

REVIEW AND APPROVALS

GRULLA NATIONAL WILDLIFE REFUGE

Arch, New Mexico

ANNUAL NARRATIVE REPORT

Calendar Year 1997

Donald R. Clapp
Project Leader

2/12/98
Date

Ryan B. Stamm
Geographic Manager, TX

2/18/98
Date



GRL1-4/97

DRC

One of the Several Arroyos Adjacent Salt Lake.

INTRODUCTION

Grulla National Wildlife Refuge is located in Roosevelt County, New Mexico near the small town of Arch, approximately 25 miles northwest of the Muleshoe National Wildlife Refuge. The refuge comprises 3,236 acres. The saline lake bed of Salt Lake consists of 2,330 acres and the remainder of the refuge is grassland. Grulla was officially established as a National Wildlife Refuge on November 6, 1969 by Public Land Order No. 4742 transferring the land from BLM.

The refuge is beneficial as a wintering area for lesser sandhill cranes when the lake holds water. Although the flat lake bed is often dry or nearly dry for several years in a row, when sufficient water is present large concentrations of cranes use the refuge as a roosting site.

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K. FEEDBACK NTR

L. INFORMATION PACKET

(Inside Back Cover)

A. HIGHLIGHTS

- Above average rainfall was recorded for the year (Section B)
- Salt Lake held water during late summer (Section F.2)
- More sandhill crane were observed this year (Section G.4)
- Vandals damaged refuge equipment (Section H.17)

B. CLIMATIC CONDITIONS

Total precipitation for 1997 amounted to 21.26 inches. Total precipitation recorded for 1996 was 16.13 inches. Total snowfall recorded for the year was 13 inches.

Below normal temperatures along with five inches of snow were recorded in January through February.

Except for March, above average precipitation was recorded during the spring and throughout late summer. The wettest month was April when 3.89 inches of rain was reported.

Adequate moisture was received throughout the remainder of the year. Eight inches of snow was recorded in December. The lowest temperature recorded for the year, 2°F, was also recorded in December.



GRL2-3/97

DRC

Salt Lake Comprises 2,330 Acres and is Often Dry Year-Round.



E. ADMINISTRATION

1. Personnel

No personnel are stationed at the refuge. The refuge is administered from Muleshoe NWR.



GRL3-10/97

GKC

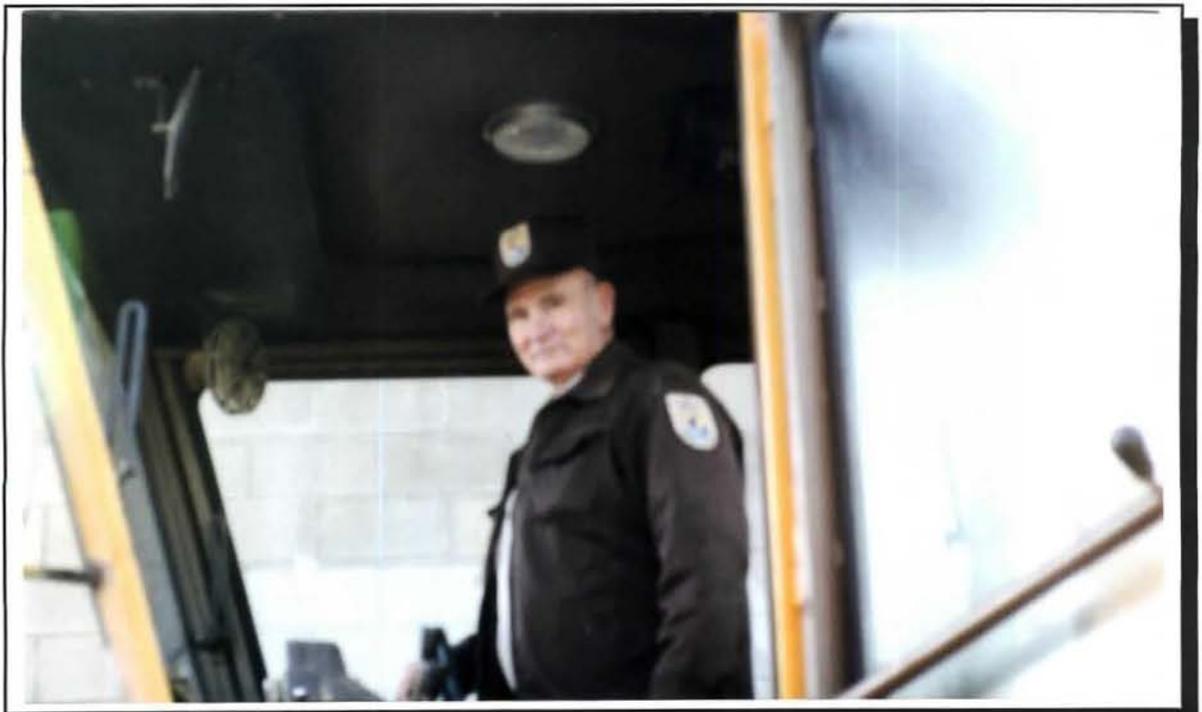
Don Clapp, Refuge Manager, GS-11 (EOD 6/87), PFT



GRL4-10/97

Glenda Copley, Office Assistant, GS-6 (EOD 7/87), PFT

DRC



GRL5-10/97

Dean Gilliam, Maintenance Worker, WG-8 (EOD 1/78), PFT

DRC



4. Volunteers

Raymond Stokes, who lives three miles northwest of the refuge at Arch, New Mexico, was a refuge volunteer throughout the year. Mr. Stokes maintained precipitation records and also reported general observations of waterfowl and sandhill crane populations in the area.

Volunteers Carlos Contreras, Carlos Contreras Jr., Scott Modderman and Jack Bush contributed a few hours of volunteer work on the refuge this year. Duties pertained to wildlife surveys, fence construction, and boundary posting.

5. Funding

<u>Refuge Funding FY 93-97</u>		
FY	Total	MMS
97	0	0
96	0	4,000
95	0	0
94	2,000	0
93	1,000	5,900

6. Safety

Monthly safety meetings were held at the Muleshoe NWR.

8. Other Items

Training and Meetings

Refuge Manager Clapp

-Law Enforcement Refresher
Training, Tucson, AZ
February 18 - 23

-Annual Fire Fighter
Recertification and Training,
Bitter Lake NWR, Roswell, NM
June 5

-Public Outreach Meeting,
Wichita Mountains NWR,
Cache, Ok
July 7-10

-Firearms Requalification
Sevilleta NWR, Socorro, NM
August 28

-Fire Management Plan Meeting,
Regional Office,
Albuquerque, NM
October 23

F. HABITAT MANAGEMENT

1. General

The refuge comprises 3,236 acres of which 906 acres are grassland and 2,330 acres are saline lake bottom.

2. Wetlands

The 2,330 acre lake bed of Salt Lake remained dry until August when increased rainfall allowed 5% of the lake to hold water for a short time. September rains inundated 35% of the lake bed but by November it was again nearly dry and remained so throughout the remainder of the year.



GRL6-10/97

DRC

More Sand



GRL7-8/97

DRC

Salt Lake Held Some Water During August.





GRL8-10/97

DRC

Salt Lake Was 35% Inundated During October.

5. Grasslands



GRL9-10/97

DRC

Overall, Grasslands Recuperated After Above Average Precipitation.

Except for a small area adjacent the entrance road the refuge boundary is not fenced since it extends through the lake bed in several areas. Although acquisition of an abandoned road right-of-way in 1983 allowed access to a small portion of the refuge, acquisition of adjacent land would be required before any boundary fencing could be accomplished.



GRL10-10/97

DRC

In Some Areas the Grass Stands Were Invaded by Weeds Following Previous Drought Years.

Above adequate moisture received this year rejuvenated refuge grasses although they have not recovered to the conditions that existed prior to the drought of 1995 and 1996. Especially in areas adjacent Salt Lake where high winds completely covered grasses.

7. Grazing

Cattle from adjacent lands have grazed on the refuge grasslands since 1969 when the land was acquired from the Bureau of Land Management and fencing was determined to be unfeasible.



GRL11-6/97

DRC

Grasslands Adjacent the Northwest End of Salt Lake.

Presently, approximately 570 acres of grassland is being actively grazed. Remaining areas on both sides of the lake are not grazed due to cross fences or are adjacent farm fields.

Adjacent land owners have expressed an interest in some type of land exchange which might be to their advantage as well as the Service's. So far nothing has been accomplished toward any type of land exchange due to the lack of refuge personnel and adequate funding.

G. WILDLIFE

3. Waterfowl

The only waterfowl observed on Salt Lake this year were 250 blue-winged teal during October.

4. Marsh and Water Birds

A few hundred lesser sandhill cranes were observed on or adjacent the refuge during January and again during the first of October. By the end of October 1,000 crane were using Salt Lake. During November and December a few thousand were seen on or near the refuge.

5. Shorebirds, Gulls, Terns, and Allied Species

More shorebirds were seen on the refuge this year since the lake held some water part of the year. Birds observed included American avocet, killdeer, black tern, and Wilson's phalarope.

6. Raptors

Turkey vultures and golden eagles were occasionally seen on the refuge or nearby. Others observed included northern harrier, American kestrel, Swainson's hawk, ferruginous hawk, and red-tailed hawk.

8. Game Mammals

In January eight mule deer were seen on the refuge. Deer numbers in the area have increased in recent years. This November the State of Texas initiated a deer hunting season for the first time in lands adjacent to the refuge.

10. Other Resident Wildlife

Ring-necked pheasant, scaled quail, and lesser prairie chicken were often seen on or near the refuge.

H. PUBLIC USE

1. General

Approximately 480 visitors used the refuge this year, this is 200 less than the number recorded for 1996. All visitor use was estimated this year as funds were not available to replace the traffic counter that was stolen at the first of the year.

Many of the refuge visitors are from the Portales, New Mexico area, approximately 30 miles west of the refuge. The Eastern New Mexico University is at Portales.

During recent years improvements to the refuge have included an entrance road, parking area, interpretive trail and signs, entrance signs, and a traffic counter.

11. Wildlife Observation

The majority of the public use at Grulla pertains to wildlife/wildlands observation. There are no facilities on the site.

17. Law Enforcement

Enforcing refuge regulations at Grulla is difficult because of the distance from Muleshoe NWR and few available personnel. There is only one staff member at the Muleshoe NWR with law enforcement authority.

This year three major vandalism incidents occurred on the refuge. This is near the annual average of vandalism incidents for the refuge.

During February the turnstile at the refuge parking area was damaged when someone pulled it out of the fence with a vehicle. During that time someone also cut the traffic counter hose and stole the traffic counter.

In May the remainder of the split rail parking lot fence was completely destroyed as well as the barbed wire fence that had

been installed last year to replace split rails destroyed by vandals.

During August someone ruined the ignition switch on the refuge's 450 Case dozer, broke tail lights out of the equipment trailer, let air out of the trailer tires, and slashed one of the tires.

I. EQUIPMENT AND FACILITIES

2. Rehabilitation



GRL12-8/97

DRC

Tumbleweeds at the Refuge Parking Area During March.

Strong March winds filled up the refuge entrance road and parking area with tumble weeds. The refuge's road grader was used to clear the road as it was inaccessible.

Beginning in May, the refuge's dozer was used in removing drifted sand from the boundary fence along the northeast side of Salt Lake. Sand that had drifted in since the previous year was also removed from the refuge's interior fence.



GRL13-3/97

DRC

Traveling the Refuge Boundary is Often Difficult.

J. OTHER ITEMS

1. Cooperative Programs

This year an Archeological Resources Protection Act Permit was issued to Dr. Stephen Durand, Department of Anthropology, Eastern New Mexico University, Portales, New Mexico, for an archaeological field research project. This project regarding surveys, field work, and data collection, was initiated after extensive winds during the summer of 1996 eroded surface sediments in Salt Lake and exposed an extensive bison bone bed along the northwestern portion of the dry lake.

Dr. Durand and at least 12 students and assistants conducted field investigations during June. Information was collected in order to determine bison age and sex and possible human exploitation patterns of the bison herd. The bone bed and lake margin was also surveyed for cultural remains and material. Stone artifacts were found in proximity of some of the bison remains. More investigation and data analysis is required in order to determine if the site represents a drive and mire site or a natural death assemblage scavenged by humans.

Data presently analyzed suggests that the bison were probably mired annually over a period of years and salvaged by humans as the opportunity arose. Bones of over 300 bison are believed to be in the lake bed. Carbon dating testing of horn sheaths revealed the time period to be in the early 15th century.



GRL14-10/97

DRC

Bison Bones Discovered in Salt Lake Date Back to the 15th Century.



GRL15-6/97

DRC

During June, Staff and Students from the Eastern New Mexico
Archaeological Department Began Field Investigations
Regarding Recently Discovered Bison Bones.



GRL16-6/97

DRC

The Main Focus of the Field Investigation was to Identify
Bison Age and Sex Ratio and Cultural Involvement.



GRL17-6/97

DRC

The Archaeological Crew Seeks Temporary Relief from the Hot Lake Bed.

4. Credits

This report was written by Manager Clapp and printed and assembled by Office Assistant Copley.

Photograph credits: DRC - Don Clapp and GKC - Glenda Copley.

GRULLA NATIONAL WILDLIFE REFUGE

Roosevelt County, New Mexico

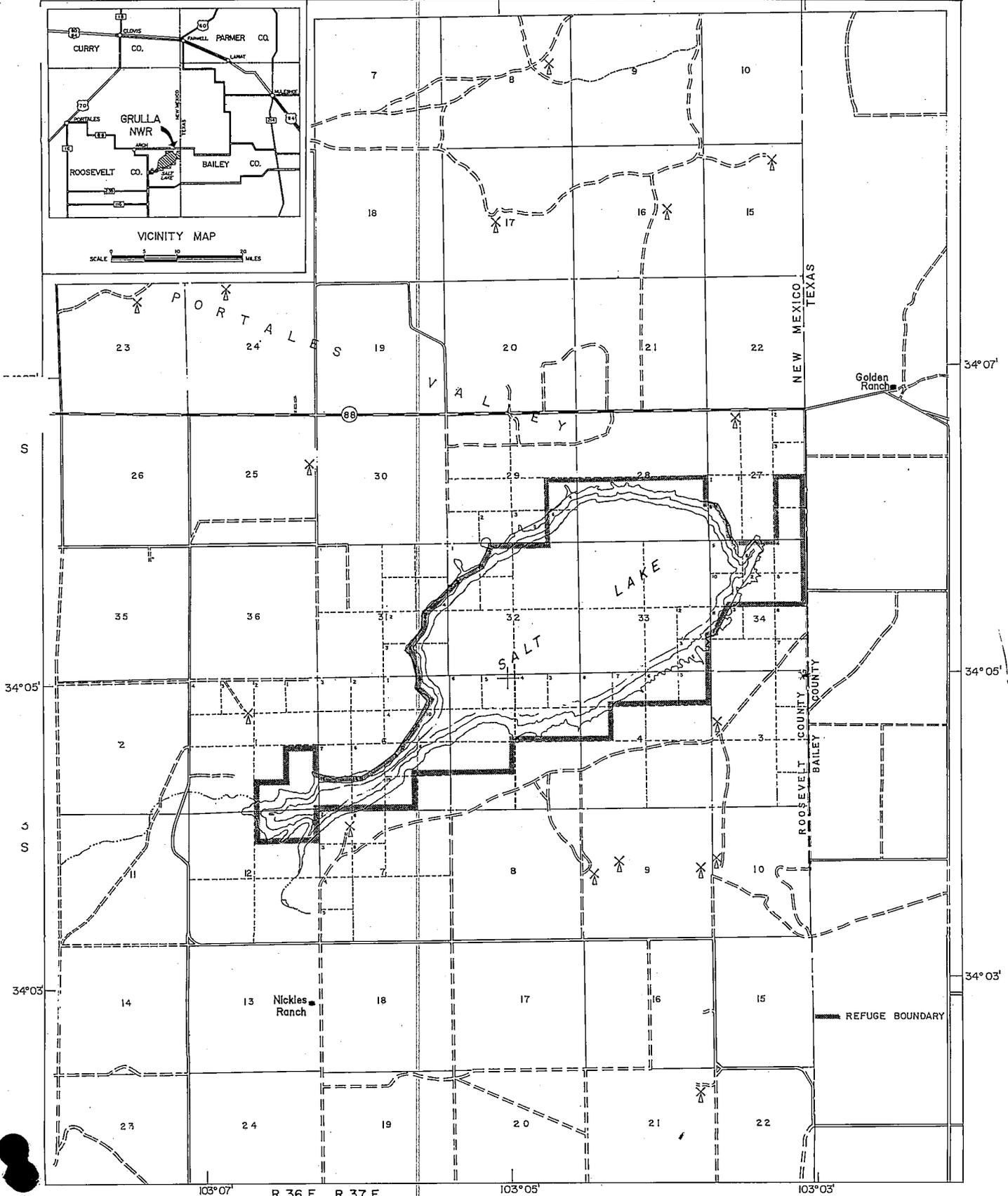
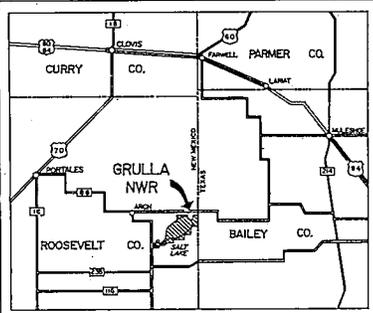
UNITED STATES
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

R. 36 E. R. 37 E.

103° 05'

103° 03'



COMPILED IN THE DIVISION OF ENGINEERING
FROM G.L.O. PLATS, U.S.G.S. QUADRANGLES,
AND OTHER OFFICIAL INFORMATION. REVISED JANUARY 1972

ALBUQUERQUE, NEW MEXICO JUNE, 1970

SIXTH PRINCIPAL MERIDIAN



6	9	12	15
7	10	13	16
8	11	14	17
9	12	15	18
10	13	16	19
11	14	17	20
12	15	18	21
13	16	19	22

TOWNSHIP
DIAGRAM



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DECLINATION
1965

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