REVIEW AND APPROVALS

TISHOMINGO NATIONAL WILDLIFE REFUGE
TISHOMINGO, OKLAHOMA

ANNUAL NARRATIVE REPORT
Calendar Year 1987

William H Hutchinson 2-18-88
Refuge Manager Date

James J. Hubert 2-24-88
Refuge Supervisor Date

4/20/88
Regional Office Approval Date

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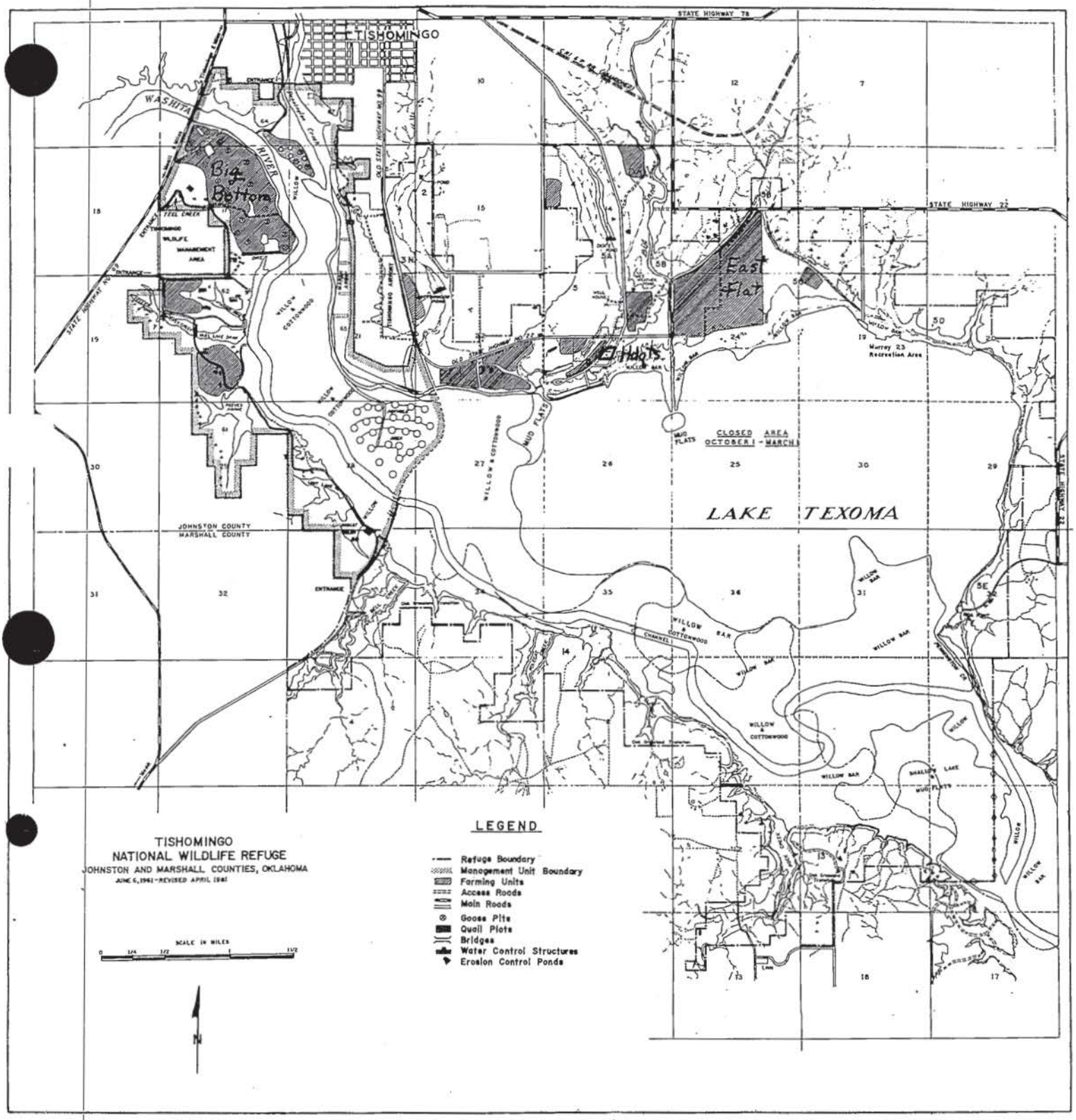

TISHOMINGO
NATIONAL WILDLIFE REFUGE
JOHNSTON AND MARSHALL COUNTIES, OKLAHOMA
JUNE 6, 1961 - REVISED APRIL 1981

INTRODUCTION

The Tishomingo National Wildlife Refuge, located three miles southeast of Tishomingo in Johnston County, Oklahoma, is comprised of 16,464.18 acres of land and water on the upper Washita Arm of Lake Texoma. The refuge was established in 1945 by agreement with the U.S. Army Corps of Engineers to provide habitat for migrating and wintering waterfowl and wildlife oriented recreation for the public.

Refuge acreage is composed of approximately 6,100 acres of wetlands, 4,800 acres of seasonally flooded flats, 850 acres of cropland, 2,300 acres of grassland and 2,400 acres of forestland. The wetlands acreage includes the 4,500 acre Cumberland Pool, Washita River and numerous small impoundments. The seasonally flooded flats lie within the flood plain of the Washita River. Characteristic overstory vegetation includes cottonwood, willow and box elder. Grassland and forest habitats are intermingled and extended along the periphery of the refuge. Topography along this periphery is gentle to steeply sloping drainages into the Washita River bottom. Vegetation characteristics of these areas includes little bluestem, Indian grass, broom sedge, threeawn, hickory, post oak, black jack, winged elm and wild plum.

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L. INFORMATION PACKET - (inside back cover)

A. HIGHLIGHTS

Assistant Manager transfers to Project Leader at Cabeza Prieta NWR.

New Assistant Manager arrives from Waubay NWR.

Croplands are flooded.

Dike is breached.

Headquarters deer hunt.

Crews room remodeled.

New Morton building.

AMOCO Oil drills dry well.

Waterfowl use increases.

B. CLIMATIC CONDITIONS

Nineteen eighty-seven was a wetter than average year with 52.57 inches of rainfall recorded. The average is 38.95 inches.

There was a considerable amount of flooding during the year because of the 52.57 inches of rainfall but the worst was in May of 1987 when heavy rain fell over a three day period from the 27th to the 29th. While the refuge received about five inches during this period, areas above us on the Washita River received as much as ten inches in one day. By May 30, the water level of the Cumberland Pool was 636 msl (normal 619 msl). This caused a lot of problems and stress for the refuge as will be discussed more in depth in the pages to follow. By the end of July, the lake water level was about normal pool level again.

Temperatures for the year ranged from a low 16 degrees in January to 101 degrees recorded the last day of July. No snowfall was recorded in 1987. Overall it was a wet and mild year.

Table 1. Climatic Conditions at Tishomingo NWR 1987.

	Temperatures			Precipitation		
Month	Min.	Max.		Inches	Days	77 Year Average
January	16	68		2.93	4	1.74
February	18	76		3.45	10	2.42
March	22	78		4.29	5	3.03
April	27	99		.39	3	4.98
May	52	93		7.84	7	5.44
June	53	97		7.85	9	3.96
July	54	101		3.16	6	2.73
August	62	99		3.16	5	2.38
September	46	93		5.20	8	4.25
October	32	85		3.44	3	3.30
November	19	87		4.33	7	2.44
December	19	72		6.53	6	2.28
Averages	35	87	Totals	52.57	73	38.95

Days with freezing temperatures. 74
Days with temperatures of 100°
or more. 3
Last frost of spring (32°) . . . . . .April 4, 27°
First frost of fall. . . . . .Oct. 32, 32°
Coldest day. . . . . .Jan. 2, 16°
Hottest day. . . . . .July 31, 101°

D. PLANNING

1. Master Plan

A master plan for Tishomingo Refuge has been postponed until a later date.

2. Management Plan

The following management plans were prepared and submitted to the Regional Office:

1. Waterfowl Disease Contingency Plan
2. Animal Control Plan
3. Croplands Management Plan

E. ADMINISTRATION

1. Personnel

Personnel 2-88 EJ

1. William H. Hutchinson, Refuge Manager, GS-12, PFT
2. David A. Stanbrough, Asst. Ref. Manager, GS-11, PFT
   (Transferred to Cabeza Prieta NWR 8/30/87)
3. Ralph L. Bryant, Asst. Ref. Manager, GS-11, PFT
   (Transferred from Waubay NWR, 12/20/87)
4. Clyde D. Woolly, Mechanic, WG-10, PFT
5. Gary W. Deaton, Maintenance, WG-8, PFT
6. Eugene W. Kite, Maintenance, WG-8, PFT
7. Royce E. Willard, Maintenance, WG-5, PFT
8. T. Charlene Ezell, Office Asst., GS-5, PFT

Table 2. Personnel levels at Tishomingo NWR 1983-87.

FISCAL YEAR	PERMANENT FULL TIME	PERMANENT PART TIME	TEMPORARY	TOTAL
87	7	0	0	7
86	8	0	0	8
85	7	0	1.5	8.5
84	7	0	0	7
83	6	1	0	7

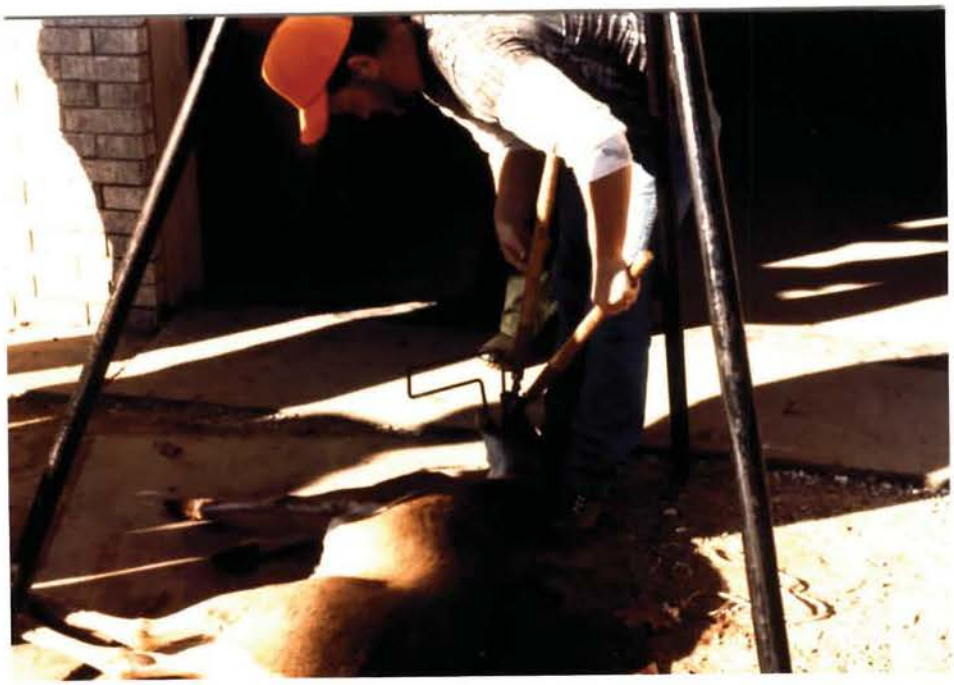
Manager Hutchinson presents Clyde Woolly
with his 20 year certificate. 2-88 EJ

2. Youth Programs

Due to reduced budgets, there was no YCC program at Tishomingo NWR this year.

3. Other Manpower Programs

This year, Oklahoma Department of Wildlife Conservation (ODWC) provided funds for two part-time employees (Brett Gantt and Kenny Johnson) to run the hunter check station and work on other projects on the Tishomingo NWR Management Unit.



Brett Gantt ran the hunter check station
and helped with the deer hunt. 11-87 BH

Kenny Johnson put in many dedicated hours as a volunteer working on the refuge before he was put on the State payroll.

ODWC Biologist John Herd also provided supplies and his assistance in running hunts on the refuge. (See Section H.8.)

ODWC Rangers Scates and Henthorne also provided their assistance during the deer hunt and other law enforcement matters.

4. Volunteer Program

In addition to Kenny Johnson, Matt Smith, also a Murray State College student, volunteered to work on the refuge. After a few days, Matt decided more time should be spent on studying and quit the volunteer program.

5. Funding

Table 3. Five Year Funding for Tishomingo NWR 1983-87.

FISCAL YEAR	SUB-ACTIVITY 1260	ARMM	RPRP	8610	3200	BUDGET
87	270.2		50.0	11.6	25.0	359.8
86	262.0	55.0	30.0	5.0	25.0	377.0
85	282.0	115.0		4.0		401.0
84	301.0	60.0		4.0		365.0
83	234.0			3.0		237.0

The station budget also includes funds for the Zone Biologist.

6. Safety

There were no lost time accidents during the year and only one minor shin bruise was reported.

Monthly staff safety meetings and Safety Committee meetings were held throughout the year.

A check of all station fire extinguishers was made by a company from Ardmore, OK.

A new water line was installed around the office. This replaced old lead pipes with PVC, which were being used to supply office drinking water.

New electric heaters were installed in the shop, wash room and carpenter's shop.

A fire hydrant was added near the new storage building.

The obsolete lookout tower in Big Bottom was removed.

8. Other

January 5-9, Manager Hutchinson attended an Administrative Workshop in Albuquerque, NM.

January 30, Manager Hutchinson traveled to Oklahoma City, OK. for a "get acquainted" meeting with ODWC Director Steve Lewis and staff.

February 10, Classification Officer Dave Yazzie held a desk audit of the Office Assistant Position - we are still waiting to hear the outcome.

February 26, Manager Hutchinson and Asst. Manager Stanbrough met with Congressman Wes Watkins' Aide Ray Sharp in Ada, OK.

March 6, Manager Hutchinson attended a town meeting with Congressman Wes Watkins to discuss refuge rules and regulations.

March 19 was the Zone Meeting in Oklahoma City, OK.

Refuge Officers attended the refresher LE training at Marana, AZ in April.

May 21, a station inspection and evaluation was held by Jim Young, Jim Hubert, Roger Monson and Pat Langley.

May 22, Regional Director Spear was given a tour of the Refuge by Manager Hutchinson and Asst. Manager Stanbrough.

Gary Deaton was detailed to East Texas to cruise timber for Realty during June.

July 23, I&R Consultants Jerry and Sue Fuhriman and Asst. Zone Supervisor Gary Burke were at the refuge to develop a site plan for camping at Murray 23. We are still waiting for this one also.

August 8-10, Manager Hutchinson attended the Regional Programatic Meeting in Albuquerque, NM.

August 19, Manager Hutchinson assisted in the public hunting drawing held by ODWC in Oklahoma City.

September 1, Asst. Manager Dave Stanbrough left Tishomingo NWR for his new job as Project Leader at Cabeza Prieta NWR.

September 14, Zone Supervisor Hubert visited the refuge to discuss the refuge farming program and repair of the Big Bottom Dike.

October 3, Manager Hutchinson and Maintenance Worker Deaton attended local Ducks Unlimited Banquet.

October 21, Manager Hutchinson met with Corps of Engineers Rangers and ODWC Ranger Harold Scates to discuss alleged trespass on refuge to hunt private property.

November 13, after one year and seven months the new diesel Chevrolet Blazer arrived at the Refuge.

December 23, Manager Hutchinson participated in the Christmas Bird Count.

December 28, Ralph L. Bryant arrived at Tishomingo NWR from Waubay NWR to fill the Asst. Manager position.

Manager Hutchinson and Asst. Manager Stanbrough attended the weekly Tishomingo Lions Club meetings.

F. HABITAT MANAGEMENT

1. General

The Tishomingo National Wildlife Refuge is located on the upper Washita River Arm of Lake Texoma. The refuge contains 10,850 acres of wetlands and 5,600 acres of upland. It serves the needs of thousands of waterfowl, other migratory and resident birds, fish and mammals. Management of the area is aimed primarily at providing resting and feeding areas for migrating and wintering waterfowl and to provide wildlife oriented recreation for the public. The various management activities are discussed in their appropriate sections.

2. Wetlands

Refuge wetlands consist of the 4,500 acre Cumberland Pool of Lake Texoma, 4,800 acres of seasonally flooded basins and flats and 1,100 acres of shallow and deep fresh marshes or impoundments. Extreme water level fluctuations occur periodically as the Washita River is influenced by heavy rains. The seasonally flooded flats lie within the floodplain of the river.

Flooding occurred three times during the year. In March, the water levels rose enough to flood out some of the newly planted corn in the East Flat and cause some damage to the dike at the Big Bottom. The dike was repaired and the water that remained inside the dike was pumped out in April with the Crisfully pump.

Big Sandy bridge and road,
somewhere in the distance. 3-87 DS

Several days were spent pumping
out Big Bottom. 3-87 DS

Heavy rains during the last three days of May caused the worst flood of the year to occur the first week of June. As much as 10 inches of rain per day was received in the Upper Washita River watershed. Water levels crested at 636 msl. This level is 17 feet higher than the normal conservation pool operation level of 619 msl. The Big Bottom dike was washed out in five locations. One of the breaks in the dike was about 70 yards long. Crop loss from this flood included 30 acres of milo in the Big Bottom, 60 acres of corn and 120 acres of milo, millet, buckwheat and duckwheat in the East Flat.

The Washita River carries heavy silt loads during these flood situations. The 60 acre Pennington Bottom field received silt/sand deposits of up to eight feet deep during the June flood. Only about 20 acres of winter wheat could be planted in September. The Big Bottom also received some silt deposits.

Then came the rains... Big Bottom at flood stage. 12-87 BH

Just one of five breaks in Big Bottom dike. 12-87 BH

Aerial view of the north
break in Big Bottom dike. 12-87 BH

The third flood occurred in late December. As the water levels rose, it backed into the standing milo and millet in the East Flat. This made the grain readily available to thousands of ducks and geese. The Big Bottom, which is a goose hunting area and had been planted to winter wheat, was also covered with water. The water receded within ten days and we could see that most of the winter wheat survived.

Ten impoundments on the refuge have dikes with water control structures which can be used to manipulate water levels. However, heavy silt deposits have created high water levels on both sides of several impoundment dikes and they cannot be drained. Some maintenance work was done on the Cottonwood Pond spillway in May but it washed out again in June.

When flood waters moved into the milo,
so did the waterfowl. 12-87 BH

When the water receded,
just stalks were left. 1-88 BH

3. Forests

Refuge forests contain approximately 2,400 acres of non-commercial timber. Bottomland and silt delta areas support a complex of willow, cottonwood and box elders. Uplands have more diversity with species of southern red oak, post oak, blackjack oak, pecan, hickory, mulberry, bois d'arc, American elm and other species present. The upland wooded areas are intersperced with grasslands and brushey areas.

4. Croplands

There are 831 acres of cropland on the refuge. This year, two cooperative farmers planned to crop 673 acres (Table 4) and the refuge farmed 158 acres by force account. The primary crops grown are winter wheat, corn and milo. The refuge did plant some mixed millets and buckwheat on some low fields that are prone to flooding. A portion of the winter wheat is plowed under in the spring and planted to row crops. The harvested portion of the row crop is planted to winter wheat in the fall for green browse.

Table 4. 1987 Planned Crop use by Cooperators.

Cooperator	Crop	Acres
R. Trimble	Wheat	69
	Corn	145
	Milo	50
	Soybeans	46
	Total	310
J. McCarthick	Wheat	218
	Milo	60
	Corn	85
	Total	363

Flooding and persistant high water levels significantly altered the cropping plan. About 60 acres of corn and 150 acres of milo, millet and buckwheat was lost in the June flood. Silt deposits in the 60 acre Pennington Bottom field prevented the planting of any summer crops. Only about 20 acres of the field could be planted to winter wheat in September. As the water receded in July and the driftwood was removed, some food crops of millet, milo and buckwheat were replanted.

Buckwheat in blossom,
the bees loved it. 6-87 BH

Buckwheat in seed, the ducks
and geese loved it. 9-87 BH

The cooperators are continually changing crop plans throughout the year due to market prices, equipment problems and weather conditions. This year, one of the cooperators signed up for the corn, milo and wheat acreage reduction program offered by ASCS. This program resulted in about 100 acres left fallow during the summer months.

Plans are being made to farm more acres by force account in 1988.

A mixture of six millets was planted for the ducks. 9-87 BH

The table is set,
come on geese. 11-87 BH

5. Grasslands

There are 2,300 acres of grassland on the refuge. Woody vegetation encroachment is steadily changing the grasslands into brushlands. Prescribed burning is a management tool that has been used to slow this process.

9. Fire Management

No wildfires occurred during the year.

About 18.5 miles of firebreaks were maintained this year. Some of these firebreaks had been left idle for several years and required extensive dozer work to clean them out.

Prescribed burning was not attempted in 1987.

10. Pest Control

The use of pesticides was reduced this year. The farming cooperators treated 145 acres of corn with Bicep (Atrazine plus Dual) at a rate of two pints per acre and 51 acres of wheat with 2,4-D at a rate of 1 pint per acre. The refuge used a small amount of Malathion in the wheat grain bin for weevils and some Roundup around the observation tower, gates and buildings for the control of poison ivy and grasses.

G. WILDLIFE

1. Wildlife Diversity

Tishomingo Refuge hosts a variety of migratory and resident wildlife. Over 250 bird species have been recorded in the area. The most notable are the fall and winter populations of thousands of geese and ducks and 50 to 90 bald eagles. Herons, egrets, pelicans, gulls and other marsh and waterbirds along with hawks, turkey vultures, cormorants, bobwhite and turkey are commonly seen. Mammals included white-tailed deer, coyotes, bobcat, beaver, raccoon, opposum, armadillos and others. The water areas support excellent fish populations.

2. Endangered and/or Threstened Species

The Midwinter Eagle Survey conducted in January, 1987 recorded 26 bald eagles using the refuge (13 adult and 13 immature). This number is consistent with the 25 seen in January, 1986 (Table 5).

The fall arrival of eagles was in early November which is a little later than usual. However, this numbers increased to over 35 by the end of December. A total of 43 bald eagles was counted on the January 8, 1988 midwinter survey.

Bald Eagles continue to congregate around Cumberland Pool. 1-87 BH

Twenty five white-faced ibis were seen in April.

Table 5. Peak Bald Eagle Wintering Populations 1975-88.

Year, Winter of	Peak Populations Numbers
75-76	12
76-77	23
77-78	60
78-79	40
79-80	24
80-81	13
81-82	30
82-83	75
83-84	90
84-85	40
85-86	25
86-87	26
87-88	43

A mixture of Canadas, Snows and White-fronts.
11-87 BH

3. Waterfowl

The goose population at the beginning of the year was at 16,500 birds. Most of the geese that utilize the refuge are Canadas but an increasing number of white-fronts and snows have been observed

in recent years. About 10 Ross' geese were seen in February and most geese were gone by the end of March. There were five large Canadas that stayed on the area during the entire months of April and May.

The fall flights of geese began to arrive in September. Warm temperatures through October delayed the migration. The population slowly built to 10,000 geese in November. A good increase was observed in mid-December. By the end of the year the poplulation was at 17,000 Canadas, 8,000 white-fronts and 3,000 snows (Figure 1).

A total of 1,591,240 use days for geese was recorded during 1987. This number is slightly higher than the 1.3 million recorded last year but still below the 2.0 million average over the past twelve years and far below the objective level of 4.86 million use days (Figure 2).

Duck populations during the year followed a similar trend as the goose population. Ten thousand ducks were present in January and steadily decreased in numbers through April until most were gone. A small breeding population of wood ducks produced an estimated 300 ducklings to flight stage.

The fall migration began in August with the arrival of a few dozen bluewinged teal. Larger duck species began arriving in October and their numbers slowly increased to 10,000 by the end of November. A sharp increase in the numbers of mallards in mid-December led to a peak of 36,000 ducks at the end of the year. Total use days recorded was 1,599,980 for 1987 (Figures 1 and 2).

Geese over Hogbarn field. 1-87 DS

Figure 1. Tishomingo NWR Peak Waterfowl Populations 1976-1987.

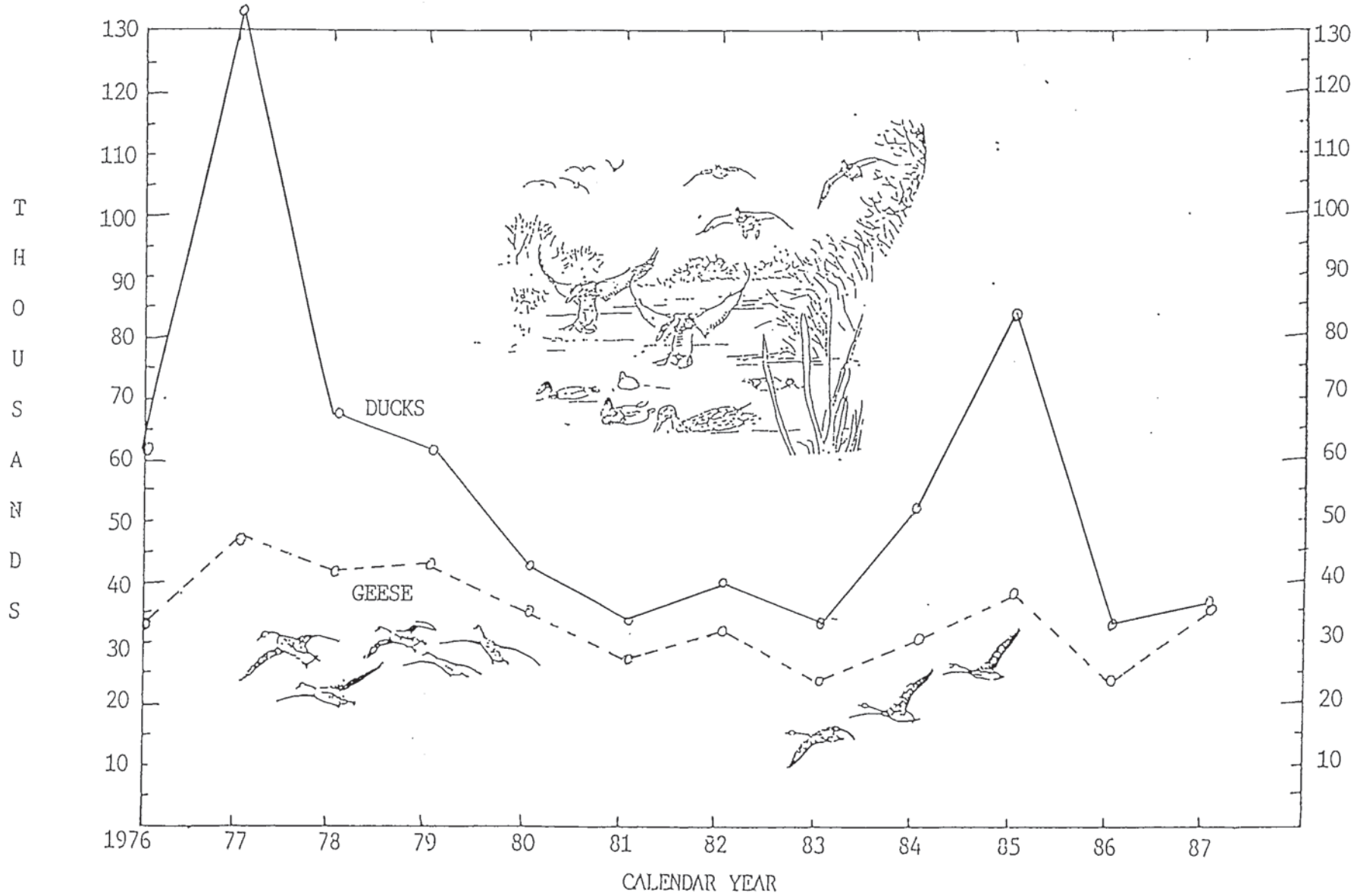
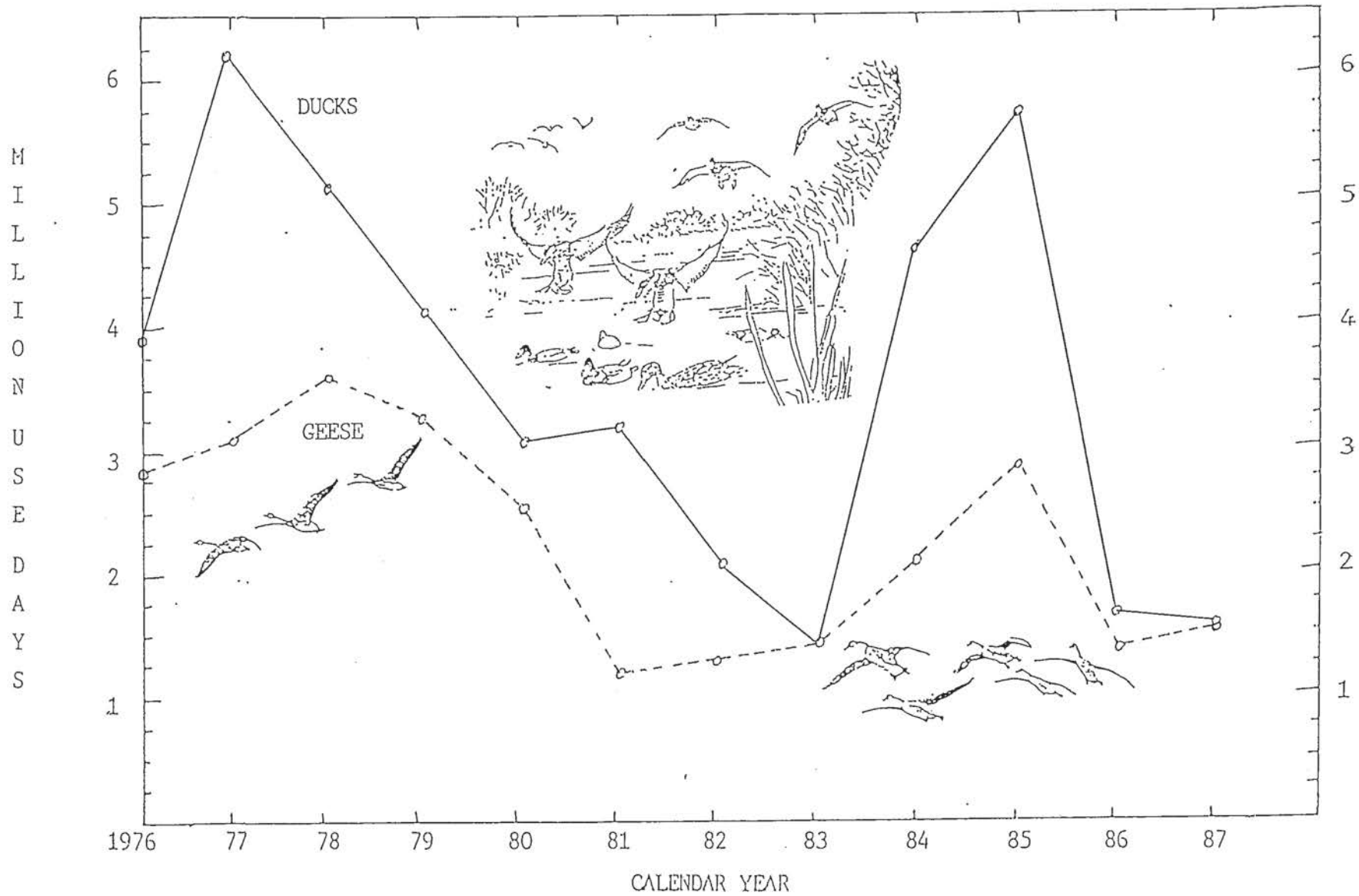


Figure 2. Tishomingo NWR Annual Waterfowl Use Days 1976-1987.



4. Marsh and Water Birds

An estimated 402,200 use days were recorded for 15 species of marsh and water birds. Species such as white pelican, cormorant, great egrets, green herons and great blue herons were seen regularly.

Unusual sightings of two white ibis' on April 29 and two sandhill cranes on December 1 were also recorded.

5. Shorebirds, Gulls, Terns and Allied Species

A total of 835,450 use days was recorded for 15 species in this category. Ring-billed and Franklin's gulls, peaking at 11,000 were the most commonly observed species. Killdeer, sandpipers and yellow legs were also seen regularly. High water conditions kept any potential nesting sites for least terns submerged.

6. Raptors

A total of 134,980 use days was recorded for raptor species. Turkey vultures, red-tailed hawks, bald eagles, kestrels and great horned owls are the most common species. A few osprey and golden eagles are seen occasionally.

8. Game Mammals

White-tailed deer are abundant on the refuge. Population trend counts were conducted with spotlights on nine nights from August 27 through September 16. The census routes cover cropland areas on and adjacent to the northern portion of the refuge and on the Wildlife Management Unit. The south portion of the refuge and the delta areas are not surveyed.

An average of 138 deer were counted each night. The number was lower than the 200 per night counted last year but still higher than any year prior to 1986. The high density of deer near the headquarters area prompted the decision to have an antlerless reduction season that is discussed in the public use section.

Efforts were made to distinguish between bucks, does and fawns. Overall results indicated 20% bucks, 55% does and 25% fawns. The doe/buck ratio at the Management Unit was 1.85/1. Archery hunting is permitted annually in that area. Twenty-seven deer were taken this year. The ratio in the headquarters was 3.29 does/1 buck. Seventy-one does were harvested during the special muzzle-loader season.

This 10 acre field located near headquarters was stripped by deer. 11-87 BH

The deer left some milo for the waterfowl. 11-87 BH

10. Other Resident Wildlife

The Rio Grande turkey population held stable at 125 birds. Three toms were taken during the spring season.

It was a good production year for bobwhite quail. Numerous coveys of young birds were seen through the summer. However, the birds were not seen as often during the fall season.

A high population of raccoon is present on the refuge. Beaver are also plentiful. A small number of bobcat, gray fox and coyotes are seen occasionally.

11. Fishery Resources

Excellent fish populations occur in the refuge waters. Catfish, striped bass, crappie, white bass, carp, buffalo and large mouth bass are the main species present.

Approximately 13,600 five inch channel catfish were stocked in seven of the water units at the Management Unit in October. This was the first of a three consecutive years stocking in these impoundments.

15. Animal Control

Beaver often cause problems with the water control structures. No beaver control was implemented this year, but it may be necessary next year.

16. Marking and Banding

Tishomingo NWR has an annual post season banding quota of 300 male and 300 female mallards. Accomplishing this quota is difficult as the birds are quite uncooperative. Rocket net sites and swim-in traps are used to capture the birds.

We were able to band 170 drakes and 57 hen mallards and 15 green-wing teal this year.

Post season mallards were hard to come by.
(L to R) Bill Hutchinson, Royce Willard, Gene Kite.

2-87 DS

H. PUBLIC USE

1. General

Visits for the year totaled 121,500 which is down somewhat from last year's total of 127,210. Wildlife observation is still the number one activity with fishing being second.

The road to Murray 23, complements of "Jack Frost". 12-87 BH

4. Interpretive Foot Trails

Although our nature trail is not "Interpretive" in the strictest sense, it does provide many hours of outdoor enjoyment.

7. Other Interpretive Programs

Refuge Manager Bill Hutchinson and Maintenance Worker Gary Deaton gave a total of 16 slide talks to 438 people during the year. The audience consisted of Scouts, preschool, grade school, high school, college, Oklahoma Ornithology Society and Tishomingo Lions Club.

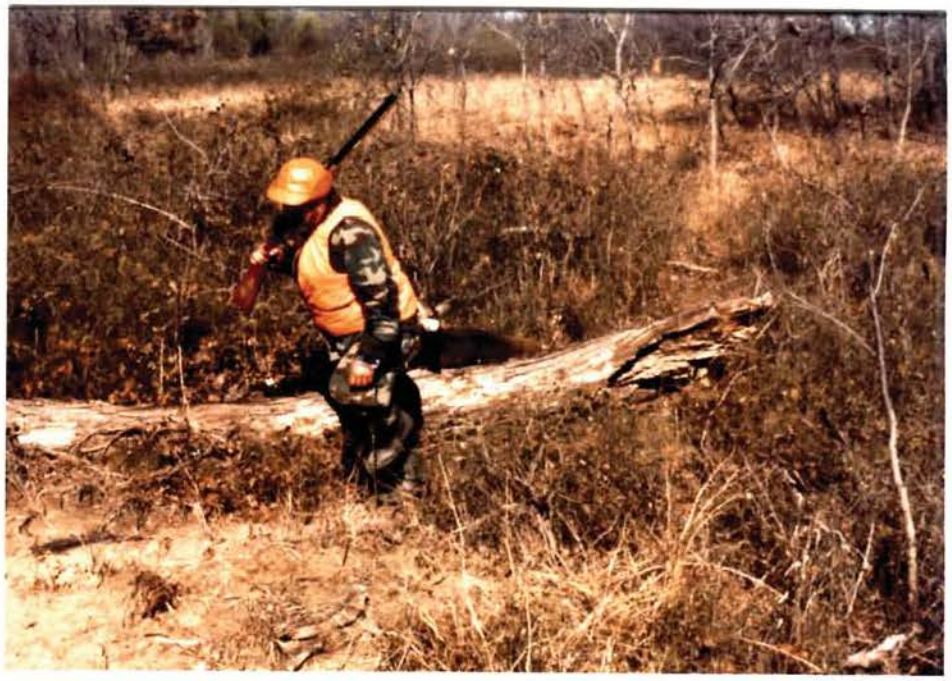
8. Hunting

Spring turkey hunters and early fall dove hunters opened the hunting season on the Tishomingo Wildlife Management Unit. Both groups, which were very small in number, met with very little success. It is estimated that only 3 turkeys were harvested and only 50-100 doves.

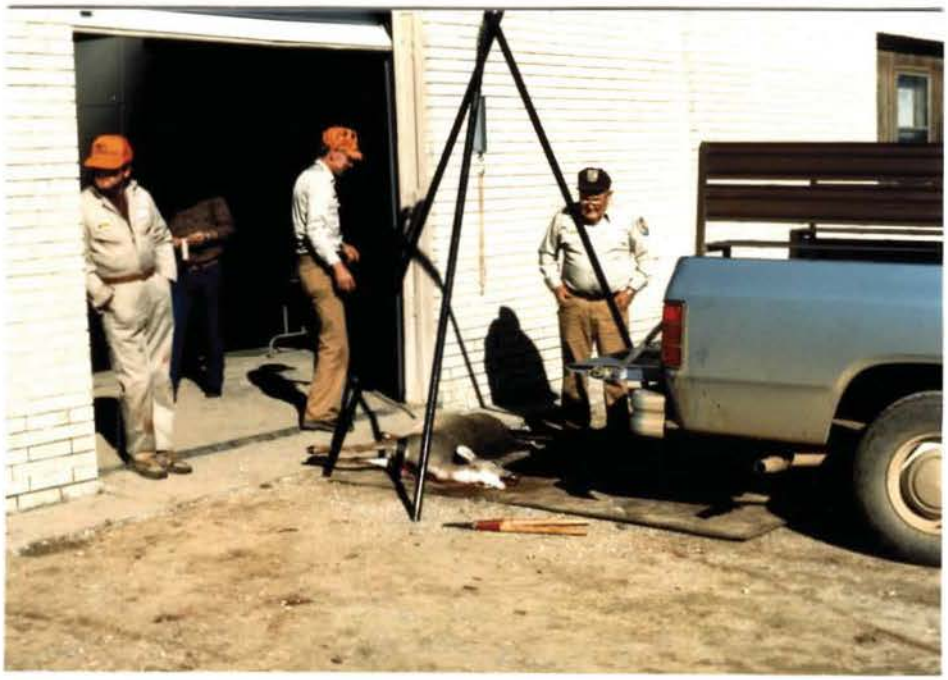
The archery deer season ran from October 1 - November 15 and December 1-31, 1987. The Unit is open to deer hunting by bow only and this year a total visitation of 2,187 archers harvested 27 deer.

This year we allowed the deer hunters to hunt the "Goose Zone" during the month of December with no reported problems. We are still using the self-registration boxes set up at various hunter access points around the management unit.

From 1980 to 1987 the area around the refuge headquarters (1100 acres) has been closed to deer hunting and the population was allowed to increase to approximately 500 deer. In November of 1987, an antlerless muzzleloader hunt was held to reduce the population. A total of 160 permits was issued by the Oklahoma Department of Wildlife Conservation thru their bonus deer hunt drawing. We had 126 hunters show up (4 - 1 day hunts) and they harvested 71 deer for a 56% success rate.



One of the successful hunters during the special refuge hunt. 11-87 BH



Another successful deer hunter. Clyde Woolly and Gene Kite working the hunt. 11-87-BH

There were fewer goose hunters this year (473) but they took more geese than last year (166 Canadas, 6 white fronts and 6 snow/blues). The season ran from November 7, 1987 to January 17, 1988.

Goose hunting in the snow can be very productive. 1-88-BH

We are still a far cry from the success rate of the late 1970's, but we are improving over the 30 taken last year. We are also holding ten to fifteen thousand less geese. We had very few duck hunters partake in some excellent duck hunting available in the management unit. Rabbit, squirrel and quail hunters accounted for the remaining activity hours of hunting on the management unit. There were sufficient numbers of rabbit and squirrel and a few quail, but hunting pressure was very light.

9. Fishing

Fishing is still the number one consumptive use on the refuge. Crappie lure many fishermen to the refuge in spring. Then with the opening of refuge waters to boating on March 1, the trotliners go after catfish. This year at the end of the boating season (October 1) we required all lines, including the mainline to be removed. We did allow the fishermen to mark their weights with jugs. As in the past, we had to remove at least 75 lines, with 50% having hooks on them after the October 1 deadline.

Bank fishing is allowed in certain areas of the refuge thru the winter and 40+ pound catfish are not uncommon.

Catfish like this 38 pounder is fairly common during the winter months. 1-6-87 DS

11. Wildlife Observation

The majority of visits to the refuge is to observe wildlife. Whether its deer, ducks, geese or armadillo, people enjoy watching wildlife. To assist the public in the endeavor, the refuge purchased and installed a 20X telescope on our observation tower. The telescope has received excellent use and we have received many compliments.

The 20X telescope was added to our observation tower this year. 9-87 BH

13. Camping

The headquarters campground was used during the spring and fall, but the hot summer months kept most people out of the campground.

Nida Point and the Management Unit still appeal to the primitive camper/fisherman.

14. Picnicking

The refuge pavillion was put under a reservation system last year and this seemed to alleviate the problems we were having. The refuge issued 39 permits for use of the pavillion during 1987.

17. Law Enforcement

Refuge Officer Dave Stanbrough spent time at Little River NWR patrolling until the new manager arrived.

Normal routine law enforcement activities were conducted throughout the year on the refuge. Night patrol and weekend duty was continued this year to control the late night "cruisers" and beer parties. During the break between Asst. Managers the night time activity increased somewhat. The following is a list of 1987 law enforcement cases:

Citations Issued	Violation	Fine
	(Refuge Officers)	
1	Operating boat during closed season	$100.
2	Possession of firearms	$200./ea.
1	Failure to comply with special regs.	$100.
2	Entering a closed area	pending
	(State Officers)	
1	Failure to have archery deer license	$72.
2	Failure to have fishing license on person	$40.
1	Hunting with invalid hunting license	$82.
2	Failure to wear flourescent orange during muzzleloader deer season	$82.
1	Possession of firearm in refuge	$132.

Refuge officers re-qualified with service revolvers in October, 1987.

I. EQUIPMENT AND FACILITIES

1. New Construction

A new 54'X96' Morton building was constructed at the headquarters area in June. The $24,590 building is being used to store vehicles, equipment and implements. The building was placed between two rows of concrete silos which will provide good protection from wind storms.

New storage building by Morton
is a welcome addition 6-87 BH

A 600 foot extension of the main water line was installed in May. This allowed for a fire hydrant to be installed near the new Morton building.

A new 1000 bushel grain bin was purchased to store corn or other grains for bait for the banding operation. The bin is on a stand with an 8 1/2 foot clearance so vehicles can drive under and be filled by gravity flow. The bin cost $3,875.00.

New corn bin will make baiting
the banding site easier. 9-87 BH

2. Rehabilitation

Last year the offices in the headquarters building were remodeled. At the end of this year, the remodeling of the crews room was started. The walls were insulated and paneled and the ceilings were lowered and insulated. A new vanity was built in the restroom.

The waterlines in the office building were replaced with PVC lines. Many of the old lines were placed within the concrete floors and stem walls making this a difficult job.

Six entrance gates into the Management Unit were replaced with new swinging gates that were fabricated with two inch square tubing.

The garage doors at Quarters 1, 2 and 3 were replaced with new ones this year.

New doors were added to the residence garages. 12-87 BH

3. Major Maintenance

A leak in the main water line at an inconspicuous location went undetected until after a very large water bill was received. It was repaired soon thereafter.

The eroding Big Bottom dike was resloped, smoothed and seeded to grass to help stabilize the side slopes. The grass seeding did not have time to establish before the late May flood severely damaged the dike. Several major breaches in the dike were caused by this flood. The drainage channel from the control structure at the Big Bottom dike had completely silted in during the March flood. It was cleaned out with the excavator in April. It remained open after the May and December floods.

The deteriorating lookout tower at the Big Bottom was removed this year. In the past it was used to observe goose hunters on the controlled hunting area.

The Johnston County Road Department delivered 440 cubic yards of granite gravel to the refuge in March. This is part of the requirement of the cooperative agreement with the County for their use of the two refuge road graders. Additional gravel was hauled by the refuge staff from the gravel pit on the State Game Management Unit west of Tishomingo.

A log jam at the Sandy Creek Bridge was removed.

Severe windstorms caused several trees and limbs to fall across refuge roads in many locations. They were removed by refuge equipment and staff.

Routine road grading, fence repair, water gap repair and road repair were accomplished during the year. Trash barrels in the public use areas were painted brown instead of silver.

4. Equipment Utilization and Replacement

Rollover protection (ROPS) was installed on the roadgrader that is scheduled to be transferred to Little River Refuge.

The trailer mounted pump engine for the Gator trailer pump and the D-8 dozer suffered water damage during the May flood. While attempting to pull the pump engine out of the water, the swift current flipped the engine off the top of the dike causing additional damage to the engine.

The Rampage pickup was loaned to Little River Refuge in May.

A 4X4 Chevy Blazer with diesel engine was received in November. It was requisitioned one year and seven months earlier. It replaces a 1978 Dodge Ramcharger.

After 19 months of waiting the new Chevy Blazer finally arrived. 12-87 BH

The propane heaters in the maintenance and carpenter shops were replaced with overhead electric units. A significant increase in the winter electric bills was noticed.

Front end pallet forks were acquired for the Case 580.

A 1987 Chevy "3/4" ton Pickup was purchased to replace a 1978 3/4 ton pickup.

This "3/4" ton pickup arrived in only 15 months.
1-88 BH

5. Communications Systems

Two radio remote units were acquired and placed in Quarters 1 and the Manager's office.

A mobile radio was installed in the Chevy Blazer.

J. OTHER ITEMS

2. Other Economic Uses

AMOCO Oil Company of Oklahoma City, Oklahoma exercised their oil lease on the Management Unit and drilled a 6500 foot well during the months of August and September. It turned out to be a dry well and everything was moved out by October 1. The refuge ended up doing some of the rehab work (planting winter wheat) at the drill site, due to substandard work by a subcontractor.

Shell Oil Company managed to clean up most of the oil before it entered the refuge. A broken pipeline across the Washita River was the culpit. 1-2-87 BH

3. Items of Interest

The following is list of organizations attended by staff members:

Bill Hutchinson

Tishomingo Lions Club
Community Services Luncheon
Ducks Unlimited
Oklahoma Wildlife Society

Dave Stanbrough

Tishomingo Lions Club
VFW
NRA
American Legion
Conducts local benefit auctions

T. Charlene Ezell

Active in Calvary Baptist Church
Community Services - Murray State College

Clyde Woolly

S.E. Oklahoma Beekeepers Assoc.
NRA
Works with Tishomingo High School Chapter of FFA

Royce Willard

Member of Tishomingo Volunteer Fire Dept.

Gary Deaton

Member of Tishomingo Volunteer Fire Dept.
Taxidermy Instructor - Murray State College
Ducks Unlimited

Gene Kite

VFW

Ralph Bryant

Getting acquainted with the community.

4. Credits

Sections A, D, E, H, J, and K were written by Bill Hutchinson.

Sections F, G, and I were written by Ralph Bryant.

Sections B, C and typing by T. Charlene Ezell.

Photo credits - EJ (Ernest Jemison)
BH (Bill Hutchinson)
DS (Dave Stanbrough)

K. FEEDBACK

It has been two years since the ADC Division of the USFWS was put under the Department of Agriculture. At that time, we were told that they would get their own radio frequency in two years. That time period has come and gone and still the endless radio "chatter" continues. I know this is not just a problem to this refuge, because at Bosque we were "covered up" during our snow goose hunt when we were trying to notify hunters that a whooping crane was in the area or during a fire when you needed to communicate between crews. The list goes on and on. It's an everyday occurance to hear them start at 5:00 am and continue late in the day. At least 50% of the "traffic" is talking about the weather, hunting, fishing or just B.S.ing. The majority of them go thru a repeator tower, so even a walkie-talking will boom in from several miles away.

Surely there must be an available frequency they can switch to. Maybe if the RO's or Washington Office had to listen to their "chatter", perhaps something would be done about it.

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Surely there must be an available frequency they can switch to. Maybe if the RO's or Washington Office had to listen to their "chatter", perhaps something would be done about it.

ACCIDENTALS

Snowy Plover
Short-billed Dowitcher
Black-billed Cuckoo
Burrowing Owl
Acadian Flycatcher
Northern Waterthrush
MacGillivray's Warbler
Canada Warbler
Lazuli Bunting
Green-tailed Towhee

FIELD NOTES

Date: _____ Species: _____

Time: _____

Observers: _____

_____

Weather: _____

_____

Remarks: _____

_____

_____

_____

_____

_____

_____

_____

For additional information contact: Refuge Manager

Tishomingo NWR
Route 1, Box 151
Tishomingo, OK 73460
405-371-2402

RF-21650-2

May 1985

Tishomingo National Wildlife Refuge

BIRDS of Tishomingo National Wildlife Refuge

OKLAHOMA

Beginning in August, the southward migration of shorebirds, herons, cormorants, and Franklin's gulls is well under way. Waterfowl begin to appear in September, reaching their peak sometime between November and February. Recently, the goose populations have varied from 24 to 45 thousand individuals, with Canada geese being most numerous. Except during severe winters, moderate populations of most waterfowl remain. Early in February the northward flight resumes. It is during this time the winter grainfields on the refuge prove most attractive.

Songbirds are well represented, with the scissor-tailed flycatcher, blue grosbeak, painted bunting, and lark sparrow being most conspicuous during the nesting season.

This list contains 252 species that have been recorded on the refuge. Species are listed in accordance with the sixth edition (1984) A.O.U. Checklist.

Symbols used in this list are defined as follows:

S	—Spring	March-May
S	—Summer	June-August
F	—Fall	September-November
W	—Winter	December-February
A	—Abundant	a common species which is very numerous
C	—Common	certain to be seen in suitable habitat at the suitable time of day
O	—Occasional	seen only a few times during a season
R	—Rare	seen at intervals of 2 to 5 years
Accidental		has been seen only once or twice

	S	S	F	W
GREBES				
_____ Pied-billed Grebe	C	O	C	O
_____ Horned Grebe		O	O	O
_____ Eared Grebe	O			
_____ Western Grebe			R	R
PELICANS				
_____ American White Pelican	C	O	C	O
CORMORANTS				
_____ Double-crested Cormorant	C	O	C	O
_____ Olivaceous Cormorant		R		
DARTERS				
_____ Anhinga		R	R	
BITTERNS & HERONS				
_____ • American Bittern	O	O	O	
_____ • Least Bittern	O	O	R	
_____ • Great Blue Heron	C	C	C	C
_____ Great Egret	O	C	C	
_____ Snowy Egret	O	O	O	
_____ • Little Blue Heron	C	C	C	R
_____ Tricolored Heron		R		
_____ Cattle Egret	O	O	O	
_____ • Green-backed Heron	C	C	C	R
_____ Black-crowned Night-Heron	R	O	C	
_____ Yellow-crowned Night-Heron		R	O	
IBISES & SPOONBILLS				
_____ White-faced Ibis	R	R		
_____ Roseate Spoonbill			R	
STORKS				
_____ Wood Stork		R	O	
SWANS, GEESE & DUCKS				
_____ Tundra Swan				R
_____ Greater White-fronted Goose	O		C	C
_____ Snow Goose (white morph)	O		C	O
_____ Snow Goose (blue morph)	O		C	O
_____ Ross' Goose				R
_____ Brant			R	
_____ Barnacle Goose				R
_____ • Canada Goose	C	R	A	A
_____ • Wood Duck	C	O	C	A
_____ Green-winged Teal	C		C	C
_____ American Black Duck	R		O	O
_____ Mallard	A	O	A	A
_____ Northern Pintail	C		C	C
_____ Blue-winged Teal	C	O	C	R
_____ Cinnamon Teal	R		R	R
_____ Northern Shoveler	C	O	C	C
_____ Gadwall	O		C	C
_____ American Wigeon	C		C	C
_____ Canvasback	O		O	O
_____ Redhead	O		O	O
_____ Ring-necked Duck	O		O	C
_____ Greater Scaup	O		O	O
_____ Lesser Scaup	O	R	C	C
_____ Common Goldeneye	R		R	O
_____ Bufflehead	O		O	O
_____ Hooded Merganser	O	R	O	O
_____ Common Merganser	O		C	C
_____ Red-breasted Merganser			O	R
_____ Ruddy Duck	O		O	O

	S	S	F	W
AMERICAN VULTURES				
____ Black Vulture	O		O	O
____ • Turkey Vulture	C	A	A	C
KITES, EAGLES & HAWKS				
____ Osprey	R	R	O	R
____ Mississippi Kite		O	O	
____ Bald Eagle	O		O	C
____ Northern Harrier	C	R	O	C
____ Sharp-shinned Hawk	O	O	O	R
____ • Cooper's Hawk	O	O	O	O
____ Northern Goshawk		R		
____ • Red-shouldered Hawk		O	O	
____ • Broad-winged Hawk	O	R	O	
____ Swainson's Hawk	O	O	O	O
____ • Red-tailed Hawk (Common)	C	C	A	C
____ Red-tailed Hawk (Harlan's)				R
____ Ferruginous Hawk	O		O	O
____ Rough-legged Hawk	O		O	O
____ Golden Eagle	R		R	R
FALCONS				
____ • American Kestrel	C	O	C	C
____ Merlin			R	R
____ Peregrine Falcon			R	R
TURKEYS & QUAIL				
____ • Wild Turkey	O	O	O	O
____ • Northern Bobwhite	A	A	A	A
RAILS, GALLINULES & COOTS				
____ Black Rail		R	R	
____ • King Rail	O	R	R	R
____ Virginia Rail	R		C	
____ Sora	O	R	O	
____ Common Moorhen		R	R	
____ • American Coot	C	O	A	A
CRANES				
____ Sandhill Crane	O		O	
PLOVERS				
____ Lesser Golden-Plover	O	R	R	
____ Semipalmated Plover	O	R	O	
____ Piping Plover		O	R	
____ • Killdeer	C	C	A	A
STILTS & AVOCETS				
____ Black-necked Stilt	R			
____ American Avocet	O	O	O	
SANDPIPERS & PHALAROPES				
____ Greater Yellowlegs	C	O	O	O
____ Lesser Yellowlegs	C	O	C	O
____ Solitary Sandpiper	C	O	O	
____ Willet	O		R	
____ Spotted Sandpiper	C	O	C	
____ Upland Sandpiper	C	O	O	
____ Long-billed Curlew	R	R	R	
____ Hudsonian Godwit	R	R		
____ Marbled Godwit	R	R		
____ Sanderling	R	R	R	
____ Semipalmated Sandpiper	C	C	O	
____ Western Sandpiper	C	O	C	
____ Least Sandpiper	A	R	C	O
____ White-rumped Sandpiper	C		O	
____ Baird's Sandpiper	A	O	O	R
____ Pectoral Sandpiper	A	C	O	

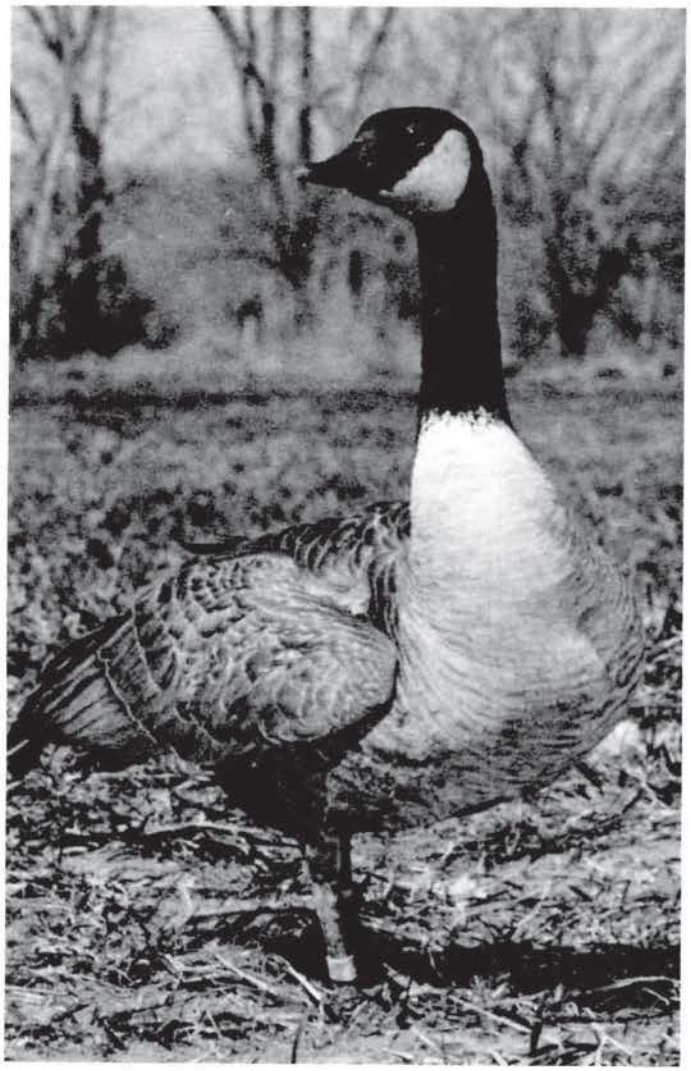
	S	S	F	W
____ Dunlin			O	
____ Stilt Sandpiper	O	O	O	
____ Long-billed Dowitcher	O		C	R
____ Common Snipe	C	O	C	C
____ American Woodcock			O	O
____ Wilson's Phalarope	O		O	
GULLS & TERNS				
____ Franklin's Gull	C	O	A	A
____ Bonaparte's Gull	O		O	R
____ Ring-billed Gull	C	O	A	A
____ Herring Gull	C		C	O
____ Caspian Tern	R		R	
____ Common Tern	O	O	C	
____ Forster's Tern	C	O	C	
____ Least Tern	R	O	O	
____ Black Tern	A	O	C	
PIGEONS & DOVES				
____ • Rock Dove	C	C	C	C
____ • Mourning Dove	A	A	A	C
CUCKOOS & ROADRUNNERS				
____ • Yellow-billed Cuckoo	C	C	O	
____ • Greater Roadrunner	O	O	O	O
BARN-OWLS				
____ Common Barn-Owl			O	O
TYPICAL OWLS				
____ • Eastern Screech-Owl	O	O	O	O
____ • Great Horned Owl	C	C	C	C
____ • Barred Owl	C	C	C	C
____ Short-eared Owl			O	O
GOATSUCKERS				
____ • Common Nighthawk	O	C	C	R
____ • Chuck-will's-widow	O	O		
____ • Whip-poor-will	O	O	O	
SWIFTS				
____ • Chimney Swift	C	C	C	
HUMMINGBIRDS				
____ • Ruby-throated Hummingbird	O	C	O	
KINGFISHERS				
____ • Belted Kingfisher	O	C	C	O
WOODPECKERS				
____ Red-headed Woodpecker	C	C	O	O
____ • Red-bellied Woodpecker	C	C	C	C
____ Yellow-bellied Sapsucker	O		O	O
____ • Downy Woodpecker	C	C	C	C
____ • Hairy Woodpecker	C	C	C	C
____ • Northern Flicker (Yellow-shafted)	C	O	C	C
____ Northern Flicker (Red-shafted)	O		O	O
____ Pileated Woodpecker	O	U	O	O
TYRANT FLYCATCHERS				
____ • Eastern Wood-Pewee	O	O	O	
____ Yellow-bellied Flycatcher	R	R		
____ Alder Flycatcher	O			
____ Willow Flycatcher	O			
____ Least Flycatcher	C			
____ • Eastern Phoebe	C	C	O	O
____ • Great Crested Flycatcher	C	C	O	
____ • Western Kingbird	A	O	O	
____ • Eastern Kingbird	A	A	O	
____ • Scissor-tailed Flycatcher	C	C	A	

	S	S	F	W
LARKS				
____ •Horned Lark	C	O	C	C
SWALLOWS				
____ •Purple Martin	C	C	O	
____ Tree Swallow	O	O	O	
____ •Northern Rough-winged Swallow	C	C	O	
____ Bank Swallow	C	O	O	
____ Cliff Swallow	A	O	A	
____ •Barn Swallow	A	A	A	
JAYS & CROWS				
____ •Blue Jay	C	C	C	C
____ •American Crow	A	C	A	A
TITMICE				
____ •Carolina Chickadee	C	C	C	C
____ •Tufted Titmouse	C	C	C	C
NUTHATCHES				
____ •White-breasted Nuthatch	O	O	O	O
CREEPERS				
____ Brown Creeper	R		O	O
WRENS				
____ •Carolina Wren	C	C	C	C
____ •Bewick's Wren	C	C	O	O
____ House Wren	O	O	O	O
____ Winter Wren			O	O
____ Marsh Wren	R		O	
KINGLETS & GNATCATCHERS				
____ Golden-crowned Kinglet	R		O	O
____ Ruby-crowned Kinglet	C		C	O
____ •Blue-gray Gnatcatcher	C	C	O	
THRUSHES				
____ •Eastern Bluebird	O	O	C	C
____ Gray-cheeked Thrush	O			
____ Swainson's Thrush	A		O	
____ Hermit Thrush	O	R		O
____ Wood Thrush		O	O	
____ •American Robin	C	O	A	A
MOCKINGBIRDS & THRASHERS				
____ •Gray Catbird	C	R	O	
____ •Northern Mockingbird	C	A	C	C
____ •Brown Thrasher	C	O	C	C
PIPITS				
____ Water Pipit	C		C	C
____ Sprague's Pipit	R		R	
WAXWINGS				
____ Cedar Waxwing	C		O	C
SHRIKES				
____ •Loggerhead Shrike	C	C	C	C
STARLINGS				
____ •European Starling	C	C	C	C
VIREOS				
____ •White-eyed Vireo	C	C	O	
____ •Bell's Vireo	C	C	O	
____ Solitary Vireo	O		O	
____ Warbling Vireo	C	R	O	
____ •Red-eyed Vireo	C	C	O	
WOOD-WARBLERS				
____ Tennessee Warbler	C		R	
____ Orange-crowned Warbler	C		C	O
____ Nashville Warbler	C	R	O	
____ Yellow Warbler	C	O	O	

	S	S	F	W
____ Yellow-rumped Warbler (Myrtle)	O			C
____ Yellow-throated Warbler	O	O	O	
____ Blackpoll Warbler	O			
____ Black-and-white Warbler	O	O	O	
____ American Redstart	O			
____ •Prothonotary Warbler	C	C		
____ Louisiana Waterthrush	O	O		
____ Mourning Warbler	O			
____ •Common Yellowthroat	C	O	C	O
____ Wilson's Warbler	O		O	
____ •Yellow-breasted Chat	O	A		
TANAGERS				
____ •Summer Tanager	C	C		
CARDINALS & GROSBEAKS				
____ •Northern Cardinal	A	A	A	A
____ Rose-breasted Grosbeak	O			
____ •Blue Grosbeak	C	O	O	
____ •Indigo Bunting	A	A	C	
____ •Painted Bunting	A	A	C	
____ •Dickcissel	C	A	O	
SPARROWS				
____ Rufous-sided Towhee	A		O	C
____ Chipping Sparrow	O		O	O
____ Clay-colored Sparrow	R		R	
____ •Field Sparrow	O	C	C	O
____ Vesper Sparrow	C		C	O
____ •Lark Sparrow	C	A	C	
____ Savannah Sparrow	A		A	A
____ Grasshopper Sparrow	O	R	O	
____ Le Conte's Sparrow	R		O	
____ Fox Sparrow	O		O	C
____ Song Sparrow	C		A	C
____ Lincoln's Sparrow	C		C	O
____ Swamp Sparrow	C		C	O
____ White-throated Sparrow	C		C	A
____ White-crowned Sparrow	C		C	C
____ Harris' Sparrow	A		A	A
____ Dark-eyed Junco (Slate-colored)	C		C	C
____ Dark-eyed Junco (Oregon)			O	O
BLACKBIRDS				
____ Bobolink	R		R	
____ •Red-winged Blackbird	A	A	A	A
____ •Eastern Meadowlark	A	A	A	A
____ Western Meadowlark	O	R	O	O
____ Yellow-headed Blackbird	O	R	O	O
____ Rusty Blackbird			C	C
____ Brewer's Blackbird	O	R	O	O
____ Great-tailed Grackle	C	O	C	C
____ •Common Grackle	C	O	C	C
____ •Brown-headed Cowbird	C	C	C	C
____ •Orchard Oriole	C	C	C	
____ •Northern Oriole (Baltimore)	O	O	O	
____ Northern Oriole (Bullock's)	R	R	R	
FINCHES				
____ Purple Finch	O		A	C
____ Pine Siskin			O	R
____ •American Goldfinch	A	A	A	A
OLD WORLD SPARROWS				
____ •House Sparrow	A	A	A	A

TISHOMINGO NATIONAL WILDLIFE REFUGE

OKLAHOMA



DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

RF-21650-1

May 1987

Tishomingo National Wildlife Refuge lies at the upper Washita Arm of Lake Texoma and is administered for the benefit of migratory waterfowl in the Central Flyway. Most of the refuge's 16,464 acres, including the 4500-acre Cumberland Pool of the lake, were acquired in 1946.

Before Lake Texoma's creation, this area was the site of a large corporate farm whose concrete structures still stand, some below the lake's surface.

Tishomingo gets its name from a famous Chickasaw Indian Chief and is shared with a nearby century-old town where the old tribal capital of the Choctaw-Chickasaw Nations is still used as the county courthouse.

WILDLANDS

Tishomingo Refuge offers a variety of aquatic habitats for wildlife. The murky water of Cumberland Pool permits essentially no growth of higher aquatic plants, but abundant nutrients feed innumerable microscopic plants and animals. Seasonally flooded flats and willow shallows lying at the Pool's edge also provide excellent wildlife habitat.

Upland areas vary from grassland to wild plum thickets to oak-hickory-elm woodlands. Crops, primarily wheat and corn, are grown on approximately 900 acres to provide forage and high-caloric grain for waterfowl.

WILDLIFE

Populations of up to 100,000 ducks and 45,000 geese feed, loaf, and roost at Tishomingo Refuge in fall and winter. Geese are predominantly Canadas, but include white-fronts and snow geese. Mallards, teal and other dabblers are the most common ducks. Waterfowl numbers generally peak between mid-December and late January. During that time, 50 to 90 endangered bald eagles may also be present.

During fall and spring migration, pelicans, grebes, ducks, herons, sandpipers, gulls and numerous upland birds can be found at Tishomingo. Summer birds include many egrets, herons, and woodland birds, and occassionally, white-faced ibis, wood storks and nesting wood ducks. Over 250 bird species have been recorded for this area.

White-tailed deer, cottontail, and fox squirrel are plentiful, and signs of numerous raccoon and beaver are abundant near sources of water. Beaver dams on Spring Creek (west of headquarters) can be seen from the road. Skunk, opposum, and armadillo are other common mammals.

The host of microscopic organisms in Cumberland Pool waters support an amazingly large fish population, including several species popular with sportsmen — crappie, sand bass, channel catfish, flat-head catfish and blue (locally called "white") catfish.

VISITING THE REFUGE

Sightseeing, photography and hiking are encouraged throughout most of the refuge from March 1 through September 30 and in limited areas during the rest of the year. From October 1 until March 1, the Wildlife Management Unit is closed to all public recreation except limited hunting. Visitors with special interests in using closed areas may request permission from the manager.

The Craven Nature Trail (north of headquarters) winds through a mile of woodlands and out to a small pier on Dick's Pond. From the pier, you may see a beaver lodge, herons, ducks, or other wildlife.

In winter, large flocks of ducks and geese may be seen from an observation tower located east of Big Sandy Creek. Jemison's Lookout, near Nida Point, provides a beautiful view of the Cumberland Pool year-round.

School classes and similar groups are encouraged to visit the refuge. Advance arrangements can usually be made to have refuge personnel discuss the refuge's programs, and the refuge itself can be used as an outdoor classroom. Contact the office for assistance and further information.

BASIC RULES AND REGULATIONS

While Tishomingo Refuge welcomes you to engage in a variety of recreational activities, certain rules and regulations must exist to protect the wildlife and preserve the beauty of the area. More detailed information and other regulations may be obtained from refuge headquarters. *ALL PUBLIC ACCESS OR ACTIVITY NOT EXPRESSLY PERMITTED IS PROHIBITED.*

Fishing is permitted. See fishing regulations for details.

Boating is permitted. See fishing regulations for details.

Picnic facilities are available.

Consult refuge staff, or regulations leaflet for camping information.

Contact the refuge staff for information on special refuge regulations and hunting programs.

Fires may be built from dead and fallen wood, but only in the fireplaces provided. Leave no fire unattended and be sure that fires are completely extinguished before you leave. During times of fire hazard, fires may be prohibited.

Swimming is not permitted.

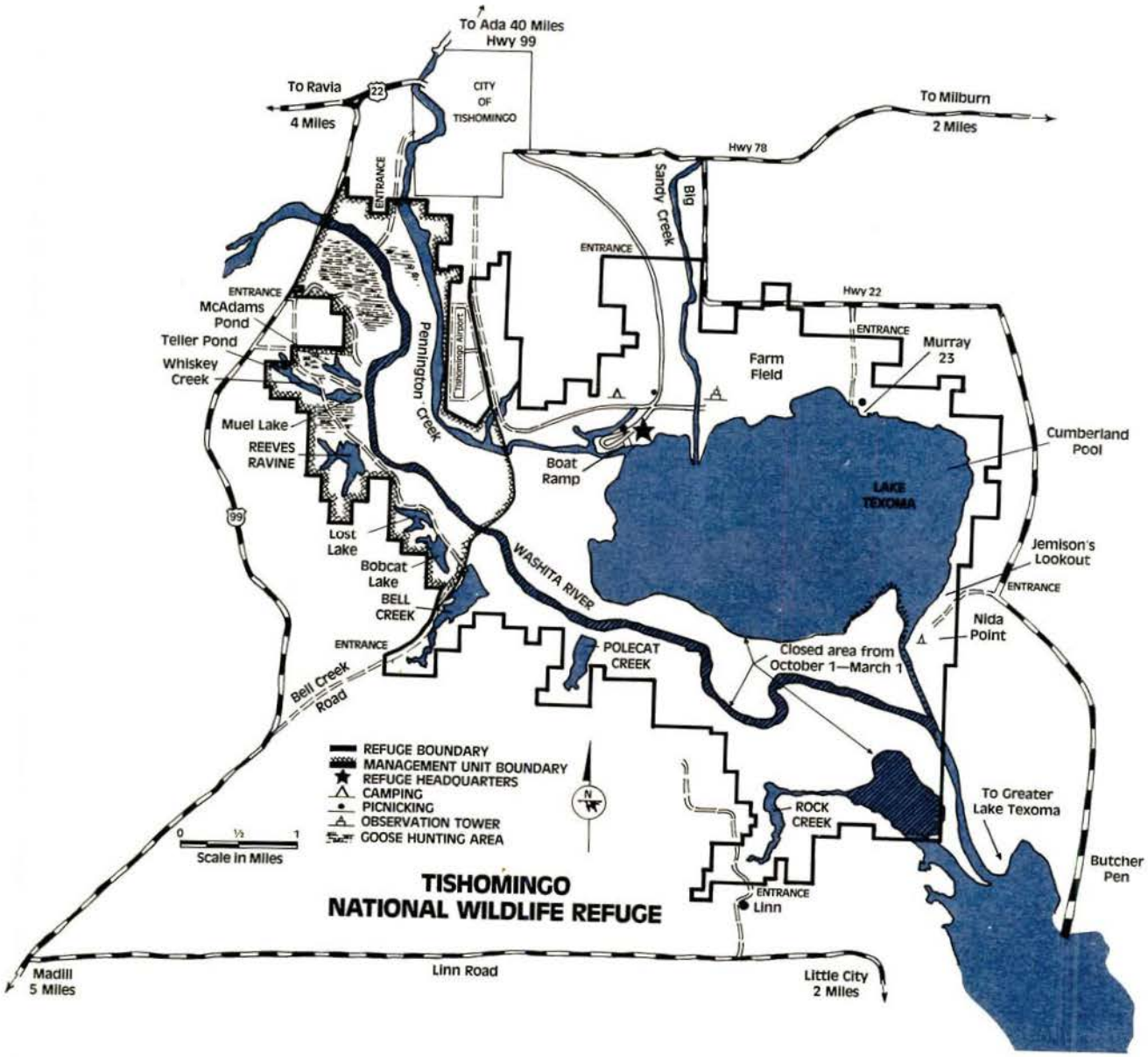
Firearms, bows, other weapons, and fireworks are prohibited, except those being used for legal hunting and fishing activities in accordance with refuge regulations in the appropriate areas.

Vehicles may travel only on designated, improved roads. Speed limits are 25 mph unless otherwise posted.

PLANT AND ANIMAL LIFE: Plants, including their fruits and nuts, may not be gathered or injured. Animals may not be spotlighted, otherwise harassed, or injured.

CONDUCT: Avoid disorderly conduct and disturbing the peace, including loud use of sound equipment such as radios. Intoxicated persons may not enter or remain on the refuge.

HOURS: Tishomingo Refuge is open seven days a week, from sunrise until one-half hour after sunset, except for night fishing and camping. Office hours are Monday through Friday, 7:30 a.m. to 4:00 p.m.


To Ada 40 Miles
Hwy 99
To Ravia
4 Miles
22
CITY
OF
TISHOMINGO
To Milburn
2 Miles
Hwy 78
ENTRANCE
Big
Sandy Creek
ENTRANCE
Hwy 22
ENTRANCE
McAdams
Pond
Teller Pond
Whiskey
Creek
Pennington Creek
Tishomingo Airport
Farm
Field
ENTRANCE
Murray
23
Muel Lake
REEVES
RAVINE
Boat
Ramp
LAKE
TEXOMA
Cumberland
Pool
99
Lost
Lake
Bobcat
Lake
BELL
CREEK
WASHITA RIVER
Jemison's
Lookout
ENTRANCE
Nida
Point
ENTRANCE
POLECAT
CREEK
Closed area from
October 1—March 1
Bell Creek
Road
REFUGE BOUNDARY
MANAGEMENT UNIT BOUNDARY
REFUGE HEADQUARTERS
CAMPING
PICNICKING
OBSERVATION TOWER
GOOSE HUNTING AREA
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5 Miles
Linn Road
Little City
2 Miles