

HAGERMAN NATIONAL WILDLIFE REFUGE, TEXAS

NARRATIVE REPORT

January 1 to December 31, 1972

UNITED STATES DEPARTMENT OF INTERIOR

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

SHERMAN, TEXAS

INDEX

	PAGE
I. GENERAL	1
A. Weather Conditions	1
B. Habitat Conditions	2
1. Water	2
2. Food and Cover	3
II. WILDLIFE	4
A. Migratory Birds	4
B. Upland Game Birds	5
C. Big Game Animals	5
D. Fur Animals, Predators, Rodents and Other Mammals	6
E. Hawks, Eagles, Owls, Crows, Ravens, etc.	6
F. Fishing	7
G. Reptiles	7
H. Diseases	7
III. REFUGE DEVELOPMENT AND MAINTENANCE	8
A. Physical Development	8
B. Plantings	11
1. Aquatic and Marsh	11
2. Trees and Shrubs	11
3. Upland Herbaceous Plants	11
4. Cultivated Crops	11
C. Collections and Receipts	12
D. Control of Vegetation	12
E. Planned Burning	12
F. Fires	12
IV. RESOURCE MANAGEMENT	14
A. Grazing	14
B. Haying	14
C. Fur Harvest	14
D. Timber Removal	14
E. Commercial Fishing	14
V. FIELD INVESTIGATION	14
A. Banding	14
VI. PUBLIC RELATIONS	14
A. Recreational Use	14
B. Refuge Visitors	15
C. Refuge Participation	17
D. Hunting	18
E. Violations	18
F. Safety	18

VII. OTHER ITEMS
A. Items of Interest
B. Photographs
C. Credits

19
19
19
19

NARRATIVE REPORT

HAGERMAN NATIONAL WILDLIFE REFUGE, TEXAS

January 1 to December 31, 1972

I. GENERAL

A. Weather Conditions.

The year began with temperatures varying from 90° to the 70's and precipitation of less than one half of an inch. February temperatures jumped into the 80° range with minimum moisture. March showed some relief with over 1 inch of moisture but with 80° temperatures. April came on with 90° and above normal rainfall. May through August recorded temperatures reaching the 100° mark and below normal rainfall. September and October brought cooler temperatures and above normal rainfall for both months. November temperatures dipped to the 20's with rainfall below normal, allowing a short drying out period. December turned into real winter with snow, ice, rain, cold temperatures, and gusty winds. For the third year in a row, rainfall has dropped below normal for this area.



This was a common occurrence throughout the summer, visible thunderstorms afar.

Month	Snow- fall	Precipitation		Temperatures	
		This Year	Normal*	Maximum Temperature	Minimum Temperature
January		.42	1.75	76	9
February		.36	2.51	82	19
March		1.04	2.61	83	28
April		4.94	4.45	93	37
May		2.30	5.07	93	51
June		1.61	3.70	103	60
July		1.43	2.91	101	57
August		2.52	4.42	102	67
September		5.05	4.59	96	46
October		8.42	3.45	94	39
November		2.32	2.80	75	26
December	.24	.72	3.27	69	15
TOTAL	.24	31.13	41.53	103	9

* - 28 Year Average

Monthly rainfall and temperature data taken from official records at Denison Dam, U.S. Army Corps of Engineers, 20 miles northeast of refuge headquarters.

B. Habitat Conditions.

1. Water

Lake Texoma fluctuation showed a deviation of 9.70 feet. The year began at 617.65 and fell to 607.95 in October. The first six days of November showed nearly a foot rise per day, and by the end of the month the lake level was approaching normal (617'). Impoundments started the year in near flood condition and by October were 95% dry. November rains replenished water areas and a rising lake level once again flooded lakeshore impoundments.

Lake Texoma Levels

	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
January 1	616.97	612.31	613.72	617.65
February 1	615.88	610.31	612.49	614.57
March 1	615.69	610.21	612.71	611.90
April 1	615.64	611.66	611.69	610.30
May 1	614.54	613.91	610.64	610.51
June 1	616.84	615.63	610.41	613.62
July 1	617.37	615.29	610.87	612.17
August 1	614.96	613.03	609.22	610.81
September 1	613.33	610.18	610.25	609.86
October 1	614.54	612.60	612.41	609.39
November 1	614.68	617.12	614.26	610.14
December 1	613.19	616.10	613.37	616.89
December 31	612.18	613.89	617.68	615.82

2. Food and Cover.

This year developed into a hit and miss situation with food and cover. The change in lake level and drying out of impoundments left natural foods such as smartweed, high and dry, and virtually non-existent. Habitat for resident birds and animals suffered somewhat by high temperatures and lack of rainfall, but provided sufficient food and cover to carry them through. Cultivated fields were in good condition, with little loss to army worms in wheat; corn somehow surviving the summer, and sorghum producing an excellent crop. Utilization by geese was confined primarily to the wheat fields, with corn still standing, as such, as the end of the year approached. Sorghum along the lakeshore was heavily utilized by ducks as the lake level rose. Other sorghum fields were still standing, (wet weather) with blackbirds the recipients of benefits. Lanes were plowed in the rank weed growth in Harris Creek to afford waterfowl some open areas in the 6-foot high weed patch, which is flooded as the lake level rises.

II. WILDLIFE

A. Migratory Birds.

1. Waterfowl.

TOTAL USE DAYS

<u>Species</u>	<u>1972</u>	<u>1971</u>	<u>1970</u>	<u>1969</u>
Geese	529,350	620,800	1,010,513	841,542
Ducks	669,840	1,121,492	1,725,698	1,038,597

Peak Numbers:

<u>Species</u>	<u>1972</u>	<u>1971</u>	<u>1970</u>	<u>1969</u>	<u>1968</u>
Geese	6,000	8,000	10,880	10,300	8,900
Ducks	15,600	15,000	20,000	13,200	7,300

Canada Geese. Canada population was less again this year, with the peak at 6,000 birds. Early prognosis looked good for reaching objective RBU's, but waned and failed to materialize.

Snow and Blue Geese. Population peaked at 450 birds on March 4, with a fall peak of 350. Large flights were noted flying over the refuge in November.

White-Fronted Geese. A peak number of 300 white-fronts were recorded this year, an increase of last years count of 130 birds.

Ducks. Our 1971 carryover population was 5,300 birds, the majority being mallards. Fall migrants began arriving in September and peaked at 15,600 birds by December. Mallards represented 75% of the peak population.

2. Other Water Birds.

Herons and Egrets. No unusual variation was observed this year. The greatest concentration of Great Blue herons was 28 birds observed feeding in Mineral Marsh as it began to dry up.

Other common visitors were: American egrets, Snowy egrets, Little blue herons, and Green herons. One Cattle egret was observed on March 11. Other birds noted along the lake-shore mud flats include: Killdeer, Avocets, Sandpipers, Plover, Yellowlegs, Glossy Ibis, Dowitchers, Snipe and one Marbled Godwit.

Gulls and Pelicans. Gull use was approximately the same as last year with Franklin's and Ring-billed gulls the dominant species. Bonaparte's gulls and Forrester's terns were observed through March and April. Pelicans peaked at some 3,500 birds, the last being observed in December. Problems arise when pelicans become caught in abandoned trollines and are noted by visitors, calling for immediate action for their removal. Result: Four birds died hung in lines, one released alive. (See photo section.)

Mourning Doves. No significant change was noted this year. However, a record population was welcomed by hunters south of the refuge in maize fields as the season began. One Ringed Turtle Dove was observed at headquarters on April 16, and a pair noted at Harris Creek Bridge the rest of the month. Needless to say, these birds were far from their natural habitat and probably discarded by some visitor.

B. Upland Game Birds.

The Bobwhite quail population showed a sharp decline which could possibly be attributed to the hot dry weather during the nesting season. Pairs were observed throughout the summer without chicks and observations of late hatches were scarce. The estimated population of the refuge is 300 birds.

C. Big Game Animals.

White-tailed deer population is estimated at 50 animals, a decline from last years 90 animals. Few observations of does with fawns were noted this year and deer observations of any kind were at a premium. Although the county is still closed to deer hunting, pressure is building to allow a hunt of some type.

D. Fur Animals, Predators, Rodents and Other Mammals.

Beaver continue to make their presence known by plugging water control structures. Cuttings are visible around ponds, marshes, and the lakeshore.

One Mink observation was made this year.

Raccoon, Opposum and Skunk tracks and sightings were abundant around fields, along roadsides, and impoundments over the refuge.

Armadillo are common with observations made over the refuge.

Coyote and Bobcat were occasionally observed on the refuge. Night time coyote serenades are common along Meyer's Branch and Harris Creek bottoms.

A Red Fox was reported seen by a visitor on June 2, but no verification was made.

E. Hawks, Eagles, Owls, Crows, etc.

Redtail and Marsh hawks are the most common raptors on the refuge, with Rough-legged and Sparrow hawk present. Seventeen (17) Swainson's Hawks were observed on April 8.

Eagle use appears to have stabilized with two Bald Eagles carried over from winter and two reappearing in the fall. No other observations were confirmed in 1972.

Great Horned Owls are readily seen during the evening and morning hours. The refuge was the recipient of two immature Great Horned Owls on March 28, taken from the intake tube at Denison Dam, where painting was in progress. Mr. Bill O'Neal, falconer in Gerland, Texas, was contacted and cared for the birds until they could be returned to the wild.

Crows are common on the refuge, with a roost located in Harris Creek bottom.

F. Fishing.

April Fool's Day opened the fishing season on the refuge with numerous fishermen and limited success. The lake level had dropped and spawning creppie were not readily available. Two staff members worked opening day of the season, checking licenses, distributing litter bags, answering questions, and asking fishermen's cooperation with litter control. 92 fishermen and women were contacted.

Trotline fishermen continue to create problems by abandoning trotlines either during or after fishing season, leaving hazards for unsuspecting pelicans. (see photo section.)

G. Reptiles.

The most common reptiles on the refuge are water snakes, (MATRIX), with rattlers, moccasins and copperheads occasionally observed.

H. Diseases.

One case of anti-plasmosis was reported on July 28, in Mr. C. L. Terry's herd in Unit G-15e. The cow was saved by treatment and the entire herd inoculated.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development.

1. Water Facilities.

Drainage ditch was cut from RF-2 through RF-3 to Harris Creek bottom to allow surface water to drain.

Check dams were constructed in unit G-25 and G-26 to prevent erosion.

Silt basin constructed above Taylor pond and lakeshore marshes to retard silt from adjacent farm fields, etc.

A small dam was constructed in the upper end of Myleshoe Marsh to provide open water in the marsh when rainfall is scarce. An adjacent flowing well was diverted into this area.

A flowing well was also diverted to a stock tank in grazing unit G-16, providing for a wider dispersal of livestock by creating another "water hole".

2. Roads and Trails.

One half mile of access road to Sandy Picnic Area was rocked with 499.05 tons of #2 road base. The 200 yards of access road to Sandy Picnic Area constructed and graveled last year was rocked twice this year and finally closed during wet weather to prevent oil field rigs from gutting it before it could pack down.

The proposed foot trail in and around Goode Picnic Area was mowed as time allowed and provided a crude (not up to standards) access around the lakeshore.

The Lake Overlook Tower road received 42.2 tons of #2 road base since traffic and wet weather had taken its toll.

Big Mineral Picnic Area roadway received 20.7 tons of #2 road base next to the new latrine.

Approximately 30 miles of fireguard were dozed and plowed around the refuge boundary.

3. Fencing and Posting.

Two interior pasture fences were constructed, one between G-27 and G-28, and one in G-37 to separate two herds in the same grazing unit.

Boundary fence in unit G-25 was restapled and posted.

North refuge boundary on the west side entering the lake in G-37 was rebuilt.

Prior to waterfowl seasons, boundary fence and "blue goose" signs were checked and signs replaced as needed.

All wooden refuge signs were reworked.

4. Buildings and Utilities.

Two new field latrines were constructed this year with pollution abatement monies. One at Big Miner's Picnic Area and one at Sandy Picnic Area. These replaced pit latrines.

New steel overhead doors were purchased for vehicle stalls, replacing the original wooden doors that were becoming laden with patch work and strenuous to back.

Sidewalk was poured from visitor parking area to office; concrete slab poured in front of the mechanic shop; and a small slab poured in the backyard of the quarters.

Two 500-gallon septic tanks and 200 feet of lateral line were installed at the quarters with pollution abatement money. This brought the septic system up to FHA standards.

Rain guttering was installed on the Service Building.

5. Croplands.

Terraces were reshaped in RF-6 since they had deteriorated to the point that farm equipment could not manipulate over them. Other fields farmed by co-op farmers are in need of terracing as recommended by SCS, or alternately reverted to pasture land. Problem: Co-op farmers prefer to plow terraces out since they hinder their operation.

6. Grassland.

The nine-month grazing program went into effect as of July 1, 1972, and needless to say, so came the inquiries. With the unrest over the program, permit violations and trespass cattle are evident in cattle counts as winter attained full swing. The good old program of repairing interior fences, herding cattle, ignoring permit violations has slowed down, and we hope to make greater strides in the future. At present, SCS personnel are in the process of making a range survey under their program of determining wildlife food plants and values, then range forage for livestock. Close scrutiny will determine the outcome. Amendments are necessary to our grazing plan.

7. Marsh and Water.

The control structure at Dead Woman Pond was cleaned of accumulated beaver work and closed.

With the hot, dry weather, lake fluctuation and lack of rainfall, smartweed was virtually non-existent this year.

8. Equipment.

Two new vehicles were added to the refuge fleet, 4X2 pickup and 4X4 pickup.

A new tire changer and air compressor were added to the mechanics shop.

A new calculator was purchased for the office, and an electric typewriter transferred from RO.

Repairs included; replacement of heads on 670 MM Tractor; repairs to 670 Tractor hydraulic system; replacement of alternator and voltage regulator on Maintainer; clutch adjustment on dozer and maintainer; replacement of axle and bearings on fire truck; replacement of alternator and water pump on Ford wagon; and general day-to-day maintenance.

B. Plantings.

1. Aquatic and Marsh Plants.

None.

2. Trees and Shrubs.

Five native red-bud trees were transplanted around the headquarters.

3. Upland Herbaceous Plants.

None.

4. Cultivated Crops.

633 acres of agricultural lands were utilized this year on the refuge. Total wheat planted amounted to 525 acres: 182 acres of contract farming, 100 acres refuge share of co-op farming, and 243 acres as farmer's share of co-op farmed acreage. Corn planted amounted to 37 acres; alfalfa 10 acres (planted by permittee for refuge share), maize 22 acres and mixed grain 4 acres. Areas along the lake shore were plowed to control Johnson Grass and planted with sorghum and mixed grain, as were areas in Muleshoe and Steedman Marsh. The areas planted with mixed grain had a rapid growth of sorghum with a wheat understory. To date, wet weather and muddy fields have prevented cutting the sorghum so geese could get to the wheat. 20 acres were planted with soybeans, which failed due to dry weather, but volunteer wheat from last year provided some food for geese. 15 acres in RF-11c was left fallow.

C. Collections and Receipts.

This year we received 3,200 pounds of mixed grain from the Fort Worth Office of the U.S.D.A. Grain Division. This is used for bird feed, banding operations, and limited planting. Seed purchases for farming operations included: 200 pounds of corn, 400 pounds of sorghum, 607 bushels of wheat and 200 pounds of soybeans. Approximately 600 bushels of wheat were transferred from Tishomingo NWR, failed to germinate, and was replanted with commercial seed.

D. Control of Vegetation.

None this year other than regular mowing operations.

E. Planned Burning.

None this year.

F. Fires.

Three fires occurred this year on the refuge:

1. On Sunday, March 26, 1972, at 12:15 a.m. the refuge manager received a report of a fire south of Meadow Pond along the railroad tracks from a refuge visitor. The manager departed headquarters at 12:30 a.m. Upon arrival, Mr. Paul Cleon Bromley was found standing along the road on the railroad right-of-way. His face was bloody and he could not walk due to an injured right leg. He stated that he had fallen from a freight train and had started the fire to summon help. Mr. Bromley was taken to headquarters and the sheriff's office notified at 12:52 a.m. The manager proceeded to ready the fire truck while waiting the arrival of assistance. At 1:15 a.m., Constable C. E. Harris arrived and upon talking with the injured man, phoned for a doctor to meet him at Wilson N. Jones Hospital in Sherman. Constable Harris departed with the injured party at 1:25 a.m. Refuge Manager departed headquarters area in the fire truck for the fire, and arrived at 1:35 a.m. The fire was control-

led and mop-up completed at 2:30 a.m. On the way back to headquarters, the right rear axle of the fire truck broke at Dever Pond, with the wheel, hub, and axle coming to rest along side of the road. Refuge Manager proceeded to walk two miles back to headquarters, arriving at 3:30 a.m. At this point, the manager took another truck back to the fire truck, removing tools and fire extinguishers, locked the cab, and set up a barricade sign and a saw horse (CLOSED TO VEHICLES) to prevent theft of vehicle radio, etc. Arrived back at headquarters at 4:30 a.m. Refuge Mechanic, Preston O. Lawrence was summoned to bring in the fire truck at 8:00 a.m. Mr. Lawrence succeeded in the feat by towing the vehicle on the back of a tractor drawbar, completing the task at noon.

2. On July 17, 1972, at 7:20 p.m. the refuge manager received a call from Shell Oil Production Foreman, Mr. Joe Irons that a fire had broken out in Unit G-35 and had been controlled by use of a 44-barrel tank truck. Loss was approximately 15 acres of pasture. The refuge manager proceeded to the fire and completed mop-up work. Once again our fire truck gave up as the PTO pump sheared a pin. Mop-up was finally completed by letting the hose siphon from the tank. Origin unknown, smoking suspected cause.
3. On July 28, 1972, at 7:45 p.m., a call was received from our neighbors to the south that a fire was burning in Unit G-23. Approximately 12 persons, volunteers and neighbors, controlled the fire with sacks and the local volunteer fire truck before the refuge staff arrived. Personal services included the refuge manager and a seasonal employee. Mop-up by staff members was completed at 11:00 p.m. Lightning was the suspected cause during a "heat" shower.

IV. RESOURCE MANAGEMENT

A. Grazing.

26 grazing permittees are currently utilizing the refuge. Permits were issued for 462 animals or 4,055 AUM's or 7,138 acres. Grazing fees are \$1.50 per AUM, revenue being \$6,082.50, and reverting to Corps of Engineers funds.

B. Haying.

None.

C. Fur Harvest.

None.

D. Timber Removal.

None.

E. Commercial Fishing.

None.

V. FIELD INVESTIGATION

A. Banding.

Once again banding operations were halted by the lake level flooding the banding site and wet, muddy conditions preventing use of other fields. Another factor was reduced manpower.

VI. PUBLIC RELATIONS

A. Recreational Use.

The traffic counter maintained by the Corps of Engineers tallied 102,700 visitors, down 6,400 visits from 1971. Of this total, 69,232 visits were recorded within the scope of refuge objectives, excluding all field use, permittee and refuge use and general county road use. This counter was moved from the entrance road north of headquarters to the intersection below headquarters in November to monitor two of the eight entrance roads to the refuge.

B. Refuge Visitors.

Routine visits were made by grazing and farming permittees, Texas Parks and Wildlife Personnel, Oil field representatives and numerous visitors seeking information on hunting, fishing, birding, etc.

Registered Visitors Included:

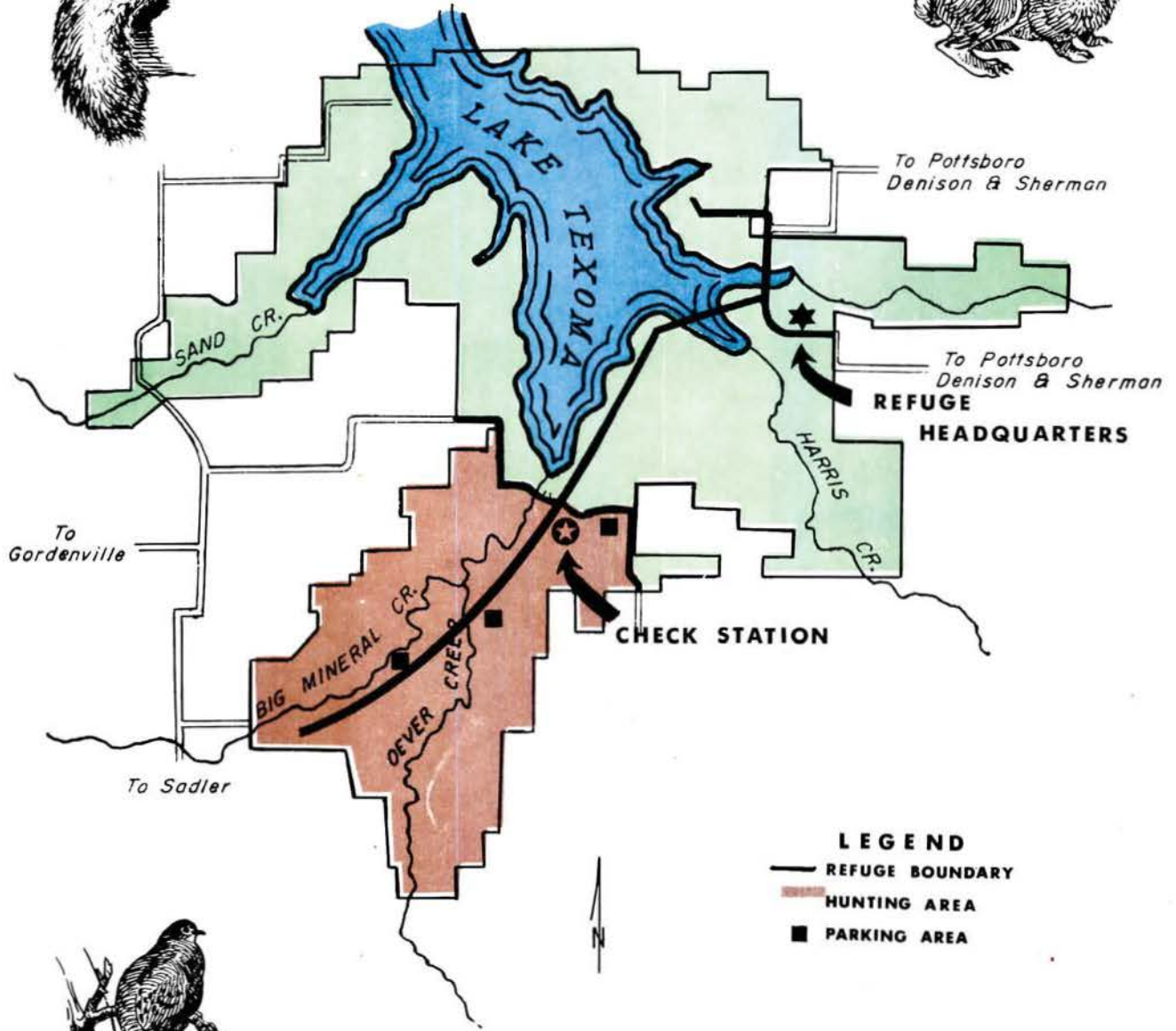
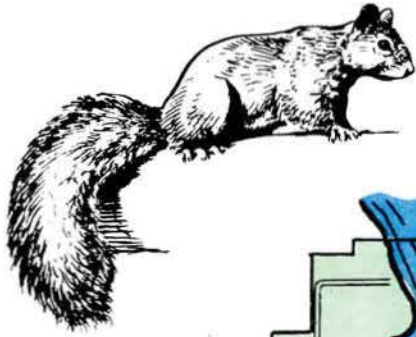
<u>DATE</u>	<u>VISITOR</u>	<u>REASON FOR VISIT</u>
2-24	John S. Redfield, U.S. Geological Survey	Inspection
3-2	William L. Lafield, Editor, Shell Oil	Magazine Article
3-14	William J. Petrick, Engineer, Regional Office	Construction Insp
3-20	Wesley Bonnell, W/L Services, Wyo.	Excess Property
3-20	K. M. Brown, University of Texas	Archeological Site Investigation
3-20	John Clark, University of Texas	Archeological Site Investigation
3-31	Barry LeBaron, Texoma Regional Planning Comm.	Courtesy Visit
4-4	Elton R. Previtt, University of Texas	Archeological Testing
4-6	Steve Seale, Sports Ed., Denison Herald	Fishing Article
7-7	Charles Cail, Soil Conservation Service	Soil Samples
7-8	Dr. H. E. Schlichting, Jr. OU Biological Station	Field Trip
7-11	Pete Bryant, Monte Viata NWR	Courtesy Visit
7-12	Rex Cochran, Soil Conservation Service	Soil Samples

<u>DATE</u>	<u>VISITOR</u>	<u>REASON FOR VISIT</u>
7-12	Birtie Clountz, County Road Foreman	Bridge Replacement
8-3	John H. Ray, County Health Department	Courtesy Visit
8-29	Jerry Thornhill, EPA	Oil Field Inspection
8-29	Wallace Cooper, EPA	Oil Field Inspection
8-30	Phil Garrett, RBS, Tulsa	Lake Level Invest.
9-6	J. C. Bryant, Merritt Island NWR	Courtesy Visit
9-16	W. O. Nelson, Jr., R.D. R0, Albuquerque, NM	Courtesy Visit
9-26	Joe B. Norris, Soil Conservation Service	Range Survey
9-26	Jack Bradley, Soil Conservation Service	Range Survey
9-26	Gary Westmoreland, Soil Conservation Service	Range Survey
9-26	Harris W. Wright, Soil Conservation Service	Range Survey
10-26	Lynn McDaniel, Soil Conservation Service	Range Survey
10-31	Charles Hensley, District Supervisor, TP&WL Dallas	Enforcement
11-16	Dick Droll, GMA, Fort Worth	Patrol

C. Refuge Participation.

- January - Tour for 60 elementary school students.
- February - Tour for 60 elementary school students.
- March - Newspaper notified of official opening of fishing season.
Tour for 15 Campfire Bluebirds.
Eagle posters for National Wildlife Week distributed to local schools.
- April - Newspapers notified of upcoming hunt season.
Manager Anduss and Mechanic Lawrence worked opening day of the fishing season checking licenses, distributing litter bags, and asking fishermen's cooperation on litter control. Contact was made with 92 visitors.
Tour for 59 elementary school students.
- May - Article on refuge published in Shell Oil Company's magazine, "The Pecten".
- August - Participation in local Hunter Safety and Home Safety Firearms Course.
- September - Refuge Manager guest speaker at Hunter Safety and Home Safety Firearms Course.
Talk presented to Explorer Scouts in Sherman, Texas.
- October - North Texas Retriever Trials held on refuge, 180 canine entries and 100 people.
- November - Two tours, 180 students.
Talks to 300 students.
- December - Christmas bird count, December 16.

HAGERMAN NATIONAL WILDLIFE REFUGE



LEGEND

- REFUGE BOUNDARY
- HUNTING AREA
- PARKING AREA

Scale



UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE



FEB. 1972

HAGERMAN NATIONAL WILDLIFE REFUGE

Sherman, Texas

Hunting Regulations

HUNTING AREA

The hunting area includes that portion of the refuge posted as "Public Hunting Area" and shown on the map. Hunters must check in and check out at the check station, located on the north side of the hunt area.

PARKING

Hunters will park in designated areas as shown on map. Loaded firearms and hunting are not permitted within 50 yards of parking areas or roads.

SQUIRREL AND RABBIT

May be hunted in accordance with applicable State and Federal regulations from May 1 through July 31.

DOVE AND RABBIT

May be hunted in accordance with applicable State and Federal regulations from September 1 through September 30.

GUNS

Hunting is permitted with shotguns or bows and arrows in accordance with applicable State and Federal regulations. No rifles or handguns are permitted.

DOGS

Dogs may not be used within the refuge.

CAMPING

Overnight camping within the hunting area is not permitted.

LITTER

Litter must be deposited in the litter barrels provided or removed from the refuge.

FIRES

Fires are not permitted in the hunting area.

BE SURE OF YOUR TARGET ** HUNT SAFELY

D. Hunting.

Hunting on the refuge is now in its second year, comprising a squirrel and rabbit season during May, June and July, and dove and rabbit season from September 1 to 30th. To attain a better record of hunter use, a check station was set up on the north side of the hunt area and regulations written that hunter must check-in and check-out of the area. Cooperation was for the most part excellent, excluding crude remarks, with 55 hunters signing in during the spring hunt and 177 hunters during the fall hunt. Hunter success could be rated as fair to poor as most hunters will not hunt more than 100 yards from the roadway, due to our poisonous snake population.

E. Violations.

Three violations were handled by Texas Game Management Officers this year.

<u>Name</u>	<u>Violation</u>	<u>Date</u>	<u>Result</u>
James M. Thornell Dallas TX	Fishing Closed Season	10-14	\$27.50
James Cleveland Sherman TX	"	10-14	\$27.50
Harless Harris Denison TX	DWI	12-1	Dismissed

Reports of hunter trespass increased in December, after-the-fact, with alleged hunting taking place in RF-14, along the Central Service Road at RF-10, and in unit G-13. A solution that would be of great benefit to the refuge interior would be control of access roads by closing them or locking them up and preparing for the pressures that bear. As a result of these reports, refuge patrol was increased, but to no avail.

F. Safety.

Staff safety meetings are held each month with chairmanship rotating among staff members. Alice T. Graves, Refuge Clerk, attended a Defensive Driver Course in Sherman, Texas.

There were no lost-time accidents this year, and the refuge has now gone 19 years without a vehicle accident. A Safety Management Citation was received from Regional Office.

VII. OTHER ITEMS

A. Items of interest.

Kenneth O. Barton, Refuge Clerk, retired May 31, 1972, with 27 years of government service. To everyone's regret, "Buz" succumbed to a heart attack on December 8, 1972.

Alice T. Groves, the first female assigned to Hagerman NWR, entered on duty July 24, 1972, as Refuge Clerk. With some 14 years of government experience behind her, she has done an excellent job of assuming the clerical duties and handling the ever increasing paperwork.

Preston O. Lawrence was presented his 20-year pin and Service Award by Ernest Jamison, Refuge Manager, Tishomingo NWR, on May 31, 1972.

One oil well behind Muleshoe Marsh was removed and capped. However, permission has been requested to "wildcat" in unit Q-27, just east of the wheat field, RF-14. Operations will probably start early next year.

Late in the year, two (2) Research Natural Areas were approved and boosted refuge RBU's.

B. Photographs follow text. All photos taken by the refuge manager.

C. Credits: All sections - Anduss; Typing - Groves.



#2 ROAD BASE BEING SPREAD ON ACCESS ROAD
TO SANDY PICNIC AREA.



EXPANDED FIREGUARDS GIVE BETTER ACCESS TO
HIDDEN CORNERS OF THE REFUGE.



EVIDENCE OF OUR DRAIN PLUGGING FRIEND,
"CHARLEY CHISELTOOTH"



ONE TWIN TRYING TO FIGURE OUT HOW TO CROSS THE
ROAD, JUMP THE PIPELINES AND JOIN MOTHER AND TWIN.



THIS WHITE PELICAN WAS LUCKY, IT WAS RELEASED FROM THE TROTLINE AND WENT ON ITS MERRY WAY.



NEEDLESS TO SAY-----THESE TWO BIRDS WERE NOT.



NOW YOU SEE IT-----



-----NOW YOU DON'T. ONE OIL WELL REMOVED
FROM THE LAKESHORE BEHIND MULESHOE MARSH.



HAGERMAN'S FIRST RETRIEVER TRIALS WERE HELD THIS YEAR.....





OKLAHOMA BIOLOGICAL STATION CLASS ON AN ALGAE
COLLECTING TRIP.....



ONE OF THE TWO NEW LATRINES LOCATED IN REFUGE
PICNIC AREAS.....



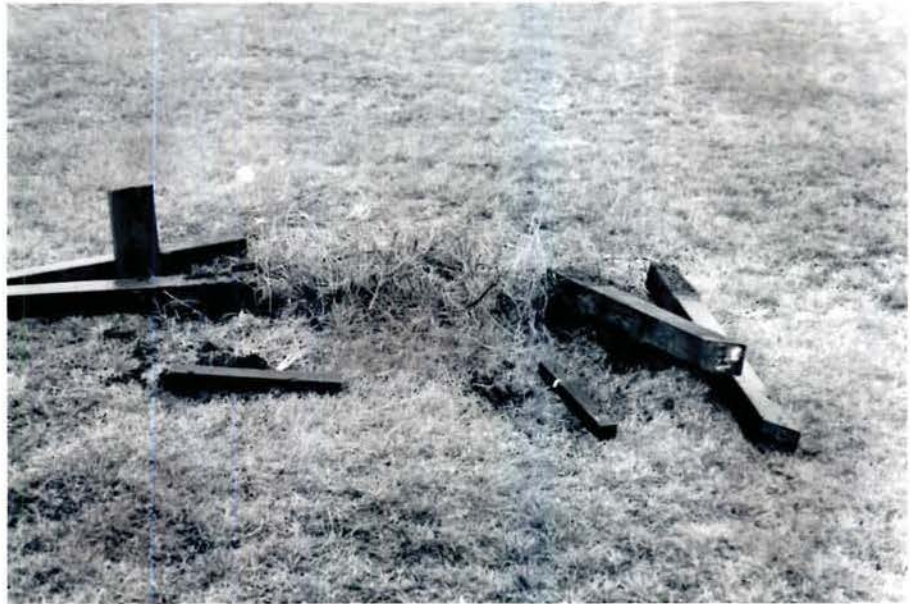
SUCCESSFUL FISHERMAN WITH 22 LB. FLATHEAD CATFISH.....



FISHERMEN AND FISHERWOMAN AT BIG MINERAL PICNIC AREA.....



ONE OF OUR GRAZING PERMITTEE'S HAY SHEDS AND CORRALS LOCATED ON THE REFUGE - IT ADDS TO THE AESTHETIC VALUE OF THE REFUGE.



THE REMAINS OF THE CEDAR OF LEBANON SIGN LOCATED NORTH OF HEADQUARTERS AFTER A VISIT BY VANDALS.

FISHING TO OPEN AT HAGERMAN

HAGERMAN REFUGE —
The fishing season at
Hagerman National Wildlife
Refuge will open April 1 and
continue through September
30.

Woman's Lib Comes To Hagerman Refuge

Mrs. Alice T. Groves, a native of Denison, has become the first woman staff member at the Hagerman National Wildlife Refuge near Pottsboro. Mrs. Groves is serving as a Refuge Clerk, greeting visitors and handling administrative chores.

She previously was employed at Perrin AFB for 11 years and at the NASA Manned Spacecraft Center in Houston.

Mrs. Groves resides at 115 North Imperial and has three children in school, Linda at Grayson County College, Mike at the senior high school, and Alice at Mayes Elementary.

Man Falls From Train, Sets Fire To Get Attention

POTTSBORO — A Virginia man fell out of a passing train at the Hagerman Game Preserve near here Saturday night and lit a grass fire to attract attention.

Paul Cleon Bromley, 36, of Woodbridge, Va., was taken to a Sherman hospital and later transferred to the Bonham VA hospital with cuts and bruises and a possible broken leg.

Constable C. E. Harris said Bromley was riding in an empty railroad freight car from Kansas to Fort Worth when he fell out. Bromley started the fire to attract attention after three hours passed and no one had passed by, according to Harris.

5 THE DENISON HERALD
Denison, Texas, Wednesday Evening, March 29, 1972

NEWS BRIEFS

SHERIFF REPORT

Paul Cleon Bromley, 36, of Woodbridge, Va., remained in the Bonham Veterans Hospital today for treatment of leg injuries received when he fell from a Katy boxcar, near the Hagerman Wildlife Refuge. He set fire to grass to attract help.

Three college youths saw the fire and reported it to Mike Andruss, manager of the refuge. Andruss found Bromley and summoned aid. Bromley was first treated at Wilson N. Jones Hospital and later transferred to Bonham.

About 300 yards of grass along the area burned, but the fire did not spread to the surrounding grassland. Sheriff Woody Blanton said that, although it was a prohibited act of wilfull burning, no charge would be filed because of the circumstances.

* * *

BOATING ★ FISHING ★ HUNTING



I Cover The LAKE FRONT



JERRY CRENSHAW

Mike Andruss, the head honcho at Hagerman Wildlife Refuge, reports that one of the largest crowds ever, was on hand for the opening of the fishing season at the rustic sanctuary last weekend, but the chances are he 'aint' seen nothin' yet."

A couple of patrons reported seeing some boy take a pair of monstrous black bass out of one of the isolated duck ponds during the inaugural, and as soon as the word gets around, it's going to look like Elm and Ackard at the refuge.

"I didn't see them so I can't verify it," noted Andruss, "but they swear they must have weighed at least 10 pounds."

He acknowledged that some fishermen are prone to exaggerate a might when they see an unusually large specimen, even if they didn't catch it, but then he didn't rule out the possibility that such piscatorial prizes haunt the refuge waters.

As you may, or may not know, the remote retreat is laden with underwater vegetation and stumps, and with the power pool down to about 610 feet it looks about as "bassy" as any spot on Lake Texoma.

"It's so shallow right now you have to be careful if you come in with anything other than a flat bottom boat," said Andruss, "but there were a few boats in here opening day."

Most of the 300 or so fishermen who made the scene at the outset, however, fished from the bank — including the guy who got the hernia packing off the big bass — either at one of the duck ponds or that portion of Big Mineral arm which flows into the refuge.

Ironically, that might be just the ticket at this particular time, because the blacks and crappie have matrimony on their minds and are setting up housekeeping around the shoreline in shallow water.

Just about everybody Andruss checked during the opening had caught some fish — mostly blacks, crappie and catfish — but it figures to get better with the weather.

In case you're interested in getting in on the action, all you need is a valid Texas fishing license and enough gas to get you about eight miles west of Pottsboro.

The management, however, suggests that you stop by the main office near the gate for some simple directions before you start driving off across the refuge because there are certain areas that are off limits — and you could wind up in Wichita Falls.

* * *
ODDS'N ENDS — The first National Bobwhite Quail Symposium will be held April 23 - 26 at Oklahoma State University in Stillwater.

Rear Admiral A. C. Wagner, Chief of Office Safety, will be the principal speaker at the annual meeting of the National Water Safety Congress to be held April 10 - 12 at Dallas.

Finally, the National Shooting Sports Foundation's Shooters' Calendar for 1972, which lists the major national and international shooting competitions for the year is available and may be obtained by sending 10 cents to the National Shooting Foundation, 1075 Post Road, Riverside, Conn. 06878.

Hagerman Refuge Employee Retires

Kenneth O. Barton, clerk at Hagerman National Wildlife Refuge west of Pottsboro, retired last week after over 27 years of government service.

Barton, or "Buz" to his friends, began work at Hagerman Refuge Jan. 26, 1949, with previous government service as purchasing agent at Perrin AFB and Majors AFB, Greenville. The early years of his clerk's job at Hagerman entailed both office and field work, and he was involved in the construction of many of the facilities at the refuge.

Barton worked under five refuge managers.

A certificate in recognition of service was presented in behalf of the regional director by Ernest Jemison, refuge manager of the Tishomingo Refuge, in ceremonies held at the Hagerman Refuge office. Staff from both Hagerman and Tishomingo were in attendance. Barton and wife, Mary Cathrine, will remain at their home west of Denison.

Preston O. Lawrence was presented his 20 - year service award and departmental emblem at ceremonies held at Hagerman Refuge headquarters. Lawrence is employed as automotive mechanic at the refuge and is a native of the Denison - Sherman area.

Wednesday, October 11, 1974

SHERMAN DEMOCRAT, SHERMAN, TEXAS

◆ ◆ ◆
Democrat
Sports
◆ ◆ ◆

Hagerman Retriever Trials Set

The North Texas Retriever Club trials will be held at Hagerman National Wildlife Refuge on Oct. 13-15. To date, 188 dogs have been entered, both Labrador and Golden retrievers, along with their 100 owners and trainers.

The club will be using commercial birds, including pheasant and ducks, and the dogs will be under control at all times.

Four events will be held, the Open, Amateur, Qualifying and Derby for entries of all ages. This is the first time a trial has been held in this area and on the refuge.

Participants will be from several surrounding states as well as the following judges: Pete Jones, California; Robert Kennon, Baton Rouge, La.; Hugh McInnis, Jackson, Mississippi; Orlie Boehler, Ardmore; Jim Harding, Amarillo; and Mrs. Allie Dittmar, Dallas.

The trials are under the supervision of the refuge staff, who will be on hand to assist as necessary and approved by the Texas Parks and Wildlife Department. The events will be open for public observation and anyone interested is invited.

High School youths from the local area will be working at the trials at various jobs.

The club was founded 10 years ago by Mr. and Mrs. Medlin of Grapevine, and is licensed with the American Kennel Club.

Events are scheduled to begin at 8:00 a. m. each morning and end late each afternoon.

THE DENISON HERALD
Denison, Texas, Wednesday Evening, October 11, 1972

188 LABS WILL SHOW IN FIELD TRIAL HERE

HAGERMAN REFUGE — The North Texas Retriever Club trials will be held at Hagerman National Wildlife Refuge on Friday, Saturday and Sunday.

So far 188 dogs have been entered, both Labrador and Golden retrievers, along with their 100 owners and trainers.

The club will be using commercial birds, including pheasant and ducks, and the dogs will be under control at all times.

Four events will be held. They are the open, amateur, qualifying and derby for entries of all ages. This is the first time a trial has been held in this area and on the refuge.

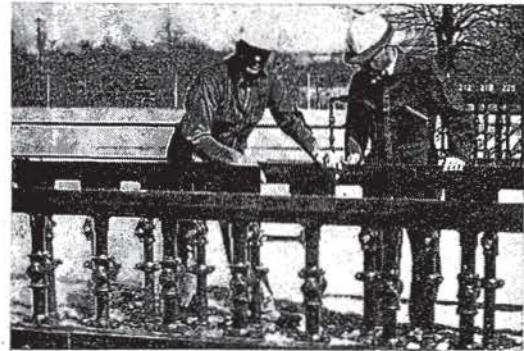
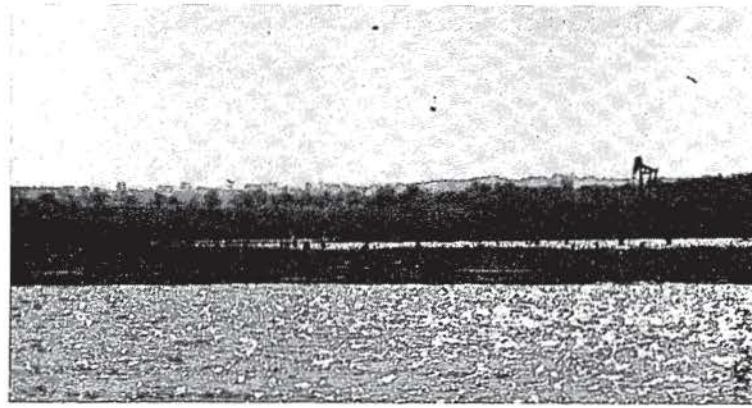
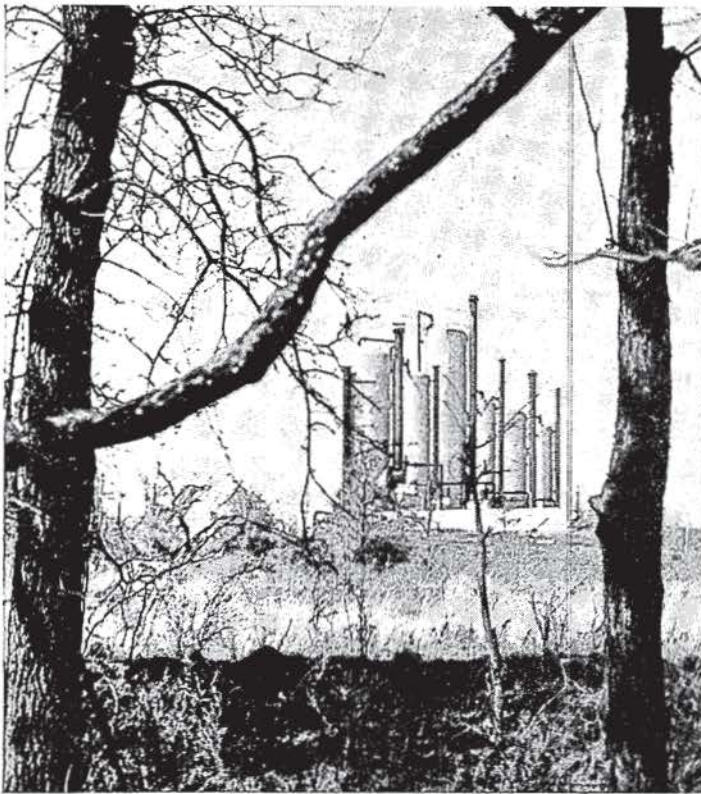
Participants will be from all surrounding states. Judges are Pete Jones of Los Angeles, Calif.; Mr.

Robert Kennon of Baton Rouge, La.; Hugh McInnis of Jackson, Miss.; Orlie Boehler of Ardmore; Jim Harding of Amarillo; and Mrs. Allie Dittmar of Dallas.

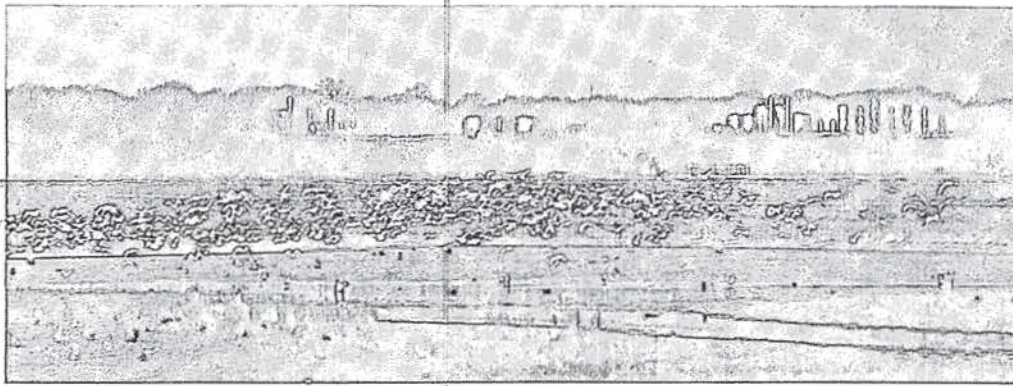
The trials are under the supervision of the refuge staff and have been approved by the Texas Parks and Wildlife Department. The events will be open to the public.

High school youths from the local area will be working at the trials at various jobs.

The club was founded 10 years ago by Mr. and Mrs. A. Medlin of Grapevine, and is licensed with the American Kennel Club. Events are scheduled to begin at 8 a. m. each morning and end late each afternoon.



Alth
enjt
Nat
ope
Der
the
Mik
Iron



Oil wells, nature mix well at wi

Many people believe that oil wells and nature do not mix. They obviously have never visited Hagerman National Wildlife Refuge in Texas which is the home of thousands of animals and the site of Shell's Big Mineral Field.

Hagerman was created in 1946 near the Texas-Oklahoma border north of Dallas to assure survival of that area's plant and animal species in their natural surroundings. It covers 11,429 acres and surrounds the Big Mineral Arm of Lake Texoma. More than 100,000 visitors enjoy hunting, fishing, camping, hiking, birdwatching, and picnicking there each year.

Oil was discovered on the refuge in 1951, and Shell is now the major producer in the area. The Big Mineral Field covers an area about one mile wide and two miles long which is almost entirely inside the refuge. More than 100 Shell wells are now produc-

ing over 150,000 barrels of oil a month there.

The refuge is along the central flyway, the route taken annually by migrating water fowl, and provides a rest stop for thousands of ducks and geese during the spring, fall, and winter months. Up to 20,000 geese and 70,000 ducks have been seen on the lake and in the marshes during peak season. More than 250 other species of birds, including the Southern Bald eagle (an endangered species), have also been seen and recorded there.

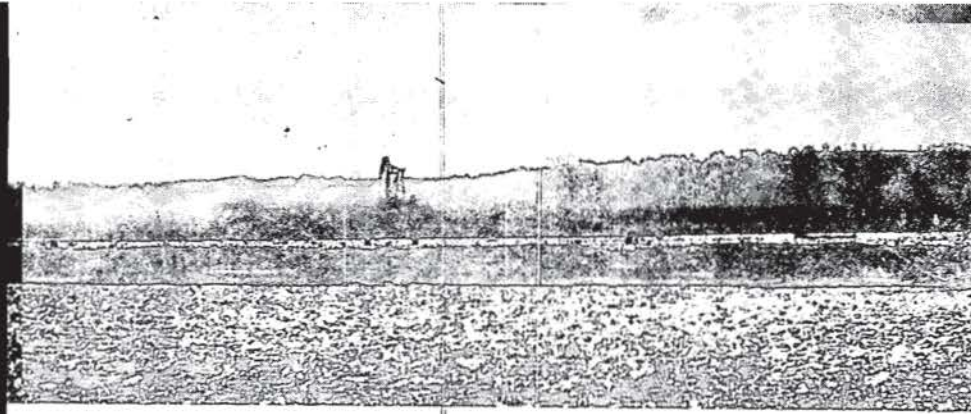
The terrain of the refuge varies from open fields to forests of pecan, oak, ash, and juniper. It provides homes for deer, squirrel, rabbit, armadillo, quail, opossum, raccoon, fox, bobcat, skunk, and other animals.

The hunting of squirrel, rabbit, and dove is allowed during the seasons,

and fishing is permitted from August to September. Anglers land catches of catfish, bass, and other sport fish.

Production Foreman Joe Irons and a crew of seven operate the main zone field. Three of the zones utilize waterflooding secondary recovery operations. The Shell crew enjoys the natural surroundings of the area and stays in touch with the three U.S. Department of the Interior Fish and Wildlife Services personnel who operate the refuge.

Mike Anduss, Refuge Manager, says that the oil field does not bother the animals at all. According to Anduss, the ducks and geese feed next to the wells which provide the animals with welcome relief from the thick forest undergrowth. He added that he has more problems with poachers than with the oil operations.



Although Big Mineral Field employees get to enjoy the beautiful surroundings of Hagerman National Wildlife Refuge, the day-to-day work of operating an oil field must get done. (left) Denvil Whiss and M. S. Jones switch a valve in the field's tank battery. (below) Refuge Manager Mike Anduss and Shell Production Foreman Joe Irons discuss operations at the Refuge entrance.



Well at wildlife refuge

and fishing is permitted from April to September. Anglers land fine catches of catfish, bass, and other sport fish.

Production Foreman Joe Irons and a crew of seven operate the multi-zone field. Three of the zones utilize waterflooding secondary recovery operations. The Shell crew enjoys the natural surroundings of the area and stays in touch with the three U.S. Department of the Interior Fish and Wildlife Services personnel who operate the refuge.

Mike Anduss, Refuge Manager, said that the oil field does not bother the animals at all. According to Anduss, the ducks and geese feed next to the wells which provide the animals with welcome relief from the thick forest undergrowth. He added that he has more problems with poachers than with the oil operations.

Much of the production in Big Mineral Field comes from 13 man-made peninsulas jutting into Lake Texoma. The peninsulas or "pads" were built specifically for the wells because the lake varies greatly in size from season to season, and sometimes the well sites are in the water and sometimes they are not. The peninsulas were made from 426,000 cubic yards of earth taken from the lake's bottom (since restrictions prevented bringing any foreign matter into the lake) and usually insure easy access to the wells regardless of the lake's depth.

June and July are the busiest seasons at the refuge when thousands of nature-loving humans invade the animals' sanctuary. They bring their cameras, campers, fishing gear, and picnic lunches and hardly notice the oil wells.

3-1750b
 Form NR-1B
 (Rev. Nov. 1957)

UNITED STATES
 DEPARTMENT OF THE INTERIOR
 FISH AND WILDLIFE SERVICE
 BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Hagerman NWR

For 12-month period ending ~~August~~ ^{December} 31, 1972

Reported by Bert M. Anduss

Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat			(3) Use-days	(4) Breeding Population	(5) Production
	Type	Acreage				
Total Refuge	Crops	640	Ducks	669,840		
	Upland	7,764	Geese	529,350		
	Marsh	316	Swans	30		
	Water	2,600	Coots	156,900		
	Total	11,320	Total	1,356,120		

	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) Area or Unit: A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.
- (2) Habitat: Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.
- (4) Breeding Population: An estimate of the total breeding population of each category of birds for each area or unit.
- (5) Production: Estimated total number of young raised to flight age.

NATIONAL WILDLIFE REFUGE SYSTEM
PUBLIC USE REPORT

ACT HRS BY MONTH

HAGERMAN
02-3519-00-HGR

ACTIVITY NAME	JUL-71	AUG-71	SEP-71	OCT-71	NOV-71	DEC-71	JAN-72	FEB-72	MAR-72	APR-72	MAY-72	JUN-72	12 MONTH TOTAL
INTERPRETATION													
AUTO ROUTES CONDUCTED.										180			180
RECREATION-WILDLIFE WILDLANDS													
HUNTING RESIDENT GAME SMALL GAME											40	40	80
FISHING													
WARMWATER										3000	4000	9000	16000
ON REF WLDLFE OBSERVATN CN REF OTHR W/W N-C REC						2000	200	1400	2000				5600
PHCTOGRAPHY						10	10	10	30				60
SIGHTSEEING						1900	2215	2500	2500				9115
OTHER AND GENERAL						45	25	60	100				230
RECREATION NON-WILOLIFE													
CAMPING						4800	2100	4800	9600				21300
PICNICKING						250	400	1000	1600				3250
BOATING AND WATERSKIING													
BOATING							100	300	200				600
OTHER NON W/W REC OTHER						7750	8250	8345	8413				32758
TOTAL INTERPRETATION									180				180
TOTAL HUNTING									40	40			80
TOTAL FISHING									3000	4000	9000		16000
TOTAL OTHER W/W RECREATION						3955	2450	3970	4630				15005
TOTAL WILDLIFE ORIENTED						3955	5630	8010	13670				31265
TOTAL NON-WILDLIFE ORIENTED						12800	10850	14445	19813				57908
TOTAL PUBLIC USE						16755	16480	22455	33483				89173
NO. VISITS TO REFUGE						7600	9800	12700	15300				45400

NATIONAL WILDLIFE REFUGE SYSTEM

WATERFOWL USE DAYS

HAGERMAN

02-3519-00-HGR

SPECIES NAME	JAN 1972- FEB 1972	MAR 1972- APR 1972	MAY 1972- JUN 1972	JUL 1972- DEC 1972	12 MONTH TOTAL
SPECIAL RECOG SPECIES					
AMERICAN COOT	0	12,000	600	0	12,600
WATERFOWL MAINTENANCE					
GEESE					
LESSER SNOW GOOSE	0	60	0	0	60
WHITE FRONT GOOSE	0	360	0	0	360
CANADA GOOSE	0	930	0	0	930
DUCKS					
MALLARD	0	300	0	0	300
GADWALL	0	360	0	0	360
GREEN WINGED TEAL	0	60	0	0	60
BLUE WINGED TEAL	0	1,200	90	0	1,290
SHOVELER	0	360	0	0	360
PINTAIL	0	300	0	0	300
WOOD DUCK	0	120	60	0	180
RED HEAD	0	600	0	0	600
TOTAL SWANS	0	0	0	0	0
TOTAL GEESE	0	1,350	0	0	1,350
TOTAL DUCKS	0	3,300	150	0	3,450
TOTAL WATERFOWL	0	4,650	150	0	4,800

NATIONAL WILDLIFE REFUGE SYSTEM
REPORT OF MISCELLANEOUS OUTPUTS
FY-72

HAGERMAN
02-3519-00-HGR

TYPE OF OUTPUTS	UNITS	FY TOTAL
MISCELLANEOUS WILDLIFE OUTPUTS		
WILDLIFE DIVERSITY	USE DAYS	238
SPECIMEN DONATED	DOLLARS	6

NATIONAL WILDLIFE REFUGE SYSTEM
WILDLIFE USE REPORT
ALL REPORTED SPECIES FOR FY 72
(EXCLUDING WATERFOWL)
FY-72

HAGERMAN
02-3519-00-HGR

SPECIES NAME	LINE CODE	*****-----USE DAYS-----*****				FY TOTAL	PRODUCED	FY-NO. HARVESTED	FY-NO. POPULATION	FY-PEAK DATE
		JUL-SEP 71	OCT-DEC 71	JAN-MAR 72	APR-JUN 72					
THREATENED SPECIES										
REGISTERED										
SOUTHERN BALD EAGLE	701 3521	0	0	60	0	60	0	0	2	03/02
SPECIAL RECOG SPECIES										
HORNED GREBE	720 0030	0	0	0	20	20	0	0	2	04/06
EARED GREBE	720 0040	0	0	180	30	210	0	0	2	03/14
PIED BILLED BREBE	720 0060	0	0	320	60	380	0	0	6	04/10
HERRING GULL	720 0510	0	0	9000	0	9000	0	0	200	01/14
RING BILLED GULL	720 0540	0	0	9000	0	9000	0	0	400	01/14
FRANKLINS GULL	720 0590	0	0	4500	0	4500	0	0	150	02/14
DOUBLE-CRESTED-CORMORANT	720 1200	0	0	900	90	990	0	0	27	03/31
WHITE PELICAN	720 1250	0	0	0	100	100	0	0	25	04/06
GREAT BLUE HERON	720 1940	0	0	900	900	1800	0	0	17	03/24
COMMON EGRET	720 1960	0	0	0	200	200	0	0	6	05/12
SNOWY EGRET	720 1970	0	0	0	200	200	0	0	6	05/12
LITTLE BLUE HERON	720 2000	0	0	320	900	1220	0	0	12	05/04
GREEN HERON	720 2010	0	0	0	1800	1800	0	0	6	06/15
BLACK CROWNED NIGHT HERON	720 2020	0	0	0	200	200	0	0	6	04/20
COMMON SNIPE	720 2290	0	0	0	1500	1500	0	0	30	04/06
COMMON SNIPE	720 2300	0	0	1350	0	1350	0	0	15	03/09
LONG BILLED DOWITCHER	720 2320	0	0	720	0	720	0	0	8	03/09
PECTORAL SANDPIPER	720 2390	0	0	0	900	900	0	0	5	04/06
BAIRDS SANDPIPER	720 2410	0	0	900	1200	2100	0	0	160	04/06
LEAST SANDPIPER	720 2420	0	0	900	0	900	0	0	10	03/09
GREATER YELLOWLEGS	720 2540	0	0	180	120	300	0	0	2	03/09
LESSER YELLOWLEGS	720 2550	0	0	180	120	300	0	0	4	04/06
LUNG BILLED CURLEW	720 2640	0	0	0	10	10	0	0	2	06/29
KILLDEER	720 2730	0	0	1800	1800	3600	20	0	0	02/15
SHARP SHINNED HAWK	720 3320	0	0	5	0	5	0	0	1	03/26
RED TAILED HAWK	720 3370	0	0	60	120	180	0	0	6	02/05
SPARROW HAWK	720 3600	0	0	60	0	60	0	0	6	02/05
GREAT HORNED OWL	720 3750	0	0	0	720	720	0	0	8	06/15
TOTAL		0	0	31335	10990	42325	20	0		

NATIONAL WILDLIFE REFUGE SYSTEM
PUBLIC USE REPORT

VISITS BY MONTH

HAGERMAN
02-3519-00-HGR

ACTIVITY NAME	JUL-71	AUG-71	SEP-71	OCT-71	NOV-71	DEC-71	JAN-72	FEB-72	MAR-72	APR-72	MAY-72	JUN-72	12 MONTH TOTAL
INTERPRETATION													
AUTO ROUTES CONDUCTED										60			60
RECREATION-WILDLIFE WILDLANDS													
HUNTING RESIDENT GAME													
SMALL GAME											20	10	30
FISHING													
WARMWATER										1500	2000	3000	6500
ON REF W/LIFE OBSERVATN							1000	100	700	1000			2800
ON REF OTHER W/W N-C REC													
PHOTOGRAPHY							10	10	10	10			40
SIGHTSEEING							3800	4430	5000	5000			18230
OTHER AND GENERAL							90	50	120	200			460
RECREATION NON-WILDLIFE													
CAMPING							200	150	200	400			950
PICNICKING							500	400	500	800			2200
BOATING AND WATERSKIING													
BOATING								50	150	200			400
OTHER NON W/W REC													
OTHER							2000	3050	4000	4680			13730
TOTAL INTERPRETATION										60			60
TOTAL HUNTING											20	10	30
TOTAL FISHING										1500	2000	3000	6500
TOTAL OTHER W/W RECREATION							4900	4590	5830	6210			21530
TOTAL WILDLIFE ORIENTED							4900	6150	7850	9220			28120
TOTAL NON-WILDLIFE ORIENTED							2700	3650	4850	6080			17280
TOTAL PUBLIC USE							7600	9800	12700	15300			45400
NO. VISITS TO REFUGE							7600	9800	12700	15300			45400

NATIONAL WILDLIFE REFUGE SYSTEM
AVERAGE MONTHLY WATERFOWL POPULATIONS

HAGERMAN

02-3519-00-HGR

SPECIES NAME	JUL 71	AUG 71	SEP 71	OCT 71	NOV 71	DEC 71	JAN 72	FEB 72	MAR 72	APR 72	MAY 72	JUN 72
SPECIAL RFCOG SPECIES												
AMERICAN COOT	0	0	0	0	0	0	0	0	300	100	10	10
WATERFOWL MAINTENANCE												
GEESE												
LESSER SNOW GOOSE	0	0	0	0	0	0	0	0	2	0	0	0
WHITE FRONT GOOSE	0	0	0	0	0	0	0	0	11	1	0	0
CANADA GOOSE	0	0	0	0	0	0	0	0	30	1	0	0
DUCKS												
MALLARD	0	0	0	0	0	0	0	0	10	0	0	0
GADWALL	0	0	0	0	0	0	0	0	10	2	0	0
GREEN WINGED TEAL	0	0	0	0	0	0	0	0	0	0	0	0
BLUE WINGED TEAL	0	0	0	0	0	0	0	0	30	10	3	0
SHOVELER	0	0	0	0	0	0	0	0	10	2	0	0
PINTAIL	0	0	0	0	0	0	0	0	10	0	0	0
WOOD DUCK	0	0	0	0	0	0	0	0	4	0	0	2
RED HEAD	0	0	0	0	0	0	0	0	20	0	0	0
TOTAL SWANS	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL GEESE	0	0	0	0	0	0	0	0	43	2	0	0
TOTAL DUCKS	0	0	0	0	0	0	0	0	94	16	3	2
TOTAL WATERFOWL	0	0	0	0	0	0	0	0	137	18	3	2

3-1758
Form NR-8
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge Hagerman National Wildlife Refuge County Grayson State Texas

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water-fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Corn							37	Field Corn	37
Maize							22	Standing Feed	22
Soybeans					20	0	20	Lost to drought	20
Wheat	243	4860			232	5640	232	Browse	529
Alfalfa		<i>80/ac</i>			10	<i>20 bu</i>	10	Browse	10
Mixed Grain					4		4	Standing in Field	4
								Fallow Ag. Land	15

No. of Permittees: Agricultural Operations 5 Haying Operations _____ Grazing Operations 26

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
				1. Cattle	462	4055	6032.50	7133
				2. Other				
				1. Total Refuge Acreage Under Cultivation				633
Hay - Wild				2. Acreage Cultivated as Service Operation				241

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

3-1570
NR-88
(4/54)

REFUGE GRAIN REPORT

Refuge Hagerman National Wildlife Refuge

Months of Jan 1 through Dec 31, 19572

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Mixed Grain	0	45	45		20	10		15		15	
Seed Wheat	0	1207	1207		1207			0			
Seed Corn	0	4	4		4			0			
Seed Maize	0	8	8		8			0			
Bermuda Seed	14	0	14		7			7	7		
Pasture Mix	27	0	27		14			13	13		
Alfalfa	5	0	5		5			0			
Soybeans	0	4	4		4			0			

(8) Indicate shipping or collection points _____

(9) Grain is stored at Headquarter's Grainary

(10) Remarks 600 bushels seed wheat received from Tishomingo NWR.

*See instructions on back.

REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (2) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (3) A total of columns 2 and 3.
- (4) Column 4 less column 5.
- (5) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (6) Nearest railroad station for shipping and receiving.
- (7) Where stored on refuge: "Headquarters granary," etc.
- (8) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

3-1757
 Form NR-7
 (April 1946)

PLANTINGS
 (Marsh - Aquatic - Upland)

Refuge Hagerman National Wildlife Refuge Year 1972

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Redbud Trees	Hdqtrs	4 trees		Replant native trees		Unknown		

TOTAL ACREAGE PLANTED:

Marsh and aquatic.....
 Hedgerows, cover patches.....
 Food strips, food patches.....
 Forest plantings.....

TIMBER REMOVAL

Refuge Hagerman National Wildlife Refuge Year 1957

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
<u>NONE</u>								

Total acreage cut over..... Total income.....

No. of units removed B. F. Method of slash disposal.....
 Cords.....
 Ties.....

DISEASE

Refuge Hagerman National Wildlife Refuge Year 1972

Botulism **NONE**

Lead Poisoning or other Disease

Period of outbreak _____

Period of heaviest losses _____

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Number Hospitalized	No. Recovered	% Recovered
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.)

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease _____

Species affected _____

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks _____