



Lower Colorado River Multi-Species Conservation Program

Balancing Resource Use and Conservation

Marsh Bird Surveys at Conservation Areas 2019 Annual Report



February 2020

Work conducted under LCR MSCP Work Task F7

Lower Colorado River Multi-Species Conservation Program Steering Committee Members

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Bureau of Reclamation
U.S. Fish and Wildlife Service
National Park Service
Bureau of Land Management
Bureau of Indian Affairs
Western Area Power Administration

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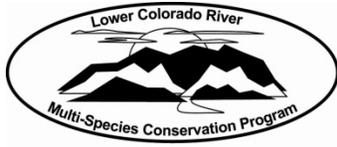
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RECLAMATION

Lower Colorado River Multi-Species Conservation Program

Marsh Bird Surveys at Conservation Areas 2019 Annual Report

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Multi-Species Conservation Program
Bureau of Reclamation
Lower Colorado Basin
Boulder City, Nevada
<http://www.lcrmscp.gov>**

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ACRONYMS AND ABBREVIATIONS

AKN	Avian Knowledge Network
BLRA	California black rail (<i>Laterallus jamaicensis coturniculus</i>)
CLRA	Yuma clapper rail (<i>Rallus longirostris yumanensis</i> [also known as Yuma Ridgway's rail = <i>R. obsoletus yumanensis</i>])
COGA	common gallinule (<i>Gallinula galeata</i>)
LCR MSCP	Lower Colorado River Multi-Species Conservation Program
LEBI	western least bittern (<i>Ixobrychus exilis hesperis</i>)
PBGR	pied-billed grebe (<i>Podilymbus podiceps</i>)
SORA	sora (<i>Porzana carolina</i>)
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VIRA	Virginia rail (<i>Rallus limicola</i>)

CONTENTS

	Page
Executive Summary	ES-1
Introduction	1
Methods	1
Survey Areas.....	2
Big Bend Conservation Area	4
Beal Lake Conservation Area	6
Hart Mine Marsh	8
Imperial Ponds Conservation Area.....	10
Laguna Division Conservation Area.....	12
Yuma East Wetlands.....	14
Results	16
Big Bend Conservation Area	16
Beal Lake Conservation Area	17
Hart Mine Marsh	19
Imperial Ponds Conservation Area.....	22
Laguna Division Conservation Area.....	24
Yuma East Wetlands.....	27
Literature Cited.....	29

Tables

Table	Page
1 Big Bend Conservation Area marsh bird survey results, April 8, 2019	16
2 Big Bend Conservation Area marsh bird survey results, May 9, 2019.....	16
3 Beal Lake marsh bird survey results, March 26, 2019	17
4 Beal Lake marsh bird survey results, April 11, 2019	18
5 Beal Lake marsh bird survey results, April 24, 2019	18
6 Hart Mine Marsh survey results, March 21, 2019.....	19
7 Hart Mine Marsh survey results, April 3, 2019	20
8 Hart Mine Marsh survey results, April 25, 2019	20
9 Imperial Ponds Conservation Area marsh bird survey results, March 17, 2019	22
10 Imperial Ponds Conservation Area marsh bird survey results, April 11, 2019	23
11 Imperial Ponds Conservation Area marsh bird survey results, May 4, 2019.....	23
12 Laguna Division Conservation Area marsh bird survey results, April 2 and 4, 2019.....	25
13 Laguna Division Conservation Area marsh bird survey results, April 25–26, 2019.....	26
14 Yuma East Wetlands marsh bird survey results, March 22, 2019	27
15 Yuma East Wetlands marsh bird survey results, April 5, 2019.....	28
16 Yuma East Wetlands marsh bird survey results, April 18, 2019.....	28

Figures

Figure	Page
1 LCR MSCP planning area and conservation areas.	3
2 Big Bend Conservation Area.	5
3 Beal Lake Conservation Area sites: Beal Lake and Willow Marsh.....	7
4 Hart Mine Marsh.	9
5 Imperial Ponds Conservation Area.....	11
6 Laguna Division Conservation Area.....	13
7 Yuma East Wetlands.....	15

Attachments

Attachment	
1	Species Lists from Surveys Conducted at Conservation Areas
2	Survey Data Sheet

EXECUTIVE SUMMARY

In 2019, surveys for marsh birds were conducted under the Lower Colorado River Multi-Species Conservation Program at conservation areas along portions of the lower Colorado River. Surveys for Yuma clapper rails (*Rallus longirostris yumanensis* [also known as Yuma Ridgway's rail = *R. obsoletus yumanensis*]), California black rails (*Laterallus jamaicensis coturniculus*), and western least bitterns (*Ixobrychus exilis hesperis*) were conducted between March and May after marsh habitat was created. Survey locations included the Big Bend Conservation Area near Laughlin, Nevada; the Beal Lake Conservation Area on the Havasu National Wildlife Refuge near Needles, California; Hart Mine Marsh on the Cibola National Wildlife Refuge near Cibola, Arizona; the Imperial Ponds Conservation Area on the Imperial National Wildlife Refuge near Yuma, Arizona; the Laguna Division Conservation Area near Yuma, Arizona; and Yuma East Wetlands in Yuma, Arizona. Yuma clapper rails and western least bitterns were detected at all of the conservation areas. California black rails were detected at the Imperial Ponds Conservation Area.

INTRODUCTION

The Yuma clapper rail (*Rallus longirostris yumanensis* [also known as Yuma Ridgway's rail = *R. obsoletus yumanensis*]) was listed as an endangered species by the U.S. Department of the Interior in 1967 under the Endangered Species Preservation Act of 1966 (Public Law 89-669) (U.S. Department of the Interior 1967). This protection continued under the Endangered Species Act of 1973, which is regulated by the U.S. Fish and Wildlife Service (USFWS). This species is also protected under the Migratory Bird Treaty Act (16 U.S.C. 703–711). In addition, it is presently listed as threatened in California (California Department of Fish and Wildlife 2017) and is a species of special concern in Arizona (Arizona Game and Fish Department 2006). Nevada classifies the Yuma clapper rail as endangered and ranks it as S1B: critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors (Nevada Natural Heritage Program 2018).

The California black rail (*Laterallus jamaicensis coturniculus*) has been identified by the USFWS as a bird of conservation concern (USFWS 2008), and it is protected under the Migratory Bird Treaty Act. In California, this species is listed as threatened (California Department of Fish and Wildlife 2017); in Arizona, it is listed as a species of special concern (Arizona Game and Fish Department 2002).

The western least bittern (*Ixobrychus exilis hesperis*) has been identified by the USFWS as a bird of conservation concern (USFWS 2008), and it is protected under the Migratory Bird Treaty Act. It is also a species of special concern in Arizona (Arizona Game and Fish Department 2004) and California (California Department of Fish and Wildlife 2017; Sterling 2008). It is a protected species in Nevada and ranked as S2B: The breeding population is imperiled and at high risk of extirpation in Nevada due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors (Nevada Natural Heritage Program 2018). The name western least bittern is considered a synonym of the least bittern (*I. e. exilis*) (Dickerman 1973).

Conservation measures under the Habitat Conservation Plan of the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) provide for monitoring and research of Yuma clapper rails, California black rails, and western least bitterns (LCR MSCP 2004). Surveys for these three covered species are conducted at sites prior to and after creation of marshland habitat and in existing habitat as part of system-wide monitoring (LCR MSCP 2004).

METHODS

Surveys for Yuma clapper rails, California black rails, western least bitterns, and Virginia rails (*Rallus limicola*) were performed between March 15 and May 9, 2019, using a standardized call-playback protocol from the National Marsh Bird

Marsh Bird Surveys at Conservation Areas 2019 Annual Report

Monitoring Program (Conway 2009). Up to three surveys were conducted at each survey point. A standardized survey data sheet was used to record the date, start and end time, location, route, observers, environmental data, and other comments, as well as selected marsh birds encountered, their responses, and the direction and distance from the survey point (attachment 2). Common gallinules (*Gallinula galeata*), pied-billed grebes (*Podilymbus podiceps*), and soras (*Porzana carolina*) were also recorded.

Surveys began 30 minutes before sunrise and continued until marsh birds stopped calling, usually by 10:00 a.m. Surveys ceased when windspeeds were greater than 20 kilometers per hour, as the noise from rustling vegetation impaired the detection of birds. Surveys were not conducted during periods of sustained rain or heavy fog (Conway 2009).

Audio players with speakers were used to broadcast calls of Yuma clapper rails, California black rails, western least bitterns, and Virginia rails. The audio recordings consisted of 5 minutes of silence followed by 30 seconds of selected calls and 30 seconds of silence for each of the species. Specific calls used were “clatter,” “kek,” and “kek-burr” for Yuma clapper rails, “kicky-doo” and “grr” for California black rails, “coo” and “kak” for western east bitterns, and “grunt,” “ticket,” and “kicker” for Virginia rails. Calls were played at a volume of 80–90 decibels measured 1 meter from the speakers.

Birds encountered before or after the official 9-minute survey period were also noted on the survey form (attachment 2). Maps of the survey sites were marked with the general location of the birds encountered, and Universal Transverse Mercator coordinates for the survey sites were recorded using a Global Positioning System. Surveys at the Beal Lake Conservation Area were conducted using a motorized boat; surveys at the Big Bend Conservation Area, Imperial National Wildlife Refuge, and the Cibola National Wildlife refuge were conducted on foot and with vehicles.

Prior to 2006, surveys were conducted primarily for the detection of Yuma clapper rails. In 2006, the surveys were expanded to include California black rails, western least bitterns, and Virginia rails (Conway 2005).

SURVEY AREAS

Six LCR MSCP conservation areas were surveyed during 2019: Big Bend Conservation Area near Laughlin, Nevada; Beal Lake Conservation Area on the Havasu National Wildlife Refuge near Needles, California; Hart Mine Marsh on the Cibola National Wildlife Refuge near Cibola, Arizona; Imperial Ponds Conservation Area on the Imperial National Wildlife Refuge near Yuma, Arizona; Laguna Division Conservation Area near Yuma, Arizona; and Yuma East Wetlands in Yuma, Arizona (see figures 1–7).

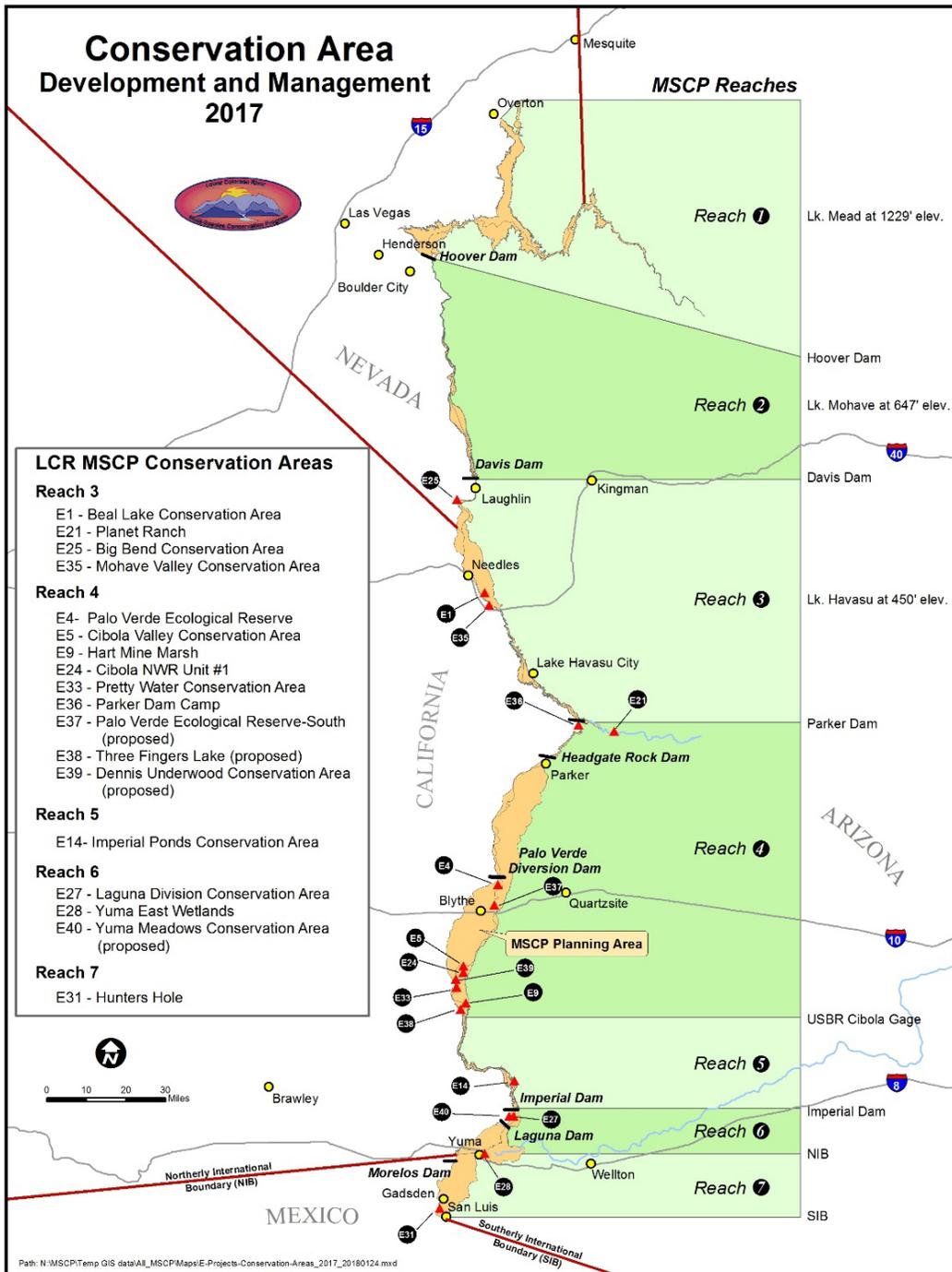


Figure 1.—LCR MSCP planning area and conservation areas.

Big Bend Conservation Area

The Big Bend Conservation Area is located along the Colorado River, south of Laughlin, Nevada (see figures 1 and 2). It is a small marsh backwater that contains approximately 15 acres of backwater and 15 acres of upland. The predominant vegetation of the backwater is southern cattail (*Typha domingensis*). It is at the northern limit of Reach 3 and between River Miles 266 and 267 (see figures 1 and 2). There were four survey points in 2019.

Marsh bird surveys were not required at the Big Bend Conservation Area because it is being managed as backwater habitat for native fishes. Surveys were conducted and funded by the Southern Nevada Water Authority and were only conducted twice, on April 8 and May 9, 2019.

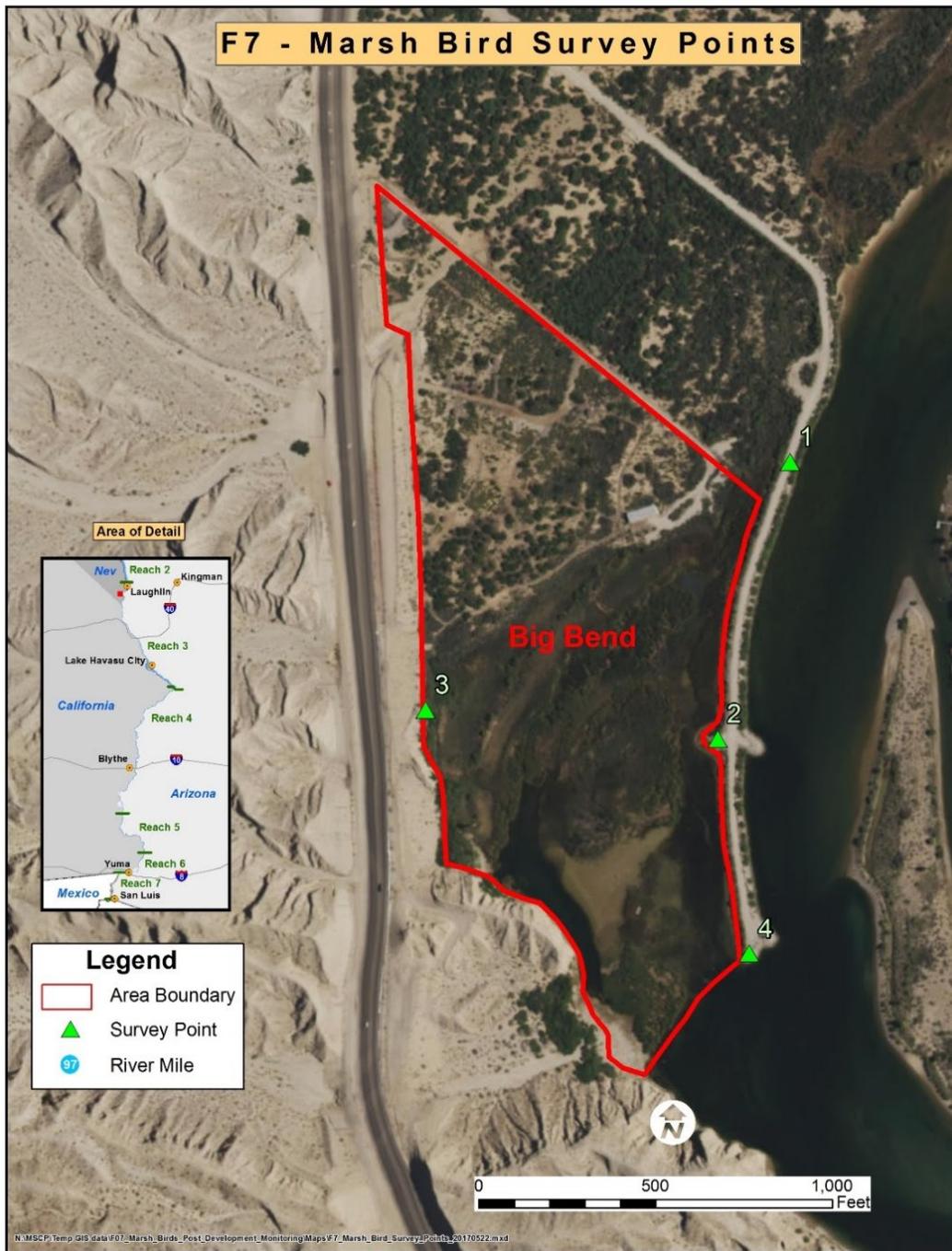


Figure 2.—Big Bend Conservation Area.

Beal Lake Conservation Area

There are two survey areas in the Beal Lake Conservation Area: Beal Lake and Willow Marsh. The Beal Lake Conservation Area is in Reach 3 between River Miles 238 and 239, and it is located on the Havasu National Wildlife Refuge between Topock Marsh and the Colorado River (see figures 1 and 3). There are nine survey points at Beal Lake within roughly 80 acres of emergent vegetation, predominantly southern cattail and bulrush (*Schoenoplectus* spp.). Willow Marsh is located adjacent to the riparian vegetation of the Beal Lake Conservation Area. It is a 14-acre site, constructed in 2012, which is predominately southern cattail and bulrush. There were three survey points in 2019.

Marsh bird surveys were not required at the Beal Lake Conservation Area because it is being managed as backwater habitat for native fishes. Surveys were conducted by the Bureau of Reclamation within Beal Lake to monitor Yuma clapper rail presence within the lake prior to dredging activities. No surveys were conducted in Willow Marsh.

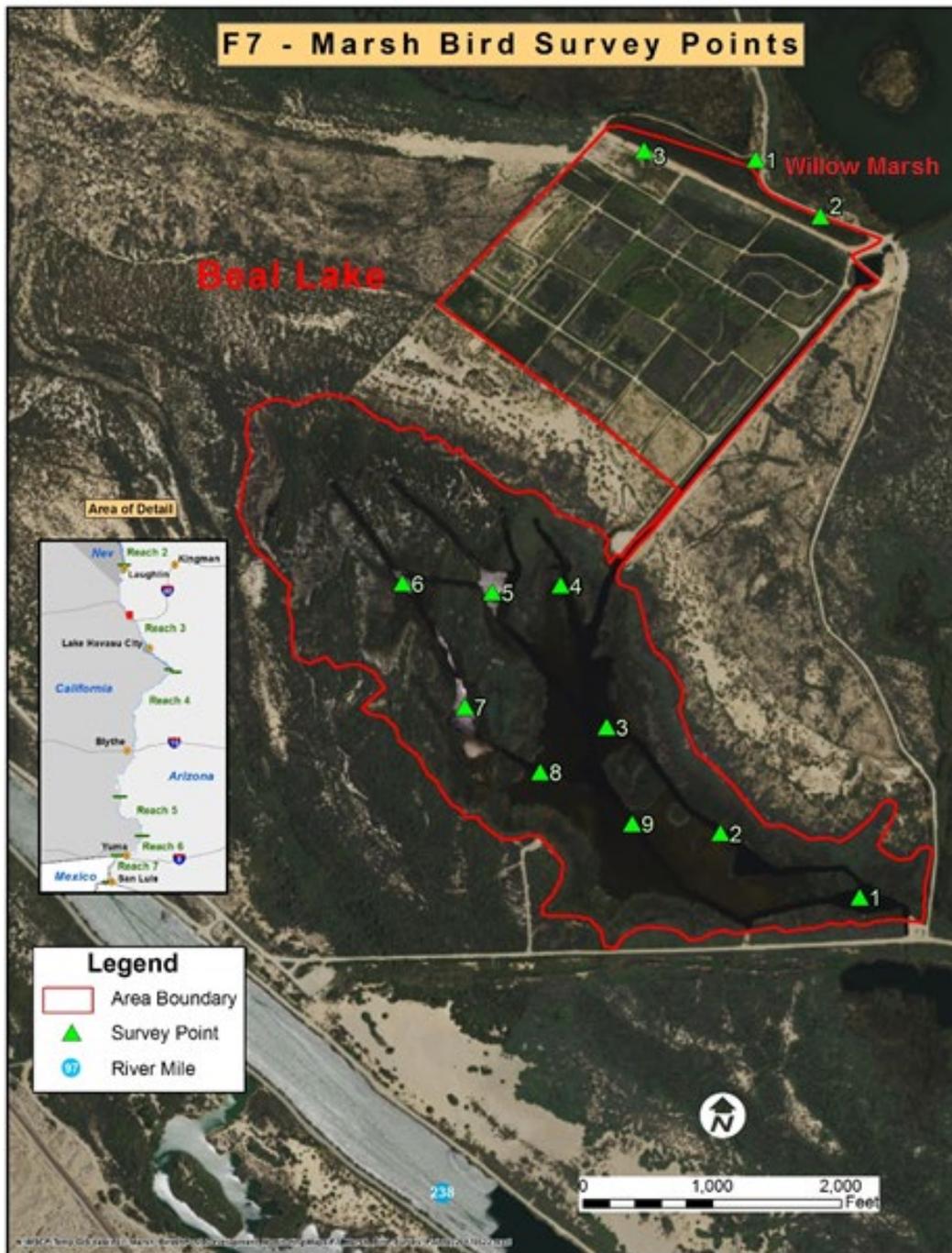


Figure 3.—Beal Lake Conservation Area sites: Beal Lake and Willow Marsh.

Hart Mine Marsh

Hart Mine Marsh is located on the Cibola National Wildlife Refuge. It contains 163 acres of a decadent marsh, restored between 2009 and 2011, and it is located at the southern limit of Reach 4, adjacent to River Miles 91 and 92 (see figures 1 and 4). The vegetation consists of southern cattail, three-square bulrush (*Scirpus olneyi*), California bulrush (*Schoenoplectus californicus*), common spikerush (*Eleocharis palustris*), great bulrush (*S. tabernaemontani*), inland saltgrass (*Distichlis spicata*) with quailbush (*Atriplex lentiformis*), and honey mesquite (*Prosopis glandulosa*). Surveys were conducted and funded by the USFWS. There were nine survey points in 2019.

In 2019, the LCR MSCP also reviewed the data from surveys conducted at Hart Mine Marsh between 2014 and 2018, as there appeared to be inconsistencies in the survey point locations. In the 2014–16 report, a map of the survey points was included (Ronning and Kahl, Jr. 2017a), which showed Point 20 in the upper portion of Cell 1. Both the 2017 annual report (Ronning and Kahl, Jr. 2017b) and the 2018 annual report (Kahl, Jr. 2018) included a map with two additional survey points, Point 21 in the lower portion and Point 22 in Cell 1. The map for this (2019) report (figure 4) shows Point 20 in Cell 2; it does not include Points 21 and 22. Field data sheets, the data entered into the Avian Knowledge Network (AKN) database, and reports were reviewed, and any discrepancies were noted.

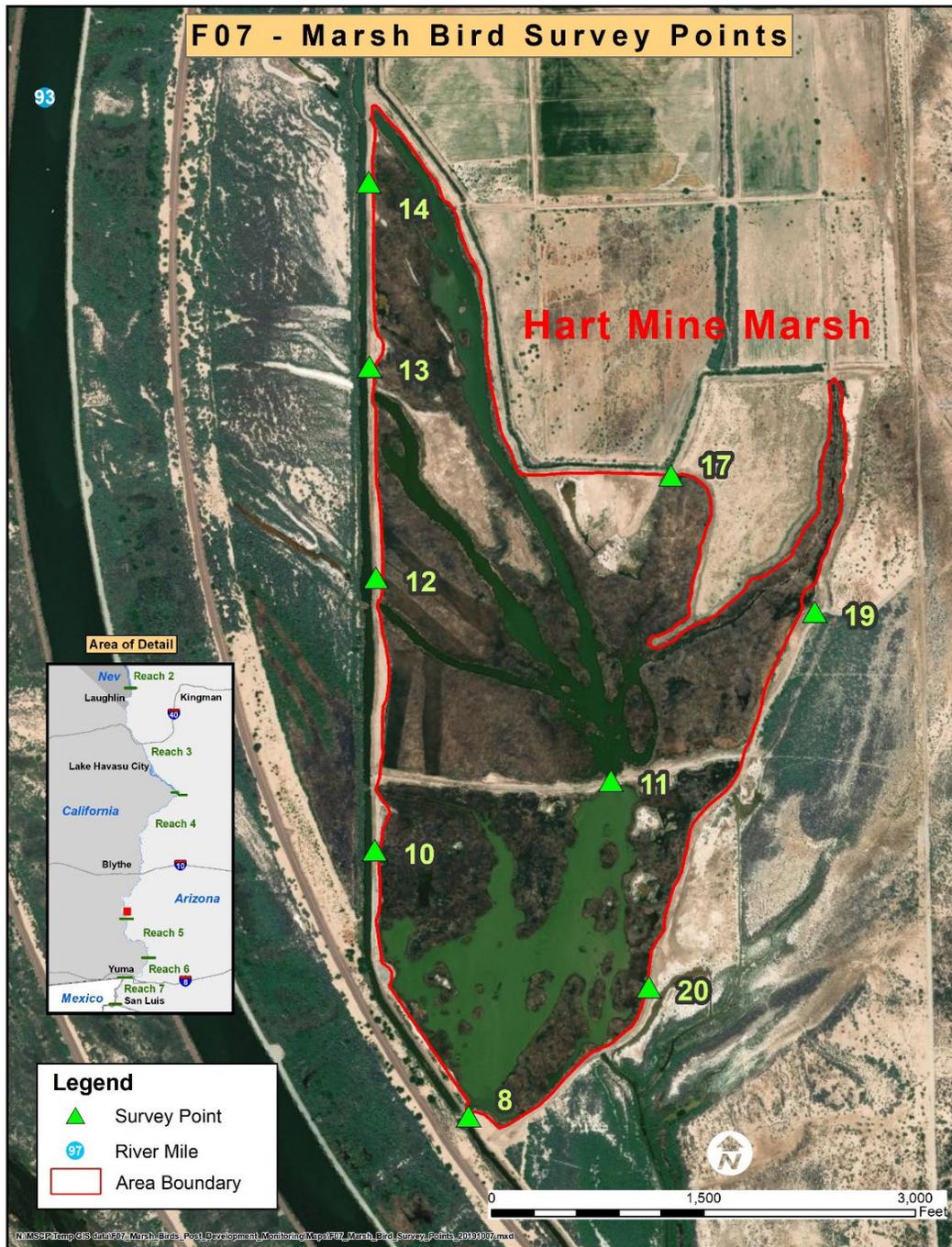


Figure 4.—Hart Mine Marsh.

Imperial Ponds Conservation Area

The Imperial Ponds Conservation Area is located on the Imperial National Wildlife Refuge (see figures 1 and 5). There are six constructed ponds with 80 acres of backwater habitat that contain some marsh habitat along the edges and in hummocks within the ponds. Field 18 is a 12-acre marsh converted from a farm field. It is dominated by bulrush and was constructed primarily for California black rails. There were four survey points for the ponds (8–11) and two for Field 18 (3 and 12) in 2019. The Imperial Ponds Conservation Area is located in Reach 5 adjacent to River Miles 59 and 58 (see figures 1 and 5). Surveys were conducted and funded by the USFWS.

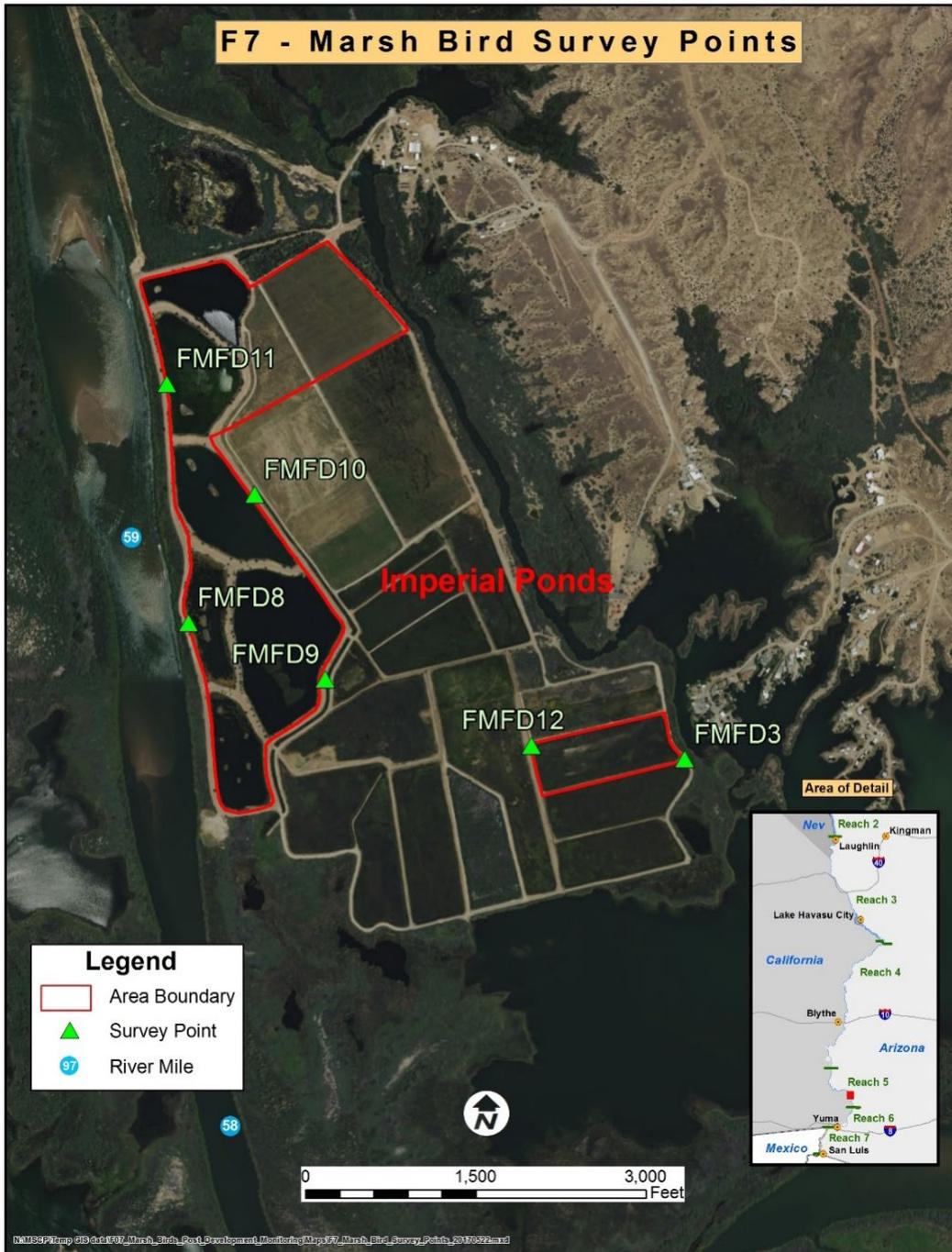


Figure 5.—Imperial Ponds Conservation Area.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Laguna Division Conservation Area

The Laguna Division Conservation Area is 1,100 acres nestled between Imperial Dam and Laguna Dam, with the Mittry Wildlife Area to the east and the Laguna Settling Basin to the west (see figures 1 and 6). It contains approximately 200 acres of open water and marsh. Marsh species were planted in Reach 1 in 2013 and Reach 2 in 2014. Marsh vegetation includes three-square bulrush, California bulrush, chairmaker's bulrush (*Schoenoplectus americanus*), alkali sacaton (*Sporobolus airoides*), inland saltgrass, and yerba mansa (*Anemopsis californica*). There were 18 survey points in 2019.

Marsh bird surveys were not required at the Laguna Division Conservation Area because it is being managed for species that utilize Fremont cottonwood (*Populus fremontii*), Goodding's willow (*Salix gooddingii*), and honey mesquite habitat. Surveys were conducted by a volunteer, a biologist from Pheasant's Unlimited, in coordination with the Arizona Game and Fish Department monitoring at Mittry Lake. Surveys were only conducted twice, on April 2 and 4 and April 25 and 26, 2019.

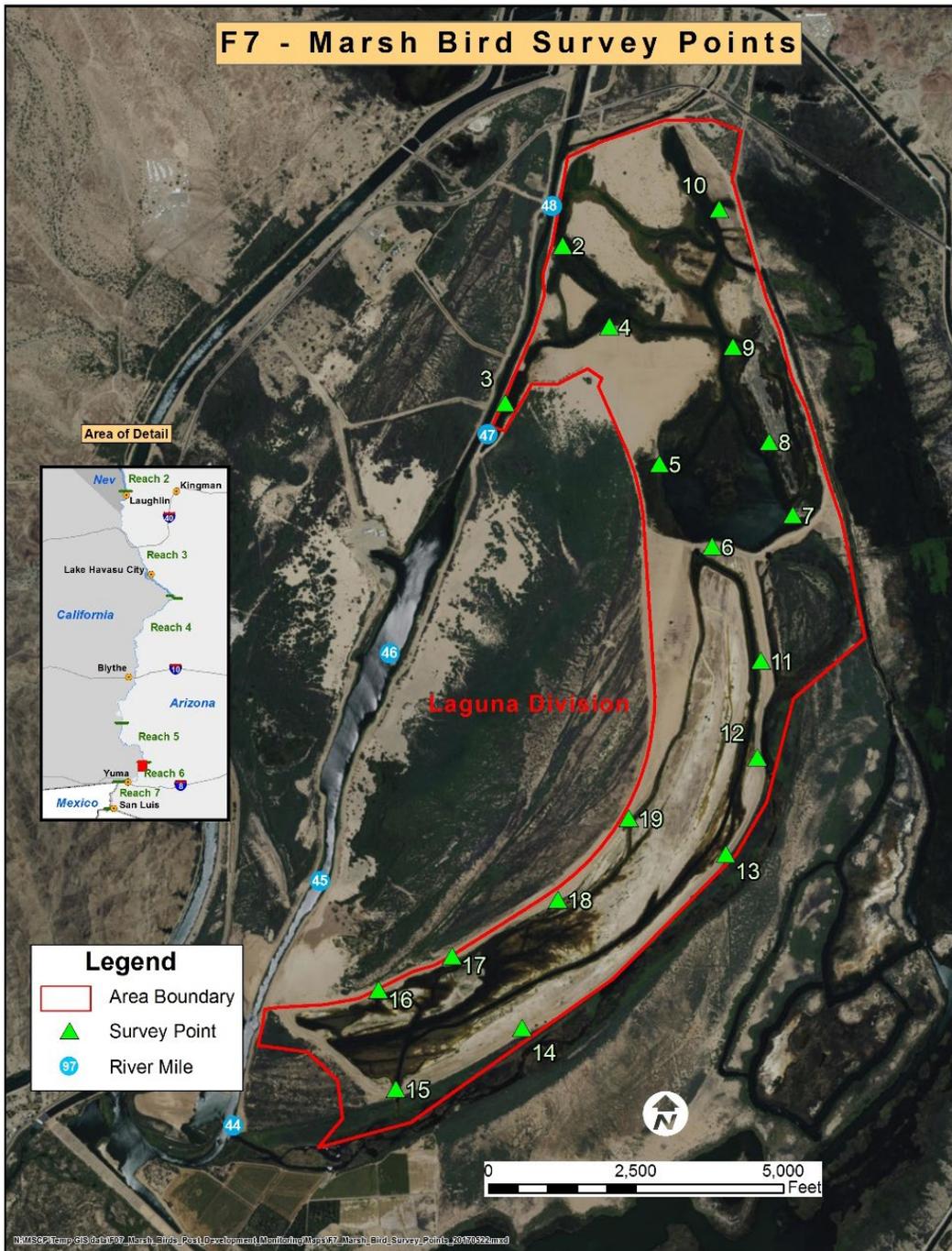


Figure 6.—Laguna Division Conservation Area.

Yuma East Wetlands

Yuma East Wetlands is located in Yuma, Arizona (see figures 1 and 7). It includes two marshes totaling 66 acres, one north of the Colorado River and one south of the river. Marsh vegetation planted includes bulrush, alkali sacaton, and inland saltgrass. Surveys were conducted by the Bureau of Reclamation. There were nine survey points in 2019.

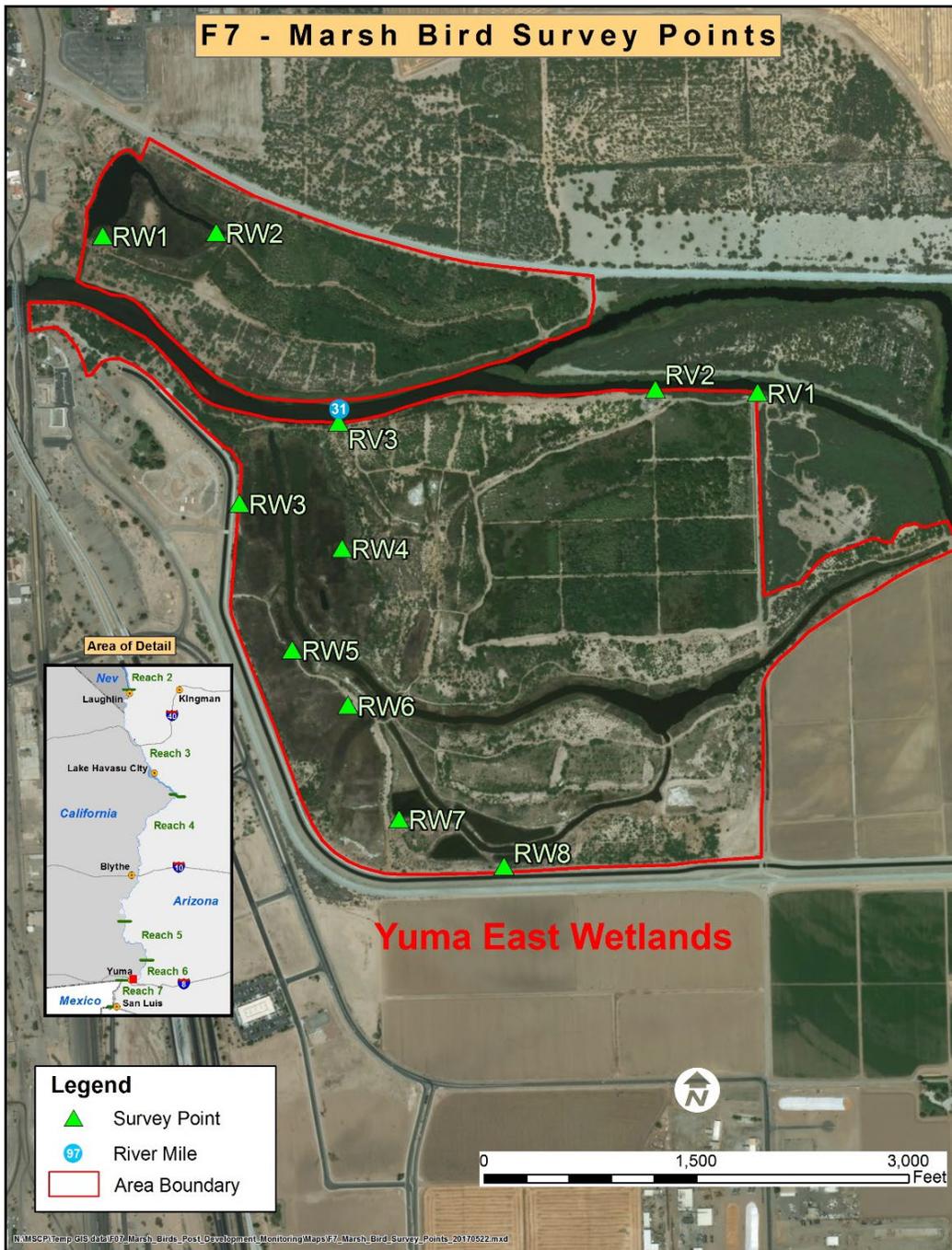


Figure 7.—Yuma East Wetlands.

RESULTS

Big Bend Conservation Area

Surveys at the Big Bend Conservation Area were conducted on April 8 and May 9, 2019 (tables 1 and 2). The western least bittern was the only LCR MSCP covered marsh bird species detected. In addition, all four other marsh birds targeted in the surveys were detected: Virginia rail, soras, pied-billed grebes, and common gallinules.

Table 1.—Big Bend Conservation Area marsh bird survey results, April 8, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
1	0	0	0	0	2	1	2
2	0	0	0	0	2	1	3
3	0	0	0	1	4	0	2
4	0	0	0	0	1	0	2
Total	0	0	0	1	9	2	9

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Table 2.—Big Bend Conservation Area marsh bird survey results, May 9, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
1	0	0	0	0	0	1	0
2	0	1	0	0	0	0	2
3	0	1	0	0	0	1	0
4	0	0	0	0	0	0	0
Total	0	2	0	0	0	2	2

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Beal Lake Conservation Area

Surveys at Beal Lake were conducted on March 26, April 11, and April 24, 2019 (tables 3–5). Two LCR MSCP covered marsh bird species were detected: Yuma clapper rails and western least bitterns. In addition, all four other marsh birds targeted in the surveys were detected: Virginia rails, soras, pied-billed grebes, and common gallinules. A complete list of species observed is located in attachment 1, table 1-1.

Table 3.—Beal Lake marsh bird survey results, March 26, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
1	2	0	0	2	2	0	0
2	1	0	0	1	0	0	0
3	2	0	0	0	0	0	1
4	2	0	0	0	1	0	0
5	2	0	0	1	0	0	0
6	1	0	0	1	0	0	0
7	0	0	0	0	0	0	0
8	1	0	0	0	0	0	0
9	0	0	0	0	0	0	1
Total	11	0	0	5	3	0	2

CLRA = Yuma clapper rail, LEBI = least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Table 4.—Beal Lake marsh bird survey results, April 11, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
1	2	2	0	1	0	0	0
2	2	1	0	0	0	4	2
3	2	1	0	0	0	2	0
4	1	0	0	0	1	0	0
5	1	0	0	0	1	2	1
6	3	0	0	0	0	1	1
7	0	0	0	0	0	4	0
8	0	1	0	0	0	0	0
9	0	0	0	0	0	0	0
Total	11	5	0	1	2	13	4

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Table 5.—Beal Lake marsh bird survey results, April 24, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
1	3	2	0	0	0	1	0
2	2	3	0	0	0	2	0
3	3	2	0	0	0	0	1
4	1	0	0	0	0	0	1
5	3	0	0	0	0	1	0
6	1	0	0	0	0	0	1
7	0	1	0	0	0	2	0
8	0	2	0	0	0	0	0
9	0	1	0	0	0	0	1
Total	13	11	0	0	0	6	4

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Hart Mine Marsh

Surveys at Hart Mine Marsh were conducted on March 21, April 3, and April 25, 2019 (tables 6–8). Two LCR MSCP covered marsh bird species were detected: Yuma clapper rails and western least bitterns. In addition, all four other marsh birds targeted in the surveys were detected: Virginia rails, soras, pied-billed grebes, and common gallinules.

Table 6.—Hart Mine Marsh survey results, March 21, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
8	1	0	0	0	1	0	1
10	1	1	0	0	0	0	3
11	1	1	0	1	1	0	3
12	1	0	0	0	0	0	0
13	0	0	0	0	0	1	0
14	0	0	0	0	0	0	0
17	0	1	0	0	0	0	0
19	1	0	0	0	0	0	0
20	1	1	0	0	0	0	1
Total	6	4	0	1	2	1	8

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Table 7.—Hart Mine Marsh survey results, April 3, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
8	0	2	0	1	0	0	1
10	4	0	0	0	1	0	1
11	2	3	0	1	1	2	2
12	0	0	0	0	0	0	0
13	0	1	0	1	0	1	0
14	0	0	0	0	0	2	0
17	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0
20	1	1	0	1	2	3	0
Total	7	7	0	4	4	8	4

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Table 8.—Hart Mine Marsh survey results, April 25, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
8	3	1	0	0	0	1	0
10	2	1	0	0	0	1	0
11	5	3	0	0	0	2	3
12	2	1	0	0	0	1	0
13	2	0	0	0	0	0	0
14	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0
19	4	0	0	0	0	0	0
20	2	1	0	0	0	2	0
Total	20	7	0	0	0	7	3

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

In 2019, the LCR MSCP also reviewed the data from surveys at Hart Mine Marsh conducted between 2014 and 2018, as there appeared to be inconsistencies in the survey point locations:

- In the 2014–16 report, a map of the survey points was included (Ronning and Kahl, Jr. 2017a), which showed Point 20 in the upper portion of Cell 1.
- Both the 2017 annual report (Ronning and Kahl, Jr. 2017b) and the 2018 annual report (Kahl, Jr. 2018) included a map with two additional survey points, Point 21 in the lower portion and Point 22 in Cell 1.
- The map for this (2019) report (see figure 4) shows Point 20 in Cell 2; Points 21 and 22 are not included.

Field data sheets, the data entered into the AKN database, and reports were reviewed. The review found that the data used in the three LCR MSCP reports was based on the USFWS annual field survey sheets, not the quality-checked survey results entered by the USFWS into the AKN database. The data from the field data sheets was used because they indicated whether the birds were located in Hart Mine Marsh or in the adjacent Arnett Ditch.

- The March 23, 2017, field survey sheet had a point identified as either 20 or 21.
- The April 7, 2017, field survey sheet had Point 20 included but not Points 21 and 22.
- The April 22, 2017, field survey sheet had survey Points 21 and 22, but not Point 20.
- The March 23, 2018, field survey sheet has a notation, “ 21 on map,” next to the entry for Point 20.
- The April 26, 2018, field survey sheet had the word “review” next to Point 20.
- The April 10, 2018, field survey sheet does not have any notes of a question associated with Point 20.

It appears that there were two different maps being used by the USFWS for the surveys. Both maps were created by the USFWS around the beginning of 2013: one including Points 21 and 22 and one not including them. All the survey results entered in the AKN database for Hart Mine Marsh from 2013 to 2019 do not contain Points 21 or 22. This data was checked for quality by the USFWS when entered, so it is clear that the survey point locations surveyed were those depicted on

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

figure 4 and do not include Points 21 and 22. From this point on, the reports for Hart Mine Marsh will only include the nine survey points that are depicted on figure 4 and listed in tables 6-8.

Imperial Ponds Conservation Area

Surveys at the Imperial Ponds Conservation Area were conducted on March 17, April 11, and May 4, 2019 (tables 9–11). Survey Points FMFD3 and FMFD12 are located in Field 18, and Survey Points FMFD8–11 are located at the adjacent ponds. FMFD3 and FMFD12 were not surveyed during the March survey; Field 18 was dry due to irrigation ditch reconstruction. All three LCR MSCP covered marsh bird species was detected. In addition, two other marsh birds targeted in the surveys were detected: pied-billed grebes and common gallinules.

Table 9.—Imperial Ponds Conservation Area marsh bird survey results, March 17, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
Field 18							
FMFD3	-	-	-	-	-	-	-
FMFD12	-	-	-	-	-	-	-
Ponds							
FMFD8	0	0	0	0	0	3	0
FMFD9	1	0	0	0	0	3	1
FMFD10	0	0	0	0	0	4	0
FMFD11	0	0	0	0	0	4	3
Total	1	0	0	0	0	14	4

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Table 10.—Imperial Ponds Conservation Area marsh bird survey results, April 11, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
Field 18							
FMFD3	2	0	0	0	0	0	0
FMFD12	4	0	1	0	0	0	1
Ponds							
FMFD8	0	0	0	0	0	2	0
FMFD9	0	1	0	0	0	4	1
FMFD10	0	0	0	0	0	3	0
FMFD11	0	1	0	0	0	3	2
Total	6	2	1	0	0	12	4

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Table 11.—Imperial Ponds Conservation Area marsh bird survey results, May 4, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
Field 18							
FMFD3	0	0	0	0	0	0	0
FMFD12	5	0	1	0	0	0	2
Ponds							
FMFD8	0	0	0	0	0	3	0
FMFD9	0	1	0	0	0	2	0
FMFD10	1	0	0	0	0	5	1
FMFD11	0	0	0	0	0	0	1
Total	6	1	1	0	0	10	4

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Laguna Division Conservation Area

Surveys at the Laguna Division Conservation Area were conducted on April 2 and 4 and April 25–26, 2019 (tables 12–13). Two LCR MSCP covered marsh bird species were detected: Yuma clapper rails and western least bitterns. In addition, all four other marsh birds targeted in the surveys were detected: Virginia rails, soras, pied-billed grebes, and common gallinules. A complete list of species observed is located in attachment 1, table 1-2.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Table 12.—Laguna Division Conservation Area marsh bird survey results, April 2 and 4, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
2	0	0	0	1	1	0	1
3	0	0	0	1	0	0	1
4	0	1	0	0	1	3	1
5	0	0	0	0	0	1	2
6	1	0	0	0	1	1	1
7	1	0	0	1	1	1	1
8	0	0	0	1	0	1	1
9	1	0	0	0	1	0	1
10	0	0	0	0	0	0	0
11	2	1	0	1	0	1	1
12	1	1	0	0	1	2	1
13	0	0	0	3	0	2	2
14	0	0	0	0	0	0	1
15	0	0	0	0	0	0	1
16	0	0	0	0	1	1	1
17	0	0	0	0	0	2	1
18	0	0	0	1	0	2	3
19	0	0	0	0	1	1	1
Total	6	3	0	9	8	18	21

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Table 13.—Laguna Division Conservation Area marsh bird survey results, April 25–26, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
2	1	0	0	1	1	0	0
3	0	0	0	2	1	1	0
4	0	0	0	0	2	0	3
5	2	0	0	0	0	0	2
6	1	0	0	0	0	0	1
7	1	1	0	1	1	1	1
8	0	1	0	1	0	2	1
9	2	1	0	1	0	0	1
10	0	0	0	0	0	0	0
11	0	0	0	0	0	4	2
12	0	2	0	0	0	3	1
13	4	2	0	0	0	1	1
14	2	1	0	0	1	2	1
15	0	1	0	0	2	2	2
16	0	0	0	0	0	2	1
17	0	0	0	1	0	1	1
18	0	0	0	0	0	1	1
19	1	0	0	0	0	1	0
Total	14	9	0	7	8	21	19

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Yuma East Wetlands

Surveys at Yuma East Wetlands were conducted on March 22, April 5, and April 18, 2019 (tables 14–16). Survey Points RV1 and RV2 were dropped from the second and third surveys; the habitat along the shore had been removed. Two LCR MSCP covered marsh bird species were detected: Yuma clapper rails and western least bitterns. In addition, three other marsh birds targeted in the surveys were detected: soras, pied-billed grebes, and common gallinules. A complete list of species observed is located in attachment 1, table 1-3.

Table 14.—Yuma East Wetlands marsh bird survey results, March 22, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
RV1	0	0	0	0	0	0	0
RV2	0	0	0	0	0	0	0
RV3	0	0	0	0	0	0	0
RW1	0	0	0	0	0	0	0
RW2	0	0	0	0	0	0	0
RW3	0	0	0	0	0	0	1
RW4	0	0	0	0	1	0	0
RW5	0	0	0	0	0	0	0
RW6	0	0	0	0	0	0	0
RW7	0	0	0	0	0	0	1
RW8	0	0	0	0	0	1	0
Total	0	0	0	0	1	1	2

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

Table 15.—Yuma East Wetlands marsh bird survey results, April 5, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
RV3	0	0	0	0	0	0	0
RW1	0	0	0	0	0	0	0
RW2	0	0	0	0	0	0	0
RW3	0	0	0	0	0	0	0
RW4	1	0	0	0	0	0	0
RW5	0	0	0	0	0	0	0
RW6	0	0	0	0	0	0	0
RW7	0	0	0	0	1	0	0
RW8	0	0	0	0	0	0	0
Total	1	0	0	0	1	0	0

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

Table 16.—Yuma East Wetlands marsh bird survey results, April 18, 2019

Survey point	CLRA	LEBI	BLRA	VIRA	SORA	PBGR	COGA
RV3	0	0	0	0	0	0	0
RW1	0	0	0	0	0	0	0
RW2	0	0	0	0	0	0	0
RW3	2	1	0	0	0	0	0
RW4	0	0	0	0	0	0	0
RW5	0	0	0	0	0	0	0
RW6	2	0	0	0	0	0	0
RW7	0	0	0	0	0	0	0
RW8	0	0	0	0	0	1	0
Total	4	1	0	0	0	1	0

CLRA = Yuma clapper rail, LEBI = western least bittern, BLRA = California black rail, VIRA = Virginia rail, SORA = sora, PBGR = pied-billed grebe, and COGA = common gallinule.

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**Marsh Bird Surveys at Conservation Areas
2019 Annual Report**

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ATTACHMENT 1

Species Lists from Surveys Conducted at Conservation
Areas

Table 1-1.—Birds observed or encountered during marsh bird surveys at the Beal Lake Conservation Area, 2019

Common name	Species	3/26/2019	4/11/2019	4/24/2019
American coot	<i>Fulica americana</i>	X	X	
Black-crowned night heron	<i>Nycticorax nycticorax</i>		X	
Cinnamon teal	<i>Anas cyanoptera</i>	X		
Clark's grebe	<i>Aechmophorus clarkii</i>	X	X	X
Common gallinule	<i>Gallinula galeata</i>	X	X	X
Common raven	<i>Corvus corax</i>		X	
Common yellowthroat	<i>Geothlypis trichas</i>	X	X	X
Double-crested cormorant	<i>Phalacrocorax auritus</i>		X	X
Eared grebe	<i>Podiceps nigricollis</i>			X
Forster's tern	<i>Sterna forsteri</i>			X
Great blue heron	<i>Ardea herodias</i>	X		X
Great-tailed grackle	<i>Quiscalus mexicanus</i>	X	X	X
Killdeer	<i>Charadrius vociferus</i>			X
Mallard	<i>Anas platyrhynchos</i>		X	
Marsh wren	<i>Cistothorus palustris</i>	X	X	X
Mourning dove	<i>Zenaida macroura</i>		X	X
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>		X	
Pied-billed grebe	<i>Podilymbus podiceps</i>		X	X
Red-winged blackbird	<i>Agelaius phoeniceus</i>	X	X	X
Song sparrow	<i>Melospiza melodia</i>	X	X	X
Sora	<i>Porzana carolina</i>	X	X	
Tree swallow	<i>Tachycineta bicolor</i>		X	X
Verdin	<i>Auriparus flaviceps</i>	X		
Virginia rail	<i>Rallus limicola</i>	X	X	
Western least bittern	<i>Ixobrychus exilis hesperis</i>		X	X
Western meadowlark	<i>Sturnella neglecta</i>	X		
Yellow-breasted chat	<i>Icteria virens</i>			X
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	X	X	X
Yuma clapper rail	<i>Rallus longirostris yumanensis</i> (also known as Yuma Ridgway's rail = <i>R. obsoletus yumanensis</i>)	X	X	X

Table 1-2.—Birds observed or encountered during marsh bird surveys at Laguna Division Conservation Area, 2019

Common name	Species	4/24/2019	4/25–26/2019
American coot	<i>Fulica americana</i>	X	X
Common gallinule	<i>Gallinula galeata</i>	X	X
Gamble's quail	<i>Calipepla gambelii</i>	X	
Great blue heron	<i>Ardea herodias</i>	X	
Mallard	<i>Anas platyrhynchos</i>	X	
Northern harrier	<i>Circus cyaneus</i>	X	
Pied-billed grebe	<i>Podilymbus podiceps</i>	X	X
Snowy egret	<i>Egretta thula</i>	X	X
Sora	<i>Porzana carolina</i>	X	X
Turkey vulture	<i>Cathartes aura</i>	X	
Virginia rail	<i>Rallus limicola</i>	X	X
Western least bittern	<i>Ixobrychus exilis hesperis</i>	X	X
Yuma clapper rail	<i>Rallus logirostris yumanensis</i> (also known as Yuma Ridgway's rail = <i>R. obsoletus yumanensis</i>)	X	X

Table 1-3.—Birds observed or encountered during marsh bird surveys at Yuma East Wetlands, 2019

Common name	Species	3/22/2019	4/5/2019	4/18/2019
Abert's towhee	<i>Melospiza aberti</i>		X	X
American coot	<i>Fulica americana</i>	X	X	X
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	X		X
Belted kingfisher	<i>Megasceryle alcyon</i>		X	
Black-necked stilt	<i>Himantopus mexicanus</i>	X	X	X
Black-tailed gnatcatcher	<i>Poliophtila melanura</i>			X
Brown-headed cowbird	<i>Molothrus ater</i>	X		X
Cattle egret	<i>Bubulcus ibis</i>		X	
Cliff swallow	<i>Petrochelidon pyrrhonota</i>			X
Common gallinule	<i>Gallinula galeata</i>	X		
Common yellowthroat	<i>Geothlypis trichas</i>	X	X	X
European collared dove	<i>Streptopelia decaocto</i>			X
Gamble's quail	<i>Calipepla gambelii</i>			X
Gila woodpecker	<i>Melanerpes uropygialis</i>		X	
Great blue heron	<i>Ardea herodias</i>			X
Great egret	<i>Ardea alba</i>	X	X	X
Greater roadrunner	<i>Geococcyx californicus</i>		X	
Great-tailed grackle	<i>Quiscalus mexicanus</i>		X	X
Killdeer	<i>Charadrius vociferus</i>		X	X
Marsh wren	<i>Cistothorus palustris</i>	X	X	X
Mourning dove	<i>Zenaida macroura</i>	X	X	X
Northern mockingbird	<i>Mimus polyglottos</i>			X
Osprey	<i>Pandion haliaetus</i>		X	
Pied-billed grebe	<i>Podilymbus podiceps</i>	X	X	X
Snowy egret	<i>Egretta thula</i>		X	X
Sora	<i>Porzana carolina</i>	X	X	
Turkey vulture	<i>Cathartes aura</i>	X	X	
Verdin	<i>Auriparus flaviceps</i>	X		X
Western least bittern	<i>Ixobrychus exilis hesperis</i>			X
White-winged dove	<i>Zenaida asiatica</i>			X
Wilson's warbler	<i>Cardellina pusilla</i>		X	
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>			X
Yellow-rumped warbler	<i>Setophaga coronata</i>		X	
Yuma clapper rail	<i>Rallus longirostris yumanensis</i> (also known as Ridgway's rail = <i>R. obsoletus yumanensis</i>)		X	X

ATTACHMENT 2

Survey Data Sheet

