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K. FEEDBACK



Jon Brock, Carol Duran, Bill Mobley

Personnel

1. Jon Brock - Refuge Manager - GS-9 - PFT.
2. Carol Duran - Refuge Clerk - GS-4 - PPT (30 hrs/week).
3. Bill Mobley - Biological Technician - GS-6 - PFT.

Review and Approvals

Jon Brock 3-15-82
Submitted By Date

John E. Kurtz 5/13/82 William E. Gussel 5/18/82
Area Office Review Date Regional Office Review Date

A. HIGHLIGHTS

Hearings were held before a special master appointed by the U.S. Supreme Court in the case of Colorado vs. New Mexico. The decision of this case will effect the irrigation water available to the refuge. (Section F. 11)

A new office/visitor center, shop, paint/oil storage building, and residence were constructed. (Section I. 1)

B. CLIMATIC CONDITIONS

The year started out as a very dry one with only 2.23 inches of moisture received during the first four months.

Rain was received in July and August. A total of 8.51 inches was received in August. The total precipitation for the year was 21.49 inches.

Two hail storms moved through the refuge in July and August. The first storm produced golf ball size hail which resulted in several broken windows, roof damage, and crop damage. The second storm produced small hail which once again damaged crops.

Temperatures ranged from a high of 97°F to a low of -23°F.

The last spring frost was on May 14 and the first frost of fall was on October 18.

Irrigation water was not available until the middle of June this year due to little or no snow pack in the watershed.

A lack of moisture effected spring germination and growth of crops. A lack of moisture also reduced growth and survival of winter wheat during the last three months of the year.

August rains resulted in Lake 13 and Lake 14 being filled. Lake 12 received enough water to bring it to conservation pool. This is the first time Lake 12 has had this much water in it for several years.

C. LAND ACQUISITION

1. Fee Title

Nothing to report.

2. Easements

Nothing to report.

3. Other

Nothing to report.

D. PLANNING1. Master Plan

Nothing to report.

2. Management Plan

Nothing to report.

3. Public Participation

Nothing to report.

4. Compliance with Environmental Mandates

Nothing to report.

5. Research and Investigations

Nothing to report.

E. ADMINISTRATION1. Personnel

No personnel changes occurred during the past year.

	<u>Permanent</u>		<u>Temporary</u>
	<u>Full-Time</u>	<u>Part-Time</u>	
FY 81	2	1	
FY 80	2	1	
FY 79	2	1	2
FY 78	2	1	
FY 77	2		

2. Youth Programs

Two Young Adult Conservation Corps enrollees were hired on October 26 of this year. The enrollees, John Paiz and Anthony Salazar, worked with the refuge staff. No group leaders were hired.

The enrollees provided manpower for projects ranging from painting to working concrete. They were most valuable when it came time to move into the new buildings.

The biological technician was on sick leave during the end of October, November, and December. John and Anthony helped move all the furniture, shop tools, and materials that were stuffed in those little buildings.

Both enrollees resigned around the first of the year.

3. Other Manpower Programs

Nothing to report.

4. Volunteers Program

Nothing to report.

5. Funding

A total of \$82,100 was available in FY 81 for operations.

Approximately \$50,668 were utilized for salaries. The remainder was used to pay fixed costs and purchase small tools and equipment. The irrigation water assessment increased to \$8,047.40 this year. This assessment takes about ten percent of our budget, but it is probably the best spent money. We don't have anything without water. The water assessment is used by the Vermejo Conservancy District to operate and maintain the irrigation system in the district.

Subactivity 1220 funds were eliminated this year. We're still doing the same job with about the same total funds. We just cost code to one less subactivity.

Funding (exclude construction)

	<u>Total</u>	<u>1210</u>	<u>1220</u>	<u>1240</u>	<u>1994</u>
FY 81	\$82,100	\$77,000	0	\$4,000	\$1,100
FY 80	76,600	72,000	\$1,000	3,600	1,100
FY 79	83,960	79,000	900	4,000	0
FY 78	59,900	50,000	1,900	8,000	0
FY 77	39,500	34,900	500	5,100	0

6. Safety

No accidents occurred on the refuge this year. Safety is discussed informally at this station during the course of each day. Safety efforts are directed more towards a safety analysis of each job before beginning work. A formal safety committee has not been established because there are only three employees at this station.

7. Technical Assistance

Nothing to report.

8. Other Items

Nothing to report.

F. HABITAT MANAGEMENT

1. General

Habitat conditions were fair to poor during the first part of the year due to lack of precipitation. Summer rains changed the look of the refuge as conditions improved. A late frost date in the fall also helped maintain green vegetation.

2. Wetlands

Lake 12, Lake 13, and Lake 14 are owned and managed for irrigation water storage by the Vermejo Conservancy District and the Bureau of Reclamation. The refuge does have leases or management agreements on the lakes giving the refuge control over public use, grazing, etc. The refuge has no control over the water levels or water manipulation.

Lake 12 received water up to conservation pool this year. The water in the lake averaged only about a foot in depth. The revegetated lake bottom provided good feed for waterfowl when it was flooded.

Lake 13 had fair natural food production. An increase in the water level during the summer made aquatics less available to waterfowl in the fall, but grassland flooded by the high water produced some feed.

Lake 14 continues to be the most productive lake in terms of aquatic vegetation. Natural food production was good again this year.

3. Forests

Nothing to report.

4. Croplands

There were 238 acres of crops under cooperative farming agreement this year with two cooperative farmers. The refuge receives one third of the acreage in corn, wheat and barley. The farmer plants primarily alfalfa and wheat or barley for his share. Grain crops are placed on a five year rotation with alfalfa to reduce the need for commercial fertilizer and improve the soil.

The refuge also force account farmed 106 acres. This land was planted to barley, winter wheat, and field peas. There were also 22 acres of yellow blossom clover and 9 acres of alfalfa which were planted previously. The clover and alfalfa is used to improve soil fertility. Six acres of field peas were planted this year.

Grasshoppers were here again for the third consecutive year, but died out naturally during the summer. Some damage was received this year but not as much as the two previous years.

Irrigation water was not allocated until June of this year due to little runoff in the watershed. Most of the crops were planted in May anyway, with a hope for rain. Some loss occurred before irrigation water was released in June, and even then, there was not enough water to irrigate all crops.

Things were looking good after the July rains came and then a hail storm came. Golf ball size hail killed 30-50 percent of the barley on the area farmed force account.

All crops under cooperative agreement with Hronich were hit by Hail. The farmer lost one cutting of alfalfa and 11 acres of wheat ready for harvest. Fifteen acres of corn planted for the refuge were completely destroyed. One nine acre field of barley was damaged.



Hail damage on Corn. JB 7-81

The second hail storm which hit in August didn't do as much damage because the hail was smaller and there just wasn't as much left to hurt.

In spite of everything, we ended up with a fair amount of feed this year. Winter wheat did very good until the end of November and the barley produced enough feed. The other cooperative farmer did not receive hail damage and produced fourteen acres of fair corn for the refuge share and some barley.

The Vermejo Conservancy District allocated 24 hours per 40 shares (1.2 inches/share) in June, July, August and September for a total of 4.8 inches/share.

Crop production this year should be sufficient to feed existing populations if extremely bad weather is not received this winter. Production was not sufficient to attract a large population increase. The acreage farmed by cooperative farmers was reduced this year because little or no irrigation water would be available. Sufficient irrigation water was received this year, but it was received too late.

Pea production was fair this year and received heavy use by pheasants. It was mowed in December and the geese soon cleaned the field.

5. Grasslands

Management of grasslands was directed primarily towards protection and restoration of eroded or overgrazed areas. Wind erosion is a major factor in this area.

Thirteen acres of eroded land were reseeded with a mixture of native grasses this year. The land was abandoned farm land which has not been tilled since the refuge was established. July rains germinated the grass. If enough grass doesn't survive the winter, the area will be seeded again next spring. A mixture of blue grama, western wheatgrass, rye, and clover is used.

6. Other Habitat

Nothing to report.

7. Grazing

Nothing to report.

8. Haying

Nothing to report.

9. Fire Management

No wildfires occurred on the refuge this year and there were no prescribed burns.

10. Pest Control

Pest control this year was directed towards grasshoppers and field bindweed.

Malathion was used to attempt to control the extent of crop damage. It was applied at the rate of 0.5 AI/acre with tractor mounted sprayers. The areas sprayed were limited to small areas with heavy infestation and field borders. During the summer the grasshoppers began to decline naturally. Heavy infestations occurred in the clover on land force account farmed. The clover was left standing this year instead of turning it under for wheat.

Field bindweed continues to be a problem in croplands. Control was necessary in grain crops with 0.5 AI/acre 2,4,D.

Deep rooted perennials such as alfalfa will compete with bindweed but other grains cannot. Alfalfa ground can be farmed in grain crops for one to two years before control is necessary. The presence of bindweed throughout the Conservancy District irrigation ditches and along most of the county roads precludes its elimination.

11. Water Rights

The Vermejo River provides a major portion of the irrigation water which is available to the Vermejo Conservancy District of which the refuge is a member. The refuge receives over 80 percent of its irrigation water from this watershed.

The State of Colorado filed action in the U.S. Supreme Court against New Mexico, claiming a share of the Vermejo River which originates in Colorado.

A special master was appointed by the U.S. Supreme Court to gather evidence in 1980. Colorado presented its case in December, 1980. New Mexico presented its case in Santa Fe in January of this year. Jon Brock, Refuge Manager, was called as a witness to present evidence on Maxwell Refuge including water use, objectives of the refuge, wildlife benefit, public use, and the effect of water reduction.

Rebuttal was presented in Cheyenne, Wyoming, in March. A final decision has not yet been made.

The City of Raton, New Mexico, filed suit against the Vermejo Conservancy District this year for water rights in the Chico Rico watershed. Raton uses this water for their water supply. Raton maintained that the District forfeited water rights through non-use and that releasing water would be futile due to ditch loss and evaporation. The Conservancy District maintained that Raton had exceeded their water rights and impounded water which should have been released downstream to the District. The decision was in favor of the Vermejo Conservancy District. Raton has not decided as yet whether to appeal the decision.

12. Wilderness and Special Areas

Nothing to report.

13. WPA Easement Monitoring

Nothing to report.

G. WILDLIFE

1. Wildlife Diversity

Nothing to report.

2. Endangered and/or Threatened Species

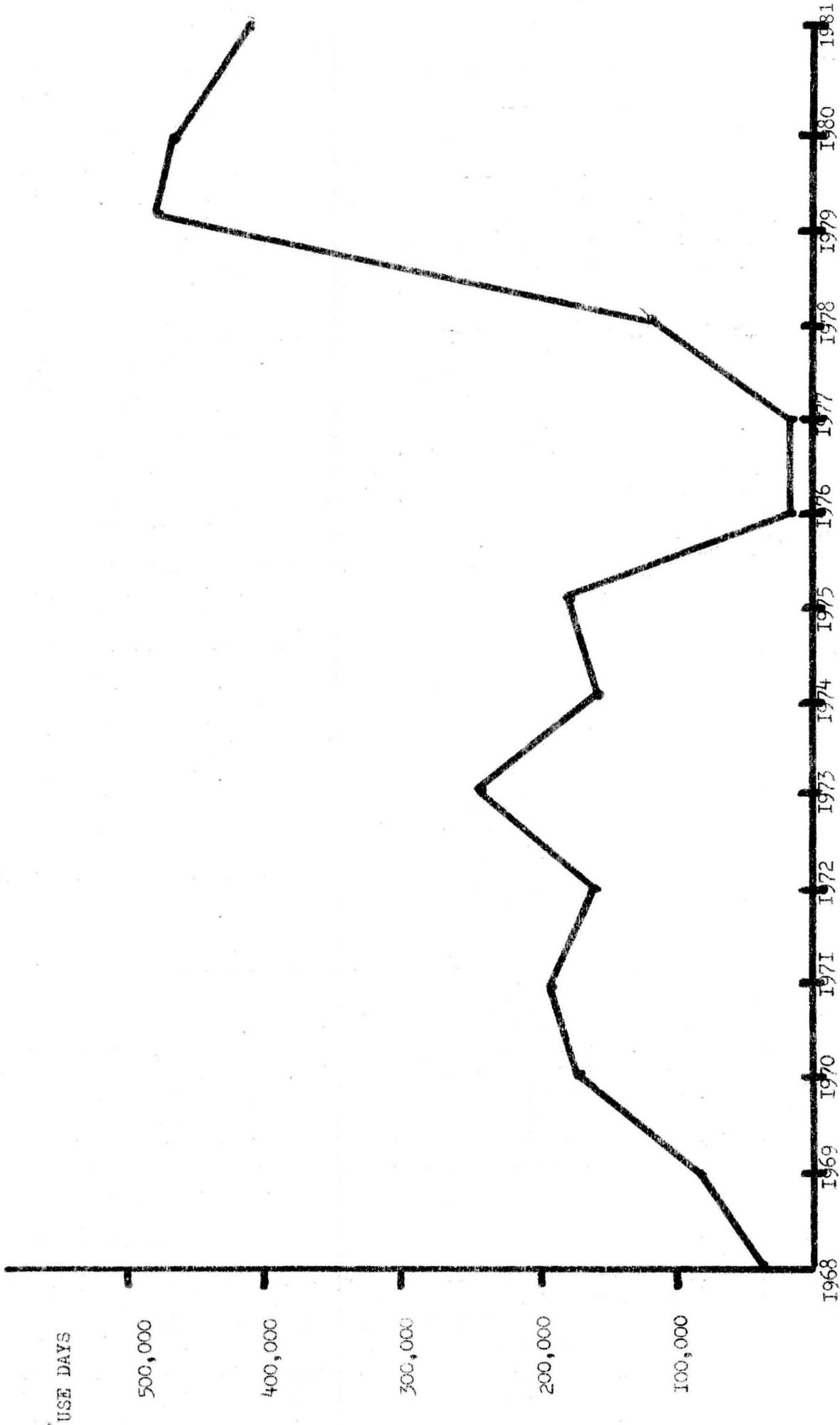
Bald eagle use on the refuge increased this year with a peak of nineteen recorded in January. A pair of bald eagles began nest building activities on the southeast corner of the refuge again this year. They departed without completing the nest. A fifty percent increase in bald eagle use days this year could be attributed to weather and available food.

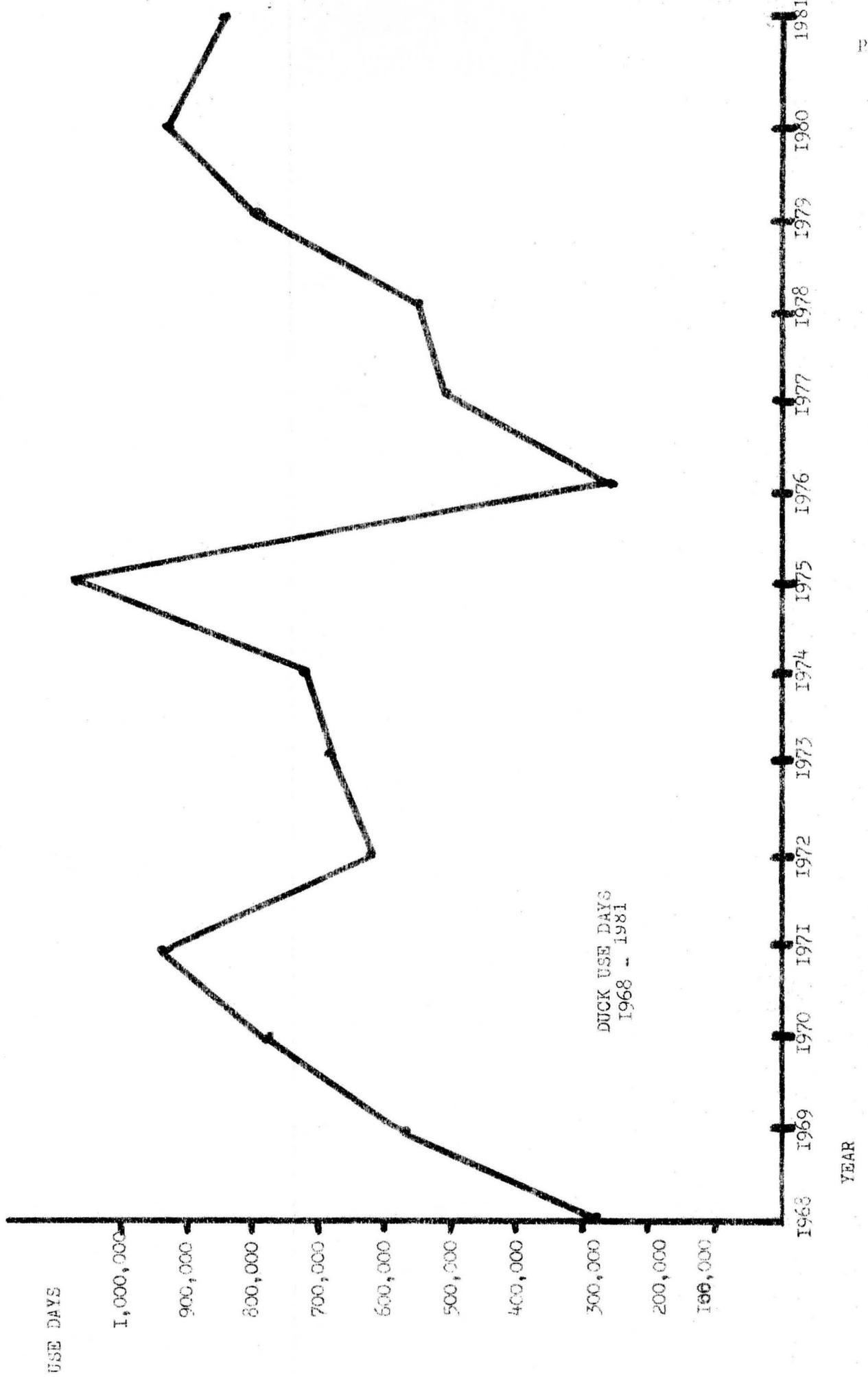
Prairie Falcon (status undetermined) use, white-faced ibis (status undetermined) use, and burrowing owl (status undetermined) use continued at about the same levels.

3. Waterfowl

Goose use was approximately one percent less than last year. A total of 396,520 use days and a peak population of 5,460 was received in 1981 compared to 464,543 use days and a peak population of 6500 in 1980. A decrease in the peak population could be attributed to a mild winter permitting the geese to winter farther north.

GOOSE USE DAYS
1968 - 1981





Duck use remained fairly constant with 885,170 use days this year compared to 957,093 use days in 1980. Mild weather and plenty of available food account for the increased population during the past two years.

4. Marsh and Water Birds

Hared grebes nested again this year on Lake 14. A total of twelve young were produced.

Western grebes hatched young for the second consecutive year, but only two young were produced. Most of the nests were abandoned during the summer as water levels increased.

Sandhill crane use increased from 1845 use days and a peak population of 190 in 1980 to 4200 use days and a peak population of 450. They fed primarily in alfalfa fields, corn stubble, and shallow areas around Lake 13. The increase could be attributed to cranes utilizing the refuge more each year instead of lands outside the refuge. Cranes are beginning to utilize this area as a stop-over instead of migrating straight south.

5. Shorebirds, Gulls, Terns, and Allied Species

No significant changes to report.

6. Raptors

Raptor populations remained at approximately the same levels this year. Small mammals, particularly rabbits were plentiful. A small increase in golden eagles was observed this year as the peak population increased to ten from seven in 1980.

7. Other Migratory Birds

No significant changes to report.

8. Game Mammals

Nothing to report.

9. Marine Mammals

None.

10. Other Resident Wildlife

No significant changes occurred in the pheasant population this year. Production was down with only twenty young produced.

Scaled quail continued to utilize the refuge for the second consecutive year.

The rabbit population continued at the same high level as the previous few years and provides a food base for raptors and other predators. An increase in food and cover as well as relatively mild winters have helped maintain a

good population. The rabbits do concentrate around the refuge headquarters during the winter as a result of hunting pressure by predators.

11. Fishery Resources

The New Mexico Game and Fish Department continues to manage the fisheries on the refuge per a cooperative agreement. Game and Fish personnel stocked rainbow trout in Lake 13 on three occasions this year.

12. Wildlife Propagation and Stocking

New Mexico Game and Fish released rainbow trout in Lake 13 per a fisheries management agreement. The fish are stocked due to poor reproduction in the lake because of high siltation. They are stocked primarily to provide a fisheries for recreation.

13. Surplus Animal Disposal

Nothing to report.

14. Scientific Collection

Nothing to report.

15. Animal Control

Nothing to report.

16. Marking and Banding

Nothing to report.

17. Disease Prevention and Control

Nothing to report.

H. PUBLIC USE

1. General

Nothing to report.

2. Outdoor Classrooms - Students

Nothing to report.

3. Outdoor Classrooms - Teachers

Nothing to report.

4. Interpretive Foot Trails

Nothing to report.

5. Interpretive Tour Routes

Nothing to report.

6. Interpretive Exhibits/Demonstrations

The new office/visitor center was constructed this year (Section I. 1). This office is much more suitable for receiving visitors and has an exhibit room. Work on the exhibit room has been postponed until a later date.

7. Other Interpretive Programs

Interpretation is normally limited to an occasional school group, boy scouts, or girl scouts.

8. Hunting

None.

9. Fishing

Fishing activity increased in September and October this year due to unseasonably warm weather and good success. Several limits of fourteen to eighteen inch trout were secured towards the close of the season. Fishing season extended from February 28 until October 18. This year the season is closed during the middle of the winter to reduce the disturbance to migratory birds.

10. Trapping

None.

11. Wildlife Observation

A small increase was seen in the amount of wildlife observation on the refuge. An increase was received in the number of written inquiries on the refuge and written requests for bird lists.

12. Other Wildlife Oriented Recreation

Camping is permitted at Lake 13 during the fishing season. A large percentage of the fishermen using the area live thirty miles or farther from the refuge. A three day camping limit permits out-of-town fishermen to utilize the area and has not yet created major problems. Very few people actually spent the night camping, but many fished all night. Permitting camping eliminates the need to distinguish campers from all-night fishermen.

13. Camping

Nothing to report.

14. Picnicking

Almost all picnicking occurring on the refuge is concurrent with wildlife oriented recreation. Fishermen and bird watchers account for most of the picnicking activity.

15. Off-Road Vehicling

Nothing to report.

16. Other Non-Wildlife Oriented Recreation

Non-wildlife oriented recreation on this area is minimal.

17. Law Enforcement

Law enforcement activity is limited due to the small number of violations. Two of the refuge personnel have law enforcement authority. Most of the violations are by local juveniles. New Mexico Game and Fish officers spend some time on the refuge checking fishermen.

18. Cooperating Associations

Nothing to report.

19. Concessions

None.

I. EQUIPMENT AND FACILITIES

1. New Construction

Construction on the 2" PVC pipeline from the refuge to the Village of Maxwell was completed this year with the installation of 7,366 feet of waterline.

A new office/visitor center, shop, residence, and paint/oil storage building was constructed this year. Shamrock Five Construction Co., Albuquerque, NM, began work on April 1. The buildings were accepted on October 22 pending completion of minor items.

The office/visitor center was designed to make maximum use of passive solar heat. It is concrete block. The clearstory windows usually provide plenty of light and a lot of heat. The central heat is used only on cloudy days or at night. We rarely have to use any lights except on extremely cloudy days.



New Office. WM 1-82

The shop is block construction. Only the repair stall and welding room of the shop are heated. We now have room to put equipment inside to work on it. Seed and fertilizer can now be placed inside instead of an open shed.



Shop. WM 1-82

The oil/paint storage building also has a pump room for the distribution pump and fire pump. One side is used for agricultural pesticides and small tool storage.



Oil/Paint Storage and Pump Room. WM 1-82

The residence is wood frame with active solar heat and passive solar heat. The passive heat is obtained primarily through six glass doors on the living room area. The benefit of the active solar unit has not been determined to date. It is tied in with the hot water heater and the central heat. Central heat in both the residence and office is a hydronic system which permits the use of three or four heat zones and thermostats.



Residence. WM 1-82

The old office, shop, and storage shed were sold for salvage by bid. The high bid was for a total of \$1025. The recipient is required to remove all material except concrete foundations.

2. Rehabilitation

Nothing to report.

3. Major Maintenance

Lumber racks, pipe racks, work benches, and cabinets were built in the new shop.

A concrete drive was built for the residence and a gravel drive. A chain-link fence was put around the back yard.

Approximately one mile of old fence was removed. A quarter of a mile of new fence was constructed.

A concrete pad for the radio tower was poured and radio cable in conduit was installed to the new office.

A drain was constructed on an underground irrigation pipeline constructed during 1978.

The 2500 gallon underground fiberglass water storage tank was replaced with a 2000 gallon steel tank. All pipe between the tank and the distribution tank was replaced. The tank increases the capacity of the well.

A 1000 bushel grain bin was constructed for wheat seed. We had no storage area for bulk seed prior to building the bin.

New refuge entrance signs and information signs were installed.

Culverts were installed or replaced in several locations and roads were shaped and graded.

4. Equipment Utilization and Replacement

The 1974 Dodge half ton pickup was replaced this year with a Ford half ton pickup. The new pickup has a six cylinder engine and standard transmission with overdrive. The gas mileage is definitely improved.

Most of the equipment at Maxwell is not very old, therefore, maintenance has not been a major problem. Most repairs are made during routine maintenance checks. The dump truck and stake truck are old in years but are used primarily on the refuge.

5. Communications System

The telephone system in this area was completely replaced this year with a new underground system. The new system has direct distance dialing and private lines.

On the old system we had to call the operator to make a long distance call and were on a four party line. The old phones usually quit if it rained or the wind blew over 15 miles per hour. The new system has been almost trouble free.

6. Energy Conservation

Construction of new buildings and a wind generator were directed towards conserving energy. In addition, the new pickup received was more economical. The new shop utilizes more energy than the old one because of its increased size, but only the repair stalls on one end are heated. The storage stalls are not heated.

The wind generator is an Enertech 4KW generator. It is used to assist in furnishing electricity to all buildings on the refuge. Excess power is fed back into the Electric Coop. lines and sold to the coop. The generator produced 460 KWH's during the first month of operation. Cost of the unit including installation, was \$15,995.

7. Other

Nothing to report.

J. OTHER ITEMS

1. Cooperative Programs

Nothing to report.

2. Items of Interest

Nothing to report.

3. Credits

This report was written by Jon Brock, Refuge Manager, and typed by Carol Duran, Refuge Clerk.

K. FEEDBACK

Information has not been provided to this field station in a timely manner concerning waterfowl disease or die-offs which could effect waterfowl migrating through this area or could be of special interest to the public. Several inquiries were received from the public last fall concerning the discovery of Endrin in waterfowl in Montana. Information was received by this office in the mail about a week after the news was broadcast on television. It would be helpful to us in dealing with the public if we were provided with the information as soon as possible. It would also greatly enhance our credibility. All refuges should be notified as soon as possible of any reports of waterfowl die-offs in the same area or along the same migration route. We would then be more alert to the possibility of problems on the refuge.