



Map 2. General Survey Area

YUMA CLAPPER RAIL OFFICIAL SURVEY LOCATIONS

ANNUAL SURVEY REQUIRED

Topock Marsh	Fish and Wildlife Service (FWS)
Topock Gorge	Bureau of Reclamation (BOR)
Bill Williams Delta	FWS
Cibola NWR	FWS
Imperial Division	Bureau of Land Management (BLM)#
Imperial NWR	FWS
Mittry Lake/Teal Alley/YPG Slough	Arizona Game & Fish Department (AGFD)
Gila River (Buckeye-Arlington)	AGFD, FWS, Dick Todd
Other Internal Arizona Areas	AGFD, FWS
IWA: Wister Unit	California Department of Fish & Game (CDFG)
Sonny Bono-Salton Sea NWR	FWS
Barnacle Beach (Salton Sea)	FWS
Ciénega de Santa Clara	University of Arizona, AGFD, FWS

SURVEY ON 3-YEAR ROTATION*

SURVEY IN 2000 AND 2003

Mohave Division	BOR
Parker Division	CDFG, Colorado River Indian Tribes (CRIT)
Laguna Division	AGFD, BLM
Yuma Valley Drains	BOR

SURVEY IN 2001 AND 2004

Lake Havasu	BLM
Palo Verde Division	CDFG
Yuma Division	AGFD
Lower Gila River/Quigley Pond	AGFD

SURVEY IN 2002

Parker Strip (CRIT)	CRIT
Cibola Division	CDFG, FWS
Limitrophe Division	AGFD

#BLM has requested assistance from other agencies to complete this location.

*Locations in this category can be surveyed more often if the responsible agency wishes.

General Location _____ Date _____

Observer(s) _____

Survey Method _____ % Cloud Cover _____

Temperature Range _____ Wind Velocity at Start _____ Finish _____

Stop No.	Time	Total Birds Monitored	Sighted	Clatter	Kek	Kek-burr	Other	Habitat Type

Totals

YUMA CLAPPER RAIL SURVEY
COVER SHEET
(January 2000)

Date: _____

Location Information:

Location Name _____ Route _____

Map Name _____ Township/Range/Section _____

Observer(s) _____

Weather:

Start %Cloud Cover _____ Temp _____ Wind Speed _____

End %Cloud Cover _____ Temp _____ Wind Speed _____

Data Summary:

1) Total individual rails seen or heard while surveying _____

2) Number of other rails seen or heard (incidentals) _____

Total rails per route or location equals #1+#2 _____

For rails/hours, each stop is 7 minutes

Observations:

Events during survey that may have affected results:

Other Observations/Comments

Yuma Clapper Rail Survey Data Sheet

January 2000

Location _____ Route _____ Date _____

Weather start _____ end _____ Observer _____

Stop #	Time start	Time stop	Clatter call	Kek call	Other call	Was Rail seen?	Was Rail Heard?	Was Rail Paired?	Other Species?	Habitat Type Where Rail Was Detected?

Page total:
 Total rails recorded on survey _____
 Incidental observations of rails in survey area _____

**YUMA CLAPPER RAIL SURVEY
OPTIONAL DATA SHEET
COVER SHEET
MARCH 2003**

Date of survey: _____

Location

Name: _____ Route: _____

Map Name: _____ Township/Range/Section: _____

Observers: _____

Weather:

Start: % Cloud Cover: _____ Temp: _____ Wind Speed: _____ Precipitation: _____

End: % Cloud Cover: _____ Temp: _____ Wind Speed: _____ Precipitation: _____

Instructions:

- Use one line of data sheet for each individual bird detected at each survey point. Where more than one individual encountered, give each individual a number (YCRA 1, YCRA 2 etc.). If a pair is detected, each bird gets a separate line and number. The pair is identified in the "Comments" section.
- If bird is seen but not heard, indicate with an "s" in the data boxes. If seen and heard, indicate with "1s".
- Timed data boxes reflect silent and active call-broadcast periods divided into 8 one-minute intervals. If a bird is seen or heard during any part of each one-minute period, record it. For example, YCRA 1 may be heard during the initial passive minute, the 2nd calling minute, and the 4th calling minute. A notation should be made in each of the three relevant columns.
- In the "calls heard" column, note which types of calls were made by the individual bird during the 8-minute survey period. Please use the following for YCRA calls: kek (k); clatter (c); kekburr (kb); kekhurrah (kh), other (o)
- If other secretive marsh birds are heard during the survey, record them in the same way as the YCRA individuals. A list of species abbreviations and call types is given below:
 - Least Bittern (LEBI: coo, kak, other)
 - Virginia Rail (VIRA: grunt, ticket, kicker, other)
 - Sora Rail (SORA: whinny, perweep, keep, other)
 - Black Rail (BLRA: kickydoo, grr, churt, other)

Data summary:

Number YCRA recorded (seen or heard) during survey: _____

Number YCRA incidentally observed (seen or heard): _____

Comments/Events during survey that may have affected results:

Date:

Location:

Route

Page:

*put an 's' in appropriate column if bird was seen but not heard, '1s' if was seen and heard use one line for each individual (example, YCRA 1, YCRA 2, etc.). If a pair is detected, note which birds are paired in the comments.

Sta #	Time Start	Species of individual Detected	Responded During:							alls heard	repeat?	distance (estimate)	direction	Comments
			Pass 1 min	YCRA 1st	YCRA 2nd	Silent 1 st	Silent 2nd	YCRA 3rd	YCRA 4th					

Attachment 4, 2003 Data Sheet, back page

YCLR Agency Surveys

Date (e.g. 10-May-04) Enter weather data to the nearest whole number

Name of marsh or route: Before After

Observer: **Temperature (°F) :**

Survey replicate # : **Wind speed (mph) :**

Broadcast sequence : **Cloud cover (%) :**

Multiple observer survey: Y / N **Precipitation (see right) :**

Call Types	Precipitation	Background noise
BLRA: kicky-doo, gr, churt CLRA: cltr, kburr, kek, khurrah LEBI: coo, kak, ert AMBI: pump-er-lunk, kok PBGR: owhoop, hyena VIRA: grunt, ticket, kicker COMO: wipeout, beep SORA: whinny, perweep, keep	Light rain Rain Heavy rain Light snow Snow Heavy snow Fog None	0. no noise 1. faint noise 2. moderate noise (probably can't hear some birds > 100m) 3. loud noise (probably can't hear some birds > 50m) 4. intense noise (probably can't hear some birds > 25m) X. not recorded

**put an "I" in the appropriate column if the bird was heard, a "S" if the bird was seen and "IS" if both heard and seen*

Responded During:

Station #	Start Time	Background Noise	Species	Responded During:								After	Call Type	Repeat	Distance (meters)	Comments
				Before	Silent 0-1	CLRA 1-2	CLRA 2-3	Silent 3-4	Silent 4-5	CLRA 5-6	CLRA 6-7					

Results of Clapper Rail Surveys at Topock Gorge 1996-2005

CLAPPER RAIL OCCURRENCE AT SURVEY SITES - TOPOCK GORGE -1996 TO 2005																													
SITE #	Apr-96	May-96	Apr-97	May-97	Apr-98	May-98	Apr-99	May-99	Mar-00	Apr-00	May-00	Mar-01	Apr-01	May-01	Mar-02	Apr-02	May-02	Mar-03	Apr-03	May-03	Mar-04	Apr-04	May-04	Mar-05	Apr-05	May-05	Total	Occurrence	SITE #
1	0	0	0	0	0	0	1	2	0	0	0	2	1	2	0	0	0	1	0	2	0	0	1	0	0	0	12	8	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	2
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	1	2	2	0	2	0	10	6	3
4	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	2	4
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	0	0	3	3	7
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	3	0	1	2	11	5	9
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	2	10
11	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2	0	0	1	0	6	4	11
12	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	2	3	9	6	12
13	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	3	13
14	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	14
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	15
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	16
17	0	0	0	0	3	1	4	3	0	0	0	0	1	1	1	0	2	1	4	1	2	1	1	1	0	0	27	15	17
18	0	2	0	0	0	1	1	0	0	2	1	1	1	1	0	0	1	1	1	0	5		0	7	0	2	27	14	18
19	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	1	0	2	2	1	2	0	2	2	3	18	10	19	
20	0	0	0	1	1	1	0	2	0	2	1	0	1	2	1	0	1	1	2	4	2	0	0	0	0	0	22	14	20
21	3	4	1	2	1	1	1	0	0	1	2	5	4	3	4	0	3	3	4	4	6	4	3	3	6	68	21	21	
22	0	2	2	1	2	0	1	3	3	4	0	4	1	4	0	2	3	4	4	5	3	3	2	1	2	2	58	22	22
23	3	0	0	1	1	0	1	1	0	1	0	0	0	0	0	0	1	0	1	2	0	5	2	1	2	3	25	14	23
24	3	1	0	1	1	0	0	0	0	1	5	2	2	0	0	0	1	0	1	0	0	0	1	2	1	1	23	14	24
25	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	2	25	25
26	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	2	0	0	0	1	2	0	0	0	0	0	8	6	26
27	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	2	27
28	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2	2	0	0	1	0	0	0	7	5	28
29	0	0	0	1	0	0	3	0	0	1	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	8	5	29	
30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	3	3	30
31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
32	1	0	0	0	2	1	0	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	12	7	32
33	3	2	2	2	0	1	5	3	0	0	1	0	0	0	0	2	1	1	0	0	0	0	3	0	0	0	26	12	33
34	0	2	1	0	1	1	1	1	0	0	0	0	3	3	0	2	0	0	1	0	1	0	0	0	0	1	18	12	34
35	2	0	0	1	3	1	5	1	8	0	0	1	2	1	0	0	2	5	3	2	6	2	5	0	1	0	51	18	35
36	1	1	1	1	0	2	2	6	3	1	1	2	0	0	0	2	0	1	3	0	6	1	4	2	0	4	44	19	36
37	2	2	0	0	2	1	1	4	0	0	0	3	2	2	0	1	0	2	3	3	0	0	0	2	2	1	33	16	37
38	0	0	1	3	2	3	2	3	1	1	0	1	3	3	0	7	4	4	5	5	6	2	1	4	5	2	68	22	38
39	1	0	0	2	1	0	0	4	0	1	0	1	1	0	0	2	0	1	2	2	2	1	4	0	2	0	27	15	39
40	0	0	1	0	0	1	2	1	2	2	2	0	0	1	1	1	3	4	2	2	1	0	6	1	1	0	34	18	40
41	0	2	1	1	0	3	1	0	5	1	1	1	1	4	0	0	5	1	1	0	0	1	8	0	0	0	37	16	41
42	0	0	2	2	3	3	2	0	0	1	2	2	1	3	4	3		2	2	0	2	0	3	2	1	0	40	18	42
43	1	1	1	2	2	3	0	1	0	3		0	0	3	0	0	0	1	1	3	0	5	0	4	1	7	39	16	43
44	0	0	2	2	0	2	1	3	0	0	0	0	0	0	0	0	2	2	3	1	2	2	1	1	2	26	14	44	
45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	3	1	2	13	7	45	
46	0	0	0	1	0	1	0	0	0	2	2	0	0	0	0	2	0	3	1	0	0	3	0	1	0	16	9	46	
47	0	1	1	1	1	0	0	1	0	0	0	2	0	0	0	1	2	2	0	1	1	0	2	0	0	16	12	47	
48	0	0	1	1	0	0	1	3	1	2	0	4	2	0	1	0	1	0	3	1	1	0	1	0	2	25	15	48	
49	0	1	0	1	0	1	1	2	2	0	0	0	1	0	1	0	4	0	2	1	1	0	1	2	0	21	14	49	
50	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	1	3	3	50	
51			3	1	1	0	3	1	2	2	2	2	1	3	2	0	1	3	4	2	0	0	5	2	1	0	41	19	51
52			0	0	0	0	0	0	3	2	0	0	0	0	0	0	2	2	2	3	0	5	1	2	0	22	9	52	
TOTAL	20	19	20	28	32	29	41	44	30	34	27	30	36	40	17	27	33	55	59	54	57	47	72	43	38	44	976	481	TOTAL
Avg/Yr		20		24		31		43		30		30		35		26		59		56		59		42					Avg/Yr

Note: Blank spaces indicate no visit during survey period.

Figure 1

Yuma Clapper Rails - Topock Gorge 1996-2005



Figure 2