

**THE RESULTS OF LIGHT-FOOTED CLAPPER RAIL SURVEYS
AT THE BALLONA WETLANDS ECOLOGICAL RESERVE
PLAYA DEL REY, LOS ANGELES COUNTY, CALIFORNIA
MARCH-APRIL 2011**

Final Report

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INTRODUCTION

This document presents the findings of protocol-level surveys for the State and Federally Endangered Light-footed Clapper Rail (*Rallus longirostris levipes*) at the Ballona Wetlands Ecological Reserve, Playa del Rey, Los Angeles County, California (33°57'47.76"N, 118°26'51.20"W), Venice USGS Quad (study area) (Figure 1). The study area is located within the Ballona Wetlands Ecological Reserve at five patches of potentially suitable habitat as previously identified by Daniel S. Cooper of Cooper Ecological Monitoring, Inc. as having the highest chance of detecting the species (Figure 1). The five areas are the Ballona Creek levee (south), tidal channels north of Culver, the base of Westchester bluffs, tidal channels and muted tidal saltmarsh south of Culver, and the "Fiji Ditch" adjacent to Marina del Rey. These areas span approximately 300 acres; none is more than 250 m wide. The elevation within the study area is approximately 0-15 feet above mean sea level (msl), and the topography is of a flat, broad estuary, bounded by bluffs to the south, developed areas to the north (Marina del Rey) and east (residential/commercial buildings of Playa Vista). A small area of former sand dunes, along with residential and commercial buildings, lie to the west.

An area of constructed freshwater marsh ("Ballona Freshwater Marsh"), located just east of and adjacent to the Ballona Wetlands Ecological Reserve, was not sampled during this survey. This habitat was created only in 2003, and was intensively surveyed for birds (by Cooper Ecological Monitoring, Inc.) from 2003 to 2008 (Read 2010). This site continues to be visited by birders on a near-daily basis, and several other cryptic marsh birds have been detected here and at the adjacent Playa Vista Riparian Corridor, including the Least Bittern (*Ixobrychus exilis*) and Virginia Rail (*Rallus limicola*), with no reports of Clapper Rail.

METHODS

As per permit regulations, both USFWS and CDFG were notified of these surveys and the proposed survey methods prior to the first survey, and representatives of both agencies reviewed and approved the surveys and the proposed methods (electronic mail messages dated February 24, 2011 (CDFG) and March 7, 2011 (USFWS). CDFG additionally required that the survey results be forwarded to Richard Zembal for inclusion in his 2011 Light-footed Clapper Rail Statewide Census Report upon completion of this report.

As per USFWS protocols and permit conditions of approval, morning surveys were conducted one hour before sunrise and extended no more than one hour after sunrise; evening surveys began one hour prior to sunset and extended no more than one hour following sunset. One evening survey was conducted on March 10, 2011. Road noise was found to be much higher during this evening period, and the wind speeds tend to be higher in the evening than in the morning. Based on these observations, all remaining surveys, including all tape-playback surveys were conducted during the morning hours.

The surveys were broken up into two main survey areas divided by Culver Blvd. We conducted surveys from 15 survey "stations" at least 200 meters apart; stations were located on existing

trails at the edge of salt marsh to minimize disturbance (Figures 2 and 2a). Surveys were spaced two weeks apart.

Each station was visited three times (one passive, two tape-playback) between March 10 and April 11. We conducted passive listening at each station prior to conducting tape-playback surveys. At each station, a tape was played through 3 cycles (< one minute each), and then the observer listened for 10 minutes.

If a Clapper Rail was detected, its location would have been marked using a Global Positioning System (GPS) device and on an aerial photograph of the site. In addition, we recorded all wildlife species observed at the study area, and mapped special status species observed.

Surveys took place between 05:32 and 08:08 am (5 visits) and 16:58 to 18:43 pm (1 visit); temperatures were generally cool, between 43° and 61° F (Table 1). Conditions varied from clear to overcast, but surveys were not conducted during rain events. Wind was always less than 10 mph (16 kph) and usually varied between 0-3 mph (0-5 kph) (Table 1).

Table 1. Summary of survey weather conditions.

Survey	Date	Surveyor	Time	Temp (°F)	Wind (mph)	Conditions	Tide
South 1	3/10/11	T. Ryan	16:58-18:43	61-59	3-10	Clear	0.63 m, falling
North 1	3/13/11	T. Ryan	06:07-08:08	49-51	0-1	Clear	1.07 m, falling
South 2	3/26/11	T. Ryan	05:51-07:50	50-53	0-1	Pt. Cldy	1.06 m, falling
North 2	3/27/11	T. Ryan	05:55-07:47	50-52	0-1	Cloudy	1.19 m, falling
South 3	4/9/11	T. Ryan	05:32-07:28	43-48	1-3	Clear	0.30 m, falling
North 3	4/10/11	T. Ryan	05:35-07:27	50-56	0-1	Clear	0.70 m, falling

Study Area Description This study focused on the remaining pockets of salt marsh within the Ballona Wetlands Ecological Reserve that support pickleweed (*Salicornia virginica*). Salt marsh vegetation was found in areas of muted tidal flow, and on the fringes of a large salt panne (Figure 1) and is the preferred habitat of the Light-footed Clapper Rail at occupied sites elsewhere in the region.

Natural History of Clapper Rail. The Light-footed Clapper Rail is one of three subspecies that occur in California. It is found in coastal salt marshes from Santa Barbara County to Northern Baja California (USFWS 1985, Eddleman and Conway 1998). It prefers salt marsh with both pickleweed and cordgrass, and appears to require large areas of cordgrass. It benefits from emergent vegetation in upstream inlets that include freshwater marshes (USFWS 1985). Nests are typically built on the ground under clumps of pickleweed or elevated in stands of cordgrass

(USFWS 1985, Eddleman and Conway 1998). Nesting takes place from mid-March to late August (USFWS 1985, Eddleman and Conway 1998).

The Light-footed Clapper Rail was a resident, breeding species within the Ballona Wetlands until the 1950's (AFN 2002, Cooper 2006). Since the 1960's, there have been two records of presumed dispersing individuals from either the Ventura or Orange County populations (Cooper, *In press*). The closest populations of Light-footed Clapper Rails occur at the Los Alamitos Wetlands/Seal Beach National Wildlife Refuge (Orange County) and Mugu Lagoon (Ventura County) (Zembal 2010). Steps that were suggested in the Recovery Plan (USFWS 1985) to re-establish the Light-footed Clapper Rails at the Ballona Wetlands include pursuing appropriate protective measures, improving/restoring tidal action, developing fringing freshwater marsh, creating nest hummocks, developing low marsh, and enhancing *Spartina* vigor (USFWS 1985).

RESULTS

No Light-footed Clapper Rails were detected during the surveys. While conducting the surveys, we noted that the overall habitat conditions for the Clapper Rail remain poor. Most of the salt marsh supports low-growing pickleweed. Pickleweed is good foraging habitat, but is considered lower quality nesting habitat. Tall cordgrass is considered highly desirable and a lack of this habitat at Ballona was noted in the Recovery Plan (USFWS 1985). There are few areas where freshwater marsh integrates into the salt marsh, notably in the southeastern corner of the Ecological Reserve. These could be important foraging areas and high-tide refugia should a population become established locally. Finally, there are few deep channels, which would be important for foraging, cover, and movement by rails.

We detected several potential predators (Eddleman and Conway 1998) including the Red-tailed Hawk (observed on each survey), Red-shouldered Hawk (observed once in eucalyptus grove on 3-10-11), and Cooper's Hawk (observed on each survey in riparian habitat along Westchester Bluffs). Additionally, there are tall and dense trees that border the salt marsh where at least the Red-tailed Hawk nests (Cooper 2006). There are also numerous human-built structures within the salt marsh including telephone poles, statues, fences, etc. that provide hunting perches for these species. Biologists noted evidence of local residents walking domestic dogs adjacent to the salt marsh. Domestic/feral cats were observed in areas adjacent to the salt marsh. Coyotes howled at fire engines from within the willows along the southern edge of the marsh south of points BL2 and BL3 (Figure 2). All of these could be considered constraints on the development of a population of Clapper Rails at the Ballona Wetlands.

Another potential threat to a future population of Clapper Rails is the fact that the salt marsh is bisected by the heavily-travelled Culver Blvd.; collisions with automobiles are a known regular cause of mortality of this taxon (Zembal 1989).

Special Status Species Observed During Surveys

Cooper's Hawk (*Accipiter cooperii*) perched and foraged at the study area in an area of willows (*Salix* spp.) immediately south of survey points BL2 and BL3 (Figure 2). The Cooper's Hawk is on the CDFG's Watch List (Shuford and Gardali 2008, CDFG 2011) and is a raptor which, when nesting, is afforded special protection by the State of California.

Yellow Warbler (*Dendroica petechia*) was observed singing in willows south of survey points BL2 and BL3 and in the Freshwater Marsh. While no nesting records exist for the Ballona area (Cooper 2006, D.S. Cooper, pers. comm.), appropriate nesting habitat is present at the southeastern edge of the Ballona Wetlands, including the Ballona Freshwater Marsh. The Yellow Warbler is a State Bird Species of Special Concern (Shuford and Gardali 2008, CDFG 2011).

Belding's Savannah Sparrow (*Passerculus sandwichensis beldingi*) was observed singing, foraging, and perching at survey points BL2, BL3, BL4, BL5, BL6, BC1, BC2, BC3, WAB1, and WAB3. They tended to sing vigorously as the marsh became light. They were all detected within pickleweed or adjacent herbaceous plants within the salt marsh and adjacent to roads. This subspecies of the savannah sparrow is considered State Endangered (CDFG 2011).

Western Meadowlark (*Sturnella neglecta*) was observed and heard singing from the upland area adjacent to point BC2 and WAB1 on 3-11-11. This species is considered locally sensitive when nesting (Los Angeles County Sensitive Bird Species Working Group 2009), is not common in this area and last bred here in 2005 (*fide* D.S. Cooper).

Other bird species of local concern (Los Angeles County Sensitive Bird Species Working Group 2009) were detected at the adjacent Freshwater Marsh including the **American Bittern** (3-26-11) and **Virginia Rail** (3-26-11). In addition, the **Marsh Wren** was detected at the Fiji Ditch (3-27-11) and in a small freshwater wetland along the southern bluffs (3-26-11). These are likely remnant wintering or transient birds and are not likely to nest here. Other species that are afforded special status at the State or County level were detected, but only as transients (see Appendix 1).

CONCLUSIONS AND RECOMMENDATIONS

Based on these surveys and observations of habitat, it is unlikely that the Light-footed Clapper Rail currently resides at the Ballona Wetlands Ecological Reserve. This is further supported by the near-total lack of observations of this species by the many birdwatchers that have frequented the area for decades. There have only been two modern observations of this species in the Ballona Wetlands since their disappearance in the 1950's. Currently the salt marsh habitat within the Ballona Wetlands is fragmented and of poor quality for the Light-footed Clapper Rail. Steps that may be considered to improve habitat for this species include 1) improving tidal flow to the salt marsh in order to improve habitat quality; 2) creating new tidal channels to increase the available prey base; 3) actively restoring native cordgrass; 4) removing non-native plants such as iceplant (Family: Aizoaceae), and reducing the number of palm and

eucalyptus trees within and adjacent to the marsh that raptors can use as hunting perches; 5) removing non-essential, human-built structures from the marsh that raptors may use as hunting perches (posts, fences); 5) enforcing regulations regarding off-leash pets; and 7) investigating alternatives to reduce the potential for vehicle strikes on Culver Blvd.

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Certification Statement.

I certify that the information in this survey report, and attached exhibits, fully and accurately represent my work. The results of focused surveys for listed species are typically considered valid for one year by the USFWS and CDFG. If you have any questions or require additional information, please call me at (949) 923-8224.

A handwritten signature in blue ink that reads "Thomas Ryan". The signature is written in a cursive style with a long horizontal line extending from the end of the name.

Thomas Ryan
TE-097516-1

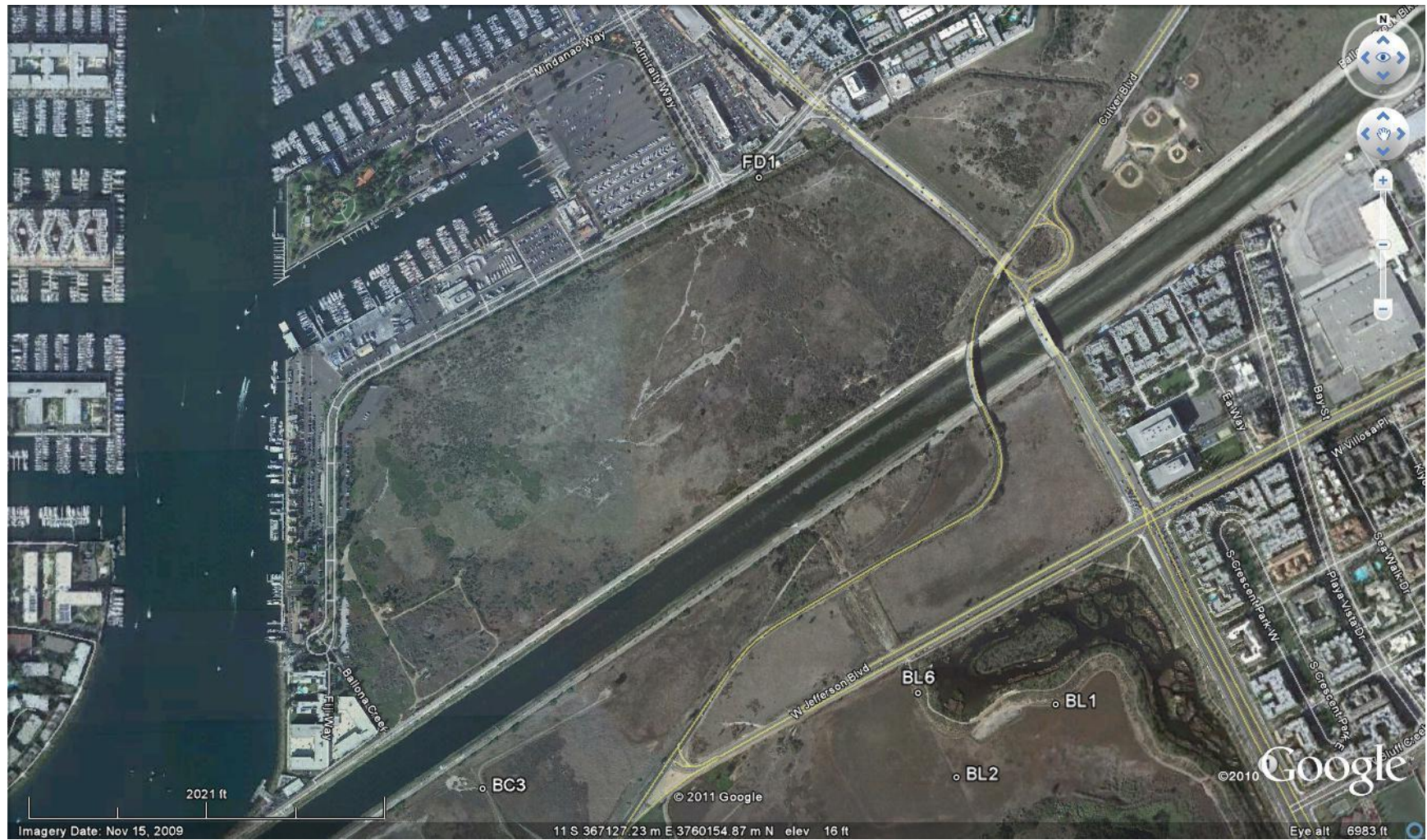
Figure 1. Map of proposed survey areas within the Ballona Wetlands. Areas marked in red are areas identified by Cooper Ecological Inc. as priority survey areas.



Figure 2. Survey points south of Ballona Channel.



Figure 2a. Survey point at Fiji Ditch.



Appendix 1. Wildlife observed at the study area in 2011. Special status species are in bold. Species “Detected” include those in the salt marsh and elsewhere in the Ballona Wetlands Complex and Ballona Creek. Those seen in the “salt marsh,” include only those species that were observed within or foraging over the salt marsh habitat.

Scientific Name	Common Name	Species Status	Detected	Salt Marsh
Amphibians & Reptiles				
<i>Rana catesbeiana</i>	Bullfrog		X	
<i>Pseudacris regilla</i>	Pacific Chorus Frog		X	?
<i>Sceleporous occidentalis</i>	Western Fence Lizard		X	
Birds				
<i>Branta canadensis</i>	Canada Goose		X	
<i>Anas strepera</i>	Gadwall		X	X
<i>Anas americana</i>	American Wigeon		X	X
<i>Anas platyrhynchos</i>	Mallard		X	X
<i>Anas cyanoptera</i>	Cinnamon Teal		X	X
<i>Anas clypeata</i>	Northern Shoveler		X	
<i>Anas crecca</i>	Green-winged Teal		X	
<i>Mergus serrator</i>	Red-breasted Merganser		X	
<i>Oxyura jamaicensis</i>	Ruddy Duck		X	
<i>Podilymbus podiceps</i>	Pied-billed Grebe		X	
<i>Aechmophorus occidentalis</i>	Western Grebe		X	
<i>Phalacrocorax auritus</i>	Double-crested Cormorant	SW	X	
<i>Pelecanus occidentalis</i>	Brown Pelican	FD, SD, FP	X	
<i>Botaurus lentiginosus</i>	American Bittern	LACSBS	X	
<i>Ardea herodias</i>	Great Blue Heron		X	X
<i>Ardea alba</i>	Great Egret		X	X
<i>Egretta thula</i>	Snowy Egret		X	X
<i>Nycticorax nycticorax</i>	Black-crowned Night-Heron		X	X
<i>Cathartes aura</i>	Turkey Vulture	LACSBS	X	
<i>Accipiter cooperii</i>	Cooper's Hawk	SW	X	
<i>Buteo lineatus</i>	Red-shouldered Hawk		X	
<i>Buteo jamaicensis</i>	Red-tailed Hawk		X	X
<i>Falco sparverius</i>	American Kestrel		X	X
<i>Rallus limicola</i>	Virginia Rail	LACSBS	X	
<i>Fulica americana</i>	American Coot		X	
<i>Pluvialis squatarola</i>	Black-bellied Plover		X	X
<i>Charadrius semipalmatus</i>	Semipalmated Plover		X	
<i>Charadrius vociferus</i>	Killdeer		X	X
<i>Himantopus mexicanus</i>	Black-necked Stilt		X	X

Scientific Name	Common Name	Species Status	Detected	Salt Marsh
<i>Actitis macularius</i>	Spotted Sandpiper		X	
<i>Tringa melanoleuca</i>	Greater Yellowlegs		X	X
<i>Tringa semipalmata</i>	Willet		X	X
<i>Numenius phaeopus</i>	Whimbrel		X	X
<i>Limosa fedoa</i>	Marbled Godwit		X	X
<i>Arenaria interpres</i>	Ruddy Turnstone		X	
<i>Arenaria melanocephala</i>	Black Turnstone		X	
<i>Aphriza virgata</i>	Surfbird		X	
<i>Calidris mauri</i>	Western Sandpiper		X	
<i>Calidris minutilla</i>	Least Sandpiper		X	X
<i>Calidris alpina</i>	Dunlin		X	
<i>Larus heermanni</i>	Heermann's Gull		X	
<i>Larus delawarensis</i>	Ring-billed Gull		X	
<i>Larus occidentalis</i>	Western Gull		X	
<i>Larus californicus</i>	California Gull	SW	X	
<i>Larus argentatus</i>	Herring Gull		X	
<i>Larus glaucescens</i>	Glaucous-winged Gull		X	
<i>Hydroprogne caspia</i>	Caspian Tern	LACSBS	X	
<i>Sterna forsteri</i>	Forster's Tern		X	X
<i>Thalasseus elegans</i>	Elegant Tern	SW, LACSBS	X	
<i>Columba livia</i>	Rock Pigeon	I	X	
<i>Zenaida macroura</i>	Mourning Dove		X	
<i>Aeronautes saxatalis</i>	White-throated Swift		X	
<i>Calypte anna</i>	Anna's Hummingbird		X	
<i>Selasphorus sasin</i>	Allen's Hummingbird		X	
<i>Megaceryle alcyon</i>	Belted Kingfisher	LACSBS	X	
<i>Picoides nuttallii</i>	Nuttall's Woodpecker		X	
<i>Colaptes auratus</i>	Northern Flicker		X	
<i>Sayornis nigricans</i>	Black Phoebe		X	X
<i>Sayornis saya</i>	Say's Phoebe		X	X
<i>Tyrannus vociferans</i>	Cassin's Kingbird		X	X
<i>Aphelocoma californica</i>	Western Scrub-Jay		X	
<i>Corvus brachyrhynchos</i>	American Crow		X	X
<i>Corvus corax</i>	Common Raven		X	X
<i>Tachycineta bicolor</i>	Tree Swallow		X	X
<i>Tachycineta thalassina</i>	Violet-green Swallow		X	X
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow		X	X
<i>Petrochelidon pyrrhonota</i>	Cliff Swallow		X	X
<i>Hirundo rustica</i>	Barn Swallow		X	X

Scientific Name	Common Name	Species Status	Detected	Salt Marsh
<i>Psaltiriparus minimus</i>	Bushtit		X	
<i>Troglodytes aedon</i>	House Wren		X	
<i>Cistothorus palustris</i>	Marsh Wren	LACSBS	X	
<i>Mimus polyglottos</i>	Northern Mockingbird		X	
<i>Sturnus vulgaris</i>	European Starling	I	X	
<i>Oreothlypis celata</i>	Orange-crowned Warbler		X	
<i>Dendroica petechia</i>	Yellow Warbler	BSSC	X	
<i>Dendroica coronata</i>	Yellow-rumped Warbler		X	
<i>Geothlypis trichas</i>	Common Yellowthroat		X	X
<i>Pipilo maculatus</i>	Spotted Towhee		X	
<i>Melospiza crissalis</i>	California Towhee		X	X
<i>Passerculus sandwichensis</i>	Belding's Savannah Sparrow	SE	X	X
<i>Melospiza melodia</i>	Song Sparrow		X	X
<i>Melospiza lincolnii</i>	Lincoln's Sparrow	LACSBS	X	
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow		X	X
<i>Agelaius phoeniceus</i>	Red-winged Blackbird		X	X
<i>Sturnella neglecta</i>	Western Meadowlark	LACSBS	X	X
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird		X	
<i>Quiscalus mexicanus</i>	Great-tailed Grackle		X	
<i>Molothrus ater</i>	Brown-headed Cowbird		X	
<i>Icterus bullockii</i>	Bullock's Oriole		X	
<i>Carpodacus mexicanus</i>	House Finch		X	X
<i>Spinus psaltria</i>	Lesser Goldfinch		X	X
<i>Spinus tristis</i>	American Goldfinch		X	X
<i>Passer domesticus</i>	House Sparrow	I	X	
Mammals				
<i>Canis latrans</i>	Coyote		X	
<i>Canis familiaris</i>	Domestic Dog		X	
<i>Procyon lotor</i>	Raccoon		X	
<i>Felis domesticus</i>	House Cat		X	
<i>Spermophilus beecheyi</i>	California Ground Squirrel		X	
<i>Thomomys bottae</i>	Botta Pocket Gopher		X	
<i>Rattus norvegicus</i>	Norway Rat		X	
<i>Sylvilagus audubonii</i>	Desert Cottontail		X	

FE – Federally Endangered, FT – Federally Threatened, SE – State Endangered, ST – State Threatened, FP – State Fully Protected, SD – State Delisted, BSSC – State Bird Species of Special Concern, SW – State Watch List, LACSBS – Los Angeles County Sensitive Bird Species., I – Introduced.