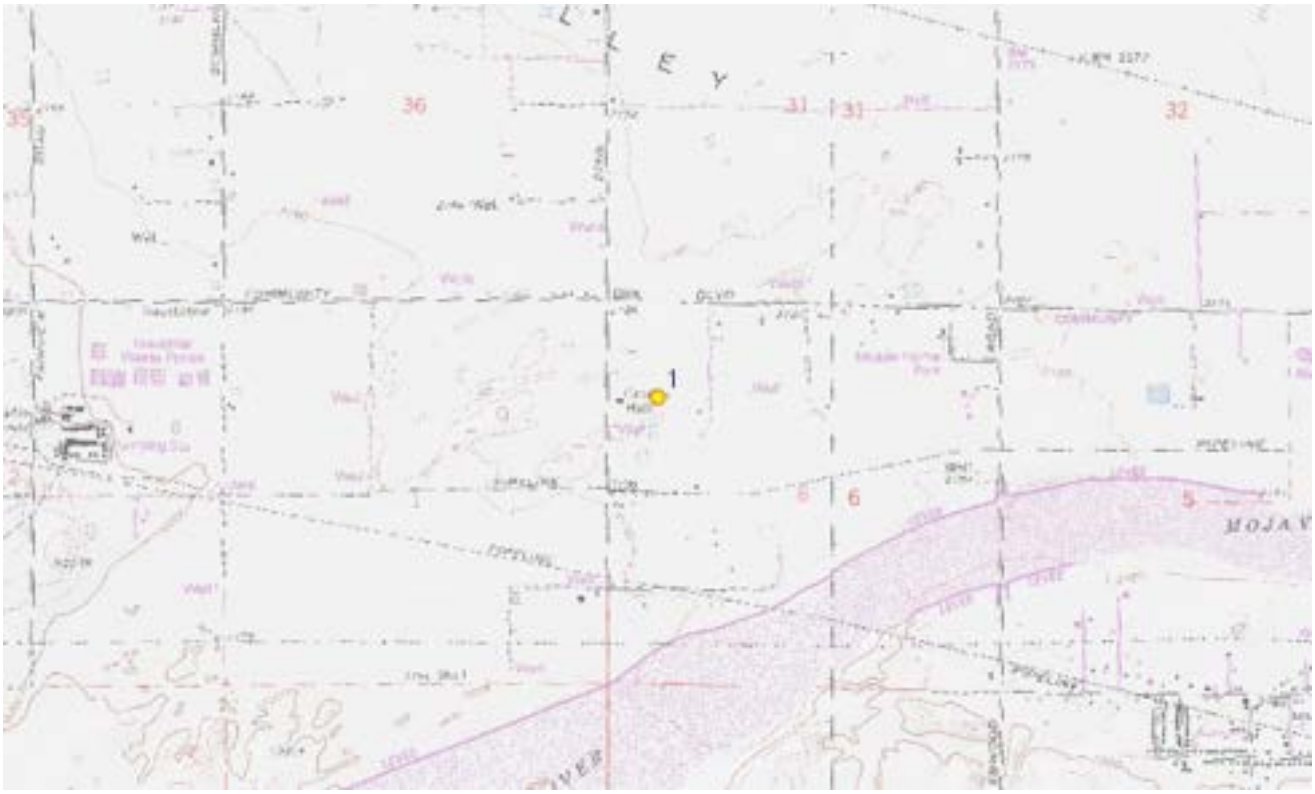
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2189	34.90377	-117.13392	487765	3862380	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOO25F0032
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alec Goodman

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: alec@rocksbio.com

Phone: (909) 565-7197

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely used for foraging

What was the observed behavior? Perching on power line

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

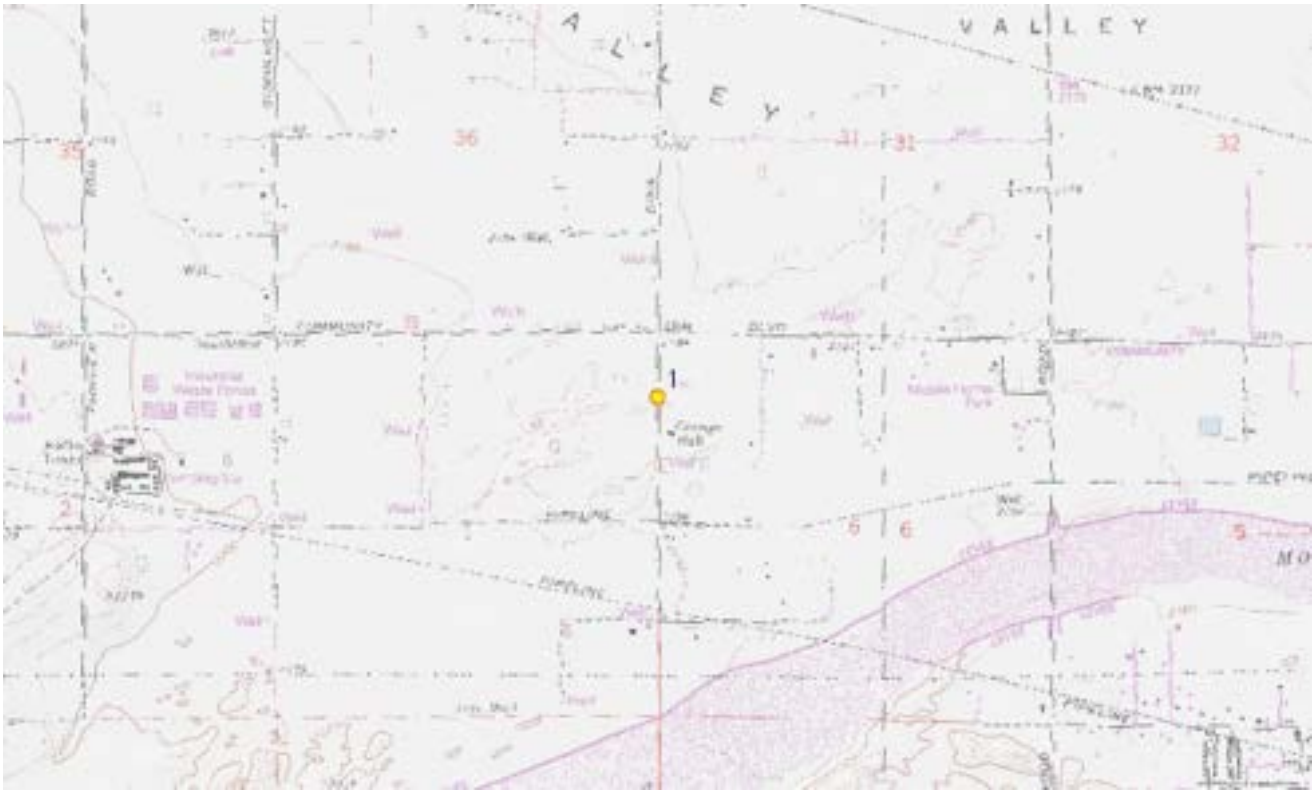
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2189	34.90499	-117.13629	487549	3862515	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0035
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely used for forage

What was the observed behavior? Perching on irrigation structure in alfalfa fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

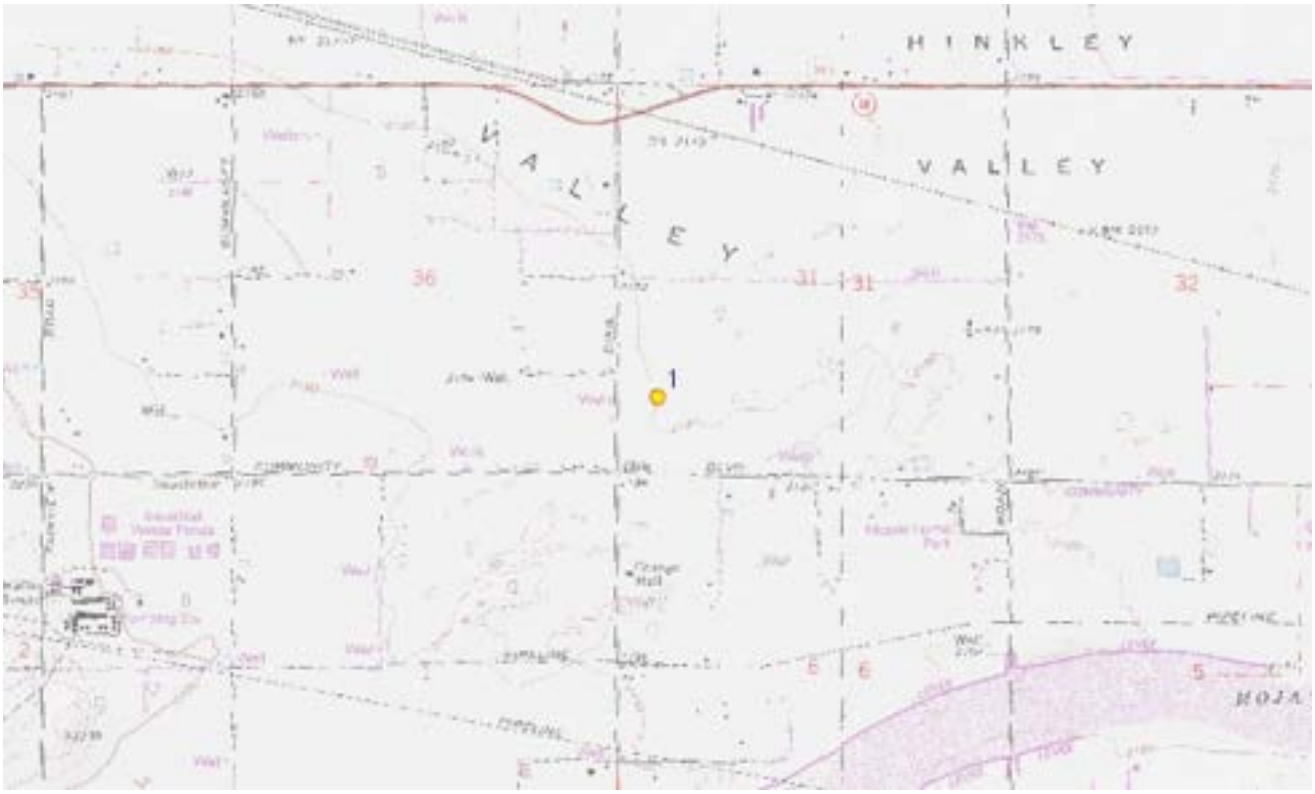
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2185	34.91026	-117.13437	487724	3863101	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R02W 31							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0034
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-04-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Potentially used for foraging

What was the observed behavior? Perching on irrigation structure in alfalfa fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

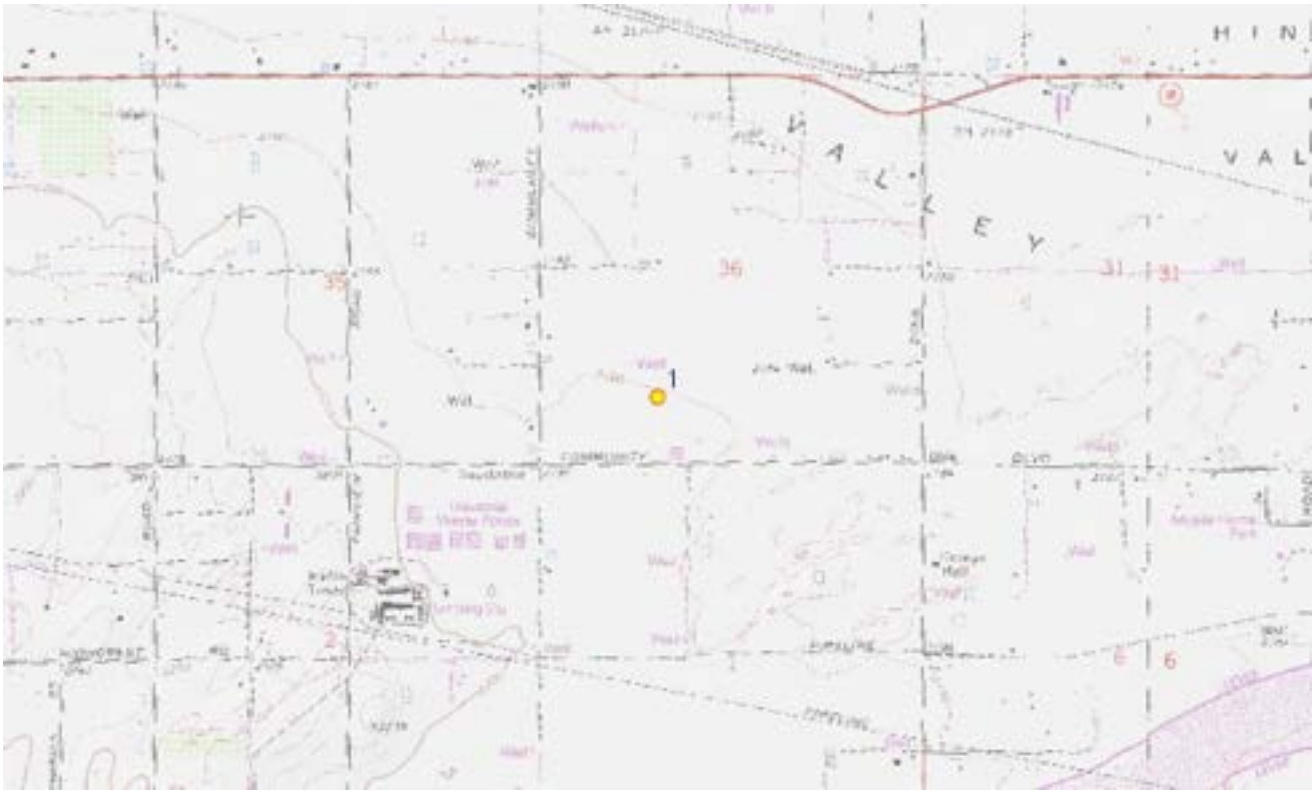
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2194	34.90990	-117.14842	486441	3863062	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0033
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 3

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
3				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely for forage

What was the observed behavior? Perching on irrigation structure on ag field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

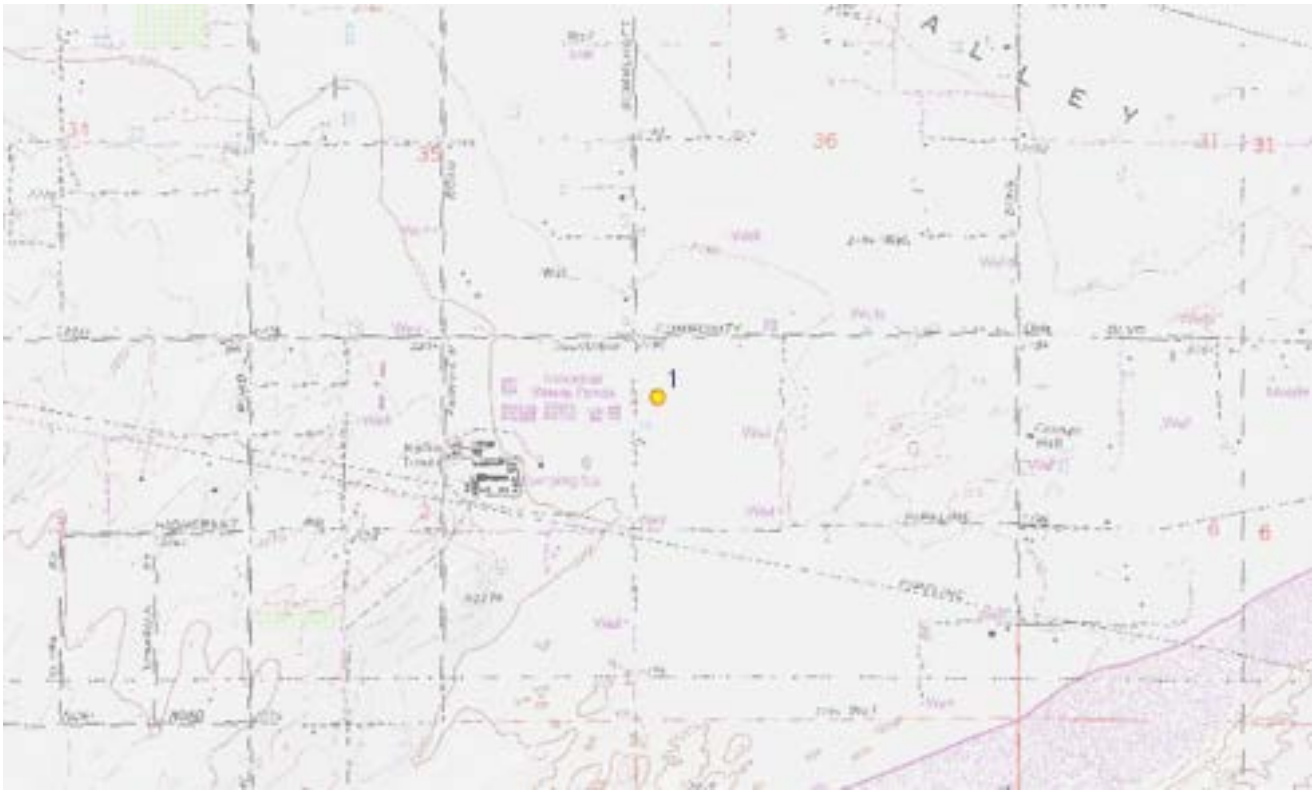
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2198	34.90508	-117.15277	486043	3862528	11
	Public Land Survey	**Feature Comment**						
1	S T09N R03W 1							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0032
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely for forage

What was the observed behavior? Perched in irrigation structure in ag field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2192	34.90280	-117.14728	486544	3862274	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 10 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0031
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Perched in tree

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

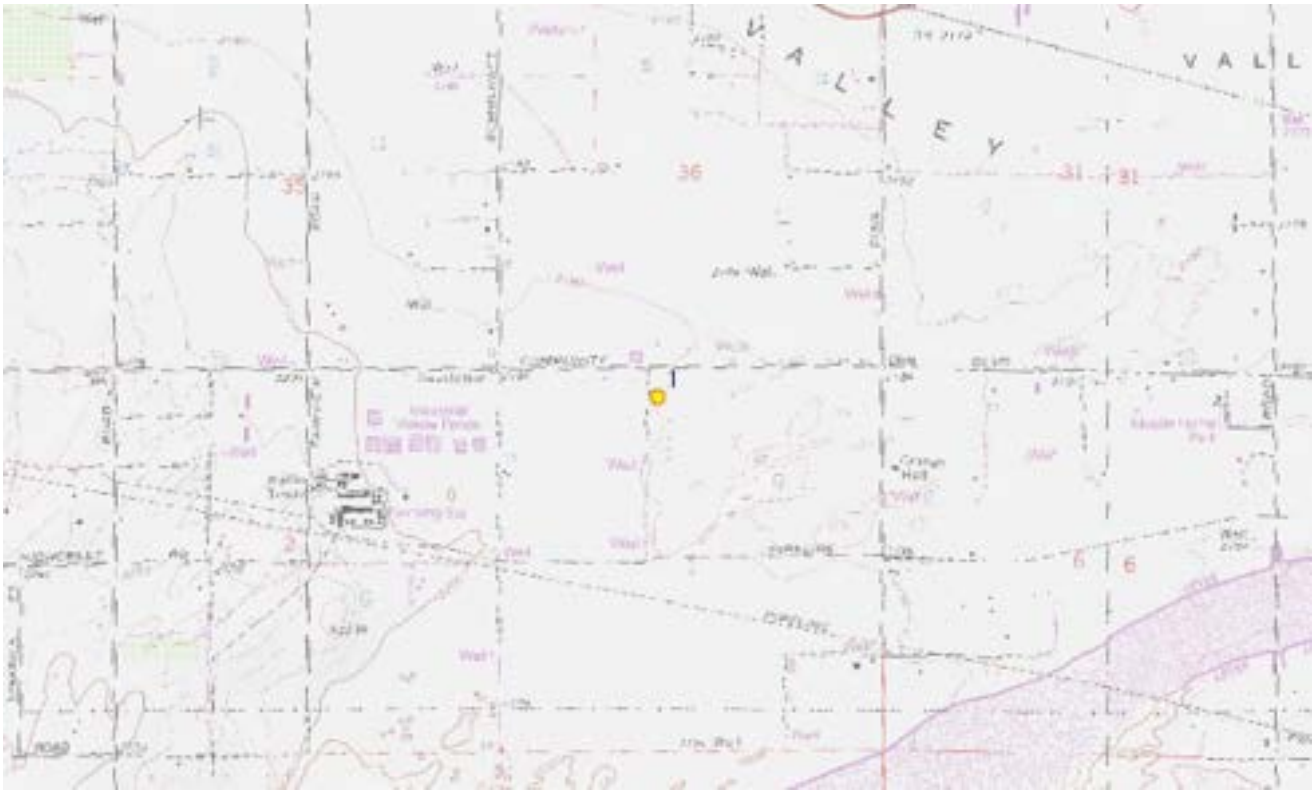
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2189	34.90628	-117.14657	486610	3862661	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0030
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 4

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
4				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Perching in irrigation structure and occasionally dropping to the ground

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

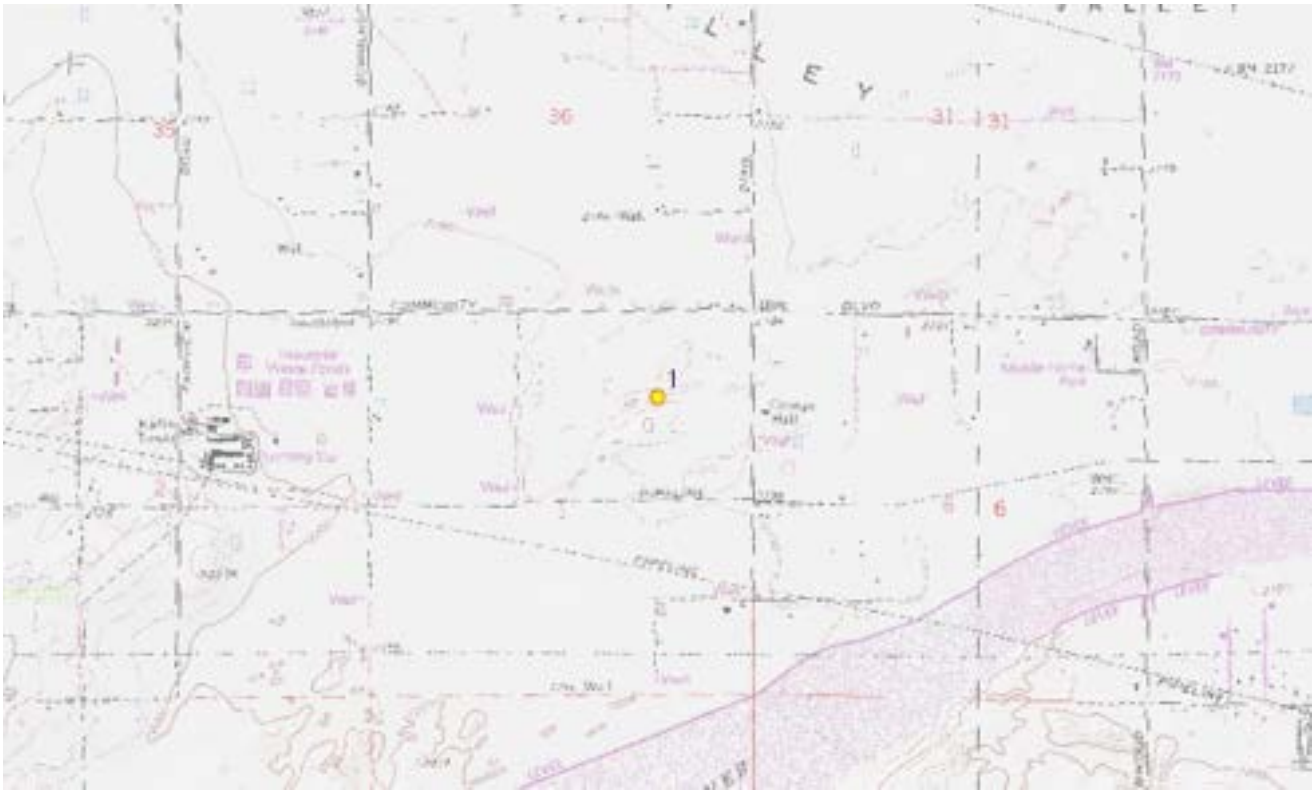
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2191	34.90418	-117.14061	487154	3862427	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0028
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Perched on top of transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

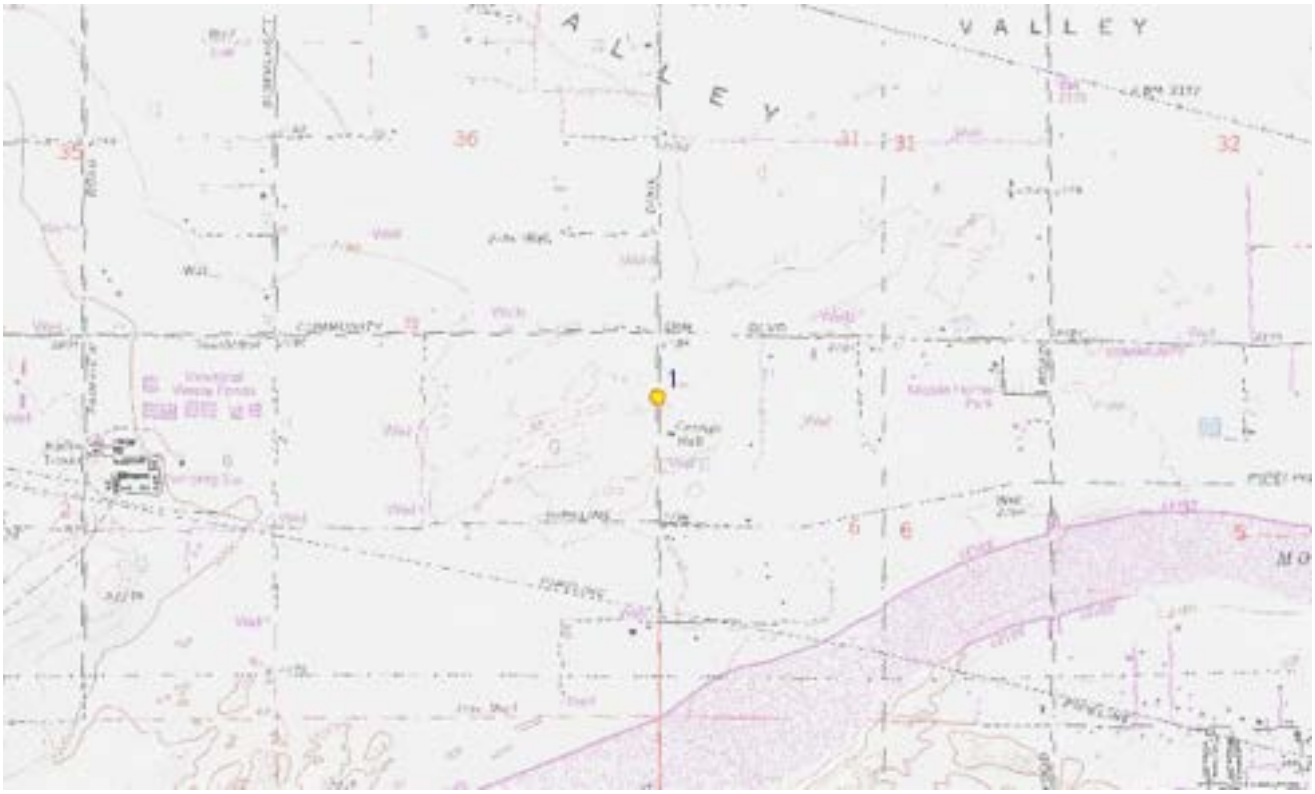
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2189	34.90501	-117.13629	487549	3862518	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0027
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 04-03-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Likely foraging

What was the observed behavior? Perched on irrigation line

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

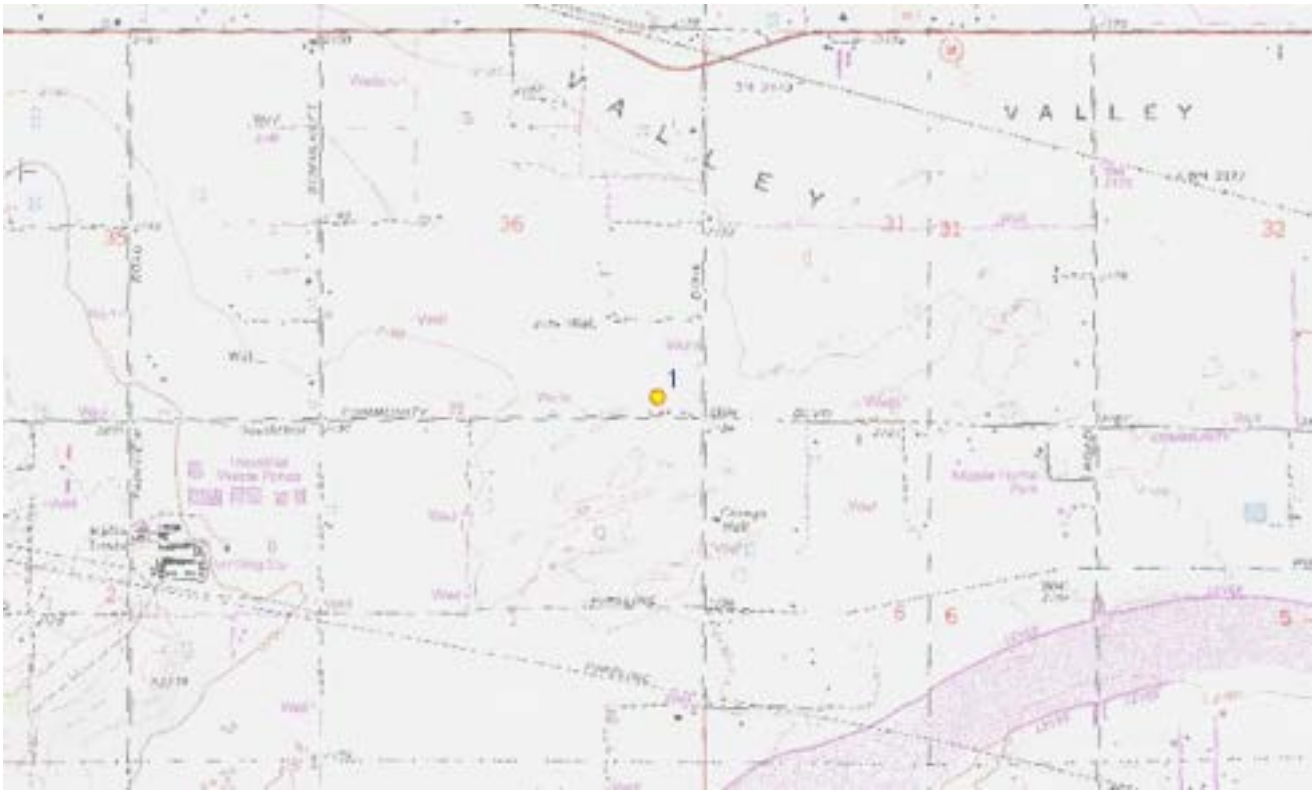
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.90823	-117.13836	487360	3862875	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0026
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 8

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
8				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching to potentially forage

What was the observed behavior? Individuals were seen perching on a large irrigation sprinkler in an alfalfa field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

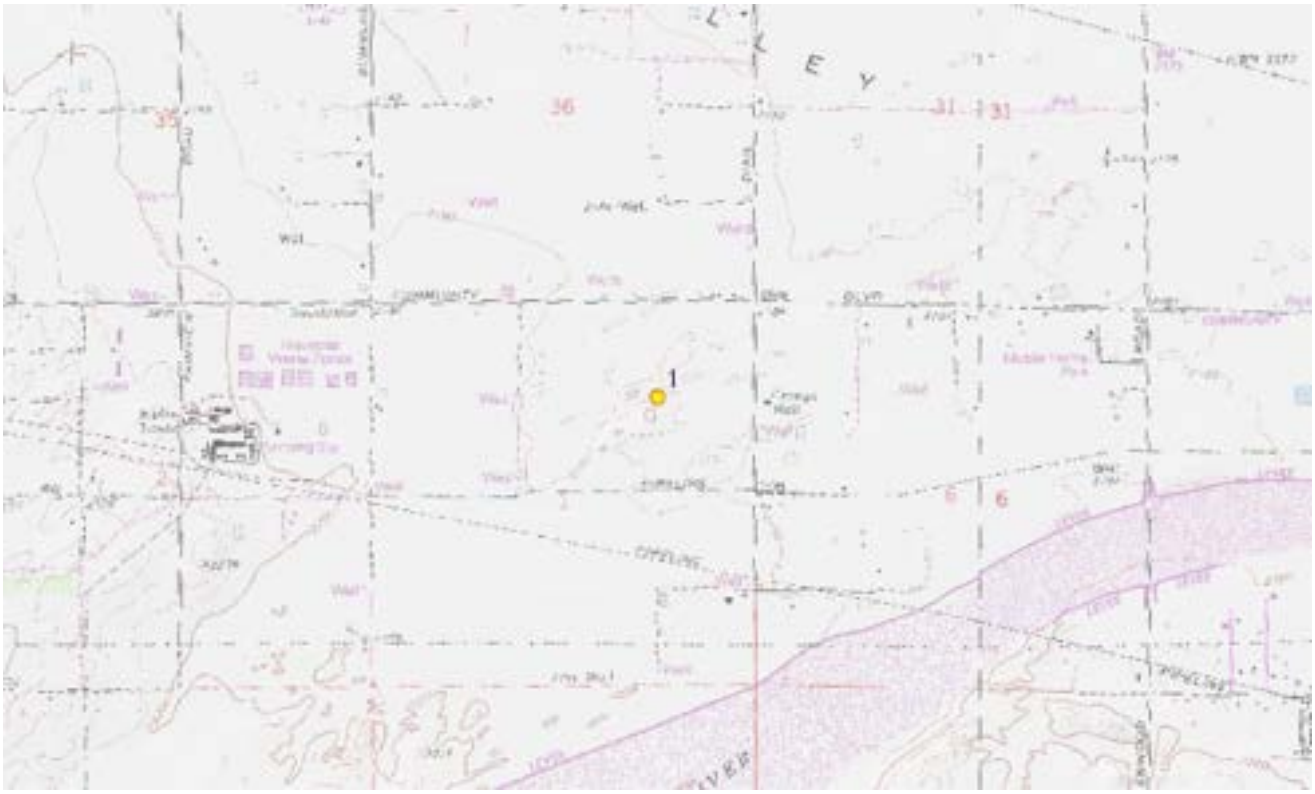
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2191	34.90382	-117.14069	487146	3862387	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 20 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0025
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
2				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perched on power lines

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

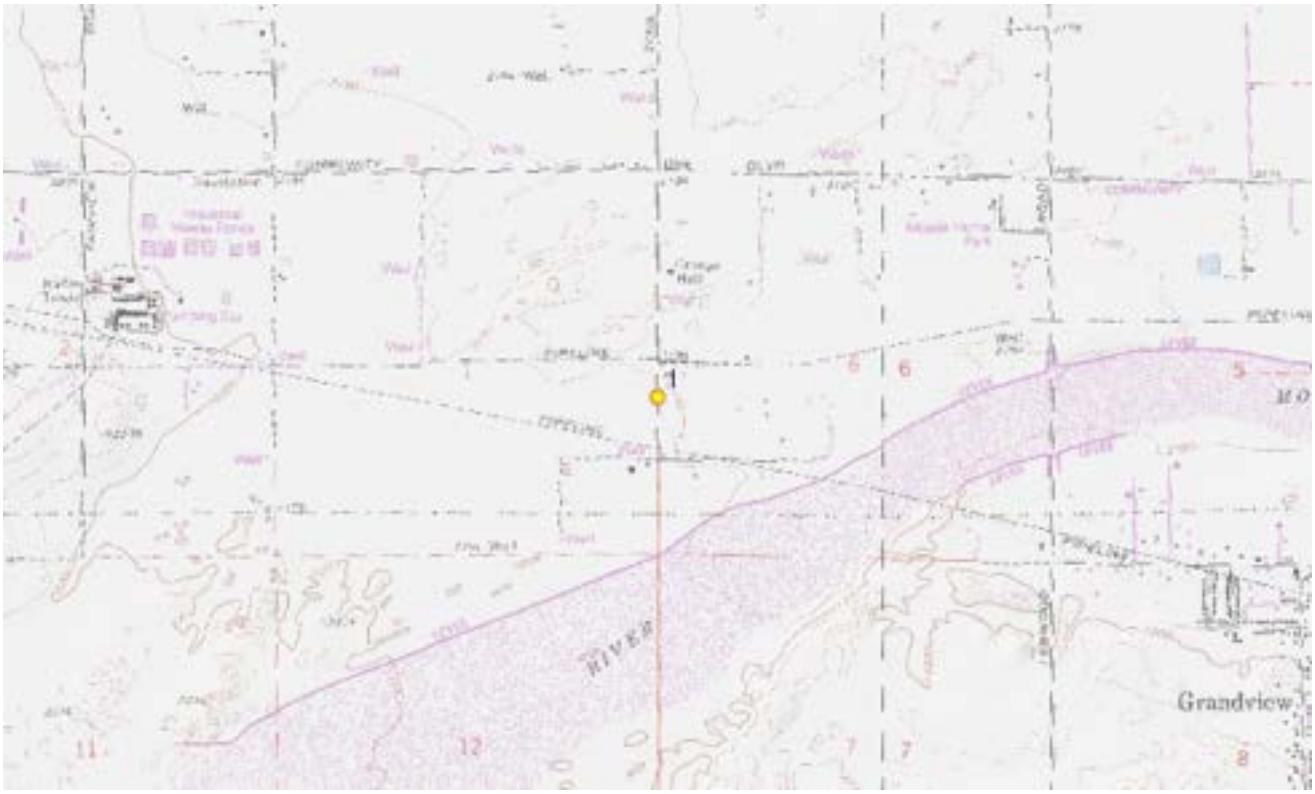
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2194	34.89890	-117.13624	487552	3861841	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0024
Quad code 3411782
Occ. no.
EO index no.
Map index no.

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Kettling

What was the observed behavior? Kettling above agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

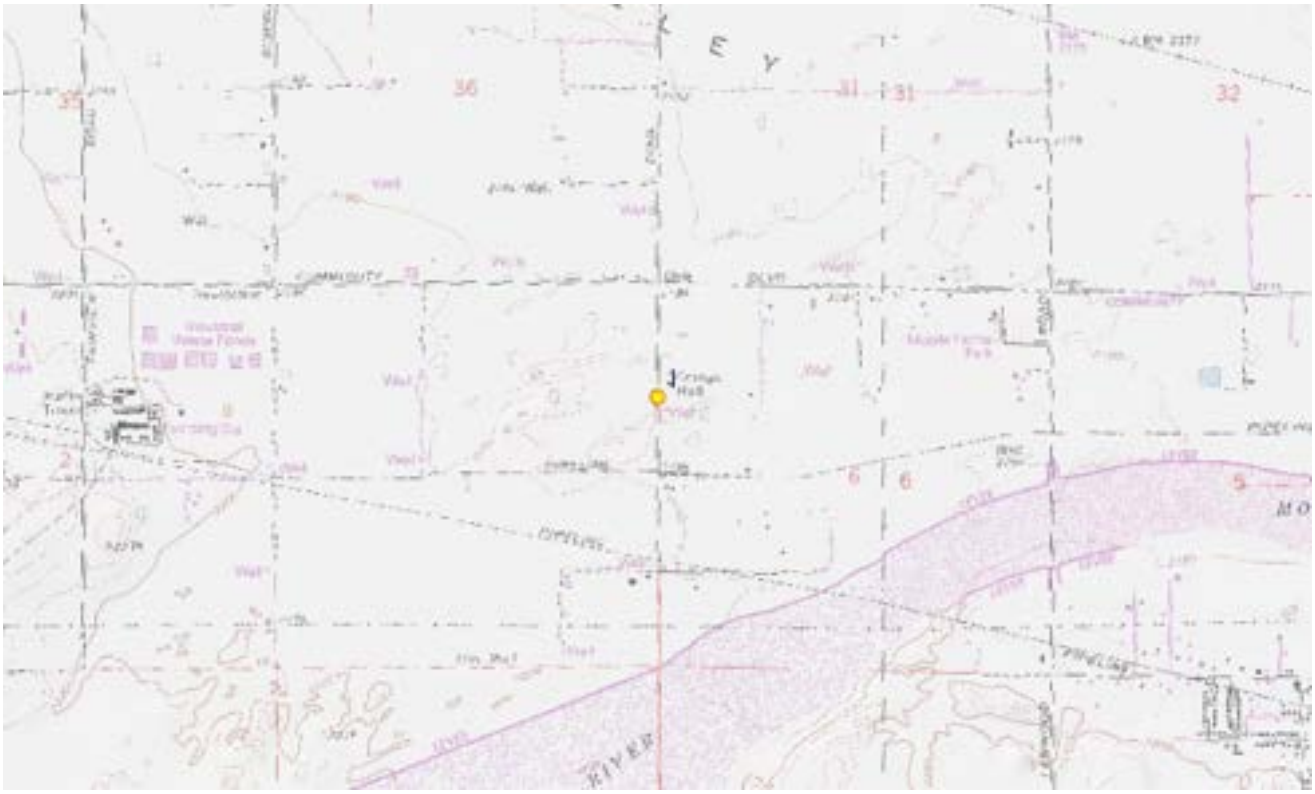
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	San Bernardino	Hinkley	2189	34.90312	-117.13627	487550	3862309	11
	Public Land Survey	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0023
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching in snag tree

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

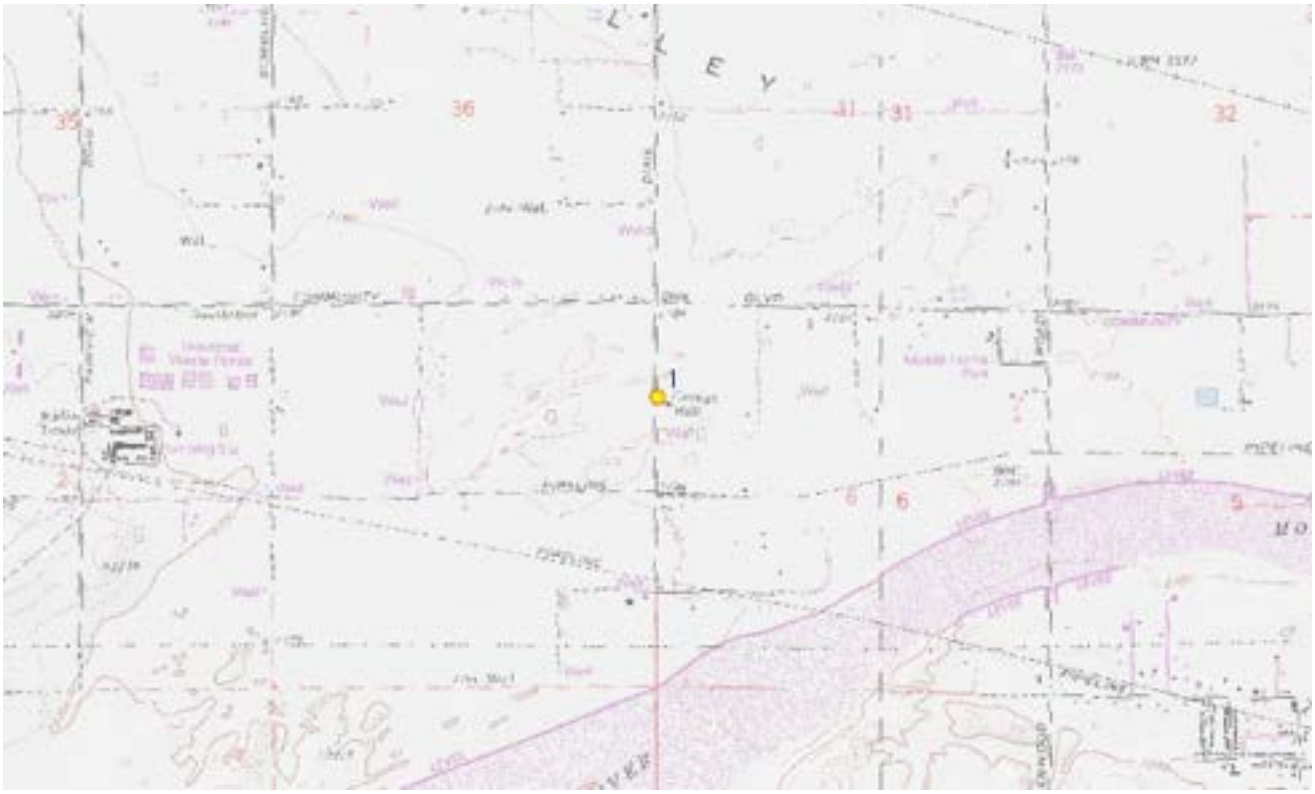
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90388	-117.13614	487562	3862393	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0022
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-28-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Foraging

What was the observed behavior? Seen eating prey in snag tree

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

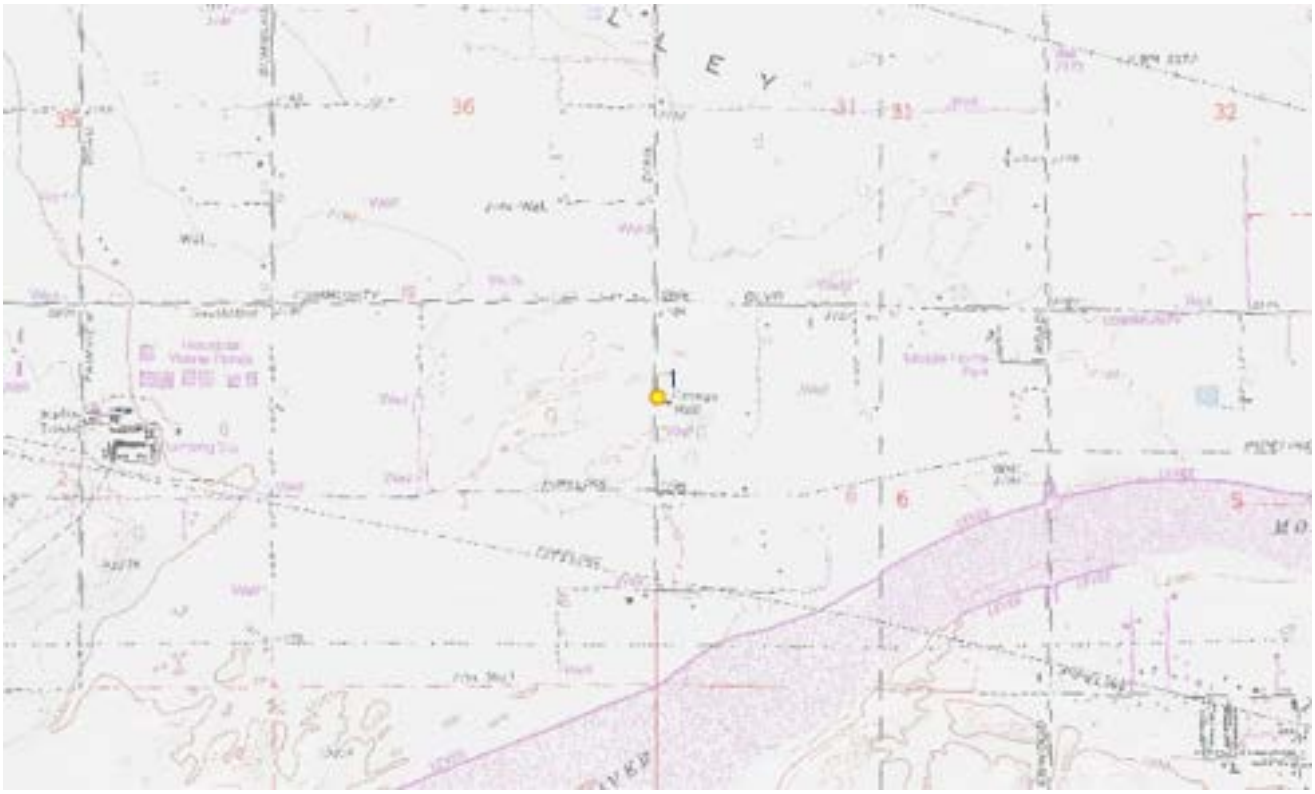
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90382	-117.13614	487562	3862386	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0021
Quad code 3411782
Occ. no.
EO index no.
Map index no.

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Foraging

What was the observed behavior? Flying over agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

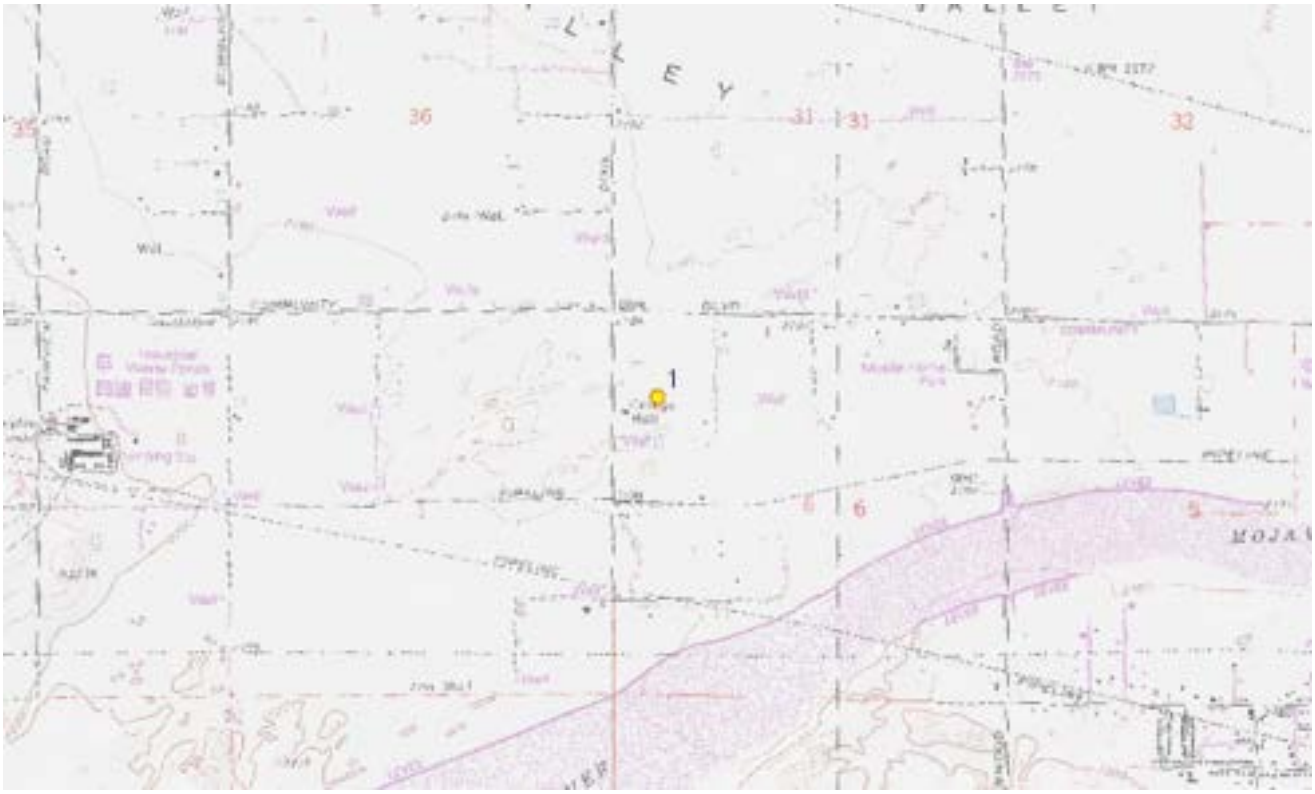
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.90418	-117.13418	487742	3862425	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 10 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0020
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-28-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Soaring over agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

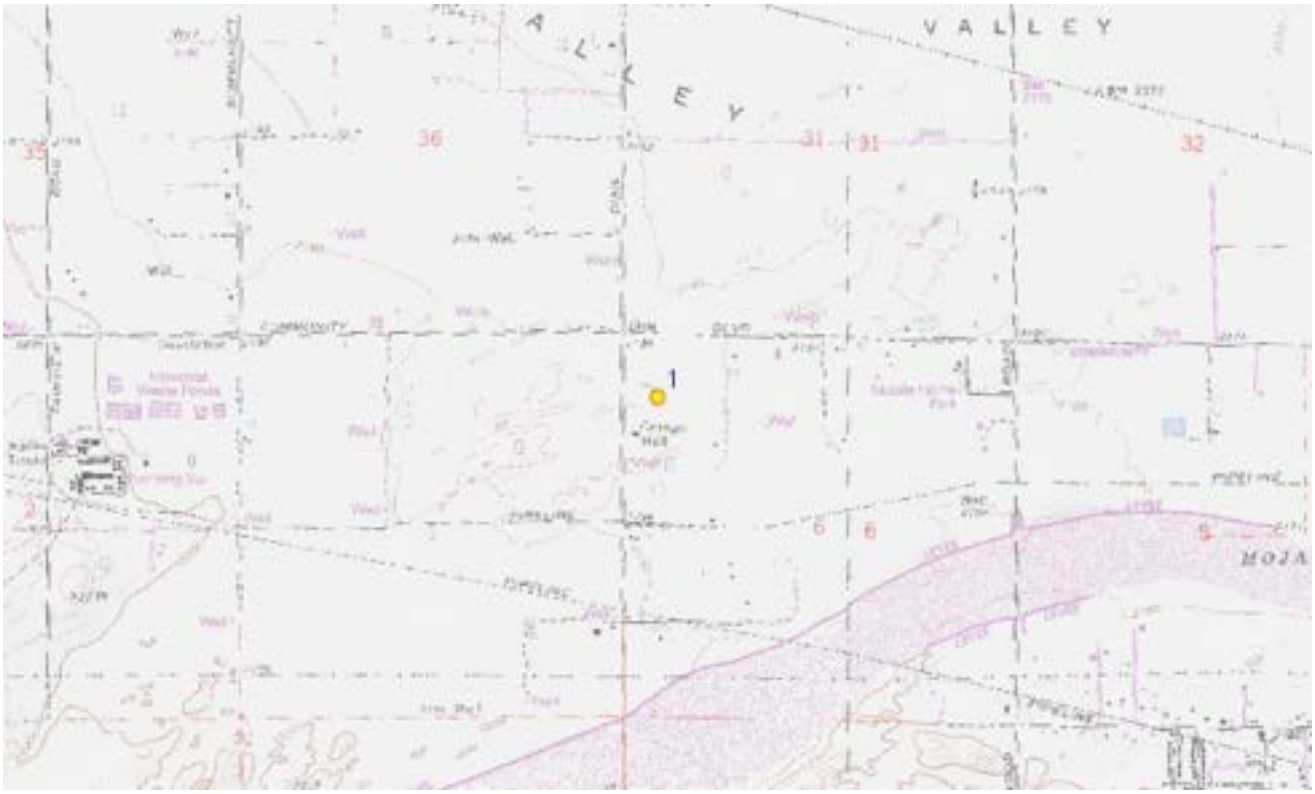
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90501	-117.13465	487699	3862518	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 10 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0019
Quad code 3411782
Occ. no.
EO index no.
Map index no.

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-28-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Soaring over agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

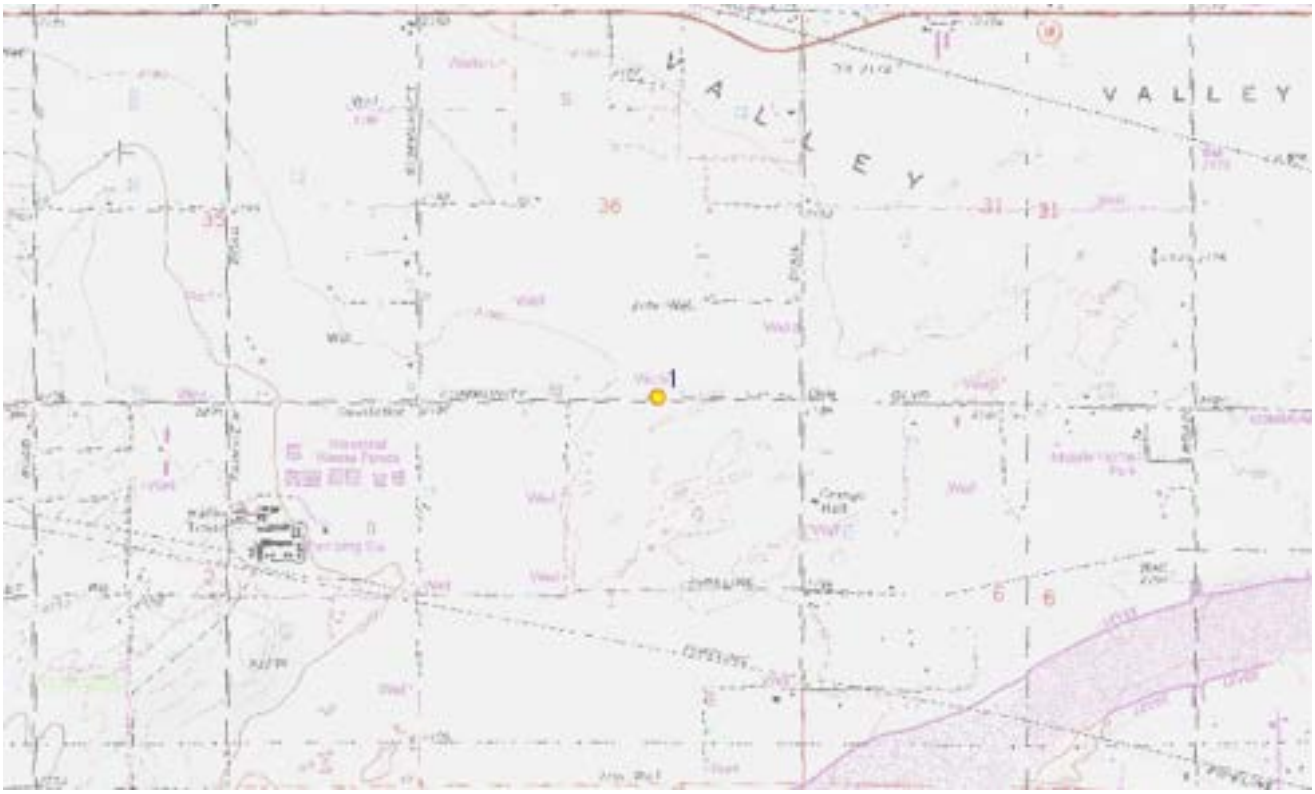
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2188	34.90754	-117.14287	486947	3862800	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0018
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-28-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 4

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
4				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Kettling

What was the observed behavior? Kettling over agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

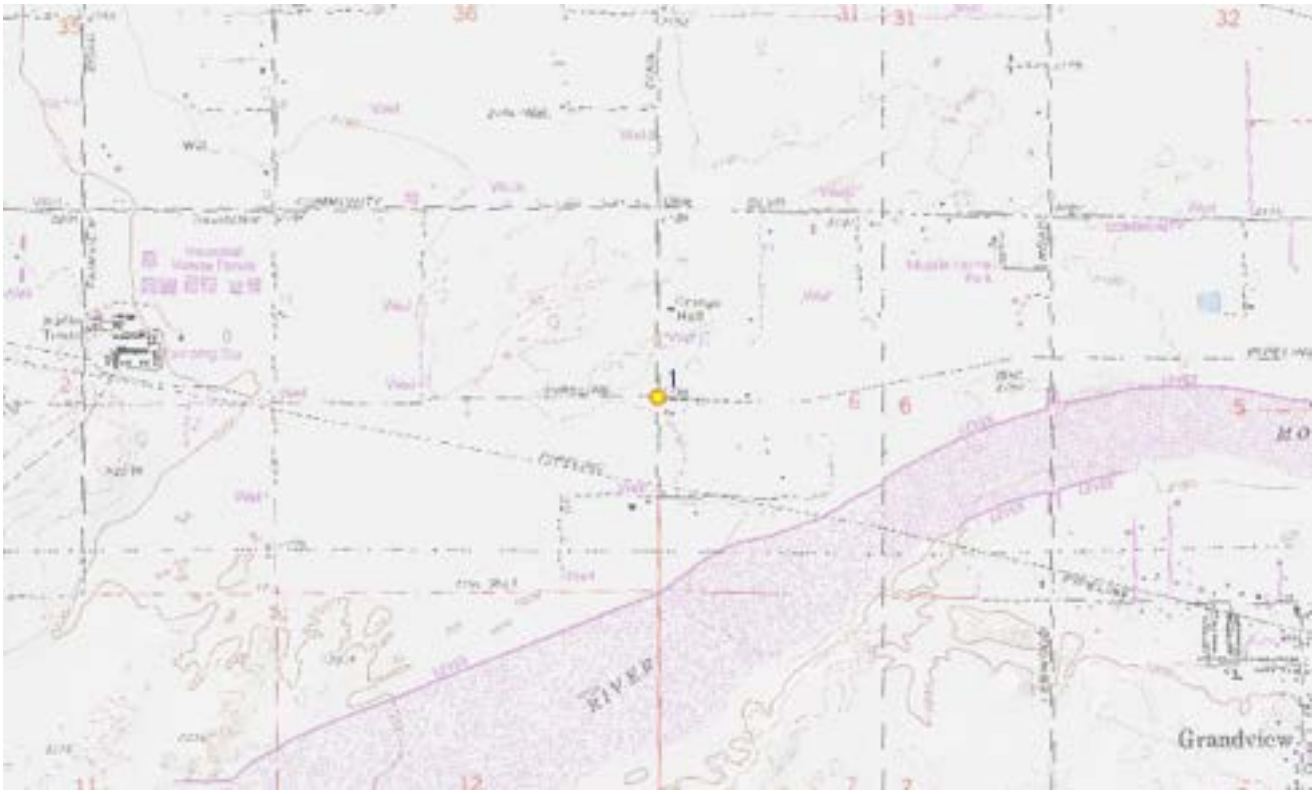
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2191	34.90031	-117.13626	487550	3861996	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 10 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0017
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 03-27-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 13

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
13				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Kettling over agricultural fields

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

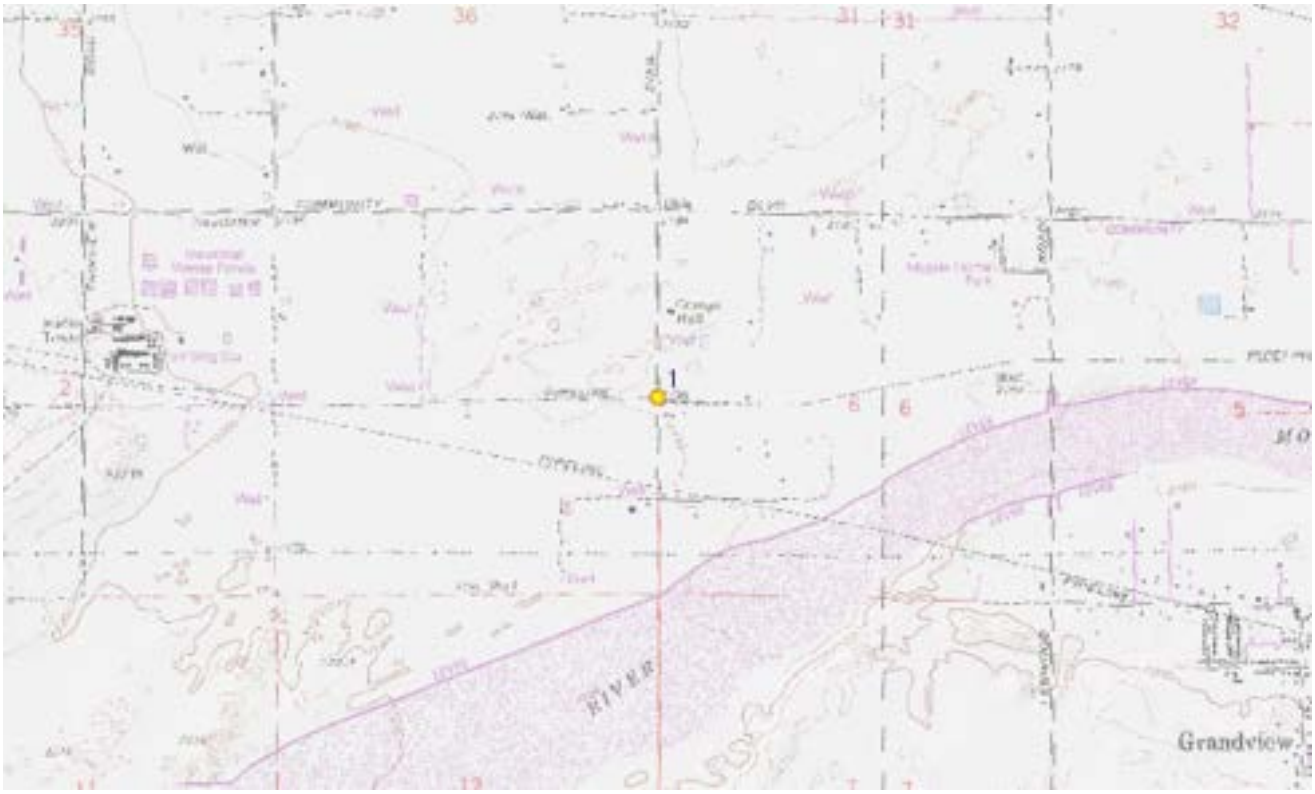
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2192	34.90040	-117.13626	487550	3862007	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 10 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0016
Quad code 3411782
Occ. no.
EO index no.
Map index no.

Scientific name: *Plegadis chihi*

Common name: white-faced ibis

Date of field work (mm-dd-yyyy): 07-16-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 6

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
6				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Flyover

What was the observed behavior? Seen flying over agricultural field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

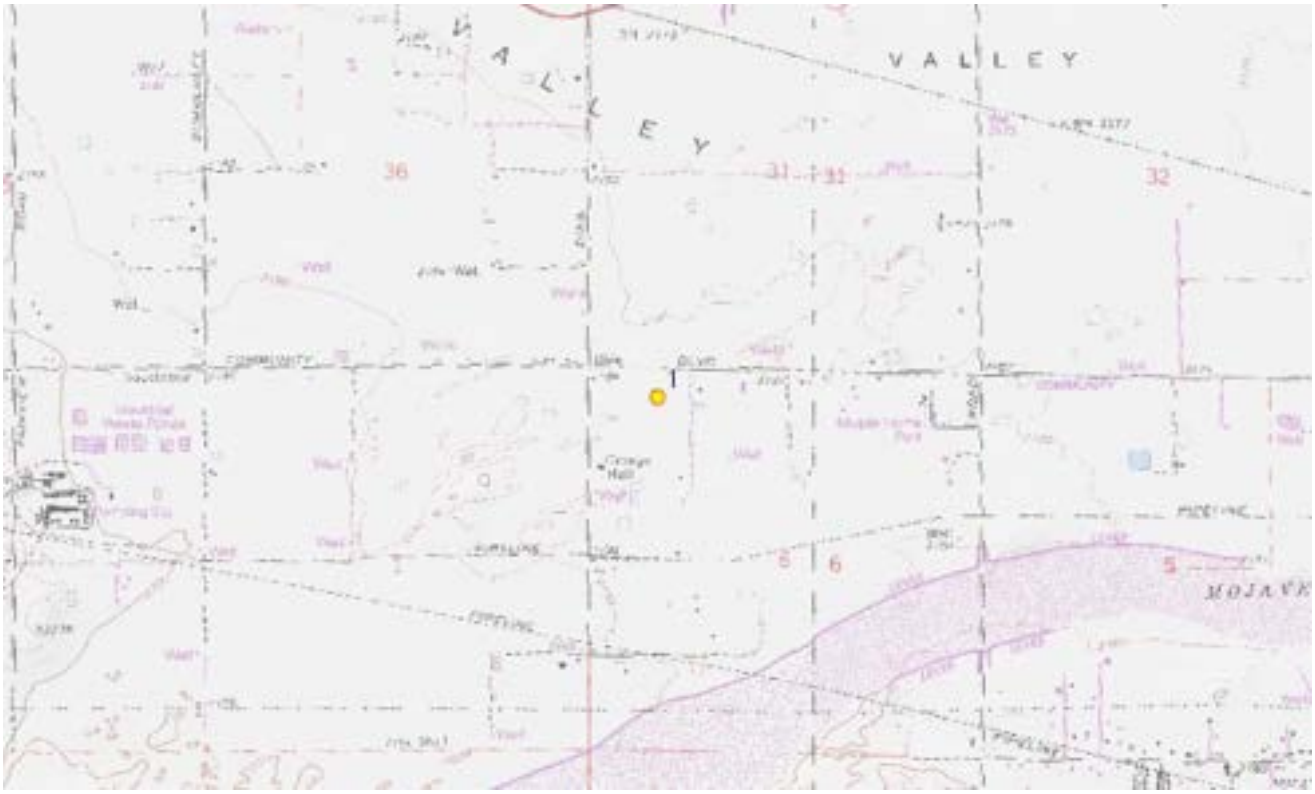
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	San Bernardino	Hinkley	2186	34.90626	-117.13306	487844	3862656	11
	Public Land Survey	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 10 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code BAD25F0015
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Calypte costae*

Common name: Costa's hummingbird

Date of field work (mm-dd-yyyy): 07-17-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Imran Badar

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: imran@rocksbio.com

Phone: (858) 444-6031

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perched on power line

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

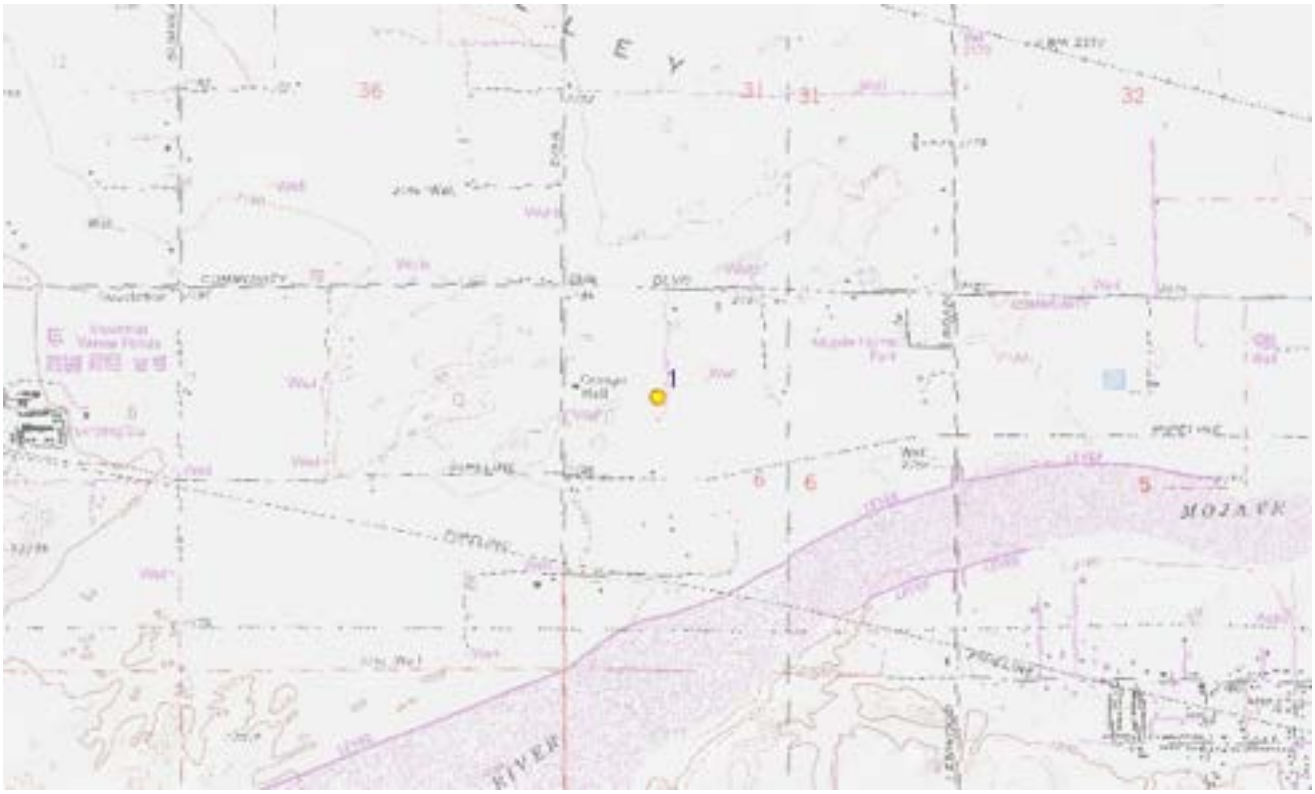
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2186	34.90322	-117.13190	487949	3862319	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0013
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Circus hudsonius*

Common name: northern harrier

Date of field work (mm-dd-yyyy): 07-17-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Heard calling

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Heard calling from the agricultural field

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

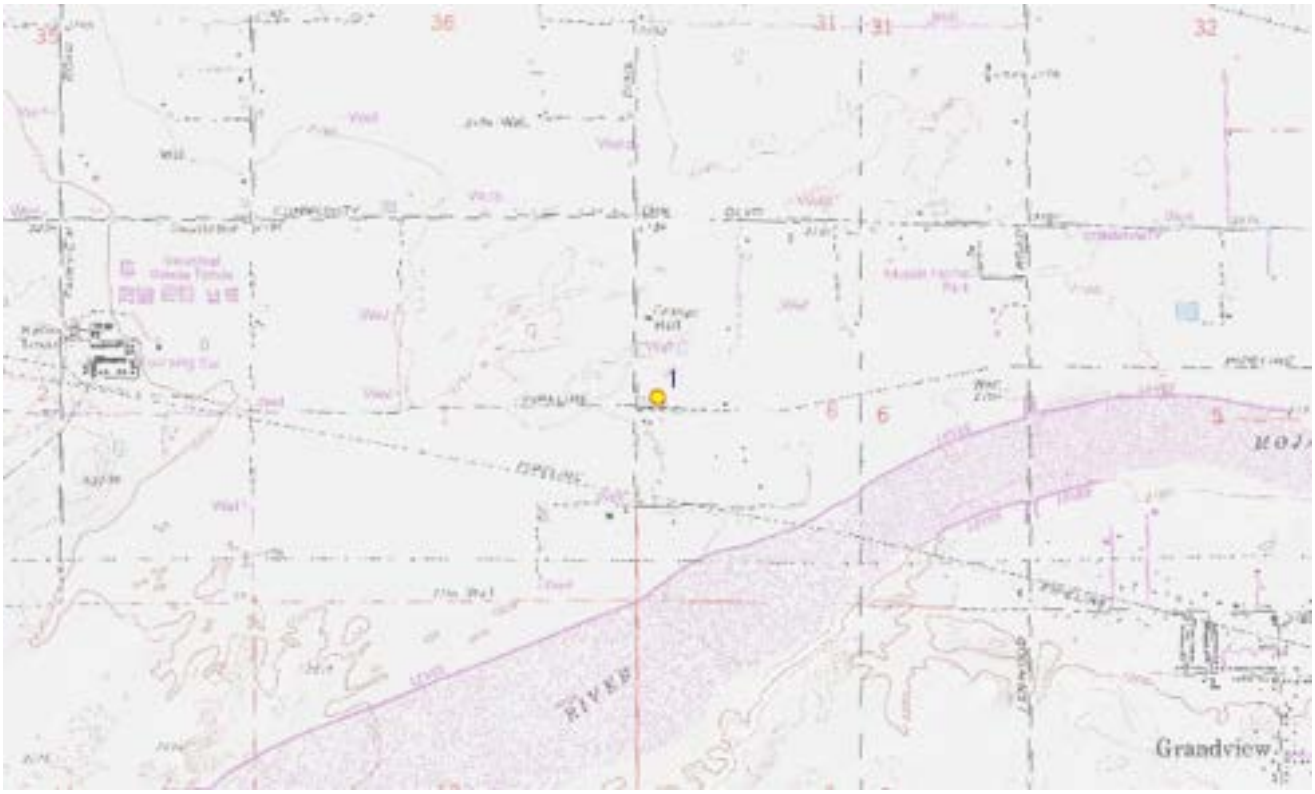
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2192	34.90065	-117.13523	487645	3862034	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0018
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Falco mexicanus*

Common name: prairie falcon

Date of field work (mm-dd-yyyy): 07-16-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Feeding on prey on top of transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

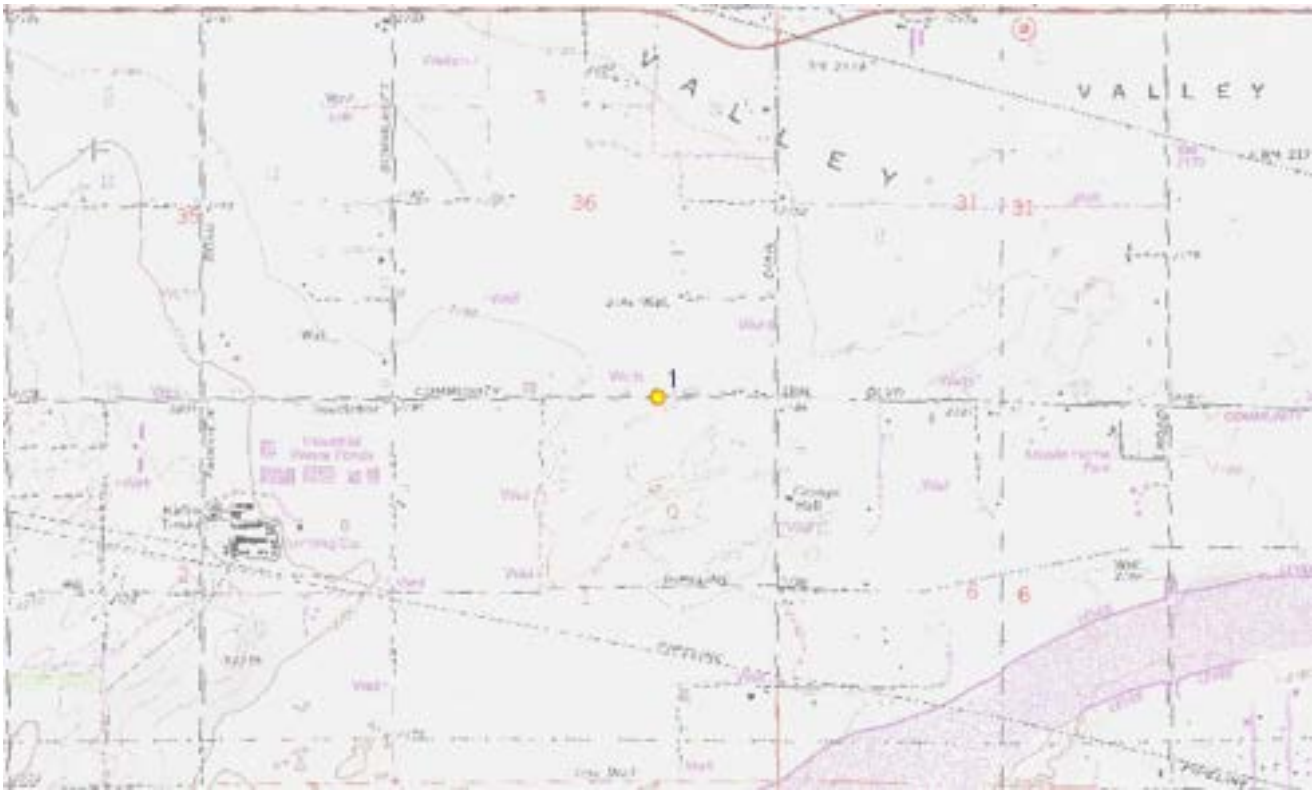
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2187	34.90743	-117.14170	487054	3862787	11
1	**Public Land Survey**	**Feature Comment**						
	S T10N R03W 36							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code TAM25F0017
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Falco mexicanus*

Common name: prairie falcon

Date of field work (mm-dd-yyyy): 06-12-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Melissa Tamarkin

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: melissa@rocksbio.com

Phone: (760) 994-6687

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Perching

What was the observed behavior? Perching in transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

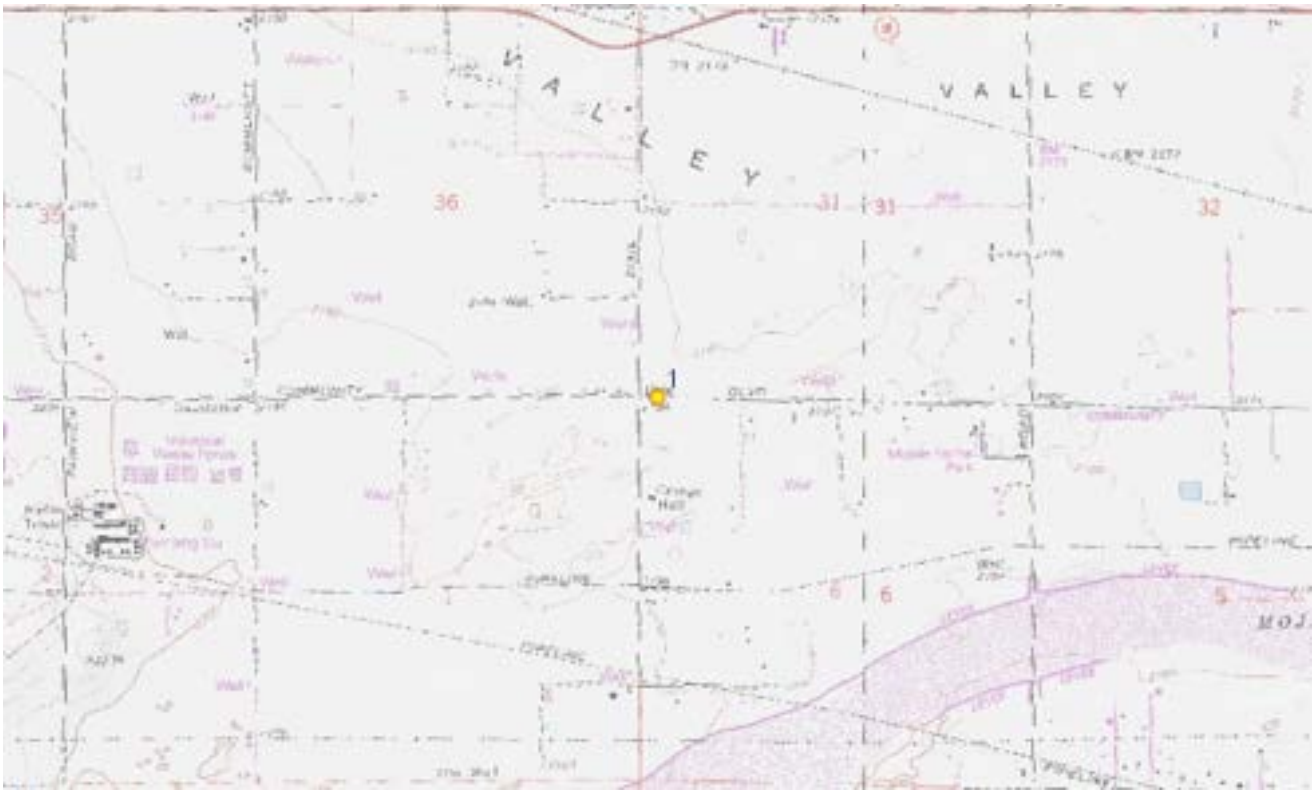
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	San Bernardino	Hinkley	2187	34.90741	-117.13539	487631	3862784	11
	Public Land Survey	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code GOO25F0031
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Accipiter cooperii*

Common name: Cooper's hawk

Date of field work (mm-dd-yyyy): 07-16-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Alec Goodman

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: alec@rocksbio.com

Phone: (909) 565-7197

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
	1			

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Perching

What was the observed behavior? Perching in transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

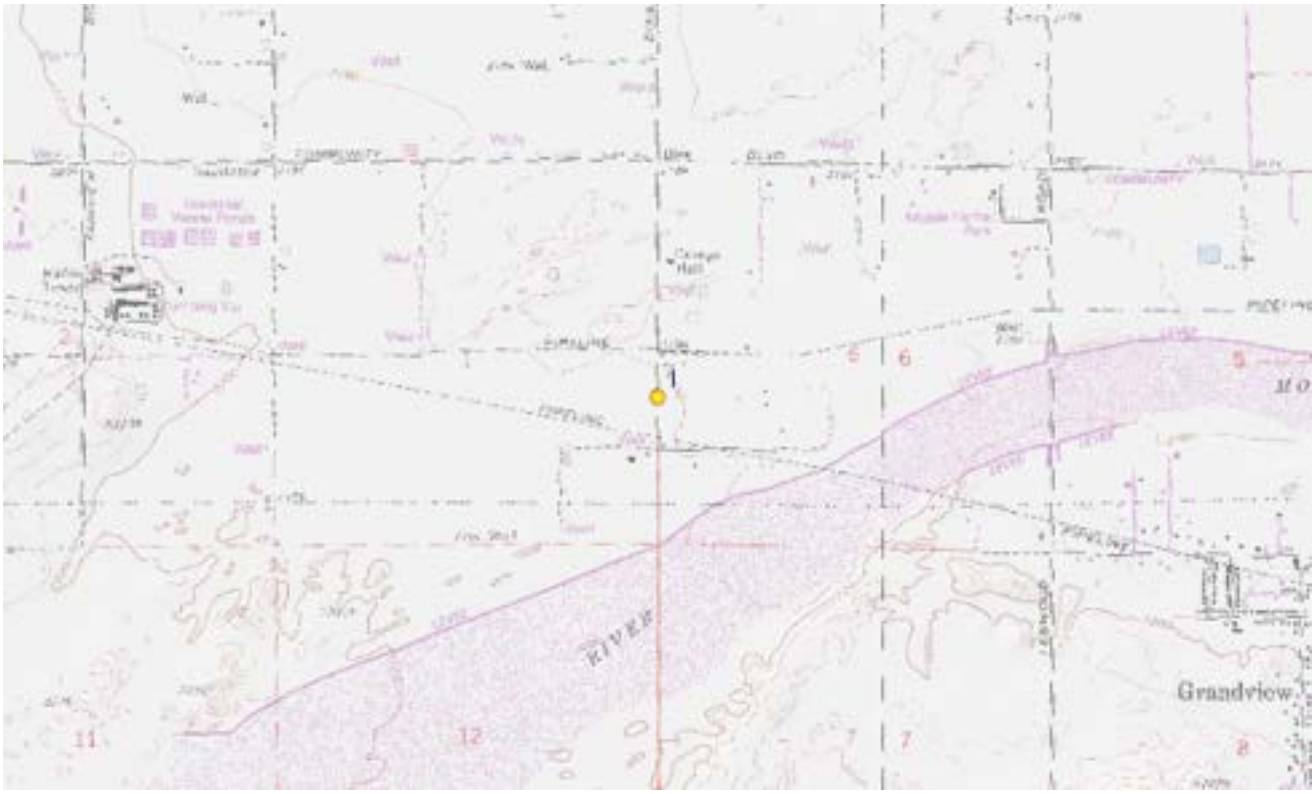
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2195	34.89852	-117.13624	487552	3861798	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0012
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Accipiter cooperii*

Common name: Cooper's hawk

Date of field work (mm-dd-yyyy): 06-25-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perched in transmission structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

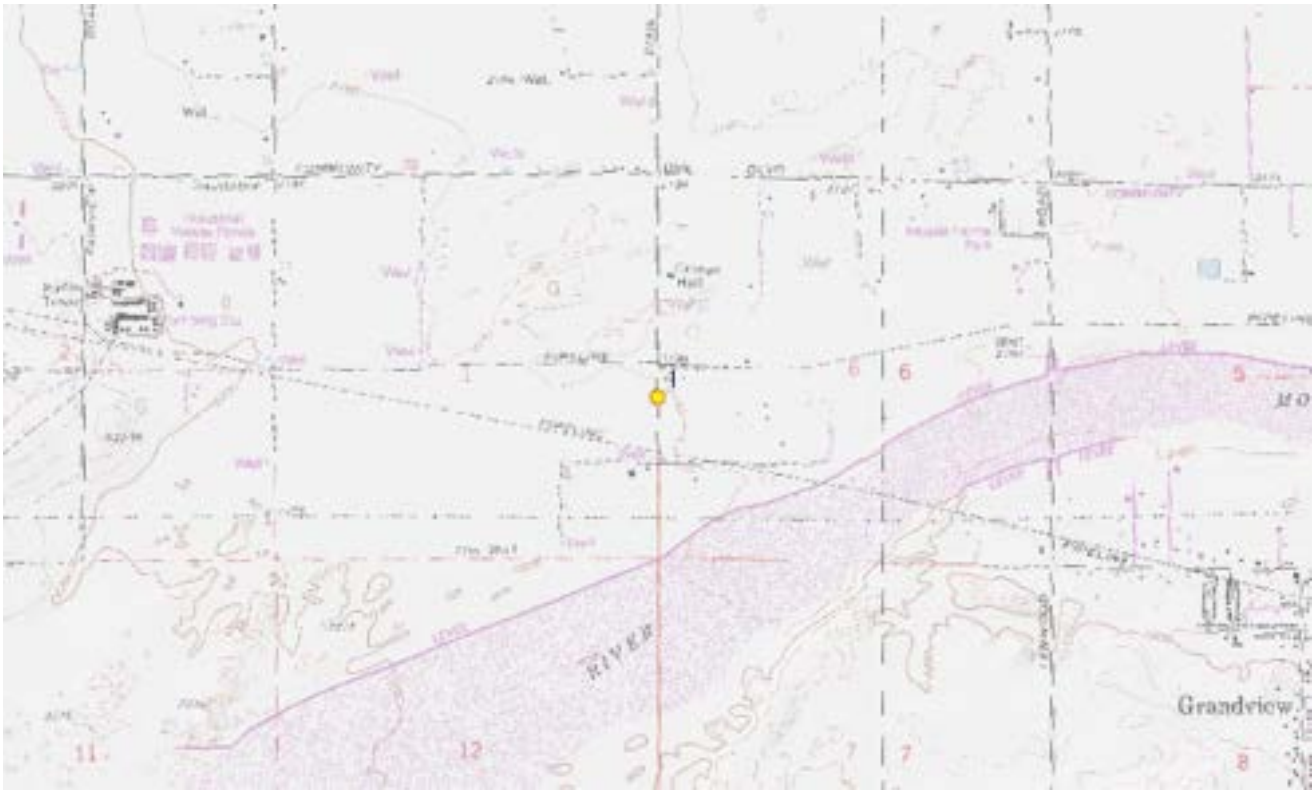
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2193	34.89905	-117.13624	487552	3861857	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0011
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Accipiter cooperii*

Common name: Cooper's hawk

Date of field work (mm-dd-yyyy): 06-12-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching on transmission line

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

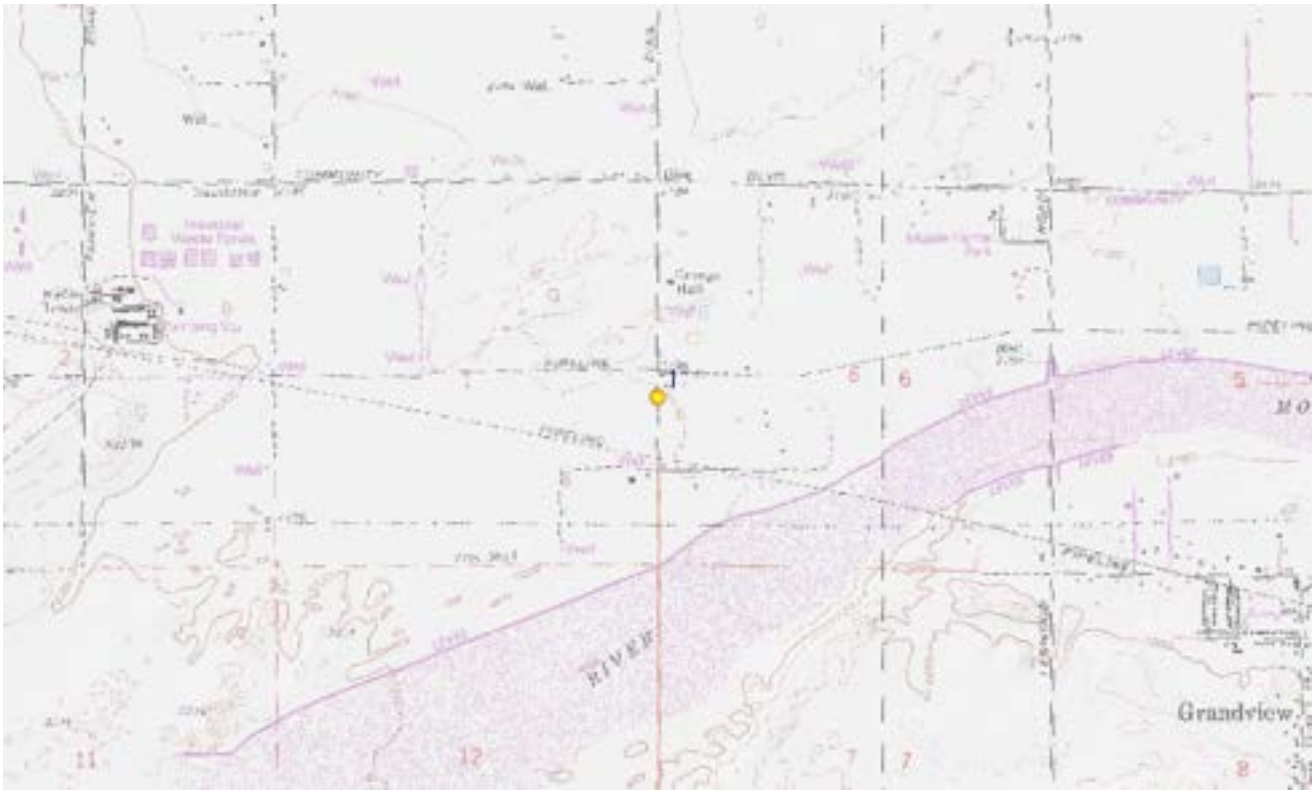
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2193	34.89930	-117.13625	487552	3861884	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0010
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Accipiter cooperii*

Common name: Cooper's hawk

Date of field work (mm-dd-yyyy): 07-17-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: Kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
	1			

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other (foraging, fly-over, etc.)

Site use description: Perching

What was the observed behavior? Perching on T-structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

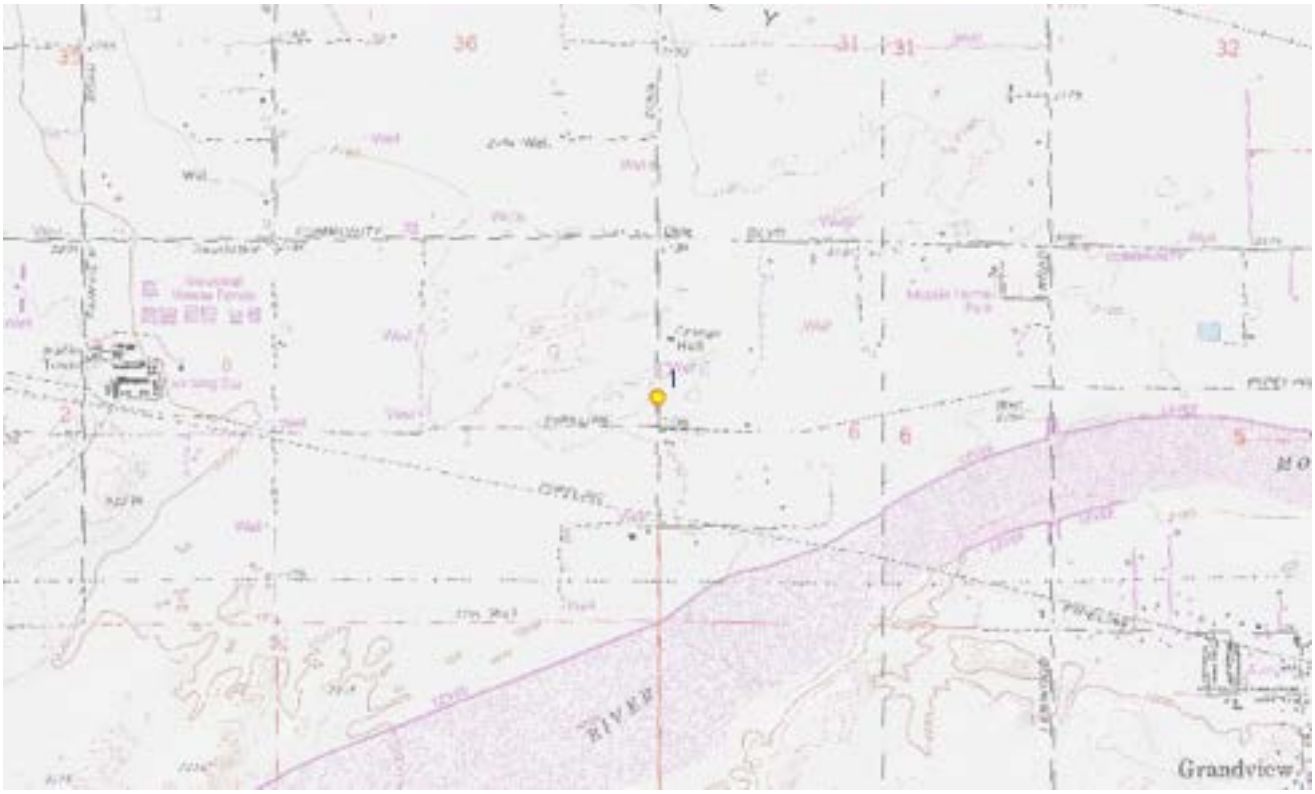
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2191	34.90143	-117.13626	487551	3862121	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0009
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Accipiter cooperii*

Common name: Cooper's hawk

Date of field work (mm-dd-yyyy): 07-17-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Perching

What was the observed behavior? Perching on T-structure

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
1	San Bernardino	Hinkley	2192	34.90251	-117.13627	487550	3862241	11
	Public Land Survey	**Feature Comment**						
	S T09N R03W 1							

The mapped feature is accurate within: 5 m

Source of mapped feature: ArcGIS Field Maps Mobile App

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code WOL25F0008
Quad code 3411782
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Accipiter cooperii*

Common name: Cooper's hawk

Date of field work (mm-dd-yyyy): 06-12-2025

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Kelsey Woldt

Affiliation:

Address: 4312 Rialto St. , San Diego, CA 92107

Email: Kelsey@rocksbio.com

Phone: (619) 247-4336

Other observers:

DETERMINATION

Personal expertise: Yes

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort:

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	other
1				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other (foraging, fly-over, etc.)**

Site use description: Foraging

What was the observed behavior? Soaring past trees and house

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description:

Slope: Landowner/manager:

Aspect:

Site condition + population viability:

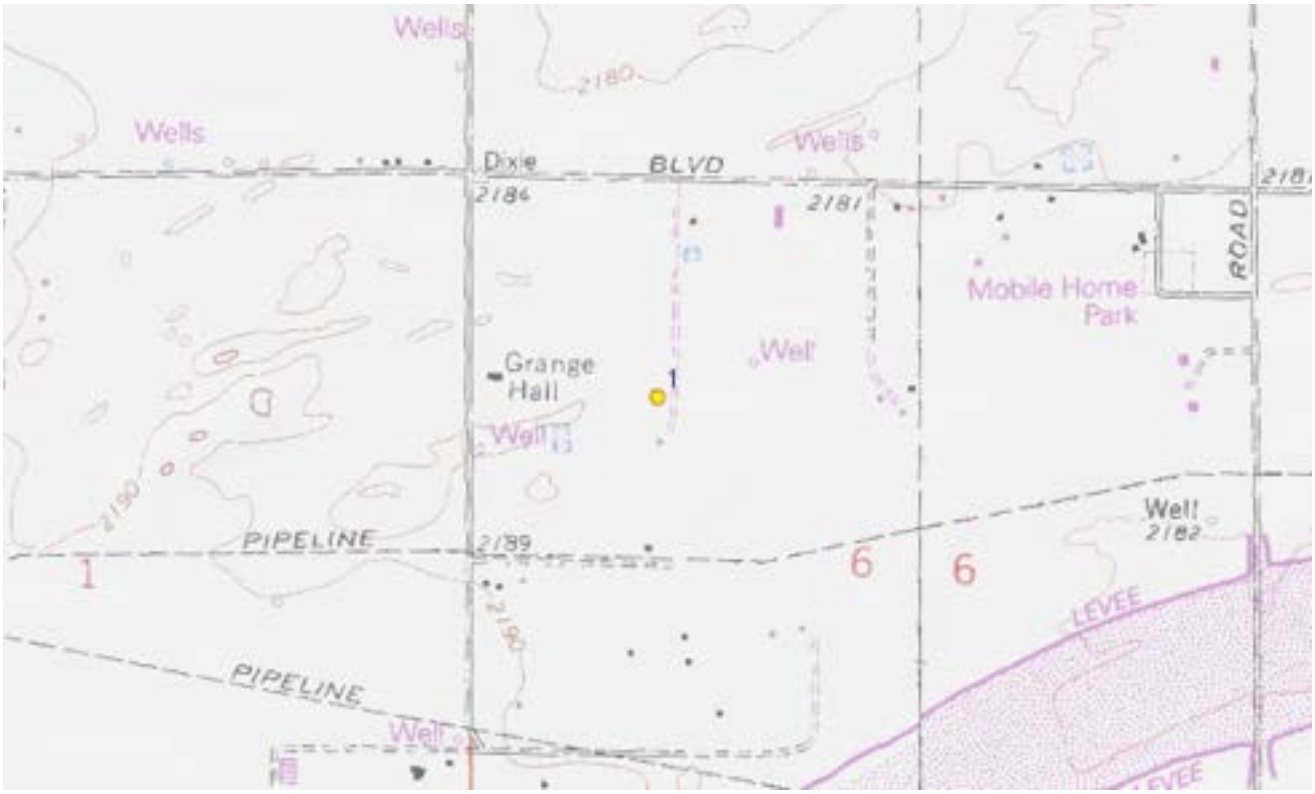
Immediate & surrounding land use:

Visible disturbances:

Threats:

General comments:

MAP INFORMATION

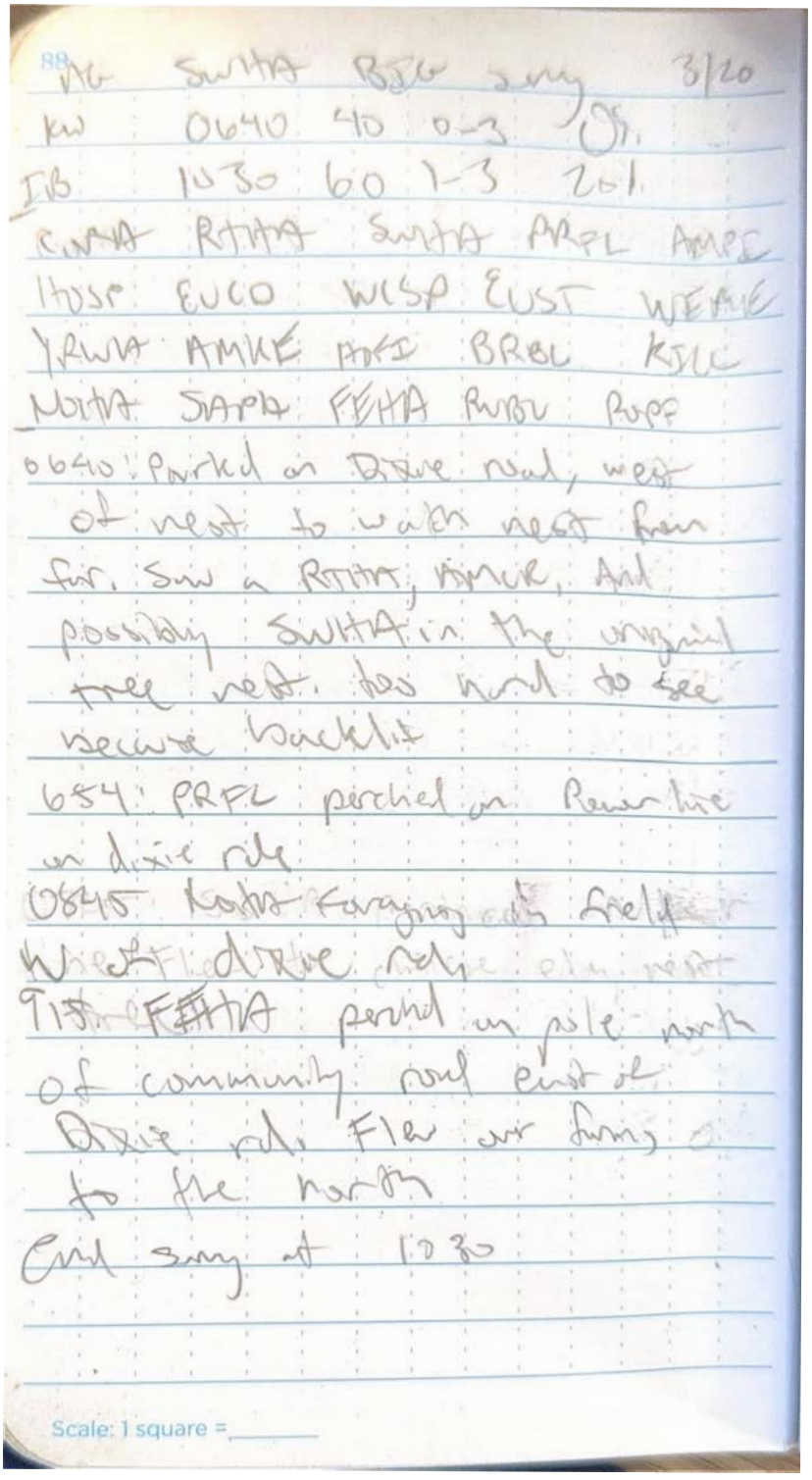


ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hinkley	2186	34.90322	-117.13190	487949	3862319	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R02W 6							

The mapped feature is accurate within: 5 m

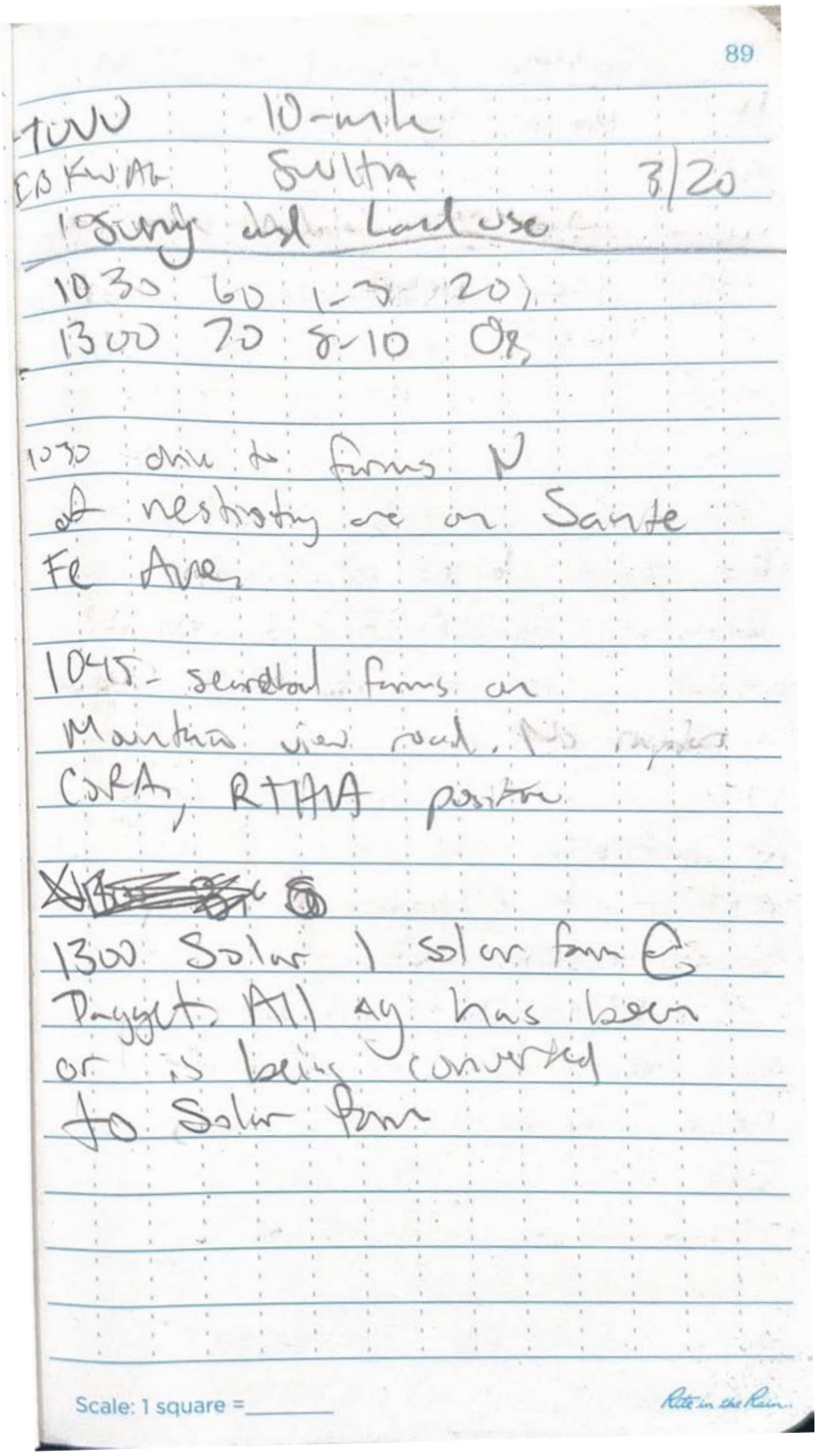
Source of mapped feature: ArcGIS Field Maps Mobile App

Attachment D - 1



88
MG SWTA BSC surv 3/20
KW 0640 40 0-3 OS.
IB 1030 60 1-3 201
CWA RTHA SWTA PRFL AMPE
HOSP EUCO WISP EUST WEME
YRWA AMKE HAFI BRBL KILL
NOTA SAPA FEHA RUBU RUFF
0640: Parked on Dixie road, west of nest to watch nest from far. Saw a RTHA, KINGK, And possibly SWTA in the original tree nest. has mind to see secure backlit
654: PRFL perched on Power line in dixie rd
0845 Kathi Fanning on field
W Dixie dr
915 FEHA perch on pole north of community and east of Dixie rd. Flew over fwing to the north
End surv at 1030

Scale: 1 square = _____



89

TCW 10-mile
EDKWA Solitra 3/20
Survey dist Land use

1030 60 1-3 20
1300 70 8-10 0%

1030 drive to farms N
of nesting are on Sante
Fe Ave

1045 - several farms on
Manteca view road. No impact
CSRA, RTHA positive

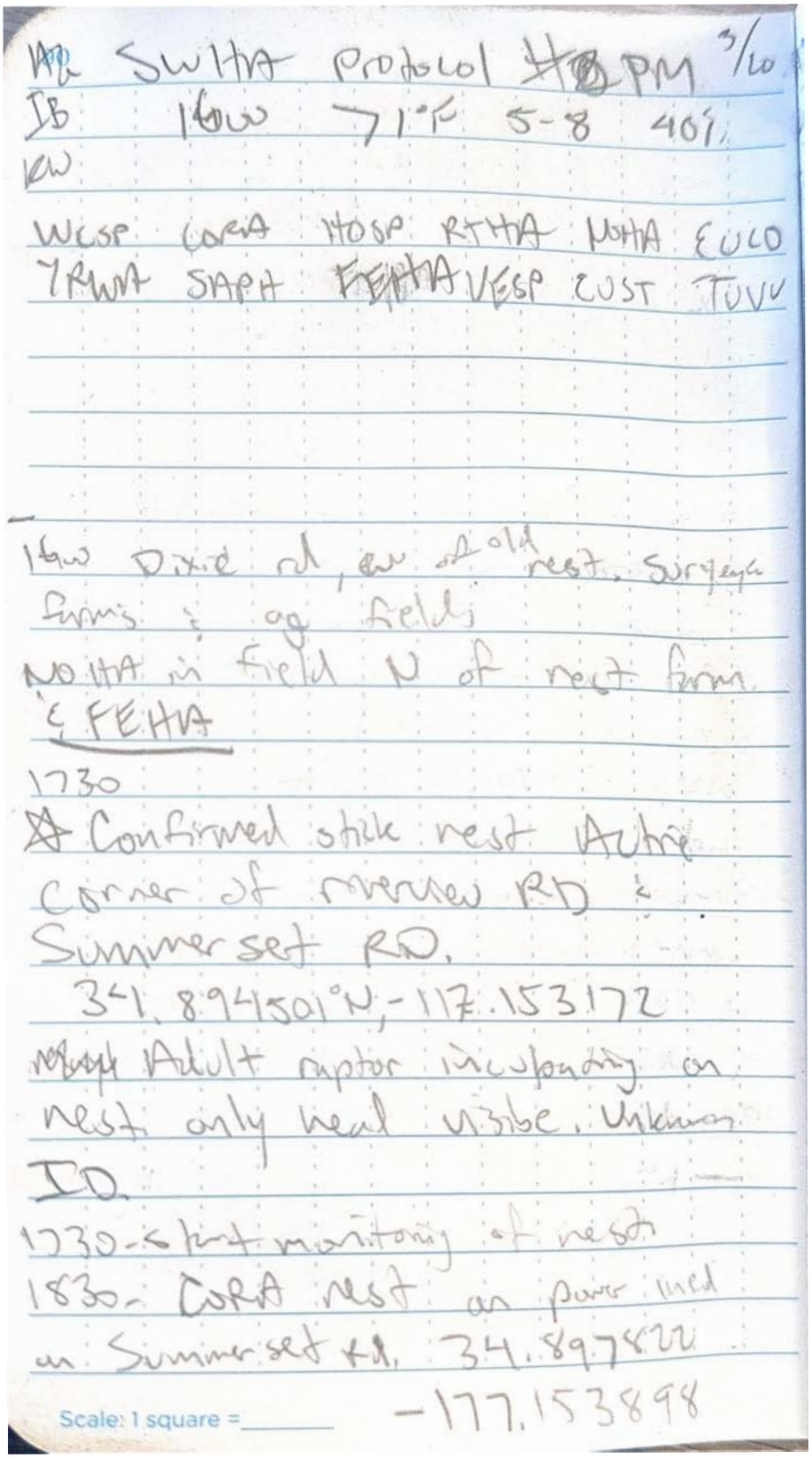
~~XXXXXXXX~~ ©

1300 Solar 1 solar farm ©
Projects All ag has been
or is being converted
to Solar farm

Scale: 1 square = _____

Rite in the Rain

Attachment D - 3

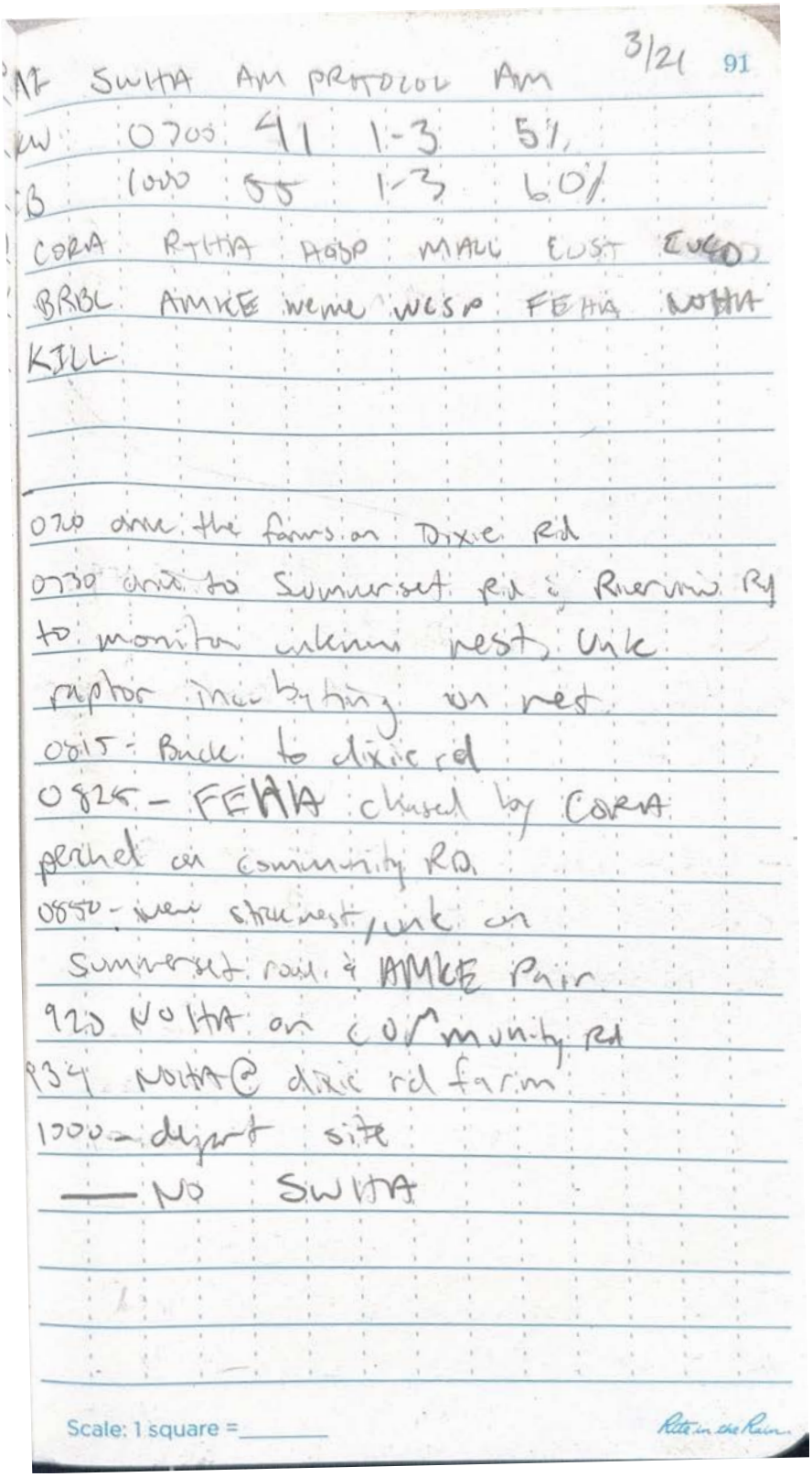


SWTHA Protocol 4PM 3/20
IB 16w 71°F 5-8 40%
KW
WEGR CORA HOSP RTHA MOHA EUCO
YRWA SAPH FEHA VESP CUST TUVU

16w Dixie rd, ew old nest. Surveys
firms ; ag fields
NO HA in field N of nest from
5 FEHA
1730
✡ Confirmed stick nest Archie
Corner of riverview RD &
Summerset RD.
34.894501°N, -117.153172
Adult raptor incubating on
nest only head visible. Unknown
ID
1730- start monitoring of nest
1830- CORA nest on power line
on Summerset rd. 34.897822
-177.153898

Scale: 1 square = _____

Attachment D - 4



3/21 91

AT SWHA AM PROTOCOL AM

SW 0700 41 1-3 5%

B 1000 55 1-3 60%

CORA RTHA HAWK MALE EAST EWHO

BRBL AMKE were WCSP FEHA SWHA

KILL

0700 drive the farms on Dixie Rd

0730 drive to Somerset Rd & Riverview Rd to monitor wilsons nest, Unk raptor incubating in nest

0815 - Back to dixie rd

0825 - FEHA chased by CORA perched on community Rd.

0850 - wilsons nest/unk on Somerset road. & AMKE Pair.

920 NOHA on community Rd

934 NOHA @ dixie rd farm

1000 - depart site

— NO SWHA

Scale: 1 square = _____

Rite in the Rain

Attachment D - 5

92 NAD SWTHA - 10-mile visit patrol 3/21

KW Survey

IB 1015 60 1-3 60%

1030 63 1-3 40%

NOTHA TUUV CORA RTHA

1015 start survey

1030 @ BIG old Ag field sites

→ Birds present: CORA RTHA

HOLA

- CORA NEST on pole in center of AG areas.

No active foraging in fields observed

Scale: 1 square = _____

SWTHA Survey #1 3/20

Ag	900	40°F	0-3 mph 0%
KW	1030	60°F	1-3 mph 20%

WEME BRBL YRWA AMKE HOFI SAPH
CORA PRFA EUCD RTHA AMPI HOSP
EUST NOMO FEHA NWBL KDFI TUVU

6:50: PRFA spotted by Kelsey on a pole

7:25: RTHA spotted on power pole and flew across Ag to elm trees
↳

845: NOHA flew across Ag field foraging

910: Ferruginous hawk on sprinkler (Ag) flew to pole - perching

1030: Switched to surveying for habitat; daum survey over

11

Scale: 1 square = _____

Rite in the Rain

10 112 10-mile Habitat Assessment Survey

Ag Start: 1030 60°F 1-3 mph 20%

KW End: 1300 70°F 8-10 mph 0%

1030: drove to farms north of the meeting tree on Santa Fe avenue - No SWHA or nests

10.45: Arrived at Mountain View Rd farms - RTHA (3) No SWHA or Kestling nests:

1115: Arrived at BIG Ag fields, no ~~accipter~~ ~~Red~~ raptors, Inactive (ORA nest at turnarisics

1300: Arrived at Solar One - Ag fields converted to solar panels and no longer or being converted provide foraging habitat

Scale: 1 square = _____

DUSK SWHA

AG Start 1600 71°F 5-8 mph 40 J

KW End: 1900

WCSP RTHA EUSP FEHA BRBL

CORA VESP EUCD YRWA

HOSP NOHA SAVH TUVU

1600: Arrived at Dixie Rd dwest of road surveying Ag and fencing

1610: Spotted NOHA foraging/feeding East of Dixie Rd in Ag field

1620: Spotted FEHA Flying high

1835: Spotted unknown nest in NOHA field Saw a fledgling on top a power pole. 1 adult incubating nest

1830: CORA incubating a nest in power pole near unknown nest

1840: CORA nest

Scale: 1 square = _____

Rite in the Rain

Attachment D - 9

IB 114 SWHA day 2 dawn survey 3/21

Dca Start: 700 9°F | 1-3 mph SE

KU End: 1000 55 | 1-3 mph 60%

COKA EUCD BRSL HORI HALK
RTHA MALL AMKE NCSO TUVU
EUST HOSP WEME FEHA HOLA

700: Checked fig + farm areas for raptors
RTHAS

730: Arrived at UNE nest at transmission
parked at corner of Riverview and
Summerset Rd. 1 ind. on nest
↳ couldn't see any birds coming
in or out

815: left to go to Dixie Rd.

825: followed FEHA across fig field
↳ SSC

850: Unknown stick nest in tree on side
along Summerset Rd directly South from
Community Blvd
- AMKE pair found nearby further south

920: NOHA at Community Rd

Scale: 1 square = _____

939: NOHA at Dixie Rd Ag
SWHA Afternoon survey 10-mile radius
Start: 1045 68°F 1-3 60%
End: 1130 63°F 1-3 90%

1030: Arrived at BIG Ag fields

1045: CORA nest on transmission structure near BIG Ag fields - female incubating
1046: RTHA foraging at AG Field

Scale: 1 square = _____

BIG SWHA SURVEY #1 3/20/25 7

AG, KW, IB

0640	40°	0-3	0 0 10
1030	60	1-3	20 0 10

DAWN:

*Arrived @ historical nest @ 0640, sunrise @ 0650

*PRFA n=1 perched on transmission structure

*RTHA on transmission structure @ 0725, flushed to elm tree

*0745 → requested permission to enter Alfalfa farm property (Josie - Daniel's wife)

*0750 CORA nest in Daniel's front yard → CORA's incubating →

CORA PRFA* EUCD RTHA
AMPI HOSP EUST WCSP
BRBL *RWA AMKE HOFI
KILL NOHA* SAPH FEHU*
ROPI RWBL WEME

3/20/25

→ 8 defensive behavior surrounding nests

* NoHA foraging
* Light Morph FERHA* seen @ 0908 on sprinklers
* 1030 survey of nesting area complete.

3/20/25

10-Mile SWHA Survey

10:30	60	1-3	20%
1300	70	8-10	0%

* 1030 - Farms N of nesting area on Santa Fe Ave.
  ↳ RTHA n=3 Kettleny
* 1045 - Mountain View Rd farmland + TAMRAM → No raptor activity.
* 1115 - checked Ag fields onsite
  ↳ No Raptors observed
* 1300 - Daggett Solar I
  ↳ Ag fields converted to development or in process of being converted

Scale: 1 square = _____

3/20/25

DUSK

1600 71° 5-8 40

ask AG for end stats

WCSP CORA HOSP RTHA
NOHA* SAPH YRWA FEHA
VESP EAST EUCD TUVU
BRBL

* 1600 - Dixie Rd west of nest surveying
* 1735 - Raptor (unknown species) nest observed on transmission structure; ♀ incubating
* 1830 CORA nest; ♀ incubating

10

B16 SWHA SURVEY #1 3/21/25

0700	41	1-3	5.1°
1000	55	1-3	60.1°

DAWN

CORA	EUST	MALL	EUCD
HOSP	RTHA	BRBL	WEME
HOFI	WCSP	AMKE	FEHA*
KILL	NOHA*	TUVU	HOLA

* Bios on site @ historical nest on Dixie Rd @ 0700
* 0730 Checked unknown raptor nest on transmission structure (parked at Riverview & Summerset Rd)
  ↳ ♀ incubating
  ↳ RTHA on transmission structure W of nest (0737)
* Corner of Dixie Rd & Community Rd → 0825 FEHA dive-bombing CORA n=1
* 850 unknown sp. stick nest in TAMRAM on Summerset Rd

Scale: 1 square = _____

* Summerset Rd → 854 pair of AMKE on transmission structure
* 920 NOHA kettling on community Rd
* 935 NOHA foraging in Ag on Dixie Rd
* 1000 BIOS departed Dixie Rd hist. nest site

10-Mile Radius

*Ag fields on-site @ 1030

1035	60	1-3	60.1°
1130	63	1-3	40.0°

on site Ag fields:
* 1045 CORA nest on Transmission Structure near on-site Ag fields (♀ incubating)
* 1047 RTHA foraging
* Low raptor activity
* BIOS depart site @ 1130

BIG SWHA SURVEY #2

MT, KW, IB 3/27/25

0650	52	3-5	70
1000	67	3-5	70

EUST EUCD WCSP CORA
BRBL FEHA* SWHA* RTHA
TUVU NRWS AMKE

DAWN

*0710 RTHA on Ag sprinkler @ Dixie Rd
*0715 FEHA on transmission structure (n=1, perched)
*0720 SWHA dark morph n=1 on community Rd on transmission structure
*0725 flew to sprinklers (south)
*0726 Juvenile RTHA on sprinkler
* Possibly 1 more SWHA on sprinkler (0730)
*0745 SWHA n=3 on sprinklers
*0748 SWHA n=4 on sprinklers (Page 1)

Scale: 1 square = Rite in the Rain

(Page 2)

* n=2 SWHA in A6 field (800)
* n=3 on sprinkler (802)
* n=1 flew West
* n=5 0805 SWHA on sprinkler
* n=6 SWHA on sprinkler with juvenile RTHA 0815
* 0820 possibly n=8 on sprinkler
* SWHA periodically jump down into field to forage then return to sprinkler
* 0820 sprinkler still running (turned on @ 0730)
* 0830 n=7 confirmed & possibly n=9 SWHA
* n=1 SWHA flew east to forage then returned to powerline

*0850 KW → check on Raptor nest off of Summerset Rd
↳ 0850 ♀ incubating
↳ 0915 RTHA kettling NE of nest
*1000 KW → Community Rd
n=8 SWHA on sprinkler

10-mile Radius

* IB & MT → to check Ag fields w/in 10-mile radius
* KW @ sprinkler on Community Road

→ 1000	67	3-5	70
1340	77	5-8	60

*1043 n=2 SWHA kettling/flying in to distance to the North, over AG field
⊘ n=2 on sprinklers
*1100 n=1 SWHA kettling/soaring above Ag field to Northwest (inactive Ag)
*1101 n=3 on sprinkler off of Community Rd

Scale: 1 square =

Rite in the Rain

NOTE → MOST SWHA = dark morphs ; 1-2 light/intermediates

*1115 FEHA n=1 flyover Community Rd Ag field site (34.907392°N, -117.139427°W)

* General Behavior @ 0730

SWHA perch on sprinklers, occassionally swooping down into alfalfa to forage.

→ 1000 1/2 population begins kettling over Ag fields to the NW

*1135 FEHA being dive-bombed by CORA while flying over Ag fields btwn community & Dixie Rd.

*1145 KW → checked unknown raptor nest @ end of Summerset Rd

↳ ♀ incubating

(Page A) ↳ RTHA soaring W of nest @ 1315

*1330 SWHA n=1 (light morph) fly over Community & Dixie Rd Ag fields

Scale: 1 square =

(Page 5)

DUSK

1600 76
1920 66
AMKE CORA SWHA* NRWS BRBL WEKI WEKI EUCD HOFI NOHA*

10-15 10
18-20 10

*1615 n=2 SWHA, one on snag on Dixie Rd, one soaring above Community Rd/Dixie Rd Ag fields

*1630 n=3 total, soaring above hist nest site/Ag fields off Dixie Rd.

*KW → unknown raptor nest on Summerset Rd
↳ 1650 ♀ incubating
↳ 1700 NOHA foraging in area n=1

*CORA nest on Summerset Rd (1720) → ♀ incubating

*1730 SWHA n=4 foraging in Ag fields on both sides of Dixie Rd.

(Page 6)

*1732 n=1 SWHA in Elm tree outside of Daniels house (green house)

*1733 Kettle on Dixie Rd. south of hist. nest, n= at least 13, up to 15

*1810 n=7 SWHA in Kettle mentioned above

*1840 n=3 SWHA in Kettle

*1850 n=2 SWHA

*NOTE: Kettle SWHA dispersed in all directions quickly w/ wind gusts besides final 2 (1850)

*1857 n=3 SWHA in Kettle

*1859 n=4 " "

*1900 n=5 " "

*1902 n=7 " "

*1903 n=9 " "

*1905 n=2/a headed to Kettle near TAMRAM to the South

*Remaining Kettle Largely trending S!

*RBC departs @ 0720, SWHA pair still near Kettle location

BIG SWHA #2 3/28/25

DAWN KW, IB, MT

0630 50 20-23 50
1010 58 20-23 70

WCSP YRWA NRWS HOSP
OORA SWHA* EUCD AMKE
VGSW NOHA* RTHA AMPI
WEME BRBL EUST SAVS

*SWHA n=2 in Kettle area 100 ft south of Hist. nest area on Dixie Rd (0630)

*0700 SWHA n=2, one in snag on Dixe Rd West of hist nest site, other on transmission structure, one on snag eating.

*0703 n=2 NOHA foraging in Ag field West of Hist nest site (across the street)

*0708 n=1 Juvenile RTHA @ intersection of Dixie & Community Rd.

*0715 RTHA foraging in Ag field North of Community Rd

*0720 KW & MT → unknown raptor nest

Scale: 1 square = _____

Rite in the Rain.

*0720 unknown raptor nest: ♀ incubating
↳ 0735 unknown raptor on transmission structure S of nest (likely RTHA)
*CORA nest on Summerset Rd → ♀ incubating 0815
*0829 SWHA Transmission structure across from hist. nest
*0830 SWHA (new individual) on sprinklers in AG field across from hist nest (near kettle area)
*0840 n=3 SWHA in kettle S of hist nest area on Dixie Rd
*0847 n=4 in kettle
*0910 unknown raptor nest
↳ ♀ incubating
*0940 n=1 SWHA foraging in mustard field N of community Rd.

Scale: 1 square = _____

*0945 n=1 SWHA on transmission structure across st from hist nest

*0950 n=5 in kettle south from hist nest on Dixie Rd

*1005 n=10 SWHA foraging + Kettling; additional SWHA still on transmission structure across from hist nest

*n=12 SWHA total

*1010 RBC depart site

SWHA 2

SWHA MORNING SESSION 3/27

- start: 6:50 am, 52 F, 3-5 mph, 70%
- End: 10:00 am, 67 F, 3-5 mph, 70%

CORA BRBL, WCSP, EUCD, FEHA, RTHA, SWHA, NOHA, HOSP, AMKE, TUVU, KILL

- arrived at 6:50 am
- 7:10: RTHA on irrigation line
- 7:15: FEHA on transmission structure on community blvd
- 7:20: found a dark morph SWHA on community RD on transmission structure
- 8:09: discovered another SWHA
- 8:32: 1 SWHA goes foraging - kite behavior observed
- 8:35: 2 SWHA swoop down to the ground presumably foraging
- 9:00: FEHA foraging in west ag fields adjacent to community RD
- 9:20: NOHA foraging north side of community Rd
- 9:40: Imran left to check on historical nest site - found 2 RTHA in area
- 10:00: Imran and Kelsey left the site to use bathroom while Melissa stays and monitors

SWHA 10-mile radius 3/27

Start: 10:00 am
End: 1:40 pm 77 F 5-8 mph 60%

- 10:20: Imran and Melissa look at ag fields in 10 mile radius
- 12:00: Imran and Melissa arrive at big Ag fields
- 1:30: Imran and Melissa arrive back at historical nest
- 1:35: Kelsey spots a light morph SWHA at ag field west of Dixie rd

SWHA Dusk survey 3/27

Start: 4:00 pm 76 F, 10-15 mph, 10 %
End: 7:20 pm 66 F, 18-20, 10%

SWHA WEKI HOSP KILL
CORA
NRWS
VGSW

4:30: 3 SWHA flying over Dixie Rd near the historic nest site
5:15: 4th SWHA flying around historic nest site

6:05: juvenile RTHA perches in historic nest elm tree

SWHA 2

SWHA MORNING SESSION 3/27

- start: 6:50 am, 52 F, 3-5 mph, 70%
- End: 10:00 am, 67 F, 3-5 mph, 70%

CORA BRBL, WCSP, EUCD, FEHA, RTHA, SWHA, NOHA, HOSP, AMKE, TUVU, KILL

- arrived at 6:50 am
- 7:10: RTHA on irrigation line
- 7:15: FEHA on transmission structure on community blvd
- 7:20: found a dark morph SWHA on community RD on transmission structure
- 8:09: discovered another SWHA
- 8:32: 1 SWHA goes foraging - kite behavior observed
- 8:35: 2 SWHA swoop down to the ground presumably foraging
- 9:00: FEHA foraging in west ag fields adjacent to community RD
- 9:20: NOHA foraging north side of community Rd
- 9:40: Imran left to check on historical nest site - found 2 RTHA in area
- 10:00: Imran and Kelsey left the site to use bathroom while Melissa stays and monitors

SWHA 10-mile radius 3/27

Start: 10:00 am
End: 1:40 pm 77 F 5-8 mph 60%

- 10:20: Imran and Melissa look at ag fields in 10 mile radius
- 12:00: Imran and Melissa arrive at big Ag fields
- 1:30: Imran and Melissa arrive back at historical nest
- 1:35: Kelsey spots a light morph SWHA at ag field west of Dixie rd

SWHA Dusk survey 3/27

Start: 4:00 pm 76 F, 10-15 mph, 10 %
End: 7:20 pm 66 F, 18-20, 10%

SWHA WEKI HOSP KILL
CORA
NRWS
VGSW

4:30: 3 SWHA flying over Dixie Rd near the historic nest site
5:15: 4th SWHA flying around historic nest site

6:05: juvenile RTHA perches in historic nest elm tree

SWHA 2

SWHA MORNING SESSION 3/27

- start: 6:50 am, 52 F, 3-5 mph, 70%
- End: 10:00 am, 67 F, 3-5 mph, 70%

CORA BRBL, WCSP, EUCD, FEHA, RTHA, SWHA, NOHA, HOSP, AMKE, TUVU, KILL

- arrived at 6:50 am
- 7:10: RTHA on irrigation line
- 7:15: FEHA on transmission structure on community blvd
- 7:20: found a dark morph SWHA on community RD on transmission structure
- 8:09: discovered another SWHA
- 8:32: 1 SWHA goes foraging - kite behavior observed
- 8:35: 2 SWHA swoop down to the ground presumably foraging
- 9:00: FEHA foraging in west ag fields adjacent to community RD
- 9:20: NOHA foraging north side of community Rd
- 9:40: Imran left to check on historical nest site - found 2 RTHA in area
- 10:00: Imran and Kelsey left the site to use bathroom while Melissa stays and monitors

SWHA 10-mile radius 3/27

Start: 10:00 am
End: 1:40 pm 77 F 5-8 mph 60%

- 10:20: Imran and Melissa look at ag fields in 10 mile radius
- 12:00: Imran and Melissa arrive at big Ag fields
- 1:30: Imran and Melissa arrive back at historical nest
- 1:35: Kelsey spots a light morph SWHA at ag field west of Dixie rd

SWHA Dusk survey 3/27

Start: 4:00 pm 76 F, 10-15 mph, 10 %
End: 7:20 pm 66 F, 18-20, 10%

SWHA WEKI HOSP KILL
CORA
NRWS
VGSW

4:30: 3 SWHA flying over Dixie Rd near the historic nest site
5:15: 4th SWHA flying around historic nest site

6:05: juvenile RTHA perches in historic nest elm tree

BLG SWHA #2 3127/25 MT, KSW, IB

	Time	Temp	Wind	CC
Start	0650	52	3-5	70
End	1000	67	3-5	10

EVST EVCO CORA WCSP RTHA
AMKE FEHA* SWHA* TVVV
BRBL NRWS NOHA

Dawn

0710 RTHA perched on Ag irrigation structure along Dixie Rd

0715 FEHA on transmission structure

0720 1 SWHA on transmission structure along Community Rd

0725 SWHA flies to sprinklers. Juvenile RTHA seen on sprinklers

0730 Another SWHA seen on sprinklers

0745 n=3 SWHA on sprinklers

0748 n=4 SWHA on sprinklers

0800 n=2 SWHA in Ag field

0802 n=3 on sprinkler
↳ n=1 flies West

0805 n=5 SWHA on sprinkler

0815 n=6 SWHA on sprinkler

Scale: 1 square = _____

Rita in the Rain

0820 n=8 SWHA on sprinkler
Foraging SWHA periodically
jump down from sprinkler onto
the ground, then return to sprinkler
0830 Possibly n = 9 SWHA (7 confirmed)
0900 FEHA foraging in Ag fields
west of Community Rd
0920 NOHA foraging north of community
Road

Mid Day Survey, 10-mile radius check 3/21

	Time	Temp	Wind	CC
Start	1000	67	3-5	70
End	1340	77	5-8	60

1020 MT & IB check Ag fields in
surrounding area, outside of
main activity hub along
Community Blvd & historic nest
site. Ag fields
1200 MT & IB arrive at BTL
land previously used for Ag.
No SWHA observed in project.
1330 MT & IB arrive back at
historic nest site
13:35 KW spots light morph SWHA at
Ag field west of Dixie Rd.

Scale: 1 square =

BJC - SWHA Dusk survey 3/27/25

	Time	Temp	Wind	CC
Start	1600	76	10-15	10
End	1920	66	18-20	10

SWHA WERT HOSP KILLCORA
NRWS VC - SW EVCD EUST NOHA BRB

1615 n=2 SWHA, one on snag & one soaring
1630 n=3 SWHA total, soaring above historical nest site & Ag fields
1715 n=4 SWHA in area around historic nest site
1733 kettle on Dixie road with n= at least 13, up to 15
1810 n=7 SWHA in kettle
1840 n=3 SWHA in kettle
1850 n=2 SWHA, kettle of SWHA dispersed in all directions besides final 2
1857 n=3 SWHA in kettle
1859 n=4 ↳
1900 n=5
1902 n=7
1903 n=9

Scale: 1 square = _____

Rotate clockwise

1905 n=2 SWHA stay n=9 kettle to the south

BIG SWHA +20 Dawn 3/28/25 MT, KW, DB

	Time	Temp	Wind	CC
Start	0630	50	20-23	50
End	1010	58	20-23	70

WCSP YRWA NRWS HOSP CORA
SWHA EUCD AMKE VGSW NOHA
RTHA AMPI WEME BRBL EUST
SAVS

0630 n=2 SWHA in kettle south on Dixie Rd

0700 n=2 SWHA, one on snag tree, other on transmission structure

0703 n=2 NOHA foraging in Ag field west of historic nest tree

0708 n=1 Juvenile RTHA @ intersection of Dixie Rd & Community Blvd

0715 RTHA foraging in Ag field north of community Blvd

0720 MI & KW check unknown raptor nest

Scale: 1 square = _____

0720 Unknown female raptor on nest incubating. Nest is on top of transmission structure

0735 Unidentified raptor (in addition to incubating female) perched on transmission structure near

0815 CORA nest with incubating female on Summerset Rd

0829 SWHA perched on transmiss structure across from historic nest tree

0830 New SWHA individual perches on sprinkler in Ag field west of historic nest tree

0840 n=3 SWHA in kettle south on Dixie Rd

0847 n=4 in kettle

0940 n=1 SWHA foraging in mustard field N of Community Rd

0945 n=1 SWHA on transmission structure across the street from this nest

0950 n=5 in kettle south from historic nest on Dixie Rd

Rite in the Rain

70

1005 n=11 SWHA foraging & kettling. Additional SWHA still on transmission structure across from historic nest
n=12 SWHA total

1010 RBC leaves site and concludes survey

Scale: 1 square = _____

104 AL BIG SWITA Sug 4/4

MT 0630 38 1-3 01

IB 1020 57 1-3 01.

SWITA CORA JOINT EUCD SANS

CWISP WEME CARD GREEN PAL

COAST YRWA LOSH HOSP

0630. SWITA Between fields 1 & 9

on dixie rds pended in

powerline

0633 = flushed by CORA's fw

South

0715 - 11 Switz on spokers field 9 -

New CORA west mapper

16 SWHA #3 (morning) 4/3

IH Start: 630 35°F 1-3 mph 0%

MT End: 1000 51°F 1-3 mph 6%

SWHA, NOHA, WEME, HOSP, FEHA, CORA, WEST, BRBL, EUCD, EAST, TURK, AMKE, RNSW, FOTA, WEKI

630: SWHA on transmission structure adjacent from Ag 9, NOHA foraging Ag 4

647: SWHA flushed to unvegetated elm tree

657: Ian + Melissa check on irrigation line w/ raptors at Ag 9, I stay to watch the SWHA

700: 1 FEHA foraging in Ag 9

707: FEHA perches on transmission structure west from historic nest and adjacent to Ag 1

718: The SWHA briefly swoops down over Ag 9, then lands on same transmisson structure.

720: FEHA disturbed the SWHA. SWHA briefly chased FEHA before going back to unvegetated elm

735: The SWHA flew to perch on irrigation line in Ag 1

750: Left to meet MT and left at northern irrigation line on ~~SC~~ [illegible] from Ag 9

↳ 5 SWHA

Scale: 1 square = _____

Rite in the Rain

9:00: left to Ag field SE from Ag 9 — SWHA perched on transmission line adjacent from Ag field
8:05: SWHA flew NW from South to land on irrigation line nearby
8:15: Arrived back at irrigation line Ag 9 → 6 SWHA still perched
9:29: Arrived at nesting point for unk. raptor nest on transmission structure
9:00: left to search for SWHA around Ag
9:10: 2 SWHA perched on tree east of Ag 8.
9:18: 2 SWHA perched on irrigation line in bott Ag field east from Ag 8.
~~9:24: 1 SWHA perche~~
9:30: 1 SWHA on irrigation line on Ag 9.
9:45: 1 SWHA perched in unvegetated tree coming from Ag 9.

10 mile radius

Start: 1000am 51°F 1-3 mph 0%
End: 200pm 61°F 1-3 mph 40%

1000: Melissa + I check Ag fields in 10-mile radius → No SWHA
1100: Arrived at BIG Ag fields

Scale: 1 square = _____

1130: left bldg Ag fields to check previously active nests

1135: Arrived at unknown Raptor nest on transmission structure

1240: 75: confirmed SWHA nest on transmission structure

→ now believed to be RTHA

150: departed raptor nest to check area → historical nest

↳ 1 SWHA in unvegetated tree

Evening SWHA

Start: 4:00 pm 61°F 3-5 mph 50%

End: 7:10 pm 57°F 1-3 mph 10%

4:00: SWHA in Ag 9 irrigation structure

CCKD, HOSE, COHA, YBVI, [redacted], RTHA, SWHA, WEKI

4:16: Ian left to check [redacted] Ag

4:16: SWHA on historic nest tree

4:25: 1 SWHA foraging in Ag 9

4:35: 1 NOHA flew from Ag 1 to Ag 9 across Dixie Rd

445: 1 SWHA over Ag 1 foraging

Scale: 1 square = _____

Rita in the Rain

5:04: Left to Check Ag 6
↳ 2 SWTHA on Irrigation line
5:20: Continued KTHA in nest on power Structure
5:45: Continued CCRA nest on Community Blvd South of Ag 7
5:50: Unknown stick nest on white tower structure at crossroad of tall tree and Community Blvd
5:52: 1 SWTHA flushed from roadside Salsola near Ag 3
6:06: 2 SWTHA including the flushed indv. perched on irrigation line in Ag field 3
↳ NOHA flies across the field

Scale: 1 square = _____

4/14

MB SWHA #3 - 2nd Morning

MT start: 630 34f 1-3 0/

AG end: 1020 57f 1-3 0/

CUCD, HCF, SWHA, CORA, PKFA GRCA

MAH

630: Met up with AG

655: Scoped 1st SWHA on Ag 4 irrigation line

7:15: Went to check other Ag fields while AG stays at Hibiscus Rest area.

7:22: PKFA on transmission structure West of Ag 3 adjacent to dairy farm

7:28: 1 SWHA on Irrigation line - Ag 3

7:30: 1 SWHA perched on transmission structure South adjacent to Community Rd and north adjacent to Ag 9

7:35: 1 SWHA foraging over Ag 5

7:42: 2 SWHA, 1 adult Raptor on Irrigation Structure @ Ag 6.

850: 2 Raptors in unharvested Ag field West adjacent to Ag 7

9:30: Met back up with AG down South at Divided

Scale: 1 square = _____

1100: left to check area near
LCOW pest for SWHA and west
1000: left to drive near the west
extension down South to check for
hosts.

Scale: 1 square =_____

4/3/25 BIG SWHA SURVEY #3

MORNING	TIME	TEMP	CC	WIND
START	0640	37	0%	1-3
END	1000	51	0%	1-3

AMKE	AMPI	SAPH	EUCD	BHCO	CLSW
SWHA	NOHA	EUST	WEME	HOSP	MODO
SAVS	RTHA	BRBL	CORA	GTGR	FEHA

0640: SWHA ON TELEPHONE POLE NEXT TO HISTORIC NEST ON DIXIE RD.

0645: ABOVE SWHA MOVED TO PERCH IN SNAG BETWEEN AG 1 & 2.

0655: IAN & MEL MOVE TO COMMUNITY BLVD TO CHECK IRRIGATION PERCH.

0700-0719: ID. 2 SWHA ON IRR. LINE OFF COMMUNITY. PERCHED & FORAGING: MINGLING W/ RAVENS & RTHA.

0730: ID 3RD SWHA ON IRR. LINE

0746: 4 SWHA PERCHED ON IRR LINE.

0753: 5TH SWHA PERCHED / IAN TO CHECK UNKNOWN RAPTOR NEST.

0759: 3 SWHA ON IRR. LINE IN AG 8 OFF SOMERSET.

0810: SET UP SCOPE ON HUMMOCK W OF TELE NEST. POTENTIALLY SWHA. LIGHTING AND POSITION OF BIRD MAKE IT TOO DIFF. TO ID RIGHT NOW. WILL RETURN LATER.

0900: LEFT NEST SITE & RETURNED TO AG. 8.

0906: 3 SWHA PERCH. ON IRR. LINE ON AG. 8.

KILL PRFL VGSW WCSP SOSP LEOW

0930: CHECKED AG FIELDS 6 & 7. NO SWHA

0955: 1 SWHA FLIES EAST FROM AG. 8.
0957: 3 SWHA ON IRR. LINE IN AG 9.

CAKI WEKI NOMO

4/3/25 BIG SWHA SURVEY 3 CONT.

MD	TIME	TEMP	CC	WIND
START	1000	51	0%	1-3
END	1400	60	10%	2-5

1000: GOING ON SITE TO CHECK POTENTIAL RAPTOR NEST.

1003: SWHA ON IRR LINE IN AG 3.

1020: PARKED @ END OF LENWOOD CHANNEL DIRT RD / WALKED TO TAMARISK THICKET.

1020-1105: OWL NESTING IN TAM. TRYING TO DETERMINE SPECIES. PAIR SEEN. LONG-EARED OWL!!
CAMERA IN TREE MONITORING NEST.

1105: HEAD TO ~~PROJECT AG FIELDS~~. DIXIE/COMMUNITY AG FIELDS. TREE SURVEY FOR NESTS.

1240: SCOPE RAPTOR IN NEST. APPEARS TO BE SWHA. POSSIBLY RTHA THOUGH.

1302: IAN TO CHECK OLD DATA ON BIG.

4/3/25 BIG SWHA SURVEY 3 CONT.

Attachment D - 44

DUSK

	TIME	TEMP	CC	WIND
START	1600	63	30%	2-5
END	1910	61	10%	1-3

BRCO NOHA
HOFI EVST CORA WCSP YRWA SWHA
EUCD RTHA BRBL CLSW WEME HOSP

1600: SWHA PERCHED IN TREE OF HISTORIC NEST. BEEN THERE A LARGE PORTION OF THE DAY.

1622: HEAD TO BONANZA/TORTOLA SUB

1707: 2 SWHA ON IRR. LINE @ AG FIELD 8.

1727: CONFIRMED ID OF NESTING RAPTOR. IT'S A RED-TAILED HAWK. PAIR @ NEST.

1742: BACK @ AGS 9/1/2 ON DIXIE

1820: SWHA IN HISTORIC NEST TREE ON DIXIE, SWOOPED INTO AG FIELD AND RIGHT BACK TO TREE.

SWHA/RTHA ACTIVITY LOW IN EVENING.

BIG SWHA #3 Morning 4/3/2025 MT, IB, IH

Time: 630-1000
Temp: 35- 51
CC: 0-0
Wind: 1-3; 1-3

SWHA
CORA
NOHA
WCSP
HOSP
WEME
AMKE
NRWS

0630: 1 SWHA seen perched on transmission structure near AG9
0635: 1 NOHA seen foraging over AG9
0655: MT and IH leave to investigate raptors on irrigation structure on Community Boulevard
720: 2 SWHA seen perched on irrigation structure in AG9 and hopping down to forage
723: 3 RTHA seen perched on irrigation structure in AG9
731: 3 SWHA seen perched on irrigation structure in AG9, and one FEHA seen perched on transmission structure on Community Blvd
750: 5 SWHA seen perched on irrigation structure in AG9
758: MT and IB move to check high activity spot near historic nest
800: 1 SWHA perched on transmission structure near historic nest site next to AG field southeast of AG9
805: 1 Additional SWHA flew in from southeast and perched on irrigation structure near historic nest site next to AG field southeast of AG9
816: 1 additional SWHA perched on transmission structure on Dixie Rd between AG9 and AG1.
820: Total concurrent count in the area is 8, in addition to 3 reported by Ian in AG 8
829: MT and IB meet Ian at unidentified raptor nest
909: 2 SWHA perched on a tree east of AG8
918: 2 additional SWHA perched on irrigation structure southeast of AG8, and 2 NOHA
930: MT and IB return to AG9 and see 6 SWHA perched on irrigation structure and 1 SWHA perched on irrigation structure in AG 4
945: 1 SWHA perched in tree south of AG1 near historic nest tree

BIG SWHA #3 Mid Day 4/3/2025 MT, IB, IH

Time: 1000-1400
Temp: 51-61
CC: 0-40
Wind: 1-3;1-3

SWHA
CORA
HOSP
TUVU
HOLA
RTHA
CAGS
WEKI

1005: IB and MT depart historic nest site for mid day checks
1020: IB and MT check surrounding ag fields, no SWHA
1100: IB and MT arrived at BIG ag fields to monitor for raptor activity and check for nests
1220: IB and MT depart BIG and head to unknown raptor nest
1350: IB and MT depart raptor nest after monitoring
1354: IB and MT arrive at historic nest site to check activity. SWHA still present in Ag fields
1400: IB and MT leave site for end of mid day monitoring session

BIG SWHA #3 Dusk 4/3/2025 MT, IB, IH

Time: 1600-1810
Temp: 61-57
CC: 50-10
Wind: 3-5; 1-3

WEKE
SWHA
RTHA
WCSP
AMKE

1600: IB and MT arrive at historic nest site
1616: IH leaves historic nest site to check tortilla sub
1625: 1 SWHA foraging in AG9
1630:
1635: 1 adult NOHA seen foraging over AG9
1645: 1 SWHA foraging over AG1
1704: MT IB and IH leave Dixie rd to check AG 8
1708: 2 SWHA seen perched on irrigation structure at AG8
1722: Unknown raptor nest confirmed to be RTHA. Other RTHA seen perched one transmission structure down
1727: RTHA flies to nest and replaces mother. 100% confirmed ID on both hawks.
1735: MT and IB depart to check AG field activity and do check of project
1742: Confirmed CORA nest on Community Blvd south of AG7
1750: Unknown (possibly active) nest seen in white tower at crossroads of Community Blvd and Fairview Road
1752: 1 SWHA flushed from roadside Salsola on Dixie Rd next to AG3
1805: 2 additional SWHA perched on irrigation structure in AG3. 1 NOHA seen foraging over AG3
1816: IB and MT begin driving through BIG checking potential foraging grounds

BIG SWHA #3 Second Morning 4/4/2025 MT, IB, AG

Time: 630-1020
Temp: 39-57
CC: 0-0
Wind: 1-3;1-3

EUCD
HOSP
SOSP
WCSP
GREG
MADU
BRBL

700: 11 SWHA seen perched on irrigation structure in AG9, 1 SWHA seen perched on irrigation structure in AG field south of AG9
724: 1 Prairie Falcon perched on transmission structure next to dairy farm west of AG3
728: 1 SWHA perched on irrigation structure in AG3
730: 1 SWHA perched on transmission structure north of AG9 along Community Blvd
742: 2 SWHA seen perched on irrigation structure in AG6
752: 2 NOHA seen foraging in AG west of AG7
844: 1 SWHA seen foraging in AG field south of AG9
855: MT IB and AG leave historic nest site to check project
900: 1 NOHA seen foraging in project
945: Long Eared Owl nest in project site checked, confirmed active
1000: AG MT IB drive through project site and map raven nests

6/12 AM

Ab IB BIO SWHA #4

KW MT 0700 70 2-5 20^

2:10 102 5-8 5^

COHA EUCO COHA HOLA BRBL

PRFL EUST AUPI RTHA

0800 SWHA 0800-215 = 1/2 MGS

0815 → 215 = 11 hrs

1400 → SWHA =

0705. Arvt COHA parked on keyhole

SWHA on Dixie RD

725- PRFL on PL @ Dixie RD

& Community BLVD

0800- depart BC MGS camera

placement

MGS cam placement

@ 0935

Back to car @ 1235

Back @ (HZ) 2:10

No KW BDS SWHA #4 6/12
EBMP PM
@1600 104 8-10 OS
1900 91 8-12 OS
SWHA COKA EVST EVCD
OAKI HOSP TUVU COHA
HOLA LASP CAQU

SWHA: on Lenwood RD. @ 1615 flew west bound and into the project area

0700 - SWHA @ nest tree, flew to west perched in dead tree

455 - SWHA soars to air above field #2 and gets mobbed by 5 CORAs then continues to soar S, SE 1700 COHA field 1

1520. SWHA nest attempt in progress. Found Adult sitting on nest in c. elm tree.

1830 - SWHA feeding c/ partner on ag mgmt wheel. Just SE of nest tree

Attachment D - 52

MT KW BIG SWHA #4 6/13

FB MT AM x2

0545 70 1-3 20%

1000 54 8-12 20%

CORA EUCA RUHA PRFA HOLA

HUSP MOOO AMLE EUST TUVU

CAPE EUST

0545 - Many CORA @ and around fields,

0605 - PRFA perched on pole on Dixie rd north of field 4 by dairy farm

0645 - 1 SWHA in red fir

1 solitary vireo other tree perch

0655 - SWHA vs RAVEN mob

13 SWHA #4 Dawn session 6/12

AG Start: 7:00 AM 70°F 2-5mph 20%

KW End: 10:00 AM 87°F 2-5mph 20%

MT

COFA EUCD PRFA EUST RTHA AMKE
COHA BRBL HOLA ROLL LBSL TUVU
Yellow bell spring bear SWHA MDD WEAT
7:06: COHA in Ag field below Ag 9
7:25: PRFA on top of transmission structure
B North of Ag 1
7:30: RTHA juvenile west of Ag 3 on transmission structure
9:00: Searched for nests in trees east of dixie rd near ag 2.
8:10: Observed 1 SWHA dive into Ag 1 and landing in defoliated tree near elm
8:15: The SWHA moved to historic nest tree
8:20: SWHA moved to Ag 2 potentially to forage, lost visual
8:40: SWHA seen perched on irrigation structure in Ag 2 near South of historic nest tree

Scale: 1 square = _____

8:45: SWFA flies to bird tree

8:58: SWFA flies to Ag 2 and lands in field. CORA attack and SWFA flies south

9:00: Left historic nest area to do a reconnaissance

9:15: RTHA east of Ag 8 on Irrigation structure

9:20: Juvenile RTHA perched in Ag 6 irrigation structure

9:40: Arrived back near historic nest Location to monitor known SWFA location

9:50: The SWFA individual spotted in middle interior of historic nest site

Rite in the Rain

SWHA #4 Midday session 6/12

MT Start: 10:00 AM 87°F 2-5 mph SW.

End: 1:00 PM 97°F 4-7 mph 15%

10:00: IB and MT leave to check Ag fields north and south of Santa Fe Avenue - arrived at 10:15

10:45: IB and MT drive to BIG project footprint and start surveying Ag fields

11:45: Drove around BIG + Ag fields

12:30: left BIG to check historic nest trees for SWHA

1:00 PM: left the site

Scale: 1 square = _____

Attachment D - 56

LB SWHA #4 Evening session 6/15
AT Start: 4:00 PM 10 ft & - 0mph 0%
AG End: 7:00 PM 91°F & - 12 mph 0%
KW

CORA TWW HOLA
SWHA HOSP

4:15: SWHA on transmission structure west of Lenwood Rd, SW
4:20: the SWHA flushed and headed towards Big sand dunes
4:40: SWHA arrived near historic nest tree and perched on adjacent irrigation structure. SWHA may have been displaying territorial behavior, as once been arrived at the tree, it flushed and circled in defoliated tree closer to dixie Rd
4:55: SWHA seen flying over to 2 and fly 1
5:00: SWHA perches in historic nest tree
5:05: AG and KW check under the trees and discovers the nest w/ SWHA in it. The nest isn't well developed.
5:20: SWHA flushed; LB and MI stay in area to watch nest.

Scale: 1 square = _____

Rite in the Rain.

5:30: SWTA hovers over Ag 1 and lands on irrigation structure in Ag 2

5:35: Second SWTA seen flying south of Ag fields, 2 individuals confirmed

5:40. SWTA flies around in vicinity of nest tree

6:00: SWTA mobbed by corn in Ag 2

6:20: SWTA seen on irrigation structure feeding on prey

6:30: Flushed ~~feeding~~ eating and flushed towards Ag 1.

6:40: SWTA comes back to irrigation structure to finish feeding

Attachment D - 58

1B SWHA survey #4 Dawn 6/13/25
AG Start 5:45AM 70°F 1-3 mph 20%
KW End: 10:00 AM 84°F 8-10 mph 20%
MT

CORA PRFA CAEI
RTHA Coyote TUVU

5:50 AM: Juvenile RTHA perched on transmission structure North of Ag 1.
6:07 AM: SWHA seen flying around nest tree
6:10: SWHA perched on top nest tree then has conflict w/ ravens, flies over Ag 1, and lands back in top canopy of nest tree
6:25: SWHA continues to fly around nest tree, occasionally perching, and chases ravens around Ag fields
6:45: 2nd SWHA perched in defoliated tree
7:15: SWHA in defoliated tree flushed by CORA
7:22: SWHA returns to defoliated tree
8:30: SWHA in nest tree flushes
9:10: SWHA starts getting further South on Dixie & 1 from nest tree

Scale: 1 square = ____

Rite in the Rain

52 9:30: On-Site Ag check for Stuff

Scale: 1 square = _____

SWHA survey #4 DAWN 6/12/25 61

0700 70 2-5 20

→ see IB & MT notes

AG, KW, IB, MT

CORA	COHA*	EUCD	BRBL
HOLA	PRFA*	EUST	ROPI
RTHA			

AG + KW → MGS com drop-off

* RBC on site @ 0700
* COHA n=1 on transmission line
* PRFA n=1 on transmission line by Ag field 1
* RTHA on transmission line near Ag field 4
* See IB & MT's notes for rest of dawn survey + 10-mile radius survey (AG & KW → MGS @ 0740)

Pg 1/3

Rite in the Rain

Scale: 1 square =

SWHA survey #4 pg 2/3

DUSK

1600 101 8-10 0.1°
1900 91 8-12 0.1°

*1615 SWHA n=1 perched on transmission structure on Lenwood Rd
*1620 flushed towards project site (dunes)
*1640 SWHA (n=1) on sprinkler near historical nest (seemed defensive that 2 cars were near hist. nest tree...)
*1655 1 SWHA mobbed by CORA on Ag field 2, Kettling
*1700 COHA flyby near green house
*1740 south of Ag field Kettling → n=1 SWHA
*1720 nest obs! Flushed SWHA

SWHA* EUCD CORA CAKI HOSP TUVU COHA* LASP

Pg 3/3

* second SWHA still by nest
* nest in hist. nest Chinese elm tree
  ↳ under construction
* 1752 SWHA kettwing above nest tree
* 1814 SWHA flew NE out of sight
* 1830 SWHA feeding on sprinkler in Ag field 2
* ~~Second SWHA to south~~

SUMMARY

* Nest building @ historical nest tree confirmed
* n = 2 SWHA

64 SWHA SURVEY #4 6/13/25

DAWN AG, KW, MT, IB

0545	70°	1-3	20.10
1000	84°	8-10	20.1°

CORA	EUCD	RTHA	PRFA*
HOLA	HOSP	AMKE	SWHA*
EUST	CAKI	TUVU	

PG 1/

* RBC on site @ 0545
* 0600 ♂=2 juvenile RTHAs on pole by Ag field #4
* 0607 PRFA on transmission structure (TS) ~~by Ag field~~
by cattle N of Ag field 4
* 3 RTHA N of Ag field 4 (in Ag fields) by RTHA nest on TS near nest

~~* SWHA n=1 near nest~~
~~in Ag fields foraging~~

* 0645 SWHA n=1 in nest & second

Scale: 1 square = in

SWHA in snag near Dixie Ln
*0654 SWHA in snag → nest tree to fend off mobbing CORA
*^ returned to tree snag (other SWHA still in nest tree)
*0900 n=1 SWHA in snag/tree by Dixie Ln. (other SWHA still believed to be in nest tree)
*0930 SWHA soaring over AG field #1
*0930-1000 Ag field on B16 project site check
↳ NO SWHAs

36

BIG SWHA #4 6/12/25 Dawn

	time	Temp	wind	CC
Start	700	70	2-5	201
End	1000	87	2-5	201

CORA EUCD PRFA EUST RTHA
COHA BRBL HOLA ROPI
HOSP TUVU AMKE MOUO
SWHA

706 COHA in Ag field below Ag 9
725 PRFA on top of transmission structure north of Ag 1
730 RTHA juvenile west of Ag 3 on transmission structure
800 IB & MT search for nests in Tamarix and pine trees east of Dixie road
810 1 SWHA seen perched on bare tree next to historic nest site south of Ag 1
815 SWHA flies to historic nest tree
820 SWHA leaves historic nest tree and appears to goto Ag 2 (Maybe to forage)

Scale: 1 square = _____

840 SWHA seen perched on irrigation structure in Ag 2 south of historic nest tree
845 SWHA flies to bare tree where it was initially identified
850 SWHA flies to Ag 1 and lands in Field CORA attack and SWHA flies south
900 IB and MT leave to do recon of other fields
915 RTHA seen perched on irrigation stru in Ag field east of AL-8
920 Juvenile RTHA seen perched on irrigation structure in AL-6
940 IB & MT arrive at historic nest site to monitor known SWHA location
950 SWHA flies out of historic nest tree, then back to perch in
1000 IB & MT leave to do mid day survey in 10 mile radius

Scale: 1 square = _____

38 BIG SWHA #4 Midday window 6/19/25 MT TB

	Time	Temp	Wind	CC
start	1000	87	2-5	20
End	1300	97	4-7	15

SWHA CORA WEKI BRBL

1000 IB & MT leave historic nest area to do midday 10-mile radius & BIG Ag fields

1015 Survey of Ag fields north of (& south) Santa Fe Avenue

1045 IB&MT drive to BIG project footprint and start surveying Ag fields

1145 IB&MT leave to drive through more of BIG

1230 IB&MT leave BIG to check historic nest tree for any activity

1300 IB&MT leave site

Scale: 1 square = _____

BIG SWHA Dusk survey 6/12/25

KW, MT, IB, AG

	Time	Temp	Wind	CC
Start	1600	101	8-10	0
End	1900	91	8-12	0

SWHA BRBL CORA HOSP

1615 SWHA seen perched on transmission structure west of Lenwood Rd. Next to BIG Project footprint

1620 SWHA flushed Southwest into BIG footprint and lands on the ground out of view

1625 Survey team arrive at historic nest site

1640 SWHA perches on irrigation structure right next to historic nest tree, then flies west to perch on bare tree next to Dixie Rd

1655 SWHA seen flying over Ag 2 and Ag 1

1700 SWHA perches in historic nest tree

Scale: 1 square = _____

Rite in the Rain.

1720 SWHA flushes from tree after AG & KW see hawk on nest

1725 MT and IB park with view of tree to give hawk & nest some space

1735 Second SWHA seen flying South of Ag fields, 2 individuals confirmed

1740 SWHA flies around/in vicinity of nest tree

1800 SWHA mobbed by CORA in Ag 2

1820 SWHA seen perched on irrigation structure with prey item and starts to consume it

1830 SWHA flies over Ag 1

DIG SWHA Survey #4 6/13/25 Dawn
MTAG KWIB

	Time	Temp	Wind	CC
Start	0545	70	1-3	20
End	1000	84	8-10	20

CORA RTHA BRBL SWHA
PRFA Coyote WEKI TUW
WEME

0550 Juvenile RTHA seen perched on transmission structure north of Ag 1
0601 SWHA seen flying around nest tree
0610 SWHA perched on top of nest tree, then has conflict with ravens and flies over Ag 1, then perches on nest tree again
0625 SWHA continues to fly around near nest tree and nearby Ag fields
0645 second SWHA seen in bare tree next to nest tree & Dixie Rd
0715 SWHA perched on bare tree mobbed by CORA

Scale: 1 square =

0722 SWHA perches on same bare tree

0830 5 WHAs perch & fly around nest tree

0913 SWHA kettling south on Dixie Rd

0930 Crew does onsite ag check

1000 Crew concludes survey

Attachment D - 72

6/25

BIG SWTA #5

KW 0845 74 35 01

MT 1305 92 1-3 02

SWTA CORA HOLA EUCD COTTA

CUTQU EUST HOSP RTHA AMKE

TUVU

zebra hilly; DELO; YBSL

0815 - 2 SWTA on dead tree @ NW corner of field #2

0834 - 1 swtn foraging in field #1 then flies to and perches in west tree

0855 - COTTA AT W edge of field south of Dixie Rd. dropped pond

0910 - both SWTA on dead tree @ NW corner of Field 2

0930 - West has ~2 nestlings!

1000 ↓

Searched 10 mile circle around project site. Went to our site & fields. Checked on nests within footprint.

1121 1 Adult SWTA field #1

1210 COTTA over field 2

AL BIG SWHA #5 PM 6/25
KW 1600 93 3-5 0%
MT 0730 91 3-5 0%
SWHA CORA HOSP HOFI MODO
HOLA BRBL EUCD CAQU

1650 - SWHA flies from nest tree to dead tree NW field #2
1720 = n=1 SWHA settled above drive in until out of sight
1820 SWHA 1 back at snag (dead tree) NW field #2
1830 SWHA AT nest tree
1845 SWHA perched on sprinklers in ag field

6/25

AG By SWHA #5 HM #2 6/26

MT 0545 73 0-3 0%

MW 0815 79 0-3 0%

CORA HOFI RORD SWHA RTHA

EUCD EUST HOLA

DECO ~~COR~~ COYOTE

0625 - 1 SWHA @ dead tree
MW at field 2

0615 - Coyote in field #1

0630 - SWHA #2 in nest tree
flies over SW ag. field
chases off a RTHA.

0635 - Both SWHA meet in air and #1 offers #2 food item.

↳ SWHA #2 ~~#2~~ 1 with food flies back to nest.

0706 - 1 SWHA @ dead tree
1 SWHA Brings food to nest

BSG SWIFA 7/9

KW Nest check

FB 0750 76 1-3 15?

0550 76 1-3 15

0750 SWIFA observed on powerline on community rd. ↓ of nest.

0810 2 adults on nest

0910 1 fledgling in nest.

0920 - depart

CARA CARO HOUSA HOUSE EVED

AMKE SWIFA flop

4th SWIFA on ↓ Dixie Rd

13 SWHA #4 Dawn session 6/12

AG Start: 7:00 AM 70°F 2-5mph 20%
KW End: 10:00 AM 87°F 2-5mph 20%
MT

COFA EUCO PRFA EUST RTHA AMKE
COHA BRBL HOLA RCKI LBSL TUVU
Yellow bell spring bear SWHA MDOW WEAK
7:06: COHA in Ag field below Ag 9
7:25: PRFA on top of transmission structure
B North of Ag 1
7:30: RTHA juvenile west of Ag 3 on transmission structure
9:00: Searched for nests in trees east of dixie rd near ag 2.
8:10: Observed 1 SWHA dive into Ag 1 and landing in defoliated tree near elm
8:15: The SWHA moved to historic nest tree
8:20: SWHA moved to Ag 2 potentially to forage, lost visual
8:40: SWHA seen perched on irrigation structure in Ag 2 near South of historic nest tree

Scale: 1 square = _____

8:45: SWFA flies to bird tree

8:58: SWFA flies to Ag 2 and lands in field. CORA attack and SWFA flies south

9:00: Left historic nest area to do a reconnaissance

9:15: RTHA east of Ag 8 on Irrigation structure

9:20: Juvenile RTHA perched in Ag 6 irrigation structure

9:40: Arrived back near historic nest location to monitor known SWFA location

9:50: The SWFA individual spotted in middle interior of historic nest site

Scale: 1 square = _____

Rite in the Rain

SWHA #4 Midday session 6/12

MT Start: 10:00 AM 87°F 2-5 mph SW.

End: 1:00 PM 97°F 4-7 mph 15%

10:00: IB and MT leave to check Ag fields north and south of Santa Fe Avenue - arrived at 10:15

10:45: IB and MT drive to BIG project footprint and start surveying Ag fields

11:45: Drove around BIG + Ag fields

12:30: left BIG to check historic nest trees for SWHA

1:00 PM: left the site

Scale: 1 square = _____

LB SWHA #4 Evening session 6/15
AT Start: 4:00 PM 10 ft & - 0mph O; -
AG End: 7:00 PM 91°F & - 12 mph O; -
KW

CORA TWW HOLA
SWHA HOSP

4:15: SWHA on transmission structure west of Lenwood Rd, SW
4:20: the SWHA flushed and headed towards Big sand dunes
4:40: SWHA arrived near historic nest tree and perched on adjacent irrigation structure. SWHA may have been displaying territorial behavior, as once been arrived at the tree, it flushed and circled in defoliated tree closer to dixie Rd
4:55: SWHA seen flying over to 2 and fly 1
5:00: SWHA perches in historic nest tree
5:05: AG and KW check under the trees and discovers the nest w/ SWHA in it. The nest isn't well developed.
5:20: SWHA flushed; LB and MI stay in area to watch nest.

Scale: 1 square = _____

Rite in the Rain.

5:30: SWFA hovers over Ag 1 and lands on irrigation structure in Ag 2

5:35: Second SWFA seen flying south of Ag fields, 2 individuals confirmed

5:40: SWFA flies around in vicinity of nest tree

6:00: SWFA mobbed by crow in Ag 2

6:20: SWFA seen on irrigation structure feeding on prey

6:30: Flushed ~~feeding~~ eating and flushed towards Ag 1.

6:40: SWFA comes back to irrigation structure to finish feeding

1B SWHA Survey #4 Dawn 6/13/25
AG Start 5:45AM 70°F 1-3 mph 20%
KW End: 10:00 AM 84°F 8-10 mph 20%
MT

CORA PRFA CAEI
RTHA Coyote TUVU

5:50 AM: Juvenile RTHA perched on transmission structure North of Ag 1.
6:07 AM: SWHA seen flying around nest tree
6:10: SWHA perched on top nest tree then has conflict w/ ravens, flies over Ag 1, and lands back in top canopy of nest tree
6:25: SWHA continues to fly around nest tree, occasionally perching, and hovers around Ag fields
6:45: 2nd SWHA for perched in defoliated tree
7:15: SWHA in defoliated tree flushed by CORA
7:22: SWHA returns to defoliated tree
8:30: SWHA in nest tree flushes
9:10: SWHA starts getting further South on Dixie & 1 from nest tree

Scale: 1 square = ____

Rite in the Rain

52 9:30: On-Site Ag check for [illegible]

Scale: 1 square = _____

B16 SWHA #5 6/25/25

0815 74 3-5 Old
1305 92 1-3 Old

MT, AG, KW

DAWN

* 0815 RBC on site, SWHA n=2 in snag on Dixie In
* 0835 n=1 SWHA → nest tree
* 0900 n=2 in snag
* 0908 n=1 SWHA in tree
* 0908 chicks in nest!!
* n=2 chicks (at least)
* Likely 3-4 weeks old based on plumage
*
10-mile
* 1000 RBC → Ag fields or project site (no SWHA)

COBA HOFI SWHA* EUCD
HOSP EUST RTHA CAQU
BMKE TUVU

10-mile Radius

*1050 checked dunes / Long-eared owl nest
↳ empty nest
↳ no SWHA
↳ 1100 → Lenwood charred
↳ 1115 n=1 SWHA flushed from the north, flew above nest tree, & landed in snag on Dixie Ln.
↳ 1123 SWHA n=1 hovering over Ag field #1, mobbed THVI

DUSK

1600 93 3-5 0 >10

Audubon cottontail
EUCD
MODO HOLA BRBL CAQU
CORA SWHA* HOSP HOFI

*1600 SWHA n=1 in nest tree

Scale: 1 square = _____

Rate of the Ra

DUSK

* 1650 n=1 SWHA → Dixie Ln snag
* 1720 n=1 SWHA ~~kettled~~ above Dixie Ln snag until out of sight
* 1820 SWHA n=1 back in snag off Dixie Ln
* 1830 SWHA n=1 → nest tree
* 1845 SWHA n=1 perched on sprinklers in Ag field #1

B16 SWHA #5 6/26/25

0545 73 0-3 0.0°

0815 79 0-3 0.1°

DAWN

EUCD
CORA ROPI MODO SWHA*
HOSP EUST HOLA RTHA

Coyote
Audubon cottontail

*0625 n=1 SWHA flew to & perched in snag of Dixie Ln.

*0630 n=1 SWHA in nest tree

*0635 nest tree SWHA → AG field across from Daniel Senor's house → Dive bombs RTHA

*0635 Dixie ln snag SWHA → same Ag field as above → brings prey to other SWHA

* n=2 SWHA in Dixie ln snag

Scale: 1 square =

Rite in the Rain

DAWN

*0637 n=1 SWTHA brings food → nest

*0658 n=1 SWTHA → snag

*0706 n=1 SWTHA brought food to nest tree, other SWTHA still in Dixie In snag

*0708 SWTHA from snag → nest tree

Windlands M65 Cam pick up @ 0815

N

* 4 miles from Hinkley, Ag fields (green), high quality foraging grounds (5. of Black Mtn w/ airness) ↳ SWTHA more likely to forage here than B16

80 B16 SWHA Nest Check

7/9/25 AG, IB, KW

0750	80	1-3	10.10
0830	83	1-3	10.10

CORA SWHA* CAQU EUCD HOFI HOSP

*0750 n=1 SWHA perched on T-structure on Community Rd

B16 Wildlands M65 7/8/25

Cam pick up / Drop off (504) (228-021-31)

1300	100	1-3	0.0
1715	104	10-12	5.0

→ SWHA Cont'

*0800 n=2 adult SWHA perched on T-structure by Daniels house

*0805 n=1 chick in nest (likely the runt)

*Other 2 older chicks believed to have fledged

*Male SWHA (unbanded) near Ag Bird #4

Scale: 1 square

48 BIG SWHA 6/25/25 Dawn MT, AG, KW

	Time	Temp	Wind	CC
Start	815	74	3-5	0
End	1305	92	1-3	0

SWHA CORA COHA CAQU
EUST AVGO HOSP EUCD RTHA
AMKE Antelope GS Yellow spiny lizard BRBL
TUVU CAGS

0815 2 SWHA seen perched in snag next to historic nest tree

0835 One SWHA attempts to hunt in AG1, touching down briefly before perching in nest tree

0858 Cooper's hawk seen perched in transmission structure South of AG9

0900 2 SWHA perched in snag next to nest tree

0905 Nest check confirms chicks! At least 2 chicks, estimated to be 3-4 weeks old

1000 Surveyors check BIG Ag fields

1100 Surveyors survey BIG project site near Tenwood channel

Scale: 1 square = _____

1115 One SWHA flies around AG1
and lands in snag tree
1123 SWHA soaring over AG1
and mobbing TVVV
1155 One SWHA flies out of nest
tree and lands in AG1 near
irrigation structure to forage
1210 COHA seen soaring over AG2

BIG SWHA 6/25/25 Dusk MTAG, KW

	Time	Temp	Wind	CC
start	1600	93	3-5	0
End				

CORA HOSP SWHA MODO
HOLA BRBL CARW EVGR ANCO

1652 SWHA flies out of nest tree
on perches on snag
1720 SWHA kettled above Dixie
lane until out of sight
1823 SWHA perches on snag
1827 SWHA perches in nest tree

Rite in the Rain.

1845 SWHA perches on irrigation structure in AG 1

BIG SWHA Dawn 6/26/25 MI, AG, RW

	Time	Temp	Wind	CC
start	0545	73	0-3	0
End	0815	79	0-3	0

HOSP CORA ROPI Coyote AVCO
SWHA EUST RTHA HOLA EUCD

0625 1 SWHA flies and perches on snag next to nest tree

0630 1 SWHA in nest tree

0635 1 SWHA flies over AG field South of AG 9 and attacks RTHA
- Other SWHA flies in to same field with prey in claws, offers to other SWHA
- Both hawks perch on snag tree before hawk holding prey flies into nest tree

0706 1 SWHA brings food to nest tree, other SWHA still in snag

0708 SWHA from snag flies to nest tree

Scale: 1 square = _____

94

AG BIG SWITH 6 7/16

LEW 1/2 AM

IB 0630 72 3-5 57

MT 1000 87 3.5 03

CORA HOSP CUST EUCD ANITU

SUITH LOTTA KITH-PRIA

BUOR HOFI

Dead KTHA

-

070 - SWITH Muley unloaded

@ snwy tree

0811 - 3 SWITH visual

7/16

Mt Big SWHA 6

1615 @ 1/2 PM

@ 1630 100 8-12 OA

1930 93 10-15 OA

COHA LOSP SWHA HOSP

ZWCD HOLA AMKE RTHA

1650: 2 adult SWHA in snag tree. W of nest 12 max, unpaired dad.

1720: Confirmed. 2 fledglings in tree 2 adults flying around!

AB KW Big SWHA #6 7/17
IBMT BO 2 AM
0615 72 0-3 30%
103> 86 3-5 20%,
HULA CSHA SWHA EJCD LASP
COHA RTHA NBHA PRFA POPI
HOSP EUCD CHQU AMLE PEFA
RBOR EUST

0615 SWHA flit from snag tree to utility pole, chases over — Harvest Continues @ field ①
0620 Male in snag, female in nest tree
0630 Male sings defending territory chased NB long bill in field 2
0632 COHA on dirt rd
0640 NOHA veered in field ②

PEFA

0725 - ~~[redacted]~~ with food on leeward KO power lines. Photos.

1 Fledgling in nest tree. 1 fledgling on spanker in field 2

-2 adults in snag tree.

1020 - AD check and project site drive survey

1030 depart

SWHA nesting survey # 6 7/16

Start: 0620 72 3-5 mph S

End: 1000 89 1-3 mph W

Dawn

CORA WEKI PRFA TUVU

EUCD EUST WFIB - flyover

MODO SWHA*

0630: Unknown raptor on power structure on Community Rd - likely RSHA or COHA

0640: Discovered the male SWHA on defoliated tree - No banding on legs

~~0700~~

0730: Arrived at ~~NW side~~ nest tree to look out for adults + juveniles

0755: other adult SWHA perched in irrigation structure in Ag 1

0800: third SWHA perched in tamarisk shag down in Riverview Rd.

0825: PRFA perched on transmission structure south of Ag 5 along community Blvd consuming prey

0915: SWHA flies over Ag 1 and lands in nest tree while SWHA in shag tree is still there

Scale: 1 square = _____

78 0922: 2 SWHA foraging over Ag 1
0940: 6 WFIB fly over Ag 1
0945: 1 SWHA perched on Impatiens structure in Ag 1
0948: Other SWHA perched on transmission structure north of Ag 1 on Community Blvd → first over Ag 1 and Ag 4 to forage
1000: SWHA kettles with TUVU, flies over Ag 3, then over Ag 1 to forage

Scale: 1 square = _____

BB SWHA 10-mile Radius Check #6 7/16
MT Start: 1000 89°F 1-3 m/h 1%
End: 1300 96°F 1-3 m/h 1%
ROPI RTHA
1000: Left Dexie Rd to drive around nearby Ag fields within 10-miles for SWHA
1040: Arrived at B/G Ag fields to monitor for SWHA
1130: JB and MT drive through B/G project site looking for SWHA

SWHA Dusk #6 7/16
Start: 1630 100°F 8-10 0.01%
CORA SWHA LASP
TOSP TUVU
End: 1930 93°F 10-15 0%

1650: 2 SWHA perched in snag tree next to nest tree
- Leg band with J2 on female confirms breeding pair returned from previous year
1719: Both SWHA fly over Ag 1 and 2 then land in snag tree

Rite in the Rain

1740: Nest tree reveals two chicks still untagged
1752: TUVU approaches nest tree and 2 SWHA fly over to protect nest
1830: MTU and IB survey surrounding ag fields
1930: conclude survey

Scale: 1 square = _____

1B SWHA #6 Dawn Survey (2nd) 7/17
MT start: 0615 72°F 0-2mph 30%
AG End: 1000 88°F 0-2mph 10%
HW CRAU EUST BRBL
BAD CORA LASP HOLA HOSP EUCD WEKI
SWHA* AMKE COHA, yellow-backed spiny lizard
0600: 1 SWHA perched in shag tree
0620: 1 SWHA perched in transmission structure on Dixie Rd.
0625: SWHA on transmission structure went to shag tree - male
0631: SWHA chases away bird to get to irrigation structure in Ag 2
0640: Male SWHA adult continues to land on transmission structure and shag
0727: COHA on transmission structure on Dixie Rd. - Juvenile
0736: PRFA on transmission structure North of Dixie Rd
0830: Male and female SWHA in shag tree
0950: Female brings food to nest tree
0945: Checked on nest - nestling is in tree and SWHA juvenile on ground by irrigation structure in Ag 2.

Rite in the Rain.

B16 SWHA #6 DAWN 7/16/25

0630	72	3-5	SE10
1000	87	3-5	Calm

A6, KW, IB, MT

CORA HQSP EUST ANHU
EUCD HOLA SAPH BUOR
CAKI HOFI

*0630 RBC onsite @ nest tree/Dixie Ln
*0710 n=1 SWHA in snag near Dixie Ln. other SWHA in nest tree
*0730 nest check - no chicks observed
*0735 SWHA n=1 → snag tree.
*0810 n=1 SWHA on sprinklers @ south end of Dixie ln
*0805 n=2 (additional) SWHA on A6 field #2
*Daniel (pers comm.) - 4 SWHA foraging under nest tree

Rite in the Rain

*0825 h=1 (♂) SWHA
in snag off Dixie Ln.
*1000 AG + KW → MGS
Cam pick up.

MGS CAM PICK-UP
228-02-13) (AG+KW)

9, 3, 4, 11, 7, 27, 26, 35
10, 25, 22, 31, 20, 30

182-150-23

28, 5, 23, 19, 12, 14, 6, 18
32, 24, 2, 21, 1

END MGS - 1400

DUSK		SWHA	
1630	100	8-10	0.10
1930	93	10-15	0.10
CORA	SWHA*	LASP	HOLA
EUCD	HOSP	AMKE	RTHA

* SWTHA n=2 in snag tree (1650).
* "J2" on color band on ♀ SWTHA - confirmed same breeding pair as last year. @
* 1720 nest check — n=2 SWTHA chick in nest tree (mom + dad flew & circled nest tree then returned to snag)
→ one chick in nest, other "branchiing" nearby
* 1900 - no SWTHA @ nest tree or snag
* 1720 - 1900 AV + KW to drive to project site to look for 3rd fledgling
→ survey negative

90 B16 SWHA [DAWN] 7/17/25

0615 72 0-2 30%
1030 86 3-5 20%
AG, KW, MT, IB, BO
CORA SWHA* HOLA COHA*
LASP RTHA NOHA* ROPI
PRFA* AMKE PEFA EUST

n=2 (♀ + ♂)

*0615 SWHA ♀ on trans. struc on Dixie Ln chasing CORA
*0628 ♂ SWHA ⇒ Dixie Ln tree snag ; ♀ SWHA flew towards nest tree
*0629 ♂ SWHA → T. structure on Dixie Ln
*0630 ♂ SWHA flew South to dire bomb another raptor over A6 field #2
* n=2 COHAs on T. structures off Dixie ln
*NOHA n=1 heard calling near A6 field #2
*0650 ♂ SWHA in snag

* DRFA n=1 on T. Structure by the 58 fwy
* PEFA n=1 on T structure feeding on prey @ 0726 off Lenwood Rd on project site (Alec has photos on camera)
↳ (34.885466, -117.11884)
↳ prey = Midsize bird

* n=1 SWHA in snag off Dixie Ln @ 8:10
* 0822 n=1 SWHA on snag, n=1 SWHA on sprinklers on Ag #2
* 0825 ♀ + ♂ SWHA on sprinklers @ Ag #2
* 0830 n=1 fledgling on same sprinkler

* n=1 fledgling in nest tree (2 fledglings total)
* SWHA ♀ in nest tree 0925
* 0925 n=1 SWHA fledgling still on sprinklers in AG #2
* SWHA ♂ in Dixie In snag 0933

BIG SWHA #6 7/16/25 MT

	Time	Temp	Wind	cc
Start	630	72	3-5	5
End	1000	89	1-3	1

EUCD SWHA HOLA AMKE
RTHA PRFA EUST VFIB
TUVU GREG

0630 Unidentified raptor seen on transmission structure on Community Blvd

0640 Male SWHA perches on snag tree next to nest tree. Photos taken and no bands confirmed

0720 Arrived at nest tree. No chicks seen in nest, likely all fledged

0755 Other adult SWHA perched on irrigation structure in AG1

0800 Third SWHA perched in tamarisk snag down Riverview Rd.

0825 PRFA perched on transmission structure South of AG5 along Community Blvd consuming prey

Rite in the Rain

0915 SWHA flies over AG1 and lands in nest tree while SWHA in snag tree is still there

0922 2 SWHA foraging over AG1

0940 6 WFIB (White faced Ibis) fly over Ag 1

0945 1 SWHA perched on irrigation structure in AG-1

0948 Other SWHA perched on transmission structure north of AG-1 on Community Blvd
↳ Flies over AG-1 & AG-9 to forage

1000→ SWHA kettles over AG 9 with TUVU, then flies over AG 3, then over AG 1 to forage

Mid-Day 10-mile radius check for SWHA

	Time	Temp	Wind	CC
Start	1000	89	1-3	1/
End	1300	96	1-3	1/

ROPI MODO

1000 IBIS MT depart nest area to do mid-day 10 mile radius check of surrounding AG fields

Scale: 1 square = _____

1040 IB & MT arrive at BIG AG Fields to search for SWHA

1130 IB & MT drive through BIG project site looking for foraging SWHA

1300 Survey concluded

Evening Survey BIG SWHA 7/16/25

	Time	Temp	Wind	CC
Start	1630	100	8-10	0%
End	1930	93	10-15	0%

LASP SWHA CORA HOSP TUW CAQU EUCD

1650 2 SWHA seen perched in snag tree next to nest tree. Both individuals photographed, Leg band with J2 on female confirms breeding pair returned from previous year.

1719 Both SWHA fly over AG1 & AG2 then land in snag tree again

1740 Nest check reveals two chicks still unfledged.

1750 BIOs return to monitoring the area

Rite in the Rain

1757 TUVV approaches nest tree and 2 SWHA fly in to protect nest. One SWHA perches on snag again

1830 MT & IB survey surrounding Ag fields

1930 Survey concluded

BIG SWHA Dawn Survey 7/17/2025

MT IB BAO KW AG

	Time	Temp	Wind	CC
Start	615	72	0-2	30
End	1000	88	0-2	10

SWHA EUCD HOLA CORA LASP VOHA HOSP AMKE RTHA BRBL COHA (Juvie) PRFA PEFA CAQU WEKI MODO EAST

0615 1 SWHA perched in snag tree

0620 2 SWHA perch on transmission structure east of AG9 along Dixie Rd

0625 1 SWHA out of view, 1 perches on snag tree, then bombs raptor perched on irrigation structure in AG2

0641 ↳ SWHA moves to transmission structure along Dixie Rd

↳ Goes back to snag tree

Scale: 1 square = _____

0700 MT, IB, & BAO do check of Ag Fields in surrounding area
0830 4 juvenile RTHA in the area of AG 7
0945 MT, IB, & BAO check nest tree and see one SWHA nestling, branching, in nest tree, and one fledgling on the ground near irrigation structure in AG2
1000 Survey concluded

Scale: 1 square = _____

Rite in the Rain

56 17 Jul 2025 BAO IB, MT AG KW Rocks

SWHA survey

0615, 72°F, 0-2 mph, 30% cc

- start @ known nesting pair, saw some territorial behavior

(MT collected GIS data)

~ 0900 SWHA pair in perch tree (sunny start), ♀ w/ food

~0945 visited nest. One fledgling at 4 am ground in adj ag field. One in tree next to nest - hopped btwn branches

1000, 88°F, 0-2 mph, 10% cc

EUCD
SWHA
HOSP
HOLA
CORA
LASP
AMKE
RTHA
MODO
COHA
PRFA
yellow-backed Spiny lizard
PEFA
CAQU
WEKI
BRBL
EUST
orange sulphur

Scale: 1 square =

ATTACHMENT DD

FOCUSED PRESENCE/ ABSENCE SURVEY FOR YELLOW-BILLED CUCKOO, BARSTOW INTERNATIONAL GATEWAY, COMMUNITIES OF LENWOOD AND HODGE, SAN BERNARDINO COUNTY, CALIFORNIA, OCTOBER 13, 2022

October 13, 2022

Jim Rocks
Owner, Principal Biologist
Rocks Biological Consulting
4312 Rialto Street, San Diego, CA 92107

Subject: Focused Presence/Absence Survey for Yellow-billed Cuckoo, Barstow International Gateway, Communities of Lenwood and Hodge, San Bernardino County, California.

Dear Mr. Rocks:

Borrego Biological was retained by Rocks Biological Consulting to conduct a focused presence/absence survey for yellow-billed cuckoo (*Coccyzus americanus*; YBCU), at the Barstow International Gateway project site and a 1000-foot buffer near the communities of Lenwood and Hodge in San Bernardino County, CA (Project Area; Attachments 1 and 2). The results of the survey are presented below.

Yellow-billed Cuckoo

Due to the unresolved taxonomic status of the YBCU in western North America, the United States federal government listed the western distinct population segment (DPS) of the YBCU as threatened, while the California state government listed the western yellow-billed cuckoo subspecies (*Coccyzus americanus occidentalis)* as endangered. The population of the western DPS of YBCU and the western YBCU subspecies are essentially the same. The breeding range of western YBCU in the United States includes Arizona, California, Colorado, Idaho, New Mexico, Texas, and Utah. The wintering range of the entire YBCU species includes South America east of the Andes mountains (Halterman et al 2015).

The YBCU is a medium-sized, slender bird with a long graduated tail, grey-brown upperparts, dull white underparts, and a long and slightly decurved bill with a black upper mandible and a yellow lower mandible with a dark tip (Hughes 2020). The breeding habitat for YBCU consists of low to moderate elevation riparian woodlands that are at least 20 hectares (50 acres) in size with native broadleaf trees and shrubs. In California the plant species composition is usually willows (Salix spp.) mixed with Fremont cottonwoods (Populus fremontii) but may also include narrow-leaf cottonwood (Populus augustifolia) and mesquite (Prosopis spp.). The decline of the western YBCU is primarily the result of riparian habitat loss and degradation (Halterman et al 2015).

Survey Area

The survey took place within suitable habitat for YBCU present in the Project Area (Survey Area; Attachments 1 and 2). The Survey Area was within the California United States Geological Survey 7.5-minute *Hodge* topographic quadrangle, and the elevation was approximately 690 meters above mean sea level. The Survey Area occurred within Assessor's Parcel Numbers 0420082230000, 0420082270000, 0420091020000, 0420082080000, 0420121010000, 0420121110000, and 042012103000 (San Bernardino County Assessor-Recorder-Clerk 2022). The Survey Area was approximately 115 acres.

Methods

United States Fish and Wildlife Service (USFWS)-permitted biologist Arthur Davenport (TE802450-9) conducted a focused presence/absence survey for YBCU according to *A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo* (Halterman et al 2015). Four survey passes were conducted at least 12 days to a maximum of 15 days apart: one during June 15 - 30; two during July 1 (+ or – 3 days) to July 31 (+ or – 3 days); and one during August 1 – 15.

All survey passes were conducted during favorable weather conditions between morning civil twilight and 1100 hours (Table 1). Survey passes were not conducted during excessive heat, cold, wind, rain, or other inclement weather that would be reasonably expected to reduce bird activity and consequential detection. In order to cover the Survey Area thoroughly, each survey pass took two mornings to complete. Mr. Davenport did not conduct any other surveys concurrently with the YBCU survey.

During each survey pass, Mr. Davenport walked paths throughout all suitable habitat looking and listening for YBCU, stopping at optimal stationary locations to look and listen for the target species without harming any other wildlife species in the area. Mr. Davenport used prerecorded YBCU vocalizations to elicit YBCU within and/or adjacent to all suitable habitat. After a brief and silent acclimation period of one to two minutes, Mr. Davenport broadcasted the prerecorded YBCU vocalizations two to three times at each chosen location, mimicking natural vocalization conditions (i.e., broadcast at natural volume occurring for approximately 10 to 15 seconds followed by 1 to 2 minutes of silence). Distance between broadcast locations varied from 20 to 30 meters (60 to 100 feet), depending on topographic, vegetative, and other factors. If a YBCU was detected, the vocalization broadcast was ceased at that location, and location, numbers, status, and demographic data were recorded.

Plant communities and associations were recorded in accordance with the categories set forth in *A Manual of California Vegetation, Second Edition* (Sawyer et al 2009) (Attachment 3). The USFWS Critical Habitat Mapper and File Data (USFWS 2022) was reviewed to determine if the Survey Area was within designated critical habitat for YBCU.

The locations of any YBCU and other sensitive species were documented and mapped (Attachment 4), and California Natural Diversity Database (CNDDB) forms were prepared (Attachment 5). If leg bands were observed, they were noted. All observed wildlife animal species were recorded for each survey day (Attachment 6). Site photographs and species photographs were taken (Attachment 7).

Results

Survey conditions are presented in Table 1.

Table 1. Survey Conditions

Survey Pass	Date 2022	Time (Start/End)	Temperature (Start/End) °F	Wind Speed (Start/End) mph	Cloud Cover (Start/End) %	Precipitation (Start/End)
1a	6/29	0500/0945	69/93	3/6	0/0	0/0
1b	6/30	0500/0940	77/93	3/6	5/5	0/0
2a	7/13	0500/0915	72/86	4/4	0/0	0/0
2b	7/14	0500/1000	78/93	5/4	5/0	0/0
3a	7/27	0530/0930	78/86	4/5	90/80	0/0
3b	7/28	0530/0930	78/87	4/5	90/80	0/0
4a	8/10	0530/0930	76/87	5/6	5/0	0/0
4b	8/11	0530/1000	76/88	5/6	10/10	0/0

Habitat

Suitable habitat within the Survey Area included Tamarisk Thickets, fragments of Black Willow Thickets, and small stands of honey mesquite (*Prosopis glandulosa*) and Fremont cottonwood (*Populus fremontii*) (Attachment 3). The suitable habitat in the southernmost portion of the Survey Area was surrounded by Fourwing Saltbush Scrub.

Tamarisk Thickets (99 acres): Vegetation within the banks of the Mojave River in the Survey Area was dominated by tamarisk (*Tamarix ramosissima*) with a generally open canopy between small stands. Native shrubs were sparse: an occasional mulefat shrub (*Baccharis salicifolia*) and screwbean mesquite (*Prosopis pubescens*) were observed. The herbaceous layer was sparse, especially as it was a drought year. The soils were comprised of coarse sand riverwash of the Mojave Riverbed.

During other riparian bird surveys in late May and June, it was observed that the tamarisk began to defoliate, and very large swarms of tamarisk beetle (*Diorhabda* sp.) spread throughout the Survey Area in mid-June (L. Davenport 2022). Almost all the tamarisk stands were defoliating by July (Attachment 7). No native shrubs appeared to be negatively impacted.

Black Willow Thickets (5 acres): Fragments of Black Willow Thickets occurred southwest of the Hinkley Road bridge and in the southernmost section of the Survey Area. Black willow (*Salix goodingii*), occasional Fremont cottonwood, and occasional honey mesquite and screwbean mesquite trees were surrounded by Tamarisk Thickets or Fourwing Saltbush Scrub. The herbaceous layer was sparse, with patches of desert saltgrass (*Distichlis spicata*) present in the alkaline soils in the southernmost section of the Survey Area.

Critical Habitat

The Survey Area is not within USFWS-designated critical habitat for YBCU (USFWS 2022).

Yellow-billed Cuckoo

No YBCU were detected during any of the survey passes.

Other Special Status Species

One loggerhead shrike (*Lanius ludovicianus*), a California Department of Fish and Wildlife (CDFW) Species of Special Concern, was observed on July 14. It appeared to be migrating or dispersing through the Survey Area and did not appear to be nesting within the Survey Area, and thus was not reported to the CNDDB.

Three willow flycatchers (*Empidonax traillii;* WIFL) were observed on August 11. One adult was observed in the southernmost portion of the Survey Area foraging in a honey mesquite, and two were observed south of Hinkley Road within a honey mesquite. No evidence of nesting behavior in the Survey Area was observed. It is undetermined whether the observed individuals were southwestern willow flycatchers that bred locally in the region (*Empidonax traillii extimus*; SWFL) and were in post-breeding dispersal, or if they were migrating WIFL. These incidental observations were included in the report for the SWFL survey in the Survey Area (Attachments 4 and 5, and Davenport 2022).

Discussion

During surveys in late May and June, the extensive Tamarisk Thickets throughout the Survey Area were heavily impacted and defoliated by tamarisk beetle. This appears to be the first year that tamarisk beetle invaded the region, since tamarisk defoliation was not documented during SWFL surveys in 2021 in the Survey Area (Attachment 7; L. Davenport 2021). Even though tamarisk is invasive and negatively impacts native vegetation and animals, it still can provide habitat for YBCU, WIFL, and other riparian birds. The possible impacts of widespread defoliation of tamarisk by tamarisk beetle on riparian birds are unknown

and may vary, but it is possible that it could be detrimental unless active restoration of native vegetation also occurs prior to complete eradication of tamarisk in the region (Paxton et al 2011).

Conclusion

No YBCU were found to be nesting in the Survey Area. Tamarisk beetles were newly discovered in the Survey Area in 2022 and may have negative impacts on riparian birds unless it is addressed within the region.

Please do not hesitate to contact me at (714) 721-4621 or borregobiological@gmail.com if you have any questions.

Sincerely,



Linette Davenport
Borrego Biological

SURVEYOR'S CERTIFICATION

"I certify that the information in this survey report and attached exhibits fully and accurately represents my work."



Arthur Davenport
TE802450-9
October 13, 2022

References

Davenport, Linette

2021 Focused Presence/Absence Survey for Southwestern Willow Flycatcher, Communities of Lenwood and Hodge, San Bernardino County, California. Submitted to Rocks Biological Consulting, San Diego, California, July 30, 2021.

2022 Focused Presence/Absence Survey for Southwestern Willow Flycatcher, Communities of Lenwood and Hodge, San Bernardino County, California. In submittal.

Halterman, Murrelet, M. J. Johnson, J. A. Holmes, and S. A. Laymon

2015 A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45 p.

Hughes, J.M.
2020 Yellow-billed Cuckoo *(Coccyzus americanus),* version 1.0. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. Retrieved from The Birds of the World website: *https://doi.org/10.2173/bow.yebcuc.01*

Paxton, Eben H., Tad C. Theimer, and Mark K. Sogge
2011 Tamarisk Biocontrol using Tamarisk Beetles: Potential Consequences for Riparian Birds in the Southwestern United States. The Condor, Volume 113, Issue 2, Pages 255–265. Retrieved from the American Ornithological Society website: https://doi.org/10.1525/cond.2011.090226

San Bernardino County Assessor-Recorder-Clerk
2022 Parcel Access and File Data. Retrieved from the San Bernardino County Assessor-Recorder-Clerk website: https://arcpropertyinfo.sbcounty.gov/

Sawyer, J.O., Jr., T. Keeler-Wolf, and J. Evens
2009 *A Manual of California Vegetation, Second Edition*. California Native Plant Society. Sacramento, California.

United States Fish and Wildlife Service (USFWS)
2022 Critical Habitat Mapper and File Data. Retrieved from the USFWS Critical Habitat Mapper website: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77

Attachments

1 – Survey Area

2 – Survey Location

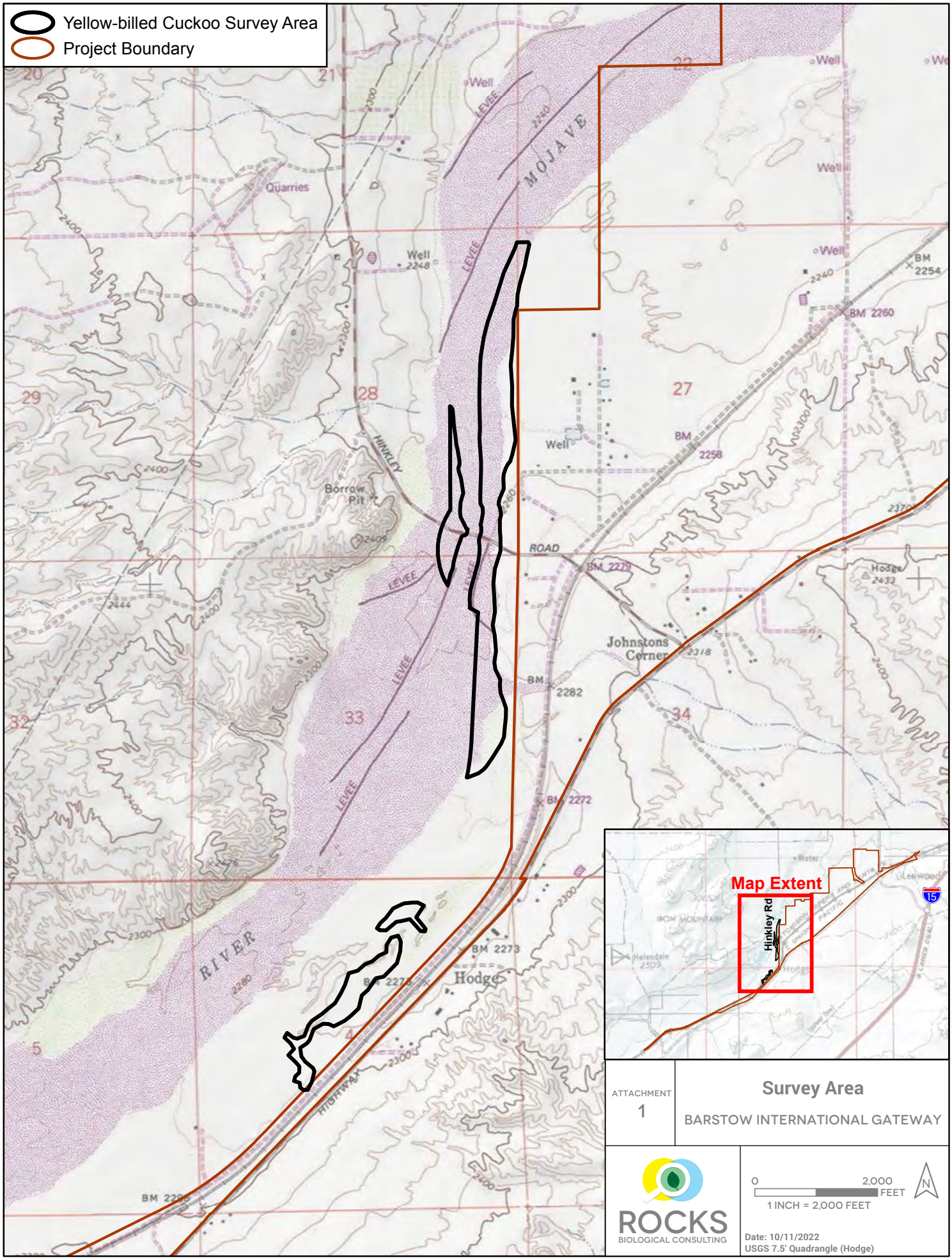
3 – Vegetation

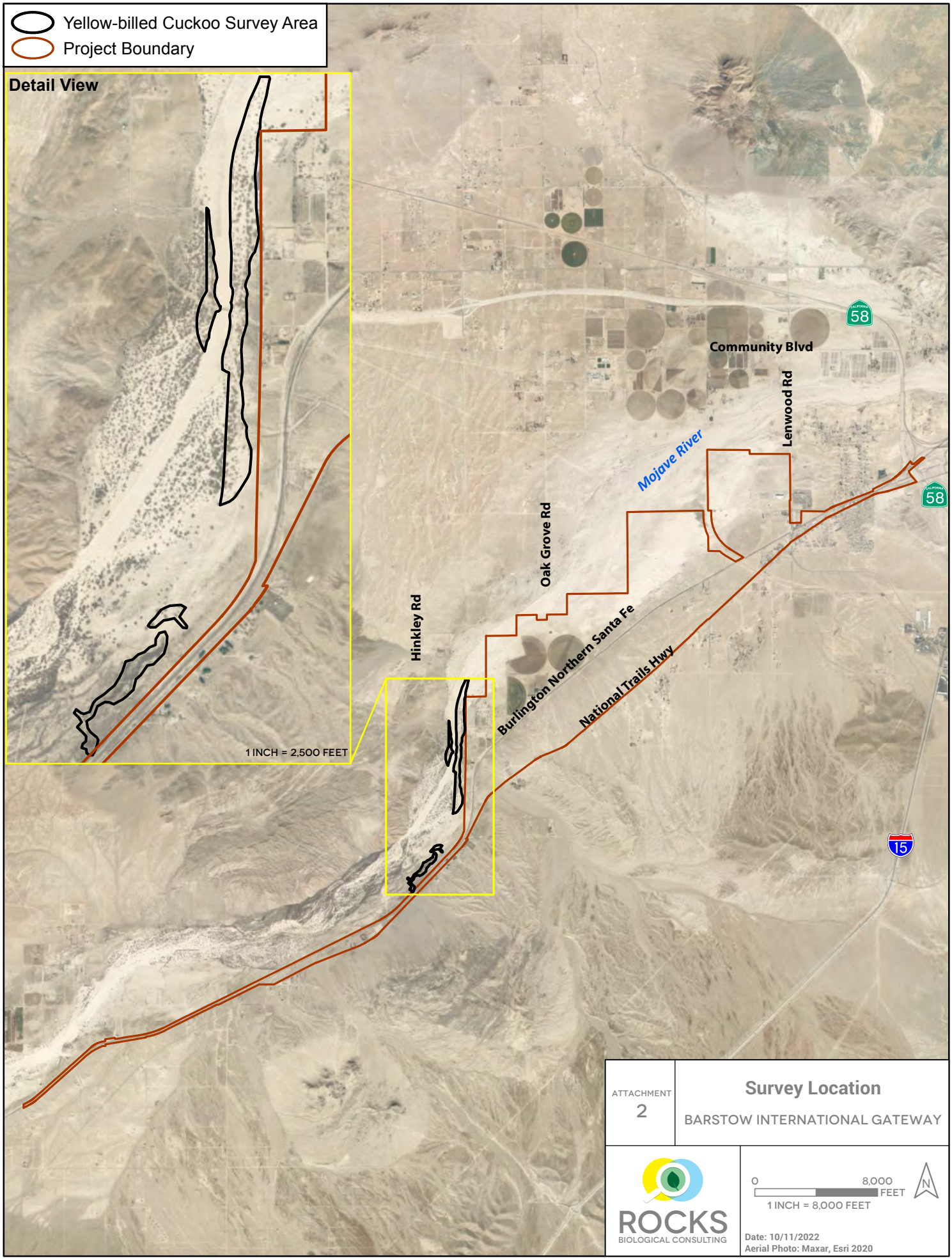
4 – Special Status Species Observations

5 – CNDDB Forms

6 – Animal Species Observed

7 – Survey Photographs


Yellow-billed Cuckoo Survey Area
Project Boundary
MOJAVE
RIVER
HINKLEY
ROAD
HIGHWAY
LEVEE
Quarries
Borrow Pit
Well
Hodge
Johnstons Corner
BM 2254
BM 2260
BM 2258
BM 2279
BM 2282
BM 2272
BM 2273
Map Extent
Hinkley Rd
ATTACHMENT 1
Survey Area
BARSTOW INTERNATIONAL GATEWAY
ROCKS BIOLOGICAL CONSULTING
0 2,000 FEET
1 INCH = 2,000 FEET
Date: 10/11/2022
USGS 7.5' Quadrangle (Hodge)



ATTACHMENT 2

Survey Location

BARSTOW INTERNATIONAL GATEWAY

ROCKS BIOLOGICAL CONSULTING

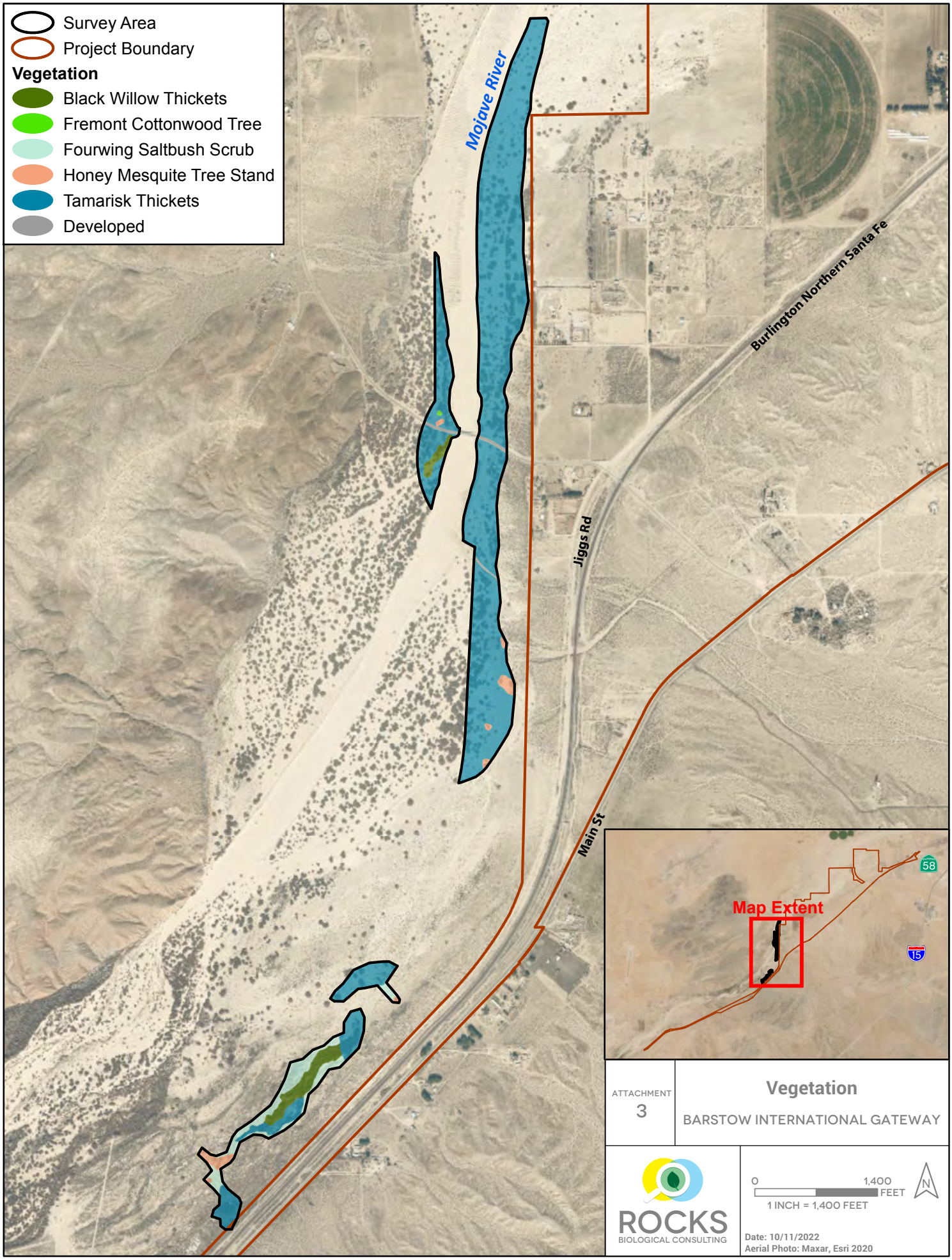
0 8,000 FEET

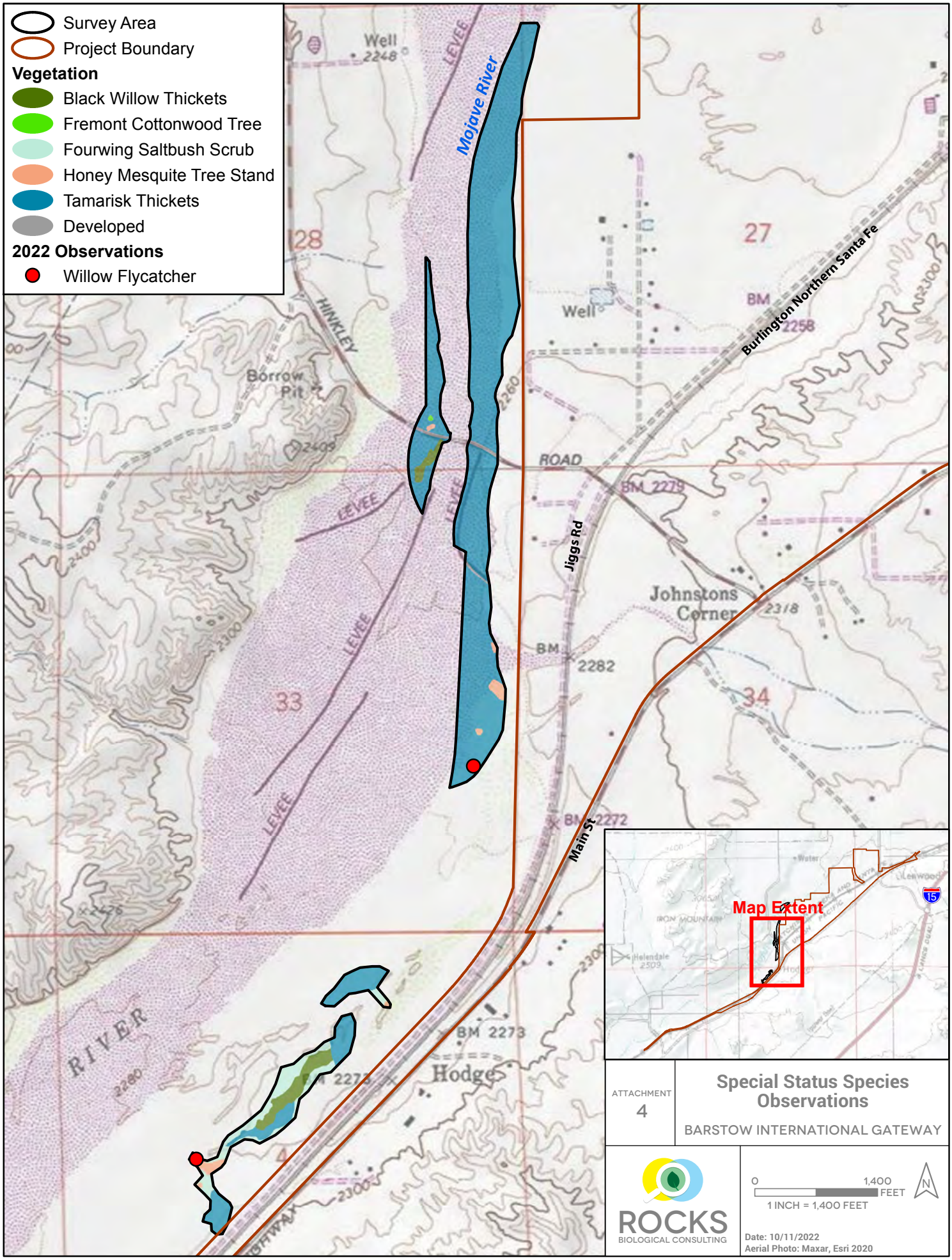
1 INCH = 8,000 FEET

N

Date: 10/11/2022

Aerial Photo: Maxar, Esri 2020


Survey Area
Project Boundary
Vegetation
Black Willow Thickets
Fremont Cottonwood Tree
Fourwing Saltbush Scrub
Honey Mesquite Tree Stand
Tamarisk Thickets
Developed
Mojave River
Burlington Northern Santa Fe
Jiggs Rd
Main St
Map Extent
58
15
ATTACHMENT
3
Vegetation
BARSTOW INTERNATIONAL GATEWAY
ROCKS
BIOLOGICAL CONSULTING
0
1,400
FEET
1 INCH = 1,400 FEET
N
Date: 10/11/2022
Aerial Photo: Maxar, Esri 2020


Survey Area
Project Boundary
Vegetation
Black Willow Thickets
Fremont Cottonwood Tree
Fourwing Saltbush Scrub
Honey Mesquite Tree Stand
Tamarisk Thickets
Developed
2022 Observations
Willow Flycatcher
Mojave River
Well
2248
LEVEE
28
27
HINKLEY
Borrow Pit
2409
Well
BM 2258
Burlington Northern Santa Fe
2260
ROAD
BM 2279
Jiggs Rd
Johnstons Corner
2318
2400
2300
LEVEE
33
BM 2282
34
BM 2272
Main St
Map Extent
RIVER
2280
BM 2273
Hodge
2300
ATTACHMENT 4
Special Status Species Observations
BARSTOW INTERNATIONAL GATEWAY
ROCKS
BIOLOGICAL CONSULTING
0
1,400 FEET
1 INCH = 1,400 FEET
N
Date: 10/11/2022
Aerial Photo: Maxar, Esri 2020

Attachment 5

CNDDB and Yellow-billed Cuckoo Survey Forms

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code DAV22F0003
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Empidonax traillii*

Common name: willow flycatcher

Date of field work (mm-dd-yyyy): 08-11-2022

Comment about field work date(s): Observations took place from 5/17/22 - 6/15/22 and on 8/11/22.

OBSERVER INFORMATION

Observer: Linette Davenport

Affiliation: Borrego Biological

Address: 5820 Alpine Woods Dr. , Anchorage, AK 99516

Email: borregobiological@gmail.com

Phone: (714) 721-4621

Other observers: Arthur Davenport

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person: 2 identified by Arthur Davenport incidentally on 8/11 during YBCU survey

Other: Familiarity with vocalizations and visual markings

Identification explanation: Individuals were observed visually and aurally. Identification was confirmed by "fitz-bew" vocalizations. Photos were taken as feasible.

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: 5 SWFL survey passes following USGS 2010 guidelines; incidental observations also made during LBVI and YBCU surveys. Observations occurred 5/17-6/15 during SWFL & LBVI surveys, then 2 WIFL were observed on 8/11 during a YBCU survey.

Total number of individuals: At least 13

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Heard calling then seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
9				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other**

Site use description: Migrating

What was the observed behavior? Foraging. Individuals were observed during surveys from 5/17 - 6/15, then not observed during rest of SWFL surveys or other LBVI surveys. No nesting behavior obs. On 8/11, 2 WIFL observed could have been migrating or maybe SWFL that bred in the region.

Describe any evidence of reproduction: None observed.

SITE INFORMATION

Habitat description: Tamarisk Thickets dominated by tamarisk (Tamarix ramosissima) with a generally open canopy between small tamarisk stands within the banks of the Mojave River. Occasional honey mesquite, Fremont cottonwood, and black willow scattered.

Slope:

Aspect:

Land owner/manager: Private, San Bernardino County Flood Control

Site condition + population viability: Poor

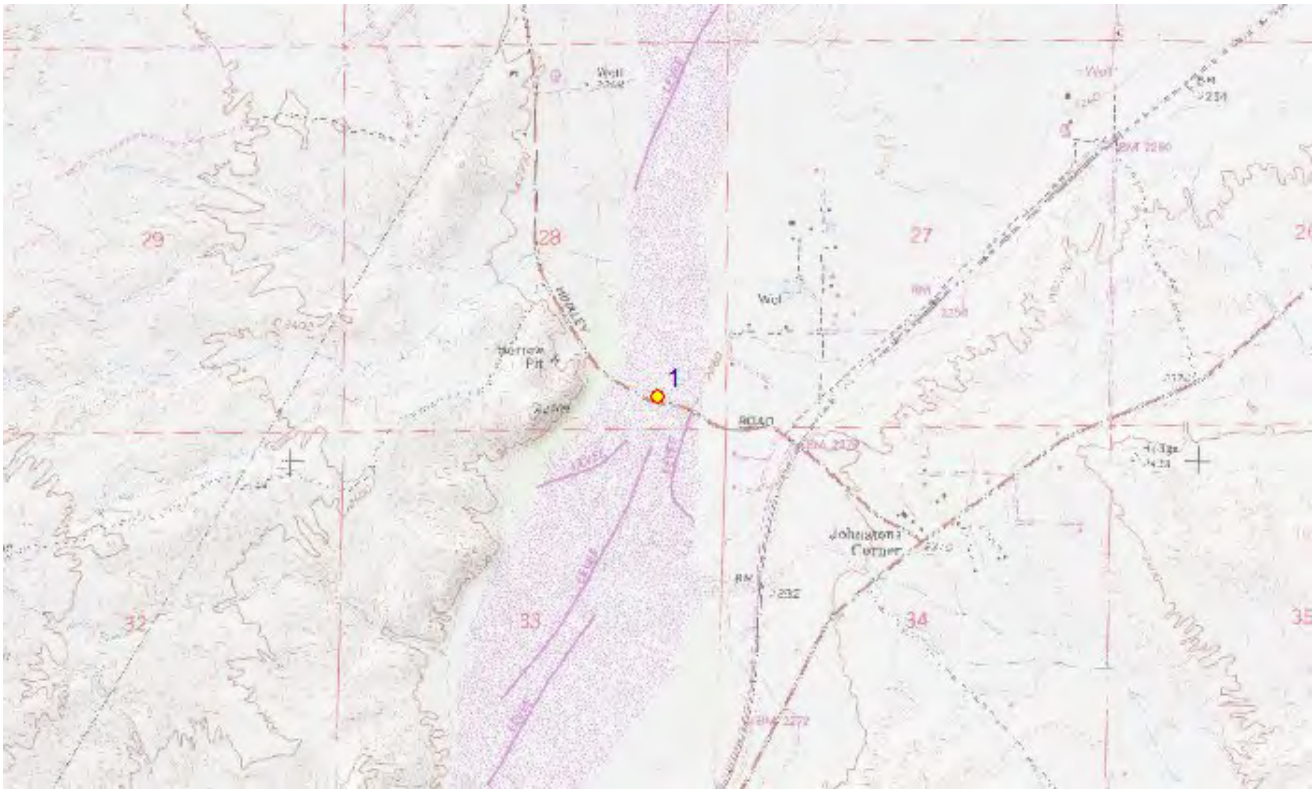
Immediate & surrounding land use: Mojave River, residential properties, a livestock corral, a railroad, and Route 66 to the east.

Visible disturbances: Non-native vegetation, scouring, trash, OHV use

Threats: OHV use; also, in June 2022 large swarms of Diorhabda sp. were observed within the entire survey area. Almost all stands of tamarisk, which dominate the survey area, became deciduous and defoliated. This was not observed during surveys in 2021.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2262	34.83580	-117.19239	482409	3854851	11

1	Public Land Survey	Feature Comment
	S T09N R03W 28	

The mapped feature is accurate within: 1000 m

Source of mapped feature: GPS, +/- 16 feet accuracy

Mapping notes:

Location/directions comments:

Attachment(s): WIFL_DetectionForm_Excel_LDavenport_20220817.pdf, Form with additional location and other survey info.

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code DAV22F0004
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Empidonax traillii*

Common name: willow flycatcher

Date of field work (mm-dd-yyyy): 08-11-2022

Comment about field work date(s): Observations took place from 5/17/22 - 6/15/22 and on 8/11/22.

OBSERVER INFORMATION

Observer: Linette Davenport

Affiliation:

Address: 5820 Alpine Woods Dr. , Anchorage, AK 99516

Email: borregobiological@gmail.com

Phone: (714) 721-4621

Other observers: Arthur Davenport

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person: 1 identified by Arthur Davenport incidentally on 8/11 during YBCU survey

Other: Familiarity with vocalizations and visual markings

Identification explanation: Individuals were observed visually and aurally. Identification was confirmed by "fitz-bew" vocalizations. Photos were taken as feasible.

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: 5 SWFL survey passes following USGS 2010 guidelines; incidental observations also made during LBVI and YBCU surveys. Observations occurred 5/17-6/15 during SWFL & LBVI surveys, then 1 WIFL was observed on 8/11 during a YBCU survey.

Total number of individuals: At least 4

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Heard calling then seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
4				

Age class comment:

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other**

Site use description: Migration

What was the observed behavior? Foraging. Individuals were observed during surveys from 5/17 - 6/15, then not observed during rest of SWFL surveys or other LBVI surveys. No nesting behavior obs. On 8/11, 1 WIFL observed could have been migrating or maybe SWFL that bred in the region.

Describe any evidence of reproduction: None observed.

SITE INFORMATION

Habitat description: Black Willow Thickets and Tamarisk Thickets with occasional stand of honey mesquite. Suitable habitat is surrounded by Fourwing Saltbush Scrub.

Slope:

Land owner/manager: Private

Aspect:

Site condition + population viability: Poor

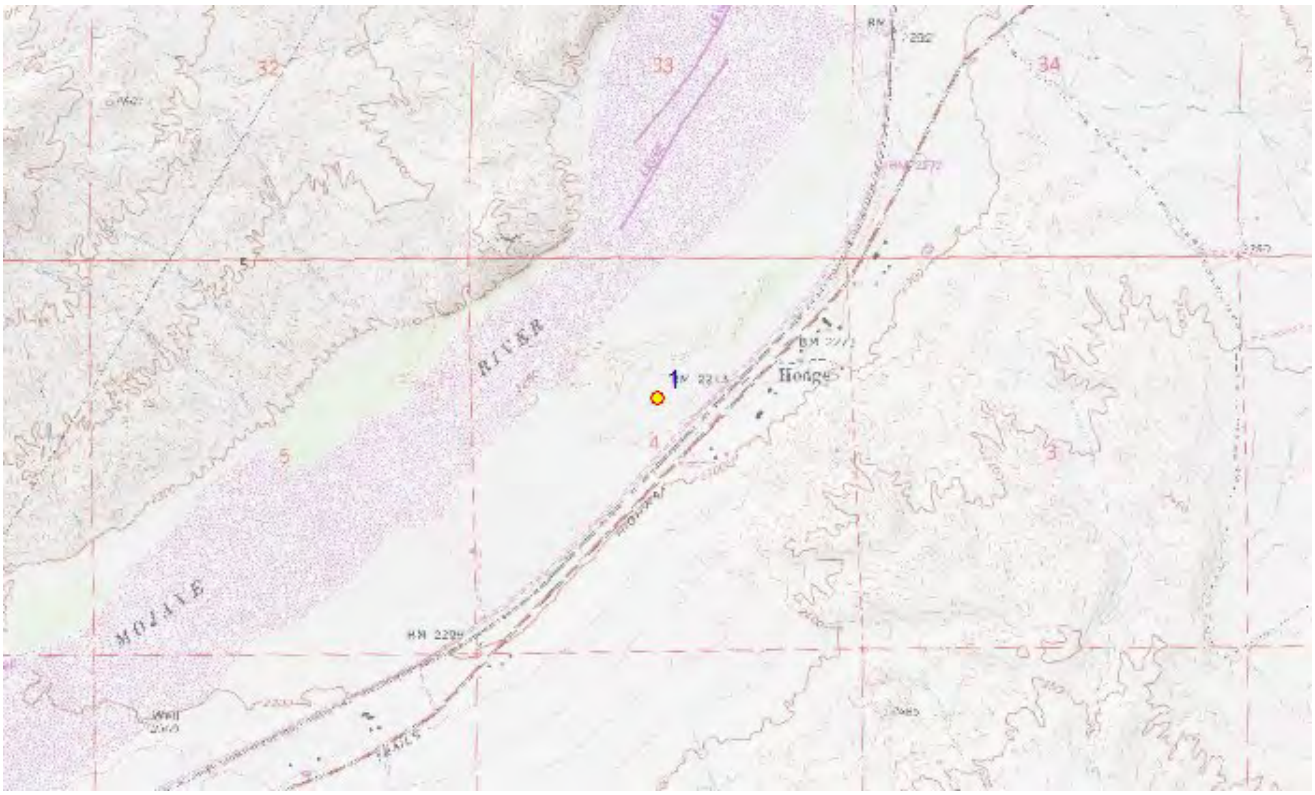
Immediate & surrounding land use: Mojave River to west, railroad and Route 66 to east, some residential and commercial properties to west and south.

Visible disturbances: Non-native vegetation, historic grazing

Threats: In June 2022 large swarms of Diorhabda sp. were observed within the entire survey area. Almost all stands of tamarisk, which dominate the survey area, became deciduous and defoliated. This was not observed during surveys in 2021.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2282	34.81481	-117.19847	481848	3852525	11

ID	Public Land Survey	Feature Comment
1	S T08N R03W 4	

The mapped feature is accurate within: 500 m

Source of mapped feature: GPS, +/- 16 feet accuracy

Mapping notes:

Location/directions comments:

Attachment(s): WIFL_DetectionForm_Excel_LDavenport_20220817.pdf, orm with additional location and other survey info.

Yellow-Billed Cuckoo Survey Summary Form for electronic submission (Form revised 2021)

Site Name:	Barstow International Gateway	County:	San Bernardino	Elevation (m):	690	State:	CA
USGS Quad Name:	Hodge	Creek, River, Wetland, Canyon, or Lake Name:			Mojave River		

Site Coordinates (UTM):	UTM Zone:	11	Start:	**E**	481621	**N**	3852067	Magnetic North Declination:	
NAD 83 preferred	Datum:	NAD83	Stop:	**E**	482732	**N**	3856236		

Was site surveyed in a previous year? (Yes, No, Unknown): If yes, what name was used?:

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total # of YBCUs	Survey Number:	YBCU#:	Time Detected (AM):	Detection Method: **I** = Incidental **P** = Playback	Detection Type: **A**=Aural **V**=Visual **B**=Both	Vocalization Type: **CN**= Contact **CO**=coo **AL**=alarm **OT**=other	Number of 'kowlp' calls played prior to response:	Behavior Observed: (refer to codes)	Surveyor Detection Coordinates UTM E (6 digits)	Surveyor Detection Coordinates UTM N (7 digits)	Distance (m):	Bearing (in number degrees):	Corrected Coordinates (automatically generated) UTM E	Corrected Coordinates (automatically generated) UTM N
Survey	Date:		1												0	0
1	6/29/22-6/30/22		1												0	0
Observer(s):	Start:		1												0	0
	5:00AM/5:00AM		1												0	0
	Stop:		1												0	0
Arthur Davenport	9:40AM/9:40AM		1												0	0
	Total hrs:	Total:	1												0	0
	9.5	0	1												0	0
Survey	Date:		2												0	0
2	7/13/22-7/14-22		2												0	0
Observer(s):	Start:		2												0	0
	5:00AM/5:00AM		2												0	0
	Stop:		2												0	0
Arthur Davenport	9:15AM/10:00AM		2												0	0
	Total hrs:	Total:	2												0	0
	9.25	0	2												0	0
Survey	Date:		3												0	0
3	727/22-7/28/22		3												0	0
Observer(s):	Start:		3												0	0
	5:30AM/5:30AM		3												0	0
	Stop:		3												0	0
Arthur Davenport	9:30AM/9:30AM		3												0	0
	Total hrs:	Total:	3												0	0
	8	0	3												0	0
Survey	Date:		4												0	0
4	8/10/22-8/11/22		4												0	0
Observer(s):	Start:		4												0	0
	5:30AM/5:30AM		4												0	0
	Stop:		4												0	0
Arthur Davenport	9:30AM/10:00AM		4												0	0
	Total hrs:	Total:	4												0	0
	8.5	0	4												0	0
Survey	Date:		5												0	0
5			5												0	0
Observer(s):	Start:		5												0	0
			5												0	0
	Stop:		5												0	0
			5												0	0
	Total hrs:	Total:	5												0	0
			5												0	0

Survey Summary REQUIRED	Total Survey Hours:	Tot. # of Detections:	Total Estimated Breeding Territories: (refer to Territory Defintions below)			**Number of Nests Found:**
			Number of PO BreedingTerritories:	Number of PR Breeding Territories:	Number of CO Breeding Territories:	
	35.25	0				

Sur. #:	YBCU #:	Detection Comments/Additional Behaviors/Nest UTM:

Breeding Behavior Observation Codes	
Brooding/Incubating	BI
Carrying Nest Material	MAT
Copulation	COP
Distraction Display	DD
Feeds Mate	FM
Feeds Nestling	FN
Fledgling	FLG
Nest Building	NB
Carry Food	CF
Kowlp Exchange/Pair	VEX

Breeding Territory Definitions

Possible Breeding Territory (PO):	**Probable Breeding Territory (PR):**	**Confirmed Breeding Territory (CO):**
Detections within a 300 - 500 m area during at least 2 surveys and 12 - 14 days apart.	Detections within a 300-500 m area during at least 3 surveys and 12-14 days apart; or PO territory plus purposeful food carry (single observation, bird does not eat food), stick carry (single observation), multiple incidents of alarm calls in same area, or PO territory plus pair exchanging multiple kowlp or alarm calls (not coos) within 100 m of one another.	Observation of active nest (or multiple stick carries to nest being built), copulation, fledgling (unable to fly) with adult; or PR plus multiple food carries to same area or distraction display (dropped wings).

Site Name:	Barstow International Gateway	Date Report Completed:	9/15/2022
Name of Reporting Individual:	Arthur Davenport	Phone #:	(619) 729-4242
Affiliation:	Davenport Biological Services	Email:	davenportbio@gmail.com
USFWS Permit #:	TE802450-9	State Permit #:	
Ownership: Primary:	Private	Owner Name (if applicable):	

Did you survey the same general area during each visit to this site this year (if no, summarize in comments section below)? Yes

If site was surveyed last year, did you survey the same general area this year (if no, summarize in comments section below)?

Length of survey area (km): 3.8

Overall Vegetation Characteristics:

Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

Native broadleaf plants (>75% native)		Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)		Mixed native and exotic plants (mostly exotic 51%-75%)	X

Average Overstory/Canopy (where playback calls were used):

List up to 5 species of overstory vegetation and proportion of average canopy cover of each species . Click on dropdown menu to select scientific name. If species is missing, select OTHER and include scientific name in Comments. For relative percent cover, the total should equal 100%.

		Relative				Relative	
Species 1:	Salix goodingii	% Cover	90	Species 3:		% Cover	
Species 2:	Populus fremontii	% Cover	10	Species 4:		% Cover	
				Species 5:		% Cover	

General Overstory/Canopy Characteristics:

Average Height (top of trees) of Overstory (meters; do not include a range):	10
Estimated Absolute (as opposed to relative) Canopy Cover (percent; may be < 100%):	10

Average Subcanopy (if present; where playback calls were used):

List up to 5 species of subcanopy vegetation (if present) and estimate proportion of average subcanopy cover of each species. Click on dropdown menu to select scientific name. If species is missing, select OTHER and include scientific name in Comments. For relative percent cover, the total should equal 100%.

		Relative				Relative	
Species 1:	Tamarix ramosissiama	% Cover	98	Species 3:		% Cover	
Species 2:	Prosopis glandulosa	% Cover	2	Species 4:		% Cover	
				Species 5:		% Cover	

General Subcanopy Characteristics:

Average Height (top of trees) of Subcanopy (meters; do not include a range):	5
Estimated Absolute (as opposed to relative) Subcanopy Cover (percent; may be < 100%):	80

Average Understory (if present; where playback calls were used):

List up to 5 species of understory/ shrub vegetation (not all sites will have a separate understory) and estimate proportion of average understory cover of each species. Use scientific names. For relative percent cover, the total should equal 100% even if more than 5 species present.

		Relative				Relative	
Species 1:		% Cover		Species 3:		% Cover	
Species 2:		% Cover		Species 4:		% Cover	
				Species 5:		% Cover	

General Understory Characteristics:

Average Height (top) of Understory (meters; do not include a range):	
Estimated Absolute (as opposed to relative) Understory Cover (percent; may be < 100%):	

Immediate Adjacent Habitat Along Entire Transect (Outside of survey site):

Categorize adjacent habitat (e.g. rock outcrop, desert/scrub/thornscrub, urban/residential, agriculture/pasture, orchard, oak woodland, pinyon-juniper woodland, mixed conifer forest, grassland, marsh/wet meadow, open water, ditch/irrigation). List up to 5 categories of adjacent habitat, and estimate proportion of percent cover (should =100%). If adjacent habitat type is missing, select "OTHER" and enter habitat type in Comments.

Category 1:	Desert/Scrub/thornscrub	% Cover	60	Category 3:		% Cover	
Category 2:	Agriculture/Pasture	% Cover	40	Category 4:		% Cover	
				Category 5:		% Cover	

Is the survey area or adjacent area (within 300 m) dominated by surface water or saturated soil during at least 2 surveys?	No
Perennial, intermittent, or ephemeral drainage (or body of water:):	Intermittent

Comments. If surface water changed between surveys please describe in this section. Provide comments regarding differences between the survey patches within the site. For example, if the average canopy for this site is 30% cover, but within one patch it is 60% cover--please note. Please note significant differences between dominant overstory, subcanopy, and understory vegetation among the patches. Document these differences with photographs whenever possible. referencing comments to photo number whenever available. Note potential threats (e.g., livestock, ORV, hunting, etc.) to the site. If *Diorhabda* beetles are observed, provide location and photos. Attach additional pages or use the continuation sheet if needed.

See state and federal permit reporting requirements. Excel forms (spreadsheets) must be emailed in Excel format. Maps and photos may be compiled into a pdf. Results must be submitted by October 15, following each survey season.

Attachment 6

Animal Species Observed

Scientific Name	Common Name
CLASS REPTILIA	REPTILES
FAMILY PHRYNOSOMATIDAE	HORNED AND SPINY LIZARDS
Uta stansburiana	Common side-blotched lizard
Sceloporus uniformis	Yellow-backed spiny lizard
Callisaurus draconoides	Zebra-tailed lizard
FAMILY TEIIDAE	WHIPTAILS AND RELATIVES
Aspidoscelis tigris tigris	Great Basin whiptail
CLASS AVES	BIRDS
FAMILY ODONTOPHORIDAE	QUAIL
Callipepla californica	California quail
FAMILY COLUMBIDAE	DOVES, PIGEONS
Zenaida macroura	Mourning dove
Streptopelia decaocto	Eurasian collared-dove
FAMILY CUCULIDAE	CUCKOOS AND RELATIVES
Geococcyx californianus	Greater roadrunner
FAMILY CAPRIMULGIDAE	NIGHTJARS AND RELATIVES
Chordeiles acutipennis	Lesser nighthawk
FAMILY TROCHILIDAE	HUMMINGBIRDS
Calypte anna	Anna's hummingbird
Calypte costae	Costa's hummingbird
FAMILY CHARADRIIDAE	SANDPIPERS AND RELATIVES
Charadrius vociferus	Killdeer
FAMILY CATHARTIDAE	VULTURES AND RELATIVES
Cathartes aura	Turkey vulture
FAMILY PANDIONIDAE	OSPREY
Pandion haliaetus	Osprey
FAMILY ACCIPTRIDAE	HAWKS, KITES, EAGLES, AND ALLIES
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
FAMILY PICIDAE	WOODPECKERS
Picoides nuttallii	Nuttall's woodpecker
FAMILY FALCONIDAE	FALCONS
Falco sparverius	American kestrel
FAMILY TYRANNIDAE	TYRANT FLYCATCHERS
Empidonax traillii	Willow flycatcher
Sayornis saya	Say's phoebe
Myiarchus cinerascens	Ash-throated flycatcher
Tyrannus verticalis	Western kingbird
FAMILY LANIIDAE	SHRIKES

Scientific Name	Common Name
Lanius ludovicianus	Loggerhead shrike
FAMILY VIREONIDAE	VIREOS
Vireo gilvus	Warbling vireo
FAMILY CORVIDAE	CROWS, RAVENS, AND RELATIVES
Corvus corax	Common raven
FAMILY ALAUDIDAE	LARKS
Eremophila alpestris	Horned lark
FAMILY TROGLODYTIDAE	WRENS
Thryomanes bewickii	Bewick's wren
FAMILY POLIOPTILIDAE	GNATCATCHERS
Polioptila melanura	Black-tailed gnatcatcher
FAMILY REMIZIDAE	VERDIN
Auriparus flaviceps	Verdin
FAMILY TURDIDAE	THRUSHES
Catharus ustulatus	Swainson's thrush
FAMILY MIMIDAE	THRASHERS, MOCKINGBIRDS, AND RELATIVES
Toxostoma redivivum	California thrasher
Mimus polyglottos	Northern mockingbird
FAMILY PTILOGONATIDAE	SILKY FLYCATCHERS
Phainopepla nitens	Phainopepla
FAMILY PARULIDAE	WOOD WARBLERS
Leiothlypis celata	Orange-crowned warbler
FAMILY EMBERIZIDAE	SPARROWS AND RELATIVES
Chondestes grammacus	Lark sparrow
Artemisiospiza belli	Bell's sparrow
FAMILY CARDINALIDAE	CARDINALS, GROSBEAKS, AND ALLIES
Piranga ludoviciana	Western tanager
Passerina caerulea	Blue grosbeak
FAMLIY ICTERIDAE	BLACKBIRDS AND RELATIVES
Quiscalus mexicanus	Great-tailed Grackle
Molothrus ater	Brown-headed cowbird
Icterus bullockii	Bullock's oriole
FAMILY FRINGILLIDAE	FINCHES
Haemorhous mexicanus	House finch
FAMILY PASSERIDAE	OLD WORLD SPARROWS
Passer domesticus	House sparrow
CLASS MAMMALIA	MAMMALS
FAMILY LEPORIDAE	RABBITS AND HARES
Sylvilagus audubonii	Audubon's cottontail
Lepus californicus	Black-tailed jackrabbit
FAMILY SCIURIDAE	SQUIRREL, CHIPMUNKS, AND MARMOTS
Ammospermophilus leucurus	White-tailed antelope ground squirrel

Scientific Name	Common Name
FAMILY CANIDAE	FOXES, WOLVES, AND RELATIVES
Canis latrans	Coyote

Attachment 7
Survey Photographs

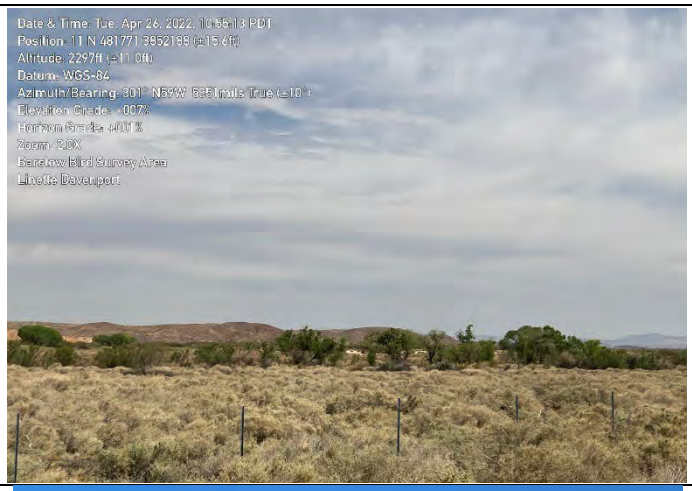
	Photo 1. Southernmost section of Survey Area depicting Black Willow Thickets (surrounded by Fourwing Saltbush Scrub). Photo taken April 26, 2022.
	Photo 2. Southernmost section of Survey Area depicting a Fremont cottonwood within Black Willow Thickets. Photo taken June 30, 2022.
	Photo 3. Survey Area south of Hinkley Road depicting Tamarisk Thickets that made up most of the Survey Area. Photo taken May 25, 2021.

	Photo 4. Survey Area south of Hinkley Road on July 15, 2021, showing un-impacted stands of tamarisk.
	Photo 5. Survey Area south of Hinkley Road on July 13, 2022 showing impacted tamarisk throughout the survey area.
	Photo 6. Photo of tamarisk beetle (*Diorhabda* sp.*)* on June 16, 2022.

ATTACHMENT EE

2023 FOCUSED PRESENCE/ ABSENCE SURVEY FOR YELLOW-BILLED CUCKOO, BARSTOW INTERNATIONAL GATEWAY, COMMUNITY OF HODGE, SAN BERNARDINO COUNTY, CALIFORNIA

DRAFT September 11, 2023

Jim Rocks
Owner, Principal Biologist
Rocks Biological Consulting
4312 Rialto Street, San Diego, CA 92107

Subject: 2023 Focused Presence/Absence Survey for Yellow-billed Cuckoo, Barstow International Gateway, Community of Hodge, San Bernardino County, California.

Dear Mr. Rocks:

Borrego Biological was retained by Rocks Biological Consulting to conduct a focused presence/absence survey for Yellow-billed Cuckoo (*Coccyzus americanus*; YBCU), at a portion of the Barstow International Gateway (BIG) project site added after 2022 and a 1000-foot buffer near the community of Hodge in San Bernardino County, CA (Survey Area; Attachments 1 and 2). The results of the survey are presented below.

Yellow-billed Cuckoo

Due to the unresolved taxonomic status of the YBCU in western North America, the United States federal government listed the western distinct population segment (DPS) of the YBCU as threatened, while the California state government listed the western Yellow-billed Cuckoo subspecies (*Coccyzus americanus occidentalis)* as endangered. The population of the western DPS of YBCU and the western YBCU subspecies are essentially the same. The breeding range of western YBCU in the United States includes Arizona, California, Colorado, Idaho, New Mexico, Texas, and Utah. The wintering range of the entire YBCU species includes South America east of the Andes mountains (Halterman et al 2015).

The YBCU is a medium-sized, slender bird with a long graduated tail, grey-brown upperparts, dull white underparts, and a long and slightly decurved bill with a black upper mandible and a yellow lower mandible with a dark tip (Hughes 2020). The breeding habitat for YBCU consists of low to moderate elevation riparian woodlands that are at least 20 hectares (50 acres) in size with native broadleaf trees and shrubs. In California the plant species composition is usually willows (*Salix* spp.) mixed with Fremont cottonwoods (*Populus fremontii*) but may also include narrow-leaf cottonwood (*Populus augustifolia*) and mesquite (*Prosopis* spp.). The decline of the western YBCU is primarily the result of riparian habitat loss and degradation (Halterman et al 2015).

Survey Area

A survey for YBCU in suitable habitat within the BIG project site and 1000-buffer were conducted in 2022 (Davenport 2022). The 2023 survey took place within suitable habitat for YBCU present within a portion of the BIG project site that was added after the 2022 survey season plus a 1000-foot buffer. Suitable habitat was assessed by consulting vegetation maps and aerial photos of this area prior to the survey, and then ground-truthing the assessment during the first survey pass. The Survey Area was within the California United States Geological Survey 7.5-minute *Hodge* topographic quadrangle, and the elevation was approximately 704 meters above mean sea level (Attachment 1). The Survey Area was approximately 60 acres occurring within Assessor's Parcel Number 0420151010000 (San Bernardino County Assessor-Recorder-Clerk 2023).

Methods

United States Fish and Wildlife Service (USFWS)-permitted biologist Arthur Davenport (TE802450-9) conducted a focused presence/absence survey for YBCU according to *A Natural History Summary and*

Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo (Halterman et al 2015). Four survey passes were conducted at least 12 days to a maximum of 15 days apart: one during June 15 - 30; two during July 1 (+ or – 3 days) to July 31 (+ or – 3 days); and one during August 1 – 15.

All survey passes were conducted during favorable weather conditions between morning civil twilight and 1100 hours (Table 1). Survey passes were not conducted during excessive heat, cold, wind, rain, or other inclement weather that would be reasonably expected to reduce bird activity and consequential detection. Mr. Davenport did not conduct any other surveys concurrently with the YBCU survey.

During each survey pass, Mr. Davenport walked paths throughout all suitable habitat looking and listening for YBCU, stopping at optimal stationary locations to look and listen for the target species without harming any other wildlife species in the area. Mr. Davenport used prerecorded YBCU vocalizations to elicit YBCU within and/or adjacent to all suitable habitat. After a brief and silent acclimation period of one to two minutes, Mr. Davenport broadcasted the prerecorded YBCU vocalizations two to three times at each chosen location, mimicking natural vocalization conditions (i.e., broadcast at natural volume occurring for approximately 10 to 15 seconds followed by 1 to 2 minutes of silence). Distance between broadcast locations varied from 20 to 30 meters (60 to 100 feet), depending on topographic, vegetative, and other factors. If a YBCU was detected, the vocalization broadcast was ceased at that location, and location, numbers, status, and demographic data were recorded.

Plant communities and associations were recorded in accordance with the categories set forth in *A Manual of California Vegetation, Second Edition* (Sawyer et al 2009) (Attachment 3). The USFWS Critical Habitat Mapper and File Data (USFWS 2023) was reviewed to determine if the Survey Area was within designated critical habitat for YBCU.

The locations of any YBCU and other sensitive species were documented and mapped (Attachment 4), and California Natural Diversity Database (CNDDB) forms were prepared (Attachment 5). If leg bands were observed, they were noted. All observed wildlife animal species were recorded for each survey day (Attachment 6). Site photographs and species photographs were taken (Attachment 7).

Results

Survey conditions are presented in Table 1. Because a YBCU was found during the second survey pass ("2a"), another survey visit was conducted the following day ("2b") to attempt to re-detect the individual and gather more information.

Table 1. Survey Conditions

Survey Pass	Date 2023	Time (Start/End)	Temperature (Start/End) °F	Wind Speed (Start/End) mph	Cloud Cover (Start/End) %	Precipitation (Start/End)	Comments
1	6/19	0600/0830	62/69	9/10	0/0	0/0	
2a	7/3	0500/0830	77/87	5/6	0/0	0/0	
2b	7/4	0530/0900	71/86	8/13	0/0	0/0	
3	7/16	0530/0830	80/91	4/3	5/5	0/0	

Survey Pass	Date 2023	Time (Start/End)	Temperature (Start/End) °F	Wind Speed (Start/End) mph	Cloud Cover (Start/End) %	Precipitation (Start/End)	Comments
4	8/10	0530/0830	70/73	6/5	90/90	0/0	Monsoon conditions: rain previous day, higher than typical humidity (64% start/ 60% end)

Habitat

Suitable habitat within the Survey Area was made up of Tamarisk Thickets (Attachment 3).

Tamarisk Thickets (60 acres): Vegetation within the banks of the Survey Area was dominated by tamarisk (*Tamarix ramosissima*) with a generally open canopy between small stands. Honey mesquite (*Prosopis glandulosa*), screwbean mesquite (*Prosopis pubescens*), and small stands of sandbar willow (*Salix exigua*) were occasionally present, and one small stand of giant reed (*Arundo donax*) was present. An herbaceous layer was present in April and May due to significant rainfall during the previous winter season, consisting of various native annual plants including devil's lettuce (*Amsinckia tessellata*), desert dandelion (*Malacothrix glabrata*), and birdcage evening primrose (*Oenothera deltoides*). One small seep in the northern portion of the Survey Area contained water all survey passes through July, likely fed by snowmelt of local mountains (Attachment 7).

Swarms of tamarisk beetle (*Diorhabda* sp.) heavily impacted the Tamarisk Thickets surveyed in 2022, which are downstream of the current Survey Area (Davenport 2022). Tamarisk beetle larvae were observed in the current Survey Area in 2023 (Attachment 7) but only a very small number of adult beetles were observed. Approximately 10% or less of the tamarisk in the 2023 Survey Area appeared to be defoliated. In contrast, the tamarisk stands in the 2022 survey area appeared severely impacted in 2023 (Attachment 7). No native shrubs appeared to be negatively impacted.

Critical Habitat

The Survey Area is not within USFWS-designated critical habitat for YBCU (USFWS 2023).

Yellow-billed Cuckoo

One YBCU was detected in the northern part of the Survey Area during the July 3 survey day (Attachment 4). It approached in response to broadcast vocalization and gave two alarm calls (soft "knock" calls) before "coo"-ing continuously for approximately 20 minutes, then eventually moving towards the Mojave River. It appeared to forage on the numerous grasshoppers in the area that appeared to be a result of significant rainfall during the previous winter. Mr. Davenport returned on July 4 to attempt to re-detect the bird, but did not detect it on that day or during the rest of the survey passes. The YBCU observation was submitted to the CNDDB (Attachment 5).

Other Special Status Species

At least one loggerhead shrike (*Lanius ludovicianus*), a California Species of Special Concern (SSC), was observed on July 3 and July 13. No nesting behavior was confirmed, but based on timing and range it is possible it was breeding in the vicinity.

Up to 20 Swainson's hawks (*Buteo swainsoni*), a California state-listed as threatened species, were observed during surveys from June 12 through June 30. Most of the Swainson's hawks appeared to be

second-year birds with a small number of adults that did not appear to be breeding. They were foraging on the numerous grasshoppers onsite and along the Mojave River that appeared to be a result of significant rainfall during the previous winter.

One adult desert tortoise (*Gopherus agassizii*) was observed on August 10 on Link Road, the dirt access road to the Survey Area. It crossed the road from east to west and foraged on small plants. It was very skittish and appeared to be a wild desert tortoise. Monsoonal conditions, including rain the previous day, appeared to have drawn the individual out of its burrow.

The special status species observations were submitted to the CNDDB (Attachment 5).

Discussion

One YBCU was detected during the July 3 survey pass. YBCU detected during this period may be migrants or breeders, but most YBCU detected during this period may be breeders (Halterman, et al 2015). The YBCU individual that was detected was not found again during subsequent surveys, and the Survey Area was dominated by Tamarisk Thickets, making it less likely that the individual was breeding within the Survey Area. However, it may have been breeding within the cottonwood-willow riparian habitat along the Mojave River in the general vicinity, and was detected while foraging within the Survey Area. Numerous grasshoppers were in the Survey Area during the 2023 season due to significant rainfall the previous winter, providing a large favored food source for YBCU through June. Alternatively, the YBCU may have been migrating through the area and just foraging within the Survey Area.

Conclusion

One YBCU was detected during the survey. It did not appear to be breeding within the Survey Area, but it was using the area for foraging. Active restoration of habitat along the Mojave River, especially as tamarisk beetles cause rapid loss of the tamarisk in the region, would benefit the species significantly.

Please do not hesitate to contact me at (714) 721-4621 or borregobiological@gmail.com if you have any questions.

Sincerely,

L. Davenport

Linette Davenport
Borrego Biological

SURVEYOR'S CERTIFICATION

"I certify that the information in this survey report and attached exhibits fully and accurately represents my work."

Arthur Davenport
TE802450-9

References

Davenport, Linette
2022 Focused Presence/Absence Survey for Yellow-billed Cuckoo, Barstow International Gateway, Communities of Lenwood and Hodge, San Bernardino County, California. Submitted to Rocks Biological Consulting, San Diego, California, October 13, 2022.

Halterman, Murrelet, M. J. Johnson, J. A. Holmes, and S. A. Laymon
2015 A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45 p.

Hughes, J.M.
2020 Yellow-billed Cuckoo *(Coccyzus americanus),* version 1.0. In Birds of the World (P. G. Rodewald, Editor). Cornell Lab of Ornithology, Ithaca, NY, USA. Retrieved from The Birds of the World website: *https://doi.org/10.2173/bow.yebcuc.01*

Paxton, Eben H., Tad C. Theimer, and Mark K. Sogge
2011 Tamarisk Biocontrol using Tamarisk Beetles: Potential Consequences for Riparian Birds in the Southwestern United States. The Condor, Volume 113, Issue 2, Pages 255–265. Retrieved from the American Ornithological Society website: https://doi.org/10.1525/cond.2011.090226

San Bernardino County Assessor-Recorder-Clerk
2023 Parcel Access and File Data. Retrieved from the San Bernardino County Assessor-Recorder-Clerk website: https://arcpropertyinfo.sbcounty.gov/

Sawyer, J.O., Jr., T. Keeler-Wolf, and J. Evens
2009 *A Manual of California Vegetation, Second Edition*. California Native Plant Society. Sacramento, California.

United States Fish and Wildlife Service (USFWS)
2023 Critical Habitat Mapper and File Data. Retrieved from the USFWS Critical Habitat Mapper website: https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77

Attachments

1 – Survey Area

2 – Survey Location

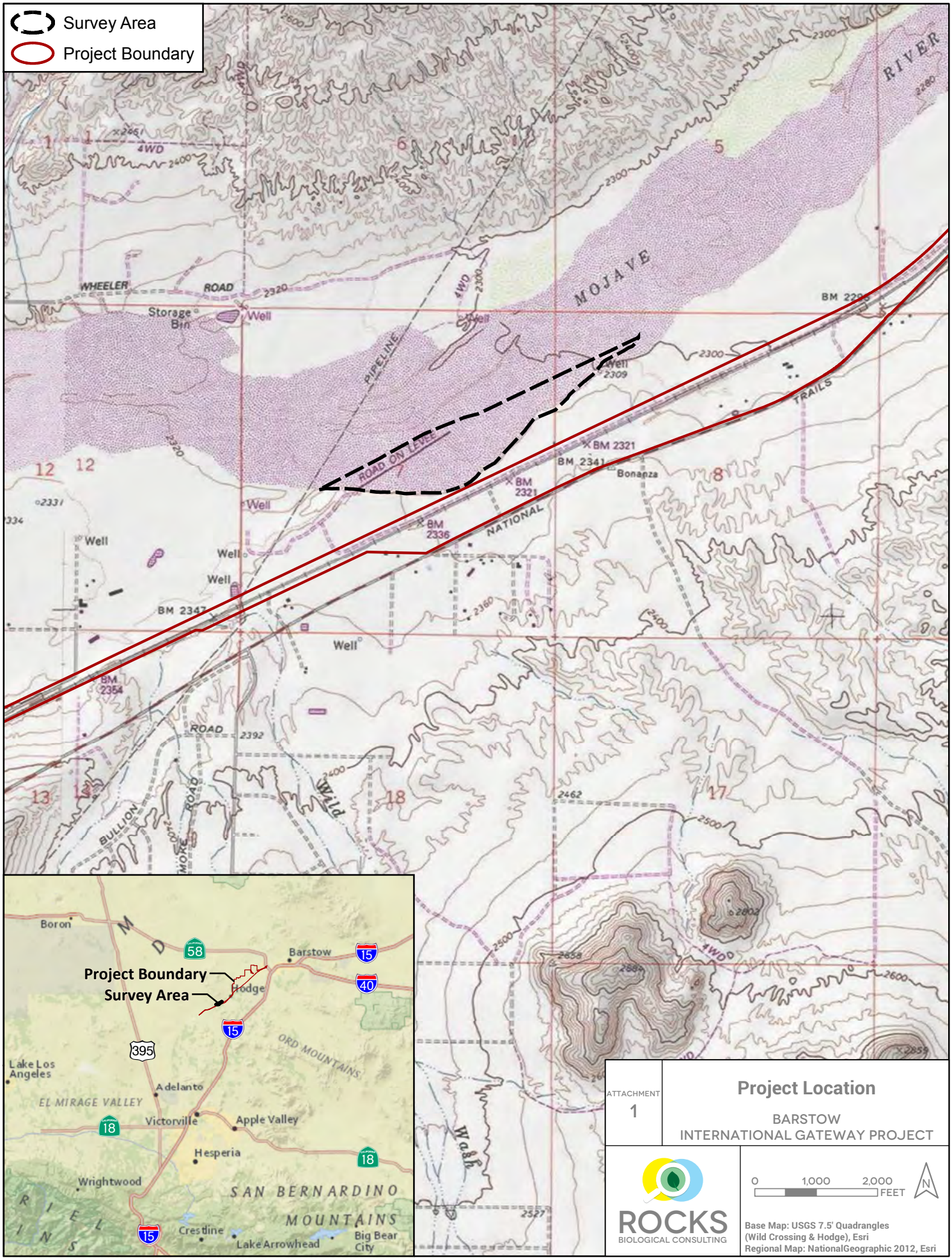
3 – Vegetation

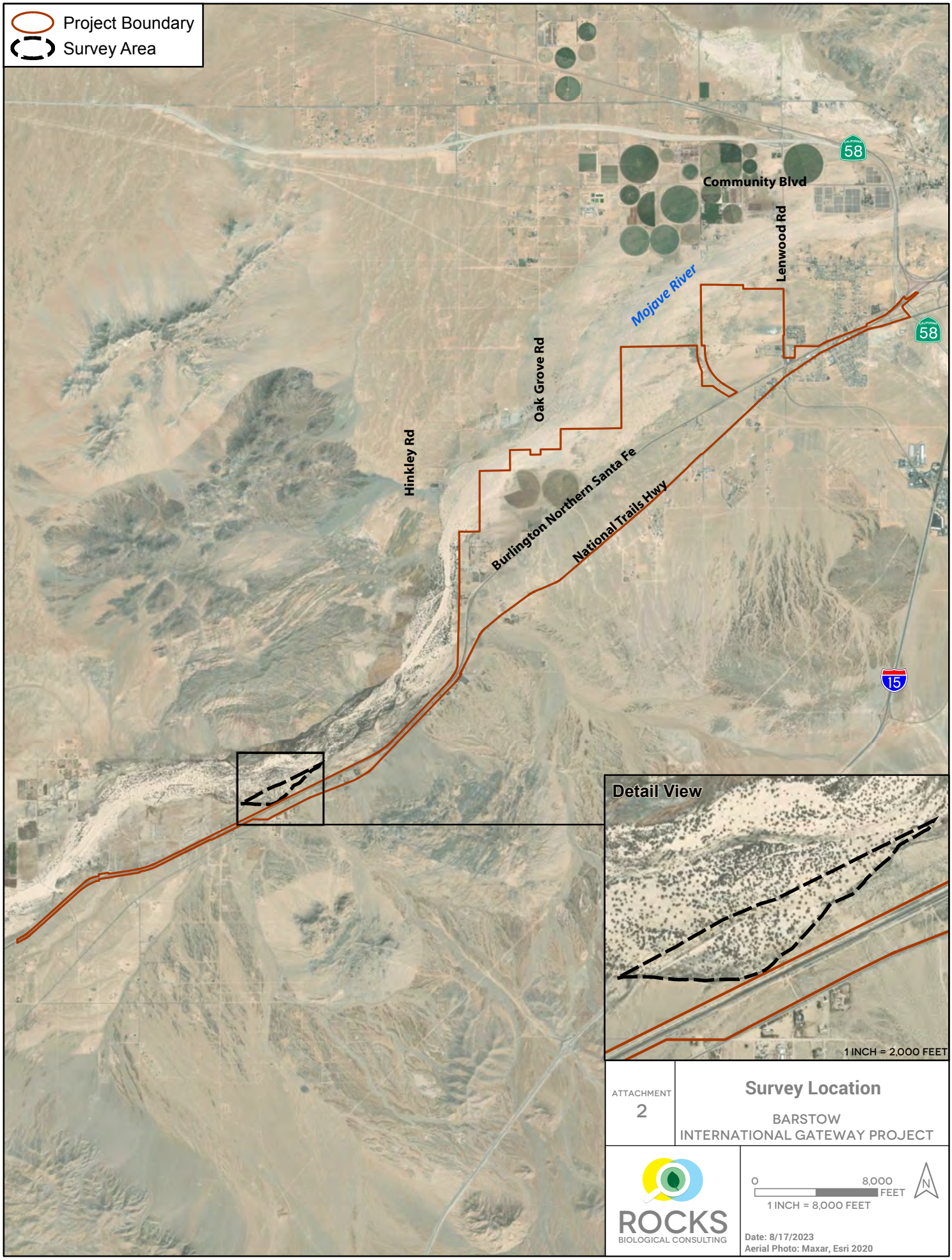
4 – Special Status Species Observations

5 – CNDDB Forms

6 – Animal Species Observed

7 – Survey Photographs


Survey Area
Project Boundary
WHEELER
ROAD
Storage Bin
Well
PIPELINE
MOJAVE
RIVER
TRAILS
NATIONAL
BM 2321
BM 2341
Bonanza
BM 2336
BM 2347
BM 2354
ROAD
BULLION
MOJAVE
Wild
Wash
Boron
Barstow
Hodge
Project Boundary
Survey Area
Lake Los Angeles
Adelanto
EL MIRAGE VALLEY
Victorville
Apple Valley
Hesperia
Wrightwood
SAN BERNARDINO MOUNTAINS
Crestline
Lake Arrowhead
Big Bear City
ORD MOUNTAINS
ATTACHMENT 1
Project Location
BARSTOW
INTERNATIONAL GATEWAY PROJECT
ROCKS
BIOLOGICAL CONSULTING
0 1,000 2,000 FEET
Base Map: USGS 7.5' Quadrangles
(Wild Crossing & Hodge), Esri
Regional Map: NationalGeographic 2012, Esri



ATTACHMENT 2

Survey Location

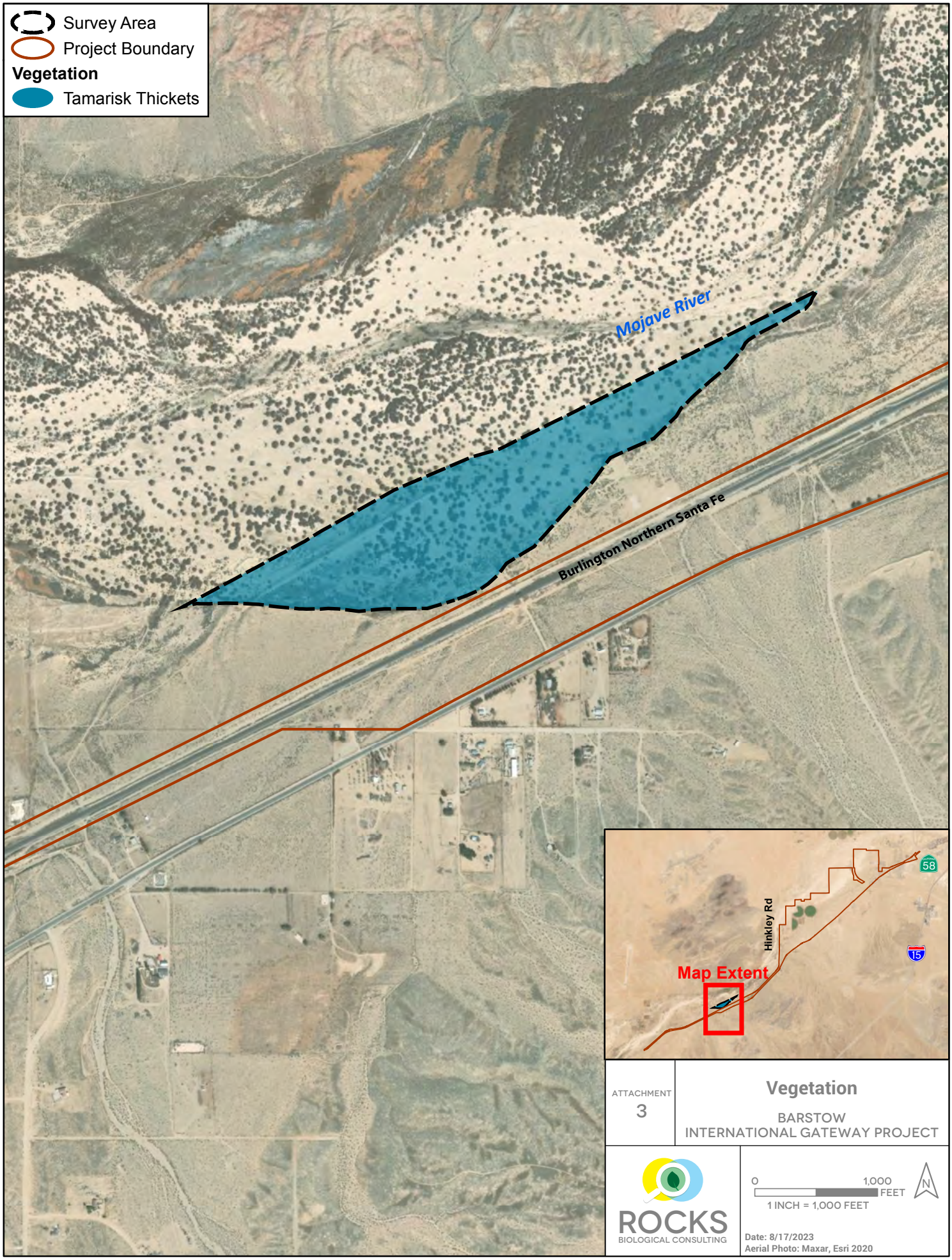
BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 8,000 FEET
1 INCH = 8,000 FEET

N

Date: 8/17/2023
Aerial Photo: Maxar, Esri 2020



ATTACHMENT 3

Vegetation

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

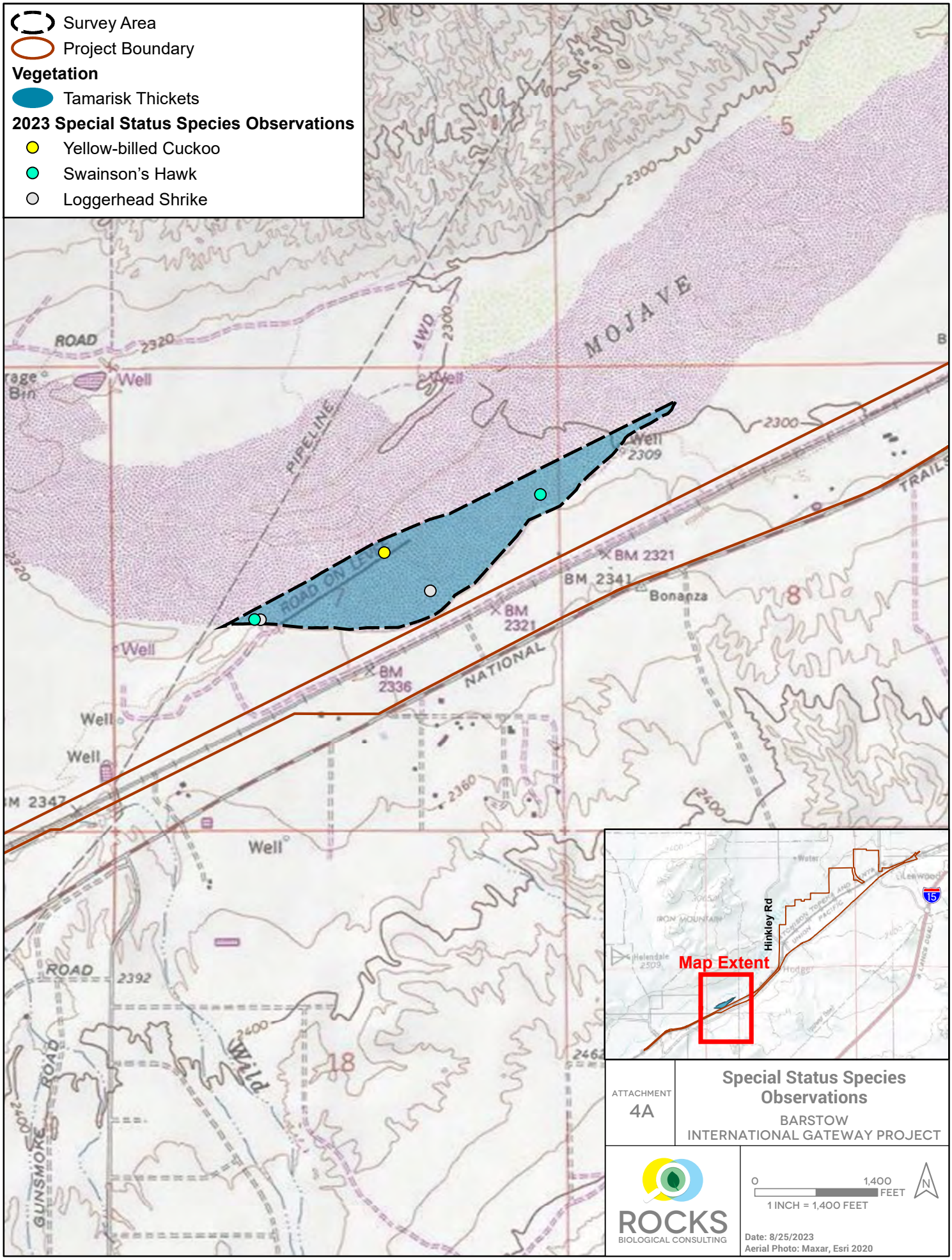
0 1,000 FEET

1 INCH = 1,000 FEET

N

Date: 8/17/2023

Aerial Photo: Maxar, Esri 2020



ATTACHMENT 4A

Special Status Species Observations

BARSTOW INTERNATIONAL GATEWAY PROJECT

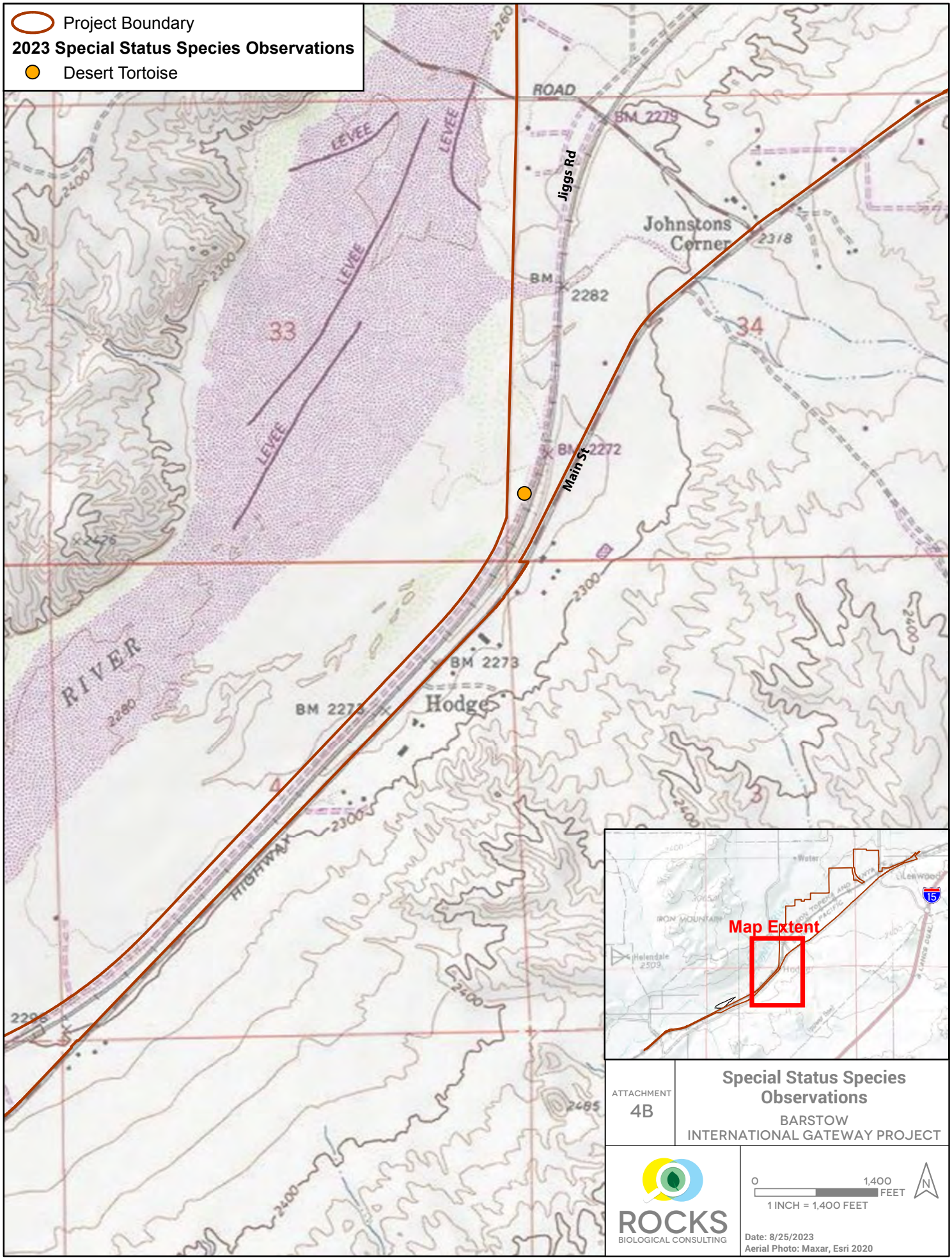
ROCKS BIOLOGICAL CONSULTING

0 1,400 FEET

1 INCH = 1,400 FEET

Date: 8/25/2023

Aerial Photo: Maxar, Esri 2020


Project Boundary
2023 Special Status Species Observations
Desert Tortoise
ROAD
BM 2279
Jiggs Rd
Johnstons Corner
2318
BM 2282
33
34
LEVEE
LEVEE
LEVEE
BM 2272
Main St
RIVER
BM 2273
BM 2273
Hodge
HIGHWAY
4
3
2260
2300
2400
2280
2485
Map Extent
ATTACHMENT
4B
Special Status Species Observations
BARSTOW
INTERNATIONAL GATEWAY PROJECT
ROCKS
BIOLOGICAL CONSULTING
0
1,400
FEET
1 INCH = 1,400 FEET
N
Date: 8/25/2023
Aerial Photo: Maxar, Esri 2020

Attachment 5

CNDDB and Yellow-billed Cuckoo Survey Forms

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code DAV23F0004
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Coccyzus americanus occidentalis*

Common name: western yellow-billed cuckoo

Date of field work (mm-dd-yyyy): 07-03-2023

Comment about field work date(s): Focused yellow-billed cuckoo surveys took place from June 19 - Aug 10.

OBSERVER INFORMATION

Observer: Arthur Davenport

Affiliation:

Address: PO Box 1692, Barstow, CA 92312

Email: davenportbio@gmail.com

Phone: (619) 729-4242

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other: Familiarity with vocalizations and visual markings

Identification explanation: Individual was observed visually and aurally

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: Observed during focused presence/absence surveys for yellow-billed cuckoo using broadcast vocalizations.

Total number of individuals: 1

Collection? **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Heard singing then seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
1				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other

Site use description: Foraging on numerous grasshoppers that were likely present due to significant precipitation from the previous winter.

What was the observed behavior? Responded and approached to broadcast vocalizations, then foraged in the area.

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description: Tamarisk Thickets dominated by tamarisk (Tamarix ramosissima) with a generally open canopy between small tamarisk stands within the banks of the Mojave River. Occasional honey mesquite and screwbean mesquite present. Black willow and Fremont cottonwood present closer to the Mojave River bed.

Slope: Land owner/manager: Private

Aspect:

Site condition + population viability: Fair

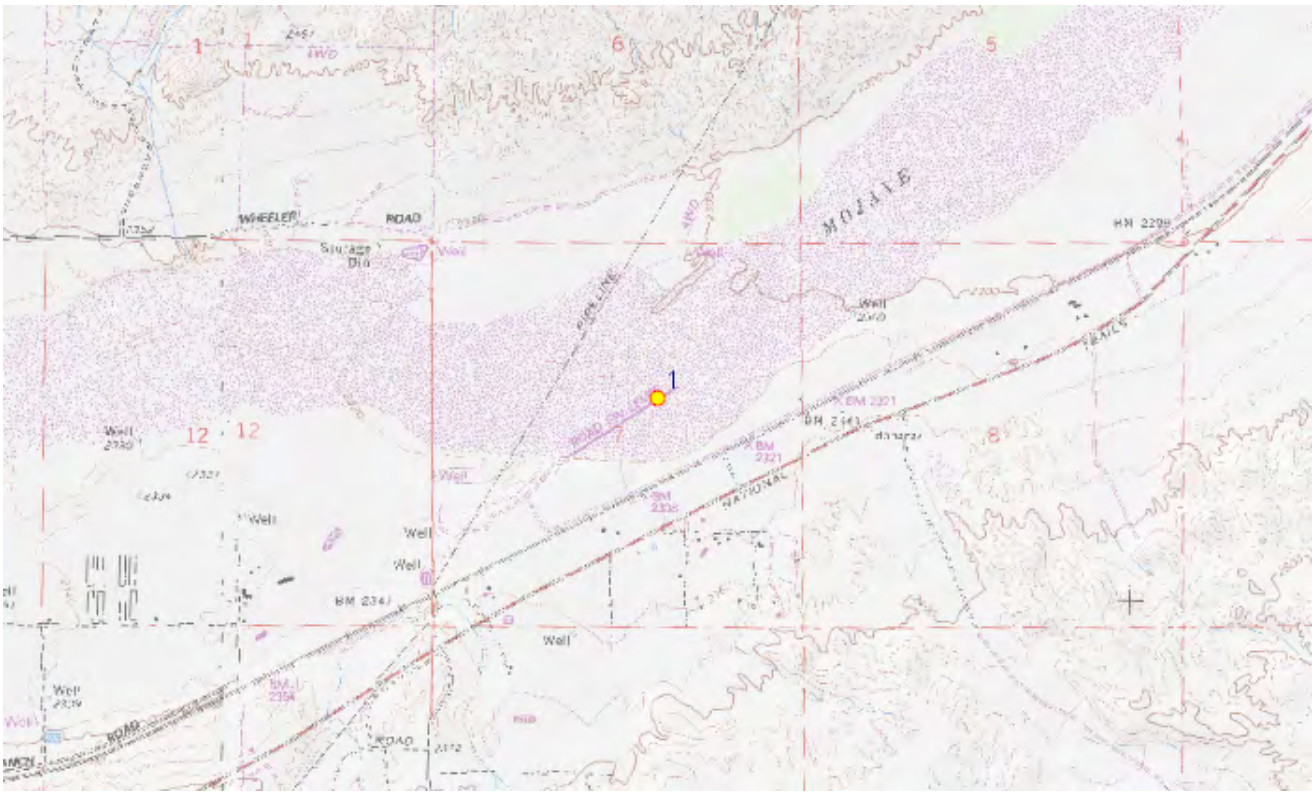
Immediate & surrounding land use: Mojave River, residential properties, a railroad, and Route 66 to the east.

Visible disturbances: Non-native vegetation, scouring, trash, OHV use

Threats: OHV use; also, small numbers of tamarisk beetle (Diorhabda sp.) causing defoliation of some tamarisk trees in the immediate vicinity, and defoliation of most tamarisk downstream around Hinkley Rd.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2311	34.79931	-117.23091	478877	3850812	11
1	**Public Land Survey**	**Feature Comment**						
	S T08N R03W 7							

The mapped feature is accurate within: 10 m

Source of mapped feature: GPS Horizontal Accuracy: ± 21 ft Vertical Accuracy: ± 16 ft

Mapping notes:

Location/directions comments:

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code DAV23F0005
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Gopherus agassizii*

Common name: desert tortoise

Date of field work (mm-dd-yyyy): 08-10-2023

Comment about field work date(s):

OBSERVER INFORMATION

Observer: Arthur Davenport

Affiliation:

Address: PO Box 1692, Barstow, CA 92312

Email: davenportbio@gmail.com

Phone: (619) 729-4242

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person:

Other: Familiarity with visual markings

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: Incidental observation while driving along dirt road

Total number of individuals: 1

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
1				

Age class comment:

Site use description: Crossing dirt road then foraging on small annual plants at edge of road

What was the observed behavior? Crossing dirt road then foraging on small plants

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description: Dirt road surrounded by railroad to the east and a barbed wire fence to the west (Developed); Atriplex scrub to the west. A Creosote-atriplex scrub community occurs approximately 1000 feet to the north.

Slope: Land owner/manager: Private

Aspect:

Site condition + population viability: Fair

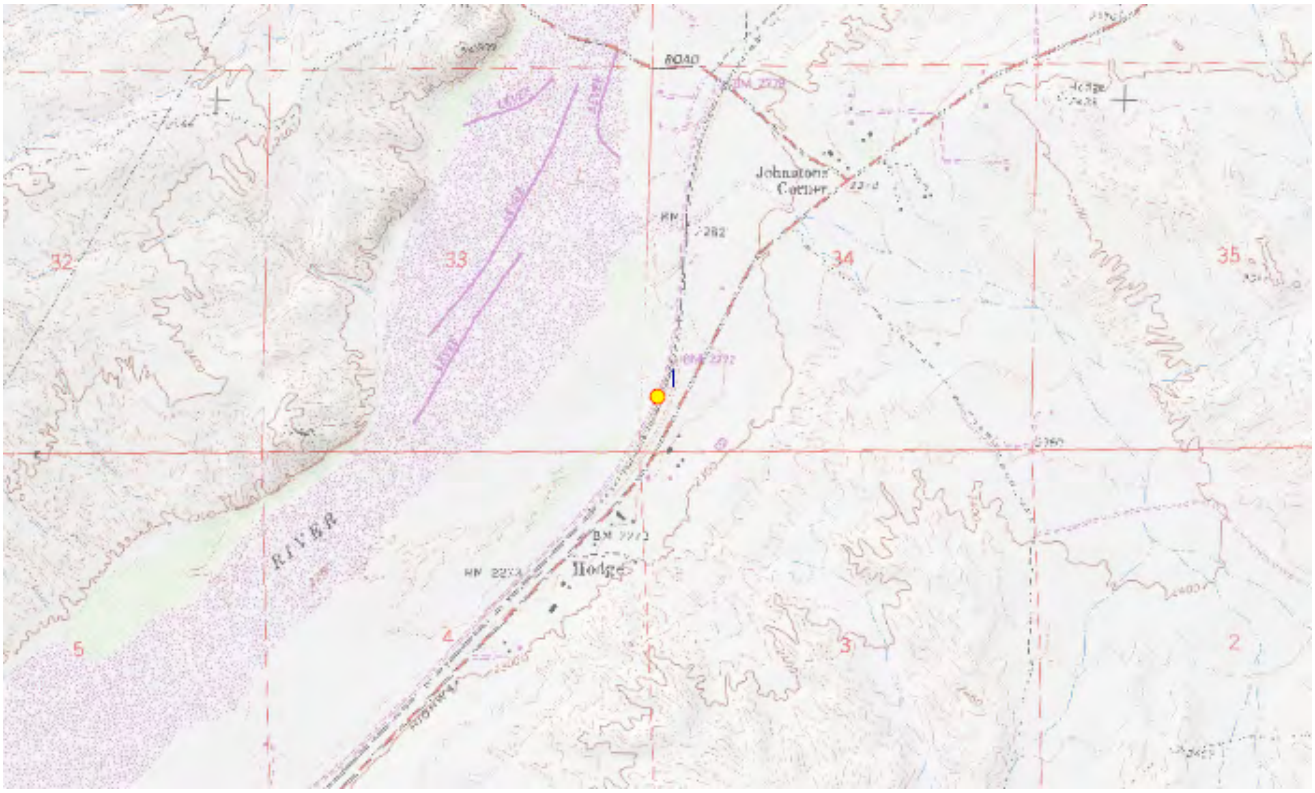
Immediate & surrounding land use: Dirt road (Link Road), railroad, residences, Route 66 to east.

Visible disturbances: Vehicle use, railroad tracks, trash, residential properties.

Threats: Vehicle use, trains, OHV use, domestic dogs.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2266	34.82217	-117.18900	482716	3853339	11
1	**Public Land Survey**	**Feature Comment**						
	S T09N R03W 34							

The mapped feature is accurate within: 10 m

Source of mapped feature: GPS Horizontal Accuracy: ± 16 ft Vertical Accuracy: ± 11 ft

Mapping notes:

Location/directions comments:

Attachment(s): TH004266.jpg, Desert tortoise

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code DAV23F0002
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Lanius ludovicianus*

Common name: loggerhead shrike

Date of field work (mm-dd-yyyy): 07-16-2023

Comment about field work date(s): Observations made on 6/13, 6/29, 6/30, 7/3, 7/10, 7/16

OBSERVER INFORMATION

Observer: Linette Davenport

Affiliation:

Address: 1120 Huffman Rd Suite 24 #285, Anchorage, AK 99515

Email: borregobiological@gmail.com

Phone: (714) 721-4621

Other observers:

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in:

By another person: Arthur Davenport observed the species on 7/3 and 7/16

Other: Familiarity with vocalizations and visual markings

Identification explanation: Individuals were observed visually and aurally

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: Incidental observations made during focused surveys for least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo.

Total number of individuals: 1 or 2

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Heard calling then seen

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
2				

Age class comment:

Bird site use:

☐ Nesting ☐ Rookery ☐ Nesting colony ☐ Burrow site ☐ Lek

☐ Non-breeding (over-wintering) ☐ Communal roost ☑ Other

Site use description: At least one, possibly two individuals observed over a month-long period. No nesting behavior confirmed, but based on timing and range it is possible it was breeding in the vicinity.

What was the observed behavior? Foraging, calling

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description: Tamarisk Thickets dominated by tamarisk (Tamarix ramosissima) with a generally open canopy between small tamarisk stands within the banks of the Mojave River. Occasional honey mesquite and sandbar willow present.

Slope: Land owner/manager: Private

Aspect:

Site condition + population viability: Fair

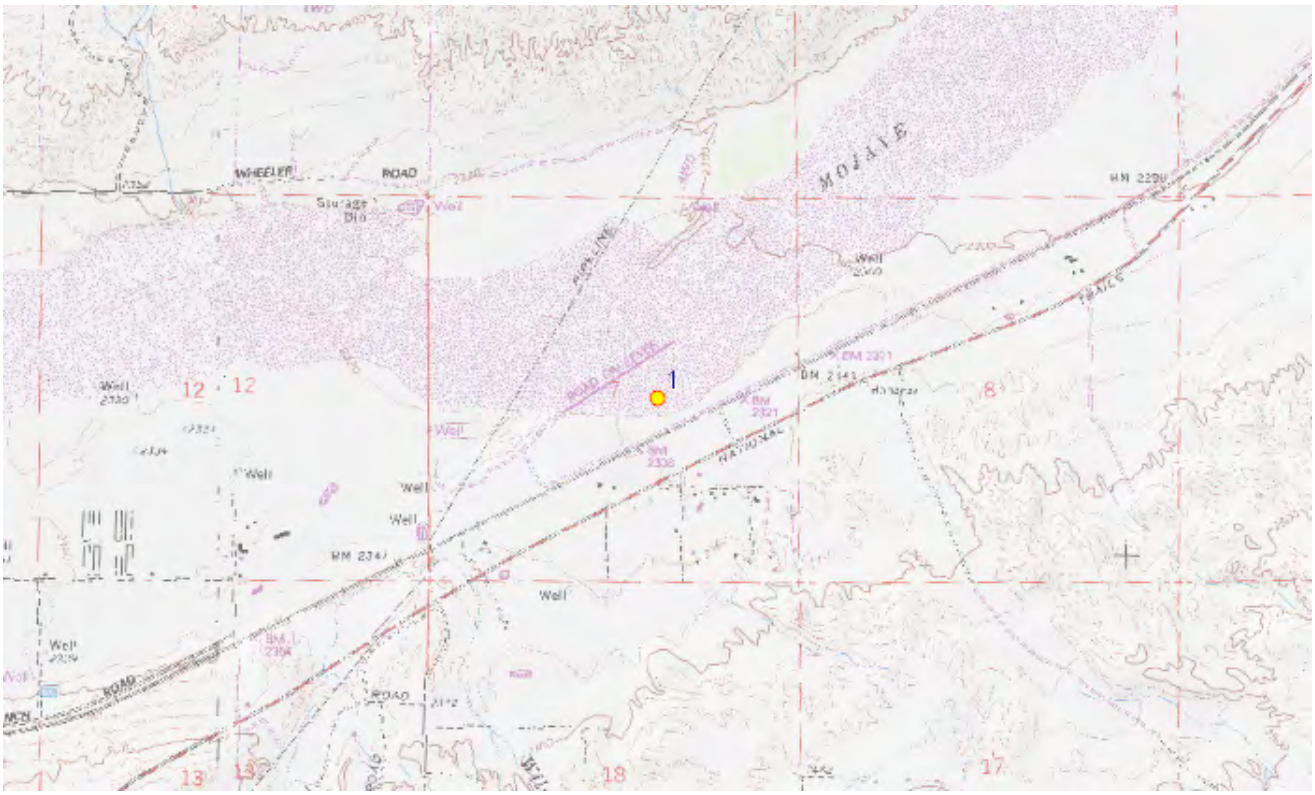
Immediate & surrounding land use: Mojave River, residential properties, a railroad, and Route 66 to the east.

Visible disturbances: Non-native vegetation, scouring, trash, OHV use

Threats: OHV use; also, small numbers of tamarisk beetle (Diorhabda sp.) causing defoliation of some tamarisk trees in the immediate vicinity, and defoliation of most tamarisk downstream around Hinkley Rd.

General comments:

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2307	34.79760	-117.23074	478893	3850623	11
1	**Public Land Survey**	**Feature Comment**						
	S T08N R03W 7							

The mapped feature is accurate within: 5 m

Source of mapped feature: GPS Horizontal Accuracy: ± 15 ft Vertical Accuracy: ± 12 ft

Mapping notes:

Location/directions comments:

Attachment(s):

CNDDB Online Field Survey Form Report

California Natural Diversity Database
Department of Fish and Wildlife
1416 9th Street, Suite 1266
Sacramento, CA 95814
Fax: 916.324.0475
cnddb@wildlife.ca.gov
www.dfg.ca.gov/biogeodata/cnddb/

This data has been reported to the CNDDB, but may not have been evaluated by the CNDDB staff

Source code DAV23F0003
Quad code 3411772
Occ. no. _____
EO index no. _____
Map index no. _____

Scientific name: *Buteo swainsoni*

Common name: Swainson's hawk

Date of field work (mm-dd-yyyy): 06-30-2023

Comment about field work date(s): Observations made on 6/12, 6/13, 6/19, 6/30

OBSERVER INFORMATION

Observer: Linette Davenport

Affiliation:

Address: 1120 Huffman Rd Suite 24 #285, Anchorage, AK 99515

Email: borregobiological@gmail.com

Phone: (714) 721-4621

Other observers: Arthur Davenport

DETERMINATION

Keyed in:

Compared w/ specimen at:

Compared w/ image in: Sibley Birds V2 app for iPhone

By another person:

Other:

Identification explanation:

Identification confidence: Very confident

Species found: Yes **If not found, why not?**

Level of survey effort: Incidental observations made during focused surveys for least Bell's vireo, southwestern willow flycatcher, and yellow-billed cuckoo

Total number of individuals: 3 to 20

Collection? No **Collection number:**

Museum/Herbarium:

ANIMAL INFORMATION

How was the detection made? Photograph

Number detected in each age class:

adults	juveniles	larvae	egg mass	unknown
2	18			

Age class comment: Most individuals appeared to be 2nd-year/immature birds, with 2 or so full adults.

Bird site use:

☐ **Nesting** ☐ **Rookery** ☐ **Nesting colony** ☐ **Burrow site** ☐ **Lek**

☐ **Non-breeding (over-wintering)** ☐ **Communal roost** ☑ **Other**

Site use description: Group was foraging on numerous grasshoppers along the Mojave River that were likely present due to significant precipitation from the previous winter.

What was the observed behavior? Individuals on the ground or perched in trees, foraging, or kettling in the air. Individuals were highly skittish and flushed when observer was within 200 feet.

Describe any evidence of reproduction:

SITE INFORMATION

Habitat description: Tamarisk Thickets dominated by tamarisk (Tamarix ramosissima) with a generally open canopy between small tamarisk stands within the banks of the Mojave River. Occasional honey mesquite and sandbar willow present.

Slope:

Land owner/manager: Private

Aspect:

Site condition + population viability: Fair

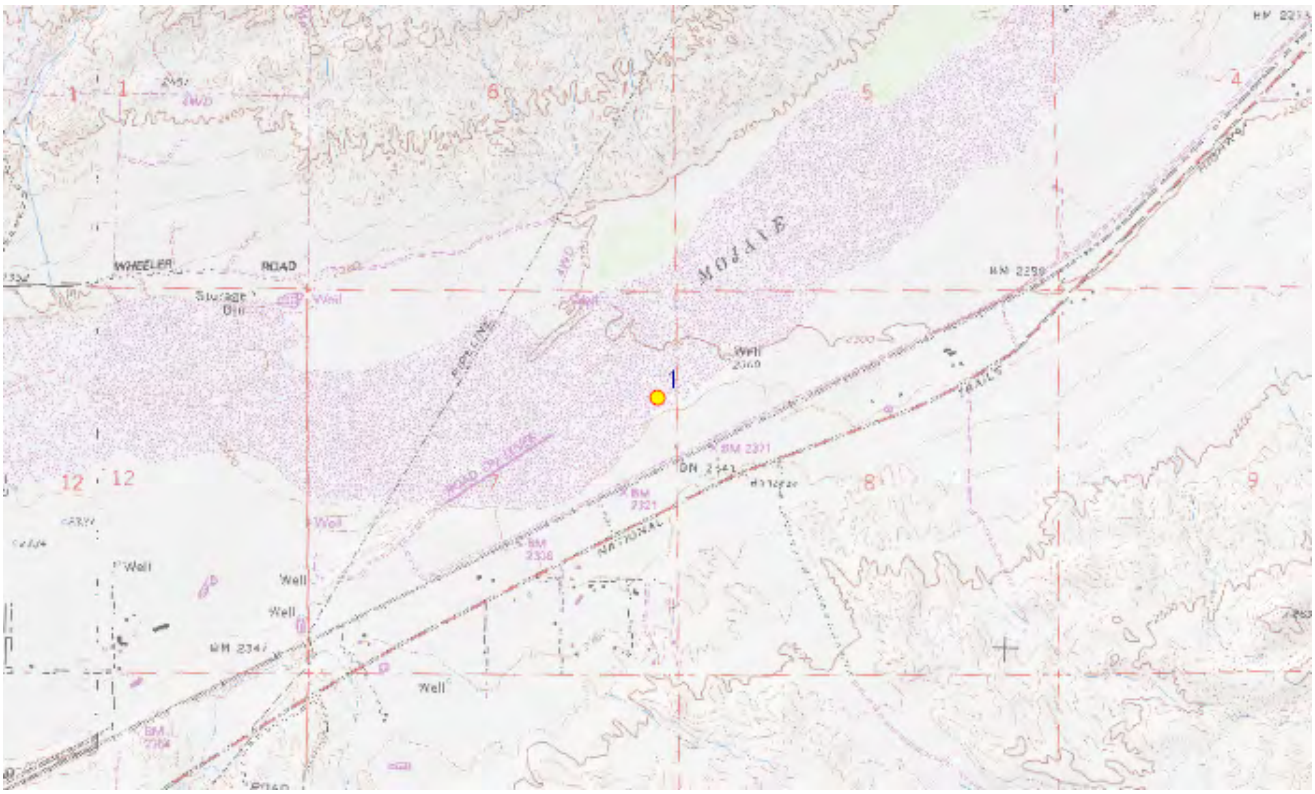
Immediate & surrounding land use: Mojave River, residential properties, a railroad, and Route 66 to the east.

Visible disturbances: Non-native vegetation, scouring, trash, OHV use

Threats: OHV use; also, small numbers of tamarisk beetle (Diorhabda sp.) causing defoliation of some tamarisk trees in the immediate vicinity, and defoliation of most tamarisk downstream around Hinkley Rd.

General comments: Very large numbers of grasshoppers present in May and June 2023.

MAP INFORMATION



ID	County	24K Quadrangle	Elev. (ft)	Latitude NAD83	Longitude NAD83	UTM E NAD83	UTM N NAD83	UTM Zone
	San Bernardino	Hodge	2304	34.80111	-117.22519	479401	3851011	11

1	Public Land Survey	Feature Comment
	S T08N R03W 7	

The mapped feature is accurate within: 5 m

Source of mapped feature: GPS Horizontal Accuracy: ± 12 ft Vertical Accuracy: ± 10 ft

Mapping notes:

Location/directions comments:

Attachment(s): 9.JPG, Molting 2nd-year Swainson's Hawk

Yellow-Billed Cuckoo Survey Summary Form for electronic submission (Form revised 2021)

Site Name:	Barstow International Gateway 2023	County:	San Bernardino	Elevation (m):	704	State:	CA
USGS Quad Name:	Hodge	Creek, River, Wetland, Canyon, or Lake Name:			Mojave River		

Site Coordinates (UTM):		UTM Zone:	11S		Start:	**E**	479558	**N**	3851087	Magnetic North	
NAD 83 preferred		Datum:	NAD83		Stop:	**E**	478385	**N**	3850571	Declination:	0

Was site surveyed in a previous year? (Yes, No, Unknown): No — If yes, what name was used?:

Survey # Observer(s) (Last Name, First Initial)	Date (m/d/y) Survey, Time, Total Hours	Total # of YBCUs	Survey Number:	YBCU#:	Time Detected (AM):	Detection Method: **I** = Incidental **P** = Playback **B**=Both	Detection Type: **A**= Aural **V**=Visual	Vocalization Type: **CN**= Contact **CO**=coo **AL**=alarm **OT**=other	Number of 'kowlp' calls played prior to response:	Behavior Observed: (refer to codes)	Surveyor Detection Coordinates UTM E (6 digits)	Surveyor Detection Coordinates UTM N (7 digits)	Distance (m):	Bearing (in number degrees):	Corrected Coordinates (automatically generated) UTM E	Corrected Coordinates (automatically generated) UTM N
Survey	Date:		1												0	0
1	6/19/2023		1												0	0
Observer(s):	Start:		1												0	0
Arthur Davenport	6:00		1												0	0
	Stop:		1												0	0
	8:30		1												0	0
	Total hrs:	Total:	1												0	0
	2.5	0	1												0	0
Survey	Date:		2	1	7:00	P	B	AL, CO	Many	FLC	478789	3850756	30	187	478785	3850726
2	7/3/2023		2												0	0
Observer(s):	Start:		2												0	0
Arthur Davenport	5:00		2												0	0
	Stop:		2												0	0
	8:30		2												0	0
	Total hrs:	Total:	2												0	0
	3.5	1	2												0	0
Survey	Date:		3												0	0
3	7/4/2023		3												0	0
Observer(s):	Start:		3												0	0
Arthur Davenport	5:30		3												0	0
	Stop:		3												0	0
	9:00		3												0	0
	Total hrs:	Total:	3												0	0
	3.5	0	3												0	0
Survey	Date:		4												0	0
4	7/16/2023		4												0	0
Observer(s):	Start:		4												0	0
Arthur Davenport	5:30		4												0	0
	Stop:		4												0	0
	8:30		4												0	0
	Total hrs:	Total:	4												0	0
	3	0	4												0	0
Survey	Date:		5												0	0
5	8/10/2023		5												0	0
Observer(s):	Start:		5												0	0
Arthur Davenport	5:30		5												0	0
	Stop:		5												0	0
	8:30		5												0	0
	Total hrs:	Total:	5												0	0
	3	0	5												0	0

Survey Summary REQUIRED	Total Survey Hours:	Tot. # of Detections:	Total Estimated Breeding Territories: (refer to Territory Defintions below) Number of PO BreedingTerritories:	Number of PR Breeding Territories:	Number of CO Breeding Territories:	**Number of Nests Found:**
	15.5	1	0	0	0	0

Sur. #:	YBCU #:	Detection Comments/Additional Behaviors/Nest UTM:
2	1	Individual approached to playback calling with "knock" call twice, then began "coo-ing" for approximately 20 minutes.
		Appeared to forage on the numerous grasshoppers in the area due to significant precipitation from the previous winter.

Breeding Behavior Observation Codes	
Brooding/Incubating	BI
Carrying Nest Material	MAT
Copulation	COP
Distraction Display	DD
Feeds Mate	FM
Feeds Nestling	FN
Fledgling	FLG
Nest Building	NB
Carry Food	CF
Kowlp Exchange/Pair	VEX

Breeding Territory Definitions

Possible Breeding Territory (PO):	Probable Breeding Territory (PR):	Confirmed Breeding Territory (CO):
Detections within a 300 - 500 m area during at least 2 surveys and 12 - 14 days apart.	Detections within a 300-500 m area during at least 3 surveys and 12-14 days apart; or PO territory plus purposeful food carry (single observation, bird does not eat food), stick carry (single observation), multiple incidents of alarm calls in same area, or PO territory plus pair exchanging multiple kowlp or alarm calls (not coos) within 100 m of one another.	Observation of active nest (or multiple stick carries to nest being built), copulation, fledgling (unable to fly) with adult; or PR plus multiple food carries to same area or distraction display (dropped wings).

Site Name:	Barstow International Gateway 2023	Date Report Completed:	8/24/2023
Name of Reporting Individual:	Arthur Davenport	Phone #:	619-729-4242
Affiliation:	Davenport Biological Services	Email:	avenportbio@gmail.cor
USFWS Permit #:	TE802450-9	State Permit #:	
Ownership: Primary:	Private	Owner Name (if applicable):	

Did you survey the same general area during each visit to this site this year (if no, summarize in comments section below)? Yes

If site was surveyed last year, did you survey the same general area this year (if no, summarize in comments section below)?

Length of survey area (km): 1.5

Overall Vegetation Characteristics:

Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

Native broadleaf plants (>75% native)		Mixed native and exotic plants (mostly native 51%-75%)	
Exotic/introduced plants (>75% exotic)	X	Mixed native and exotic plants (mostly exotic 51%-75%)	

Average Overstory/Canopy (where playback calls were used):

List up to 5 species of overstory vegetation and proportion of average canopy cover of each species . Click on dropdown menu to select scientific name. If species is missing, select OTHER and include scientific name in Comments. For relative percent cover, the total should equal 100%.

		Relative				Relative	
Species 1:	Tamarix ramosissiama	% Cover	90	Species 3:	Prosopis pubescens	% Cover	1
Species 2:	Prosopis glandulosa	% Cover	9	Species 4:		% Cover	
				Species 5:		% Cover	

General Overstory/Canopy Characteristics:

Average Height (top of trees) of Overstory (meters; do not include a range):	3
Estimated Absolute (as opposed to relative) Canopy Cover (percent; may be < 100%):	40

Average Subcanopy (if present; where playback calls were used):

List up to 5 species of subcanopy vegetation (if present) and estimate proportion of average subcanopy cover of each species. Click on dropdown menu to select scientific name. If species is missing, select OTHER and include scientific name in Comments. For relative percent cover, the total should equal 100%.

		Relative				Relative	
Species 1:	Salix exigua	% Cover	100	Species 3:		% Cover	
Species 2:		% Cover		Species 4:		% Cover	
				Species 5:		% Cover	

General Subcanopy Characteristics:

Average Height (top of trees) of Subcanopy (meters; do not include a range):	2
Estimated Absolute (as opposed to relative) Subcanopy Cover (percent; may be < 100%):	2

Average Understory (if present; where playback calls were used):

List up to 5 species of understory/ shrub vegetation (not all sites will have a separate understory) and estimate proportion of average understory cover of each species. Use scientific names. For relative percent cover, the total should equal 100% even if more than 5 species present.

		Relative				Relative	
Species 1:	Descurainia sp.	% Cover	70	Species 3:	Mentzelia sp.	% Cover	5
Species 2:	Amsinckia tessellata	% Cover	20	Species 4:	Oenothera deltoides	% Cover	3
				Species 5:	Malacothrix glabrata	% Cover	2

General Understory Characteristics:

Average Height (top) of Understory (meters; do not include a range):	0.2
Estimated Absolute (as opposed to relative) Understory Cover (percent; may be < 100%):	5

Immediate Adjacent Habitat Along Entire Transect (Outside of survey site):

Categorize adjacent habitat (e.g. rock outcrop, desert/scrub/thornscrub, urban/residential, agriculture/pasture, orchard, oak woodland, pinyon-juniper woodland, mixed conifer forest, grassland, marsh/wet meadow, open water, ditch/irrigation). List up to 5 categories of adjacent habitat, and estimate proportion of percent cover (should =100%). If adjacent habitat type is missing, select "OTHER" and enter habitat type in Comments.

Category 1:	Desert/Scrub/thornscrub	% Cover	50	Category 3:		% Cover	
Category 2:	Other	% Cover	50	Category 4:		% Cover	
				Category 5:		% Cover	

Is the survey area or adjacent area (within 300 m) dominated by surface water or saturated soil during at least 2 surveys?	Yes
Perennial, intermittent, or ephemeral drainage (or body of water:):	Intermittent

Comments. If surface water changed between surveys please describe in this section. Provide comments regarding differences between the survey patches within the site. For example, if the average canopy for this site is 30% cover, but within one patch it is 60% cover--please note. Please note significant differences between dominant overstory, subcanopy, and understory vegetation among the patches. Document these differences with photographs whenever possible. referencing comments to photo number whenever available. Note potential threats (e.g., livestock, ORV, hunting, etc.) to the site. If *Diorhabda* beetles are observed, provide location and photos. Attach additional pages or use the continuation sheet if needed.

Surveys were conducted within a parcel of land dominated by Tamarisk Thickets. Habitat to the south and east of the Survey Area were Atriplex scrub, while to the west and north were more Tamarisk Thickets and then Fremont Cottonwood-Black Willow Woodlands lining the Mojave River. Tamarisk beetle larvae were observed in the Survey Area but only a very small number of adult beetles were observed. Approximately 10% or less of the tamarisk in the Survey Area appeared to be defoliated.

See state and federal permit reporting requirements. Excel forms (spreadsheets) must be emailed in Excel format. Maps and photos may be compiled into a pdf. Results must be submitted by October 15, following each survey season.

Attachment 6

Animal Species Observed

Yellow-billed Cuckoo Survey

Scientific Name	Common Name
CLASS REPTILIA	REPTILES
FAMILY TESTUDINIDAE	TRUE LAND TORTOISES
Gopherus agassizii	Desert tortoise
FAMILY PHRYNOSOMATIDAE	HORNED AND SPINY LIZARDS
Sceloporus uniformis	Yellow-backed spiny lizard
CLASS AVES	BIRDS
FAMILY ODONTOPHORIDAE	QUAIL
Callipepla californica	California quail
FAMILY COLUMBIDAE	DOVES, PIGEONS
Columba livia	Rock pigeon
Zenaida macroura	Mourning dove
FAMILY CUCULIDAE	CUCKOOS AND RELATIVES
Geococcyx californianus	Greater roadrunner
Coccyzus americanus occidentalis	Western yellow-billed cuckoo
FAMILY CAPRIMULGIDAE	NIGHTJARS AND RELATIVES
Chordeiles acutipennis	Lesser nighthawk
FAMILY CATHARTIDAE	VULTURES AND RELATIVES
Cathartes aura	Turkey vulture
FAMILY ACCIPTRIDAE	HAWKS, KITES, EAGLES, AND ALLIES
Buteo swainsoni	Swainson's hawk
FAMILY TYRANNIDAE	TYRANT FLYCATCHERS
Myiarchus cinerascens	Ash-throated flycatcher
FAMILY LANIIDAE	SHRIKES
Lanius ludovicianus	Loggerhead shrike
FAMILY CORVIDAE	CROWS, RAVENS, AND RELATIVES
Corvus corax	Common raven
FAMILY ALAUDIDAE	LARKS
Eremophila alpestris	Horned lark
FAMILY TROGLODYTIDAE	WRENS
Thryomanes bewickii	Bewick's wren
FAMILY REMIZIDAE	VERDIN
Auriparus flaviceps	Verdin
FAMILY MIMIDAE	THRASHERS, MOCKINGBIRDS, AND RELATIVES
Toxostoma redivivum	California thrasher
Mimus polyglottos	Northern mockingbird
FAMILY EMBERIZIDAE	SPARROWS AND RELATIVES
Chondestes grammacus	Lark sparrow

Scientific Name	Common Name
FAMLIY ICTERIDAE	BLACKBIRDS AND RELATIVES
Quiscalus mexicanus	Great-tailed grackle
Icterus bullockii	Bullock's oriole
FAMILY FRINGILLIDAE	FINCHES
Haemorhous mexicanus	House finch
Spinus psaltria	Lesser goldfinch
FAMILY PASSERIDAE	OLD WORLD SPARROWS
Passer domesticus	House sparrow
CLASS MAMMALIA	MAMMALS
FAMILY LEPORIDAE	RABBITS AND HARES
Lepus californicus	Black-tailed jackrabbit
FAMILY SCIURIDAE	SQUIRREL, CHIPMUNKS, AND MARMOTS
Ostospermophilus beecheyi	California ground squirrel
Ammospermophilus leucurus	White-tailed antelope ground squirrel
FAMILY CANIDAE	FOXES, WOLVES, AND RELATIVES
Canis latrans	Coyote

Attachment 7
Survey Photographs

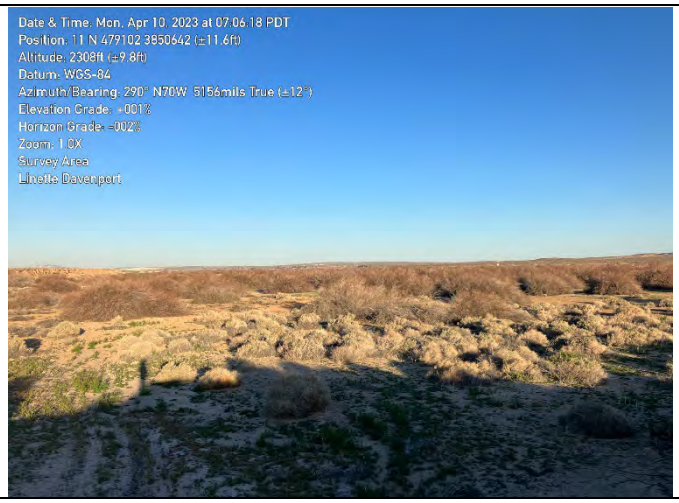
		Photo 1. Western portion of the Survey Area. Photo taken from the south side of the Survey Area facing northwest. Photo taken on April 10, 2023.
		Photo 2. Eastern portion of the Survey Area. Photo taken from the south side of the Survey Area facing northeast. Photo taken on April 10, 2023.
		Photo 3. Seep present in northern portion of Survey Area. Photo taken on June 29, 2023.

		Photo 4. Tamarisk beetle (*Diorhabda* sp.) larva on a tamarisk. Photo taken on June 12, 2023.
		Photo 5. Tamarisk Thickets south of Hinkley Road downstream of the 2023 Survey Area. Photo taken May 25, 2021, prior to the arrival of tamarisk beetles.
		Photo 6. Tamarisk Thickets south of Hinkley Road downstream of the 2023 Survey Area showing severe defoliation from tamarisk beetles. Photo taken July 24, 2023.

		Photo 7. Desert tortoise found on Link Road on August 10, 2023.

ATTACHMENT FF

BARSTOW INTERNATIONAL GATEWAY PROJECT
WESTERN JOSHUA TREE CENSUS REPORT

ROCKS
BIOLOGICAL CONSULTING





BARSTOW INTERNATIONAL GATEWAY PROJECT

WESTERN JOSHUA TREE CENSUS REPORT

San Bernardino County, California

August 25, 2025

Prepared for:
Kimley-Horn and Associates
1100 W Town and Country Road, Suite 700
Orange, CA 92868
(619) 234-9411

Prepared by:
Rocks Biological Consulting
4312 Rialto Street
San Diego, CA 92107
(619) 701-6798

TABLE OF CONTENTS

1 Summary 1
2 Introduction 1
2.1 Project Location 1
2.2 Project Description 1
3 Western Joshua Tree Background 1
3.1 Regulatory Framework 1
3.2 Natural History 2
4 Methods 2
5 Results 3
6 Conclusions 3
7 References 4

TABLES

Table 1. Western Joshua Tree Census Results and Potential Impacts

FIGURES

Figure 1. Survey Results

APPENDICES

Appendix A – Western Joshua Tree Census Results Table
Appendix B – Western Joshua Tree Individual Photographs

1 SUMMARY

This report is a summary of the western Joshua tree (WJT; *Yucca brevifolia*) census conducted by Rocks Biological Consulting (RBC) for the BNSF Railway Company (BNSF) Barstow International Gateway (BIG) Project (project) in San Bernardino County, California. A total of 33 WJTs were recorded during the focused WJT census conducted on October 17, 2024.

2 INTRODUCTION

2.1 PROJECT LOCATION

The project area consists of approximately 5,000 acres located within the City of Barstow and in unincorporated San Bernardino County, California (Figure 1). The project area is generally north of Main Street, south of CA Highway 58, and west of Interstate 15. The project area is within the *Barstow, Barstow SE, Hinkley, Hodge,* and *Wild Crossing* U.S. Geological Survey (USGS) 7.5-minute quadrangles.

2.2 PROJECT DESCRIPTION

The project proposes the construction of a rail yard with an intermodal facility, a block swap yard, and a transload warehouse center. Additional improvements to offsite rail and non-rail infrastructure are planned to serve the new warehouse center and rail yard. Improvements include lead track extensions and enhancement of roadways and infrastructure.

3 WESTERN JOSHUA TREE BACKGROUND

3.1 REGULATORY FRAMEWORK

The WJT is currently a candidate for listing under the California Endangered Species Act (CESA) based on a 2019 petition submitted by the Center for Biological Diversity (Center for Biological Diversity [CBD] 2019). In addition, WJT is protected under the Western Joshua Tree Conservation Act (WJTCA), which went into effect July 2023 to streamline development in WJT habitat while standardizing conservation efforts to further preserve the species. The WJTCA facilitates take permits in exchange for in-lieu mitigation fee payments. Fee magnitude is dependent on multiple variables, including, but not limited to, tree height, condition, and location. Mitigation fees are placed into the WJT Conservation Fund and used to acquire, manage, and preserve WJT habitat in perpetuity. The WJT receives protection as a candidate species under CESA, in addition to state protections outlined in the WJTCA, pending a listing petition decision by the California Fish and Game Commission.

3.2 NATURAL HISTORY

The WJT is endemic to the Mojave Desert in southern California, southwestern Nevada, and northern Baja California Norte (U.S. Department of Agriculture [USDA] n.d.). Within California, WJT is associated with California juniper (*Juniperus californica*), single-leaf pinyon (*Pinus monophylla*), shrub live oak (*Quercus turbinella*), blackbrush (*Coleogyne ramosissima*), green ephedra (*Ephedra viridis*), California buckwheat (*Eriogonum fasciculatum*), white burrobrush (*Hymenoclea salsola*), bladdersage (*Salazaria mexicana*), and Mojave desertrue (*Thamnosma montana*) amongst other species (USDA n.d.). Numerous vegetation communities can support WJT including but not limited to, Joshua tree woodland, California juniper tree woodland, Mojave desert scrub, and Mojave mixed steppe habitats (USDA n.d.). The yucca moth (*Tegeticula synthetica*) is responsible for pollination, and seeds are dispersed by mammals and wind. On average, WJT's temperature threshold ranges from -13 °F (-25 °C) to 120 °F (51 °C) and annual precipitation requirements range from 3.9 to 10.6 inches (98-268 mm; USDA n.d.).

Threats to WJT include climate change, fire, and habitat loss or degradation due to human activities (CBD 2019). Seed dispersal is greatly inhibited by climate change-induced droughts which stall recruitment and kill adult trees. Development of private lands containing large stands of WJT also poses a major threat to this species (CBD 2019).

4 METHODS

On October 17, 2024, RBC biologists, Alec Goodman, Hannah Swarthout, and Kelsey Woldt, conducted a WJT census within the approximately 5,000-acre project area and the surrounding 50-foot buffer (census area) pursuant to the *Western Joshua Tree Conservation Permitting Census Instructions* (California Department of Fish and Wildlife [CDFW] 2024a).

Senior Biologist Alec Goodman holds a Bachelor of Science degree in environmental science and has over eight years of experience in southern California field biology, including experience conducting ten WJT focused surveys. Biologist Hannah Swarthout has over four years of professional experience in southern California field biology, including the Mojave and Sonoran deserts, and is familiar with desert fauna and flora survey methods, including Mojave Desert tortoise (*Gopherus agassizii*), Mojave fringe-toed lizard (*Uma scoparia*), Mohave ground squirrel (*Xerospermophilus mohavensis*), and WJT. Ms. Swarthout has conducted nine focused surveys for WJT. Associate Biologist, Kelsey Woldt has five years of professional experience in southern California field biology, including the Mojave and Sonoran deserts, and is familiar with desert fauna and flora survey methods including Barstow woolly-sunflower (*Eriophyllum mahavense*), beaver dam breadroot (*Pediomelum castoreum*), crucifixion thorn (*Castela emoryi*), Mojave Desert tortoise, Mojave fringe-toed lizard, Mojave monkey flower (*Diplacus mohavensis*), Parish's phacelia (*Phacelia parishii*), and WJT. Ms. Woldt has conducted six focused surveys for WJT.

During the survey, each WJT was assigned a unique tree identification number and mapped using a sub-meter Geographic Positioning System (GPS) device in areas without restricted access; in

areas with restricted access, such as private properties, the locations of WJTs were estimated. Trees were classified into the following size classes: A – less than one meter in height; B – one meter or greater but less than five meters in height; and C – five meters or greater in height. Additional information collected included status (live/dead), maturity (branched/not branched), phenological stage (flowers/fruits/none), and proposed impacts (removal, trim, relocation, other, or none). Detailed information for each tree is provided in Appendix A and photos of each WJT are provided in Appendix B.

5 RESULTS

RBC biologists documented 33 WJTs within the census area (Figure 1), including 12 Class A, 13 Class B, and eight Class C WJTs. Of these, 31 are live and two are dead. Direct impacts are anticipated on 17 WJTs located within the project boundary; these trees are proposed for removal. In addition, potential impacts may occur on the root systems of 16 WJTs located within 10 feet of the project impacts boundary. A detailed summary of size class composition and proposed impacts on WJTs are summarized in Table 1 below.

Table 1. Western Joshua Tree Census Results and Potential Impacts

Size Class	Total Trees in Census Area	Directly Impacted Trees within Project	Potential Root Impacts on Trees Within 10 Feet of Project
Class A	12	9	3
Class B	13	6	7
Class C	8	2	6
Total	**33**	**17**	**16**

6 CONCLUSIONS

The WJT census conducted by RBC biologists recorded a total of 33 trees within the census area. Pursuant to CESA and the WJTCA, the project must obtain an incidental take permit prior to any impacts on WJTs and implement the avoidance, minimization, and mitigation measures described within the permit. Please note that any updates to the project boundary including any off-site improvements or staging areas will require a follow-up census survey.

7 REFERENCES

[CDFW] California Department of Fish and Wildlife. 2024a. Western Joshua Tree Conservation Permitting Census Instructions. Retrieved November 12, 2024, from https://wildlife.ca.gov/Conservation/Environmental-Review/WJT/Permitting.

__. (n.d.) Western Joshua Tree Conservation Act Mitigation Fee Map. Retrieved November 2024, from https://experience.arcgis.com/experience/40690ac231124bccb07cbce42fc95ebd/

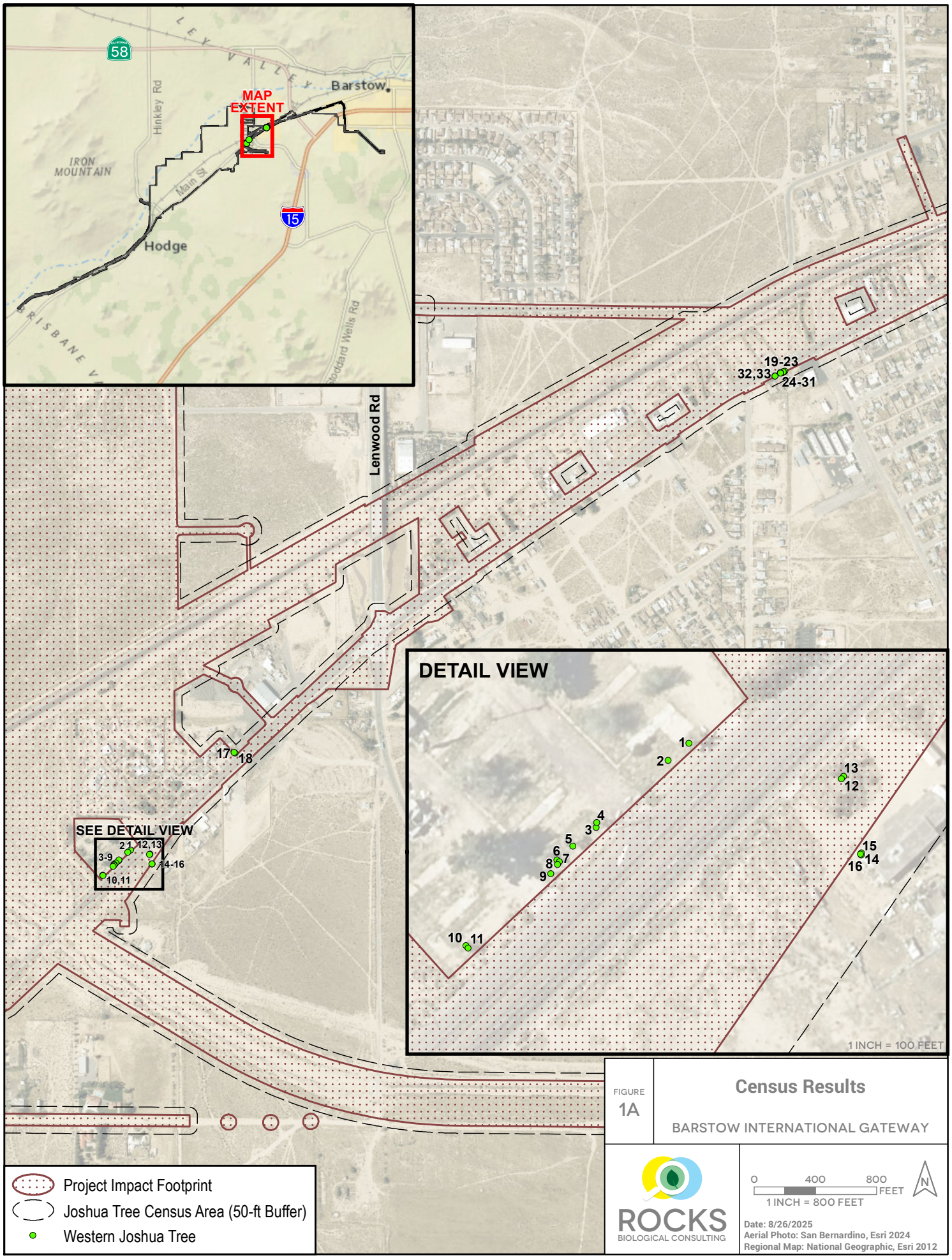
__. (2024b). Western Joshua Tree Relocation Guidelines and Protocols

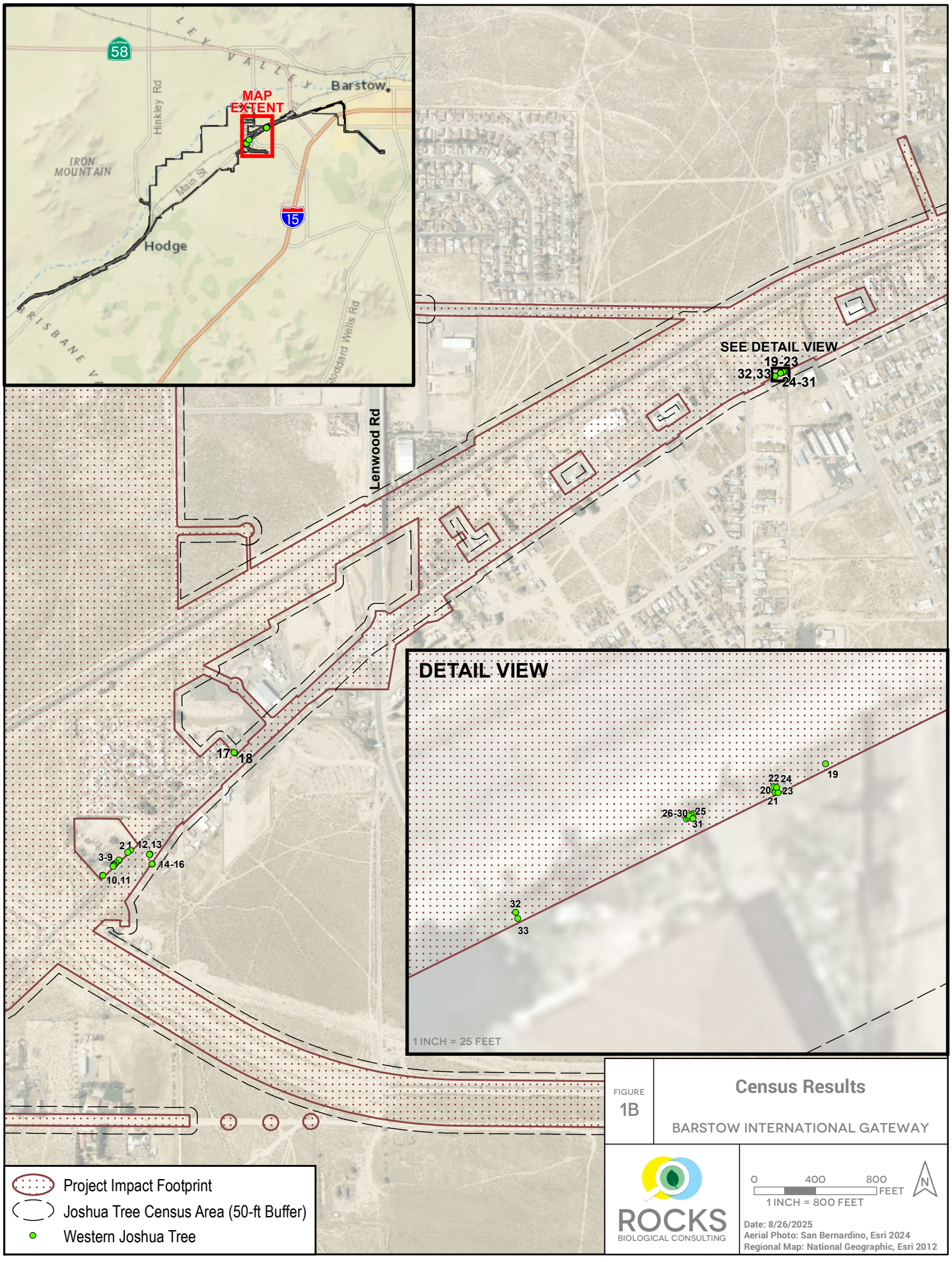
__. (2025). Western Joshua Tree Conservation Act Incidental Take Permit, Calculating Mitigation Fees. Retrieved January 28, 2025, from https://wildlife.ca.gov/Conservation/Environmental-Review/WJT/Permitting/WJTCA-ITP

[CBD] Center for Biological Diversity. 2019. A Petition to List the Western Joshua Tree (Yucca brevifolia) as Threatened under the California Endangered Species Act (CESA). Retrieved November 2024, from https://www.biologicaldiversity.org/species/plants/pdfs/CESA-petition-Western-Joshua-Tree-10-15-19.pdf

[USDA] U.S. Department of Agriculture. No date (n.d.). Fire Effects Information System (FEIS): Yucca brevifolia. Retrieved November 2024, from https://www.fs.usda.gov/database/feis/plants/tree/yucbre/all.html#DistributionAndOccurrence.

[USFWS] U.S. Fish and Wildlife Service. 2023. Joshua Tree Species Assessment and Listing Priority Assignment Form. Retrieved December 2024, from https://www.fws.gov/sites/default/files/documents/20230209a%20Joshua%20Tree%20Remand%20SAF.pdf.


MAP EXTENT
Barstow
Hodge
IRON MOUNTAIN
Hinkley Rd
Main St
Lenwood Rd
Goddard Wells Rd
58
15
19-23
32,33
24-31
17
18
SEE DETAIL VIEW
21
12,13
3-9
14-16
10,11
DETAIL VIEW
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
1 INCH = 100 FEET
Project Impact Footprint
Joshua Tree Census Area (50-ft Buffer)
Western Joshua Tree
FIGURE
1A
Census Results
BARSTOW INTERNATIONAL GATEWAY
ROCKS
BIOLOGICAL CONSULTING
0
400
800
FEET
1 INCH = 800 FEET
N
Date: 8/26/2025
Aerial Photo: San Bernardino, Esri 2024
Regional Map: National Geographic, Esri 2012


MAP EXTENT
Barstow
Hodge
IRON MOUNTAIN
Hinkley Rd
Main St
Lenwood Rd
Goddard Wells Rd
58
15
SEE DETAIL VIEW
19-23
32,33
24-31
DETAIL VIEW
17
18
21
12,13
3-9
14-16
10,11
19
22
24
20
23
21
26-30
25
31
32
33
1 INCH = 25 FEET
Project Impact Footprint
Joshua Tree Census Area (50-ft Buffer)
Western Joshua Tree
FIGURE
1B
Census Results
BARSTOW INTERNATIONAL GATEWAY
ROCKS
BIOLOGICAL CONSULTING
0
400
800
FEET
1 INCH = 800 FEET
N
Date: 8/26/2025
Aerial Photo: San Bernardino, Esri 2024
Regional Map: National Geographic, Esri 2012

APPENDIX A

WESTERN JOSHUA TREE CENSUS RESULTS TABLE

Tree ID	Latitude	Longitude	Surveyor	Survey Date	Common Name	Scientific	Size Class	Mature	Live or Dead	Flowers/Fruits	Impacted	Impact Location
1	34.868683	-117.123449	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	None	Root Impacts	Tree within 10' buffer of impacts
2	34.868645	-117.123506	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Dead	None	Root Impacts	Tree within 10' buffer of impacts
3	34.868496	-117.123703	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
4	34.868507	-117.123702	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Root Impacts	Tree within 10' buffer of impacts
5	34.868454	-117.123767	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
6	34.868424	-117.123811	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
7	34.868420	-117.123804	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Root Impacts	Tree within 10' buffer of impacts
8	34.868413	-117.123809	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	None	Root Impacts	Tree within 10' buffer of impacts
9	34.868393	-117.123828	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
10	34.868233	-117.124060	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
11	34.868228	-117.124055	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
12	34.868606	-117.123028	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	None	Removal	Tree within project impacts/project site
13	34.868600	-117.123035	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	Yes	Live	None	Removal	Tree within project impacts/project site
14	34.868429	-117.122982	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	No	Live	None	Root Impacts	Tree within 10' buffer of impacts
15	34.868433	-117.122982	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	No	Live	None	Root Impacts	Tree within 10' buffer of impacts
16	34.868431	-117.122985	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Root Impacts	Tree within 10' buffer of impacts
17	34.870407	-117.121157	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
18	34.870419	-117.121178	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	Fruiting	Root Impacts	Tree within 10' buffer of impacts
19	34.877172	-117.109116	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	No	Dead	None	Removal	Tree within project impacts/project site
20	34.877158	-117.109151	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	No	Live	None	Removal	Tree within project impacts/project site
21	34.877157	-117.109150	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	None	Removal	Tree within project impacts/project site
22	34.877160	-117.109151	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
23	34.877156	-117.109148	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	None	Removal	Tree within project impacts/project site
24	34.877159	-117.109149	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
25	34.877145	-117.109206	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
26	34.877145	-117.109207	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
27	34.877144	-117.109209	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
28	34.877144	-117.109208	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
29	34.877143	-117.109209	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
30	34.877142	-117.109211	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class A (<1 m)	No	Live	None	Removal	Tree within project impacts/project site
31	34.877142	-117.109206	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class B (1-4.9 m)	Yes	Live	None	Removal	Tree within project impacts/project site
32	34.877091	-117.109328	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	Fruiting	Removal	Tree within project impacts/project site
33	34.877087	-117.109326	Kelsey Woldt	10/17/24	Western Joshua Tree	Yucca brevifolia	Class C (≥5 m)	Yes	Live	None	Removal	Tree within project impacts/project site

Summary Data						
	Total Trees within 50-ft	Dead Trees	Live Trees	Directly Impacted	Potential Root Impacts	Total Impacted
Class A	12	0	12	9	3	12
Class B	13	2	11	6	7	13
Class C	8	0	8	2	6	8
Total	**33**	**2**	**31**	**17**	**16**	**33**

APPENDIX B

WESTERN JOSHUA TREE INDIVIDUAL PHOTOGRAPHS

Appendix B
Western Joshua Tree Individual Photographs



Photo 1. WJT 1



Photo 2. WJT 2



Photo 3. WJT 3



Photo 4. WJT 4



Photo 5. WJT 5



Photo 6. WJT 6



Photo 7. WJT 7



Photo 8. WJT 8



Photo 9. WJT 9



Photo 10. WJT 10



Photo 11.WJT 11 (yellow arrow)



Photo 12. WJT 12 (yellow arrow)



Photo 13. WJT 13 (yellow arrow)



Photo 14. WJT 14 (yellow arrow)



Photo 15. WJT 15 (yellow arrow)



Photo 16. WJT 16 (yellow arrow)



Photo 17. WJT 17 (yellow arrow)



Photo 18. WJT 18 (yellow arrow)



Photo 19. WJT 19 (yellow arrow)

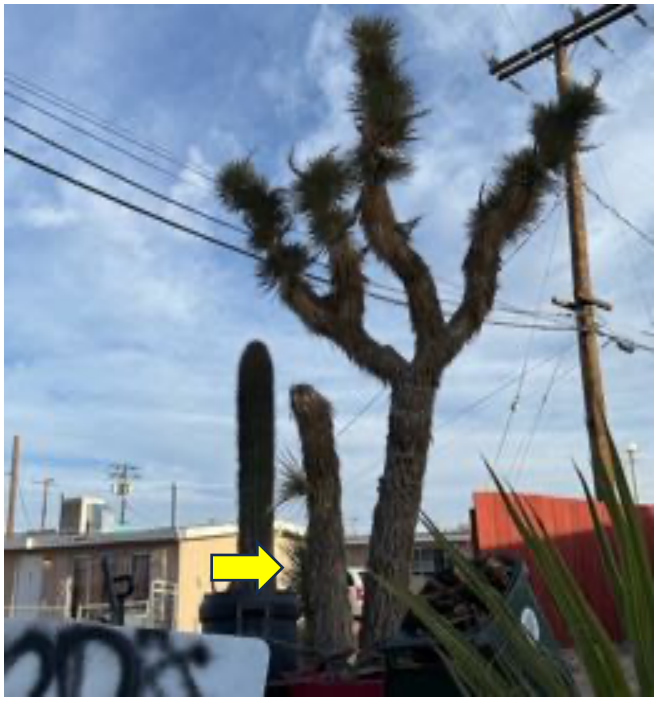


Photo 20. WJT 20 (yellow arrow)



Photo 21. WJT 21 (yellow arrow)

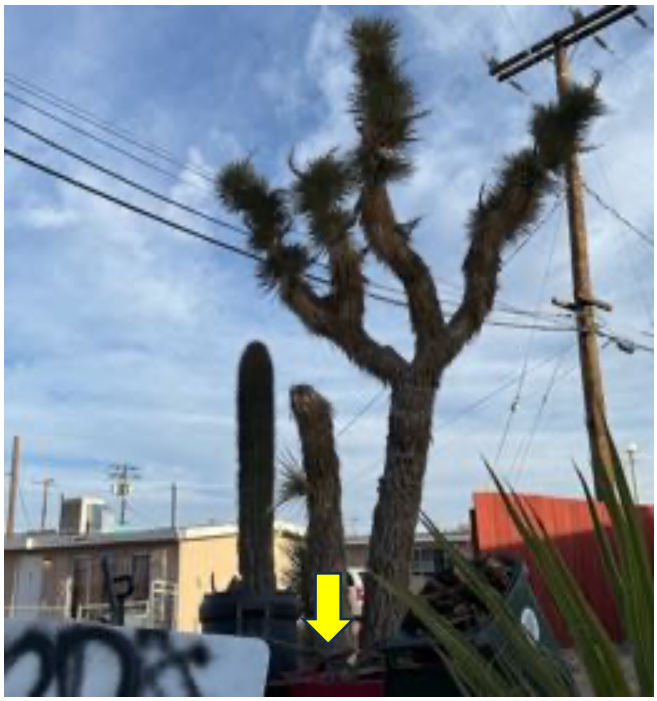


Photo 22. WJT 22 (yellow arrow)



Photo 23. WJT 23 (yellow arrow)



Photo 24. WJT 24 (yellow arrow)



Photo 25. WJT 25 (yellow arrow)



Photo 26. WJT 26 (yellow arrow; background)



Photo 27. WJT 27 (yellow arrow; foreground)



Photo 28. WJT 28 (yellow arrow)



Photo 29. WJT 29 (yellow arrow)



Photo 30. WJT 30 (yellow arrow)



Photo 31. WJT 31 (yellow arrow)



Photo 32. WJT 32 (yellow arrow)



Photo 33. WJT 33 (yellow arrow)

ATTACHMENT GG

BARSTOW INTERNATIONAL GATEWAY PROJECT - WILDLIFE MOVEMENT STUDY AND CAMERA TRAPPING REPORT

MEMORANDUM

To: Jennifer Harry, Kimley-Horn and Associates

From: Rocks Biological Consulting

Date: September 10, 2025

Subject: BNSF Barstow International Gateway 2024 – 2025 Wildlife Movement Camera Study

---

This memorandum summarizes the wildlife movement camera study (study) for the Barstow International Gateway (BIG) Project (project), conducted by Rocks Biological Consulting (RBC). The approximately 5,000-acre project site is located within the City of Barstow and unincorporated San Bernardino County, California (Figure 1). The project site is generally located south of the Mojave River and north of National Trails Highway and extends west/southwest from the City of Barstow for approximately 12.5 miles along the existing BNSF railroad tracks.

Wildlife corridors are often described as three-dimensional physical features that link two or more larger areas of wildlife habitat often with vegetative cover. Corridors can occur as natural features within the landscape and as human-made structures and vary greatly in size, shape, topography, cover, and other variables. A viable wildlife corridor often consists of a navigable path between habitat areas with vegetation cover or other refugia that may provide safety, rest and food for both transient species and resident populations of less mobile animals. These areas typically have fewer stressors or threats within and adjacent to the corridor. Wildlife corridors can consist of large, linear stretches of connected habitat or as a sequence of stepping-stones across the landscape. Relatively small, discontinuous areas of habitat such as patches of wetlands and ornamental vegetation, can facilitate wildlife movement, or corridors can be larger habitat areas with critical resources for local and/or regional fauna.

Regional corridors are landscape-level linkages connecting two or more large blocks of habitat, and local corridors allow resident animals to access critical resources (food, cover, and water) in a smaller area that might otherwise be fragmented by urban development. Wildlife corridors enable migration, colonization, and exchange of genetic diversity through interbreeding and are therefore critical for the movement of animals and the persistence of healthy, viable populations.

1 ENVIRONMENTAL SETTING

MAPPED CORRIDORS AND HABITAT LINKAGES

According to CDFW's Biogeographic Information and Observation System (BIOS), the project site overlaps with five mapped habitat linkages/wildlife movement corridors: a Terrestrial Connectivity Area of Conservation Emphasis (ACE), California Desert Linkage Network, CEHC Essential

Connectivity Area, CEHC Potential Riparian Connection, and the Mojave River – Barstow/Camp Cody Linkage identified in the "Missing Linkages" project (Figure 2).

EXISTING CONDITIONS

BIG is used by local wildlife as a corridor for movement, foraging, cover, and breeding within the extent of BIG and the immediate surrounding areas, as well as a corridor for movement between the larger blocks of habitat and regional connectivity areas beyond BIG. As documented during the general and focused species surveys conducted from 2019 to 2025, BIG provides suitable habitat that supports a variety of wildlife species. However, existing barriers to movement limit the ability for many species to move safely through BIG to surrounding areas of habitat.

The southern boundary of BIG is marked by approximately 14 miles of National Trails Highway until the 33kV alignment moves eastward and continues along a separate paved two-lane roadway (Figure 3). The speed limit along National Trails Highway is as high as 55 miles per hour. Additionally, approximately 13 miles of existing railway runs through the middle of BIG, which is built on raised ballast and fill and bridge structures. Although BIG contains native and naturalized vegetation communities that support a myriad of wildlife, the natural habitat on BIG is fragmented from larger blocks of natural habitat to the southeast and northwest due to these landscape-level obstructions. The regular presence of vehicles and the potential for collisions along National Trails Highway and the existing railway may also impact wildlife movement into and throughout BIG for foraging, dispersal, and/or cover.

However, select areas of BIG may facilitate wildlife movement through the project site. Lenwood Channel occurs in the northeastern portion of BIG and conveys flows to the Mojave River during heavy rain events (Figure 3). The channel is an earthen bottom feature, and its incised topography provides cover from its elevated surroundings. The channel ranges from approximately 15 feet to 60 feet wide and runs northwest-southeast through the proposed railyard and transload warehouse center, allowing wildlife to move between the south of BIG through the channel, to the Mojave River and vice versa. Additionally, a span bridge was built over the Lenwood Channel to support railway operations, leaving the corridor generally unobstructed for wildlife crossing the channel underneath the tracks. Various culverts and crossings along the existing railway also act as corridors for wildlife within BIG to access the Mojave River from the south without entering the right-of-way. Culvert sizes range from approximately two feet to five feet while crossings and span bridges are generally considered at-grade, sometimes large enough to accommodate passenger vehicles.

Although culverts and crossings are located along the existing railway, wildlife movement across/under the railway is still constrained as the openings are located at select locations primarily intended to convey water during heavy rain events. To access culverts and crossings, wildlife are funneled along the railway where adequate cover may be lacking. Certain wildlife may still successfully cross over National Trails Highway and the existing railway; however, those species may be limited to medium-sized animals with her mobility such as coyote (*Canis latrans*), bobcat (*Lynx rufus*), and desert kit fox (*Vulpes macrotis arsipus*), and are still subject to collisions with vehicles.

The northern portion of BIG (proposed transload warehouse center) occurs along the Mojave River, which flows during average/above average precipitation years and is also mapped as a wildlife corridor/linkage (Figure 2). Even as an ephemeral feature, wildlife may still use the linear corridor to travel between large expanses of natural habitat along the river year-round, including between other core desert habitat regions[1].

METHODS

Prior to conducting the study, RBC reviewed relevant literature and databases pertaining to wildlife corridors within/around BIG and its regional setting including, but not limited to:

- Google Earth[2]
- California Natural Diversity Database[3]
- California Essential Habitat Connectivity (CEHC), Essential Connectivity Areas and Potential Riparian Connections[4]
- Terrestrial Connectivity, Areas of Conservation Emphasis (ACE)[5]
- California Desert Connectivity Project, Desert Linkage Corridors[6]
- Missing Linkages in California's Landscape[7]

RBC conducted the study over six study periods from March 17, 2024 to March 18, 2025 to analyze wildlife movement within BIG and its vicinity. In addition to the study, various general biological surveys and focused and protocol-level species surveys were conducted within BIG between 2019 and 2025 during which the location of wildlife and their sign (tracks, scat, fur or feathers) were documented.

Using vegetation mapping, aerial photography, the various databases, and an assessment of existing site conditions, wildlife cameras were placed in areas with a relatively high likelihood of capturing wildlife activity including along linear landscape features and existing structures linking areas of natural habitat. These areas within the project site included culverts or openings under the existing railroad, areas parallel to the railroad such as access roads and game trails, and aquatic

---

1 *San Bernardino Council of Governments. (2023). San Bernardino County Regional Conservation Investment Strategy. Available at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=227227&inline*

2 *Google Earth Pro V 7.3.6.9345. (2024). San Bernardino County, California. 34°51'40.73"N, 117°08'58.47"W and 34°49'48.51"N, 117°10'05.53"W. Eye alt 2,863 feet and 2,409 feet. Retrieved July 2023.*

3 *California Department of Fish and Wildlife (CDFW). (2023). California Natural Diversity Database. Retrieved from https://wildlife.ca.gov/Data/CNDDB.*

4 *Spencer, W.D., P. Beier, K. Penrod, K. Winters, C. Paulman, H. Rustigian-Romsos, J. Strittholt, M. Parisi, and A. Pettler. (2010). California Essential Habitat Connectivity Project: A Strategy for Conserving a Connected California. Prepared for California Department of Transportation, California Department of Fish and Game, and Federal Highways Administration.*

5 *California Department of Fish and Wildlife (CDFW). (2019). Terrestrial Connectivity Areas of Conservation Emphasis. Retrieved January 2024 from https://apps.wildlife.ca.gov/bios6.*

6 *Science and Collaboration for Connected Wildlands (SCCW). (2014). Linkage Design for the California Desert Linkage Network. Retrieved January 2024, from https://apps.wildlife.ca.gov/bios6.*

7 *Penrod, K., R. Hunter, and M. Merrifield. (2001). Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings. Co-sponsored by the California Wilderness Coalition, The Nature Conservancy, U.S. Geological Survey, Center for the Reproduction of Endangered Species, and California State Parks.*

features such as ephemeral drainages or larger features like the Lenwood Channel. Wildlife cameras were also placed along the southern boundary of BIG along National Trails Highway to assess wildlife movement in and out of the project site at the edge of habitat, as well as along the northern portion of the project site adjacent to the Mojave River, which is also mapped in the CDFW BIOS as a movement corridor (i.e., CEHC Potential Riparian Connections, California Desert Linkage Network, and the Mojave River – Barstow/Camp Cody Linkage (Figure 2). The 33kV alignment and Tortilla Substation areas were excluded from the study as those project components would not result in permanent structures that would obstruct wildlife movement through those areas.

During each study period, 26 to 35 cameras were stationed throughout BIG, within the following general locations: Lenwood Channel, Unnamed Stream (Milepost [MP] 10.9), under crossings or culverts along the existing BNSF railway main track and lead track extension, along unpaved OHV access roads and other on-site habitat areas, and National Trails Highway crossings. The number and placement of cameras varied and were adjusted across the six study periods to increase capture efficacy and to minimize camera theft (Figures 4A – 4F).

During each study period, Vikeri or WOSPORTS brand infrared trail cameras were stationed throughout the site. At each camera location, wildlife cameras were oriented to best observe wildlife movement through culvert and vehicle crossing entrances/exits, towards/through natural landscapes with linear corridor features, or across project boundaries. Each camera's field of view was positioned to capture the surrounding habitat and/or nearby structure without obstructing the movement of the species. Cameras were not placed or focused on areas that could inadvertently trigger non-wildlife photo captures, such as areas with potential for wind-blown vegetation or in areas facing oncoming vehicle traffic. Camera settings allowed two to five-photo bursts per trigger with a 10 to 30-second delay between triggers. Cameras were operational over a 24-hour period during each day of each study period. At the end of each study period, biologists reviewed photos from each camera to identify wildlife species captured and document the frequency of each species captured throughout the study period. Capture frequency was determined by the quantity of image captures at any given camera location which was considered in assessing the functionality of each potential wildlife movement location. If a camera location was not effective at capturing wildlife due to a high frequency of false triggers such as moving vegetation or vehicle traffic, the camera angle was either adjusted to face a different direction or the camera was moved to a different location during the next study period.

Additionally, at the beginning and end of each study period, biologists drove along paved and unpaved roadways within the project vicinity to document and identify roadkill. Roadkill observations were used to document potential areas of concern for wildlife movement into and around BIG.

Photographs captured during the study were processed through the software Timelapse Image Analyzer[8] to aid in identifying the presence of wildlife in images, identifying false captures, sorting out duplicative captures, and extracting and filtering image metadata for post-study analysis. After

[8] *Greenberg, Saul. (2023). Timelapse: An Image Analyser for Camera Traps. Retrieved from https://saul.cpsc.ucalgary.ca/timelapse/.*

photos were sorted, they were reviewed by biologists familiar with desert species identification. Wildlife documented on camera were identified to the lowest taxonomic unit possible. Most wildlife captured via photos were identified to genus or species; however, some animals were only identifiable to order or family. Representative site photographs and camera locations are provided in Attachment A.

RESULTS

The study was conducted over the following six study periods over a course of 12 months to document any seasonal patterns of wildlife movement:

- Period 1: March 17 – 22, 2024
- Period 2: June 24 – 30, 2024
- Period 3: September 8 – 13, 2024
- Period 4: November 21 – 26, 2024
- Period 5: January 10 – 14, 2025
- Period 6: March 13 – 18, 2025

A variety of medium-sized mammals, small reptiles, rodents and lagomorphs (hares and rabbits), and bird species were detected by use of wildlife cameras within BIG during the study. Other notable detections included desert tortoise (*Gopherus agassizii*) and western toad (*Anaxyrus boreas*).

Coyote and desert kit fox were photo captured throughout all six study periods. Small mammals such as kangaroo rat (*Dipodomys* sp.) and white-tailed antelope squirrel (*Ammospermophilus leucurus*), and lagomorphs such as desert cottontail (*Sylvilagus audubonii*) and black-tailed jackrabbit (*Lepus californicus*), were also observed year-round throughout the site. These species are common desert residents and can be observed all year within their range. Bird species detected included several resident species such as mourning dove (*Zenaida macroura*), greater roadrunner (*Geococcyx californianus*), California thrasher (*Toxostoma redivivum*), California quail (*Callipepla californica*), and western meadowlark (*Sturnella neglecta).* Small reptiles observed include common desert species such as northern desert spiny lizard (*Sceloporus magister uniformis*), zebra-tailed lizard (*Callisaurus draconoides*) and desert iguana (*Dipsosaurus dorsalis*). Please note that most of the species detected via camera during the study were also documented during various other project surveys. Except for the detection of migratory bird species such as white-crowned sparrow (*Zonotrichia leucophrys*), lark sparrow (*Chondestes grammacus*), and American pipit (*Anthus rubescens*), the species detected during the study were relatively common residents and did not include any migratory species or species with regional post-natal dispersion potential. A full list of all the wildlife species detected during the study is included in Attachment B.

Following the completion of the study, species frequency maps were generated for all camera locations using a summary of the taxa captured at camera locations throughout all six study periods (Attachment C). Areas with higher capture frequencies for certain species were generally

assumed to support more wildlife movement/activity for those species compared to other camera locations with lower capture frequencies. Figure 5A displays the relative number of images captured of certain species with larger home ranges that may extend beyond BIG; these species included coyote, desert kit fox, desert tortoise, bobcat, and burrowing owl (*Athene cunicularia*). Figure 5B displays the relative number of images captured for smaller mammals such as members of taxonomic orders of Rodentia and Lagomorpha at camera locations.

Throughout the study, wildlife cameras placed throughout Lenwood Channel detected coyote traveling through the channel from the railway and northward. Coyotes were also documented at vehicle crossings and underneath span bridges along the railway, including crossings along the southwest lead track extension (Figures 4A – 4F, Attachment C). Although desert kit fox had a lower capture frequency, they were also observed on wildlife cameras throughout Lenwood Channel, though more detections occurred in the channel south of the main track. Desert kit fox was also observed at vehicle crossings and under span bridges along the railway such as MP 7.0 (vehicle crossing) and MP 8.2 (round corrugated culvert) during Period 2. Bobcat was detected during Periods 2 and 4, moving off site towards the Mojave River near MP 10.9 and traveling under the span bridge at MP 12.3. Although desert tortoise was observed on only one day (3/21/24) during only one study period (Period 1) at MP 11.3, the camera photos showed an adult tortoise approaching the culvert from the north several times and turning away; the burst frequency of the camera capture and relatively slower speed of the species resulted in a higher quantity of capture frequency and it was determined that the desert tortoise individual did not cross the culvert at MP 11.3 (Attachment A). A single burrowing owl was also observed during the study on one day (3/17/25) during Period 6 along the dune area adjacent the Mojave River but was not captured on camera during any other study periods (Figure 4F, Attachment C).

No medium-sized mammals such as coyote, desert kit box, or bobcat were observed on wildlife cameras stationed at Hinkley Road Bridge. Smaller wildlife including birds, desert cottontail, white-tailed antelope squirrel, and western toad were documented during most study periods. The camera at the Hinkley Road Bridge was placed immediately past the north side of the bridge within the riverbed where there was almost no vegetative cover. Most species caught on camera at the Hinkley Road Bridge were primarily observed during the day and were likely using the bridge as a shade structure (Attachment A). The lack of vegetation cover immediately surrounding the camera station at the Hinkley Road Bridge may have precluded wildlife species from crossing directly under the bridge or from resting long enough to be captured by the wildlife camera if they did pass under the bridge. Additionally, with only one camera aimed at the entire span of the Hinkley Road Bridge, species that moved quickly on the opposite side of the river from the camera may have been less likely to be detected, especially at night when species like desert kit fox and coyote are more active. The upper banks along the Mojave River at Hinkley Road Bridge contain mature shrubs and trees which may be more suitable for travel along the Mojave River corridor, as opposed to the lower elevation of the riverbed which lacks vegetation.

Small mammals had a substantially higher capture frequency throughout the study and were captured at every camera station at least once within the duration of the study (Figure 5B). Their higher capture frequencies of small mammals are likely due to their smaller home ranges;

individuals with smaller home ranges have less area to utilize for cover and dispersal so the likelihood of crossing the viewpoint of a stationary wildlife camera is greater than species with larger home ranges/higher mobility. Rodentia species had a higher frequency of being captured within Lenwood Channel and crossing at MP 8.9, while Lagomorphs had a higher capture frequency within MP 8.9 and other culverts and crossings along the existing railway.

National Trails Highway represents an obstruction to wildlife movement, and fragments natural habitats occurring on either side of the paved roadway. The presence of medium-sized mammals captured at cameras along the highway as well as roadkill observations of the same species supports that species with relatively larger home ranges are still crossing or attempting to cross National Trails Highway into BIG and/or crossing along the highway on the edge of habitat in search for food or cover. These species include coyote along National Trails Highway at the southwestern portion of the railyard, and desert kit fox along National Trails Highway at the northeastern portion of the railyard (Figure 6). Coyote and desert kit fox were also detected on cameras located along National Trails Highway, which (Figures 4A – 4F). Other roadkill observations along National Trails Highway included reptiles desert iguana (*Dipsosaurus dorsalis*) and red coachwhip (*Masticophis flagellum*). Carcasses of bird species such as common raven (*Corvus corax*) and barn owl (*Tyto alba*) were also observed along National Trails Highway; these species may have been struck while trying to forage at low heights along/near the roadway.

CONCLUSION

The wildlife movement camera study conducted from March 2024, to March 2025, confirmed the presence of certain resident desert wildlife species on site as well as some migratory bird species. The study also confirmed that medium-sized animals, small mammals, herpetofauna, and birds use features such as Lenwood Channel as well as various culverts and crossings along the railway for cover, dispersal, and movement between patches/blocks of habitat.

Additionally, BIG occurs in an area where movement is obstructed by human-made structures, such as the existing railway and National Trails Highway where roadkill of various species, including desert kit fox and coyote, was observed during the study. Although obstructed, wildlife are still moving through certain structures within BIG. It has been suggested that desert kit fox prefer to cross barriers such as roads or railways at grade-level as there are few documented cases of them using structures[9]. However, desert kit fox were observed using structures within BIG including vehicle underpasses and small round corrugated metal culverts under the main track during the study. The desert kit foxes appeared to be using structures more suitable for their body size versus those of their predators like coyotes. Use of larger structures by desert kit fox seem to be consistent with predator avoidance; there were several instances where desert kit fox was only observed at certain structures when coyote was not in a given study period (Attachment C).

Small mammal, herpetofauna, and bird activity was captured on wildlife cameras within the Mojave River at Hinkley Bridge and at several locations along the northern BIG boundary adjacent to the

[9] U.S. Department of Transportation. Federal Highway Administration. 2011. Wildlife Crossing Structure Handbook: Design and Evaluation in North America. Hot Sheets 6 and 9.

river. Medium-sized mammal species were observed moving within Lenwood Channel, which connects areas south of BIG to the Mojave River. Although medium-sized mammals such as coyote, desert kit fox, and bobcat were not observed on camera within the river at Hinkley Road Bridge, they may travel along the river edge immediately adjacent to BIG as they were still observed in the vicinity of BIG along the Mojave River corridor. The use of the Mojave River corridor for local and regional wildlife movement around/within BIG could be studied further with additional camera locations throughout the river corridor, including multiple camera locations along Hinkley Road bridge and its immediate surroundings.

The study confirmed that species are moving within and across BIG, and wildlife likely have the opportunity to move through the site and beyond in the future should existing corridors be maintained or improved, such as Lenwood Channel, underneath Hinkley Road bridge along the Mojave River, and/or various culverts and span bridges proposed along the southwest lead track extension.

ATTACHMENTS

Figure 1 – Location

Figure 2 – Mapped Wildlife Corridors and Habitat Linkages

Figure 3 – Wildlife Movement Existing Conditions

Figure 4A – Wildlife Movement Study – Period 1: March 17 – 22, 2024

Figure 4B – Wildlife Movement Study – Period 2: June 24 – 30, 2024

Figure 4C – Wildlife Movement Study – Period 3: September 8 – 13, 2024

Figure 4D – Wildlife Movement Study – Period 4: November 21 – 26, 2024

Figure 4E – Wildlife Movement Study – Period 5: January 10 – 14, 2025

Figure 4F – Wildlife Movement Study – Period 6: March 13 – 18, 2025

Figure 5A – Wildlife Site Use – Medium-sized Wildlife and BUOW

Figure 5B – Wildlife Site Use – Lagomorph and Rodentia

Figure 6 – Roadkill Survey Results

Attachment A. Site Photographs and Study Captures

Attachment B. Wildlife Detected during the Wildlife Movement Camera Study

Attachment C. Summary of Capture Data from Periods 1 – 6

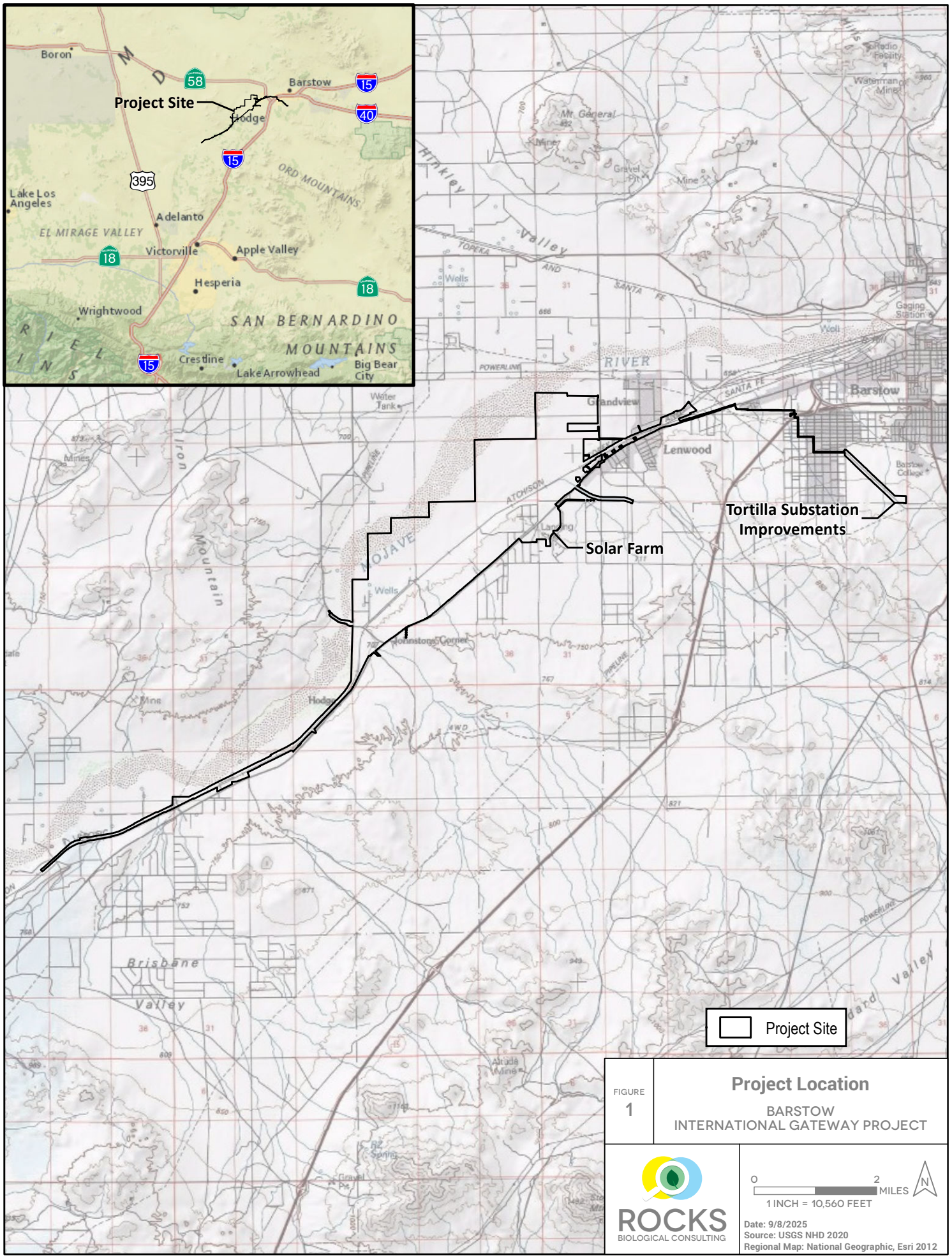


FIGURE 1

Project Location

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 2 MILES
1 INCH = 10,560 FEET

Date: 9/8/2025
Source: USGS NHD 2020
Regional Map: National Geographic, Esri 2012

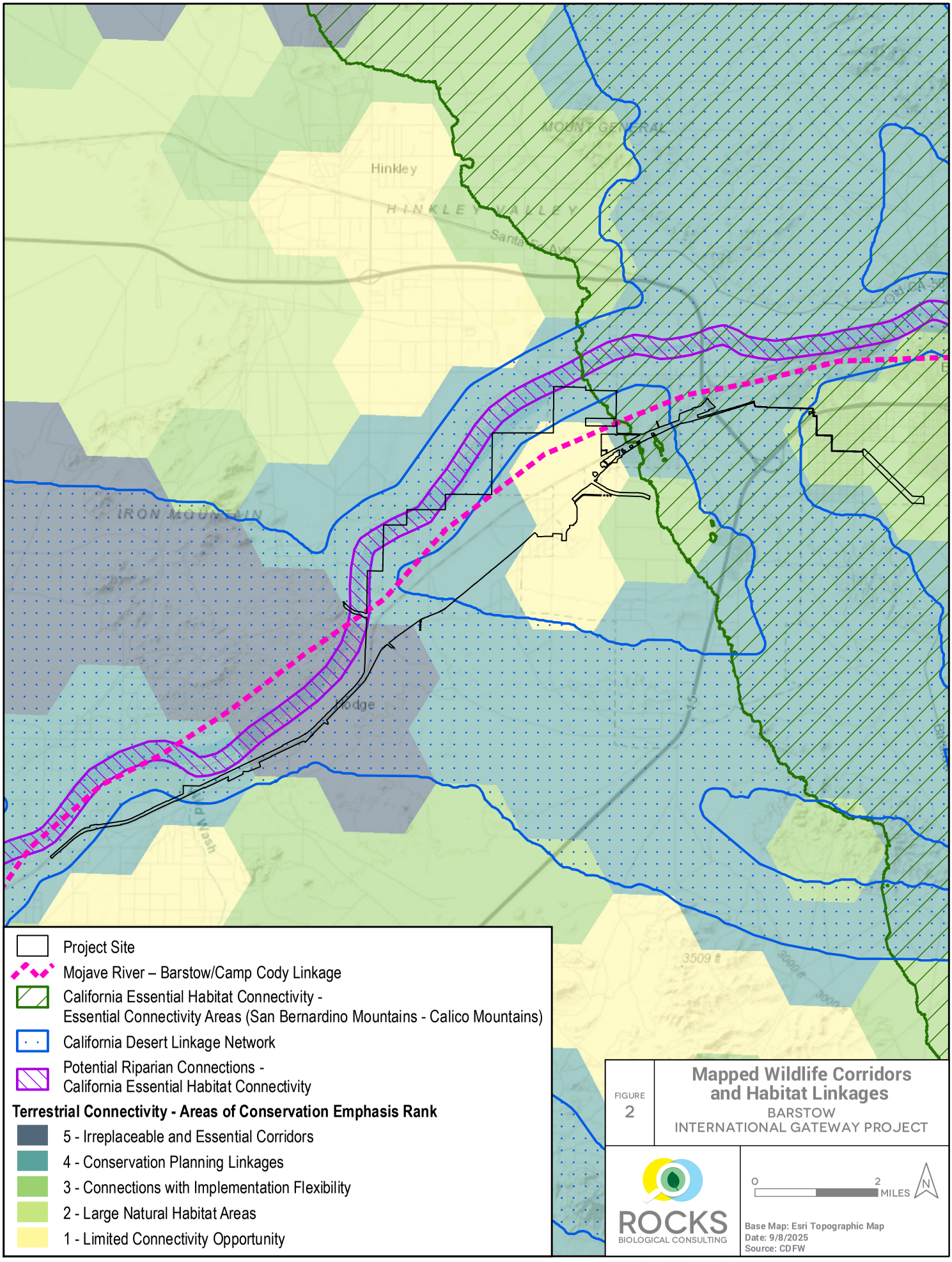


FIGURE 2

Mapped Wildlife Corridors and Habitat Linkages

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS
BIOLOGICAL CONSULTING

0 2 MILES

N

Base Map: Esri Topographic Map
Date: 9/8/2025
Source: CDFW

Project Site

Existing Barriers

National Trails Highway

Existing BNSF Railway

Vehicle Crossing

Culvert

Movement Corridors

Mojave River (Potential Riparian Connections – CEHC Project)

Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards











FIGURE 3

Wildlife Movement Existing Conditions

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2020, Esri

Project Site

Camera Location with no Sightings

Period 1 Species Recorded

- Coyote (*Canis latrans*)
- Desert kit fox (*Vulpes macrotis arsipus*)
- Desert tortoise (*Gopherus agassizii*)

Existing Barriers

- National Trails Highway
- Existing BNSF Railway
- Vehicle Crossing
- Culvert

Movement Corridors

- Mojave River (Potential Riparian Connections – CEHC Project)
- Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

DETAIL VIEW

DETAIL VIEW

Oak Grove Rd

National Trails Hwy

Gazana St

Lenwood Rd

58

15

Wildlife Movement Study - Period 1: March 17-22, 2024

FIGURE 4A

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

Aerial Photo: San Bernardino County 2024, Esri

Project Site

Camera Location with no Sightings

Period 2 Species Recorded

- Bobcat (*Lynx rufus*)
- Coyote (*Canis latrans*)
- Desert kit fox (*Vulpes macrotis arsipus*)

Existing Barriers

- National Trails Highway
- Existing BNSF Railway
- Vehicle Crossing
- Culvert

Movement Corridors

- Mojave River (Potential Riparian Connections – CEHC Project)
- Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Lenwood Rd

Oak Grove Rd

Gazana St

58

15

Wildlife Movement Study - Period 2: June 24-30, 2024

FIGURE 4B

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2020, Esri

Project Site

Camera Location with no Sightings

Period 3 Species Recorded

Coyote (Canis latrans)

Desert kit fox (*Vulpes macrotis arsipus*)

Existing Barriers

National Trails Highway

Existing BNSF Railway

Vehicle Crossing

Culvert

Movement Corridors

Mojave River (Potential Riparian Connections – CEHC Project)

Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Oak Grove Rd

Lenwood Rd

Gazana St

58

15

Wildlife Movement Study - Period 3: September 8-13, 2024

FIGURE 4C

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2024, Esri

Project Site

Camera Location with no Sightings

Period 4 Species Recorded

- Bobcat (*Lynx rufus*)
- Coyote (*Canis latrans*)
- Desert kit fox (*Vulpes macrotis arsipus*)

Existing Barriers

- National Trails Highway
- Existing BNSF Railway
- Vehicle Crossing
- Culvert

Movement Corridors

- Mojave River (Potential Riparian Connections – CEHC Project)
- Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Lenwood Rd

Oak Grove Rd

Gazana St

58

15

Wildlife Movement Study - Period 4: November 21-26, 2024

FIGURE 4D

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2024, Esri

Project Site

Camera Location with no Sightings

Period 5 Species Recorded

Coyote (Canis latrans)

Desert kit fox (Vulpes macrotis arsipus)

Existing Barriers

National Trails Highway

Existing BNSF Railway

Vehicle Crossing

Culvert

Movement Corridors

Mojave River (Potential Riparian Connections – CEHC Project)

Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Lenwood Rd

Oak Grove Rd

Gazana St

58

15

1 2 3 4 5 6 7 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 33 35

FIGURE 4E

Wildlife Movement Study - Period 5: January 10-14, 2025

BARSTOW INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2020, Esri

Project Site

Camera Location with no Sightings

Period 6 Species Recorded

Burrowing owl (*Athene cunicularia*)

Desert kit fox (*Vulpes macrotis arsipus*)

Existing Barriers

National Trails Highway

Existing BNSF Railway

Vehicle Crossing

Culvert

Movement Corridors

Mojave River (Potential Riparian Connections – CEHC Project)

Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Lenwood Rd

Oak Grove Rd

Gazana St

58

15

Wildlife Movement Study - Period 6: March 13-18, 2025

FIGURE 4F

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2024, Esri

Project Site
Culvert
Vehicle Crossing
Camera Location with no Sightings

Coyote (*Canis latrans*) Count
- 1-3
- 5-9
- 10-15

Desert kit fox (*Vulpes macrotis arsipus*) Count
- 1-4
- 5-9
- 11-12
- 18

Burrowing owl (*Athene cunicularia*) Count
- 2

Bobcat (*Lynx rufus*) Count
- 3

Desert tortoise (*Gopherus agassizii*) Count
- 20

Existing Barriers
- National Trails Highway
- Existing BNSF Railway

Movement Corridors
- Mojave River (Potential Riparian Connections – CEHC Project)
- Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Oak Grove Rd
Gazana St
Lenwood Rd
58
15

FIGURE 5A

Wildlife Site Use

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET
1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2020, Esri

Lagomorpha Count

- 1-10
- 11-25
- 26-50
- 51-100
- 101-200
- 240

Rodentia Count

- 1-10
- 11-25
- 26-50
- 51-100
- 101-200
- 201-500
- 500+

- Project Site
- Culvert
- Vehicle Crossing

Existing Barriers

- National Trails Highway
- Existing BNSF Railway

Movement Corridors

- Mojave River (Potential Riparian Connections – CEHC Project)
- Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Lenwood Rd

Oak Grove Rd

Gazana St

58

15

FIGURE 5B

Wildlife Site Use

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,000 FEET

1 INCH = 4,000 FEET

N

Aerial Photo: San Bernardino County 2020, Esri

Project Site
Roadkill Survey Route

Roadkill Survey Results

- Aves
- Barn owl (*Tyto alba*)
- Common raven (*Corvus corax*)
- Coyote (*Canis latrans*)
- Desert iguana (*Dipsosaurus dorsalis*)
- Desert kit fox (*Vulpes macrotis arsipus*)
- Eurasian collared-dove (*Streptopelia decaocto*)
- Red coachwhip (*Masticophis flagellum piceus*)

Vehicle Crossing
Culvert

Existing Barriers

National Trails Highway
Existing BNSF Railway

Movement Corridors

Mojave River (Potential Riparian Connections – CEHC Project)
Lenwood Channel[1]

[1] Representative depiction of Lenwood Channel wildlife movement corridor, not mapped to USACE aquatic resources mapping standards

Lenwood Rd
Oak Grove Rd
Gazana St
58
15

FIGURE 6

Roadkill Survey Results

BARSTOW
INTERNATIONAL GATEWAY PROJECT

ROCKS BIOLOGICAL CONSULTING

0 4,500 FEET
1 INCH = 4,500 FEET

N

Aerial Photo: San Bernardino County 2020, Esri

Attachment A

Site Photographs and Study Captures



Photo 1. Active desert dunes habitat near the center of the project site, northwest of the railroad tracks, facing north. October 20, 2021.



Photo 2. Creosote bush scrub near the center of the project site, facing north. March 16, 2022.



Photo 3. Disturbed allscale scrub and earthen drainage adjacent to the railroad tracks, near the center of the project site, facing northeast. April 12, 2022.



Photo 4. View of the Mojave River flowing under Hinkley Road. April 18, 2023.



Photo 5. Lenwood Channel within the eastern portion of the project site, facing northwest. April 13, 2022.



Photo 6. Representative photo of large railroad cement culvert with an earthen bottom. April 13, 2022.



Photo 7. Railroad bridge crossing with an established barren vehicle access road underneath. June 21, 2022.



Photo 8. View of a smaller railroad cement culverts. Deployed infrared trail camera circled in red. June 24, 2024.



Photo 9. Metal corrugated culvert that runs underneath Route 66. Deployed infrared trail camera circled in red. June 24, 2024.



Photo 10. Large metal culvert that runs under a residential access road that was used by a desert kit fox (*Vulpes macrotis arsipus*) as an atypical pipe den. Deployed infrared trail camera circled in red. June 24, 2024.



Photo 11. Coyote captured traveling southward along Lenwood Channel, at northern portion of channel (Period 1: Camera 8).



Photo 12. Coyote captured traveling within Lenwood Channel underneath the bridge at MP 6.5 (Period 1: Camera 1).



Photo 13. Coyote captured emerging from under the existing railroad bridge at MP 10.06 (Period 1: Camera 22)



Photo 14. Desert kit fox was captured multiple nights during Period 2 traveling through the span bridge at MP 8.2 (Period 1: Camera 8).



Photo 15. Desert kit fox captured underneath bridge at MP 7.0 (Period 3: Camera 7).



Photo 16. Bobcat captured traveling underneath the bridge at MP 12.3 (Period 2: Camera 17).



Photo 17. Bobcat captured within brush along game trail, heading north towards the Mojave River (Period 4: Camera 15).



Photo 18. Burrowing owl captured within the dune area adjacent to the Mojave River (Period 6: Camera 1).



Photo 19. Desert tortoise captured approaching the culverts at MP 11.3. Subsequent captures showed the desert tortoise turning away from the culverts, then reapproaching them before turning away again (Period 1: Camera 20).



Photo 20. Same desert tortoise individual turning away after initial approach to the culvert at MP 11.3 (Period 1: Camera 20).



Photo 21. Cottontail approaching culvert underneath National Trails Highway along Lenwood Channel (Period 2: Camera 29).



Photo 22. Cottontail capture traveling underneath Hinkley Road bridge (Period 2: Camera 12).



Photo 23. Woodrat captured on camera within the riverbed near Hinkley Road bridge (Period 4: Camera 14).



Photo 24. Kangaroo rat captured entering culvert under National/Trails Highway along Lenwood Channel (Period 2: Camera 29).

Appendix B

Wildlife Detected during the Wildlife Movement Camera Study

Common Name	Scientific Name	Study Period
Amphibians		
Western toad	*Anaxyrus boreas*	2, 3, 4, 5, 6
Reptiles		
Desert iguana	*Dipsosaurus dorsalis*	2
Desert tortoise [3, 4]	*Gopherus agassizii*	1
Great Basin whiptail	*Aspidoscelis tigris tigris*	1, 2, 3
Side-blotched lizard	*Uta stansburiana*	1, 2
Western fence lizard	*Sceloporus occidentalis*	6
Yellow-backed spiny lizard	*Sceloporus uniformis*	1, 2
Zebra-tailed lizard	*Callisaurus draconoides*	2
Birds		
American pipit	*Anthus rubescens*	2, 5
Barn owl	*Tyto alba*	2
Bell' sparrow	*Artemisiospiza bellii*	4, 5, 6
Burrowing owl [5, 6]	*Athene cunicularia*	4
California quail	*Callipepla californica*	1, 2, 3, 4, 5, 6
California thrasher	*Toxostoma redivivum*	1, 2, 3 6
Chukar	*Alectoris chukar*	2
Common raven	*Corvus corax*	1, 2, 3, 4, 5, 6
Eurasian collared-dove	*Streptopelia decaocto*	6
Greater roadrunner	*Geococcyx californianus*	1, 3, 4, 5, 6
Horned lark	*Eremophila alpestris*	2, 3, 5, 6
House finch	*Haemorhous mexicanus*	4, 6
House sparrow	*Passer domesticus*	2
Lark sparrow	*Chondestes grammacus*	4,
Mourning dove	*Zenaida macroura*	1, 2, 5, 6
Red-tailed hawk	*Buteo jamaicensis*	4,
Rock pigeon	*Columba livia*	2
Rock wren	*Salpinctes obsoletus*	2, 4
Sage thrasher	*Oreoscoptes montanus*	2
Say's phoebe	*Sayornis saya*	2
Western meadowlark	*Sturnella neglecta*	1, 4
White-crowned sparrow	*Zonotrichia leucophrys*	1, 4, 5, 6

Mammals		
Black rat [7]	*Rattus rattus*	5
Black-tailed jackrabbit	*Lepus californicus*	1, 2, 3, 4, 5, 6
Bobcat [2]	*Felis rufus*	2, 4
California ground squirrel	*Otospermophilus beecheyi*	2, 3, 6
Coyote	*Canis latrans*	1, 2, 3, 4, 5, 6
Deer mouse	*Peromyscus maniculatus*	1, 2, 5
Desert cottontail	*Sylvilagus audubonii*	1, 2, 3, 4, 5, 6
Desert kit fox [1]	*Vulpes macrotis arsipus*	1, 2, 3, 4, 5, 6
Domestic cat	*Felis catus*	3, 6
Domestic dog	*Canis lupus familiaris*	1, 2
House mouse [7]	*Mus musculus*	4
Kangaroo rat	*Dipodomys* sp.	1, 2, 3, 4, 5, 6
Spiny pocket mouse	*Chaetodipus sp.*	4,
White-tailed antelope squirrel	*Ammospermophilus leucurus*	1, 2, 3, 4, 5, 6
Woodrat	*Neotoma* sp.	2, 4, 5

Notes:

[1] California Fish and Game Code (CFGC) Fur-bearing Mammal

[2] CFGC Non-game Mammal

[3] Federally Threatened

[4] State Threatened

[5] State Candidate for Listing

[6] State Species of Special Concern (SSC)

[7] Non-native Species

Study Periods:

1: March 17-22, 2024

2: June 24-30, 2024

3: September 8-13, 2024

4: November 21-26, 2024

5: January 10-14, 2025

6: March 13-18, 2025

WILDLIFE MOVEMENT STUDY: MEDIUM-SIZED SPECIES

Period 1: March 17-22, 2024

Camera	Taxa	General Location / Culvert or Undercrossing Number	Taxa Image Count
1	Coyote	Lenwood Channel / BR 6.5	5
2	Coyote	Lenwood Channel / BR 6.5	1
6	Coyote	Lenwood Channel / BR 6.5E	10
8	Coyote	Lenwood Channel / BR 6.5E	10
9	Coyote	Lenwood Channel	5
10	Coyote	Lenwood Channel	10
11	Coyote	Lenwood Channel	1
13	Desert Kit Fox	Main Street	1
15	Coyote	Main Track / BR 10.9	1
20	Coyote; Desert Tortoise; Desert Kit Fox	Main Track / BR 11.3	2; 20; 11
22	Coyote	Main Track / BR 10.06	5
26	Desert Kit Fox	Container Yard	1

Period 2: June 24-30, 2024

Camera	Taxa	General Location	Taxa Image Count
4	Desert Kit Fox; Coyote	Lenwood Channel / BR 6.5E	9; 1
7	Desert Kit Fox	Main Track / BR 7.0	1
8	Desert Kit Fox	Main Track / BR 8.2	18
17	Bobcat	Lead Track Extension / BR 12.3	3
20	Coyote	Lead Track Extension / BR 13.7	3
23	Coyote	Lead Track Extension / BR 15.2	3
26	Coyote	Lead Track Extension	3
27	Desert Kit Fox	Main Street	3

Attachment C

Summary of Capture Data for Periods 1 - 6

Period 3: September 8-13, 2024

Camera	Taxa	General Location	Taxa Image Count
7	Desert Kit Fox	Main Track / BR 7.0	6
9	Desert Kit Fox	Transload Warehouses	1
10	Coyote	Main Track / BR 8.9	3
15	Desert Kit Fox	Main Track / BR 10.9	6
16	Desert Kit Fox	Main Track / BR 11.3	3
19	Desert Kit Fox	Lead Track Extension / BR 15.2	7
22	Coyote	Lead Track Extension	5
23	Coyote	Main Street	6
24	Desert Kit Fox	Main Street	3
28	Desert Kit Fox	Main Street	3
29	Desert Kit Fox	Main Street	9
30	Desert Kit Fox	Main Street	6

Period 4: November 21-26, 2024

Camera	Taxa	General Location	Taxa Image Count
2	Desert Kit Fox	Lenwood Channel / BR 6.5A	2
4	Coyote	Lenwood Channel	12
9	Coyote	Transload Warehouses	3
12	Coyote; Desert Kit Fox	Transload Warehouses	15; 1
15	Bobcat, Desert Kit Fox	Main Track / BR 10.9	3; 6
22	Desert Kit Fox	Lead Track Extension	2
23	Coyote	Main Street	2
27	Desert Kit Fox	Main Street	5
29	Desert Kit Fox; Coyote	Main Street	6; 2
31	Desert Kit Fox	Main Street	3
32	Desert Kit Fox	East Solar	4
34	Desert Kit Fox	Lenwood Channel	2

Attachment C

Summary of Capture Data for Periods 1 - 6

Period 5: January 10-14, 2025

Camera	Taxa	General Location	Taxa Image Count
3	Coyote	Aquatic Resource Area	1
4	Coyote	Lenwood Channel	2
5	Coyote	Lenwood Channel	2
6	Coyote; Desert Kit Fox	Lenwood Channel / BR 6.5	3; 2
9	Coyote	Transload Warehouses	9
16	Desert Kit Fox; Coyote	Main Track / BR 11.3	4; 3
18	Desert Kit Fox	Lead Track Extension / BR 13.7	2
29	Coyote	Main Street	2
30	Coyote	Main Street	2
34	Desert Kit Fox	Lenwood Channel	12

Period 6: March 13-18, 2025

Camera	Taxa	General Location	Taxa Image Count
1	Burrowing Owl	Aquatic Resource Area	2
7	Desert Kit Fox	Main Track / BR 7.0	2
15	Desert Kit Fox	Main Track / BR 10.9	2
31	Desert Kit Fox	Main Street	8
32	Desert Kit Fox	East Solar	3
34	Desert Kit Fox	Main Track / BR 8.9	2

WILDLIFE MOVEMENT STUDY: RODENTS AND LAGOMORPHS

Period 1: March 17-22, 2024

Camera	Taxa	General Location	Taxa Image Count
1	Rodentia	Lenwood Channel / BR 6.5	1
3	Rodentia	Lenwood Channel / BR 6.5	100
4	Rodentia	Lenwood Channel / BR 6.5	24
5	Rodentia	Lenwood Channel / BR 6.5E	143
6	Rodentia	Lenwood Channel / BR 6.5E	155
7	Rodentia	Lenwood Channel / BR 6.5E	851
8	Rodentia	Lenwood Channel / BR 6.5E	166
9	Rodentia	Lenwood Channel	690
10	Rodentia	Lenwood Channel	255
11	Rodentia	Lenwood Channel	360
12	Rodentia	Lenwood Channel	96
14	Rodentia	Main Street	52
15	Rodentia	Main Track / BR 10.9	7
16	Rodentia	Main Track / BR 10.9	93
17	Rodentia	Main Track / BR 10.9	27
18	Rodentia	Main Track / BR 10.9	123
19	Rodentia	Main Track / BR 10.9	18
20	Rodentia	Main Track / BR 11.3	25
21	Rodentia	Lead Track Extension / BR 12.3	20
22	Rodentia	Main Track / BR 10.06	9
24	Rodentia	Main Track / BR 8.9	18
27	Rodentia	Lenwood Channel / BR 6.5	24
28	Rodentia	Main Track / BR 8.2	22
29	Rodentia	Main Track / BR 7.0	29

Attachment C

Summary of Capture Data for Periods 1 - 6

Camera	Taxa	General Location	Taxa Image Count
3	Lagomorpha	Lenwood Channel / BR 6.5	4
4	Lagomorpha	Lenwood Channel / BR 6.5	4
5	Lagomorpha	Lenwood Channel / BR 6.5E	22
6	Lagomorpha	Lenwood Channel / BR 6.5E	12
7	Lagomorpha	Lenwood Channel / BR 6.5E	48
8	Lagomorpha	Lenwood Channel / BR 6.5E	2
9	Lagomorpha	Lenwood Channel	125
10	Lagomorpha	Lenwood Channel	20
11	Lagomorpha	Lenwood Channel	120
12	Lagomorpha	Lenwood Channel	31
13	Lagomorpha	Main Street	20
14	Lagomorpha	Main Street	6
15	Lagomorpha	Main Track / BR 10.9	38
16	Lagomorpha	Main Track / BR 10.9	169
17	Lagomorpha	Main Track / BR 10.9	38
18	Lagomorpha	Main Track / BR 10.9	18
19	Lagomorpha	Main Track / BR 10.9	9
20	Lagomorpha	Main Track / BR 11.3	62
21	Lagomorpha	Lead Track Extension / BR 12.3	19
22	Lagomorpha	Main Track / BR 10.06	109
26	Lagomorpha	Container Yard	9
29	Lagomorpha	Main Track / BR 7.0	3
30	Lagomorpha	Block Swap Yard	12

Period 2: June 24-30, 2024

Camera	Taxa	General Location	Taxa Image Count
2	Rodentia	Lenwood Channel	87
3	Rodentia	Lenwood Channel	69
4	Rodentia	Lenwood Channel / BR 6.5E	92

Attachment C

Summary of Capture Data for Periods 1 - 6

Camera	Taxa	General Location	Taxa Image Count
5	Rodentia	Lenwood Channel	14
6	Rodentia	Lenwood Channel	23
7	Rodentia	Main Track / BR 7.0	30
8	Rodentia	Main Track / BR 8.2	75
9	Rodentia	Main Track / BR 8.9	598
10	Rodentia	Main Track / BR 10.06	245
11	Rodentia	Hinkley Bridge	19
12	Rodentia	Hinkley Bridge	10
13	Rodentia	Main Track / BR 10.9	3
15	Rodentia	Main Track / BR 10.9	15
16	Rodentia	Main Track / BR 11.3	23
17	Rodentia	Lead Track Extension / BR 12.3	58
18	Rodentia	Lead Track Extension / BR 12.5	82
19	Rodentia	Lead Track Extension / BR 13.0	255
20	Rodentia	Lead Track Extension / BR 13.7	222
21	Rodentia	Lead Track Extension / BR 14.0	64
23	Rodentia	Lead Track Extension / BR 15.2	77
24	Rodentia	Lead Track Extension / BR 15.7	48
26	Rodentia	Main Street	22
27	Rodentia	Main Street	67
28	Rodentia	East Solar	27
29	Rodentia	Lenwood Channel / BR 6.5	21
30	Rodentia	Lenwood Channel	47

Camera	Taxa	General Location	Taxa Image Count
2	Lagomorpha	Lenwood Channel / BR 6.5	3
3	Lagomorpha	Lenwood Channel / BR 6.5	9
4	Lagomorpha	Lenwood Channel / BR 6.5	6
5	Lagomorpha	Lenwood Channel / BR 6.5	6

Attachment C

Summary of Capture Data for Periods 1 - 6

Camera	Taxa	General Location	Taxa Image Count
6	Lagomorpha	Lenwood Channel / BR 6.5	14
7	Lagomorpha	Main Track / BR 7.0	68
8	Lagomorpha	Main Track / BR 8.2	90
9	Lagomorpha	Main Track / BR 8.9	240
10	Lagomorpha	Main Track / BR 10.06	64
11	Lagomorpha	Hinkley Bridge	108
12	Lagomorpha	Hinkley Bridge	64
15	Lagomorpha	Main Track / BR 10.9	59
16	Lagomorpha	Main Track / BR 11.3	84
17	Lagomorpha	Lead Track Extension / BR 12.3	185
18	Lagomorpha	Lead Track Extension / BR 12.5	59
19	Lagomorpha	Lead Track Extension / BR 13.0	78
20	Lagomorpha	Lead Track Extension / BR 13.7	161
21	Lagomorpha	Lead Track Extension / BR 14.0	57
23	Lagomorpha	Lead Track Extension / BR 15.2	24
26	Lagomorpha	Main Street	3
28	Lagomorpha	East Solar	19
29	Lagomorpha	Lenwood Channel / BR 6.5	30
30	Lagomorpha	Lenwood Channel	12

Period 3: September 8-13, 2024

Camera	Taxa	General Location	Taxa Image Count
1	Rodentia	Aquatic Resource Area	261
2	Rodentia	Lenwood Channel / BR 6.5A	197
3	Rodentia	Aquatic Resource Area	9
4	Rodentia	Lenwood Channel	53
5	Rodentia	Lenwood Channel	104
6	Rodentia	Lenwood Channel / BR 6.5	20
7	Rodentia	Main Track / BR 7.0	6
9	Rodentia	Transload Warehouses	60

10	Rodentia	Main Track / BR 8.9	34
11	Rodentia	Hinkley Bridge	140
12	Rodentia	Transload Warehouses	97
14	Rodentia	Hinkley Bridge	19
15	Rodentia	Main Track BR 10.9	14
16	Rodentia	Main Track / BR 11.3	11
17	Rodentia	Lead Track Extension / BR 12.3	41
18	Rodentia	Lead Track Extension / BR 13.7	67
19	Rodentia	Lead Track Extension / BR 15.2	26
21	Rodentia	Lead Track Extension	1
22	Rodentia	Lead Track Extension	192
25	Rodentia	Lead Track Extension	42
26	Rodentia	Lead Track Extension / BR 12.3	23
27	Rodentia	Lead Track Extension	47
29	Rodentia	Main Street	142
30	Rodentia	Main Street	3
31	Rodentia	Main Street	20
32	Rodentia	East Solar	71
33	Rodentia	Lenwood Channel	51
34	Rodentia	Lenwood Channel	30

Camera	Taxa	General Location	Taxa Image Count
3	Lagomorpha	Aquatic Resource Area	28
4	Lagomorpha	Lenwood Channel	11
5	Lagomorpha	Lenwood Channel	86
6	Lagomorpha	Lenwood Channel / BR 6.5	20
7	Lagomorpha	Main Track / BR 7.0	11
10	Lagomorpha	Main Track / BR 8.9	181
12	Lagomorpha	Transload Warehouses	56
14	Lagomorpha	Hinkley Bridge	11

15	Lagomorpha	Main Track / BR 10.9	12
16	Lagomorpha	Main Track / BR 11.3	29
17	Lagomorpha	Lead Track Extension / BR 12.3	13
18	Lagomorpha	Lead Track Extension / BR 13.7	30
19	Lagomorpha	Lead Track Extension / BR 15.2	43
22	Lagomorpha	Lead Track Extension	1
23	Lagomorpha	Lead Track Extension	3
25	Lagomorpha	Lead Track Extension	63
26	Lagomorpha	Lead Track Extension / BR 12.3	5
33	Lagomorpha	Lenwood Channel	15

Period 4: November 21-26, 2024

Camera	Taxa	General Location	Taxa Image Count
1	Rodentia	Aquatic Resource Area	73
2	Rodentia	Lenwood Channel / BR 6.5A	4
3	Rodentia	Aquatic Resource Area	6
5	Rodentia	Lenwood Channel	72
6	Rodentia	Lenwood Channel / BR 6.5	16
7	Rodentia	Main Track / BR 7.0	24
9	Rodentia	Transload Warehouses	12
10	Rodentia	Main Track / BR 8.9	10
12	Rodentia	Transload Warehouses	66
14	Rodentia	Hinkley Bridge	92
15	Rodentia	Main Track / BR 10.9	82
16	Rodentia	Main Track / BR 11.3	5
18	Rodentia	Lead Track Extension / BR 13.7	4
19	Rodentia	Lead Track Extension / BR 15.2	46
22	Rodentia	Lead Track Extension	174
23	Rodentia	Lead Track Extension	6
24	Rodentia	Main Street	37
27	Rodentia	Main Street	5

29	Rodentia	Main Street	39
31	Rodentia	Main Street	2
32	Rodentia	East Solar	4
35	Rodentia	East Solar	8

Camera	Taxa	General Location	Taxa Image Count
1	Lagomorpha	Aquatic Resource Area	3
2	Lagomorpha	Lenwood Channel / BR 6.5A	8
3	Lagomorpha	Aquatic Resource Area	8
5	Lagomorpha	Lenwood Channel	8
7	Lagomorpha	Main Track / BR 7.0	4
9	Lagomorpha	Transload Warehouses	5
12	Lagomorpha	Transload Warehouses	3
14	Lagomorpha	Hinkley Bridge	48
19	Lagomorpha	Lead Track Extension / BR 15.2	24
20	Lagomorpha	Lead Track Extension / BR 15.7	57
27	Lagomorpha	Main Street	3
28	Lagomorpha	Main Track / BR 10.9	4
29	Lagomorpha	Main Street	2
32	Lagomorpha	East Solar	29
34	Lagomorpha	Lenwood Channel	20
35	Lagomorpha	East Solar	2

Period 5: January 10-14, 2025

Camera	Taxa	General Location	Taxa Image Count
3	Rodentia	Aquatic Resource Area	6
4	Rodentia	Lenwood Channel	22
5	Rodentia	Lenwood Channel	26
6	Rodentia	Lenwood Channel / BR 6.5	2
7	Rodentia	Main Track / BR 7.0	3
9	Rodentia	Transload Warehouses	2

11	Rodentia	Hinkley Bridge	15
15	Rodentia	Main Track / BR 10.9	4
16	Rodentia	Main Track / BR 11.3	13
18	Rodentia	Lead Track Extension / BR 13.7	37
22	Rodentia	Lead Track Extension	49
23	Rodentia	Main Street	2
24	Rodentia	Main Street	14
25	Rodentia	Lead Track Extension / BR 12.5	11
28	Rodentia	Main Street	2
32	Rodentia	East Solar	7
33	Rodentia	Lenwood Channel	6
34	Rodentia	Lenwood Channel	16

Camera	Taxa	General Location	Taxa Image Count
3	Lagomorpha	Aquatic Resource Area	9
6	Lagomorpha	Lenwood Channel / BR 6.5	10
16	Lagomorpha	Main Track / BR 11.3	4
18	Lagomorpha	Lead Track Extension / BR 13.7	4
31	Lagomorpha	Main Street	4
32	Lagomorpha	East Solar	2
34	Lagomorpha	Lenwood Channel	2

Period 6: March 13-18, 2025

Camera	Taxa	General Location	Taxa Image Count
1	Rodentia	Aquatic Resource Area	13
2	Rodentia	Lenwood Channel / BR 6.5A	5
3	Rodentia	Aquatic Resource Area	2
4	Rodentia	Lenwood Channel	22
5	Rodentia	Lenwood Channel	31
6	Rodentia	Lenwood Channel / BR 6.5	8

11	Rodentia	Hinkley Bridge	41
12	Rodentia	Transload Warehouses	18
14	Rodentia	Hinkley Bridge	4
15	Rodentia	Main Track / BR 10.9	149
18	Rodentia	Lead Track Extension / BR 13.7	99
20	Rodentia	Lead Track Extension / BR 14.3	4
23	Rodentia	Main Street	29
24	Rodentia	Main Street	10
25	Rodentia	Lead Track Extension / BR 12.5	34
27	Rodentia	Main Street	4
29	Rodentia	Main Street	1
31	Rodentia	Main Street	63
32	Rodentia	East Solar	13
33	Rodentia	Lenwood Channel	2
34	Rodentia	Main Track / BR 8.9	28

Camera	Taxa	General Location	Taxa Image Count
2	Lagomorpha	Lenwood Channel / BR 6.5A	8
5	Lagomorpha	Lenwood Channel	22
6	Lagomorpha	Lenwood Channel / BR 6.5	33
7	Lagomorpha	Main Track / BR 7.0	6
11	Lagomorpha	Hinkley Bridge	13
12	Lagomorpha	Transload Warehouses	12
18	Lagomorpha	Lead Track Extension / BR 13.7	2
21	Lagomorpha	Lead Track Extension	2
31	Lagomorpha	Main Street	9
32	Lagomorpha	East Solar	66
33	Lagomorpha	Lenwood Channel	6
34	Lagomorpha	Main Track / BR 8.9	12
35	Lagomorpha	East Solar	16

WILDLIFE MOVEMENT STUDY: BIRDS

Period 1: March 17-22, 2024

Camera	Taxa	General Location	Taxa Image Count
4	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5	5
5	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5	14
6	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5	178
7	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5	90
8	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5	58
9	*Zonotrichia leucophrys; Toxostoma redivivum*	Lenwood Channel	47; 9
10	*Zonotrichia leucophrys*	Lenwood Channel	95
11	*Zonotrichia leucophrys; Corvus corax; Callipepla californica*	Lenwood Channel	140; 1; 1
12	*Zonotrichia leucophrys*	Lenwood Channel	26
13	*Callipepla californica*	Main Street	23
14	*Zonotrichia leucophrys*	Main Street	10
15	*Zonotrichia leucophrys; Corvus corax; Callipepla californica*	Main Track / BR 10.9	10; 2; 10
16	*Zonotrichia leucophrys*	Main Track / BR 10.9	32
17	*Geococcyx californianus*	Main Track / BR 10.9	5
19	*Zonotrichia leucophrys*	Main Track / BR 10.9	5
20	*Zenaida macroura*	Main Track / BR 11.3	10
21	*Zonotrichia leucophrys; Corvus corax*	Lead Track Extension / BR 12.3	24; 1
22	*Zonotrichia leucophrys; Corvus corax; Zenaida macroura*	Main Track / BR 10.06	3; 3; 3
25	*Corvus corax; Sturnella neglecta*	Transload Warehouses	8; 3

Period 2: June 24-30, 2024

Camera	Taxa	General Location	Taxa Image Count
2	*Eremophila alpestris*	Lenwood Channel	3
3	*Zenaida macroura*	Lenwood Channel	3
4	*Corvus corax*	Lenwood Channel / BR 6.5E	3
7	*Corvus corax*	Main Track / BR 7.0	3
8	*Corvus corax*	Main Track / BR 8.2	3
9	*Corvus corax; Eremophila alpestris*	Main Track / BR 8.9	6; 109
10	*Callipepla californica*	Main Track / BR 10.06	6
11	*Callipepla californica; Toxostoma redivivum*	Hinkley Bridge	21; 3
12	*Callipepla californica; Corvus corax; Passer domesticus; Sayornis saya*	Hinkley Bridge	15; 9; 22; 3
23	*Oreoscoptes montanus; Eremophila alpestris; Columba livia; Corvus corax; Zenaida macroura; Passer domesticus*	Lead Track Extension / BR 15.2	3; 3; 9; 3; 5; 6
24	*Alectoris chukar*	Lead Track Extension / BR 15.7	9
26	*Eremophila alpestris; Anthus rubescens*	Lead Track Extension	8; 3
30	*Corvus corax*	Lenwood Channel	3

Period 3: September 8-13, 2024

Camera	Taxa	General Location	Taxa Image Count
3	*Eremophila alpestris*	Aquatic Resource Area	1
5	*Toxostoma redivivum*	Lenwood Channel	3
7	*Corvus corax*	Main Track / BR 7.0	6
10	*Eremophila alpestris*	Main Track / BR 8.9	90
12	*Toxostoma redivivum*	Transload Warehouses	3
14	*Toxostoma redivivum*	Hinkley Bridge	5

Attachment C

Summary of Capture Data for Periods 1 - 6

Camera	Taxa	General Location	Taxa Image Count
15	*Geococcyx californianus; Callipepla californica*	Main Track / BR 10.9	6; 1
18	*Eremophila alpestris*	Lead Track Extension / BR 13.7	3
22	*Corvus corax*	Lead Track Extension	1
26	*Geococcyx californianus*	Lead Track Extension / BR 12.3	2
28	*Callipepla californica*	Main Street	6
32	*Eremophila alpestris*	Main Street	6

Period 4: November 21-26, 2024

Camera	Taxa	General Location	Taxa Image Count
2	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5A	2
3	*Artemisiospiza belli*	Aquatic Resource Area	1
5	*Geococcyx californianus; Sturnella neglecta; Artemisiospiza belli*	Lenwood Channel	18; 9; 6
6	*Salpinctes obsoletus*	Lenwood Channel / BR 6.5	6
7	*Corvus corax*	Main Track / BR 7.0	6
9	*Sturnella neglecta*	Transload Warehouses	9
10	*Salpinctes obsoletus; Oreoscoptes montanus*	Main Track / BR 8.9	15; 4
14	*Corvus corax; Mimus polyglottus; Sayornis saya; Zonotrichia leucophrys*	Hinkley Bridge	33; 1; 2; 3
15	*Callipepla californica; Corvus corax; Zonotrichia leucophrys*	Main Track / BR 10.9	14; 1; 1
19	*Callipepla californica; Corvus corax; Salpinctes obsoletus*	Lead Track Extension / BR 15.2	6; 3; 3
23	*Zonotrichia leucophrys; Callipepla californica*	Lead Track Extension	122; 10
27	*Corvus corax*	Main Street	2
28	*Zonotrichia leucophrys*	Main Street	36

Camera	Taxa	General Location	Taxa Image Count
29	*Buteo jamaicensis*	Main Street	2
31	*Zonotrichia leucophrys; Haemorhous mexicanus; Chondestes grammacus*	Main Street	188; 18; 2
34	*Corvus corax*	Lenwood Channel	2

Period 5: January 10-14, 2025

Camera	Taxa	General Location	Taxa Image Count
1	*Artemisiospiza belli*	Aquatic Resource Area	2
3	*Eremophila alpestris*	Aquatic Resource Area	4
5	*Geococcyx californianus*	Lenwood Channel	2
6	*Corvus corax; Callipepla californica*	Lenwood Channel / BR 6.5	2; 4
7	*Salpinctes obsoletus; Zenaida macroura; Corvus corax*	Main Track / BR 7.0	2; 6; 1
14	*Salpinctes obsoletus; Corvus corax*	Hinkley Bridge	4; 3
15	*Artemisiospiza belli; Zonotrichia leucophrys*	Main Track / BR 10.9	8; 6
16	*Zonotrichia leucophrys*	Main Track / BR 11.3	11
18	*Zenaida macroura*	Lead Track Extension / BR 13.7	5
21	*Zonotrichia leucophrys*	Lead Track Extension	114
22	*Artemisiospiza belli; Corvus corax; Zenaida macroura; Zonotrichia leucophrys*	Lead Track Extension	2; 4; 4; 3
23	*Zonotrichia leucophrys*	Main Street	38
25	*Zonotrichia leucophrys*	Lead Track Extension / BR 12.5	2
28	*Geococcyx californianus*	Main Street	2
29	*Zonotrichia leucophrys*	Main Street	4

31	*Anthus rubescens*	Main Street	8
33	*Artemisiospiza belli*	Lenwood Channel	14
34	*Anthus rubescens; Zonotrichia leucophrys*	Lenwood Channel	2; 2

Period 6: March 13-18, 2025

Camera	Taxa	General Location	Taxa Image Count
1	*Athene cunicularia; Zonotrichia leucophrys*	Aquatic Resource Area	2; 2
2	*Zonotrichia leucophrys*	Lenwood Channel / BR 6.5A	16
4	*Zonotrichia leucophrys*	Lenwood Channel	20
5	*Zonotrichia leucophrys*	Lenwood Channel	2
6	*Zonotrichia leucophrys; Corvus corax; Zenaida macroura*	Lenwood Channel / BR 6.5	14; 18; 2
7	*Zenaida macroura*	Main Track / BR 7.0	2
9	*Corvus corax*	Transload Warehouses	31
11	*Zonotrichia leucophrys; Toxostoma redivivum*	Hinkley Bridge	47; 12
12	*Zonotrichia leucophrys; Callipepla californica*	Transload Warehouses	6; 2
14	*Geococcyx californianus*	Hinkley Bridge	2
18	*Zonotrichia leucophrys; Corvus corax*	Lead Track Extension / BR 13.7	6; 2
20	*Zonotrichia leucophrys; Corvus corax*	Lead Track Extension / BR 15.7	17; 2
21	*Zonotrichia leucophrys*	Lead Track Extension	2
23	*Zonotrichia leucophrys*	Main Street	29
24	*Zonotrichia leucophrys*	Main Street	4
25	*Zonotrichia leucophrys; Zenaida macroura; Artemisiospiza belli*	Lead Track Extension / BR 12.5	20; 1; 31
31	*Haemorhous mexicanus; Zonotrichia leucophrys*	Main Street	12; 2

32	*Zonotrichia leucophrys*	East Solar	8
33	*Zonotrichia leucophrys; Corvus corax*	Lenwood Channel	4; 1
34	*Zonotrichia leucophrys; Eremophila alpestris*	Main Track / BR 8.9	14; 4

WILDLIFE MOVEMENT STUDY: SMALL REPTILES AND AMPHIBIANS

Period 1: March 17-22, 2024

Camera	Taxa	General Location	Taxa Image Count
1	Phrynosomatidae	Lenwood Channel / BR 6.5	6
2	Phrynosomatidae; Teiidae	Lenwood Channel / BR 6.5	5; 5
7	Phrynosomatidae	Lenwood Channel / BR 6.5E	16
14	Phrynosomatidae	Main Street	79
15	Phrynosomatidae	Main Street / BR 10.9	4
16	Phrynosomatidae	Main Street / BR 10.9	40
17	Phrynosomatidae	Main Street / BR 10.9	8
19	Phrynosomatidae	Main Street / BR 10.9	10
21	Phrynosomatidae	Lead Track Extension / BR 12.3	27
27	Phrynosomatidae	Lenwood Channel / BR 6.5A	6
28	Phrynosomatidae	Main Track / BR 8.2	3

Period 2: June 24-30, 2024

Camera	Taxa	General Location	Taxa Image Count
2	Phrynosomatidae; Teiidae	Lenwood Channel	5; 3
3	Phrynosomatidae; Teiidae	Lenwood Channel	14; 3
4	Phrynosomatidae	Lenwood Channel / BR 6.5E	24
5	Teiidae	Lenwood Channel / BR 6.5	3
6	Phrynosomatidae	Lenwood Channel / BR 6.5	4
8	Phrynosomatidae	Main Track / BR 8.2	3
9	Phrynosomatidae	Main Track / BR 8.9	3
10	Phrynosomatidae; Teiidae	Main Track / BR 10.06	15; 2
11	Bufonidae	Hinkley Bridge	6
12	Bufonidae; Teiidae	Hinkley Bridge	17; 3
15	Iguanidae	Main Track / BR 10.9	6
16	Phrynosomatidae	Main Track / BR 11.3	6
17	Phrynosomatidae; Teiidae	Lead Track Extension / BR 12.3	23; 26

Attachment C

Summary of Capture Data for Periods 1 - 6

Camera	Taxa	General Location	Taxa Image Count
18	Phrynosomatidae	Lead Track Extension / BR 12.5	12
19	Phrynosomatidae; Teiidae	Lead Track Extension / BR 13.0	131; 18
20	Phrynosomatidae; Teiidae	Lead Track Extension / BR 13.7	17; 1
21	Phrynosomatidae; Teiidae	Lead Track Extension / BR 14.0	3; 1
24	Phrynosomatidae	Lead Track Extension / BR 15.7	10
26	Teiidae	Lead Track Extension	6
27	Iguaidae; Teiidae	Main Street	6; 78
28	Phrynosomatidae	East Solar	3
29	Iguanidae; Phrynosomatidae; Teiidae	Lenwood Channel / BR 6.5A	15; 9; 12
30	Iguaidae; Teiidae	Main Street	61; 6

Period 3: September 8-13, 2024

Camera	Taxa	General Location	Taxa Image Count
4	Phrynosomatidae	Lenwood Channel	3
10	Bufonidae	Main Track / BR 8.9	3
14	Bufonidae	Hinkley Bridge	12
32	Teiidae	East Solar	3

Period 4: November 21-26, 2024

Camera	Taxa	General Location	Taxa Image Count
14	Bufonidae	Hinkley Bridge	36

Period 5: January 10-14, 2025

Camera	Taxa	General Location	Taxa Image Count
22	Bufonidae	Lead Track Extension	2

Period 6: March 13-18, 2025

Camera	Taxa	General Location	Taxa Image Count
14	Bufonidae	Hinkley Bridge	2

ATTACHMENT HH

AQUATIC RESOURCE IMPACTS SUMMARY TABLES

TABLE HH-1. AQUATIC RESOURCES IMPACTS SUMMARY: CORPS/RWQCB

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-10	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.778399, -117.276743	<0.01	39
NWW-11	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, double-thread feature within allscale scrub; originates south of review area.	34.778377, -117.276478	<0.01	28
NWW-12	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.778670, -117.276121	<0.01	31
NWW-13	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.778712, -117.276024	<0.01	10
NWW-14	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.778886, -117.275827	<0.01	33
NWW-18	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.786948, -117.252605	<0.01	2
NWW-19	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.787318, -117.251761	<0.01	14
NWW-20	R6	Yes/No	Disturbed Habitat	Primarily unvegetated, single-thread feature within disturbed habitat; originates south of review area.	34.791189, -117.241868	0.18	144
NWW-21	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub that originates as runoff from National Trails Hwy/Main St.	34.795810, -117.228450	0.01	163
NWW-22	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub; originates downstream of NWW-21.	34.796559, -117.227801	0.02	176
NWW-23	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.795776, -117.228162	0.02	221
NWW-24	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.797160, -117.227759	0.10	761
NWW-25	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, double-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.796981, -117.225815	0.07	700
NWW-26	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.797595, -117.225008	0.06	492

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-27	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, partially braided feature within allscale scrub; originates as runoff from National Trails Hwy/Main St and/or features south of National Trails Hwy (NWW-103 and NWW-104).	34.798258, -117.223204	0.16	1,078
NWW-29	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub.	34.798766, -117.222983	<0.01	96
NWW-30	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.798508, -117.221906	0.03	311
NWW-31	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, small, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.798583, -117.221247	0.01	145
NWW-33	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.799322, -117.219846	0.02	171
NWW-34	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.800955, -117.215818	<0.01	78
NWW-39	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.809671, -117.200471	<0.01	91
NWW-43	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; indicators of flow not present before dirt road.	34.826693, -117.188511	0.13	475
NWW-44	R6	Yes/No	Unvegetated Channel	Large, primarily unvegetated feature fed by culvert along Hinkley Road and road runoff from National Trails Hwy and/or features south of National Trails Hwy (NWW-105 and NWW-106).; located within unvegetated channel and allscale scrub; feature runs along berm (earthen-lined and partially concrete); feature enlarges near railroad crossing.	34.829248, -117.186429	2.99	5,751
NWW-45	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated braided feature within allscale scrub; feature initiates at and is sourced by a residential lot.	34.834684, -117.182237	0.21	2,468
NWW-46	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated braided feature within allscale scrub between hillslopes.	34.835168, -117.181479	0.06	1,172
NWW-47	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, double-thread feature within allscale scrub; originates as runoff from two dirt roads leading from National Trails Hwy.	34.833706, -117.176283	0.04	580

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-48	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.836991, -117.181122	0.04	481
NWW-49	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, large braided and interwoven feature with multiple tributaries within allscale scrub between hillslopes.	34.836110, -117.179064	0.73	7,138
NWW-50	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.837239, -117.179203	0.02	461
NWW-51	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, double-thread feature within allscale scrub between hillslopes.	34.837464, -117.178078	0.04	842
NWW-52	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub between hillslopes.	34.837867, -117.177679	0.04	562
NWW-53	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, double-thread feature within allscale scrub between hillslopes.	34.837648, -117.177101	0.07	1,131
NWW-54	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.835210, -117.172619	0.02	354
NWW-55	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.835454, -117.171863	0.02	170
NWW-56	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.835773, -117.172617	0.02	252
NWW-57	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.836014, -117.172631	0.02	264
NWW-58	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub.	34.838348, -117.176084	0.50	4,358
NWW-59	R6	Yes/No	Allscale Scrub[2]	Large, primarily unvegetated, fan feature with multiple braids and heavily interwoven throughout; upstream portion of the feature runs through various hillslopes and fans downstream; within allscale scrub and creosote bush scrub; portions originate as runoff from National Trails Hwy and/or feature south of National Trails Hwy (NWW-107).	34.838248, -117.174160	0.75	8,262
NWW-60	R6	Yes/No	Creosote Bush Scrub[2]	Vegetated feature north of railroad tracks within creosote bush scrub; receives sheet flows from dirt road north of and parallel to railroad tracks.	34.840401, -117.179750	0.17	188
NWW-61	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from National Trails Hwy/Main St.	34.837031, -117.169791	0.05	910

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-62	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated feature within allscale scrub between hillslopes; multiple tributaries.	34.840397, -117.175307	0.14	1,696
NWW-63	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated feature within allscale scrub between hillslopes; multiple tributaries.	34.840934, -117.174275	0.20	2,174
NWW-64	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, double-thread feature within allscale scrub between hillslopes.	34.841711, -117.174418	0.04	538
NWW-65	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub within hillslopes.	34.842293, -117.173643	0.02	482
NWW-66	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, double-thread feature within allscale scrub within hillslopes.	34.843147, -117.172457	0.08	1,260
NWW-67	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated feature with multiple tributaries upstream within creosote bush scrub.	34.841131, -117.171984	0.22	2,373
NWW-68	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, braided feature within creosote bush scrub; originates as runoff from National Trails Hwy/Main St.	34.839992, -117.170094	0.34	5,708
NWW-69	R6	Yes/No	Allscale Scrub[2]	Large, primarily unvegetated, braided and interwoven feature within allscale scrub and creosote bush scrub between hillslopes.	34.842933, -117.168625	0.68	6,858
NWW-70	R6	Yes/No	Creosote Bush Scrub[2]	Large, primarily unvegetated, braided and interwoven feature with multiple mainstems fed by various tributaries; located within allscale scrub and creosote bush scrub between hillslopes; originates as runoff from unnamed dirt roads leading from National Trails Hwy.	34.842209, -117.166408	2.09	18,504
NWW-71	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub between hillslopes.	34.844554, -117.165718	0.10	1,128
NWW-72	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub between hillslopes.	34.845370, -117.166236	0.04	427
NWW-73	R6	Yes/No	Allscale Scrub[2]	Large, primarily unvegetated, interwoven feature with multiple mainstems fed by various tributaries within allscale scrub and creosote bush scrub; originates as runoff from unnamed dirt roads leading from National Trails Hwy.	34.844453, -117.163545	1.24	13,399
NWW-74	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, double-thread feature within allscale scrub; originates as runoff from unnamed dirt road.	34.846950, -117.162756	0.17	1,582

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-75	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, double-thread feature within allscale scrub.	34.845550, -117.159978	0.04	487
NWW-76	R6	Yes/No	Allscale Scrub[2]	Large, primarily unvegetated, braided feature with multiple tributaries within allscale scrub; originates as runoff from unnamed dirt road leading from National Trails Hwy.	34.848019, -117.159133	0.86	8,649
NWW-77	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated feature with one tributary within allscale scrub in between hillslopes; originates as runoff from unnamed dirt road leading from National Trails Hwy.	34.847129, -117.156396	0.16	1,677
NWW-78	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.848845, -117.157242	0.01	278
NWW-79	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, braided feature within allscale scrub; originates as runoff from unnamed dirt road.	34.850248, -117.158057	0.13	1,874
NWW-80	R6	Yes/No	Creosote Bush Scrub[2]	Large, primarily unvegetated, braided and interwoven feature with multiple mainstems fed by various tributaries within creosote bush scrub; originates as runoff from National Trails Hwy/Main St and/or feature south of National Trails Hwy (NWW-108); portions of feature display disturbance by off-road vehicle usage.	34.850680, -117.154564	2.02	15,877
NWW-81	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub.	34.853340, -117.156269	0.12	1,228
NWW-82	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, braided feature within allscale scrub and creosote bush scrub; heavily eroded where feature runs parallel to railroad tracks.	34.854433, -117.152784	0.64	8,327
NWW-83	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.856239, -117.153167	0.01	250
NWW-84	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub.	34.854958, -117.146066	0.02	909
NWW-85	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated feature with multiple tributaries within allscale scrub; originates as runoff from unnamed dirt road.	34.857281, -117.149898	0.31	3,921
NWW-86	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.856698, -117.147965	0.02	218

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-87	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.857936, -117.147949	0.13	2,162
NWW-88	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from unnamed dirt road.	34.858906, -117.148308	0.04	403
NWW-89	R6	Yes/No	Allscale Scrub[2]	Large, primarily unvegetated feature within allscale scrub, creosote bush scrub, and disturbed habitat that consists of two large mainstems with several tributaries; eastern main stem originates south of National Trails Hwy/Main St before traveling through a culvert, western main stem originates as runoff from Mockingbird Rd (dirt road); disturbed by off-road vehicle use and obstructions (tree logs) likely placed by adjacent residential lot residents; heavily eroded downstream near manipulated and heavily used dirt roads adjacent to the railroad tracks.	34.863711, -117.134655	1.89	16,638
NWW-90	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from unnamed dirt road.	34.860552, -117.142795	0.08	995
NWW-91	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, small, single-thread feature within allscale scrub near residential lots; originates as runoff from upstream residential lot and Dundee St.	34.863147, -117.140564	0.01	150
NWW-92	R6	Yes/No	Unvegetated Channel	Primarily unvegetated, large, trapezoidal feature (San Bernardino County Flood Control District Channel) within heavily manipulated, unvegetated channel; evidence of off-road vehicle use; originates south of Main St/National Trails Hwy.	34.874455, -117.131291	7.68	10,016
NWW-95	R6	Yes/No	Disturbed Habitat	Primarily unvegetated, single-thread feature within disturbed habitat that outlets from culvert along National Trails Hwy; manipulation on the eastern slopes.	34.877087, -117.110926	0.03	307
NWW-96	R6	Yes/No	Disturbed Habitat	Primarily heavily vegetated, disturbed, single-thread feature within disturbed habitat and tamarisk thickets; originates as road runoff from National Trails Hwy.	34.878268, -117.108708	0.05	439

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-97	R6	Yes/No	Disturbed Habitat	Primarily unvegetated, single-thread feature generally within disturbed habitat; feature drains through private commercial lots and outputs across a culvert crossing.	34.879422, -117.105552	0.04	506
NWW-98	R6	Yes/No	Allscale Scrub – Disturbed[2]	Small, unvegetated single-thread feature within allscale scrub – disturbed habitat that originates as runoff from dirt road parallel to the north side of railroad tracks.	34.880017, -117.105950	0.02	167
NWW-99	R6	Yes/No	Disturbed Habitat	Vegetated, single-thread feature within disturbed habitat that originates at culvert north of Main St/National Trails Hwy.	34.880936, -117.101226	0.03	353
NWW-100	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated feature within allscale scrub with several tributaries that travels through several culverts; originates as runoff from and at a culvert north of Main St/National Trails Hwy.	34.882602, -117.095407	0.21	1,863
NWW-101	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated feature within allscale scrub with multiple tributaries that travels through several culverts; originates as runoff from and at a culvert north of Main St/National Trails Hwy.	34.883416, -117.092671	0.12	406
NWW-102	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated feature within allscale scrub that originates as runoff from Main St/National Trails Hwy.	34.883038, -117.091930	<0.01	52
NWW-105	R6	Yes/No	Allscale Scrub[2]	Small, primarily unvegetated, single-thread feature within allscale scrub that may continue over Main St/National Trails Hwy and converge with NWW-44.	34.828712, -117.182373	<0.01	13
NWW-106	R6	Yes/No	Allscale Scrub[2]	Primarily unvegetated, single-thread feature within allscale scrub that may continue over Main St/National Trails Hwy and converge with NWW-44.	34.828907, -117.182084	0.01	15
NWW-107	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub that may continue over Main St/National Trails Hwy converge with NWW-59.	34.835555, -117.169501	<0.01	22
NWW-108	R6	Yes/No	Creosote Bush Scrub – Disturbed[2]	Primarily unvegetated, single-thread feature within creosote bush scrub – disturbed that may continue over Main St/National Trails Hwy and converge with NWW-80.	34.847053, -117.151904	0.01	18

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-109 (Mojave River)	R4	Yes/No	Unvegetated Channel	Sparsely vegetated, dry, sandy wash that comprises the on-site extent of the Mojave River; generally flows southwest to northeast before continuing off site.	34.863277, -117.170128	1.13	236
NWW-112	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.862328, -117.030154	<0.01	48
NWW-113	R6	Yes/No	Developed	Primarily concrete feature within developed area; conveys flows around Tortilla substation and into NWW-114 through NWW-119.	34.863114, -117.031133	0.11	2,328
NWW-114	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated feature with small tributaries within creosote bush scrub.	34.863906, -117.030060	0.02	596
NWW-115	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; partially fed by flows from concrete-lined NWW-113.	34.863948, -117.030548	<0.01	177
NWW-116	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; fed by flows from concrete-lined NWW-113.	34.863745, -117.030843	<0.01	22
NWW-117	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; fed by flows from concrete-lined NWW-113.	34.863948, -117.031161	<0.01	173
NWW-118	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; fed by flows from concrete-lined NWW-113.	34.863784, -117.031507	<0.01	54
NWW-119	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; partially fed by flows from concrete-lined NWW-113.	34.864131, -117.031765	0.03	523
NWW-120	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.862325, -117.032219	0.02	144
NWW-121	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, double-thread feature within creosote bush scrub.	34.863168, -117.032221	0.01	269
NWW-122	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.86354, -117.032240	0.01	115
NWW-123	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.86329, -117. 032423	0.01	103

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-124	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.863374, -117.033400	0.02	296
NWW-125	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.864110, -117.033398	0.05	436
NWW-126	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.863806, -117.033928	0.05	707
NWW-127	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-126.	34.864314, -117.0337	0.04	567
NWW-128	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.863964, -117.034043	0.03	437
NWW-129	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.864078, -117.034199	<0.01	128
NWW-130	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864243, -117.034403	0.01	294
NWW-131	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-130.	34.86500, -117.034263	0.05	528
NWW-132	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates as runoff from Bonanza Rd.	34.86473, -117.034345	0.04	484
NWW-133	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864415, -117.034695	0.02	249
NWW-134	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864537, -117.034800	0.03	511

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-135	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-134 and NWW-136.	34.865281, -117.034782	0.09	681
NWW-136	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864640, -117.034993	0.04	390
NWW-137	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.865098, -117.035362	<0.01	41
NWW-138	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-137.	34.865650, -117.035410	0.02	319
NWW-139	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865080, -117.035540	<0.01	142
NWW-140	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865346, -117.035826	0.11	1395
NWW-141	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-140.	34.865940, -117.035683	0.02	263
NWW-142	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865558, -117.036182	0.03	176
NWW-143	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-142.	34.866206, -117035864	0.04	321
NWW-144	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865697, -117.036341	0.05	286
NWW-145	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.867190, -117.037197	0.01	160

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-146	R6	Yes/No	Unvegetated Channel	Large, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.867280, -117.037889	0.325	595
NWW-147	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.867479, -117.038380	<0.01	47
NWW-148	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.868144, -117.038520	0.02	250
NWW-149	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.867884, -117.039030	0.01	250
NWW-150	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.867545, -117,039424	0.01	229
NWW-151	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.868486, -117.038907	0.01	221
NWW-152	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.868169, -117.039394	0.03	437
NWW-153	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-152.	34.868694, -117.039352	0.01	185
NWW-154	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.868471, -117.039625	<0.01	62
NWW-155	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.868497, -117.039748	<0.01	132
NWW-156	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, double-thread feature within creosote bush scrub.	34.868751, -117.040025	<0.01	126
NWW-157	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream	34.869218, -117.039849	0.03	230
NWW-158	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.869669, -117040353	0.02	325

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-159	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.869406, -117.040822	<0.01	123
NWW-160	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.869733, -117.041232	<0.01	85
NWW-161	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870069, -117.041756	0.02	411
NWW-162	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.870305, -117.041899	<0.01	55
NWW-163	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub.	34.870368, -117.042117	<0.01	169
NWW-164	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.870510, -117.042262	<0.01	125
NWW-165	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870631, -117.042459	0.01	306
NWW-166	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870818, -117.042706	0.03	515
NWW-167	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870938, -117.042896	0.02	388
NWW-168	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-167.	34.871609, -117042688	0.07	596
NWW-169	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.871831, -117042958	0.01	299
NWW-170	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.871221, -117.043257	0.03	798
NWW-171	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub that exhibits signs of off-road vehicle usage; originates south of review area.	34.871715, -117.043851	0.01	466

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-172	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub that exhibits signs of off-road vehicle usage; originates as runoff from the unpaved Bonanza Road and downstream of NWW-171.	34.872476, -117.043979	0.04	271
NWW-173	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.872264, -117.044360	<0.01	90
NWW-174	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.872611, -117.044917	0.01	374
NWW-175	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates from unnamed dirt road.	34.873081, -117.045449	0.01	155
NWW-176	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.873274, -117.045677	<0.01	173
NWW-177	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates as runoff from the unpaved Bonanza Road and downstream of NWW-176.	34.874304, -117.046091	0.10	1,060
NWW-178	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.873797, -117.046218	0.01	84
NWW-179	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.873847, -117.046343	<0.01	63
NWW-180	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.873945, -117.046598	0.01	1657
NWW-181	R6	Yes/No	Creosote Bush Scrub[2]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.874959, -117045928	0.03	407
NWW-182	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates south/southwest of review area.	34.874268, -117.047106	0.13	964
NWW-183	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south of review area.	34.864594, -117.120526	0.05	198
NWW-184	R6	Yes/No	Creosote Bush Scrub[2]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south of review area.	34.865232, -117.122088	0.02	133

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-185	R6	Yes/No	Disturbed Habitat	Unvegetated, single-thread feature within disturbed habitat; originates and terminates within the review area.	34.853009, -117.132657	<0.01	29
NWW-186	R6	Yes/No	Disturbed Habitat	Unvegetated, single-thread feature within disturbed habitat; originates and terminates within the review area.	34.853376, -117.132649	0.01	143
NWW-187	R6	Yes/No	Creosote Bush Scrub[2]	Unvegetated, double-thread feature within creosote bush scrub; originates and terminates within the review area.	34.853977, -117.132836	0.03	396
NWW-188	R6	Yes/No	Creosote Bush Scrub[2]	Unvegetated, single-thread feature within creosote bush scrub; originates and terminates within the review area.	34.856810, -117.131280	0.30	1,975
NWW-192	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Sandstone Court.	34.884968, -117.077919	0.01	47
NWW-202	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884926, -117.071903	<0.01	34
NWW-203	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884840, -117.071089	0.07	157
NWW-205	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884957, -117.070523	<0.01	6
NWW-206	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884739, -117.070669	<0.01	19
NWW-207	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884798, -117.070199	0.01	85
NWW-208	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884886, -117.070016	<0.01	37

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-209	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within site and ends offsite.	34.884793, -117.069784	<0.01	38
NWW-210	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends offsite.	34.884694, -117.069564	<0.01	60
NWW-211	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884832, -117.069431	<0.01	16
NWW-212	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884603, -117.069362	<0.01	12
NWW-213	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; draining to concrete channel, begins and ends within the site.	34.884852, -117.068194	0.01	53
NWW-214	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884638, -117.069050	<0.01	11
NWW-215	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884584, -117.068791	<0.01	6
NWW-216	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884598, -117.068755	<0.01	6
NWW-218	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884570, -117.068415	<0.01	10
NWW-219	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884627, -117.067639	0.12	33
NWW-220	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884544, -117.066951	<0.01	2
NWW-221	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884589, -117.066829	<0.01	4

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-222	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884531, -117.066373	<0.01	5
NWW-223	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884594, -117.066264	<0.01	6
NWW-224	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884631, -117.066111	<0.01	19
NWW-226	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends offsite.	34.884722, -117.064866	0.05	35
NWW-228	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends offsite.	34.884539, -117.064176	<0.01	38
NWW-229	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends offsite.	34.884760, -117.063677	<0.01	37
NWW-230	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends within the site.	34.884420, -117.063052	<0.01	41
NWW-231	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Multiple unvegetated, single-thread features within Larrea tridentata – Ambrosia dumosa Shrubland Alliance draining to Santa Cruz Street; begins within the site and ends offsite.	34.884970, -117.062850	0.08	266
NWW-233	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends offsite.	34.883705, -117.062238	0.01	424
NWW-234	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends within the site.	34.884074, -117.062543	<0.01	50
NWW-235	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends within the site.	34.884240, -117.062364	<0.01	38

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-237	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.884322, -117.062044	0.02	64
NWW-238	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.884346, -117.061772	<0.01	412
NWW-239	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends within the site.	34.884599, -117.061692	<0.01	50
NWW-241	R6	Yes/No	Developed	Unvegetated, single-thread feature within developed land; begins and ends within the site.	34.883139, -117.060675	<0.01	7
NWW-243	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.880314, -117.060555	<0.01	2
NWW-245	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.878572, -117.057288	<0.01	10
NWW-248	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.875996, -117.056428	<0.01	8
NWW-250	R6	Yes/No	Developed	Unvegetated, single-thread feature within developed land; begins and ends within the site.	34.874781, -117.052983	<0.01	16
NWW-252	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins and ends within the site.	34.874419, -117.047069	<0.01	74
NWW-268	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.884128, -117.085431	<0.01	1
NWW-275	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.884494, -117.086801	<0.01	2
NWW-279	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins within the site and ends offsite.	34.884200, -117.087561	<0.01	5

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-280	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; begins offsite and ends within the site.	34.883667, -117.087345	<0.01	3
NWW-282	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, concrete channel within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; discharges to storm sewer system along State Route (SR)-58.	34.883010, -117.090401	0.01	53
NWW-283	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.883675, -117.098066	0.04	171
NWW-284	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.883251, -117.098655	0.01	506
NWW-285	R6	Yes/No	Developed	Unvegetated, concrete channel in developed land; discharges to storm sewer system along Main Street.	34.872564, -117.117449	0.01	480
NWW-286	R6	Yes/No	Developed	Unvegetated, concrete channel in developed land; discharges to storm sewer system along Main Street.	34.871959, -117.118477	<0.01	354
NWW-289	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.844585, -117.155167	<0.01	1
NWW-290	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.844434, -117.155340	<0.01	21
NWW-292	R6	Yes/No	Disturbed Land	Unvegetated, single-thread feature within disturbed land; begins and ends offsite.	34.843835, -117.156241	<0.01	4
NWW-297	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, converging feature to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.841284, -117.159788	<0.01	9
NWW-300	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.838016, -117.164824	<0.01	7

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-301	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, diverging to converging feature to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.837817, -117.164981	<0.01	6
NWW-302	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.837379, -117.165543	<0.01	4
NWW-303	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.837119, -117.165941	<0.01	6
NWW-304	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.836963, -117.166360	<0.01	4
NWW-305	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.836611, -117.166625	<0.01	35
NWW-307	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.834780, -117.171605	<0.01	5
NWW-311	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.833845, -117.173741	<0.01	61
NWW-312	R6	Yes/No	Disturbed Land	Unvegetated, single-thread feature within disturbed land; begins within the site and ends offsite.	34.833837, -117.173783	<0.01	44
NWW-313	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.831780, -117.173876	<0.01	88
NWW-314	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.831725, -117.173709	0.01	35
NWW-317	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.862716, -117.033289	0.01	63
NWW-318	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.863052, -117.033291	0.02	272

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-319	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.864065, -117.032833	0.04	324
NWW-320	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.864390, -117.033361	0.01	165
NWW-321	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.863796, -117.034266	0.04	408
NWW-322	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.863965, -117.034632	0.04	379
NWW-323	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.864395, -117.035291	0.03	236
NWW-324	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865542, -117.034963	0.01	104
NWW-325	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865752, -117.035236	<0.01	97
NWW-326	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865358, -117.036233	0.03	231
NWW-327	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865316, -117.036605	0.01	235
NWW-328	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866424, -117.036026	<0.01	84
NWW-329	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866589, -117.036275	0.01	101
NWW-330	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865897, -117.036907	0.03	348

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-331	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866779, -117.036510	<0.01	102
NWW-332	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866848, -117.036595	<0.01	89
NWW-333	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866983, -117.036740	<0.01	99
NWW-334	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867119, -117.036832	0.01	132
NWW-335	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866330, -117.037652	0.01	121
NWW-336	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867481, -117.039109	0.01	385
NWW-337	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868444, -117.038583	<0.01	104
NWW-338	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867866, -117.039575	<0.01	137
NWW-339	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867993, -117.039753	<0.01	149
NWW-340	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868133, -117.039911	0.02	346
NWW-341	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868718, -117.038929	<0.01	100
NWW-342	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868935, -117.039171	0.01	302

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-343	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868172, -117.040103	0.01	184
NWW-344	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868514, -117.040435	0.01	156
NWW-345	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868700, -117.040644	<0.01	147
NWW-346	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869591, -117.039999	0.01	111
NWW-347	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869715, -117.040081	<0.01	48
NWW-348	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869753, -117.040238	<0.01	85
NWW-349	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868626, -117.040758	0.01	191
NWW-350	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868869, -117.040849	0.01	135
NWW-351	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869011, -117.041008	0.01	165
NWW-352	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869165, -117.041130	0.01	284
NWW-353	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869257, -117.041310	0.01	129
NWW-354	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870238, -117.040752	<0.01	54

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-355	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869366, -117.041589	0.01	195
NWW-356	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870307, -117.040980	<0.01	47
NWW-357	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870462, -117.040963	<0.01	19
NWW-358	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870513, -117.041131	<0.01	75
NWW-359	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869863, -117.041861	<0.01	34
NWW-360	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869878, -117.041965	<0.01	67
NWW-361	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869727, -117.042081	<0.01	68
NWW-362	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869966, -117.042160	0.01	132
NWW-363	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869931, -117.042218	0.01	102
NWW-364	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870478, -117.041269	0.01	206
NWW-365	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870834, -117.041454	<0.01	102
NWW-366	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870076, -117.042412	0.01	125

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-367	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870211, -117.042362	<0.01	72
NWW-368	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870257, -117.042556	0.01	136
NWW-369	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870942, -117.043474	0.01	115
NWW-370	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871049, -117.043413	<0.01	68
NWW-371	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871212, -117.043506	<0.01	8
NWW-372	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872147, -117.043231	<0.01	90
NWW-373	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871506, -117.044032	0.01	186
NWW-374	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871504, -117.044169	<0.01	108
NWW-375	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871576, -117.044217	<0.01	148
NWW-376	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872382, -117.043502	0.01	95
NWW-377	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872422, -117.043565	<0.01	125
NWW-378	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872623, -117.043737	<0.01	49

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-379	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871816, -117.044497	<0.01	148
NWW-380	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872031, -117.044720	<0.01	133
NWW-381	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872895, -117.044158	<0.01	112
NWW-382	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873045, -117.044203	<0.01	18
NWW-383	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872070, -117.045019	0.03	244
NWW-384	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872414, -117.045306	0.02	520
NWW-385	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872585, -117.045311	<0.01	79
NWW-386	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River. (	34.873216, -117.044635	0.01	100
NWW-387	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873596, -117.044917	<0.01	32
NWW-388	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873635, -117.045136	0.01	230
NWW-389	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.874196, -117.045643	<0.01	25
NWW-390	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.874263, -117.045793	<0.01	78

DRAFT

Aquatic Resource Name	Cowardin Code	Presence of OHWM/ Wetland	Dominant Vegetation[1]	General Characteristics	Location (Latitude, Longitude)	Impacts	
						Acre(s)	Linear Feet
NWW-391	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873792, -117.047252	0.01	104
NWW-392	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.874753, -117.046552	0.02	102
NWW-393	R6	Yes/No	Creosote Bush – White Bursage Scrub[2]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.875192, -117.047002	<0.01	36
					Total[3]	31.57	219,252

[1] See Figure 4.2-1 for all vegetation communities present within/around each aquatic resource.
[2] Unvegetated within mapped vegetation community; however, no vegetation technically present within the OHWM.
[3] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus, the sum of the total rounded numbers may not directly add up in this table.

DRAFT

TABLE FF-2. AQUATIC RESOURCES IMPACTS SUMMARY: CDFW

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-10	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.778399, -117.276743	<0.01	39
NWW-11	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, double-thread feature within allscale scrub; originates south of review area.	34.778377, -117.276478	<0.01	28
NWW-12	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.778670, -117.276121	<0.01	31
NWW-13	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.778712, -117.276024	<0.01	10
NWW-14	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.778886, -117.275827	<0.01	33
NWW-18	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.786948, -117.252605	<0.01	2
NWW-19	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.787318, -117.251761	<0.01	14
NWW-20	Unvegetated Streambed[2]	Disturbed Habitat	Primarily unvegetated, single-thread feature within disturbed habitat; originates south of review area.	34.791189, -117.241868	0.33	144
NWW-21	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub that originates as runoff from National Trails Hwy/Main St.	34.795810, -117.228450	0.01	163
NWW-22	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub; originates downstream of NWW-21.	34.796559, -117.227801	0.02	176
NWW-23	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.795776, -117.228162	0.07	221
NWW-24	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.797160, -117.227759	0.20	761

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-25	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, double-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.796981, -117.225815	0.15	700
NWW-26	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.797595, -117.225008	0.16	492
NWW-27	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, partially braided feature within allscale scrub; originates as runoff from National Trails Hwy/Main St and/or features south of National Trails Hwy (NWW-103 and NWW-104); watercourse mapped throughout.	34.798258, -117.223204	0.23	1,068
	Watercourse[4]	Allscale Scrub			2.46	-
NWW-29	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub; occurs within watercourse mapped as associated with NWW-27.	34.798766, -117.222983	<0.01	96
NWW-30	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.798508, -117.221906	0.05	311
NWW-31	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, small, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.798583, -117.221247	0.03	145
NWW-33	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.799322, -117.219846	0.05	171
NWW-34	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.800955, -117.215818	<0.01	78
NWW-39	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates south of review area.	34.809671, -117.200471	<0.01	78
NWW-43	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; indicators of flow not present before dirt road.	34.826693, -117.188511	0.34	475
NWW-44	Unvegetated Streambed[2]	Unvegetated Channel	Large, primarily unvegetated feature fed by culvert along Hinkley Road and road runoff from National Trails Hwy and/or features south of National Trails Hwy (NWW-105 and NWW-106).; located within unvegetated channel and allscale scrub; feature runs along berm (earthen-lined and partially concrete); feature enlarges near railroad crossing.	34.829248, -117.186429	3.58	5,751

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-45	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated braided feature within allscale scrub; feature initiates at and is sourced by a residential lot; watercourse present throughout some portions of feature.	34.834684, -117.182237	0.21	2,468
	Watercourse[4]	Allscale Scrub			0.66	-
NWW-46	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated braided feature within allscale scrub between hillslopes.	34.835168, -117.181479	0.06	1,172
NWW-47	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, double-thread feature within allscale scrub; originates as runoff from two dirt roads leading from National Trails Hwy.	34.833706, -117.176283	0.04	580
NWW-48	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; portion occurs within watercourse mapped as associated with NWW-49.	34.836991, -117.181122	0.04	481
NWW-49	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, large braided and interwoven feature with multiple tributaries within allscale scrub between hillslopes; watercourse present throughout some portions of feature.	34.836110, -117.179064	0.73	7,138
	Watercourse[4]	Allscale Scrub			1.62	-
NWW-50	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.837239, -117.179203	0.02	461
NWW-51	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, double-thread feature within allscale scrub between hillslopes.	34.837464, -117.178078	0.04	842
NWW-52	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub between hillslopes.	34.837867, -117.177679	0.04	562
NWW-53	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, double-thread feature within allscale scrub between hillslopes.	34.837648, -117.177101	0.07	1,131
NWW-54	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from National Trails Hwy/Main St.	34.835210, -117.172619	0.02	354
NWW-55	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.835454, -117.171863	0.02	170
NWW-56	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.835773, -117.172617	0.02	252
NWW-57	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.836014, -117.172631	0.02	264
NWW-58	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub.	34.838348, -117.176084	0.50	4,4358

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-59	Unvegetated Streambed[2]	Allscale Scrub[3]	Large, primarily unvegetated, fan feature with multiple braids and heavily interwoven throughout; upstream portion of the feature runs through various hillslopes and fans downstream; within allscale scrub and creosote bush scrub; portions originate as runoff from National Trails Hwy and/or feature south of National Trails Hwy (NWW-107); watercourse present throughout some portions of feature.	34.838248, -117.174160	0.82	8,262
	Watercourse[4]	Allscale Scrub			9.45	–
NWW-60	Vegetated Streambed[2]	Creosote Bush Scrub	Vegetated feature north of railroad tracks within creosote bush scrub; receives sheet flows from dirt road north of and parallel to railroad tracks.	34.840401, -117.179750	0.17	188
NWW-61	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from National Trails Hwy/Main St.	34.837031, -117.169791	0.08	910
NWW-62	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated feature within allscale scrub between hillslopes; multiple tributaries.	34.840397, -117.175307	0.14	1,696
NWW-63	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated feature within allscale scrub between hillslopes; multiple tributaries.	34.840934, -117.174275	0.20	2,174
NWW-64	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, double-thread feature within allscale scrub between hillslopes.	34.841711, -117.174418	0.04	538
NWW-65	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub within hillslopes.	34.842293, -117.173643	0.02	482
NWW-66	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, double-thread feature within allscale scrub within hillslopes.	34.843147, -117.172457	0.08	1,260
NWW-67	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated feature with multiple tributaries upstream within creosote bush scrub.	34.841131, -117.171984	0.22	2,373
NWW-68	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, braided feature within creosote bush scrub; originates as runoff from National Trails Hwy/Main St; watercourse present throughout some portions of feature.	34.839992, -117.170094	0.37	5,708
	Watercourse[4]	Creosote Bush Scrub			0.51	–
NWW-69	Unvegetated Streambed[2]	Allscale Scrub[3]	Large, primarily unvegetated, braided and interwoven feature within allscale scrub and creosote bush scrub between hillslopes; watercourse present throughout some portions of feature.	34.842933, -117.168625	0.68	6,858
	Watercourse[4]	Allscale Scrub			0.83	–

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-70	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Large, primarily unvegetated, braided and interwoven feature with multiple mainstems fed by various tributaries; located within allscale scrub and creosote bush scrub between hillslopes; originates as runoff from unnamed dirt roads leading from National Trails Hwy; watercourse present throughout some portions of feature.	34.842209, -117.166408	2.10	18,504
	Watercourse[4]	Allscale Scrub			6.248	–
NWW-71	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub between hillslopes.	34.844554, -117.165718	0.10	1,128
NWW-72	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub between hillslopes.	34.845370, -117.166236	0.04	427
NWW-73	Unvegetated Streambed[2]	Allscale Scrub[3]	Large, primarily unvegetated, interwoven feature with multiple mainstems fed by various tributaries within allscale scrub and creosote bush scrub; originates as runoff from unnamed dirt roads leading from National Trails Hwy.	34.844453, -117.163545	1.24	13,399
NWW-74	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, double-thread feature within allscale scrub; originates as runoff from unnamed dirt road.	34.846950, -117.162756	0.17	1,582
NWW-75	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, double-thread feature within allscale scrub.	34.845550, -117.159978	0.04	487
NWW-76	Unvegetated Streambed[2]	Allscale Scrub[3]	Large, primarily unvegetated, braided feature with multiple tributaries within allscale scrub; originates as runoff from unnamed dirt road leading from National Trails Hwy; watercourse present throughout some portions of feature.	34.848019, -117.159133	0.86	8,649
	Watercourse[4]	Allscale Scrub			15.46	–
NWW-77	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated feature with one tributary within allscale scrub in between hillslopes; originates as runoff from unnamed dirt road leading from National Trails Hwy; downstream extent continues into watercourse associated with NWW-76.	34.847129, -117.156396	0.17	1,677
NWW-78	Unvegetated Streambed[3]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.848845, -117.157242	0.01	278

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-79	Unvegetated Streambed[3]	Allscale Scrub[3]	Primarily unvegetated, braided feature with island within allscale scrub; originates as runoff from unnamed dirt road.	34.850248, -117.158057	0.13	1,874
NWW-80	Unvegetated Streambed[3]	Creosote Bush Scrub[3]	Large, primarily unvegetated, braided and interwoven feature with multiple mainstems fed by various tributaries within creosote bush scrub; originates from National Trails Hwy/Main St and/or feature south of National Trails Hwy (NWW-108); portions of feature display disturbance by off-road vehicle usage; watercourse present throughout some portions of feature.	34.850680, -117.154564	2.02	15,877
	Watercourse[4]	Creosote Bush Scrub			13.99	–
NWW-81	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub.	34.853340, -117.156269	0.12	1,228
NWW-82	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, braided feature within allscale scrub and creosote bush scrub; heavily eroded where feature runs parallel to railroad tracks.	34.854433, -117.152784	0.64	8,327
NWW-83	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub.	34.856239, -117.153167	0.01	250
NWW-84	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub.	34.854958, -117.146066	0.02	909
NWW-85	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated feature with multiple tributaries within allscale scrub; originates as runoff from unnamed dirt road.	34.857281, -117.149898	0.31	3,921
NWW-86	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.856698, -117.147965	0.02	218
NWW-87	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.857936, -117.147949	0.13	2,162
NWW-88	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub; originates as runoff from unnamed dirt road.	34.858906, -117.148308	0.04	403

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-89	Unvegetated Streambed[2]	Allscale Scrub[3]	Large, primarily unvegetated feature within allscale scrub, creosote bush scrub, and disturbed habitat that consists of two large mainstems with several tributaries; eastern main stem originates south of National Trails Hwy/Main St before traveling through a culvert, western main stem originates as runoff from Mockingbird Rd (dirt road); disturbed by off-road vehicle use and obstructions (tree logs) likely placed by adjacent residential lot residents; heavily eroded downstream near manipulated and heavily used dirt roads adjacent to the railroad tracks; watercourse present throughout some portions of feature.	34.863711, -117.134655	2.44	16,638
		Creosote Bush Scrub[3]				
	Watercourse[4]	Allscale Scrub, Creosote Bush Scrub			3.53	–
NWW-90	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature within allscale scrub between residential lots; originates as runoff from unnamed dirt road.	34.860552, -117.142795	0.08	995
NWW-91	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, small, single-thread feature within allscale scrub near residential lots; originates as runoff from upstream residential lot and Dundee Street.	34.863147, -117.140564	0.01	150
NWW-92	Unvegetated Streambed[2]	Unvegetated Channel	Primarily unvegetated, large, trapezoidal feature (San Bernardino County Flood Control District Channel) within heavily manipulated, unvegetated channel; evidence of off-road vehicle use; originates south of Main St/National Trails Hwy.	34.874455, -117.131291	11.31	10,361
NWW-95	Unvegetated Streambed[2]	Disturbed Habitat[3]	Primarily unvegetated, single-thread feature within disturbed habitat that outlets from culvert along National Trails Hwy; manipulation on the eastern slopes.	34.877087, -117.110926	0.06	307
NWW-96	Unvegetated Streambed[2]	Disturbed Habitat[3]	Primarily heavily vegetated, disturbed, single-thread feature within disturbed habitat and tamarisk thickets; originates as road runoff from National Trails Hwy.	34.878268, -117.108708	0.01	439
	Vegetated Streambed[2]	Disturbed Habitat			0.04	
NWW-97	Unvegetated Streambed[2]	Disturbed Habitat[3]	Primarily unvegetated, single-thread feature generally within disturbed habitat; feature drains through private commercial lots and outputs across a culvert crossing.	34.879422, -117.105552	0.04	506

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-98	Unvegetated Streambed[2]	Allscale Scrub – Disturbed[3]	Small, unvegetated single-thread feature within allscale scrub – disturbed habitat that originates as runoff from dirt road parallel to the north side of railroad tracks.	34.880017, -117.105950	0.02	167
NWW-99	Vegetated Streambed[2]	Disturbed Habitat	Vegetated, single-thread feature within disturbed habitat that originates at culvert north of Main St/National Trails Hwy.	34.880936, -117.101226	0.07	353
NWW-100	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated feature within allscale scrub with several tributaries that travels through several culverts; originates as runoff from and at a culvert north of Main St/National Trails Hwy.	34.882602, -117.095407	0.21	1,863
NWW-101	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated feature within allscale scrub with multiple tributaries that travels through several culverts; originates as runoff from and at a culvert north of Main St/National Trails Hwy.	34.883416, -117.092671	0.18	406
NWW-102	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated feature within allscale scrub that originates as runoff from Main St/National Trails Hwy.	34.883038, -117.091930	<0.01	52
NWW-105	Unvegetated Streambed[2]	Allscale Scrub[3]	Small, primarily unvegetated, single-thread feature within allscale scrub that may continue over Main St/National Trails Hwy and converge with NWW-44; occurs within watercourse mapped as associated with NWW-106.	34.828712, -117.182373	<0.01	13
	Watercourse[4]	Allscale Scrub			0.78	–
		Creosote Bush Scrub				
NWW-106	Unvegetated Streambed[2]	Allscale Scrub[3]	Primarily unvegetated, single-thread feature generally within disturbed habitat; feature drains through private commercial lots and outputs across a culvert crossing.	34.828907, -117.182084	0.01	15
NWW-107	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub that may continue over Main St/National Trails Hwy and converge with NWW-59.	34.835555, -117.169501	<0.01	22
NWW-108	Unvegetated Streambed[2]	Creosote Bush Scrub – Disturbed[3]	Primarily unvegetated, single-thread feature within creosote bush scrub – disturbed that may continue over Main St/National Trails Hwy and converge with NWW-80.	34.847053, -117.151904	0.01	18

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-109 (Mojave River)	Unvegetated Streambed[2]	Unvegetated Channel	Sparsely vegetated, dry, sandy wash that comprises the on-site extent of the Mojave River; extends into active desert dune habitat; generally flows southwest to northeast before continuing off site.	34.863277, -117.170128	1.13	236
	Vegetated Streambed[2]	Active Desert Dunes			15.33	
		Tamarisk Thickets				
NWW-112	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.862328, -117.030154	<0.01	48
NWW-113	Unvegetated Streambed[2]	Developed	Primarily concrete feature within developed area; conveys flows around Tortilla substation and into NWW-114 through NWW-119.	34.863114, -117.031133	0.28	2,328
NWW-114	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated feature with small tributaries within creosote bush scrub.	34.863906, -117.030060	0.04	596
NWW-115	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; partially fed by flows from concrete-lined NWW-113.	34.863948, -117.030548	<0.01	177
NWW-116	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; fed by flows from concrete-lined NWW-113.	34.863745, -117.030843	<0.01	22
NWW-117	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; fed by flows from concrete-lined NWW-113.	34.863948, -117.031161	<0.01	173
NWW-118	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; fed by flows from concrete-lined NWW-113.	34.863784, -117.031507	<0.01	54
NWW-119	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; partially fed by flows from concrete-lined NWW-113.	34.864131, -117.031765	0.04	523
NWW-120	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.862325, -117.032219	0.02	144
NWW-121	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, double-thread feature within creosote bush scrub.	34.863168, -117.032221	0.01	269
NWW-122	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.86354, -117.032240	0.01	115
NWW-123	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unnamed dirt road.	34.86329, -117.032423	0.01	103

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-124	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.863374, -117.033400	0.03	296
NWW-125	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.863847, -117.033290	0.05	436
NWW-126	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.863806, -117.033928	0.07	707
NWW-127	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-126.	34.864203, -117.033791	0.05	567
NWW-128	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.863964, -117.034043	0.03	437
NWW-129	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.864078, -117.034199	0.01	128
NWW-130	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864243, -117.034403	0.02	294
NWW-131	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-130.	34.864655, -117.034310	0.06	528
NWW-132	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates as runoff from Bonanza Rd.	34.864770, -117.034393	0.05	484
NWW-133	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864415, -117.034695	0.02	249
NWW-134	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864537, -117.034800	0.01	511
NWW-135	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-134 and NWW-136.	34.865000, -117.034784	0.12	681

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-136	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.864640, -117.034993	0.05	390
NWW-137	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.865098, -117.035362	<0.01	41
NWW-138	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-137.	34.865483, -117.035394	0.02	319
NWW-139	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865080, -117.035540	0.01	142
NWW-140	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865346, -117.035826	0.15	1,395
	Watercourse[4]				0.58	-
NWW-141	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-140.	34.865793, -117.035751	0.02	263
NWW-142	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865558, -117.036182	0.04	176
NWW-143	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865940, -117.035968	0.05	321
NWW-144	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.865697, -117.036341	0.07	286
NWW-145	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.867099, -117.037273	0.02	160
	Watercourse[4]				0.02	-
NWW-146	Unvegetated Streambed[2]	Unvegetated Channel	Large, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.867280, -117.037889	0.50	595
NWW-147	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.867479, -117.038380	<0.01	47

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-148	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.868016, -117.038573	0.02	250
NWW-149	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.867884, -117.039030	0.02	250
NWW-150	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.867950, -117.039201	0.01	229
NWW-151	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.868385, -117.038946	0.03	221
NWW-152	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.868169, -117.039394	0.03	437
NWW-153	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-152.	34.868686, -117.039359	0.01	185
NWW-154	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.868471, -117.039625	<0.01	62
NWW-155	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.868497, -117.039748	0.01	132
NWW-156	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, double-thread feature within creosote bush scrub.	34.868751, -117.040025	0.01	126
NWW-157	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-156.	34.869093, -117.039898	0.04	230
NWW-158	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd.	34.869493, -117.040409	0.03	325
NWW-159	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.869406, -117.040822	0.01	123
NWW-160	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.869733, -117.041232	0.01	85

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-161	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870069, -117.041756	0.02	411
NWW-162	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.870305, -117.041899	0.01	55
NWW-163	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub.	34.870368, -117.042117	0.02	169
NWW-164	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.870510, -117.042262	0.01	125
NWW-165	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870631, -117.042459	0.02	306
NWW-166	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870818, -117.042706	0.04	515
NWW-167	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.870938, -117.042896	0.03	388
NWW-168	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates as runoff from unpaved Bonanza Rd and downstream of NWW-167.	34.871428, -117.042765	0.10	596
NWW-169	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.871617, -117.042845	0.02	299
NWW-170	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates south/southwest of review area.	34.871221, -117.043257	0.04	798
	Watercourse[4]	Creosote Bush Scrub[3]			0.26	-
NWW-171	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub that exhibits signs of off-road vehicle usage; originates south of review area.	34.871715, -117.043851	0.10	466
NWW-172	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub that exhibits signs of off-road vehicle usage; originates as runoff from the unpaved Bonanza Road and downstream of NWW-171.	34.872364, -117.043974	0.06	271
NWW-173	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.872264, -117.044360	<0.01	90

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-174	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.872611, -117.044917	0.01	374
NWW-175	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates from unnamed dirt road.	34.873081, -117.045449	0.01	155
NWW-176	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.873274, -117.045677	0.01	173
NWW-177	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates as runoff from the unpaved Bonanza Road and downstream of NWW-176.	34.873893, -117.045930	0.12	1,060
	Watercourse[4]				0.10	-
NWW-178	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.873797, -117.046218	0.01	84
NWW-179	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.873847, -117.046343	<0.01	63
NWW-180	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south/southwest of review area.	34.873945, -117.046598	0.21	1,657
	Watercourse[4]	Creosote Bush Scrub[3]			0.98	-
NWW-181	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub.	34.874872, -117.046978	0.04	407
NWW-182	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, multi-thread feature within creosote bush scrub; originates south/southwest of review area.	34.874268, -117.047106	0.15	964
	Watercourse[4]	Creosote Bush Scrub[3]			0.32	-
NWW-183	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south of review area.	34.864594, -117.120526	0.06	198
NWW-184	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, single-thread feature within creosote bush scrub; originates south of review area.	34.865232, -117.122088	0.02	133
NWW-185	Unvegetated Streambed[2]	Disturbed Habitat	Unvegetated, single-thread feature within disturbed land; originates and terminates within the review area.	34.853009, -117.132657	0.01	29

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-186	Unvegetated Streambed[2]	Disturbed Habitat	Primarily unvegetated, single-thread feature within creosote bush scrub; originates within review area as runoff from higher topographic area; continues off site and may continue over National Trails Hwy/Main St.	34.853376, -117.132649	0.01	143
NWW-187	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Small, primarily unvegetated, single-thread feature within creosote bush scrub; originates within review area as runoff from higher topographic area.	34.853977, -117.132836	0.03	396
NWW-188	Unvegetated Streambed[2]	Creosote Bush Scrub[3]	Primarily unvegetated, double-thread feature within creosote bush scrub; originates within review area as runoff from higher topographic area; continues off site and may continue over National Trails Hwy/Main St.	34.856810, -117.131280	0.46	1,975
NWW-192	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; discharges to Sandstone Court.	34.884968, -117.077919	0.01	47
NWW-202	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884926, -117.071903	<0.01	34
NWW-203	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884840, -117.071089	0.13	157
NWW-205	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884957, -117.070523	<0.01	6
NWW-206	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884739, -117.070669	<0.01	19
NWW-207	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884798, -117.070199	0.01	85
NWW-208	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884886, -117.070016	<0.01	37

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-209	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within site and ends offsite.	34.884793, -117.069784	<0.01	38
NWW-210	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.884694, -117.069564	0.01	60
NWW-211	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884832, -117.069431	<0.01	16
NWW-212	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884603, -117.069362	<0.01	12
NWW-213	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; draining to concrete channel, begins and ends within the site.	34.884852, -117.068194	0.01	53
NWW-214	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884638, -117.069050	<0.01	11
NWW-215	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884584, -117.068791	<0.01	6
NWW-216	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884598, -117.068755	<0.01	6
NWW-218	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884570, -117.068415	<0.01	10
NWW-219	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884627, -117.067639	0.12	33
NWW-220	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884544, -117.066951	<0.01	2
NWW-221	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884589, -117.066829	<0.01	4

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-222	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884531, -117.066373	<0.01	5
NWW-223	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884594, -117.066264	<0.01	6
NWW-224	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884631, -117.066111	<0.01	19
NWW-226	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.884722, -117.064866	0.08	35
NWW-228	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.884539, -117.064176	<0.01	38
NWW-229	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.884760, -117.063677	0.01	37
NWW-230	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.884420, -117.063052	<0.01	41
NWW-231	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3] Developed	Multiple unvegetated, single-thread features within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance draining to Santa Cruz Street; begins within the site and ends offsite.	34.884970, -117.062850	0.08	266
NWW-233	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.883705, -117.062238	0.02	424
NWW-234	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.884074, -117.062543	<0.01	50
NWW-235	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.884240, -117.062364	<0.01	38

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-237	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.884322, -117.062044	<0.01	64
NWW-238	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.884346, -117.061772	0.03	412
NWW-239	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.884599, -117.061692	<0.01	50
NWW-241	Unvegetated Streambed[2]	Developed	Unvegetated, single-thread feature within developed land; begins and ends within the site.	34.883139, -117.060675	0.02	7
NWW-243	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.880389, -117.060464	<0.01	2
NWW-245	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.878572, -117.057288	<0.01	10
NWW-248	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.875996, -117.056428	<0.01	8
NWW-250	Unvegetated Streambed[2]	Developed	Unvegetated, single-thread feature within developed land; begins and ends within the site.	34.874781, -117.052983	<0.01	16
NWW-252	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.874419, -117.047069	<0.01	74
NWW-268	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.884128, -117.085431	0.01	1
NWW-275	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.884494, -117.086801	<0.01	2
NWW-279	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.884200, -117.087561	<0.01	5

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-280	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.883667, -117.087345	<0.01	3
NWW-282	Unvegetated Streambed - Concrete[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, concrete channel within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; discharges to storm sewer system along State Route (SR)-58.	34.883010, -117.090401	0.01	53
NWW-283	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends within the site.	34.883675, -117.098066	0.01	171

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-284	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.883251, -117.098655	0.05	506
	Watercourse[4]	Creosote Bush – White Bursage Scrub			0.03	-
NWW-285	Unvegetated Streambed - Concrete[2]	Developed	Unvegetated, concrete channel in developed land; discharges to storm sewer system along Main Street.	34.872564, -117.117449	0.03	480
NWW-286	Unvegetated Streambed - Concrete[2]	Developed	Unvegetated, concrete channel in developed land; discharges to storm sewer system along Main Street.	34.871959, -117.118477	0.03	354
NWW-289	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.844585, -117.155167	<0.01	1
NWW-290	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.844434, -117.155340	<0.01	21
NWW-292	Unvegetated Streambed[2]	Disturbed Land	Unvegetated, single-thread feature within disturbed land; begins and ends offsite.	34.843835, -117.156241	<0.01	4
NWW-293	Watercourse[4]	Disturbed Land	Unvegetated, single-thread feature within disturbed land; begins offsite and ends within the site.	34.843595, -117.155397	<0.01	-
NWW-296	Watercourse[4]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.841284, -117.159788	0.01	-
NWW-297	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging feature to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.841284, -117.159788	<0.01	9
NWW-298	Watercourse[4]	Creosote Bush – White Bursage Scrub	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.838554, -117.163668	<0.01	-
NWW-299	Watercourse[4]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, converging features and single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.838168, -117.164441	<0.01	-
NWW-300	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.838016, -117.164824	<0.01	7

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-301	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, diverging to converging feature to single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.837817, -117.164981	<0.01	6
	Watercourse[4]	Creosote Bush – White Bursage Scrub			0.01	-
NWW-302	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.837379, -117.165543	<0.01	4
NWW-303	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.837119, -117.165941	<0.01	6
NWW-304	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.836963, -117.166360	<0.01	4
NWW-305	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins and ends offsite.	34.836611, -117.166625	<0.01	35
NWW-307	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.834780, -117.171605	<0.01	5
NWW-311	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.833845, -117.173741	0.01	61
NWW-312	Unvegetated Streambed[2]	Disturbed Land	Unvegetated, single-thread feature within disturbed land; begins within the site and ends offsite.	34.833837, -117.173783	<0.01	44
NWW-313	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins offsite and ends within the site.	34.831780, -117.173876	<0.01	88
NWW-314	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance; begins within the site and ends offsite.	34.831725, -117.173709	<0.01	35
NWW-317	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.862716, -117.033289	0.01	63
NWW-318	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.863052, -117.033291	0.02	272
	Watercourse[4]				0.05	

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-319	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.864065, -117.032833	0.04	324
NWW-320	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.864390, -117.033361	0.02	165
NWW-321	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.863796, -117.034266	0.05	408
	Watercourse[4]				0.08	-
NWW-322	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.863965, -117.034632	0.06	379
	Watercourse[4]				0.11	-
NWW-323	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.864395, -117.035291	0.04	236
NWW-324	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865542, -117.034963	0.02	104
NWW-325	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865752, -117.035236	<0.01	97
NWW-326	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865358, -117.036233	0.04	231
NWW-327	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865316, -117.036605	0.02	235
NWW-328	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866424, -117.036026	0.01	84
NWW-329	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866589, -117.036275	0.02	101
NWW-330	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.865897, -117.036907	0.05	348

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-331	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866779, -117.036510	0.01	102
NWW-332	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866848, -117.036595	<0.01	89
NWW-333	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866983, -117.036740	0.01	99
NWW-334	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867119, -117.036832	0.01	132
NWW-335	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.866330, -117.037652	0.01	121
NWW-336	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867481, -117.039109	0.02	385
NWW-337	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868444, -117.038583	0.01	104
NWW-338	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867866, -117.039575	0.01	137
NWW-339	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.867993, -117.039753	<0.01	149
NWW-340	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868133, -117.039911	0.02	346
NWW-341	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868718, -117.038929	0.01	100
NWW-342	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868935, -117.039171	0.01	302

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-343	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868172, -117.040103	0.01	184
NWW-344	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868514, -117.040435	0.01	156
NWW-345	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868700, -117.040644	0.01	147
NWW-346	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869591, -117.039999	0.01	111
NWW-347	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869715, -117.040081	<0.01	48
NWW-348	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869753, -117.040238	<0.01	85
NWW-349	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868626, -117.040758	0.01	191
NWW-350	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.868869, -117.040849	0.01	135
NWW-351	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869011, -117.041008	0.01	165
NWW-352	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869165, -117.041130	0.02	284
NWW-353	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869257, -117.041310	0.01	129
	Watercourse[4]				0.14	-
NWW-354	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870238, -117.040752	<0.01	54

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-355	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869366, -117.041589	0.01	195
NWW-356	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870307, -117.040980	<0.01	47
NWW-357	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870462, -117.040963	<0.01	19
NWW-358	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870513, -117.041131	0.01	75
NWW-359	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869863, -117.041861	<0.01	34
NWW-360	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869878, -117.041965	<0.01	67
NWW-361	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869727, -117.042081	<0.01	68
NWW-362	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869966, -117.042160	0.02	132
NWW-363	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.869931, -117.042218	0.01	102
NWW-364	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870478, -117.041269	0.01	206
NWW-365	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870834, -117.041454	0.01	102
NWW-366	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870076, -117.042412	0.01	125
NWW-367	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870211, -117.042362	<0.01	72

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-368	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870257, -117.042556	0.01	136
NWW-369	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.870942, -117.043474	0.01	115
NWW-370	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871049, -117.043413	<0.01	68
NWW-371	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871212, -117.043506	<0.01	8
NWW-372	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872147, -117.043231	<0.01	90
NWW-373	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871506, -117.044032	0.01	186
NWW-374	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871504, -117.044169	0.01	108
NWW-375	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871576, -117.044217	0.01	148
NWW-376	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872382, -117.043502	0.01	95
NWW-377	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872422, -117.043565	0.01	125
NWW-378	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872623, -117.043737	<0.01	49
NWW-379	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.871816, -117.044497	<0.01	148
NWW-380	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872031, -117.044720	<0.01	133

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-381	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872895, -117.044158	0.01	112
NWW-382	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873045, -117.044203	<0.01	18
NWW-383	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872070, -117.045019	0.04	244
NWW-384	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872414, -117.045306	0.03	520
NWW-385	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, multi-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.872585, -117.045311	0.01	79
NWW-386	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873216, -117.044635	0.01	100
NWW-387	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873596, -117.044917	<0.01	32
NWW-388	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873635, -117.045136	0.02	230
NWW-389	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.874196, -117.045643	<0.01	25
NWW-390	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.874263, -117.045793	<0.01	78
NWW-391	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.873792, -117.047252	0.01	104
NWW-392	Unvegetated Streambed[2]	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.874753, -117.046552	0.03	102
	Watercourse[4]				0.02	-

DRAFT

Aquatic Resource Name	Aquatic Resource Type	Dominant Vegetation	General Characteristics	Location (Latitude, Longitude)	Impacts	
					Acre(s)	Linear Feet[1]
NWW-393	Unvegetated Streambed	Creosote Bush – White Bursage Scrub[3]	Unvegetated, single-thread feature within Larrea tridentata – Ambrosia dumosa Shrubland Alliance; discharges to Mojave River.	34.875192, -117.047002	<0.01	36
Watercourse A	Watercourse[4]	Allscale Scrub	Watercourse associated with a streambed that occurs off site and upstream.	34.789811, -117.245502	0.02	7
Watercourse E	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.841824, -117.159145	<0.01	5
Watercourse F	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.841666, -117.159546	<0.01	5
Watercourse I	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.839738, -117.162234	<0.01	4
Watercourse K	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.833463, -117.173675	0.02	67
Watercourse L	Watercourse[4]	Disturbed Land	Watercourse independent of any unvegetated streambed flowing through disturbed land.	34.809751, -117.199844	0.05	76
Watercourse M	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.827792, -117.182833	0.01	9
Watercourse O	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.809683, -117.200211	0.01	30
Watercourse P	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.809502, -117.200189	0.03	166
Watercourse Q	Watercourse[4]	Creosote Bush – White Bursage Scrub	Watercourse independent of any unvegetated streambed flowing through Larrea tridentata – Ambrosia dumosa shrubland alliance.	34.809145, -117.200450	0.03	50
				Total[5]	104.54	219, 252

[1] Linear feet not calculated for watercourse to avoid redundant linear foot calculation where such areas overlap with streambed, unless otherwise indicated.

DRAFT

[2] A “streambed” under CFGC Section 1602 includes the channel of a watercourse that is generally defined to include the depression between the banks worn by the regular and usual flow of water.
[3] Unvegetated streambed within mapped vegetation community shown on Figure 4.2-1; however, no vegetation technically present within the streambed.
[4] A “watercourse” extends beyond the streambed and can consist of associated features such as low-flow, active, and braided channels and banks associated with islands, and secondary channels within the bounds of a larger channel complex (Vyverberg & Brady 2013).
[5] Acreages and linear feet totals were summed using raw numbers provided during GIS analysis (available upon request) and thus, the sum of the total rounded numbers may not directly add up in this table.

DRAFT