

OPTIMA NATIONAL WILDLIFE REFUGE

Butler, Oklahoma

ANNUAL NARRATIVE REPORT

Calendar Year 1984

NATIONAL WILDLIFE REFUGE SYSTEM
Fish and Wildlife Service
U.S. DEPARTMENT OF THE INTERIOR

REVIEW AND APPROVALS

OPTIMA NATIONAL WILDLIFE REFUGE

Butler, Oklahoma

ANNUAL NARRATIVE REPORT

Calendar Year 1984

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Refuge Manager

2/28/85
Date

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3-4-85
Date

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Regional Office Approval

4/15/85
Date

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INTRODUCTION

The Optima NWR is located in the southeast quarter of Texas County and near the center of the Oklahoma Panhandle, about 14 miles east-southeast of Guymon. Topography is relatively flat to rolling, with some bluffs along the north boundary in the eastern half. The refuge includes 4,333 acres, which encompasses the Coldwater Creek arm of the Optima Reservoir Project.

The refuge was formally established in 1975 under provisions of the Fish and Wildlife Coordination Act, when a formal cooperative agreement was signed by the Department of the Army (Corps of Engineers) and the Department of the Interior. Gates on the Optima Dam, located just downstream from the confluence of the North Canadian (Beaver) River and Coldwater Creek, were closed in October, 1978. Impoundment rate has failed to even approach projected figures, and the lake shore is still approximately 1/2 mile downstream from the refuge boundary (lake elevation is 2,714.9 ft. above m.s.l. -- planned conservation pool is 2,763.5 ft.).

The primary purpose of the refuge is to provide migration and wintering habitat for the short-grass population of Canada geese and the High Plains population of mallards. The entire reservoir project was planned to include the primary water sports and recreation area (skiing, fishing, camping, etc.) located on the main lake and administered by the Corps of Engineers, the public hunting/game management area located along the Beaver River arm of the lake and administered by the Oklahoma Department of Wildlife Conservation (ODWC), and the waterfowl sanctuary to be the Optima NWR. At Conservation Pool level the refuge would include approximately 1,600 acres of water and marsh. Currently, however, refuge habitat includes less than 10 acres of wetlands, 412 acres of cropland, 540 acres of non-commercial forest, 1,400 acres of native grasslands, 1,930 acres of brushy grassland predominated by sand sagebrush, and smaller tracts of fallow fields and miscellaneous administrative lands.

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A. HIGHLIGHTS

Optima NWR was officially opened to public hunting of dove, quail, pheasant and rabbit in the fall of 1984 (Section H. 8).

This is the second consecutive year that no major fowl cholera die-off occurred in the Optima Area (Section G. 17).

B. CLIMATIC CONDITIONS

As is often the case in the Oklahoma Panhandle, weather patterns for CY'84 were extremely variable. The year began with unusually cool temperatures reaching a record low of -18° F on 1/19. Temperatures warmed up in the spring with highs averaging in the upper 70's, low 80's. There was more than adequate moisture in March, April, and May (6.67") to benefit refuge wheat and rye fields.

The summer months remained extremely hot and dry. Only 31% of the total precipitation normally recorded in June, July, and August was received. Fortunately, an absence of high winds during this period minimized some of the stress on resident wildlife and plants.

The dry spell finally ended in October when almost 3.5" of rain fell - nearly three times that of the 10 year average. Overall, temperatures in the fall were mild when compared with those of CY'83. The first and last recorded frosts were on 9/30 and 4/5, making a growing season of 177 days. The average frost free period is normally from 4/20 to 10/20. Weather data for the year is recorded in Table 1.

Table 1. 1984 Weather Data Recorded by Corps of Engineers near Optima Dam

MONTH	PRECIP.	"NORMAL"*	TEMPERATURES (F)	
			LOW	HIGH
Jan.	0.25	0.42	-18	67
Feb.	0.86	0.20	15	78
Mar.	1.63	1.36	15	82
Apr.	2.99	1.33	28	84
May	2.05	3.56	34	96
June	1.39	1.85	51	98
July	0.75	2.64	60	101
Aug.	0.93	2.41	59	104
Sep.	0.82	1.36	32	100
Oct.	3.43	0.84	27	89
Nov.	0.43	0.90	24	81
Dec.	1.71	0.24	16	70
Total	17.24	17.11		

*Based on data from 1972-1981

Optima Lake again showed no sign of ever reaching the projected Conservation Pool Level of 2,763.5' above m.s.l. during 1984. The highest lake level recorded during the year was 2,717.8', 5.1' below the record mark of 2,722.9' set in 1980. It appears the lake is losing rather than gaining ground. At present, the lake shore is still over 1/2 mile east of the refuge boundary.

Table 2. Reservoir Elevations Above Mean Sea Level (m.s.l.) - 1984

Jan. 1	-	2717.8	July 1	-	2717.05
Feb. 1	-	2717.8	Aug. 1	-	2716.35
Mar. 1	-	2717.7	Sep. 1	-	2715.65
Apr. 1	-	2717.7	Oct. 1	-	2715.1
May 1	-	2717.9	Nov. 1	-	2715.1
June 1	-	2717.6	Dec. 1	-	2714.9

D. PLANNING

2. Management Plan

Two management plans were written during CY 1984. The first plan, a Fire Management Plan/Fire Dispatch Plan was written and approved in January. The Station Waterfowl Disease Contingency Plan, covering disease surveillance and response, was completed and approved in April.

E. ADMINISTRATION

1. Personnel

No personnel were assigned specifically to Optima during 1984, however, the refuge received additional allotted manpower when Wade Pratt was selected as a Biological Technician (wildlife). Part of his responsibilities included routine wildlife surveys, law enforcement, and minor maintenance at Optima. During the past year Wade, or another employee in his absence, made weekly trips to the refuge.

Ken Butts rewrote assistant manager Hoban's position description, at the time of her promotion in October, adding the daily supervision of Optima activities to her responsibilities. Table 3 shows the station staffing pattern for the past 5 years.

Table 3. Optima NWR staffing over the past five years.

YEAR	PERMANENT		TEMPORARY
	FULL-TIME	PART-TIME	
1984	No personnel specifically assigned to Optima		
1983	No personnel specifically assigned to Optima		
1982	No personnel specifically assigned to Optima		
1981	1	1	1
1980	1	1	1



Washita personnel became intimately familiar with portions of the California Road as they made the 175 mi. trek to Optima NWR about once per week. We never encountered any Texas Rangers -- actually the sight of any living creature on this lonely stretch was quite noteworthy. 12/84; Roll 8, #20, KB

5. Funding

The FY'84 budget was set at \$20,000. This was an increase of almost 18% over that of last years budget before the cuts. Primary expenditures other than utilities and minor maintenance costs, included the purchase of a new vehicle and covering partial salary and travel costs for the Biological Technician. The FY '85 budget was increased to \$24,000. Optima budget needs are dependent on the waterfowl disease outbreak situation -- on years with disease problems, station costs "skyrocket". Refuge funding for the last 5 years is illustrated in Table 4.

Table 4. Funding pattern for Optima NWR, FY 1981-1985

YEAR	TOTAL FUNDS
1985	24,000
1984	20,000
1983*	17,000
1982*	68,000
1981	69,000

*Before the budget cuts -- \$5,000 in 1983, \$41,000 in 1982

At the end of the fiscal year, the monthly management report showed the remaining budget of Optima to be almost \$4,000. This was attributed to the inability of the new PAYPERS system to accept pre-printed salary costs coded to Optima. Washita's budget, therefore, was in the red, while Optima's remained well in the black. After repeatedly contacting the payroll office in Albuquerque, we still remain frustrated in trying to code salary costs to a different organization number.

6. Safety

The safety program for Optima is incorporated with the weekly meetings held at Washita. During those meetings, special emphasis is placed on potentially hazardous situations which might arise when working alone at Optima. Use of seat belts was continually stressed throughout the year when driving the 340 mile round trip to and from Optima. No lost time accidents have occurred since the establishment of the refuge.

F. HABITAT MANAGEMENT

1. General

Habitat conditions generally remained good throughout the year in spite of extremely dry conditions during the summer months.

4. Croplands

Initially, croplands were established to provide food for migrating and wintering waterfowl, but use by waterfowl is almost non-existent because of the vast areas of irrigated croplands adjacent to refuge lands. There were a total of 412 acres under cultivation this year - all of which were farmed by three cooperative farmers. Of this total, 333 acres were planted to wheat, 80 acres to milo, and the remaining 60 acres were left fallow.

Wheat harvest was completed in early July, with refuge fields yielding 15-20 bushels/acre. Approximately 400 bushels of wheat (the refuge share) was placed in storage at the elevator facilities in Hardesty. Bitter Lake NWR picked up 259 bushels of wheat in August, which still left 181 bushels in storage.

Extended hot, dry temperatures throughout the summer resulted in small, dry, shriveled milo heads - making harvest attempts hardly worth the effort.

Although not planted since 1981 or disced since 1982, the volunteer rye fields (100 acres formerly force account farmed) continued to produce surprising yields. These fields are utilized heavily during the year by resident quail, pheasant, and turkey.



Trees are precious in the Oklahoma Panhandle. The source of this solitary hackberry was very likely droppings from a seed-eating bird perching on the fence post -- a Johnny Hackberry seed? 12/84; Roll 8, #12, KB



While mowing trails on the refuge, a few meandering swaths were cut through volunteer rye stubble on old force-account fields. Resultant strips of green were heavily utilized by pheasants, turkey, and deer. 12/84; Roll 8, #6, KB



Native prairie at Optima continues to recover after many years of overgrazing. 10/84; Roll 6, #21, PH



Typical overgrazed prairie on private land near Optima -- it is easy to see why Optima NWR is an Oasis for wildlife in the Oklahoma Panhandle. 12/84; Roll 8, #18, KB

5. Grasslands

Presently, the only grassland management techniques utilized include annual habitat monitoring via photographs. A series of 23 photos are taken at established photo points every October. They provide a pictorial account of succession and other gradual habitat changes (based on weather, etc.) occurring on the refuge.

G. WILDLIFE

2. Endangered and/or Threatened Species

There were several sightings of bald eagles throughout the fall and winter months. Their numbers peaked at seven on February 5. Total use days in 1984 were 157 compared to 200 in 1983.

Five species in the "status undetermined" category -- ferruginous hawk, prairie falcon, western burrowing owl, white-faced ibis, and osprey -- were observed on Optima in 1984. The prairie falcon is listed as endangered in the state of Oklahoma.

3. Waterfowl

As with all wildlife at Optima, particularly migratory species, the absence of daily observers increases the possibility that peak numbers will not be recorded. Comparisons of yearly peaks and use day figures, therefore, should be viewed with caution.

Estimated use days for ducks totalled 416,530 compared to 442,815 in 1983 and 979,620 in 1982. The decline in use days definitely showed the decrease in mallard and pintail peaks. In 1984, peaks of only 4,500 were recorded for each species, compared to peaks of twice that in previous years. Total ducks observed in one day was 7,495 on 2/23.

There was only one observed attempt at nesting. On 5/17 a mallard hen and 12 ducklings were observed on a playa lake between Guymon and the refuge.

Goose use days for CY'84 declined 17% from 1983. The geese, however, spend considerable time migrating between Optima Lake and a small marshy lake area located approximately 5-6 miles SE of the Optima dam. Canada geese peaked at 2,400 on 2/2, while snows reached their peak of 52 on 2/16.

Comparisons of Waterfowl Use Days for the past 5 years are illustrated in Table 5.

On December 1, two adult tundra swans were observed on Optima Lake. This was the only documented sighting during the year.

Coots peaked in September with 700. Use days totalled 12,032 in comparison with 10,668 in 1983 and 16,920 in 1982.

Table 5. Comparison of Waterfowl Use Days at Optima Lake

YEAR	DUCK USE DAYS	GOOSE USE DAYS
1984	416,530	34,110
1983	442,815	41,338
1982	979,260	83,830
1981	1,458,780	124,680
1980	2,503,950	126,930

4. Marsh and Water Birds

Sandhill cranes were the most frequent visitor in this category. Their numbers peaked at 1,100 on 3/29. Use days totalled only 9,380, about 50% of the 1983 figure. Other frequently observed species included great blue herons, western, eared and pied-billed grebes, double-crested cormorants, white pelicans and black-crowned night herons.

5. Shorebirds, Gulls, Terns, and Allied Species

Extensive mud flats, exposed by lowered lake levels, provided ideal habitat for shorebirds. Use by birds in this category were limited to ring-billed gulls, American avocets, greater and lesser yellowlegs, Wilson's phalarope, willets, and killdeer. Rarer visitors included marbled godwits, sanderlings, and long-billed curlews.

The most exciting discovery was of three active nests and an estimated 25-30 nesting pairs of least terns along the north and west shorelines of Optima Lake. The discovery was made by a non-game biologist for the O.D.W.C. The interior race of this tern has tentatively been listed as "endangered". On the same day, two pairs of snowy plovers, also thought to be nesting, were observed along the same shoreline. Since these nest sites will eventually be flooded after the lake reaches conservation pool, future plans are being discussed to provide some type of artificial nesting habitat to encourage repeated nesting attempts by these terns.

6. Raptors

Fourteen different species of raptors were seen on the refuge in 1984. Golden eagles were present throughout much of the year, reaching a peak of two in February. Gene Pester, Oklahoma State Ranger, delivered one dead golden eagle to the freezer. Specimens collected the previous year were shipped to Idaho, to the Pocatello feather depository.

No unusual raptor sightings were noted in 1984. Raptor species known to nest on the refuge in 1984 included the red-tailed hawk, great horned owl, American kestrel, and turkey vulture. Probable nesters included Mississippi Kites and the western burrowing owl.

7. Other Migratory Birds

Mourning doves, both migratory and resident, utilized the abundant food and cover on the refuge provided by the volunteer rye fields. The fall hunt seemed to have little effect on the population. Only an estimated 20 birds were taken. Black-billed magpies were observed on several occasions in 1984.

8. Game Mammals

The deer population is estimated at 75-80 individuals. Herds of 15-20 individuals were not uncommon. The majority of deer are white-tails with an estimated 4-5 mule deer.

In late January, a white-tailed doe was killed by a car near the south end of the Coldwater Creek bridge on State Highway 3. Such kills occur 5-8 times per year, a situation that is being studied for possible preventive measures.

10. Other Resident Wildlife

The flock of turkeys along the Coldwater Creek are continuing to thrive in spite of reported poaching attempts. Flocks of 20-30 individuals were regularly seen feeding in the refuge rye and wheat fields. A peak of 34 were recorded on March 15. Production efforts were presumed successful; in one flock of 26 birds were 16 poults, 10 gobblers and 2 hens.

Numbers of quail, both scaled and bobwhite, were down from previous years. The extended sub-zero temperatures in 12/83 and 1/84 and the long dry summer are speculated reasons for their decline. Ring-necked pheasant were regularly seen throughout the year. An estimated 85 quail and 25 pheasants were harvested in 1984.

Eagles, coyotes, badgers, and raptors apparently took their toll on refuge prairie dogs. The population dropped from a recorded peak of 75-80 in 1983 to fewer than 10 by March 15. After June, no more prairie dogs were seen on the refuge. Their inability to keep the vegetation cropped probably led to increased predation and eventual elimination.

17. Disease Prevention and Control

For the second consecutive year, there were no outbreaks of avian cholera on or near the refuge in 1984. Washita personnel and Optima Corps staff made weekly inspections of the lakeshore marsh and roosting sites from mid-February through April. No dead or sick birds were detected.

H. PUBLIC USE

1. General

Periodic requests for general information about Optima (i.e. current regulations, permitted activities, etc.) were received at the Washita Office throughout the year. Many referrals were made to the Optima Corps of Engineers office since they provided more extensive public facilities and opportunities on lands adjacent to the refuge.

Overall public visitation, with the exception of hunting seasons, is generally low in the area. Frequent visitation of the refuge on a regular basis, is by locals - i.e. co-op farmers, Corps and State personnel, and the oil and gas related employees. They are all very cooperative in promptly notifying refuge personnel in the event of any illegal activities, wildfires, wildlife disease outbreaks, or other unusual sightings. Many people are still unaware that no full-time employees are stationed at Optima, and we try to create an impression of omnipresence (or at least unpredictable presence) in the hopes of preventing vandalism and poaching.

8. Hunting

Public hunting on Optima became a reality in the fall of 1984 when it was officially opened for public hunting of migratory birds (dove) and upland game (quail, pheasant, cottontail, and jack rabbits).

Considerable time was spent in preparing for the hunt. Three hunter parking/access areas were designated. Application for and subsequent issuance of a permit by the Oklahoma Department of Highways was necessary to allow limited parking of hunter vehicles on the State-right-of-way along Highway 3 north of Hardesty. Later that month, refuge personnel met with Ray Depuy, County Commissioner at Hooker, concerning hunter parking at the dead-end county road north of Hardesty. He, in addition to Wayne Overton, volunteered to grade both parking areas whenever the need arose.

A special refuge brochure, outlining hunting rules and regulations at Optima, was prepared in May with the assistance of Ray Rauch, Assistant Zone Supervisor, Region 2.

In July, refuge personnel constructed hunter walk-through gates and vehicle parking lots at the three hunter access areas. In addition, three large hunter informational signs with leaflet boxes were installed.

The official legal opening of dove hunting on the refuge was changed from September 1 to September 22 because of a delay in publishing the regulations in the Federal Register.

Routine patrol indicated hunter participation was much less than anticipated. The largest influx of hunters did not occur until opening day of pheasant season on December 1. Throughout the four month period, there were an estimated 155 hunters for a total of 374 activity hours.



One of three hunter access points at Optima NWR -- note the walk-through gate and informational sign. 10/84; Roll 5, #6, PH



Successful hunter on Optima NWR, very possibly with the first pheasant legally taken from the refuge since its establishment. 12/83; Personal file, DH



Many local sportsmen, such as these fellows from Tyrone, were more excited about the opportunity to hunt quail than they were about pheasants. 12/84; Roll 8, #8, KB

Additional pressure has recently been applied by State O.D.W.C. personnel to open Optima NWR to further hunting of deer and turkey. Regional office is currently studying the idea.

11. Wildlife Observation

Oklahoma State Highways (#3 and #94), serve as frequent wildlife observation drives. Adjacent county roads are also utilized for wildlife observation - especially of deer, turkey, or pheasants. Organized groups, such as college classes and state birding clubs, also occasionally stop at Optima enroute to or from the Black Mesa, located in the western tip of the panhandle.

17. Law Enforcement

With no permanent people stationed at Optima we anticipated several law enforcement problems, however, refuge personnel issued no citations during their weekly visits. There was also no occurrence of any theft or vandalism of the refuge shop facilities and equipment.

Considerable time was spent in patrolling refuge lands as well as adjacent Corps lands in November. Refuge personnel were also present during the opening weekend of deer and pheasant season.

During the last weekend of the State deer season, a local resident observed two men dragging two deer out of the refuge. Gene Pester, Texas County Ranger, was quickly notified after refuge personnel received

the initial telephone call. From a description of the truck and license tag number, Pester was able to apprehend the two individuals in Liberal, Kansas. Both deer were still in the back of the truck at that time.

I. EQUIPMENT AND FACILITIES

2. Rehabilitation

No sooner had we patched and repaired one leak when another one developed in the underground waterline at Optima. The waterline was constructed of black 1" plastic pipe. Not only was it very brittle and susceptible to cracking, but we found gophers had no problem chewing right through it. After four attempts at splicing in new pipes to repair the leaks, we decided to completely replace and relocate all the underground waterlines and freeze-proof hydrants at the refuge shop/facilities compound.

The building night lights were removed and replaced with a security night light pole, constructed and installed by refuge employees.

Fence lines, during the year, were periodically spliced and tightened.

J. OTHER ITEMS

1. Cooperative Programs

Weekly waterfowl counts were transmitted to the O.D.W.C. Migratory Bird Supervisor (Lem Due) during the fall and winter months.

Two eagle roosts, one located at Optima Lake and the other approximately 10 miles east of the refuge, were surveyed by Corps technician Ben Burdo on 1/11, in cooperation with the National Wildlife Federation's annual Bald Eagle Mid-winter Survey.

2. Items of Interest

Ray Rauch, Assistant Supervisor (Zone 2) and Ernest Jemison, Zone Biologist, traveled to Optima with manager Ken Butts on 2/23. In addition to inspecting refuge grounds/facilities, they also conducted a deer census at dusk in order to gain necessary data to discuss future possibilities of a deer hunt.

Ken Butts, a member of the Disease Investigation Committee, attended the Playa Lakes Disease Council Meeting at Lubbock, on 8/31. The committee was established in an effort to combine existing expertise on the subject as well as coordinate waterfowl disease investigations, research, waterfowl management, and public information through their organizations.

Refuge personnel contracted the services of Doug Elliot and his backhoe to excavate four watering holes on the refuge. Up until then, there had been little or no permanently available water on the refuge.

especially southwest of Hwy. 3. Use of these holes was immediately evident from all the trails and tracks at the site - particularly by deer and pheasants.

An injured Swainson's hawk, found by a local resident of Guymon, was picked up by refuge personnel in October and later transferred to Liz Black, a state and federal licensed bird rehabilitator in Oklahoma City.

Biological Technician Wade Pratt and Zone Supervisor Jim Hubert traveled to Optima NWR on 12/19 for a field inspection of the refuge.

3. Credits

This report was written by Patty Hoban, edited by Ken Butts, and typed by Carol Torrez.

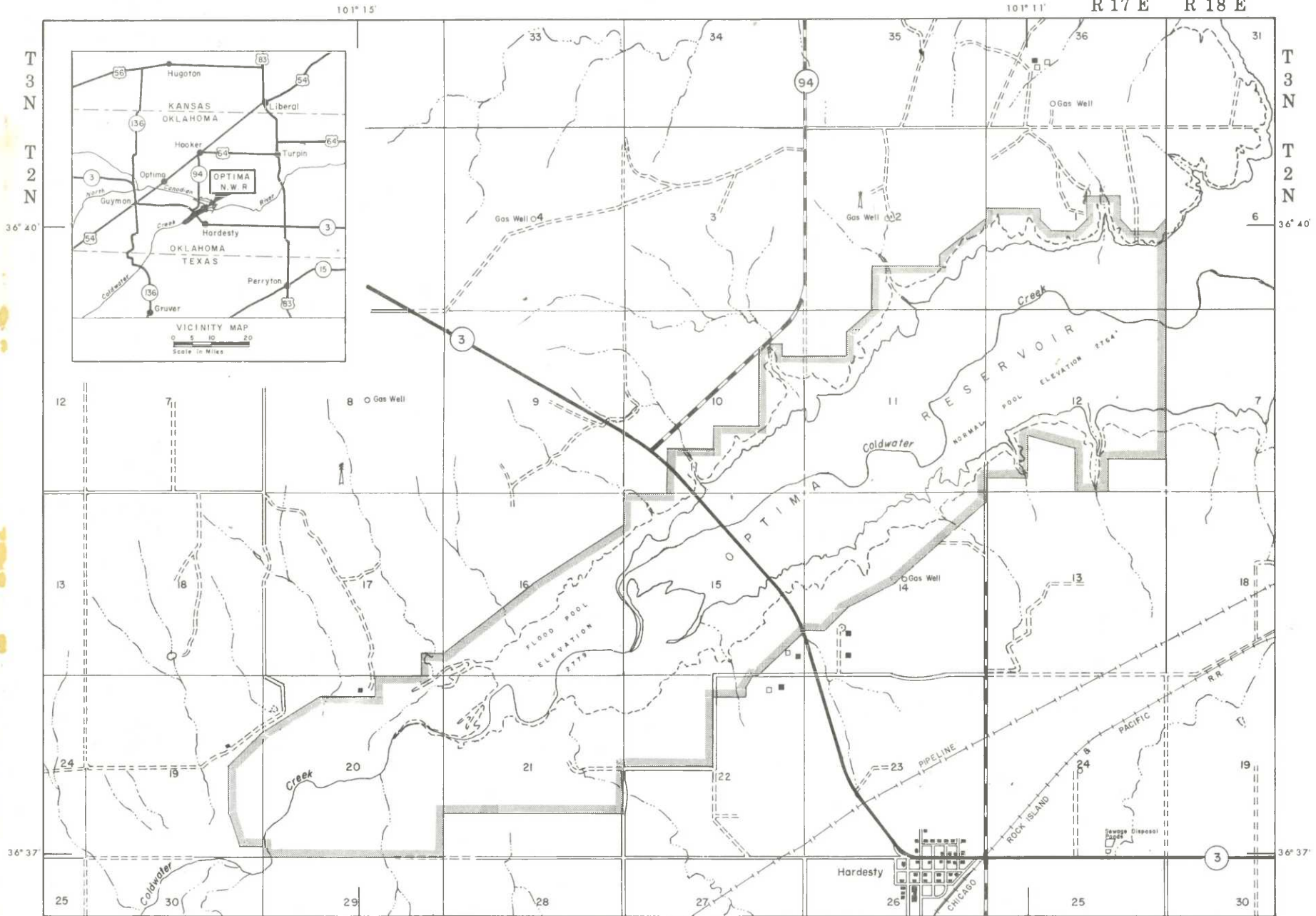
OPTIMA NATIONAL WILDLIFE REFUGE

TEXAS COUNTY, OKLAHOMA

UNITED STATES
DEPARTMENT OF THE INTERIOR

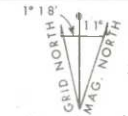
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FISH AND WILDLIFE SERVICE

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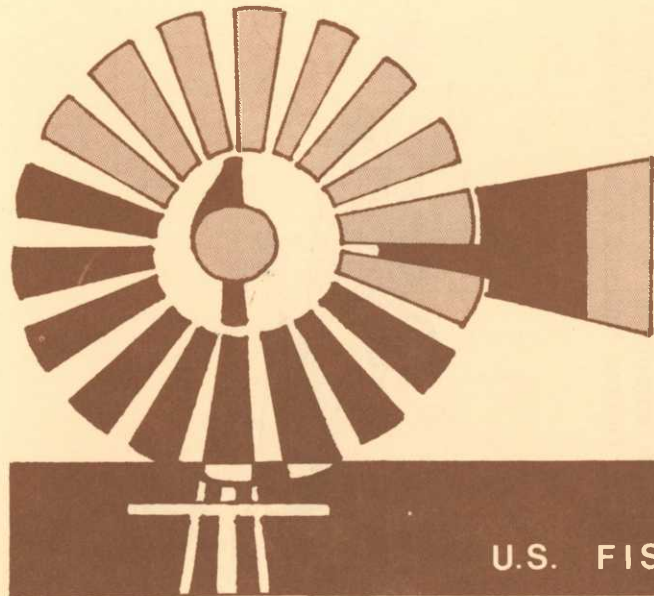


COMPILED IN REALTY
FROM U.S.G.S. QUADRANGLES AND
OTHER OFFICIAL INFORMATION

R 17 E
CIMARRON MERIDIAN



MEAN
DECLINATION
1968



OPTIMA

NATIONAL
WILDLIFE

REFUGIE

U.S. FISH & WILDLIFE SERVICE



OPTIMA NATIONAL WILDLIFE REFUGE is located in the southeast quarter of Texas County, in the middle of Oklahoma's panhandle, 15 miles east of Guymon. The refuge was established in 1975 and contains 4,333 acres. It is located on part of the Corps of Engineers' Optima Reservoir Project and is operated through a Cooperative Agreement with the Corps.

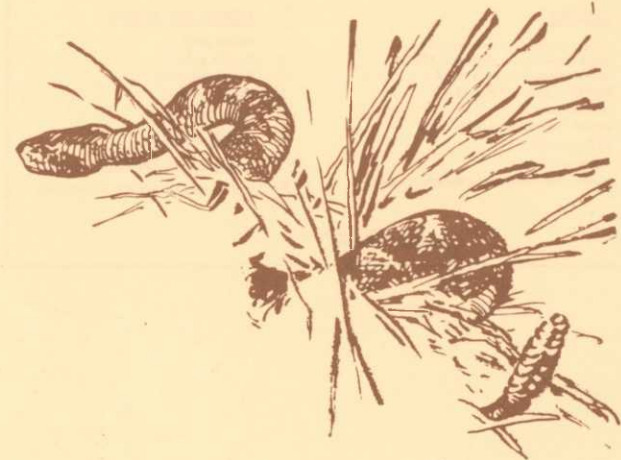
The panhandle area is often referred to as "No Man's Land". It was our last wild west frontier, with no legal law for fifty years, making it a favorite location for outlaws.

Homesteaders began settling in the Panhandle in the mid 1880's and called the area "Cimarron Territory". One of the earliest towns in the territory was the old town of Hardesty, founded in 1885. It was located about three and a half miles northeast of the present town of Hardesty. "Old" Hardesty was re-located in 1901. That same year, the railroad tracks were extended from Liberal, Kansas to Texas and the town of Guymon was started. It grew steadily as did the other towns which sprang up in the area of the present day Optima National Wildlife Refuge.



The refuge is dominated by grasslands. Approximately 50 percent of the grasslands is a vegetative type called Sandsage-Bluestem Prairie. It is comprised of sandsage and tall grasses such as sand and little bluestem and sand lovegrass. Another 30 percent of the refuge's grasslands is covered with Grama-Buffalo Grass vegetation. Blue grama and buffalo grass are the dominant species in this vegetative type. Four stands, 540 acres, of eastern cottonwood trees constitutes the bulk of the refuge's timber. Approximately, 1600 acres of habitat will be inundated when the reservoir reaches normal conservation pool level. The remaining 2,700 acres will be managed for wildlife.

Establishment of a waterfowl refuge on this reservoir project was planned from the time the construction was approved in June of 1936. Construction of the dam was delayed until the early 1970's because of the depression and two wars. The dam was completed in 1978 and impoundment of the reservoir began in October of that year.

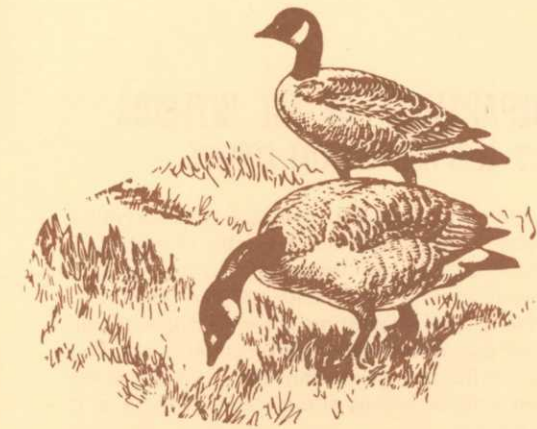


The refuge functions as a winter home for migrating waterfowl, primarily Canada geese and mallards. Located within a large area of cultivated wheat, corn and grain sorghum, only a large body of water has been lacking to make it suitable for waterfowl. The combination of available food and water will attract wintering flocks of up to 15,000 Canada geese and 50,000 mallards. Peak populations to date have been 3,500 Canada geese, 65,000 pintail, 30,000 American widgeon and 15,000 mallards.

All waterfowl common to the Central Flyway can be observed on the refuge. A wide variety of water and shorebirds are also found on the refuge, including the common loon, western grebe, least tern, snowy plover, and sandhill crane.

Birds of prey are common year-round. During the spring and summer months, common species include: turkey vulture, Mississippi kite, American kestrel, red-tailed, marsh, Swainson's and Ferruginous hawks. Species common in the fall and winter months are the bald and golden eagle, prairie falcon, rough-legged and Cooper's hawk. Resident game birds include the Rio Grande turkey, ring-necked pheasant, bobwhite and scaled quail.

The refuge is host to a variety of mammals including white-tailed and mule deer, bobcat, coyote, beaver, porcupine, black-tailed jack-rabbit, badger, raccoon and striped skunk. Reptiles of interest include the prairie rattlesnake and the Texas horned lizard, commonly called a horned toad.

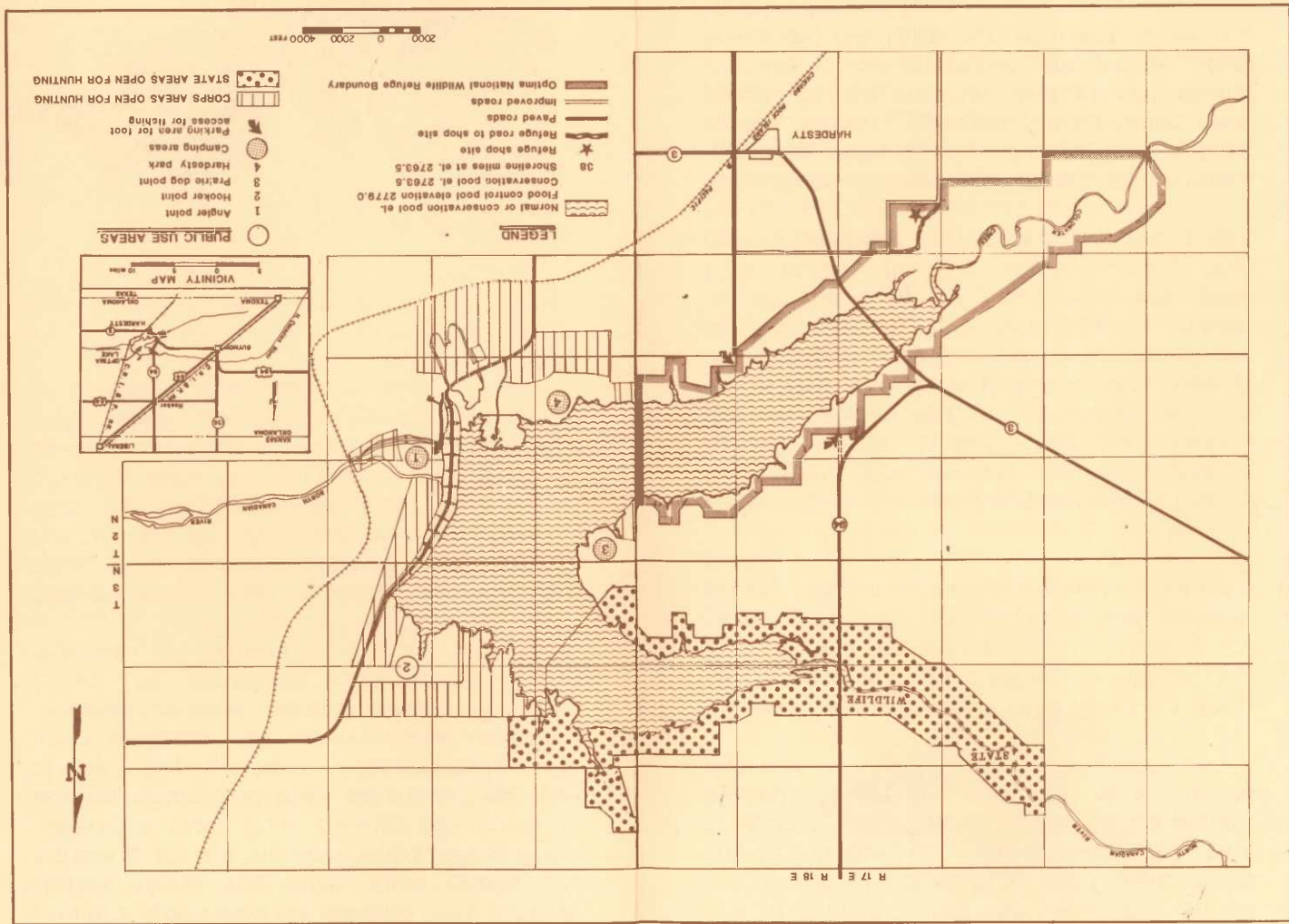


The refuge is closed to all hunting and trapping. Fishing is permitted seasonally in that portion of Optima Reservoir that is located on the refuge. The Oklahoma Department of Wildlife Conservation manages 3,400 acres of the project lands as Optima Wildlife Management Area along the North Canadian (Beaver) River. The entire area is open for public hunting. Public hunting is allowed by the Corps on a portion of the reservoir and lands that they administer around the reservoir.

There are no public use facilities on the refuge. The Corps has public use facilities for camping with water and electrical hookups at several sites around the reservoir. Lodging is available in Hardesty, Hooker and Guymon. Airports are located in Guymon and Hooker and at Liberal, Kansas.

The refuge office is located in Room 111 at 611 East Fourth Street in Guymon. The office telephone number is (405) 338-3479. Mail may be addressed to:

Refuge Manager
Optima National Wildlife Refuge
P.O. Box 628
Guymon, OK 73942



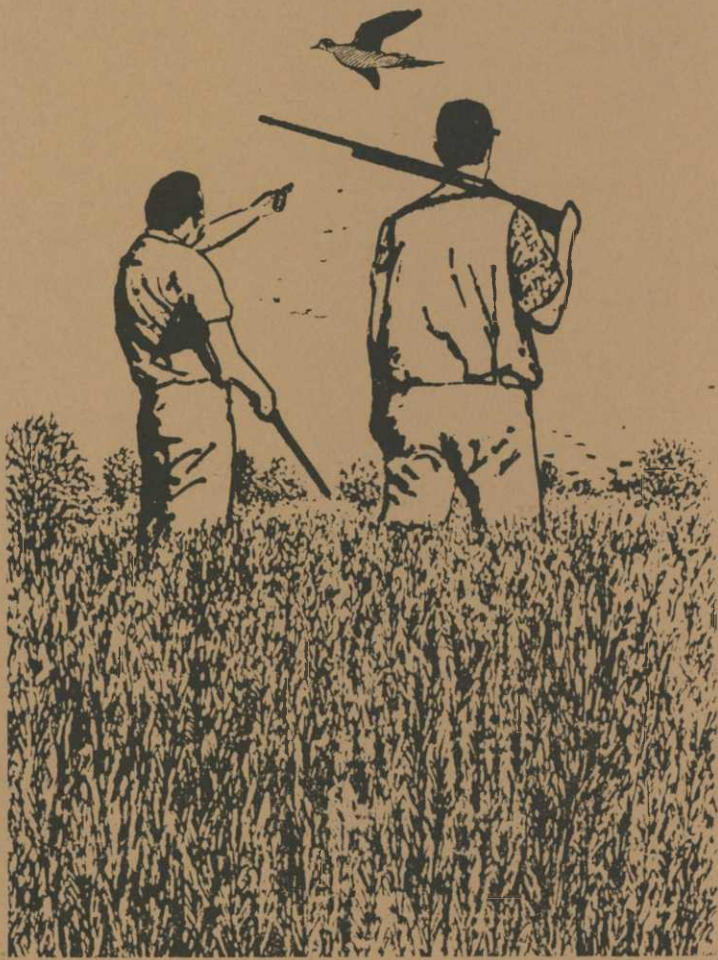
DEPARTMENT OF THE INTERIOR U.S. FISH AND WILDLIFE SERVICE

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.



On your visit to this refuge, or any type of public use area, please practice good sportsmanship — remember the people who will visit after you, not only next year, but in generations to come.

HUNTING OPTIMA NATIONAL WILDLIFE REFUGE



OPTIMA NWR HUNTING REGULATIONS

Hunting of mourning doves, rabbits (cottontail and jackrabbit), quail (scaled and bobwhite), and pheasants is permitted. **NO OTHER SPECIES OF WILDLIFE MAY BE HUNTED ON THE REFUGE.**

Season dates and bag limits are the same as those established by applicable State regulations governing public hunting areas in Texas County, Oklahoma, except that the refuge will be open to small game hunting during the State deer (firearms) season.

It is **ILLEGAL** to possess rifles or handguns on the refuge.

All vehicles must be parked in the designated Hunter Access and Parking Areas shown on the map.

All dogs must be kept under control and not allowed to harass protected wildlife.

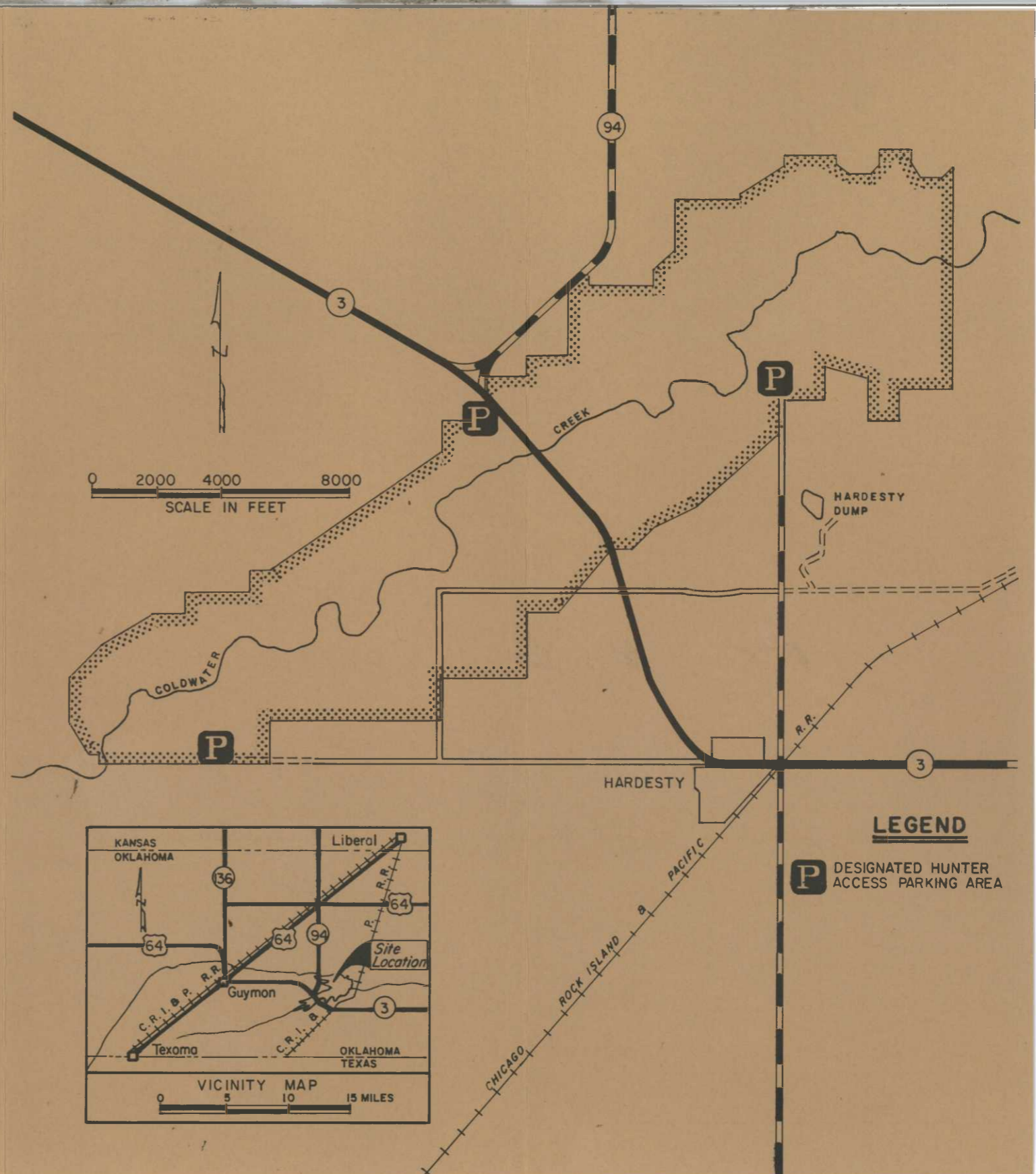
Except as noted here, hunting will be in accordance with all applicable State regulations.

STRICTLY PROHIBITED ON THE REFUGE — Vehicles of any kind, fires, including campstoves/grills/portable heaters, overnight camping or refuge trespass after dark, alcoholic beverages, or littering.

Contact a Refuge Officer if in doubt about any Refuge regulation or if additional information is wanted.

Direct Inquiries to:

Refuge Manager
Optima National Wildlife Refuge
Route #1, Box 68
Butler, Oklahoma 73625
(405) 473-2205



1934 marked the dawn of a new era for the nation's waterfowl. In July of that year, Congress created a revenue-raising device that was popularly known as the Federal "Duck Stamp." Every waterfowl hunter 16 years of age or older was required to purchase a stamp annually. Recognizing the stamp's value for wildlife and as a collector's item, a growing number of non-hunting conservationists and stamp collectors also began to buy them. By 1984, a half century later, over 285 million "Duck Stamp" dollars had gone to preserve some 3.5 million acres of precious wetland habitat – habitat that forms the backbone of the world's greatest system of waterfowl refuges.

Still, nearly half a million acres of irreplaceable wetlands vanish every year. You can help save them...



Department of the Interior U.S. Fish and Wildlife Service

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RF-21620-3



June 1984



Optima Lake

OKLAHOMA



 DEPARTMENT OF THE ARMY
TULSA DISTRICT CORPS OF ENGINEERS



Visitors Welcome

The U.S. Army Corps of Engineers invites you to visit Optima Lake. The project is one lake in a three-lake system authorized within the North Canadian River Basin consisting of Canton, Fort Supply and Optima Lakes.

This man-made lake offers extensive opportunities for outdoor recreational activities. The 5,340 acre lake with its 38 miles of shoreline is an open invitation for swimming and sunbathing. Campsites and picnic facilities are available for your enjoyment and Corps of Engineers Park Rangers will be happy to assist in assuring you a pleasant stay at the lake. Services and supplies are available in nearby communities.

Please help protect the environment by keeping areas clean. Avoid damaging vegetation, extinguish all fires, and dispose of refuse properly. Have a safe, fun time and come again.

Inquiries regarding the lake and its uses are welcomed by the Project Manager in the Project Office located near the dam. Copies of regulations governing public use of the lake may be obtained at the Project Office. The mailing address is: Project Manager, Optima Lake Project Office, Corps of Engineers, P.O. Box 30, Hardesty, Oklahoma 73944.





Project Data

LOCATION

Optima Dam is located on the North Canadian River in Texas County, Oklahoma, about four and one half miles northeast of Hardesty and approximately twenty miles east of Guymon, Oklahoma.

HISTORY AND DEVELOPMENT

Optima Lake was authorized by the Flood Control Act of 1936. Project purposes include flood control, water supply, recreation, and fish and wildlife. Construction was delayed by the depression, World War II and the Korean conflict. In 1962, Congress approved funds for preconstruction planning and construction began in 1966.

OPERATION

Optima Lake is operated in conjunction with Fort Supply and Canton Lakes for maximum flood control on the North Canadian River downstream to Oklahoma City. It is a unit in the system of upstream lakes working in conjunction with the main control plan for the Arkansas River in Arkansas and Oklahoma. The project controls the runoff from 2,341 square miles of drainage area above the dam.

The dam is a rolled earthfill embankment having a total crest length of about 16,875 feet and a maximum height of about 120 feet above the streambed. A roadway runs across the top of the dam. An uncontrolled emergency spillway about 1,500 feet wide is located on the right abutment with a crest elevation of 2,796.0 msl. The spillway has a capacity of 359,000 cfs (cubic feet per second) at maximum pool elevation.

The outlet works are located near the right abutment and consist of a concrete gate tower with a 12'-0"

by 16' oblong conduit. Discharges through the conduit are controlled by two drum hoist-operated tractor-type service gates. A 36 inch low-flow bypass and a 24 inch water supply line are incorporated in the outlet works. At conservation pool, the lake has a surface area of 5,340 acres and a shoreline of 38 miles. The surface area of the lake at top of flood control is 7,640 acres with a storage capacity of 229,500 acre-feet. An acre-foot is 325,850 gallons — enough water to cover one acre to a depth of one foot. At top of conservation pool there is 129,000 acre-feet of storage.

DAM

EMBANKMENT

Length of dam, feet 16,875
 Maximum height of dam
 above streambed, feet 120

SPILLWAY

Type Uncontrolled
 Length of spillway, feet 1,500

OUTLET WORKS

Outlet conduit (oblong) size, width
 and height, feet 12.0 by 16.
 Lowflow pipe (1), diameter in inches 36
 Water supply Pipe (1),
 Diameter in inches 24

BENEFITS

It has been estimated that operation of Optima Lake will provide average annual benefits of \$1,348,000 in flood damages prevented. The project will also supply water for present and future municipal and industrial use.

WATERSHED

Drainage area above the dam, square miles . . 2,341

LAKE

Elevations, feet above mean sea level

Top of flood control pool 2,779.0
 Top of conservation pool 2,763.5
 Top of inactive pool 2,726.0

Surface area of lake, acres

At top of flood control 7,640
 At top of conservation pool 5,340
 At top of inactive pool 1,340

Storage capacities, acre-feet

Flood control pool 100,500
 Conservation pool 117,650
 Inactive pool 11,350
 Lake total 299,500

Shoreline length, miles

Conservation pool, elevation 2763.5 38





Recreation

FISHING AND HUNTING

There are approximately 4,500 acres of excellent fish habitat at the project. It is anticipated that fishing at Optima Lake will soon be ranked among the best in this region of the state. Available species include largemouth bass, white crappies, various sunfishes, white bass, channel catfish, freshwater drums, buffalo fish, carp, carpsuckers, gar, gizzard shad, and numerous other smaller species of fish.

Hunting at the project is expected to improve as the project gets older. Approximately 3,400 acres of project lands and water have been made available to the Oklahoma Department of Wildlife Conservation for use as a wildlife management area. The area is open to the public for hunting on a year-round basis. Some of the species present include dove, bobwhite quail, pheasant, wild turkey, cottontail rabbit and some deer.

Hunting and fishing at the project are regulated by Federal and State laws and the same licenses are required as in other parts of the state of Oklahoma. Public hunting maps showing project lands open for public hunting are available at the Project Office.

CAMPING AND PICNICKING

Park areas that provide access to both sides of the lake and the stilling basin below the dam offer visitors many opportunities for outdoor family fun and recreation. Activities that can be enjoyed at these areas include camping, picnicking, hiking, swimming, etc. Facilities available at these areas include camping sites, picnic sites, boat ramps and sanitary facilities.

BOATING

Boaters and skiing enthusiasts can enjoy some 5,340 surface acres of open water in the lake. Boating is in accordance with State boating laws and Corps of Engineers' regulations. Regulations governing operational requirements of boats may be obtained from the Optima Lake Project Office located near the dam or from the Tulsa District Office. Operate your boat in a controlled safe manner at all times.

SIGHTSEEING

Optima Lake is located in a scenic area of sand hills, rock outcroppings and rolling grasslands that slope gently to the waters edge forming an attractive shoreline. Upon arrival at the project, the visitor will be impressed with the dam structure itself. Visitors to the overlook located on the south side of the lake are able to see the spillway, surrounding lake area and the North Canadian River Valley downstream. Other opportunities for sightseeing in the area in which the project is located include Black Mesa State Park, located 30 miles northwest of Boise City in Cimarron County, traces of the old Santa Fe Trail, No Mans Land Museum at Goodwell and Beaver Museum.



Early Day History

The area in which Optima Lake is located is part of what was once known as "No Man's Land" in Oklahoma Territory. The area was called "No Man's land" because it had not been placed under the jurisdiction of any state or territory and no land could be legally claimed.

This awkward status delayed settlement and generally restricted the development of the area. Incorporation of No Man's Land in Oklahoma Territory in 1890 finally opened the area to legal settlement as Beaver County and brought a gradual increase in settlers.

Railroads were extended into the area promising prosperity to the towns located along the proposed routes. One town that was located along a railroad surveyed route was the town of Old Hardesty; however, the railroad changed its course and bypassed the town some eighteen miles to the west. Most town residents and businesses moved to the new town of Sandford located on the new railroad tracks. Sandford's name was later changed to Guymon.

In 1901, Old Hardesty was finally abandoned. This ended its seventeen year existence. Though brief, this span of time encompassed the most crucial period of history in the Oklahoma Panhandle. Other early towns of the area are Beaver and Boise City.

Traces of one of the last cattle trails may still be seen near Old Hardesty. This is one of the last cattle trails going from Texas to Colorado and on to Montana. As the railroads built their lines toward the south and west, and as Kansas closed her border to the cattle driver, the cattlemen were forced to move from the cattle trails further west in Oklahoma to go through the edge of New Mexico and Colorado. The evidence of this old trail can be seen approximately 100 yards west of Old Hardesty going up through a low ravine in a northwesterly direction. It passes some 100 yards north and east of the Old Hardesty cemetery. Near the Old Hardesty burial grounds the trail swings to the west more and continues up the Beaver River Valley area. North of the Old Hardesty cemetery the cattle trail crosses the faint impression left of the stagecoach line that ran from Beaver City to Guymon, Boise City, and Clayton, New Mexico, areas.



Safety Suggestions

BOATING

Don't overload your boat.
 Boats must not approach closer to the dam than indicated by warning signs or safety buoy lines.
 If your boat upsets, stick to it and use it as a life preserver. Standing in a boat can lead to disaster.
 Head for shore if bad weather threatens.
 Slow down when approaching small boats, docks, or skiers.
 Help a boat in distress. Give help and if you need help, ask for it.
 Each boat must have an approved flotation device for each passenger.

SWIMMING

Swim and wade only where you are familiar with the water depths and the bottom.
 Don't swim alone. There's safety in numbers.
 Be sure water is deep enough before diving.
 Be careful of overestimating your swimming ability as water distances are deceiving.
 Watch children and nonswimmers closely.
 Swimmers should avoid regular boat channels, launching ramps and docks.

FISHING

Keep clear of boat channels, ski and swimming areas.
 Be careful when casting.

If trolling, watch water ahead and traffic.
 Be considerate of others.

SKIING

Always wear an approved personal flotation device.
 Stay in open water. Watch for swimmers.
 Have at least two people in the boat, one to run the boat, and one to watch the skier.

HUNTING

Know the correct way to carry your gun.
 Treat every gun as if it were loaded.
 Always point the gun muzzle in a safe direction.
 Be sure of your target.
 Keep the safety on or the chamber unloaded until ready to fire.
 Never lay a loaded gun on the bottom of a boat.
 Never shoot a rifle at the water.

HAZARDS: Optima Lake has lots of shallow water areas. Boaters and skiers should be watchful for underwater hazards such as submerged stumps, logs, fences, and other obstructions. When winds of 25mph or more are forecast or blowing, boaters are cautioned to stay out of open water.

STANDARD WATERWAY MARKERS		
	BOATS ARE PROHIBITED IN AREAS SO MARKED.	WARNS OF DANGER! IT MAY APPEAR ON A BUOY OR ON SHORE.
(Left) PORT SIDE (Right) STARBOARD SIDE CHANNEL MARKERS. (Looking Upstream)	NO SKI NO WAKE CONTROLLED AREAS AND SPEED LIMITS AS INDICATED INSIDE CIRCLE.	BRUSH CREEK SKI AREA THESE MARKERS GIVE INFORMATION SUCH AS NAMES, DISTANCES, AND ACTIVITIES PERMITTED.
THIS FLAG INDICATES THAT A DIVER IS BELOW THE SURFACE IN THE AREA MARKED. STAY AWAY.	MOORING BUOY PRIVATELY MAINTAINED.	DO NOT PASS BETWEEN SHORE AND BUOY.

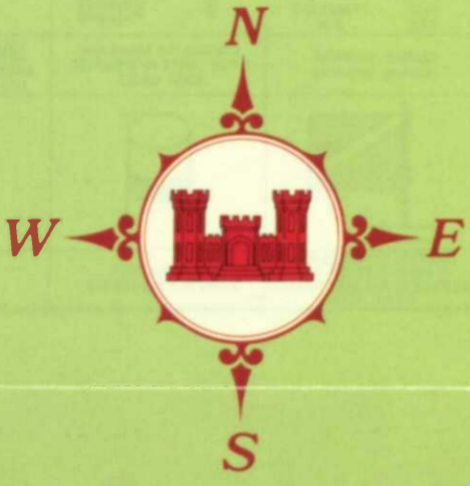


T E X A S C O U N T Y



ROAD MILEAGES TO OPTIMA LAKE

From	Miles
Guymon	23
Liberal, Kan.	36
Woodward	104
Amarillo, Texas	142
Oklahoma City	247
Wichita, Kan.	290
Denver, Colo.	370
Tulsa	315



FACILITIES

	BOAT LAUNCHING RAMP	PICNIC AREA	DESIGNATED CAMPSITES	DRINKING WATER	GROUP SHELTER	RESTROOMS	ELECTRICAL OUTLETS	SWIMMING BEACH	CHANGE HOUSE	GROUP CAMPSITE	TRAILER DUMP STATION
ANGLER POINT F-10	•	•	•	•	•	•	•	•	•	•	•
HARDESTY PARK F-8	•	•	•	•	•	•	•	•	•	•	•
HOOKEE POINT B-10	•	•	•	•	•	•	•	•	•	•	•
OVERLOOK PARK F-9	•	•	•	•	•	•	•	•	•	•	•
PRAIRIE DOG POINT D-8	•	•	•	•	•	•	•	•	•	•	•

LOCATION

ANGLER POINT F-10	•
HARDESTY PARK F-8	•
HOOKEE POINT B-10	•
OVERLOOK PARK F-9	•
PRAIRIE DOG POINT D-8	•

LEGEND

- CONSERVATION POOL EL. 2763.5
- FLOOD CONTROL POOL EL. 2779.0
- PROJECT BOUNDARY
- PARK AREA
- STATE GAME MANAGEMENT AREA
- OPTIMA NATIONAL WILDLIFE REFUGE
- STATE HIGHWAY
- PAVED ROAD
- GRAVELED ROAD
- PARK AREA ROAD
- MILEAGES
- Fish Shelter
- Old Channel

Optima Lake

OKLAHOMA

DEPARTMENT OF THE ARMY
TULSA DISTRICT, CORPS OF ENGINEERS
"THE CORPS CARES"

