DES LACS NATIONAL WILDLIFE REFUGE

Kenmare, North Dakota

ANNUAL NARRATIVE REPORT

Calendar Year 1989

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

REVIEW AND APPROVALS

DES LACS NATIONAL WILDLIFE REFUGE
Kenmare, North Dakota

ANNUAL NARRATIVE REPORT

Calendar Year 1989

Refuge Manager — Date: 9/24/90

Project Leader — Date: 8/31/90

Refuge Supervisor Review — Date: 9.29.90

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INTRODUCTION

"Des Lacs", a quote from the French trappers, means "the lakes". Des Lacs National Wildlife Refuge is actually a 28-mile long corridor of river valleys and bordering uplands with three natural lakes. The refuge is located in northwest North Dakota approximately 50 miles north of Minot and 90 miles east of the Montana state line, in Burke and Ward Counties. The topography is characterized by adjacent grass and brush uplands descending one hundred feet into the river valley, interspersed with numerous wooded draws and coulees. The 19,544 acre refuge includes 13,600 acres of upland, 5,014 acres of open water, 700 acres of marsh, and 230 acres of wooded draws and coulees.

The refuge was established during the "dust bowl era" (1935). Reclamation of waterfowl habitat was accomplished by the Civilian Conservation Corps. Construction of dikes and water control structures created more permanent large pools and several smaller marshes in a region historically known for high numbers of nesting waterfowl. Hence, primary objectives of the refuge are waterfowl production and protection, and enhancement of migratory bird habitat. An additional objective is to restore and maintain prairie vegetation.

Management on the refuge is complicated by unpredictable water movement related to the flat topography of the valley. The original, natural lakes were formed as a result of high ground in the valley which prevented water from flowing out once it had receded to a critical point. When water levels are high, water travels south toward the Souris River. However, a majority of the Des Lacs water flows from adjacent coulees, not from upstream sources in Canada. If coulee water flows are low to the north, water can flow north. Water builds very little head going either direction making water manipulation more difficult than at other riverine refuge.

A. HIGHLIGHTS

- Migrant snow goose numbers reached 251,000 in mid-October and remained high into November. Milder than normal fall weather resulted in lower hunter success. However, the first "Goosefest" was termed a "success." (See G.3.a.)

- Three species of flea beetles were released on the refuge in an effort to find non-chemical alternatives to the control of leafy spurge. (See F.10.)

- A Congressional report was published which featured the Des Lacs NWR as one of the 16 case studies selected by the General Accounting Office to demonstrate incompatible use of National Wildlife Refuges. (See H.16.)

- The draft long-range water management plan was released for public review and comment. (See D.2.)

- Doris Huwe retired on June 16 after nearly 6 years at the Des Lacs NWR Complex headquarters. Edith Goettle arrived at the complex on July 2 to replace Doris. (See E.1.)

- Mallards successfully nested in holes drilled in flax bales while Canada geese nested on the top. (See G.3.b.)

- Tedd Gutzke, Assistant Project Leader, was a member of the Shoreline Cleanup Assessment Team for 34 days during August-September, on the Alaskan Oilspill. (See H.7.)

- Draft public use plan submitted to Regional Office on November 13. (See H.1.)

B. CLIMATIC CONDITIONS

Figure 1. Climatic Conditions, 1989

Month	TEMPERATURES		PRECIPITATION		
	Max	Min	Snow	Precip	Average
January	43	-39	37.2	4.26	0.46
February	42	-34	2.5	.20	0.45
March	52	-18	3.5	.44	0.68
April	81	15		.82	1.16
May	84	24		.94	1.99
June	91	33		2.87	3.27
July	100	52		.39	2.16
August	104	39		.88	1.86
September	93	29	T	1.60	1.59
October	77	15	T	.79	0.92
November	61	- 8	6.0	.57	0.53
December	42	-34	.7	.06	0.49
TOTALS			49.9	13.82	15.56

DAWN ON A COLD NORTH DAKOTA MORNING IN KENMARE. PHOTO TAKEN FROM REFUGE HEADQUARTERS.
PTF **12/89**

An official National Weather Service station is located at the Des Lacs NWR Complex headquarters and is monitored daily for precipitation and temperature.

Near normal precipitation occurred in 1989 after two years of severely below normal precipitation. January rolled in with record amounts of precipitation giving a wildlife manager reason for optimism about filling many dry wetlands in the spring. But in nine of the remaining 11 months, below average monthly precipitation was recorded.

Soil moisture conditions were extremely dry. Much of the snow melt went directly into the soil leaving little runoff to rejuvenate wetlands.

Runoff brought some of the lower units (4,5,6,8) to planned spring time levels. The Upper Des Lacs Lake did not receive much spring runoff.

During June, several timely rains averted total disaster for area farmers. Although this year's crops were below normal, a major cropping disaster could have occurred without the June rains.

A generally mild fall occurred. On November 16, a low of -6° moved the last migratory snow geese south.

Looking in the crystal ball for 1990 and beyond, several years of

substantially above precipitation levels will be needed to get area wetlands rejuvenated.

D. PLANNING

2. Management Plan

The draft long-range water management plan was completed in September after many preliminary drafts and months of work. After being reviewed by the RO, the plan was approved for public review and comment on October 11. Announcements were published in the Kenmare News, Burke County Tribune, and the Minot Daily News about the plan and its availability. Comments were solicited from October 13 to November 13 (more in Section D.3).

The draft public use plan was submitted to RO on November 13, 1989. The plan is an ambitious attempt to upgrade existing facilities and to implement new ones. To implement this plan, $263,000 is needed over the next four years. Figure 2 is a breakdown and schedule of implementation.

Figure 2. Schedule of Implementation, Upgrade of Facilities Des Lacs NWR

Location	Item	Cost	Date
Visitor Contact Area HQ	Install Display Cabinets	$ 15,000	FY90
Visitor Contact Area HQ	Information Panels	3,000	FY90
Visitor Contact Area HQ	Touch Table, Artwork	2,000	FY90
Environmental Education	EE Site	5,000	FY90/91
Auto Tour Route	Rehab Existing Road	30,000	FY90/91
Auto Tour Route	Construct Turnouts	10,000	FY90/91
Auto Tour Route	Informational Signs	10,000	FY91
Auto Tour Route	Tour Leaflet	2,000	FY91
Grouse Blind	Construct Blind	1,000	FY91
Blind Parking	Parking Lot and Dispenser	2,000	FY91
Grouse Blind	Leaflet	2,000	FY91
Taskers Coulee	Rehabilitation	10,000	FY91
Taskers Coulee	Kiosk, Displays	5,000	FY91
Taskers Coulee	Leaflet	2,000	FY91
Canada Goose Hiking Trail	Informational Signs	10,000	FY91
Taskers Coulee	Interpretive Trails	10,000	FY92
Observation Point	Kiosk, Panels	10,000	FY92
Observation Point	Rehabilitation	3,000	FY92
Old Lake Drive	Construct Turnouts	10,000	FY92
Old Lake Drive	Informational Signs	10,000	FY92
Old Lake Drive	Tour Leaflet	2,000	FY92
Old Lake Drive	Observation Platform	10,000	FY92
Kenmare Turnout	Parking Area	2,000	FY92
Kenmare Turnout	Boardwalk	5,000	FY92
Kenmare Turnout	Observation Platform	10,000	FY92
Boating Road Drive	Road Improvements	50,000	FY93
Boating Road Drive	Construct Turnouts	10,000	FY93
Boating Road Drive	Tour Leaflet	2,000	FY93
Boating Area Site	Develop Canoe Route	20,000	FY93

Current public use of the refuge is approximately 5,000 individuals per year, many of whom are hunters.

3. Public Participation

For the most part, 1989 was an extremely quiet year compared to what has occurred in the past year. In June, a permit to clean out 8,000 feet of the Des Lacs River channel between Pools 2 and 4 was submitted to the U. S. Army Corps of Engineers and various other state agencies. A public review period for written comments was held from August 18 through September 18, 1989. No comments were received; and in November, a permit was issued.

The permit application took approximately five months. This is still too long but considerably shorter than the 18 months needed for the Units 5 and 6 cleanout.

The Des Lacs NWR Communications Council which began in 1988 continued to meet throughout the year. Attendance at some of the meetings was lacking; this may have been due to a lack of any major controversy. The group presently consists of nine people from the Bowbells-Kenmare area. The members are:

Ron Freed	Bowbells, North Dakota
Greg Bommelman Vice President	Donnybrook, North Dakota
Alice Sand	Kenmare, North Dakota
Arlen Gartner	Kenmare, North Dakota
Roger Ness	Kenmare, North Dakota
Dave Colby President	Kenmare, North Dakota
Jim Rodin	Kenmare, North Dakota
Keith Melby	Coteau, North Dakota
Don Brewster Secretary	Bowbells, North Dakota

DEL PIERCE, PROJECT LEADER, POINTS OUT TO DES LACS COMMUNICATIONS COUNCIL MEMBERS VEGETATION GROWTH STIMULATED FROM LOWER WATER LEVELS ON THE MIDDLE DES LACS LAKE.
PTF *8/89*

The draft long-range water management plan, released for public comment from October 13 to November 13, revived the Save-the-Lake Committee which in turn generated limited public controversy in the area. In an effort to address these concerns, Project Leader Pierce and Assistant Project Leader Gutzke met with Congressman Dorgan and Senators Burdick and Conrad Aides in late November in Bismarck to discuss the ramifications of the long-range water management plan and other refuge matters. The result of this was the decision to conduct a public informational meeting in January 1990. It is hoped that all the past controversy can be put to rest and the refuge staff can return to managing the refuge for the main benefit of waterfowl.

5. Research and Investigations

A. Incompatible Uses

In September, the General Accounting Office released a report to Congress on the National Wildlife Refuges called "Continuing Problems with Incompatible Uses Call for Bold Action." Quoting briefly from the report:

> "...National wildlife refuges are frequently not the pristine wildlife sanctuaries implied by their name. While the refuges serve their primary purpose by providing habitat and safe haven for wildlife, virtually all refuges also host many other nonwildlife-related uses. According to refuge managers, managing these secondary uses such as public recreation, mining, and grazing is increasingly diverting management attention from the professional wildlife management functions that refuge staff have been trained to perform. Moreover, despite the requirement that only compatible secondary activities be performed, refuge managers report that activities they consider harmful to wildlife resources (such as power boating and off-road vehicles) are occurring on nearly 60 percent of the wildlife refuges.
>
> Harmful secondary uses of refuges are occurring for two primary reasons. First, on many refuges FWS has allowed the uses in response to pressure from local public or economic interests. Second, on other refuges FWS has not been able to control the harmful uses because it does not have full ownership of, or control over, refuge lands. Because FWS does not identify the performance potential of each refuge in fulfilling its wildlife enhancement mission, a precise assessment of the overall impact of these harmful secondary uses cannot be made. However, on the basis of refuge manager responses to a GAO questionnaire and uses detailed scrutiny of 16 refuges, GAO believes that many of these uses are reducing the ability of refuges to serve their primary purpose..."

The Des Lacs NWR was one of the 16 refuges that received "detailed scrutiny" by the GAO. The major incompatible uses at Des Lacs were power boating and water skiing which directly disturb waterfowl. At the time of writing this narrative, no change in administrative policy has been directed to the refuge. However, the special use permit with the town of Kenmare which allows water skiing on the refuge expired in 1989. Refuge staff does <u>not</u> plan on renewing the permit.

B. Souris River Basin Contaminant Study

Fish and Wildlife Enhancement (FWE) Biologist Al Ludden continued a comprehensive study to determine present levels of organochlorines, polychlorinated biphenyl (PCB) petroleum hydrocarbons, and trace elements in the Souris River Basin, North Dakota.

Refuge staff assisted Mr. Ludden with collection of lake bottom sediment samples, local fish samples, and locally raised full-grown coot chicks or, in the absence of coot chicks, ducklings. The livers of the coots or ducklings were used to determine trace elements while whole carcasses of fish and birds were used to determine other contaminants.

Base line contaminant information study was continued. Refuge staff analyzed water samples to be for dissolved oxygen (DO_2), alkalinity,

hardness, turbidity, pH, temperature, and conductivity.

These studies, started in 1987, will hopefully have some results available by next year.

C. Des Lacs River Survey

Region 6 Land Surveyors Pat Carson and Bruce Mortenson spent several days determining exact levels of the Des Lacs River channel, beginning in Unit 2 and ending in the Middle Des Lacs Lake. This survey was used to determine the best route for the channel cleanout and to determine total cubic yards of material to be removed.

E. ADMINISTRATION

1. Personnel

		Station	
1.	Del Pierce, Project Leader, GS-12	Complex H.Q.	PFT
2.	Tedd Gutzke, Asst. Project Leader, GS-11	Complex H.Q.	PFT
3.	Tim Kessler, Refuge Manager, GS-11	Crosby WMD	PFT
4.	Karen Smith, Refuge Manager, GS-9	Lostwood NWR	PFT
5.	Peter Finley, Refuge Manager, GS-9	Des Lacs NWR	PFT
6.	Dave Gillund, Refuge Manager, GS-7	Lostwood WMD	PFT
7.	Molly Hansen, Refuge Assistant, GS-6	Complex H.Q.	PFT
8.	Doris Huwe, Clerk-Typist, GS-4 (Retired: 6-16-89)	Complex H.Q.	PPT
9.	Edith Goettle, Clerk-Typist, GS-4 (EOD: 7-1-89)	Complex H.Q.	PPT

10.	Gerald Felch, Engineering Equipment Operator, Training Leader, WL-9	Des Lacs NWR	PFT
11.	Dave Gins, Maintenance Worker, WG-8	Des Lacs NWR	PFT
12.	Toby Placek, Bio. Technician, GS-7	Crosby WMD	PFT
13.	Lowell Vaage, Maint. Worker, WG-8	Lostwood WMD	PFT
14.	John Stewart, Auto Mechanic, WG-10	Lostwood NWR	PFT
15.	Brad Jacobs, Biological Aide, GS-3	Crosby WMD	TFT
16.	Robert Murphy, Biological Technician GS-7	Lostwood NWR	TFT
17.	Tim Zachmeier, Biological Aide, GS-4	Des Lacs NWR	TFT
18.	Wendy Wilson, Biological Aide, GS-3	Lostwood NWR	TFT
19.	Sean Lucy, YCC, 6-5-89 to 8-18-89	Lostwood NWR	
20.	Rebecca Gutzke, YCC, 6-5-89 to 7-28-89	Des Lacs NWR	
21.	Carin Shoemaker, YCC, 5-30-89 to 8-18-89	Lostwood WMD	
22.	Mike Green, Volunteer, 5-23-89 to 8-8-89		PT*
23.	Rose Green, Volunteer, 5-23-89 to 8-8-89		PT*
24.	Scott Zacharias, Volunteer, 6-27-89 to 8-31-89		FT**
25.	Denise Kufchak, Volunteer, 5-22-89 to 8-11-89		FT**
26.	Tracy Feland, Volunteer, 5-22-89 to 8-11-89		FT**
27.	Dan Spuhler, Volunteer, 5-22-89 to 6-30-89		FT**
28.	Dan Peterson, Volunteer, 5-18-89 to 8-19-89		FT**

* 10-30 hours per week
* * 40+ hours per week

Personnel Actions, Permanent Employees, Des Lacs NWR Complex:

Jerry Felch was promoted from Heavy Mobile Equipment Mechanic WG-10 to Engineering Equipment Operator, Training Leader, WL-9 on January 15, 1989.

John Stewart was promoted from Maintenance Worker WG-8 to Automotive Mechanic WG-10 on 8-13-89.

Toby Placek was promoted from Biological Technician GS-6 to Biological Technician GS-7 on 10-8-89.

Dave Gillund was promoted from Refuge Manager GS-5 to Refuge Manager GS-7 on 11-5-89.

Doris Huwe retired from the Clerk-Typist GS-4 position on 6-16-89. Doris had worked at the complex for nearly six years.

Edith Goettle transferred from the 5th Bombardment Wing at Minot Air Force Base where she was a Secretary (Stenography) GS-6, full-time, to the Clerk-Typist GS-4 position at the Des Lacs NWR Complex.

4. Volunteer Program

The skills of Denise Kufchak, Tracy Feland, and Scott Zacharias were utilized as volunteers during the field season. Denise and Tracy are attending North Dakota State University at Bottineau, North Dakota. Scott is going to school at North Dakota State College of Science at Wahpeton, North Dakota, taking up plumbing and electrical. With the variety of skills these individuals possessed, many different projects were started and completed. Denise and Tracy did a host of biological tasks, e.g., brood counts, bluebird nesting surveys, nest dragging, and Canadian goose and mallard nesting structure surveys. They also did a variety of maintenance tasks, such as mowing refuge grounds, hiking trail construction, painting, and road maintenance.

Scott did some biological tasks, but he was mostly utilized to do maintenance jobs that required more operator skill, e.g., leafy spurge spraying and operating a bulldozer, front-end loader and dump truck.

All individuals received $12.00 per day in expenses. Scott lived in Kenmare while Denise and Tracy stayed at the refuge bunkhouse.

DES LACS NWR COMPLEX STAFF PHOTO. SHOWN, LEFT TO RIGHT, ARE: DEL PIERCE, PROJECT LEADER; MOLLY HANSEN, REFUGE ASSISTANT; EDITH GOETTLE, CLERK-TYPIST; TEDD GUTZKE, ASSISTANT PROJECT LEADER. NOT PICTURED IS DORIS HUWE, CLERK-TYPIST.
KJ *8/90*

DES LACS REFUGE STAFF-1989, FROM LEFT TO RIGHT:
DAVE GINS, TIM ZACHMEIER, PETE FINLEY, SCOTT ZACHARIAS, GERALD FELCH
PTF *12/89*

5. Funding

Figure 3. Operational Funding, Des Lacs Complex

FY	BASE O&M	ARMMS, RESOURCE, PROB-LEMS OR FLEX	MISC	EXP FOR SALE	QTRS	YCC	TOTAL
89	534.0	61.5	2.0	12.0	4.5*	4.5*	619.0
88	372.0	229.0	10.0	12.0	5.4	4.5	632.9
87	399.0	139.0	6.8	12.0	5.4	4.5	566.8
86	405.0	115.1	--	13.0	6.6	11.4	551.1
85	462.5	156.0	--	13.0	8.0	11.2	650.7
* - ESTIMATE							

In addition to operational funds, cooperative funding was received from Fish and Wildlife Enhancement for pollution sampling, the North Dakota Wetland Habitat Office for FmHA surveys and extension projects, and the fire fund for pre-suppression and suppression activities.

6. Safety

No lost time accidents occurred with Service personnel on the Des Lacs NWR Complex in 1989.

All fire extinguishers were checked, recharged, and replaced, where necessary.

Finley and Gillund completed course work and were recertified as Commercial Pesticide applicators.

Kessler and Placek completed CPR training in Crosby, North Dakota.

Jerry Felch is a Certified Heavy Equipment Instructor, and he certified the Complex maintenance and management staff on heavy equipment during the year.

On November 10, opening day of deer hunting season, a fatal hunting accident occurred on Lostwood NWR. Kerry Mork was hunting with his wife, who had very little hunting experience. The wife had shot at a deer using a .223 semi-automatic rifle and missed. Her husband, who was kneeling in front of her told her to fire again. As she did, he stood up and was struck in the back of the head with the shot. The Kenmare Rescue Squad, Burke County Sheriff, and refuge personnel responded to the accident; but Mr. Mork was pronounced dead at the scene. Kerry was an experienced hunter who had hunted Lostwood NWR for at least ten years. This terribly sad incident put a damper on the entire hunting season.

KENMARE AND BOWBELLS RURAL FIRE DEPARTMENTS PARTICIPATED IN FIRE TRAINING HELD ON THE REFUGE IN JUNE.
PTF *6/89*

F. HABITAT MANAGEMENT

1. General

Habitat management at the Des Lacs NWR was synonymous with upland management during much of the 50 year refuge history. Water management for wildlife was, and still is, difficult due to the relatively steep banks of the deep lakes and the poor gravity flow through refuge wetlands.

During the 1970s, refuge staff reduced season-long cattle grazing until their numbers were insignificant if not absent from the refuge. Prescribed burns and cooperative farming agreements were the primary means for habitat development in the early 1980s. More recently, prescribed burning has been used on uplands to remove litter from extremely decadent grasslands, but fire has not improved refuge lands over the past ten years. This is especially true in 1988 and again 1989 when extreme dry conditions made prescribed burns almost impossible. Other management is needed, and possibly grazing programs will be expanded. (See F-7 for grazing.)

In 1985, refuge staff made proposals to lower average water levels and

fluctuate water levels annually to enhance refuge wetlands. The controversy that followed has engaged many staff hours since that time, and other habitat management projects have suffered from lack of manpower.

The northwest portion of North Dakota continued on a dry cycle in 1989. The low rainfall and high evaporation dried up small wetlands, and large wetlands hit the lowest levels in recent years. Upper refuge pools received virtually no spring runoff. By late summer, these deeper units were producing submergent plant growth suitable for increased waterfowl use. The lower units (3,4,5,6 & 8) received enough water to fill to planned management levels.

2. Wetlands

The main features of the Des Lacs Refuge are the large water areas formed from the natural riverine topography of the Des Lacs River (see maps). There are six main water units and three major coulee impoundments within the refuge, ranging in size from the 3,000-acre Unit 1 to the 45-acre Niobe impoundment (Unit 3). Most of the water entering the refuge originates as runoff from surrounding farmland and is fed into the pools via numerous coulees. The Des Lacs River itself originates a few miles north in Canada and is also fed by runoff.

RUNOFF SURROUNDS NEWLY CONSTRUCTED WATERFOWL NESTING ISLANDS.
PTF *4/89*

The area's small wetlands were again in terrible shape in 1989 going into spring with most small wetlands dry and unsuitable for waterfowl. A significant amount of precipitation is needed for several years if the wetlands are going to recover.

Spring runoff filled all but one the lower units (3,4,5,6 & 8) to planned water management levels. Units 5 and 6 were subsequently lowered below planned levels to prevent erosion of nesting islands constructed too late in 1988 to get rock riprapped.

Unit 7 was drawn down purposely to facilitate the building of nesting islands by Ducks Unlimited. The project was submitted to DU early in the year. Although the project never was formally approved by DU, it was never disapproved. Since a project of this scope was approved by DU one year earlier the thought was that this one would be approved also. With this in mind, plus one year's worth of work getting all the necessary permits, all involved thought this project would be approved and the water control structure opened up. To make a long story short, the project was not approved; and the unit was lowered for nothing. Oh well, maybe next year. To scrap the project would be a shame, especially after the time-consuming task of obtaining all the required permits and approvals.

Water levels in Unit 1 did not come in contact with the Unit 1 structure. Spring levels in Unit 2 were approximately two feet lower than 1983-1988 average levels. This however is still one foot higher then objective levels in the Long Range Management Plan. Because of the lower water level, virtually no power boating occurred.

3. Forests

Des Lacs has an abundance of wooded coulees and slopes. Many upland areas are being taken over by trees thus reducing the grassland acres and eliminating waterfowl nesting habitat. In an attempt to control forest areas, woodcutting by permit was allowed. In the past, area residents were concerned about the cutting of trees on the landing road. Anyone who was interested in cutting firewood during the normal fall cutting time was issued a woodcutting permit. No complaints were received from woodcutters or non-woodcutters.

4. Croplands

A total of 381 acres were farmed on the refuge this year by four cooperative farmers. The farmed units are part of an ongoing agreement to reestablish nesting cover on these units.

Cooperator Floyd Bryan had four fields totalling 235 acres. Floyd broke out one more field this year which is 46 acres in size. His yields, both grain and straw, were low this year due to the drought. One 96-acre field that was expected to yield at least 100 flax bales for nesting structures

yielded 19 bales.

The other cooperators who have farmed the refuge for years are:

Ron Freed cropped two fields for 61 acres and broke out two more fields totaling 56 acres.

Eugene Jensen farmed 30 and broke out four more fields totaling 135 acres.

Duane Kolbo seeded down 45 acres of DNC with his small grain crop.

This year, in an effort to keep all the co-op farmers "honest," two new farmers were given opportunities to farm on the refuge. Rolf Aufforth will break out a field of 40 acres while Jim Schoemer will also break out one field with 40 acres in it.

6. Other Habitat

a. Private Lands

Refuge staff initiated several hundred contacts with private landowners with the objective of interesting the private landowners in developing or improving wildlife habitat on land they owned or controlled. Most landowners were lukewarm to the idea of FWS employees stopping by to "help" them (The old, "Hi, I'm from the Federal Government, and I am here to help you.")

Despite initial hesitation of landowners to accept FWS ideas, several "key" farmers did start and complete projects. Projects completed consisted of waterfowl nesting islands, pair ponds, wetland restoration and creation, cattle watering ponds, and cooperative grazing systems. To date, most of the private lands work has been done on private land relatively close to the refuge.

In the future, a significant workload can be developed on private lands. This is good for wildlife but bad for refuges. Wildlife habitat work should be done on private lands, but it should not be done at the expense of refuges. Private lands work should be done by additional staff and not those who are dedicated to protecting and enhancing refuges.

CONSTRUCTION OF WETLANDS, PONDS ON PRIVATE LANDS. A CONTRACTOR WAS HIRED TO DO THE WORK. SOMETIMES FWS EQUIPMENT WILL DO THE WORK. IN THE ABOVE PICTURES, THE REFUGE BOUNDARY/FENCE LINE CAN BE SEEN IN THE IMMEDIATE BACKGROUND.

PTF 11/89

7. Grazing

Des Lacs Refuge allowed season-long grazing for many years. Season-long grazing was terminated in the 1970s because of its detrimental effects on waterfowl nesting cover. Since 1985, little or no grazing has occurred on the refuge.

In 1989, a limited-term, short-duration grazing system was applied to 1600 acres on the refuge. This system extensively utilized non-permanent electric fence to move cattle at pre-determined intervals in an effort to maximize forage utilization while minimizing any possible long-term resource damages.

Ranchers grazing the refuge in 1989 were:

COOPERATOR	AUMs
Randy Jensen	20
Eugene Jensen	135
Jack Munch	162
Steve Norrie	52
Jeff Duerre	164
Greg Ankenbauer	140
Floyd Bryan	53
Jim Shoemer	110
TOTAL AUMs	836

IN 1989, CATTLE GRAZING WAS UTILIZED TO REJUVENATE DECADENT GRASS STANDS. BUT AS IN THE 60s, CATTLE DIED FROM DRINKING LAKE WATER. ALGAE GROWTH, CONCENTRATED BY CERTAIN WINDS IN THE NIGHT OR WRONG BAYS, LEADS TO CERTAIN DEATH IN CATTLE. HARD TO BELIEVE THAT SOME PEOPLE WANT TO WATER SKI IN THIS STUFF.
PTF 8/89

8. Haying

An agreement between the Governor of North Dakota and the Fish and Wildlife Service mandates that refuges are to provide emergency hay to farmers in counties declared emergency areas. During 1989, the extremely hot weather and drought triggered an emergency hay situation in Burke and Ward Counties. Hay was offered to all farmers/ranchers who requested it. All hayland offered for emergency haying was harvested. A total of 423 acres were hayed. These were mostly old DNC fields which needed haying to rejuvenate them.

The program benefited both the refuge and the farmer: fields got rejuvenated, the farmers received much needed hay, and the North Dakota political entities made hay as well. Next year may be different. Most of the grassland that can be cut without compromising wildlife habitat has been cut. If emergency haying is authorized next year, the refuge may not have any hay to cut.

Farmers haying the refuge;

Jack Aufforth	26 acres
Ron Freed	70 acres
Rolf Aufforth	25 acres
Eugene Jensen	60 acres
Floyd Bryan	40 acres
Randy Jensen	30 acres
Joe Crider	33 acres
Jack Munch	65 acres
Otto Folkers	35 acres
Jim Schoemer	40 acres

9. Fire Management

a. 1989 Prescribed burns

Due to the drought and high fire danger, no prescribed burning was conducted in 1989.

b. 1989 Wildfires

On July 5, a lightning-caused wildfire was observed burning on the refuge. An immediate response by the Des Lacs crew kept the fire limited to under 10 acres. The fire occurred on both FWS and private land. The Bowbells RFD responded to the fire on the private land.

10. Pest Control

This refuge has one of the worst leafy spurge problems of any refuge in Region 6 (1,000 plus acres). Past efforts to control this weed using 2,4-D/Tordon have not contained its spread. The steep, hilly terrain makes ground spraying difficult on most of the acreage. Several times in past years helicopters were utilized to spray spurge, but results did not justify the costs.

During 1989, refuge staff only sprayed spurge that was near our boundary with private land with 2,4-D/Tordon. A quick, high profile response was maintained to any complaints or requests to spray other refuge spurge. However, this only amounted to a one time spraying of about 50 acres. The problem at Des Lacs is simply larger than funds, personnel and equipment can handle.

Biological control on leafy spurge began in earnest when the refuge entered a Memorandum of Understanding with USDA/APHIS. The main goal of APHIS is to establish field insectaries in the U.S. The hope is that the insects will proliferate at these sites to the point where they can be harvested and released into unattacked spurge populations. This will provide a domestic source of spurge control agents as opposed to foreign collection and importation. The refuge just wants to control its spurge problem.

By having the refuge participate in this program, the refuge should attain

some control of the spurge problems on the refuge. Also by introduction of the insects into the area, the overall control of spurge by biological efforts will greatly be increased on habitats surrounding the refuge.

BEGINNING SETUP BY LAYING OUT ALUMINUM POLE SUPPORTS.
PTF *5/89*

SUPPORTS IN PLACE.
PTF *5/89*

RELEASE SITE READY FOR INSECTS.
PTF 5/89

Three species of pregnant female flea beetles were released between June 15 and July 13. Species released were: Aphthona nigriscutis, Aphthona cyparissiae, and Aphthona flava. Projections are that each female will lay approximately 250 eggs over the summer. The beetle in the adult stage will attack the leaves of the leafy spurge plant, and in the larval stage, burrow down into the soil and attack the roots of the plant. Here is where the beetles will do the most damage.

The beetles were brought to the U.S. from Hungary. Over the past, three years a number of studies have been performed on the beetle while they were in quarantine. Through this process, the determination has been made the flea beetles will not attack any domestic crops and do not affect humans. The beetles have been used in Canada for the past two years and reports indicate that they are doing a good job of spurge control.

Future biological control efforts will be the release of even more insects to attack the spurge. At least two more species will be released on the refuge in a manner similar to what has already been done. Also, plans are currently in the making to test Canadian beetles; and there is a possibility of getting additional insects from them.

A special use permit was developed in December for the 1990 field season to

allow the use of sheep to graze areas of leafy spurge. The plan is to have a shepherd and dogs (at a cost of $2500-$3000 each -- the dogs (not the shepherds) move 400 ewes from spurge patch to spurge patch. Spurge will be grazed twice in an effort to prevent it from going to seed.

The use of Angora goats has proven successful in the past on refuges in North Dakota. These animals are not found in an abundance in North Dakota. Next year, the refuge will experiment with sheep to see if the desired results can be attained. If Angora goats can be found, they will be used for spurge control. The results from both the sheep and goats will then be compared.

A summary of weed control efforts was sent to Burke and Ward County Commissioners.

RELEASE SITE FOR LEAFY SPURGE-EATING INSECTS. THE FABRIC WAS TAKEN DOWN OVER WINTER AND WILL BE PUT UP WITH THE ADVENT OF WARMER WEATHER. THE INSECTS WINTER BELOW GROUND LEVEL.

PTF 5/89

G. WILDLIFE

1. Wildlife Diversity

Diversity in wildlife habitat on Des Lacs ranges from freshwater marsh to mixed grass prairie and from cropland to wooded slopes and coulees. This variety of habitat attracts a diversity of resident wildlife as well as migratory birds. The Souris Loop bird list which includes Des Lacs Refuge contains 290 species of birds and is attached to the back cover.

2. Endangered and/or Threatened Species

Bald eagles were fairly common during periods of significant fall snow goose populations. Many area residents reported eagle sightings in early November.

3. Waterfowl

a. Geese

The spring migration of Canada geese followed the mild weather as two birds returned on March 13th. Canadas are typically one of the earliest arrivals on the refuge. The first arriving geese stake claims to the best looking flax nesting bales available. The peak migration of other Canadian geese as well as white-fronted geese occurred during mid- to late March.

An estimated 300 Giant Canada geese were present on the refuge by late summer. The southward migration of other Canadas began in late September. An average of 2000-4000 Canadas were present on the refuge from early October through early December with a peak of nearly 10,000. No Canada geese were observed during the Christmas bird count on December 18.

Giant Canada geese had a successful nesting year in 1989. An estimated 125 goslings were raised to flight stage.

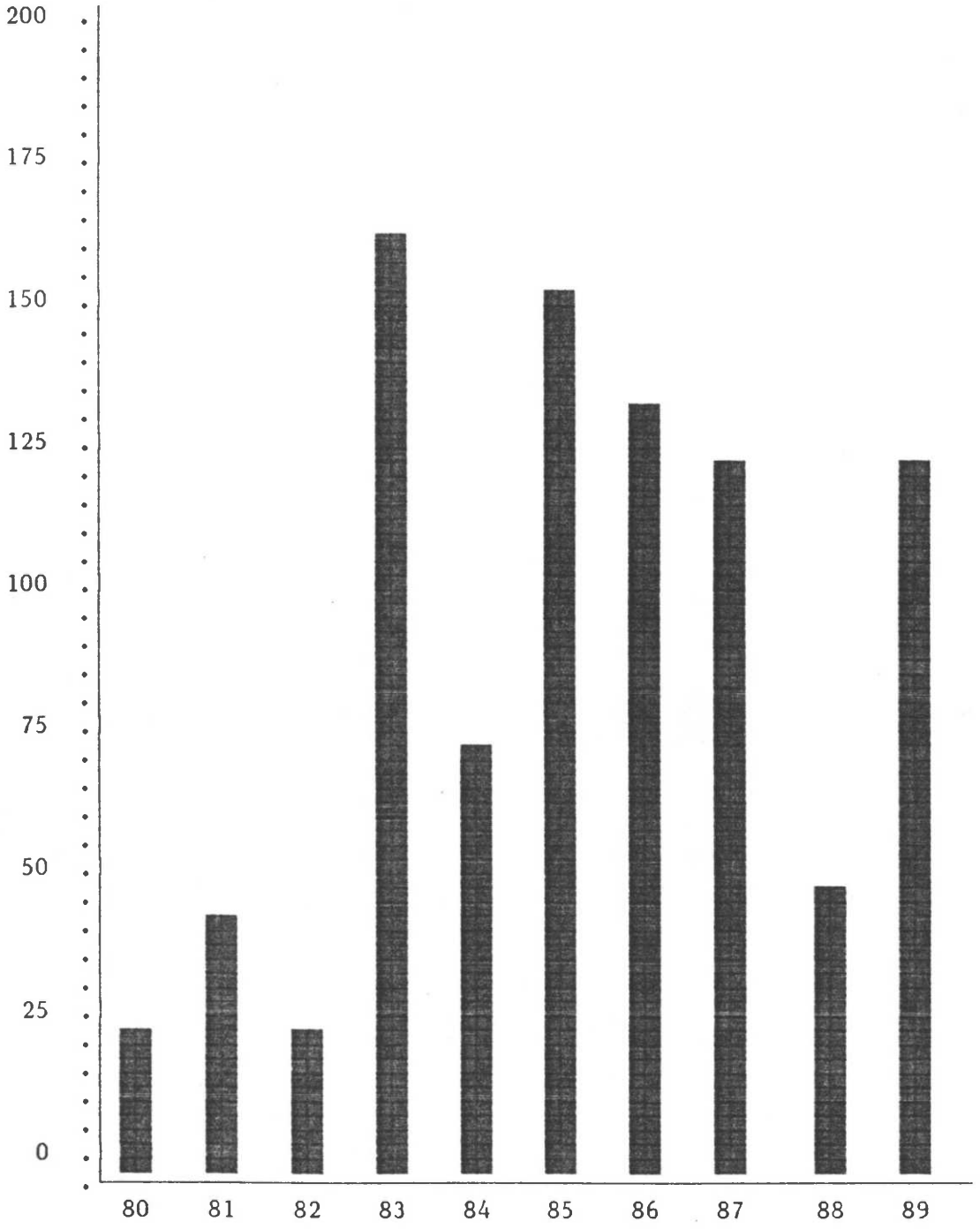


FIGURE 4. GIANT CANADA GOOSE PRODUCTION AT DES LACS NWR, 1980-89

The Giant Canadian Geese were reintroduced on the Des Lacs refuge in 1973. At that time 156 birds were released. In 1979 and 1980 144 more birds were released due to over harvest of the originally released birds. The second release also necessitated an area closure to protect and enhance a viable nesting population. The original closure consisted of 172 square miles

around the village of Kenmare. In 1986 this area was reduced in size to 28 square miles.

On April 11, a public meeting was held in Kenmare to discuss the area closed to Canada Goose hunting. Mike Johnson, Migratory Game Bird Management Supervisor for the North Dakota Fish and Game Department gave a presentation explaining why a closure area is needed.

The consensus of the group was (many attending were landowners in the closed area) that the closed area should be eliminated. Therefore for 1989, there were no areas closed to the hunting of the geese. After the season, landowners in the previously closed area were contacted for personal evaluations of the goose season. Most felt that the nesting population was unharmed. In the spring of 1990, returning goose numbers will be evaluated to determine if, in fact, they can sustain a continued hunting season.

PROVIDING FLAX NESTING BALES FOR THE REFUGE AND PRIVATE LAND IS "BIG BUSINESS" AND NECESSITATES BIG EQUIPMENT.
PTF *9/89*

Sixty large round flax straw bales were obtained from cooperative farming agreements. These bales are banded with steel or nylon strapping material. The bands give the bale a longer useful life in the marsh environment. The bands are also needed to keep the bale from coming apart when holes are drilled in the bale for duck nesting cavities. Although bale use on Des Lacs has not increased substantially for several years, all bales located

in water were used. In 1989, deteriorated bales were replaced and a few new bales were placed in favorable locations. Over half of the bales were placed on private lands in the Lostwood WMD as a cooperative effort between the Des Lacs Refuge Complex and cooperating landowners interested in actively promoting increased Canada goose populations.

NESTING BALES ARE PLACED ON FROZEN MARSH SURFACES DURING WINTER MONTHS. NOTE OLDER NEST BALE IN FRONT AND NEWLY PLACED NEST BALE IN BACKGROUND.
PTF 12/89

Snow geese are observed only in small numbers during spring migration at Des Lacs, although sizeable flocks were seen passing through the area at high altitudes. The peak migration in the Des Lacs area occurred in late March of 1989.

Fall use by snow geese at Des Lacs has changed dramatically over the past 20 years. They have expanded their migrational corridor to include most of northern North Dakota from the Devils Lake area west to the Montana border. Snows were once present only in small numbers (1000 or less) in the fall, but in recent years heavy snow goose use has occurred.

The fall migration began in September. Approximately 50,000 geese were on the refuge by October 1. Numbers peaked at 251,000 on October 24th and remained at that level through early November. Mild fall weather caused most geese to continue a leisurely migration rate as numbers declined slowly through November. There were still 65,000 snow geese on the refuge on November 15.

SNOW GOOSE NUMBERS PEAKED AT 251,000 BIRDS. THE BIRDS VISITED GRAIN FIELDS DURING THE DAY AND RETURNED TO WATER IMPOUNDMENTS ON THE REFUGE AT NIGHT.
PTF *10/89*

All area crops were harvested prior to peak migration, therefore no depredation complaints were received this year. Snow geese feeding on private croplands did provide hunting opportunities, especially for decoy hunters in late October and early November.

Figure 5. Snow goose peak populations

YEAR	POPULATION
1989	251,000
1988	145,000
1987	150,000
1986	102,000
1985	220,000
1984	40,000
1983	45,000
1982	45,000
1981	60,000
1980	45,000
1979	40,000
1978	51,000
1977	45,000
1976	35,000
1975	33,000
1974	233
1973	500
1972	1,500
1971	200
1970	200
1969	0

Again in 1989 as happened for the first time in 1988, many people would walk or drive down to Unit 4 to watch birds. Many others could watch them from their homes. Unit 4 lies adjacent to the village of Kenmare. Many

good comments were received about the snow goose usage of the unit. Numerous people visiting the area had never seen large numbers of geese nearby before and thoroughly enjoyed them.

SNOW GEESE ON UNIT #4 WITH THE VILLAGE OF KENMARE IN THE BACKGROUND.
PTF 10/89

Whenever possible we made mention that the reason for their presence was the low water, something we had tried to provide the birds for the past four years.

The first Kenmare GooseFest was held in 1989. This event was sponsored by the Kenmare Association of Commerce. The week long event was highlighted by a guest appearance by Bud Grant, former Minnesota Vikings head coach. Bud spent a couple of days hunting in the area and was successful at it! A concern of state and federal law enforcement personnel was the hunting contest with the $4,000 worth of prizes at stake. Contests were held for the largest Canada goose, the largest snow goose, the largest green head, and the longest pheasant tail feather. No increase in hunting violations were noted. This might be attributed to the weather. The weather proved to be uncooperative for good goose hunting. The combination of blue skies, light winds and warm temperatures caused many hunters who came to the area and spent a day or two to leave without geese, despite record numbers of geese on the refuge.

After the GooseFest was over, the Kenmare Association of Commerce sponsored

a landowner appreciation banquet which resulted in a good turnout. Written comments were taken concerning continuing or canceling the event, and if the event was to continue what improvements should be made. The general consensus was however that the event was a success and will occur again next year.

Although the GooseFest has the potential for game violations, it may prove to be a benefit to the refuge. With the potential of not renewing the agreement with Kenmare for power boating, this event may show local business people that the refuge is a positive economic factor in the community. Lower water levels may eliminate power boating/waterskiing but will bring in more hunters and birders.

b. Ducks

The spring duck migration began with the arrival of six common mergansers March 26. These were followed by mallards, American widgeon, pintails, lesser scaup and green-winged teal on March 27.

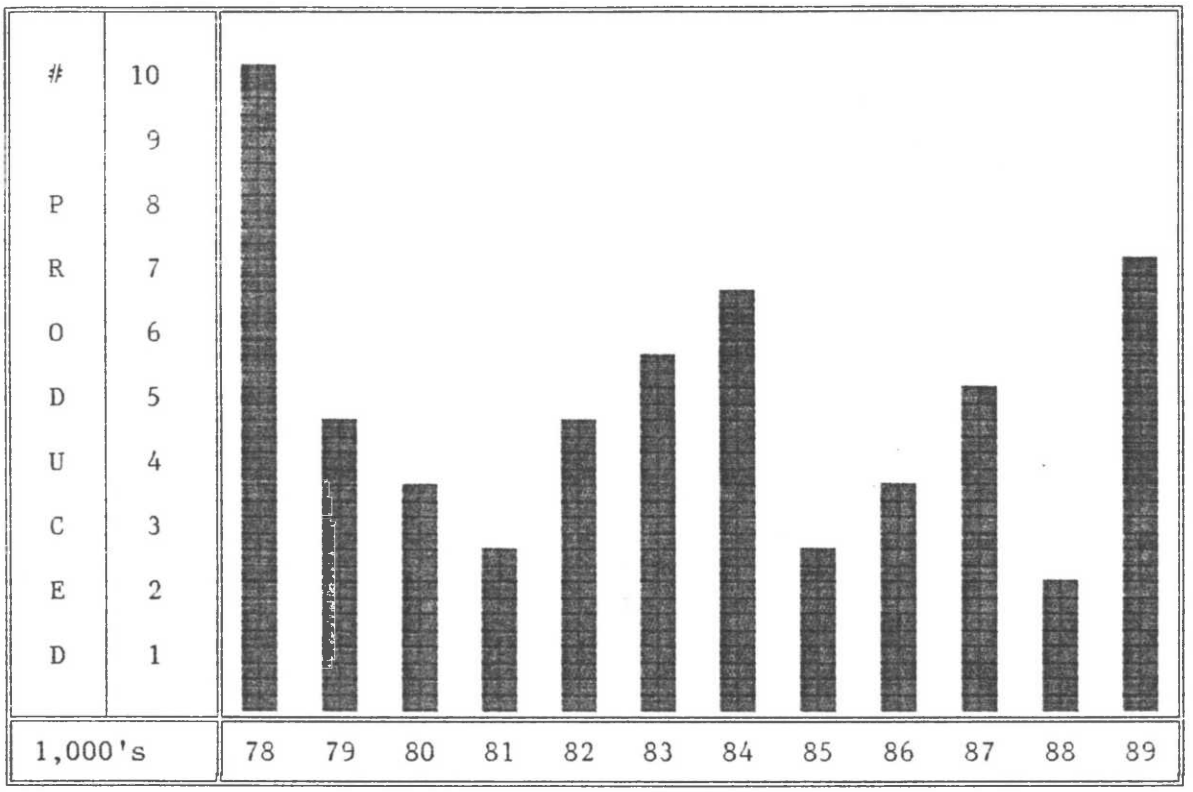
Mallards and gadwalls are the predominant nesting duck species on the Des Lacs Refuge. Each makes up 30% of the total ducks produced in a normal year.

Production in 1989 was substantially up compared to 1988 (2541 vs 7444 or a 293% increase). Figure 6 shows the breakdown of production by species while Figure 7 shows production trends in recent years.

Figure 6. Duck production for 1989

SPECIES	PRODUCTION	% OF TOTAL
Mallard	2304	31
Gadwall	2256	30
Blue-winged Teal	1801	25
Pintail	393	5
American widgeon	173	2
Northern shoveler	220	3
Lesser Scaup	133	2
Canvasback	66	1
Redhead	73	1
TOTAL	7444	100

Figure 7. Duck Production 1978-1989



Nest searching was conducted for the eighth consecutive year. A total of 318 acres were monitored on the refuge consisting of three nest searches beginning on May 12 followed by June 5 and June 30 searches. Fields included areas with different habitat types to determine the site preference by species. Fields selected were dense nesting cover, smooth brome/buckbrush mix, native prairie with interspersed patches of buckbrush and dense stands of buckbrush.

Last year, also a dry year, nest searching of 627 acres yielded 25 nests with a 40% apparent success. This year, nest searching of 318 acres found 38 nests with an apparent success of 55%. One field of buckbrush and brome, 156 acres in size, had 22 nests with an apparent success of 77%! The unsuccessful nests were destroyed by predators.

The refuge has been drilling cavities for duck nesting in flax bales for use primarily by geese. Four holes are drilled in each bale. This year out of 23 bales utilized by geese, five had mallard nesting activity in the cavities drilled in the bales. One bale with no goose nesting activity had a mallard cavity nesting. Out of the five bales with both goose and mallard nesting activity, one had three mallards in it and another had two nesting in it. Mallard nesting success looked to be very good in these bales. No one set of factors could be found for why the mallards picked a certain bale although all had water surrounding the bale with water depth varying from 9 inches to over 3 feet. Some bales had dense vegetation

surrounding them, others less vegetation, and still others were in open water. Next year, more emphasis will be placed on monitoring these cavities.

DUCK NESTING SUCCESS IN CAVITIES OF ROUND BALES LED TO THE DEVELOPMENT OF A LARGER DIAMETER BALE DRILLER. THE NEW ONE IS ATTACHED TO THE TRACTOR WHILE THE OLD ONE IS NEXT TO IT.
PTF **12/89**

Fall duck use at Des Lacs peaked at approximately 50,000 birds. The majority of the birds consisted of a large build up of mallards. This was considerably more birds than last year.

c. Swans

Tundra swans are commonly observed migrants during spring and fall at Des Lacs. Significant numbers of swans, numbering over 500, made use of the sago pondweed growth in Units 4 and 8 during October and November. Approximately 50 swans used the refuge in the spring.

4. Marsh and Water Birds

White pelican populations averaged 500-600 birds throughout the spring and summer. These are non-breeding populations which make use of the abundance flathead minnows found in all refuge pools.

Western grebes were abundant with nearly 100 breeding pairs using the refuge. An estimated 200 young were produced.

Pie-billed grebes produced an estimated 30 young in 1989, but no eared or horned grebe young were observed.

During 1986, double-crested cormorants moved their colony from the boating area to a more peaceful site farther north on the refuge. An estimated 50 young were produced in that year. Nesting cormorants did not return in 1989 and no young were produced. A peak of 300 cormorants were using the refuge in mid-September.

Black-crowned night herons, numbering 20, were seen in marshy areas. No nesting was confirmed.

5. Shorebirds, Gulls, Terns, and Allied Species

Shorebird use continued high in 1989 due to the extensive mudflat habitat associated with low water levels. Shorebirds included dunlin, ruddy turnstone, black-bellied plover, avocets and an abundance of peeps.

Franklin's gulls once again used areas of the refuge in large numbers from August through early September. An estimated 10,000 gulls used the refuge during that time.

6. Raptors

All raptor species common to the prairies of North Dakota are found at Des Lacs. The most common nesting species include red-tailed and Swainson's hawks, northern harriers, and great horned owls. During the fall, bald and golden eagles, ferruginous, rough-legged and Cooper's hawks, as well as prairie falcons are commonly observed. Highlights for the year were a Cooper's hawk nesting near headquarters and another located at Tasker's Coulee.

7. Other Migratory Birds

The annual Christmas Bird Count was completed in conjunction with the Audubon Society. Only four observers were available this year to cover the entire sample area. A total of 25 species and 525 individual birds were reported. No unusual species were sighted.

8. Game Mammals

An estimated 250 deer were on the refuge during the winter months. This caused some depredation problems with farmers bordering the refuge. After a relatively mild winter last year with more deer carrying over this years winter proved less kind. Some winter kill was observed in the deer population. A total of 102 refuge deer gun permits were issued in 1989. In North Dakota if a hunter is issued a refuge permit, the individual must hunt the first 1-1/2 days on the refuge. Approximately 50 deer were taken on the refuge during the rifle season. No deer were known to have been taken by archery hunters although late season archers were treated to some quality trophy hunting.

The area deer population does not appear to be excessively high as reported

elsewhere in North Dakota. Numbers probably declined during the past two years of heavy hunting pressure and three-week seasons.

Moose and elk are occasionally seen in the refuge area, especially during summer and fall.

10. Other Resident Wildlife

Sharp-tailed grouse populations were considerably lower than last year. Figure 8 shows this year's lek counts. Numbers in 1988 were the second highest ever recorded. The drought and high temperatures had a devastating effect on nest and fledgling survival. During the hunting season, few young birds were found; and overall grouse hunting was poor.

Figure 8. Sharp-tailed grouse lek count 1983-89

	1989	1988	1987	1986	1985	1984	1983
Grounds counted	27	27	28	10	18	14	15
Males counted	302	512	567	298	313	244	164
Average/ground	11.2	21.2	20.3	29.8	17.4	17.4	10.9

Gray partridge were also lower than last year's unusually high numbers. The area averaged 6-8 coveys per square mile in optimum habitat.

11. Fisheries Resources

During April of 1985 and 1986, a total of 3,000,000 northern pike fry obtained from Medicine Lake via Garrison Dam National Fish Hatchery were released in Unit 1. This stocking was in response to local requests to establish a fishery, and the apparent good habitat provided by Unit 1. The pool depths approach 14 feet, and there are 3,000 surface acres of water.

Test netting done in 1986 and 1987 by North Dakota Game and Fish Department personnel and by Service personnel from Valley City National Fish Hatchery failed to locate any of the northerns. The conclusion was reached that the fry stocking was a failure. The possibility is that fry lack the necessary invertebrate food source when stocked early in the year at Des Lacs. Therefore, one last attempt may be made at stocking fingerlings in the refuge unit. This project along with many others is on hold until negotiations with local concerns over water levels have been completed.

H. PUBLIC USE

1. General

Total visitation to the refuge in 1989 was an estimated 5,137. Half the visitors are picnickers and birders. Birders from as far away as Hawaii and several foreign countries enjoyed the birding here. Hunters constituted the rest of the visits. The fall color automobile tour was continued for the third year in a row. This public use of a refuge patrol road is becoming very popular with local residents.

As part of Kenmare's State Centennial Celebration held in July 1989, the Des Lacs NWR participated by entering a float in the city's parade (see photo, Page 44). The float depicted a nesting bale inhabited by a pair of Canada geese with the refuge sign in the background. Treats, in the form of T-shirts and caps bearing the slogan "Take Pride in America" were passed out to the public. These were very favorably received.

Slide shows and refuge management presentations were given to various local schools and civic organizations. Requests for these programs seem to increase each year.

As mentioned in section D-3, a long range public use plan was drafted in 1989. This plan will guide refuge staff in implementing various recreational and educational uses of the refuge over the next five years.

2. Outdoor Classrooms - Students

The refuge turned into an outdoor classroom for the Kenmare High School biology classes in September. Also enjoying the refuge during the spring, watching the sharp-tailed grouse on the dancing grounds were the biology classes from the Bowbells High School.

6. Interpretive Exhibits/Demonstrations

Biological Aide Tim Zachmeier participated in day-long exhibits at the North Dakota State Fair in Minot. This booth is a joint effort between the North Dakota Game & Fish Department and the Fish and Wildlife Service. The booth gives the public a chance to meet wildlife professionals and have their questions answered one on one. Duck stamps were also sold.

THE REFUGE FLOAT IN KENMARE'S CELEBRATION OF THE NORTH DAKOTA CENTENNIAL. "TAKE PRIDE IN AMERICA" HATS AND T-SHIRTS WERE GIVEN OUT. MANY FAVORABLE COMMENTS WERE RECEIVED FROM THIS FLOAT.
PTF 7/89

7. Other Interpretive Programs

This was the second year in a row that a weekly refuge news column was written. This column in the local newspapers has been well received by area residents. Positive feedback has been received by the refuge staff. Along with the weekly column, over twenty news articles were printed in various newspapers in the area. Examples include:

- Winter recreation on the refuge
- Communications Council minutes and activities
- Beetles released for leafy spurge control
- Christmas bird count
- Des Lacs Long Range Water Management Plan
- Tedd Gutzke working on the Alaska oil spill
- Cleaning out Unit 7 by-pass ditch

Besides the use of the written media, several spots aired on Minot radio and television stations concerning refuge activities. Refuge personnel also participated in monthly meetings of the Kenmare Association of Commerce.

THE MIDDLE PANEL FOR THE KIOSK FINALLY ARRIVED LATE IN 1989 TO COMPLETE THE OUTSIDE VISITOR INFORMATION CENTER.
PTF *12/89*

8. Hunting

The only hunting currently allowed on the refuge is deer hunting with both gun and archery. Archers have had limited success; however, gun hunters fared better this year than last year. One problem associated with the deer gun season is that the refuge is divided into two separate state deer hunting units. Hopefully, this problem can be solved before next year's season.

10. Trapping

There was little interest in trapping the refuge this year. In fact, there were no calls or inquiries into the possibilities of trapping. No animals were removed.

11. Wildlife Observation

Again this year, the sharp-tailed grouse blind was frequently used during the peak of the lek activity in April. The first annual GooseFest brought increased attention to the large numbers of snow geese in the area during

the fall migration. With lower water levels on Unit 4, the geese were easily observed by people in cars or just out for a walk.

Winter hiking and cross-country skiing use of the refuge was allowed but used infrequently. Winter use of the ice surfaces also had limited use due to cold and windy weather on many weekends. Activity on the hiking trails and county roads though the refuge picked up in the spring with the return of warmer weather.

14. Picnicking

Picnicking is an important use of the refuge as is hunting. Taskers Coulee Recreation Area is a unique wooded site for picnics, ball games, hikes, and group and family events. Last year's problem with low water in the well was solved this year without closing the restroom facilities. Portable toilets were also used for part of the season. Taskers is maintained by the Village of Kenmare as part of a cooperative agreement, while the refuge does any major repairs.

Kenmare celebrated North Dakota's Centennial with a 4th of July festival. Many former residents, friends and relatives returned to Kenmare over this weekend. Local festival planners did not know just how many people to expect for the event. With this in mind, Taskers Coulee picnic area was opened to camping for the first time. Although no one ended up camping at Taskers the thought was well-intended and did promote good public relations. The picnic area was still very busy over the 4th with many class and family reunions held there.

16. Other Non-Wildlife Oriented Recreation

The refuge maintains an agreement with the Village of Kenmare that allows winter recreation activities on the ice surfaces of Units 2 & 4. Activities allowed are 3- and 4-wheeling, snowmobiling, skating, and skiing.

Another agreement with the Village of Kenmare allows motor boating and water skiing in a portion of Unit 2. This has been a very controversial issue to say the least. In 1985, the refuge did not want to renew the special use permit. After much political debate, the new three-year permit was signed in 1987.

In 1989, the GAO audit of the Des Lacs NWR powerboating and water skiing issue was published. The GAO report on this facet of refuge activities was included in a report that looked at sixteen case studies of different national wildlife refuges across the country. The report did find power boating and water skiing conflicting uses of the refuge. The three-year permit issued in 1987 will expire in 1990. The permit's renewal or non-renewal will be decided at administrative levels above that of the Des Lacs NWR.

17. Law Enforcement

Normally, law enforcement is performed throughout the year by the refuge manager. With a new refuge manager (EOD 10/23/88) without law enforcement authority, enforcement activities on the refuge were carried out by a team effort of all Complex personnel with law enforcement authority. The refuge manager will be at FLETC in January of 1990. No violations were written this year.

I. EQUIPMENT AND FACILITIES

2. Rehabilitation

GERALD FELCH AND DAVID GINS OVERHAUL D-7 CAT OBTAINED ON SURPLUS FROM BROWNS PARK NWR.
PTF *1/89*

The Cat, when first brought to the refuge, operated "HOT" so the first thing the crew did was to "blow out" the radiator and it was used for some heavy work for over 200 hours. But the damage of running it "HOT" had been done. So in January, Gerald and David, together with John Stewart from Lostwood NWR and Lowell Vaage from Lostwood WMD, completely overhauled the Cat. It now works just like new.

GERALD FELCH CLEANING OUT UNIT 7 BY-PASS DITCH. NOTE: EMERGENT VEGETATION IN DITCH PRIOR TO CLEANOUT.
PTF *7/89*

The Unit 7 by-pass ditch was cleaned out in June by force account. The Minot Daily News reported that "...some Kenmare residents, who have vigorously risen in protest at other times concerning Fish and Wildlife policies at the Des Lacs Lake and pools were disturbed about the current work and some even talking about enlisting the help of the congressional delegation..." News articles in the local papers explaining the project and offers of guided tours of the area of work by refuge staff prior to the article yielded no interest. Therefore, the article was a surprise to refuge staff.

In mid-December after all required permits were issued, work began on the Unit 2 and 4 ditch clean out. After just a couple of days of work, the sub-zero North Dakota weather ended all ditch clean out activities.

SEVERAL HUNDRED FEET OF DITCH CLEANOUT OCCURRED BEFORE FREEZE UP OCCURRED. THIS CLEANOUT WILL ALLOW A PUMP ACCESS TO REMOVE WATER FROM THE DITCH THIS SPRING.

PTF 12/89

4. Equipment Utilization and Replacement

A new shop pickup truck (3/4 ton, 4x4) was purchased to replace the old 1981 Dodge. The old shop truck was transferred to the Lostwood Refuge to be equipped with a slip-in fire unit.

NOTHING AGAINST BUYING DODGE TRUCKS, BUT THEY SURE AIN'T CHEVYS.
PTF 12/89

5. Communications Systems

Because of frequent problems with the Complex base radio station, contacting refuge headquarters from other areas of the refuge and from the WMD's was not possible for most of the year. A major improvement of radio communication is needed which may also need major funding to accomplish.

J. OTHER ITEMS

1. Cooperative Programs

The NOAA weather station was read again this year, and snow surveys were conducted as requested.

Other surveys and censuses include:

Water Level and Flow Monitoring

Spring Grouse Count

Mourning Dove "Coo" Count

Fall Snow Goose Age-Ratio Census

FWE Monitoring Contaminants in the Des Lacs River

3. Items of Interest

Pierce and Gutzke attended the LE refresher in Marana, Arizona.

The summer Project Leader's meeting in Minot was attended by Pierce and Finley.

Regional Office personnel who visited the refuge during the year included Zone Supervisor Dale Henry and Hydrologists Bob Green and Cheryl Willis in relation to the refuge water management plan.

4. Credits

Del Pierce wrote sections E1, E5. Tedd Gutzke wrote section E6. The remainder of the narrative was written by Pete Finley. Editing was by Tedd Gutzke, and typing and assembly was by Edie Goettle.

K. FEEDBACK

Whistling swans. U.S.F.W.S. photo.

PRAIRIES AND WOODLANDS . . .
Upland areas surrounding the marshes and lakes are living examples of the ecological concept known as "edge." The interspersion or "mixture" of wooded coulees, mixed-grass prairie, and fields of tame grasses and legumes makes them desirable to many species.

Remnants of the once vast mixed-grass prairie are found on hillsides and plains above the river. Current management techniques such as prescribed fire and controlled grazing are used to preserve the character of native prairie. This results in good cover for mallards and other upland nesting ducks and in the maintenance of grassland species such as the sharp-tailed grouse and the short-eared owl. Several species of interest to summer birdwatchers, such as the Baird's sparrow, Sprague's Pipet, and the chestnut-collared longspur also occur on upland areas. In addition to the native grasslands, a portion of the uplands are maintained in a mixture of grasses and legumes which are ideal nesting habitat for waterfowl and winter cover and food for grouse, songbirds, and whitetail deer.

The whitetail deer on the refuge favor the wooded coulees which provide secluded fawning areas and protection from stinging winter winds. Other woodland wildlife include songbirds and raptors such as Swainson's and red-tailed hawks.

Aerial view of lower Des Lacs Lake and southern portion of refuge, photo by John Winship. U.S.F.W.S. photo.

Whitetail deer fawn, photo by James Frates. U.S.F.W.S. photo.

U.S. FISH AND WILDLIFE SERVICE
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DES LACS
national wildlife refuge

Indian camp, photo courtesy of the State Historical Society.

"A dark line of trees marked our approach to a running stream, the River of Lakes. . .The conical skin lodges were now plainly in sight, not more than five miles off, and Indians galloped out from the camp to meet us and escort us in. Buffalos, they said, were plenty."

Henry Boller 1858

WILDLIFE AND MAN ON THE RIVER OF LAKES. . .

Beaver, muskrat, mink, and other fur bearing animals lured French trappers to North Dakota. They found the region so flat that the river which drained it spread out in a series of marshes and lakes. The trappers called the river "Des Lacs" or "The Lakes".

The French trappers were not the first humans to discover the values of Des Lacs. Plains Indians sought shelter in the timbered coulees and fashioned stone tepee rings and religious effigies which have survived to this day.

Great herds of buffalo, pronghorns, and elk grazed the rich grasslands surrounding Des Lacs River. Grizzly bears and wolves scared up clouds of ducks from small wetlands, for this region was one of the finest waterfowl breeding grounds in North America.

But the white man brought striking changes to the region. Intensive ranching, farming, and coal-mining altered the face of the land and wildlife declined. Alarmed by the tremendous decrease in waterfowl numbers during the Dust Bowl days of the 1930's, President Franklin Roosevelt set aside a portion of the Des Lacs valley in 1935 as the Des Lacs National Wildlife Refuge.

MARSHES AND LAKES. . .

Des Lacs National Wildlife Refuge encompasses 18,800 acres along the Des Lacs River from the Canadian border to a point eight miles south of Kenmare, North Dakota. This river valley contains marshes restored by dikes and three natural lakes. Bays at the mouths of coulees are havens for waterfowl and marshbirds native to the region.

The marshes are prime areas for many species of ducks as well as western grebes whose distinctive courtship antics are a prime attraction for spring visitors. During the summer months, white pelicans feed on small fish found in the lakes and marshes. The Le Conte's sparrow, a rare prize for birdwatchers, lives in the tall vegetation of marsh edges and wet meadows.

During the fall migration, Des Lacs serves as an important resting and feeding area for thousands of ducks and shorebirds. In recent years, the refuge has become a major rest stop for lesser snow geese and whistling swans. Although the refuge is closed to public use during the fall migration, excellent opportunities exist for viewing bird concentrations from public roads along the refuge boundary.

Le Conte's sparrow.

Left to right: mallard drake and hen. Giant Canada geese and brood. Whitetail deer. All U.S.F.W.S. photos.

Beaver, photo by James Frates. U.S.F.W.S. photo.

AN INVITATION TO DES LACS . . .
Outdoor enthusiasts will find unique opportunites to observe and photograph native birds and mammals in natural surroundings. Visitors are welcome to stop at refuge headquarters, located one-half mile west of Kenmare on Ward County Road #1, for information concerning various refuge activities. Overnight camping is not permitted, but accomodations are available in Kenmare. Visitors should check with the refuge for current information and regulations on other types of outdoor activities and on local road and weather conditions. Inquiries should be addressed to the Des Lacs National Wildlife Refuge, P.O. Box 578, Kenmare, North Dakota, 58746. Telephone (701) 385-4046.

Female Gadwall. U.S.F.W.S. photo.

FOR YOUR OUTDOOR ENJOYMENT . . .

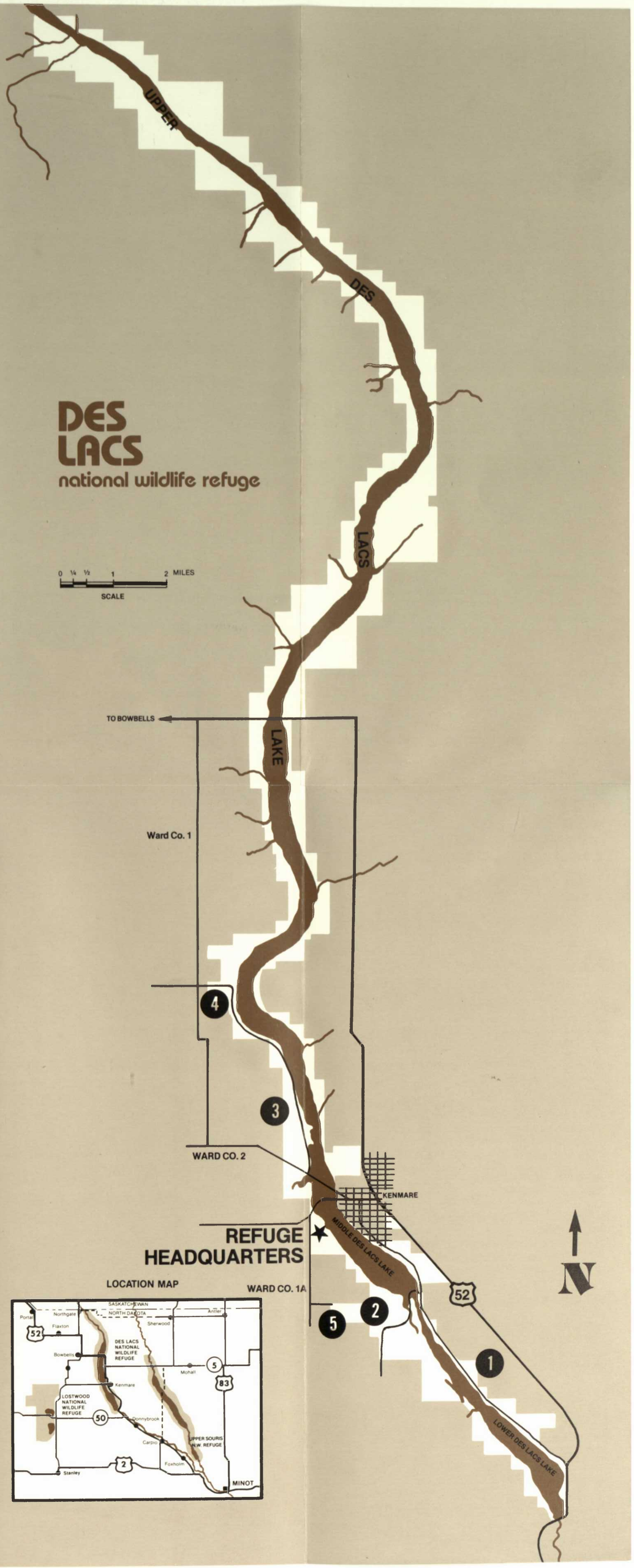
1. Good opportunities exist for viewing wildlife in marshes and lakes along the seven-mile "Old Lake Road", which parallels the refuge south of Kenmare. (The road may be impassable during winter or when wet.)
2. A spur of the Old Lake Road, the "Brickyard Hill Road," crosses the refuge and winds its way to the bluff tops of the west side of the river valley, offering a birds-eye view of the Des Lacs Valley.
3. The dirt road leading north from Ward County #2 for five miles winds along the Upper Des Lacs Lake through woodlands and coulee bottom habitat to a refuge Public Use Area. (The road may be impassable during winter or when wet.)
4. This Public Use Area offers opportunities for picnicking and birdwatching in a beautiful lakeside setting. Restrooms and picnic tables are available. The area may also be reached via Ward County Road #1. Use is restricted to daylight hours only.
5. The Taskers Coulee Picnic Area lies in a heavily wooded coulee south of the refuge headquarters and can be reached via Ward County Road #1A. Restrooms, drinking water, a shelter, picnic tables, grills, and playground equipment are available. The area is open May through September. Overnight camping is not permitted.

A photography blind located near a sharp-tailed grouse dancing ground provides excellent opportunities to observe and photograph sharp-tails during their spring dancing activities.

Visitors are advised to contact the refuge for additional information concerning current road and weather conditions.

Environmental education, photo by Don Lindberg. U.S.F.W.S. photo.

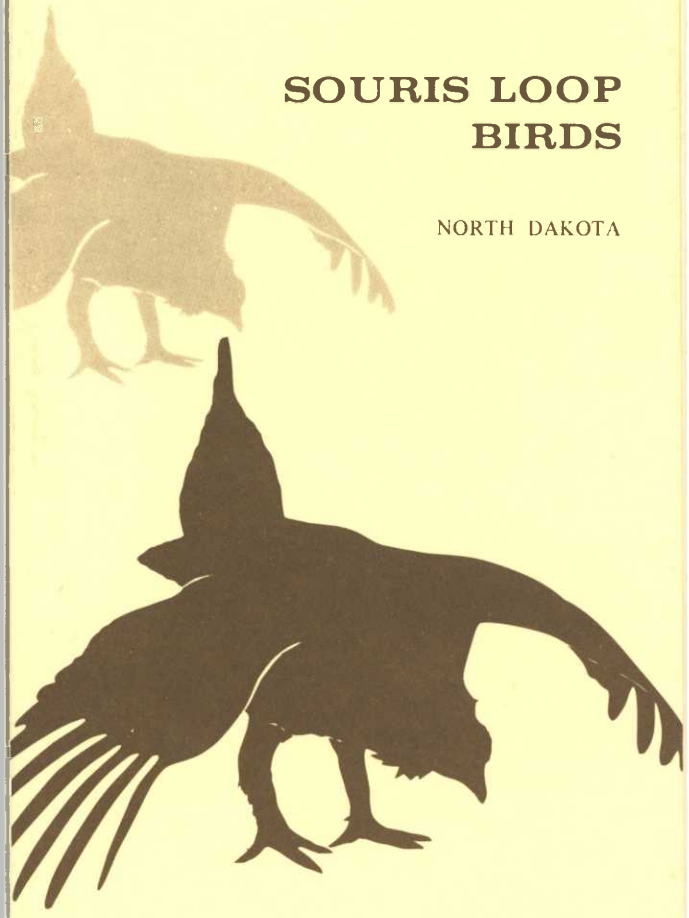
DES LACS
national wildlife refuge



LOCATION MAP

SOURIS LOOP BIRDS

NORTH DAKOTA



SOURIS LOOP BIRDS

The "Souris Loop" National Wildlife Refuges were established in 1935. They are Des Lacs (19,554 acres), J. Clark Salyer (58,700 acres) and Upper Souris (32,092 acres). Important habitats found on these refuges include restored marshes, remnant tracts of native grass, lowland meadow, impounded lakes, wooded sandhills, river bottoms and brush covered coulees.

While waterfowl, pelicans, tundra swans, grouse and cranes are spectacular, a variety of other species of interest may be found. Birders come from all over the country looking for Sprague's Pipits, and Baird's and Le Conte's sparrows. In addition, as many as five species of grebes may be found. Species found on these refuges since 1935 total 293, of which 23 are accidentals, and one is extirpated. About 150 species are known to nest on these refuges.

CHECKLIST

Sp—March-May
S—June-July
F—August-November
W—December-February

A nesting species is indicated by a "•."

The following abundance categories indicate the peak daily and season total numbers of birds that may be seen by an active, experienced observer spending at least 8 hours a week sampling all types of habitat on a refuge.

A—Abundant: > 125 per day, > 600 per season

C—Common: 25-125 per day, 125-600 per season

F—Fairly Common: 5-25 per day, 25-125 per season

U—Uncommon: 1-5 per day, 5-25 per season

R—Rare: 1-5 per season

O—Occasional: Small numbers seen every 2-10 years

(I)—Irregular species: abundance category indicates highest number expected.

		Sp	S	F	W
__	Common Loon	o			o
__	• Pied-billed Grebe	f	f		c
__	• Horned Grebe	f	u		f
__	• Red-necked Grebe	o	o		o
__	• Eared Grebe	c	c		a
__	• Western Grebe	c	c		c
__	American White Pelican	c	c		c
__	• Double-crested Cormorant	c	c		c
__	• American Bittern	u	u		u
__	Least Bittern	o	o		o
__	• Great Blue Heron	f	f		f
__	Great Egret		o		o
__	Snowy Egret		o		o
__	• Little Blue Heron	o	o		o
__	• Cattle Egret	o	o		o
__	• Black-crowned Night-Heron	f	f		f
__	White-faced Ibis		o		o
__	Tundra Swan	c			a
__	Greater White-fronted Goose	f			f
__	Snow Goose	a			a
__	Ross' Goose				o
__	• Canada Goose	a	c		a o
__	• Wood Duck	f	f		f
__	• Green-winged Teal	f	u		f
__	• American Black Duck	o	o		o
__	• Mallard	a	c		a o
__	• Northern Pintail	a	c		c o
__	• Blue-winged Teal	a	c		a
__	• Cinnamon Teal	o	o		
__	• Northern Shoveler	a	c		a
__	• Gadwall	a	c		a
__	• American Wigeon	c	u		c
__	• Canvasback	c	f		c
__	• Redhead	c	f		c
__	• Ring-necked Duck	f	r		f
__	Greater Scaup	o			o
__	• Lesser Scaup	a	u		a o
__	White-winged Scoter	o			o
__	• Common Goldeneye	c			c
__	Bufflehead	c	r		c
__	• Hooded Merganser	f	f		f
__	Common Merganser	c			f
__	Red-breasted Merganser	o			o
__	• Ruddy Duck	a	c		a
__	Turkey Vulture	o			
__	Osprey	o			o
__	Bald Eagle	u			u r
__	• Northern Harrier	c	f		c
__	• Sharp-shinned Hawk	u	r		u o
__	• Cooper's Hawk	r	r		r o
__	Northern Goshawk				o o
__	• Broad-winged Hawk	u	r		r
__	• Swainson's Hawk	c	f		c
__	• Red-tailed Hawk	c	f		c o
__	• Ferruginous Hawk	r	r		r
__	Rough-legged Hawk	u			u r
__	Golden Eagle	r			r r
__	• American Kestrel	f	u		f
__	• Merlin	r			u u
__	Peregrine Falcon	o			o
__	Gyrfalcon				o o
__	Prairie Falcon				r o
__	• Gray Partridge	f	f		f f
__	• Ring-necked Pheasant	f	f		f f
__	[1] Greater Prairie Chicken (Extirpated)				
__	• Sharp-tailed Grouse	f	f		f f
__	• Yellow Rail	r	r		r
__	• Virginia Rail	u	u		u
__	• Sora	c	c		c
__	• American Coot	a	a		a
__	[2] Sandhill Crane	a	r		a
__	Whooping Crane	o			o
__	Black-bellied Plover	f			u
__	Lesser Golden Plover	f			f
__	Semipalmated Plover	f	f		f
__	• Piping Plover	r	r		r
__	• Killdeer	c	c		c
__	• American Avocet	c	c		c
__	Greater Yellowlegs	f	u		f
__	Lesser Yellowlegs	c	c		c
__	Solitary Sandpiper	u	u		u
__	• Willet	f	f		f
__	• Spotted Sandpiper	f	f		f
__	• Upland Sandpiper	f	f		u
__	Long-billed Curlew	o			
__	Hudsonian Godwit	u			o
__	• Marbled Godwit	f	f		f
__	Ruddy Turnstone	r			o
__	Red Knot	o			o
__	Sanderling	u	u		u
__	Semipalmated Sandpiper	a	c		a
__	Western Sandpiper	o			o
__	Least Sandpiper	c	f		c
__	White-rumped Sandpiper	c	f		
__	Baird's Sandpiper	c	f		c
__	Pectoral Sandpiper	c	f		c
__	Dunlin	r			o
__	Stilt Sandpiper	f	c		c
__	Buff-breasted Sandpiper	o			o
__	Short-billed Dowitcher	u	r		o
__	Long-billed Dowitcher	c	c		c
__	• Common Snipe	f	u		c
__	• Wilson's Phalarope	c	a		a
__	Red-necked Phalarope	a	a		a
__	• Franklin's Gull	a	a		a
__	Bonaparte's Gull	r			u
__	• Ring-billed Gull	a	c		a
__	• California Gull	u	r		u
__	Herring Gull	r			r
__	• Common Tern	f	u		f
__	• Forster's Tern	f	f		f
__	• Black Tern	a	c		a
__	• Rock Dove	u	u	u	u
__	• Mourning Dove	c	c	a	o
__	• Black-billed Cuckoo	u	u		
__	Yellow-billed Cuckoo	o			
__	• Eastern Screech-Owl	r	r	r	r
__	• Great Horned Owl	u	u	u	u
__	Snowy Owl	r		r	r
__	• Burrowing Owl	r	r		r
__	• Long-eared Owl	r	u	r	r
__	• Short-eared Owl (I)	u	u	r	r
__	Boreal Owl				o
__	Northern Saw-whet Owl	o		o	o
__	• Common Nighthawk	r	r	u	
__	Whip-poor-will	o			
__	Chimney Swift	o		o	
__	• Ruby-throated Hummingbird	o	o	o	
__	• Belted Kingfisher	f	f	f	o
__	• Red-headed Woodpecker	r	r	r	
__	• Yellow-bellied Sapsucker	u	r	u	
__	• Downy Woodpecker	u	u	u	u
__	Hairy Woodpecker	u	u	u	u
__	Northern Flicker	c	c	c	o
__	Olive-sided Flycatcher	u		u	
__	Western Wood-Pewee	o		o	
__	• Eastern Wood-Pewee	r	u	u	
__	Yellow-bellied Flycatcher	r		r	
__	Alder Flycatcher	o		o	
__	• Willow Flycatcher	f	f	f	
__	• Least Flycatcher	c	c	c	
__	• Eastern Phoebe	r	r	r	
__	• Say's Phoebe	r	r	r	
__	• Great Crested Flycatcher	o	r	r	
__	• Western Kingbird	c	c	c	
__	• Eastern Kingbird	c	c	a	
__	• Horned Lark	a	c	a	c
__	• Purple Martin	f	f	f	
__	• Tree Swallow	c	f	c	
__	Violet-green Swallow			o	
__	• Northern Rough-winged Swallow	f	f	u	
__	• Bank Swallow	a	c	a	
__	• Cliff Swallow	a	a	a	
__	• Barn Swallow	a	c	a	
__	• Blue Jay	u	u	u	u
__	• Black-billed Magpie	f	f	f	f
__	• American Crow	a	f	a	o
__	Common Raven	o		o	o
__	• Black-capped Chickadee	c	c	c	c
__	Red-breasted Nuthatch (I)	u		u	o
__	• White-breasted Nuthatch	u	u	u	u
__	Brown Creeper	u		u	r
__	• Rock Wren	r	r	r	
__	• House Wren	c	c	c	
__	• Sedge Wren (I)	f	c	f	
__	• Marsh Wren	c	c	c	
__	Golden-crowned Kinglet	f		f	o
__	Ruby-crowned Kinglet	f		f	
__	• Eastern Bluebird	r	r	r	
__	• Mountain Bluebird	f	r	u	
__	Townsend's Solitaire	o		o	o
__	• Veery	f	f	u	
__	Gray-cheeked Thrush	f		o	

	Sp	S	F	W
Swainson's Thrush	c		f	
Hermit Thrush	u		u	
• American Robin	a	c	a	r
• Gray Catbird	f	f	f	
Northern Mockingbird	o	o	o	
Sage Thrasher	o	o	o	
• Brown Thrasher	f	f	f	
Water Pipit	f		f	
• Sprague's Pipit	f	f	u	
Bohemian Waxwing (I)	c		c	c
• Cedar Waxwing	u	c	c	u
Northern Shrike	u		u	u
• Loggerhead Shrike	r	r	r	
• European Starling	c	f	c	u
Solitary Vireo	f		f	
• Yellow-throated Vireo	u	u	u	
• Warbling Vireo	f	f	f	
• Philadelphia Vireo	r	r	r	
• Red-eyed Vireo	c	c	c	
Tennessee Warbler	c	o	u	
Orange-crowned Warbler	c		c	
Nashville Warbler	u		u	
• Yellow Warbler	c	c	c	
Chestnut-sided Warbler	o		r	
Magnolia Warbler	u		u	
Cape May Warbler	o		o	
Black-throated Blue Warbler	o		o	
Yellow-rumped Warbler	a	o	a	
Black-throated Green Warbler	o		o	
Blackburnian Warbler	o		r	
Palm Warbler	u		u	
Bay-breasted Warbler	o		o	
Blackpoll Warbler	c		f	
• Black-and-white Warbler	f	u	f	
• American Redstart	f	u	f	
• Ovenbird	f	u	u	
• Northern Waterthrush	c	r	u	
Connecticut Warbler	o		o	
Mourning Warbler	u		r	
Macgillivray's Warbler	o		o	
• Common Yellowthroat	c	c	c	
Wilson's Warbler	f		f	
Canada Warbler	o		o	
• Yellow-breasted Chat	r	r	r	
Scarlet Tanager	o	o		
Western Tanager			o	
• Rose-breasted Grosbeak	f	u	f	
Black-headed Grosbeak	o	o		
• Lazuli Bunting	r	r	r	
Indigo Bunting	o	o		
• Dickcissel	o	o	o	
• Rufous-sided Towhee	f	f	f	
American Tree Sparrow	a		a	u
• Chipping Sparrow	c	u	c	

	Sp	S	F	W
• Clay-colored Sparrow	a	a	a	
• Field Sparrow	r	r	r	
• Vesper Sparrow	c	c	c	
• Lark Sparrow	u	u	u	
• Lark Bunting (I)	u	u	u	
• Savannah Sparrow	a	c	a	
• Baird's Sparrow	f	f	f	
• Grasshopper Sparrow	c	c	c	
• LeConte's Sparrow	f	f	f	
• Sharp-tailed Sparrow	f	f	f	
Fox Sparrow	r		u	
• Song Sparrow	c	f	c	o
Lincoln's Sparrow	c		c	
• Swamp Sparrow	u	r	u	
White-throated Sparrow	a		c	o
White-crowned Sparrow	c		f	
Harris' Sparrow	c		c	o
Dark-eyed Junco	a	o	a	r
• McCown's Longspur	o	o	o	
Lapland Longspur	a		a	u
Smith's Longspur	o		o	
• Chestnut-collared Longspur	c	c	f	
Snow Bunting	c		a	c
• Bobolink	c	c	f	
• Red-winged Blackbird	a	a	a	o
• Western Meadowlark	a	a	a	o
• Yellow-headed Blackbird	a	a	a	o
Rusty Blackbird	u		f	o
• Brewer's Blackbird	c	f	a	o
• Common Grackle	a	c	a	o
• Brown-headed Cowbird	a	a	u	
• Orchard Oriole	f	f	o	
• Northern Oriole	f	f	f	
Pine Grosbeak (I)	u		u	f
Purple Finch	u		u	r
Red Crossbill (I)	u	o	u	f
White-winged Crossbill	o		o	o
Common Redpoll (I)	a		c	a
Hoary Redpoll	o			o
• Pine Siskin (I)	c	o	c	o
• American Goldfinch	c	c	c	u
Evening Grosbeak	o		o	o
House Sparrow	c	c	c	c

[1]Last observed in 1956

[2]Nesting recorded at J. Clark Salyer in 1973

Prepared by: Gordon Berkey
Division of Science
Minot State College
Minot, ND 58701

Birds that are rarely seen on the refuges and are out of their normal range:

Tricolored Heron
Green-backed Heron
White Ibis
Fulvous Whistling-Duck
Eurasian Wigeon
Harlequin Duck
Oldsquaw
Black Scoter
Surf Scoter
Red-shouldered Hawk
Black-necked Stilt
Whimbrel
American Woodcock
Black-legged Kittiwake
Common Barn-Owl
Barred Owl
Scissor-tailed Flycatcher
Winter Wren
Northern Parula
Townsend's Warbler
Hooded Warbler
Henslow's Sparrow
Lesser Goldfinch

Acknowledgements: To Dr. Gordon Berkey and Mr. Ron Martin for their contribution in compiling this list. Observers are encouraged to contact Dr. Berkey, Division of Science, Minot State University, Minot, North Dakota 58701, for information and to share observations.

For further information about the Souris Loop Refuges, write:

Des Lacs NWR
P.O. Box 578
Kenmare, ND 58746

J. Clark Salyer NWR
P.O. Box 66
Upham, ND 58789

Upper Souris NWR
R.R. #1
Foxholm, ND 58738

GPO 859-050

Printed April 1989

Special Places

To Visit in North Dakota

A Prairie Legacy

A potpourri of unique experiences await the public at four National Wildlife Refuges in northwestern North Dakota. The Refuges, J. Clark Salyer, Upper Souris, Des Lacs, and Lostwood are all located on or near the Souris River, each within an hour's drive of Minot.

These are special places to see wildlife, particularly early and late in the day when wildlife is most active. Fishing and hunting may also be permitted. Visitation is denied only when human presence unduly disturbs wildlife. Visitors may witness scenes deeply etched in the minds of early settlers. Unbroken prairies ablaze with wildflowers; long, wavering lines of wild geese pressing north, the frantic, exuberant courtship of prairie grouse; or a meadowlark in full song on a warm, spring day.

An Unhurried Pace

Here, visitors can set a relaxed pace while enjoying the sights and sounds of the natural world — a welcome change from the hectic pace of the twentieth century. Each of the four Refuges is unique in its own right, making a visit to each very worthwhile. A tour of all four would be far too much for one day. Schedule one or two during a day, or possibly all four in a weekend.

Maps, bird lists, and other pertinent information are available at each Refuge headquarters and their use will make a visit more pleasurable. Remember to bring binoculars, a camera, and most importantly, a sense of discovery.

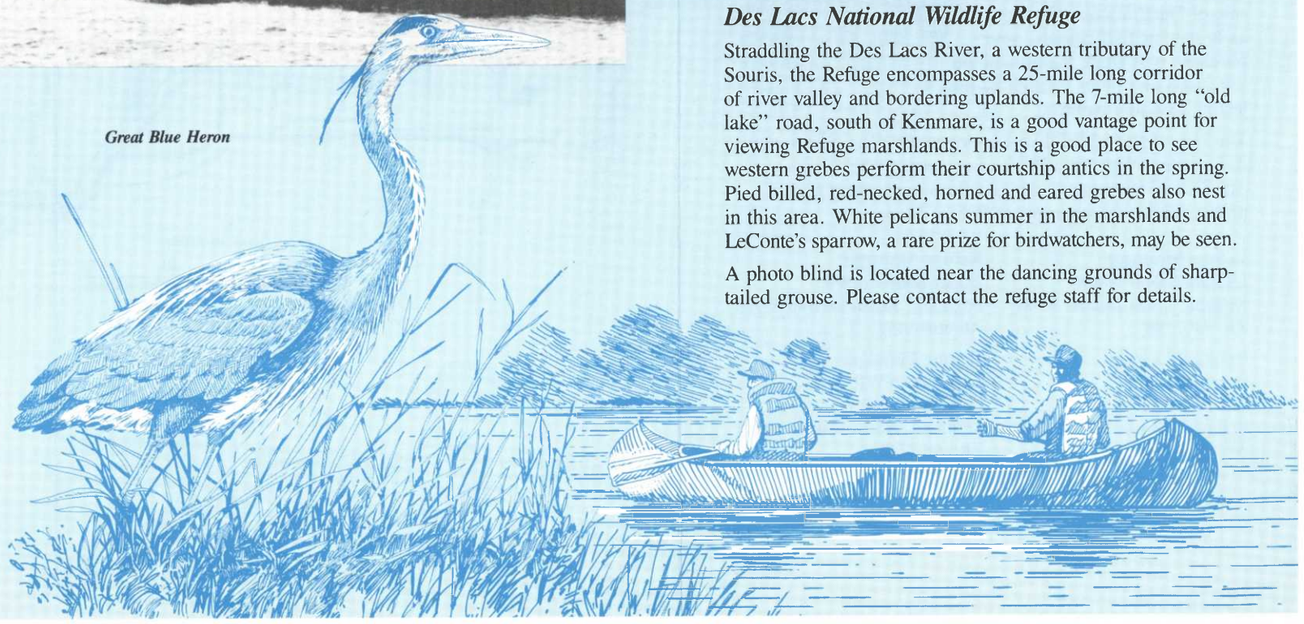
J. Clark Salyer NWR Photo by Ed Bry

J. Clark Salyer National Wildlife Refuge

This eastern most Refuge of the group lies astride the lower reaches of the Souris River loop. Here, the river valley broadens forming shallow basins that create some of the largest freshwater marshes in America. Unsuccessfully drained and later restored, the marshes stand as a tribute to the foresight of early conservationists who created the Refuge.

A 22-mile long auto tour route threads its way through marshlands, grasslands, sandy hills, and forested areas. Anticipate seeing a variety of wildlife among these markedly different plant communities.

Designated as a unit of the National Canoe Trail System, a 13-mile stretch of the River offers opportunities for exploration by canoe. The slow, meandering waters enfold great blue heron, muskrat, wild ducks, and other wildlife.



Great Blue Heron

Sprague's Pipit

Upper Souris National Wildlife Refuge

Located west and upstream from J. Clark Salyer Wildlife Refuge, Upper Souris furnishes a striking, panoramic view of the river valley. This can be seen from an auto trail that rides the crest of hills west of an earthen dam.

If you are lucky during spring and fall migrations, you may see tundra swans circling below in a wide arc preparing to land in valley marshlands. Hawks and many other species of birds commonly use the valley corridor during migration. Ardent birdwatchers should be on the alert for Baird's, LeConte's, and sharp-tailed sparrows, as well as Sprague's pipit.

The earthen dam separates valley marshlands from the lake formed behind the dam. Named after the famed conservationist and cartoonist, J.N. "Ding" Darling, Lake Darling is a favorite fishing ground for North Dakotans. Canoe trails are open to the public above and below the dam giving canoeists an intimate view of Souris River habitats and marsh wildlife.

Schedule a visit in the spring or when fall colors are at their peak. The colorful, fall blend of prairie grasses — red, yellows, and browns are surprisingly beautiful.

Des Lacs National Wildlife Refuge

Straddling the Des Lacs River, a western tributary of the Souris, the Refuge encompasses a 25-mile long corridor of river valley and bordering uplands. The 7-mile long "old lake" road, south of Kenmare, is a good vantage point for viewing Refuge marshlands. This is a good place to see western grebes perform their courtship antics in the spring. Pied billed, red-necked, horned and eared grebes also nest in this area. White pelicans summer in the marshlands and LeConte's sparrow, a rare prize for birdwatchers, may be seen.

A photo blind is located near the dancing grounds of sharp-tailed grouse. Please contact the refuge staff for details.

Lostwood National Wildlife Refuge

If any of your forefathers homesteaded on the prairie, a stop at this Refuge is a must. Here, the graceful, wind-swept beauty of unbroken prairie can be fully appreciated. Scenes like these must have awed and struck fear in the hearts of early settlers, many of whom had spent their lives amidst the shelter and protection of forested areas. This is probably the best example of mid-grass prairie pothole lands remaining in the United States. Try to schedule a visit during the spring or early summer when both wildflowers and waterfowl are very visible.

Waterfowl Productions Areas

As you travel from Refuge to Refuge, watch for Waterfowl Production Areas. These relatively small wildlife areas, purchased by the U.S. Fish and Wildlife Service, are marked with green and white boundary signs illustrated with a canvasback duck and ducklings. They were preserved to protect and improve waterfowl habitat, particularly prairie nesting areas for ducks. Birdwatching, photography, and hunting are permitted. Information on Waterfowl Production Areas can be obtained at any of the Refuges.

Many Waterfowl Production Areas and National Wildlife Refuges have been bought with monies raised from the sale of Duck Stamps. Today, as in the last half century, your purchase of a Duck Stamp will aid waterfowl and other wildlife by protecting essential habitats.

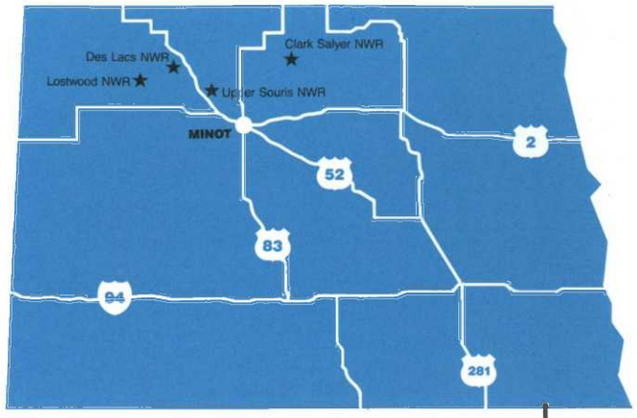
The U.S. Fish and Wildlife Service wants your visit to these Refuges and Waterfowl Production Areas to be a memorable experience. If you have any questions concerning a visit, please contact the appropriate Refuge Manager.

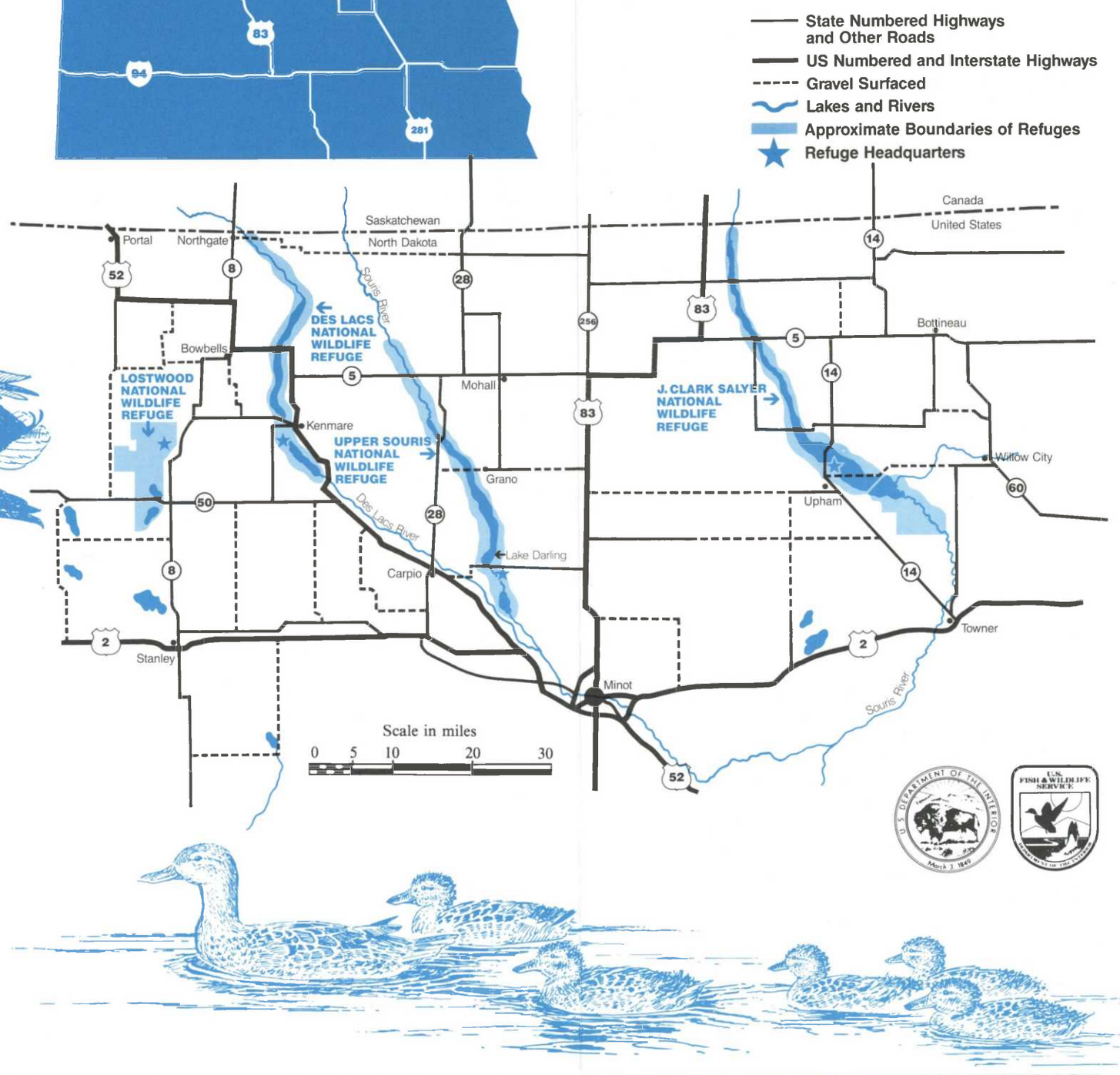
Refuge Manager
J. Clark Salyer NWR
Upham, North Dakota 58789
701/768-2548

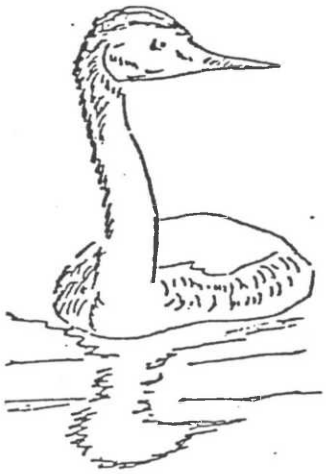
Refuge Manager
Des Lacs NWR
P.O. Box 578
Kenmare, North Dakota 58746
701/385-4046

Refuge Manager
Upper Souris NWR
Foxholm, North Dakota 58738
701/468-5467

Refuge Manager
Lostwood NWR
Rural Route #2
Kenmare, North Dakota 58746
701/848-2722







WELCOME TO THE DES LACS NATIONAL WILDLIFE REFUGE, WE ARE PLEASED THAT YOU HAVE TAKEN THE TIME TO VISIT OUR REFUGE AND WE HOPE YOU ENJOY YOUR VISIT.

WE HAVE SEVERAL SUGGESTED ROUTES AND AREA THAT YOU MIGHT VISIT. YOU WILL FIND SHORT DESCRIPTIONS OF THESE ROUTES AND AREAS AS WELL AS MAPS WHICH WE HAVE PREPARED AS AIDS TO MAKE YOUR VISIT MORE ENJOYABLE.

ROUTE 1 - " THE OLD LAKE ROAD"

ON THIS ROUTE YOU WILL FOLLOW ALONG THE EASTERN SHORELINE OF THE MIDDLE AND LOWER DES LACS LAKES FOR A DISTANCE OF ABOUT SIX MILES. THIS AREA ENCOMPASSES OUR 5 LOWER REFUGE POOLS, WHICH ARE SOME OF OUR BETTER BREEDING AND NESTING AREA.

SPECIES: WATERFOWL, SHOREBIRDS AND VARIOUS MARSH AND SONG BIRDS

SPECIAL INTEREST SPECIES: WESTERN GREBE COLONYS ARE LOCATED THROUGHOUT THE AREAS ADJACENT TO THIS ROUTE.

ROUTE 2 - "THE BOATING AREA ROAD"

THIS ROUTE WILL TAKE YOU ALONG THE WESTERN SHORELINE OF THE UPPER LAKE FOR A DISTANCE OF ABOUT $4\frac{1}{2}$ MILES TO THE SITE OF OUR BOATING AREA FACILITIES. THIS ROUTE TAKE YOU THROUGH THE TIMBER COVERED AREA OF THE DES LACS REFUGE.

SPECIES: WATERFOWL, SHOREBIRDS AND VARIOUS SONGBIRDS

ROUTE 3 - "SPARROW PASTURE"

THIS AREA IS THE ONE THAT WE SUGGEST YOU VISIT IF YOU ARE INTERESTED IN THE FOLLOWING SPECIES: CHESTNUT COLLARED LONGSPUR, SPRAGUE'S PIPIT, AND BAIRD'S SPARROWS.

MISCELLANEOUS AREAS

ANOTHER AREA THAT MANY BIRDERS VISIT IS OUR "TASKERS COULEE RECREATIONAL AREA". HERE, IN ADDITION TO BIRDING, YOU WILL FIND PICNIC FACILITIES, A COMFORT STATION, AND A PLAY AREA IF YOU HAVE CHILDREN WITH YOU.

SHARP-TAILED GROUSE

WE HAVE A PERMANENT PHOTO AND OBSERVATION BLIND SET UP FOR USE ON ONE OF OUR GROUSE DANCING GROUNDS. DURING THE SPRING COURTSHIP DISPLAYS, AS MANY AS 40-60 MALE BIRDS HAVE BEEN OBSERVED ON THIS GROUND. WE REQUEST THAT YOU CHECK WITH OUR REFUGE OFFICE BEFORE USING THIS BLIND, AS IT IS LOCATED IN A CLOSED AREA OF THE REFUGE AND WE ALSO WISH TO AVOID MORE THAN ONE PARTY (NOT MORE THAN 4 PERSONS) ARRIVING AT THE SAME TIME. THE BLIND WILL ONLY ACCOMODATE A MAXIMUM OF 4 ADULTS AT ONE TIME.

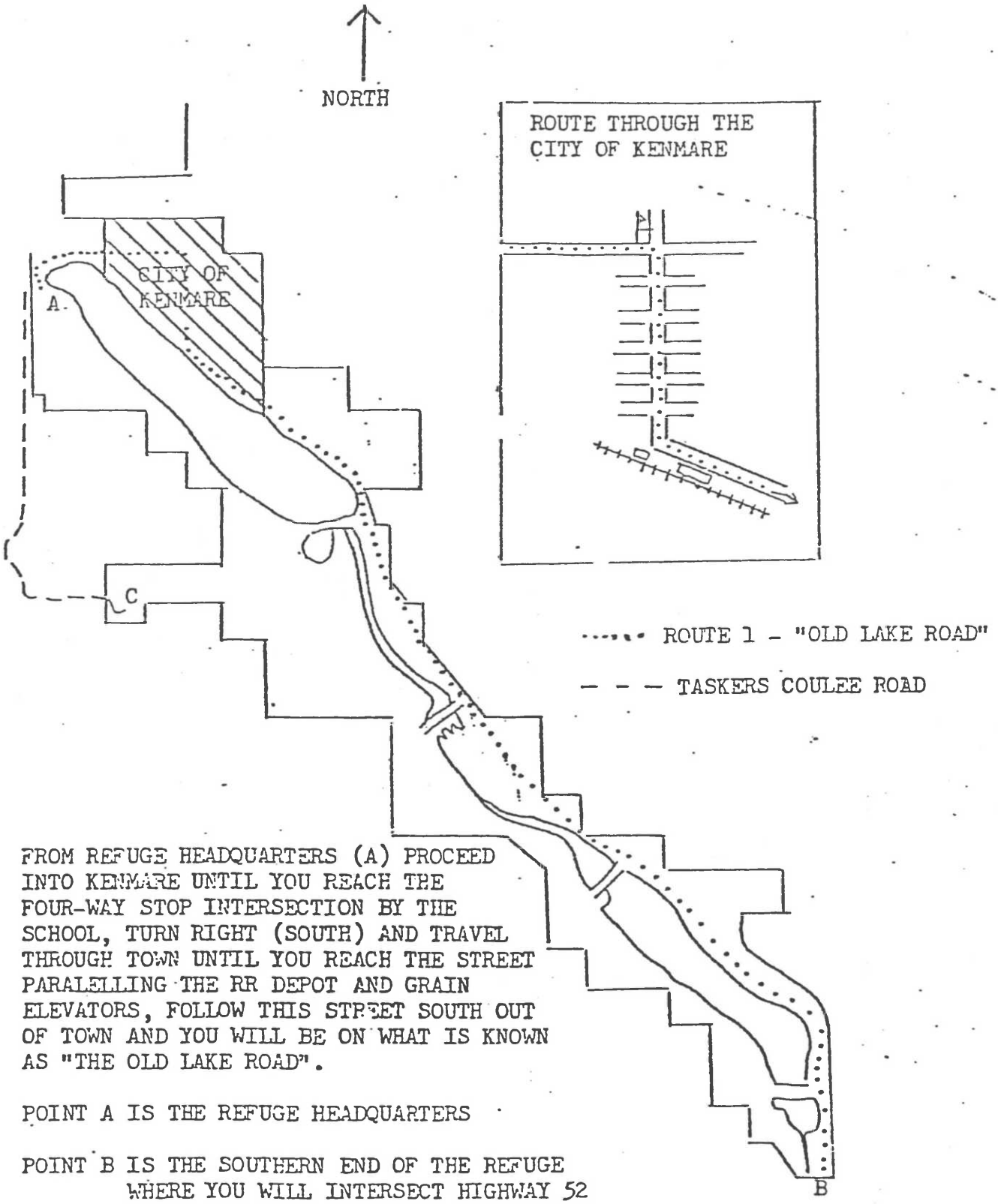
IF YOU DESIRE FURTHER ASSISTANCE OR HAVE ANY QUESTIONS, PLEASE CALL OR WRITE THE REFUGE OFFICE.

MAILING ADDRESS: U.S. DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE
DES LACS NATIONAL WILDLIFE REFUGE
KENMARE, NORTH DAKOTA 58746

OFFICE PHONE: (AC701) 385-4046

SPECIFIC ROUTE MAPS WILL BE FOUND ON THE ATTACHED SHEETS, THESE MAPS ARE NOT TO SCALE, BUT ARE INTENDED TO SERVE AS AIDS IN DELINEATING THE SUGGESTED ROUTES FOR WILDLIFE OBSERVATION.

Camping is not allowed on the Des Lacs Refuge. There are camping facilities at the City Trailer Park, Kenmare, ND and the following nearby towns; Stanley, ND, near the courthouse, Bowbells Trailer Park, Bowbells, ND, and Mouse River Park west of Mohall, ND.



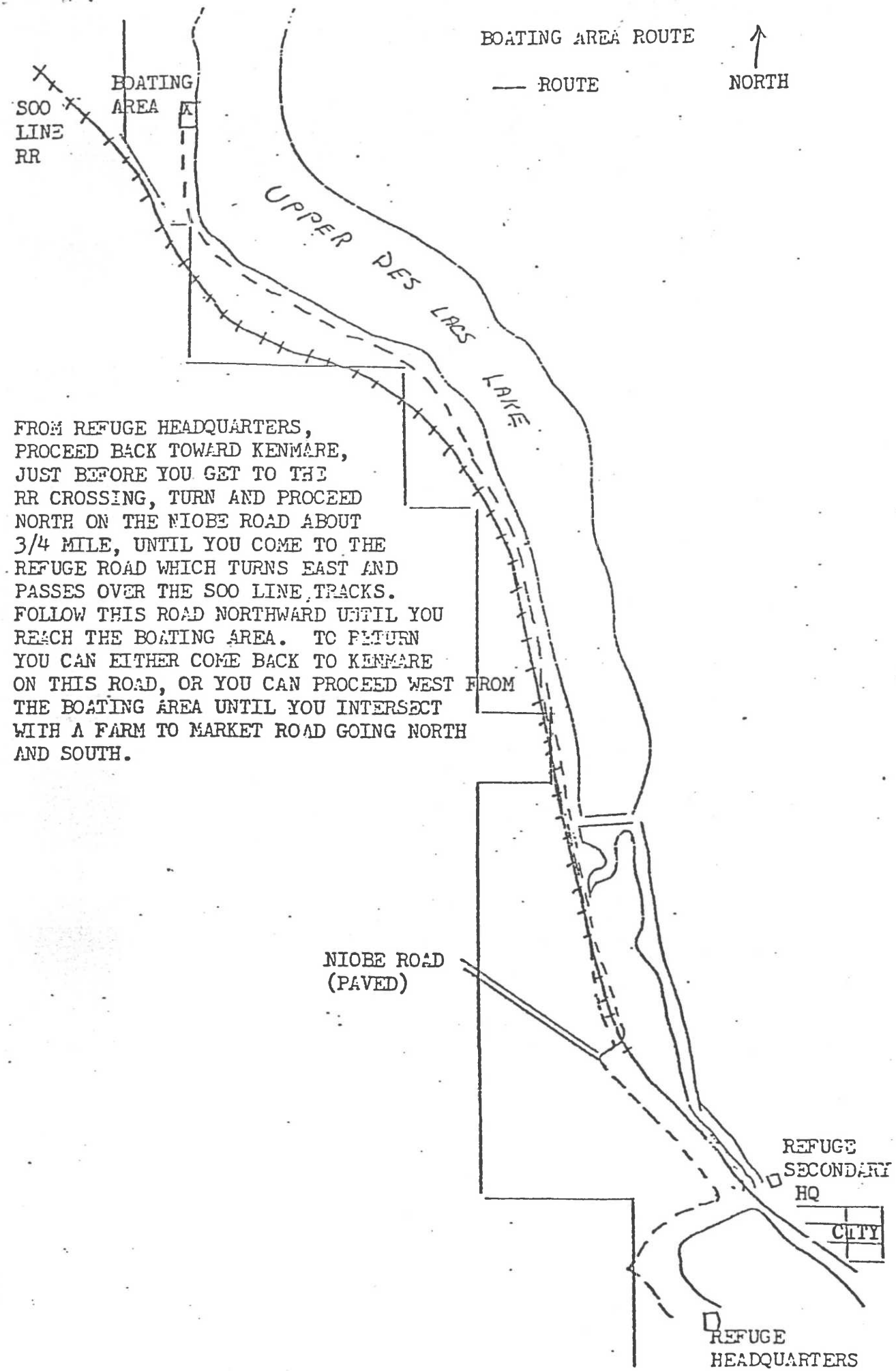
FROM REFUGE HEADQUARTERS (A) PROCEED INTO KENMARE UNTIL YOU REACH THE FOUR-WAY STOP INTERSECTION BY THE SCHOOL, TURN RIGHT (SOUTH) AND TRAVEL THROUGH TOWN UNTIL YOU REACH THE STREET PARALELLING THE RR DEPOT AND GRAIN ELEVATORS, FOLLOW THIS STREET SOUTH OUT OF TOWN AND YOU WILL BE ON WHAT IS KNOWN AS "THE OLD LAKE ROAD".

POINT A IS THE REFUGE HEADQUARTERS

POINT B IS THE SOUTHERN END OF THE REFUGE WHERE YOU WILL INTERSECT HIGHWAY 52

POINT C IS THE TASKERS COULEE RECREATIONAL AREA.

REV. 5/1/74


BOATING AREA ROUTE
— ROUTE
NORTH
SOO LINE RR
BOATING AREA
UPPER DES LACS LAKE
FROM REFUGE HEADQUARTERS, PROCEED BACK TOWARD KENMARE, JUST BEFORE YOU GET TO THE RR CROSSING, TURN AND PROCEED NORTH ON THE NIOBE ROAD ABOUT 3/4 MILE, UNTIL YOU COME TO THE REFUGE ROAD WHICH TURNS EAST AND PASSES OVER THE SOO LINE TRACKS. FOLLOW THIS ROAD NORTHWARD UNTIL YOU REACH THE BOATING AREA. TO RETURN YOU CAN EITHER COME BACK TO KENMARE ON THIS ROAD, OR YOU CAN PROCEED WEST FROM THE BOATING AREA UNTIL YOU INTERSECT WITH A FARM TO MARKET ROAD GOING NORTH AND SOUTH.
NIOBE ROAD (PAVED)
REFUGE SECONDARY HQ
CITY
REFUGE HEADQUARTERS

DIRECTIONAL MAP TO THE "SPARROW PASTURE"

PROCEED WEST FROM KENMARE TO THE TURN JUST SLIGHTLY WEST OF THE RAILROAD TRACKS, TURN NORTH ON THE PAVED ROAD AND PROCEED AS INDICATED ON THE MAP. CONTINUE WEST FROM THE TOWN OF NIOBE UNTIL YOU SEE AN OLD SCHOOL FOUNDATION ON THE NORTH SIDE OF THE ROAD. CONTINUE WEST 3½ MILES. THE SPARROW PASTURE AREA WILL BE ON BOTH SIDES OF THE ROAD.

A LARGE TREE PLANTING IS LOCATED ON THE EAST SIDE OF THE PASTURE, AS INDICATED ON THE MAP. A GRAVEL COUNTRY ROAD RUNS ALONG THE WEST SIDE OF THE PASTURE.

SINCE THIS AREA IS PRIVATELY OWNED, WE REQUEST THAT YOU RESPECT THIS FACT AND ACT ACCORDINGLY AS MANY BIRDERS HAVE ENJOYED THIS AREA IN THE PAST AND MANY WILL WANT TO SEE THE AREA IN THE FUTURE. YOU MAY ALSO ENCOUNTER CATTLE IN THE PASTURE.