

DES LACS

NARRATIVE REPORTS

JANUARY-DECEMBER 1956

BRANCH OF WILDLIFE REFUGES NARRATIVE REPORTS

MR. SALYER _____

MISS LAURE _____

MR. GRIFFITH _____

Operations

MR. REGAN _____

MR. DUBONT _____ ✓

Land Management

~~MR. ACKERSON~~ CH OC

~~MR. HOLLY~~ Bus

Habitat Improvement

MR. FRICKSON _____

MR. STILES 10785

MR. KULICHEK _____

Stenographers

REFUGE DES LACS, LOSTWOOD, ETC.

PERIOD SEPT-DEC. 1956

NARRATIVE REPORT

SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1956

DES LACS NATIONAL WILDLIFE REFUGE

LOSTWOOD NATIONAL WILDLIFE REFUGE

LAKE ILO NATIONAL WILDLIFE REFUGE

&

EASEMENT REFUGES - DISTRICT IV & IVa

Permanent Personnel

Edward J. Smith, Jr.	- Refuge Manager
Thomas P. Hunt	- Refuge Manager - Lostwood
Chesley M. Dinkins	- Refuge Aid - Lake Ilo
Lowell J. Hoffman	- Clerk Typist - 9/1-20
Donald L. Berg	- Clerk Typist - 12/20-31
Elmer M. Richwalski	- Mechanic, Heavy Duty
Wallace G. Amon	- Maintenceman

Temporary Personnel

Maynard Mahlum	- Truck Driver
Byron Krantz, Jr.	- Truck Driver
Peter Goetz	- Truck Driver
Donald Vaage	- Operator General, Light Duty
Lowwell Vaage	- Laborer

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I. GENERAL.

A. WEATHER CONDITIONS

The following weather data for this period and corresponding periods of the two preceding years were obtained from the official records of the Kenmare Weather Station:

1956	Precip.	58 year ave. Precipitation	Max.	Temperatures		
				Min.	Ave.	42 yr ave.
September	.84	1.45	88	28	53	56
October	.35	0.47	79	19	45	44
November	.75	0.59	53	-2	27	27
December	.71	0.46	51	-26	16	13
Total	2.65	3.41	Extremes 88	-26		
1955						
September	1.79		92	25	56	
October	0.47		86	18	46	
November	0.79		51	-15	12	
December	0.55		42	-28	4	
Total	3.60		Extremes 92	-28		
1954						
September	4.10		98	25	53	
October	0.61		75	17	43	
November	0.10		66	4	33	
December	0.05		49	-7	23	
Total	4.86		Extremes 98	-7		

The period as a whole was quite dry with total precipitation falling below normal. Only a trace of snow lies on the ground at this writing. Temperatures averaged quite close to normal throughout the period. We have found the climate pleasing to live with (relatively speaking) and have experienced only one blizzard this winter which occurred early in December. At that time, what snow we had blew away into counties further south.

B. WATER CONDITIONS

The following is a tabulation of Des Lacs pool elevations for the period and comparisons of maximum, approved and end of the period readings for the last four years:

Unit	Maximum for period	Approved Level		End of the Period Readings			
		Gauge	Sea Level	1956	1955	1954	1953
1	14.14	13.00	1783.00	13.80	13.90	14.20	14.04
2	7.14	6.00	1783.00	6.80	6.90	7.20	7.30
3	7.92	6.00	1783.00	7.82	7.00	7.30	8.30
4	6.46	6.00	1783.00	5.96	7.00	7.30	7.42
5	6.60	6.00	1783.00	6.20	6.60	6.90	7.28
6	6.00	6.00	1783.00	5.60	4.50	5.40	4.80
7	5.00	5.00	1782.00	4.40	4.34	4.50	4.80
8	6.20	7.00	1784.00	5.70	4.76	4.76	3.00

Maximum readings for most all impoundments were reached in September before drought conditions were felt. Our goal this year was to lower the Upper Lake (Unit 1) to elevation (1783.00) by freeze-up, but it seems that silted channels and middle units prevent the desired drawdown when approaching the 1783.00 elevation.

All water areas were frozen over by November 7.

C. FIRES.

Many smokes from burning stubble within the surrounding area were observed from time to time all period. However, only one fire occurred on refuge lands and was reported on September 21. This fire involved approximately one acre of government land in Section 22, T162N, R88W. It was a fire which had started from a private land owner's wheat field adjacent to a refuge grazing unit. A strong wind from the SE carried the fire across the fence but was brought under control in sufficient time to prevent extensive damage. Two refuge personnel with back pack pumps helped extinguish the blaze.

II. WILDLIFE

A. MIGRATORY BIRDS.

1. Populations and Behavior.

Waterfowl.

Mild weather in September and October delayed any perceptible heavy migration and only light populations of our common waterfowl species were observed using refuge marshes during most of the early fall period. The real "northern flight" finally materialized this year when severe winter storms and low temperatures occurring in late October and early November

pushed the ducks southward in endless sheets across the sky. Many old timers in this area believed they had never seen so many ducks at one time before. The peak was probably reached on November 4 but was short-lived. Lowering temperatures below the freezing mark brought on icing conditions on November 5 and 6 and by November 7, date of complete freeze-up, hardly a duck was left. From that date on the duck hunting in this area was over for 1956. Much grumbling and gnashing of teeth could be heard wherever hunters were prone to gather over another duck season shortened by the weather.

Peak numbers were exceeded amongst all species except coots this period as compared with the same period in 1955. However, a drop in waterfowl days use occurred because of the shortened period of migration. A particular highlight in this fall migration was the all time high reached in numbers of Whistling Swan. It was also interesting to note the large percentage of cygnets present in the family groupings of swan. For specific data on waterfowl numbers see NR form 1. The table below shows a comparison of peak waterfowl populations and total use-days in 1956 and 1955

Species	Peak Populations		Total Use-Days	
	1956	1955	1956	1955
Swans	250	180	4,984	3,241
Geese	300	44	5,075	1,155
Ducks	31,500	27,170	813,414	1,217,650
Coots	2,000	18,500	64,400	429,464

Water and Marsh Birds.

Peak number of birds under this category ^{was} ~~were~~ reached in early September and only a few stragglers hanging around in October. One Common Loon was sighted on the Upper Lake this fall. In the grebe family only the Pied-billed was observed as present. The Horned Eared and Western Grebes were not sighted at all.

Sandhill Cranes.

The first Sandhill Crane of the period was sighted on September 5 in Unit 2. A "heavy" flight of Sandhills was heard overhead on the night of September 13. The last observation was a record of 28 Sandhills on October 26.

Doves.

No heavy flight of mourning doves was seen this fall. Last observation was on October 18.

2. Food and Cover.

The excellent growth of pondweeds, primarily sago, was to be found and utilized in all units.

Puddle ducks were making regular flights in the morning and evening to nearby grain fields. Standing grain on the refuge was not used at all this fall. No refuge grain was left in the swath this year, in fact, most of the grain was harvested and delivered to refuge grain bins for later shipment to Lower Souris. Only a few farmers in this area reported ducks doing damage to their swathed grain. The heaviest feeding was on waste grain from fields already harvested or fields that had laid in the swath a long time before being combined.

B. UPLAND GAME BIRDS.

1. Populations and Behavior.

Sharptailed Grouse: Numbers are still fairly high but hunting success outside the refuge was reported as being very poor. The poor hunting success brought a drop in hunting pressure and a high proportion of these birds have survived the hunting season.

European Partridge: Huns are still present in good numbers and local hunters claim they are still increasing in this area. Because of the wide area in which they have to range, hunting pressure was only slight.

Ring-necked Pheasant: These birds are still scarce and are only seen on rare occasions.

2. Food and Cover.

Snowfall has been light and survival because of weather could not be considered a problem yet. Many fruits from berried shrubs are still persistent and stubble fields may still be providing waste grains.

The food patch of proso millet at the mouth of Tasker's Coulee did mature and is available for bird species to utilize.

C. BIG GAME ANIMALS.

1. Population and Behavior.

White-tailed Deer.

The 2½ day deer gun season, with bucks only allowed the first day and a half and any deer being legal on the last day, was allowed on the Des Lacs Refuge this year. It was rather difficult to check on refuge kill because many of the

deer drives started on refuge lands and ended on adjacent private farmsteads. Hunter success in the area seemed to be rather high. The State Game and Fish Department estimated hunter success to be about 65% for this area.

We have been waiting for adequate snow cover before running our winter aerial deer census.

2. Food and Cover.

The estimated 3000 acres of brushland and wooded coulees seems adequate to take care of the food and cover requirements of the White-tail population on Des Lacs this winter.

D. FUR ANIMALS, PREDATORS, RODENTS AND OTHER MAMMALS.

Muskrats: This species remain at a rather low level of abundance. Only 25 animals were taken by share trappers this fall. Most all these looked to be in rather poor condition and small in size compared with muskrats taken in eastern states.

Mink: The mink catch was doubled that taken a year ago by the same number of trappers. However, weather conditions this year were more suitable for trapping. A total of 38 mink were taken by share trappers this fall.

Weasel: Populations are at a low level and only two were taken by trapping this past period.

Beaver: The status of beaver is low also. Some fresh sign was observed this fall near the mouth of Tasker's Coulee.

Raccoon: A total of 23 coon were taken by fall trapping. Plenty of sign during summer and fall months indicate this species may be coming too abundant.

Skunks: Only eight skunks were caught in traps this fall, but like the raccoon these were all accidental catches in sets made for mink.

Badger: Numbers remain at a low level in this area. Only one was caught by fall trapping.

Fox: The fox population is reported to be on the increase but only two were caught by trapping. Not enough monetary incentive for extensive effort of trappers.

Coyote: Population status is believed to be low in abundance. One was seen on the Christmas Bird Count.

Porcupine: Numbers are relatively high for this type of habitat. Hope to get some better inkling of their status when running the winter aerial deer census.

Rabbits: They are not as common as last year. Many local sportsmen have complained the supply has depleted to a point where they are quite difficult to locate.

E. PREDACIOUS BIRDS, INCLUDING CROWS AND MAGPIES.

Marsh Hawks were common in abundance until freeze-up. The Swainson's Hawks and Rough-legged Hawks were seen occasionally all period. Sparrow Hawks and Sharp-shinned Hawks were reported infrequently.

One Golden Eagle was observed on September 5. Several Bald Eagles were seen along Des Lacs Lake in late November.

Three species of owls are known to be present, the Horned Owl, the Short-eared Owl and the Snowy Owl. Three of the latter species were observed on December 31.

Crows are not present now but moved through in mass migration during September.

Magpies are fairly common. At least 27 were observed on the late December bird count on refuge lands.

III. REFUGE DEVELOPMENT-MAINTENANCE

A. PHYSICAL DEVELOPMENTS.

Roads and Dikes.

Steel culverts were installed in the refuge trail system to replace washed out or caved-in wooden or masonry culverts left over from the days of the CCC. Funds provided were just enough to make a start as there are still many left which need replacing. The work has been completed for this year and a total of nine steel culverts ranging from 36" to 12" were installed. Rock was hauled to rip rap slopes of the new installations.

Several hundred cubic yards of gravel were hauled and placed on refuge entrance roads and on driveways around building sites. These roads were bladed several times before freeze-up.

The rock hauling to rip rap the south side of Dike No. 6 was completed and leveling and placing the rock also accomplished.

Buildings.

Sewer line excavation and installation of 100' of Orangeburg drain tile replaced the old plugged sewer line at the headquarters pumphouse. This job was complicated by the presence of frost already in the ground and the absence of definite location of the old sewer line on the plot plan. A propane gas heater was installed in the pumphouse to safeguard the water system against freezing during winter.

A new oil-fired furnace was installed by refuge personnel at the clerk's residence to replace the lignite burning furnace. Masonry work on the foundation, carpenter repairs to doors, and plumbing revamped to change location of the hot water heater were also accomplished in this dwelling. The wiring was also checked and altered by the local electrician.

The furnace in the manager's residence was also replaced by refuge personnel with an oil-fired unit. Tying in a new unit to the old duct system proved to be quite a feat. Mr. Richwalski is to be credited with the most ingenuity and patience. Interior walls of the dining room and hallway were painted this period by the refuge manager on his own time.

In the office quarters provided for the maintenance man and his family, a new counter top covering was installed and some necessary rewiring done to prevent overloading of circuits. The walls of the shower stall were painted by the Amos on their own time.

All cracked window panes were replaced in storm windows of the headquarters buildings. Some dirt fill was hauled to level trench work made for new underground wiring installed the preceding period.

Equipment.

Minor repairs were made from time to time on the D-4 cat and the LS-80 dragline to keep them in operating condition.

The Ford tractor needed major repair to the transmission involving a complete dismantling of the hydraulic assembly.

All vehicles including two at Lostwood underwent the 5000 mile check. Necessary repairs for safe operation were made at that time.

Repair was made on the Pontiac and GMC stake truck radiators.

A complete engine overhaul including new pistons and rings was made on the 1951 Willys Jeep.

A ring and valve job on the engine of the 1950 Willys Jeep was started this period.

Checked and readied fire fighting equipment.

Winterized all running equipment.

Miscellaneous Work.

Checked and helped unload and load out shipments of grain at Des Lacs and Lostwood.

Checked water levels and made necessary adjustments at control structures.

Frequent transfers of heavy equipment from one job site to another. Several equipment transfers between Souris Loop refuges.

Unloaded car of fence posts and barbed wire and a car of metal granaries at Kenmare Depot and hauled them to warehouse.

Helped install new power line poles at Lostwood for goose pen lighting.

Mr. Amon made trip to Seney via Rice Lake Refuge for transfer of wild rice and pick up load of cedar fence posts for return to Des Lacs.

Mr. Richwalski constructed trailer ramps for loading the heavy cats and dragline.

Fire hazard and safety checks in buildings were made. All sand boxes and sand shovels painted red.

Storm windows were installed on all buildings.

Marking of major and minor property was begun.

B. PLANTINGS.

None this period.

Cultivated Crops.

Under this category our efforts were directed to the harvest of permittee share cropping on agricultural units. NR form 8 furnishes all details on number of permits, crops grown, yields and disposition of shares. The grain delivered to our refuge grain bins was transferred later in the period to Lower Souris Refuge.

The five acres of millet planted by refuge personnel at the mouth of Taskir's Coulee materialized into a mature crop. Although it was not utilized to any great extent this past fall, we believe use may be made of this crop next spring by waterfowl under more moist conditions.

C. COLLECTIONS.

None this period.

D. RECEIPTS OF SEED AND NURSERY STOCK.

None this period.

E. USE OF HERBICIDES-PEST PLANT CONTROL.

Plant Species	State of Growth	Acreage	Herbicide	Strength of Herbicide	Diluent	Application Method	Date	Results	Cost per Acre
Canada Thistle (Cirsium arvense)	Flowering	275	2,4-D ¹	1#/acre	Water 4 = 1	Aircraft	7/20/56	25%	\$1.14
Sow Thistle (Sonchus arvensis)	Flowering	275	2,4-D	1#/acre	Water 4 = 1	Aircraft	7/20/56	25%	\$1.14

¹ 3.34 lbs. acid equivalent per gallon.

Acreage totaled 275 acres and included marsh margins and land areas from Dike 2 south to Baden Overpass.

The poor results are believed to be credited to the late date of application. A month earlier would have proved more worthwhile. A change in managers at that time caused the delay.

RECORDED
WTB/S

IV. ECONOMIC USE OF REFUGE

A. GRAZING.

A total of 4097 acres was grazed this year amounting to 1365.39 AUM's and a cash return of \$1394.49. Seventeen permits were issued with some doubling up on grazing units. Two permittees forfeited their down payments.

The grazing period is from July 1 through November 15 and a charge of \$1.00 per AUM is made.

Full grazing capacity was not utilized because some permittees were afraid of algal poisoning and some took their cattle out before the November 15 deadline for fear of care-less deer hunters hunting on the refuge. Dry range conditions in October was reason for others taking their cattle out early.

B. HAYING.

In checking hay units this past period we found that several permittees did'nt cut anything and forfeited their down payment. Only 144 acres of hayland was mowed yielding 151.9 tons of hay for a cash income of \$263.00.

C. FUR HARVEST.

Three trapping permits were issued this period for fall trapping from November 11 to December 16. Success was indicated under Section II, D, Fur Animals. A more complete report will be included in the January - April Narrative Report for 1957.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

No special field investigations were conducted this period.

VI. PUBLIC RELATIONS

A. PUBLIC USES.

1. Hunting Use.

The Des Lacs Refuge was open for the deer gun season from noon November 9 until sunset November 11, a total of $2\frac{1}{2}$ days. The first day and a half hunters were allowed to shoot

bucks only and on the last day any deer was legal. In that time we believe the refuge deer herd was reduced by about 45 head. An estimate of 175 man-days was believed expended in this sport.

2. Fishing Use.

None

3. Miscellaneous Use (picnicking, birding, visitors, etc.).

Use of the Tasker's Coulee Recreational Picnic area received heavy use all summer and fall. Care and maintenance of this area was food and is handled by the Kenmare Park Board.

Birders have continued to decrease in number compared with previous years.

Our heaviest visitor load is comprised of permittees and special use applicants who drop into refuge headquarters on matters of business or just to renew or make acquaintance.

Approximately 9000 visitor days were spent during 1956 under this category.

Summary Public Uses

Hunting	175 man-days
Fishing	0 man-days
Miscellaneous	9000 man-days
Total	9175 man-days

B. REFUGE VISITORS

<u>Date</u>	<u>Name</u>	<u>Organization</u>	<u>Purpose</u>
9/19	Mr. Rod Brevig	USGMA, Minot, N.D.	Disposition of refuge crops
10/2	Dr. Arthur A. Allen & Wife	Audubon Screen Tour Society	Visit refuge
10/22	Beck School Children	Niobe, N.D.	Refuge tour
10/24	Mr. Laverne Brugger	Civil Service Comm.	Job standards
10/24	Mr. Forrest A. Carpenter	R.O. FWS	Inspection
11/16	Mr. Hugh Cosby	SCS Range Specialist	Grazing status
11/19	Mr. Rod Brevig	USGMA, Minot, N.D.	Pick-up confiscated ducks

Occasional visits by State Warden Ken McKeague

C. REFUGE PARTICIPATION

The refuge manager participated in several radio broadcasts entitled "Wildlife Review" over Station KLPM Minot, North Dakota. These were evening sessions on September 12, September 26 and October 31. Topics of discussion were water-fowl migration, hunting regulations and hunting success.

On October 22, the refuge manager conducted the Beck School children from Niobe, North Dakota on a tour through the lower refuge units.

The manager has an active membership in the Kenmare Lions Club, Kenmare American Legion Post and the local affiliate of the National Rifle Association.

The refuge manager has accepted the responsibility of Scoutmaster for Kenmare Boy Scout Troop 44.

VII. OTHER ITEMS

A. ITEMS OF INTEREST.

The annual Christmas Bird Count was conducted on December 30 by the Kenmare Bird Club under the direction of the Gammells and managers Hunt and Smith. Weather conditions were very favorable and a total of 31 participants showed up to help. A total of 20 species were observed equalling 1239 individuals. The following species were observed: Rough-legged Hawk, 1; Sparrow Hawk, 1; Sharp-tailed Grouse, 27; European Partridge, 61; Ring-necked Pheasant, 3; Horned Owl, 3; Snowy Owl, 3; Short-eared Owl, 2; Hairy Woodpecker, 4; Downy Woodpecker, 3; Horned Lark, 2; Am. Magpie, 46; Black-capped Chickadee, 42; Robin, 1; Bohemian Waxwing, 22; Starling, 21; House Sparrow, 431; Pine Grosbeak, 2; Common Redpoll, 3; Snow Bunting, 561.

B. CREDITS.

Mr. Donald Berg arrived on duty from Tamarac Refuge, Minnesota December 20 to replace Mr. Lowell Hoffman who transferred to Turnbull Refuge, Washington on September 20.

Mr. Berg is to be credited with the complete typing of this report.

Respectfully submitted:

Edward J. Smith, Jr.
Edward J. Smith, Jr.
Refuge Manager

January 10, 1957

Approved: *RW Durand* 1/23/57

W A T E R F O W L

REFUGE Des Lacs

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period									
	9/2-9/8 1	9/9-9/15 2	9/16-9/22 3	9/23-9/29 4	9/30-10/6 5	10/7-10/13 6	10/14-10/20 7	10/21-10/27 8	10/28-11/3 9	11/4-11/10 10
Swans:										
Whistling						100	100	250	250	12
Trumpeter										
Geese:										
Canada					25	75	25	25	100	
Cackling										
Brant										
White-fronted				20	25	25	100	125	200	
Snow										
Blue										
Other										
Ducks:										
Mallard	2000	2000	2000	3500	6000	7000	7500	8000	20000	75
Black				2	50	50	50			
Gadwall	750	600	600	500	500	500	500	200	1000	
Baldpate	750	500	400	500	500	500	100		500	
Pintail	800	800	800	800	2000	2500	2400	500	1500	
Green-winged teal				100	250	250	250	200	1500	
Blue-winged teal	3500	3000	2000	1600	800	500	100	100	700	
Cinnamon teal										
Shoveler	200	200	200	100	100	100	100		1000	
Wood										
Redhead	600	600	600	600	800	800	800	800	1500	25
Ring-necked										
Canvasback	700	700	700	700	800	800	800	800	2000	
Scaup	100	100	100	100	400	400	400	500	2000	50
Goldeneye										
Bufflehead										
Ruddy	300	300	300	300	100	100	100	100	100	
Other										
Coot:	1000	1000	1000	1500	2000	1500	1000	50	150	

3-7150a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Des Lacs

MONTHS OF September TO December, 19 56

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	11/11-11/17	11/18-11/24	11/25-12/1	12/2-12/8	12/9-12/15	12/16-12/22	12/23-12/29	12/30-1/5		
Swans:										
Whistling									4984	
Trumpeter										
Geese:										
Canada									1750	
Cackling										
Brant										
White-fronted									3325	
Snow										
Blue										
Other										
Ducks:										
Mallard	150								407575	
Black									1034	
Gadwall									36050	
Baldpate									20650	
Pintail									84700	
Green-winged teal									17850	
Blue-winged teal									84700	
Cinnamon teal										
Shoveler									14000	
Wood										
Redhead									49875	
Ring-necked										
Canvasback									56000	
Scaup									29050	
Goldeneye										
Bufflehead										
Ruddy									11900	
Other										
Coot:									64400	

(over)

(5) (6) (7)
Total Days Use : Peak Number : Total Production

SUMMARY

Swans

4984

250

Principal feeding areas

Geese

5076

300

Ducks

815414

31500

Principal nesting areas

Coots

64400

2000

Reported by

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(1) Species:

In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.

(2) Weeks of

Reporting Period:

Estimated average refuge populations.

(3) Estimated Waterfowl

Days Use:

Average weekly populations x number of days present for each species.

(4) Production:

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(5) Total Days Use:

A summary of data recorded under (3).

(6) Peak Number:

Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production:

A summary of data recorded under (4).

Interior Duplicating Section, Washington, D. C. 37944

1953

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Das Lago Months of September to December 1958

(1) Species Common Name	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production		(6) Total
	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young Estimated Use
I. Water and Marsh Birds:									
Horned Grebe	None seen this period								
Pied-billed Grebe			250	9/15					
White Pelican			175	9/10					
Double Crested Cormorant			150	9/1					
Great Blue Heron			10	9/1	1	10/29			
Black Crowned Night Heron					1	10/12			
American Bittern					1	11/1			
Common Loon	1	9/19			1	9/19			
II. Shorebirds, Gulls and Terns:									
Common Snipe			8	10/1	1	10/31			
Greater Yellow Legs			20	9/1	8	10/27			
Dowitcher			200	9/10	1	10/11			
Marbled Godwit			50	9/10					
Ring Billed Gull			1000	9/1-10					
Anocet			25	9/10					
Frankline Gull			1000	9/1-10					
Common Tern			200	9/1-10					
Black Tern			100	9/1-10					

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons:					
Mourning dove			1	10/18	
White-winged dove					
IV. Predaceous Birds:					
Golden eagle			1	9/6	
Duck hawk			1	12/31	
Horned owl		3	12/30	Still present	
Magpie	Fairly Common	27	12/30	Still present	
Raven					
Crow	Common	peak	9/5-15	None present	
Bald eagle		3	12/3	1	11/24
Snowy owls		3	12/31	Still present	
Rough legged hawk			1	12/30	
Short eared owl			1	12/30	
Sparrow hawk		1	12/30		
Reported by Edward J. Smith, Jr.					

INSTRUCTIONS

(See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Deer Lacs

Months of September to December, 19 56

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Sharptailed Grouse									800	
European Partridge									200	
Ring-necked Pheasant									10	
	2000 -- Agricultural 8000 -- Grassland 3000 -- Brushland 15000 acres upland habitat									

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

3-1753
Form NR-3
(June 1945)

BIG GAME

Refuge Das Lac

Calendar Year 1956

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions	(7) Estimated Total Refuge Population		(8) Sex Ratio	
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
White-tailed deer	2000 -- Agricultural	50	50									176	125	
	8000 -- Grassland													
	3000 -- Brushland and wooded coulees													
	13000 acres total													

Remarks:

Reported by _____

INSTRUCTIONS

3-1153
Form NR-3
(June 1945)

Form NR-3 - BIG GAME

- (1) **SPECIES:** Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) **DENSITY:** Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) **YOUNG PRODUCED:** Estimated total number of young produced on refuge.
- (4) **REMOVALS:** Indicate total number in each category removed during the year.
- (5) **LOSSES:** On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) **INTRODUCTIONS:** Indicate the number and refuge or agency from which stock was secured.
- (7) **TOTAL REFUGE POPULATION:** Give the estimated population of each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) **SEX RATIO:** Indicate the percentage of males and females of each species as determined from field observations or through removals.

116000

DISEASE

Refuge Don Lake

Year 1956

Botulism None Observed

Lead Poisoning or other Disease None Observed

Period of outbreak _____

Period of heaviest losses _____

Losses:

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

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

Areas affected (location and approximate acreage) _____

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

Condition of vegetation and invertebrate life _____

Remarks None

Kind of disease _____

Species affected _____

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

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks None

3-1756
Form NR-6
(April 1946)

FISH

Refuge.....Des Lacs.....

...Year 194~~5~~6...

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Bluegill & Sunfish	Scarce							
Common Sucker	Scarce							
Minnows	Common	fathead minnows and sticklebacks						

REMARKS: * Severe "winter kill" experienced during winter 1955-56.

3-1757

Form NR-7

(April 1946)

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Des Moines Year 1946

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Colorado Green Spruce	all shelterbelt or landscape around				May	95%	Combined causes of drought rodent and wind	
American Elm						90%		
Ponderosa Pine					1	90%		
Honeysuckle					0	75%		
Choke Cherry					5	75%		
Russian Olive					6	90%		
Wild Plum						75%		
Cottonwood						95%		
Golden Currant						75%		

TOTAL ACREAGE PLANTED:

Marsh and aquatic.....
Hedgerows, cover patches.....
Food strips, food patches } 4 acres
Forest plantings.....

CULTIVATED CROPS

Refuge Des Lacs Year 1956

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Ankenbauer, Earl		AU-22	Alfalfa	1.3 ton	20	26 ton					\$77.94
Bryan, Floyd		AU-15	Wheat	21.0	10.5	228	3.5	76			17 acres fallowed
			Fallow								
			Barley	16	9.7	156	3.2	52			
		AU-16	Wheat	21.2	17.2	361	11.4	231			share in wheat
			Grass		17.2	100%					11.7 acres fallowed
			Fallow								for cost of breaking
Bryan, Gerald		AU-25	Flax		75	100%					44 acres fallowed
Essler, Peter		AU-5	Fallow								share in wheat
Fisher, O. J.		AU-9	Flax	14	28	392		137			24 acres fallowed
			Fallow								
Gravesen, LeRoy		AU-3	Wheat	11.2	23.9	268	14	158			left standing
			Oats	40.9	8.5	340	8.5	340			share in oats & wheat
			Corn		15.2				3.8		
			Grass								

CULTIVATED CROPS

Refuge Don Lass Year 1956

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Gravesen, LeRoy		AU-20	Wheat	16.6	18	298	6	100			Share in barley 30 acres fallowed
			Barley	20.6	18.1	370	15.9	330			
			Grass fallow		31.0						
Hansen, Julius	AU-8	Wheat	8.8	18.8	166.9	22.2	195			Share in wheat	
		Grass		47	100%						
	AU-11	Barley	14	34	477	14	195			17 acres fallowed for breaking ground	
		Barley	14	8	112			4	56		
		Fallow Flax		13	100%						
Hansen, Richard	AU-17	Grass		14	100%					Share in barley 13 acres fallowed	
		Wheat	28.5	10.5	300	3.5	100				
		Barley	16.8	22.1	371	8.9	150				
		Fallow									
Kleinmith, Myrl		AU-18	Wheat Fallow	14	8.7	118	2.9	30			20.7 acres fallowed

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				
					Acres	Bu. Har- vested	Harvested		Unharvested		Compensatory Services, or Cash Revenue
							Acres	Bu.	Acres	Bu.	
KleinSmith, Myrl		AU-18	Flax	6	10.6	64					Share in barley
			Barley	11	.7	7					
		AU-19	Barley	11	2.8	31			2.8	31	9 acres fallowed
			Barley Fallow	15.3	4.5	60	1.5	20	4.2	62	
Nelson, Alfred		AU-4	Flax		12	100%					Share in wheat 6 acres fallowed
			Wheat	20.7	15.1	313	8.8	185			
			Fallow								
Nelson, Virgil		AU-10	Fallow								55 fallowed break ground and seed retired crop land
			Wheat	15.5	54.7	858	18.2	230			
			Flax		182	100%					
			Barley	14	15.8	222	34.4	430			
Nielson, Kenneth		AU-6	Barley	40	0	0	12	485			share in barley 57 acres fallowed
			Flax & Grass		56	100%					
			Wheat	12.2	15	183	5	61			
			Fallow								

CULTIVATED CROPS

Refuge Des Lacs Year 1956

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Ormiston, Bruce		AU-17a	Wheat Fallow	12	4.5	54	1.5	18			15 acres fallowed
Rytter, Viggo		AU-21	Barley	25	18	375	5	125			31.5 acres fallowed
			Fallow Durum	12	22	261			10	123	
Schmit, Lee		AU-2	Fallow								21 acres fallowed
Swenson, Bertil		AU-14	Flax		58	100%					Share in wheat, barley 95 acres fallowed
			Fallow								
			Wheat Barley	6 14.7	32 12	192 176	14 20	85 295	22	322	
Wade Brothers		AU-7	Fallow								73 acres fallowed

Summary of Crops Grown: Average Yield Per Acre	Crop	Acreage	Permittee's Share		Government's Share		Total Revenue	
			Acres	Bushels	Harvested	Unharvested		
					Acres	Bu.	Acres	Bu.
Barley - 17.5	Fallow	522.9			114.9	2132	38.0	471
Wheat - 15.3	Barley	290.6	142.7	2357	111.0	1519	10.0	123
Oats - 40.0	Wheat	371.9	250.9	3580	8.5	340		
Corn - 18.0 est.	Oats	17.0	8.5	340				
Interior Duplicating	Corn	12.0	15.2	273 est.			2.8	68 est.
Section, Wash. D. C.	Flax	414.6	414.6	1607 est.		137 wheat		
ex - 8.7 est	Grass	145.2	145.2	188 tons est.				
us - 1.3 ton est.	TOTALS:	1781.2	977.1	8157 bu.	234.4	4128 bu.	46.8	622 bu.

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

8971-E
3-58 8707
(201 1774)

REFUGE GRAIN REPORT

Refuge Des LacsMonths of January through December, 1953

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Barley	0	2132	2132	2132			2132	0			0
Wheat	175	1656	1831	1831			1831	0			0
Oats	0	340	340	340			340	0			0
Totals	175	4128	4128	4128			4128	0			0

Above totals are bushel measure computed by weight
Grain transferred totaled 4865 bushel by volume

(8) Indicate shipping or collection points Grain received at refuge granary and tallied by weight slips.(9) Grain is stored at Refuge granary(10) Remarks Grain transferred to Lower Souris and Snake Creek Refuges.

*See instructions on back.

(10) Remarks

NR-8a

(9) Grain is stored at

(8) Indicate shipping or collection points

REFUGE GRAIN REPORT

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

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

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

16-61482-1 U. S. GOVERNMENT PRINTING OFFICE

Agency	OF PERIOD BEGINNING ON HAND	PERIOD DURING RECEIVED	TOTAL	GRAIN DISPOSED OF				PERIOD END OF ON HAND	DISPOSED ON SELLABLE USE	
				Transferred	Seeded	Feed	Total		Seed	Feed
(1)	(2)	(3)	(4)	(5)				(6)	(7)	

Refuge

Dec 1943

Months of January

through December 1943

REFUGE GRAIN REPORT

3-1759
Form NR-9
(April 1946)

COLLECTIONS AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

Refuge Des Lacs Year 1958

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period of Collection	Method	Unit Cost	Amount	Source		
Colorado Green Spruce					225	C.L. Jensen Emond, N.D.	0	0
American Elm					50	N.D. School Forestry	0	0
Ponderosa Pine					75	N.D. School Forestry	0	0
Honeysuckle					400	Oscar H. Hill & Co., Bismarck, N.D.	0	0
Choke Cherry					180	"	0	0
Russian Olive					370	"	0	0
Wild Plum					170	"	0	0
Cottonwood					80	"	0	0
Golden Current					80	"	0	0

Interior Duplicating Section,
Washington 25, D.C. 84267

~~REVENUE~~ HAYING AND GRAZING

Refuge Des Lacs Year 1946

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Ankenbauer, Earl	26086	GU-11	484	75.65		7/9 - 11/15/56	1.00	75.65	
Aufforth, John	26087	4	164	44.06		7/3 - 10/13/56	1.00	44.06	
Bakken, Oscar	26088	7a	383	143.74		7/22- 11/ 3/56	1.00	143.74	
Bryan, Floyd	26089	9b	200	88.89		7/1 - 11/6/ 56	1.00	88.89	
Kemel, Levi	26090	1a	139	45.62		8/17- 11/ 7/56	1.00	45.62	
Gissel, Frans	26091	1	245	59.76		7/2 - 10/17/56	1.00	59.76	
Johnsen, Guy	26092	1		31.63		7/2 - 10/17/56	1.00	31.63	
Nelson, Alvin	26100	2	184	9.80		7/2 - 7/23/56	1.00	15.00	Forfeit \$5.10 on down payment
Nelson, Gordon	26821	6	185	65.94		7/3 - 11/ 8/56	1.00	65.94	
Peterson, Marlow	26093	10	162	67.74		7/2 - 11/ 8/56	1.00	67.74	
Radens, Clarence	26094	8a9	270	91.49		7/1 - 10/30/56	1.00	91.49	
Ramsdell, Bennie	26096	7	270	93.52		7/2 - 10/24/56	1.00	93.52	
Ramsdell, Zina	26095	7	1184	48.41		7/2 - 11/ 3/56	1.00	48.41	
Rytter, Viggo	26097	5	193	0		0		24.00	Forfeit down payment
Schou, John B.	26085	3	324	110.65		7/2 - 10/ 5/56	1.00	110.65	
Schwartz, Otis	26099	11		24.80		7/10- 10/26/56	1.00	24.80	
Wade Brothers	26098	7		363.59		7/2 - 11/7/56	1.00	363.59	

Totals:

Acreage grazed 4097 Animal use months 1365.39 Total income Grazing \$1394.49
 Acreage cut for hay..... Tons of hay cut..... Total income Haying.....

HAYING AND ~~GRAZING~~

Refuge Des Lacs Year 1946

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Ankenbauer, Earl	26822	HU-5	30		35.20	7/1-11/15/56	1.50	52.80	
Aufforth, John	26823	10	35		0			13.00	Forfeit Down Payment
Bryan, Floyd	26824	4c	25		31.44	7/1-11/15/56	1.50	47.16	
Christiansen, Leo	26825	14 & 14b	20		8.20	7/1-11/15/56	1.50	12.30	
Emsel, Levi	26803	13 & 4	65		0			12.00	Forfeit Down Payment
Gravason, LeRoy	26826	7	22		11.66	7/1-11/15/56	1.50	17.49	
Kolbo, Duane	26808	6	22		51.2	7/18-12/31/56	1.50	46.80	
Swenson, Robert	26828	11	25		34.30	7/1-11/15/56	1.50	51.45	
Walker, Roy	26829	9	18		0			10.00	Forfeit Down Payment

Totals:

Acreage grazed.....

Animal use months.....

Total income Grazing.....

Acreage cut for hay 262 144

Tons of hay cut 151.90

Total income Haying \$263.00

NARRATIVE REPORT
SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER
1956
LOSTWOOD NATIONAL WILDLIFE REFUGE
&
DISTRICT IV A EASEMENT REFUGES

T. P. Hunt
Refuge Manager

UNITED STATES DEPARTMENT OF THE INTERIOR
UNITED STATES FISH AND WILDLIFE SERVICE
LOSTWOOD, NORTH DAKOTA

I GENERAL

A. Weather Conditions

1956				Temperatures			
Month	<u>Snowfall</u>	<u>Precipitation</u>	Max.	Ave.	Min.	Ave.	
September		1.51	88	72	24	34	
October		.31	90	65	12	29	
November	6.5	.07	57	39	1	18	
December	<u>3.75</u>	<u>.18</u>	49	26	-25	15	
Total	10.25	2.07					

60 Year Normal				Temperatures			
Month	<u>Snowfall</u>	<u>Precipitation</u>	Max.	Ave.	Min.	Ave.	
September	.1	1.30	109	70	8	42	
October	1.5	.81	98	56	-18	31	
November	4.7	.51	88	37	-38	17	
December	<u>5.2</u>	<u>.44</u>	72	22	-50	2	
Total	11.5	3.06					

Both the average temperature and total precipitation appear close to the 60 year normal. The first killing frost occurred on September 6. It occurred about a week earlier than was expected and it was the minimum recorded temperature for the month. The first heavy snowfall fell on November 5. The weather for the rest of the period was to be expected except for a spell of above freezing temperatures from December 19, to the end of the month.

B. Water Conditions

The final freeze-up occurred on November 9, on Thompson Lake, smaller bodies of water were frozen over several days earlier. Lakes and sloughs are again at high levels. If winter precipitation is near normal we should have a wet spring.

C. Fires

There were no fires on the refuge this period.

I GENERAL

A. Weather Conditions

1956 Month	Snowfall	Precipitation	Temperatures			
			Max.	Ave.	Min.	Ave.
September		1.51	88	72	24	34
October		.31	90	65	12	29
November	6.5	.07	57	39	1	18
December	3.75	.18	49	26	-25	15
Total	10.25	2.07				

60 Year Normal Month	Snowfall	Precipitation	Temperatures			
			Max.	Ave.	Min.	Ave.
September	.1	1.30	109	70	8	42
October	1.5	.81	98	56	-18	31
November	4.7	.51	88	37	-38	17
December	5.2	.44	72	22	-50	2
Total	11.5	3.06				

Both the average temperature and total precipitation appear close to the 60 year normal. The first killing frost occurred on September 6. It occurred about a week earlier than was expected and it was the minimum recorded temperature for the month. The first heavy snowfall fell on November 5. The weather for the rest of the period was to be expected except for a spell of above freezing temperatures from December 19, to the end of the month.

B. Water Conditions

The final freeze-up occurred on November 9, on Thompson Lake, smaller bodies of water were frozen over several days earlier. Lakes and sloughs are again at high levels. If winter precipitation is near normal we should have a wet spring.

C. Fires

There were no fires on the refuge this period.

II WILDLIFE

A. Migratory Birds

1. Population and Behavior

The bird populations recorded in this narrative were actually seen and the numbers either counted or estimated. The first fall waterfowl census was taken during the first week in October. It appeared that a number of birds moved into the refuge during the first week following the opening day of hunting on October 1. Mallard, redhead, canvasback and coot were typical of the population during the first two weeks in October. The eclipse plumage was still displayed by many of both the diving and dabbling species and some of the hens were accompanied by their broods. One white-winged scoter and her brood of five young, just out of the downy class, were seen on Iverson Lake at this time. Twenty Canada geese and ten whistling swans were counted in this first census. The geese passed back and forth between Thompson Lake and the summer pen of the captive goose flock; while the swans fed on aquatics along the shore and preened themselves on the island in Thompson Lake. It was noted on several occasions that small groups of coots accompanied the feeding swans and seemed to select items from the material stirred up by them. By the fourth week in October the great majority of blue-wing teal, redheads, canvasbacks and coots had left the refuge; mallards had doubled, baldpate and lesser scaup had increased many times over. There was also a small but noticeable increase in bufflehead, swans and Canada geese and one flock of white-fronted geese were seen to sit down on Thompson Lake. During a period of several days, large flights of ducks, geese and one flock of sandhill cranes were seen flying south. At this time also, the writer was impressed by the amount of use given the smaller pot-holes by the migrating redheads and scaup. In the last week of October a marked increase in baldpate and lesser scaup brought the total population to the seasonal high of 9000 ducks. The first heavy snowfall on November 5, saw the departure of most of our birds. On November 9, the last bit of open water in Thompson Lake froze over forcing the few remaining mallards, scaup and swans to leave Lostwood.

2. Food and Cover

Swathed grains and stubble fields, located between Lostwood and Des Lacs and further south, provided the main attraction for mallards and pintails which were feeding out of the refuge. Lakes Iverson, Rock, Upper Lostwood and especially Thompson attracted most of the birds feeding on aquatics. A small but surprising

C. Upland Big Game

1. Population and Behavior

From Mr. Dybsetter's calculations for 1955 and from my own observations there were probably 200 white-tailed deer on the refuge at the start of the $2\frac{1}{2}$ day deer season at noon November 9. This figure gives Lostwood an average of about six deer per square mile. The first day and a half was restricted to the taking of two prong bucks or better; while the last day was open for any deer (white-tail only in this area). Hunter success-ratio was probably high. Although no check gates were operated, most of the hunters were local and I believe the majority of kills were reported accurately over the local intelligence net. This included one doe killed on opening day. Twenty-three bucks and fourteen antlerless/~~deer~~ bucks are known to have been taken. By adding 13 animals to this figure to account for deer which were not reported the total kill becomes 50 or a 25% reduction for the herd. Probably the majority of deer killed were bucks and over half of these were taken shortly after opening hour. The season's kill does not reduce the herd substantially in the light of next year's fawn crop.

The deer here at Lostwood, don't drive as easily as they do in timbered areas. Many animals of all age and sex groups were reported as lying concealed in buck brush until the hunter approached to within a few yards.

On November 8, a trapper-permittee came into headquarters. He had been surveying his trapping unit in preparation for the coming season and ran onto two bucks with their antlers locked. I managed to get one picture (Fig. 1) at about 40 yards, but when I moved up for a closer picture one buck stepped up onto a road elevation and the antlers parted. The second picture (Fig. 2) was made as the two ran over the hill.

A doe and two fawn mule deer were reported on the southern part of the refuge by a cooperative farmer. It is not believed that there are more than a few in excess of this observation.

No antelope have been seen on the refuge during the period; although as high as 15 have been sighted within two miles of the northeast corner up to the start of deer season, after which they disappeared. Whether these animals fell to myopic hunters or whether they found better food and cover elsewhere is not known. A cooperative farmer on the Shell Lake easement stated that he had seen one doe with two kids in that area at the end of the summer.

2. Food and Cover

Silverberry, buck brush and aspen are plentiful on Lostwood and make up most of the cover for deer and presumably a large part of their food as well. No complaints have been registered of deer depredations on refuge grain fields.

3. Diseases

None known.

D. Fur Animals, Predators, Rodents and Other Mammals

Badger - This animal has become a real pest. Refuge trappers took numbers of them in mink sets. One trapper quit reportedly, because his unbaited mink sets were catching mostly badgers and skunks. Badger holes are found throughout the refuge and are a real hazard to driving a jeep off regularly traveled trails.

Beaver - Three new small beaver lodges were discovered during trapping season. The number of beaver occupying them are unknown at present.

Coyote - Three sheep ranchers bordering on the refuge have complained of damage from coyotes coming off the refuge. One rancher claimed three sheep were killed and another said he lost two. The federal predator control man in this area set up a 1080 station just west of the refuge.

Fox - One red fox was trapped by a permittee and the writer saw one near the northeast corner of the refuge. Local inhabitants say this fox is a fairly recent invader.

Mink - Twenty-seven mink were trapped on the refuge during the recent season. One permittee took three during the first half of the season and then quit because of all the "trash" he was catching i.e. skunk, badgers. The other permittee trapped the refuge during the last half of the season after his own and surrounding lands were exhausted and caught 24 mink. There are apparently good numbers of mink present considering the relatively low numbers of muskrat observed.

Muskrat - This animal does not appear numerous, although one trapper reported numerous rats denned in the banks of Elbow Lake. It may be that this is the answer to the seemingly high mink population; that there are plenty of rats on the refuge but few of them use the marsh style house which appears so vulnerable to mink predation.

Rabbits - Jack-rabbits seem abundant. This year some interest has been aroused in hunting them; as the winter pelts are bringing \$.60 an animal from fur dealers.

Raccoon - Two coons were trapped on the refuge and an old boar is known to be resident. A good pelt was bringing \$2.50 in Minot, so this animal is now considered worthwhile stretching and drying.

Skunk - There have been a number of dead ones seen along the roads, the writer hit a live one with his car one night and several have been seen on the refuge and adjacent to it. Indications are that this animal is approaching some sort of a population peak in this area.

Weasel - None are now known to exist on the refuge. A local inhabitant stated that this animal disappeared at the same time that the flicker tail ground squirrel vanished.

E. Predacious Birds, Including Crows and Magpies

See NR 1A

F. Fish

None known on the refuge.

III REFUGE DEVELOPMENT-MAINTENANCE

A. Physical Developments and Maintenance

1. The entrance roadway was mowed.
2. Poles were erected, wiring and outlets were installed to provide lights and also current for the watering pan in the captive goose compound.
3. A ten foot long feeder trough was built in anticipation of the arrival of an additional flock of geese in the summer of 1957.
4. The roof of the goose shed was shingled and the structures was painted.
5. Five goose feeder troughs were painted.
6. A number of broken tiles were replaced on the roof of the residence.
7. The cattle guards were tied in with boundary fencing.
8. Two 1650 bushel Butler granary bins were erected over a cinder-block and sand foundation.
9. The water pump and water tank underwent minor repairs so that you can now draw a glass of water without breaking the glass.

B. Plantings

1. Cultivated Crops

The average yields showed much improvement over last year but this is true largely because of greatly increased yields for a few of the cooperators. It is true that frost caught some of the barley and flax but other crops which should have showed higher yields, harvested low again for some of the cooperators. Perhaps attitude is partly at fault for some of the cooperators consistently poor showings.

C. Collections

1. None made.

D. Receipts of Seed and Nursery Crops

1. None.

IV ECONOMIC USE OF REFUGE

A. Grazing

There were 3,478.86 AUM's used during the grazing season. A total of 12,758 acres were utilized by 14 permittees. Some of the units showed signs of spotty grazing and some adjustments will be made this next season. Seven additional sections of land are being considered for conversion to pasture in 1957.

B. Haying

There were about 470 acres of land hayed during the past season. This acreage produced about 360 tons of hay for 13 permittees. Most of this hay land will be included in the contemplated new grazing units.

C. Fur Harvest

The North Dakota trapping season started on November 11, and was set to end on December 2, which was later extended to December 16. Three permits were issued for Lostwood Refuge, three for Lake Zahl easement and one for Shell Lake easement. Three mink, nineteen muskrats and unrecorded numbers of badgers and skunk were taken on Lostwood, by one trapper. Another Lostwood trapper took 24 mink,

one red fox, two raccoon and a number of badgers and skunks. The third Lostwood trapper was called to jury duty just before season started. Only one report has come in from the easements from a trapper who took one mink on Zahl Refuge.

V FIELD INVESTIGATIONS

No investigations were made under this category during the period.

VI PUBLIC RELATIONS

A. Public Use

1. Hunting - There may have been 150 days of use by deer hunters during the 2nd day season. There is much enthusiasm over this sport and several people expressed their satisfaction that the refuge was opened to deer hunting.

2. Miscellaneous Use - There were 18 days of recorded use of the refuge by bird watchers this period.

B. Refuge Visitors

- 10/3 Dr. Allen, Cornell U.; Mrs. Gammel and party, bird watching.
- 10/5 Messrs. Neilson and Vachel, SCS, conference on stockwater dam.
- 10/16 Mr. Conover, U. S. Weather Bureau, check weather instruments.
- 10/18 R. Fenstermacher, contractor, contract on stockwater dam.
- 10/19 E. Zahn, U. S. F. & W. S. predator control, on prevalence of predators.
- 10/22 Mr. Hedlin, Mrs. Ford, 12 children, Niobe School District, refuge tour.
- 10/24 Mr. Brugger C S C, Mr. F. Carpenter Regional Office, job evaluation.
- 10/29 R.W. Dougall, O.E. Recroft, Regional Office, in area.
- 10/30 H. Cosby, SCS, in area.
- 10/30 L. Thompson, M. Kinnoin, SCS, report on completed stockwater dam.

- 11/6 E. Erickson, T. Sorlie, church survey.
- 11/16 H. Cosby, SCS, review of grazing units.
- 12/27 E. Zahn, U. S. F. & W. S. predator control, establishing 1080 station west of refuge.

C. Refuge Participation

On September 12, the writer was introduced to the Minot KCJB radio audience by the sports announcer Mr. Russ Smith and the Des Lacs Refuge Manager Mr. Ed. Smith, in a discussion of the outlook for the coming hunting season.

On December 30, the writer took part in the annual Christmas Bird Count, headquartered out of Des Lacs Refuge.

D. Hunting

The duck season opened strong with limits being filled with little difficulty. Hunting dropped off in the second and third weeks of October, but hunters who did not mind the little work involved in jump shooting were still getting their birds. The fourth and fifth weeks of October, brought more birds and less bluebird weather; while the first week in November, saw the northern flight pass through the area and hunters were again taking limit bags.

Opening day on sharp-tails was September 28, and was wet and windy. By the time the weather made for better grouse shooting, the hunters had turned to ducks. After the ducks left in November, a second grouse season opened but the grouse had become flighty and hard to find. Few birds were taken throughout both seasons. In my opinion lack of hunter success in this part of North Dakota was not due to lack of birds; but rather to the lack of good field dogs and the fact that duck hunting involves less work.

A few huns were taken by hunters while hunting sharp-tails but only one hunter came to the writer's attention as specifically gunning for partridge.

The State Game Commission received a great deal of criticism for opening the pheasant season in this part of North Dakota. Game Commissioner H. R. Morgan, defended this action in the state game publication by pointing out a successful nesting is hindered by too high a percentage of cocks to hens. He stated that although northwestern North Dakota had too few pheasants; there were still too many cocks for the number of hens present and on this basis the area had been opened to the taking of two cocks per day.

The refuge deer hunt was a great success as has been stated previously. Some criticism was leveled at the state for opening the last day of the hunt to any deer. It appears that game management principles, once established are difficult to qualify.

E. Fishing

None.

F. Violations

None observed.

VII DISTRICT IV A EASEMENT REFUGES

A. Shell Lake

One trapping permit was issued and one report of a kidding antelope was received.

B. Lake Zahl

A grazing permit was issued for the 745 acre government tract. Thirty head of cattle utilized 94.83 AUM's during the season.

Three trapping permits were issued and one mink was reported trapped by one permittee, the other two permittees have not reported.

VIII OTHER ITEMS


A. The current manager took residence at Lostwood on September 17. He was formerly Assistant Refuge Manager at Santee in Region IV.

Respectfully submitted,



T. P. Hunt
Refuge Manager

January 10, 1957

Approved: Date: 1/23/57

CANADA GOOSE TRANSPLANTS (Status of Goose Flock)

In December of 1954, Mr. Dybsetter made a trip to Swan Lake where he was given a tally for a shipment of pinioned Canada geese as follows:

Adult male	Red leg band	16
Adult female	Green leg band	14
Immature male	Blue leg band	37
Immature female	Not marked	34
These geese were never given aluminum leg bands.		<u>101</u>

Mr. Dybsetter states that he received only 100 geese. Within two weeks of their arrival at Lostwood, three geese had died. Mr. Dybsetter autopsied one and said that it had died from a poison similar to warfarin. By September 24, 1955, two of the remaining birds had regained their flight powers and had joined a flock of migrating Canada geese. In November of 1955, nine geese were lost to foxes and one to a mink. Ernest Zahn, predator control man, flew the area and shot three foxes fairly close to the goose pen, after which the killings ceased.

Little interest in breeding was shown by these birds during two breeding seasons. On September 17, 1956, Mr. Wilson arrived to take the remaining pinioned geese to Snake Creek. He loaded 83 geese for transfer.

In the summer of 1956, Mr. Smith of Des Lacs, received a tally for 30 clip-winged goslings from Lower Souris. On July 23, 1956, he received and counted 28 of the described birds. Some displayed broken wings on arrival.

On September 6, there were 20 of these goslings left in the winter pen. The next day, the clerk from Des Lacs and myself, entered the goose pen for the purpose of reclipping the goslings wings. Two of the birds flew out of the pen and we succeeded in capturing one of them after a short chase of 100 yards. The other one gained about 50 yards of altitude and flew over Thompson Lake. The following week, I found the remnants of two goslings with bands attached inside the pen. One was freshly dead and one was probably several weeks old. The cause of their deaths is unknown, but may have been the handling they received during their capture and transfer.

As of December 30, 1956, the Lostwood captive goose flock contained 17 female birds of the year and one unbanded, unsexed bird. They are being held in a compartment equipped with a shed, electric lights, a heated watering pan and portable feeding troughs. One additional compartment is planned to take care of the flock which it is understood will arrive during the summer of 1957.

GOOSE BROWSE PREFERENCE

No wild birds observation made this period.



NOV 56

Fig. 1 Bucks with locked antlers near
Tower Road



NOV 56

Fig. 2 Antlers sprung - whose
got an aspirin?

WATERFOWL

REFUGE Lostwood

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	October 5	6	7	8	9	November 10
Swans:										
Whistling					10	10		63	104	None present
Trumpeter										
Geese:										
Canada					20	1		50	80	
Cackling										
Brant										
White-fronted								20		
Snow										
Blue										
Other										
Ducks:										
Mallard					1000	1000		2200	2000	
Black										
Gadwall					300	400		400	800	
Baldpate					100	300		1100	2000	
Pintail					100	200		100	300	
Green-winged teal					5			17		
Blue-winged teal					200	50				
Cinnamon teal										
Shoveler					20	12				
Wood										
Redhead					800	900		200	800	
Ring-necked					7					
Canvasback					900	800		100		
Scaup					200	500		1500	3500	
Goldeneye										
Bufflehead					4			33		
Ruddy					10				2	
Other										
White winged scoter					6					
Coot:					2500	800		100		

3-7150a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE Lostwood

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	11	12	13	14	15	16	17	18		
<u>Swans:</u>										
Whistling	None present								1400	
Trumpeter										
<u>Geese:</u>										
Canada									1400	
Cackling										
Brant										
White-fronted									200	
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard									50000	
Black										
Gadwall									15000	
Baldpate									25000	
Pintail									7000	
Green-winged teal									200	
Blue-winged teal									2000	
Cinnamon teal										
Shoveler									200	
Wood										
Redhead									20000	
Ring-necked									100	
Canvasback									15000	
Scaup									40000	
Goldeneye										
Bufflehead									300	
Ruddy									200	
Other										
White winged sector									50	
<u>Coot:</u>									30000	

(over)

*sheep
figures
over
10000*

Coop:

	(5)	(6)	(7)
Total Days Use :	Peak Number :	Total Production :	
Swans	1400	104	
Geese	1400	80	
Ducks	155,000	8000	
Coots	30,000	2500	

SUMMARY

Principal feeding areas Thompson Lake,

fields east and south-east of refuge

Principal nesting areas _____

Reported by T.P. Hunt

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

Interior Duplicating Section, Washington, D. C. 37944

1953

3-1751

Form NR-1A
(Nov. 1945)MIGRATORY BIRDS
(other than waterfowl)Refuge LostwoodMonths of September to December 1956

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Eared grebe										100
Pied-billed grebe										300
Great blue heron										50
American bittern										20
Sandhill crane	150	10/26	(migration)							150
II. <u>Shorebirds, Gulls and Terns:</u>										
Wilson's snipe	20	10/5	20	10/5						
Avocet	30	9/5								
White pelican	3	9/5								
Franklin's gull										100

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	20	10/5			100
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	1	10/9			
Duck hawk					
Horned owl					50
Magpie					5000
Raven					
Crow (migration)					
Reported by.....				T.P.Hunt	

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Lostwood Months of September to December, 1946

(1) Species	(2) Density	Acres per Bird	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat		Number broods obs'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Prairie chicken						2	
Sharp-tailed grouse						1200	
Hungarian partridge						200	

INSTRUCTIONS

3-1752
Form NR-2
(April 1946)

Form NR-2 - UPLAND GAME BIRDS.*

- | | (1) Species | (2) Density | (3) Young Produced | (4) Sex Ratio | (5) Removals | (6) Total | (7) Remarks |
|---------------------|--|-------------|--------------------|---------------|--------------|-----------|-------------|
| (1) SPECIES: | Use correct common name. | | | | | | |
| (2) DENSITY: | Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks. | | | | | | |
| (3) YOUNG PRODUCED: | Estimated number of young produced, based upon observations and actual counts in representative breeding habitat. | | | | | | |
| (4) SEX RATIO: | This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available. | | | | | | |
| (5) REMOVALS: | Indicate total number in each category removed during the report period. | | | | | | |
| (6) TOTAL: | Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons. | | | | | | |
| (7) REMARKS: | Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested. | | | | | | |

* Only columns applicable to the period covered should be used.

3-1753
Form NR-3
(June 1945)

BIG GAME

Refuge Lostwood

Calendar Year 1956

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
			Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
Common Name	Cover types, total Acreage of Habitat	Number												
White-tail deer		75	10	57 counted or reported,						23 bucks; 14 does or fawns)		200	150	50:100
Mule deer												5	5	

Remarks:

Reported by T.P.Hunt

INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE POPULATION: Give the estimated population of each species on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

DISEASE

Refuge Lostwood

Year 1956

Botulism None

Lead Poisoning or other Disease None

Period of outbreak _____

Period of heaviest losses _____

Losses:

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

Number Hospitalized	No. Recovered	% Recovered
---------------------	---------------	-------------

(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

Areas affected (location and approximate acreage) _____

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

Condition of vegetation and invertebrate life _____

Remarks _____

Kind of disease _____

Species affected _____

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

Number Recovered _____

Number lost _____

Source of infection _____

Water conditions _____

Food conditions _____

Remarks _____

3-1756
Form NR-6
(April 1946)

FISH

Refuge.....Lostwood.....Year 1944-56

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number re- moved for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
None								

REMARKS:

3-1757
Form NR-7
(April 1946)

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge.....Lostwood.....Year 19456

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Plant- ing	Survival	Cause of Loss	Remarks
None								

TOTAL ACREAGE PLANTED:

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

CULTIVATED CROPS

Refuge Lostwood

Year 1958

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Anderson, Adolph		A-91	Flax/alfalfa		15	100%					Share in other crop
		A-92, 93, 94	Wheat	6.6	35.5	228	12.5	89			
		A-97, 98	Flax/alfalfa		20	100%					Share in other crop
Edwards, Alford		A-80	Oats/alfalfa	7	16	112	4	28			
		A-81	Sum. fallow		24						
			Wheat	3	8.8	26	2.2	7			
			Barley	7	6.4	45	1.6	11			
			Barley	7	4.9	34			2.1	15	
Erickson, Martin		A-9, 10	Sum. fallow		21						
			Oats	25.5	20	510	5	127.8			
			Wheat	23.5	22.4	528	5.6	132			
			Barley	12	15.2	182	3.8	46			
		A-25	Wheat/ alfalfa	25.5	4.8	115	1.2	28			
			Oats	25.5	9.6	245	2.4	61			
		Sum. fallow		7							

CULTIVATED CROPS

Refuge Lostwood

Year 1956

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				
					Acres	Bu. Har- vested	Harvested		Unharvested		Compensatory Services, or Cash Revenue
							Acres	Bu.	Acres	Bu.	
Lindberg, Albert		A-48	Alfalfa/Hay Wheat		8 12.07	100% 71%			4.93	29%	
Lindberg, Duane		A-55	Flax/alfalfa Barley Sun. fallow Wheat		8 10.4 16 8	100% 145 77	4.6	65			Share in other crop
Lindberg, Harry & Art.		A-47 A-50	Barley Oats Flax/Alfalfa		14.7 5.4	70% 126 100%	6.6	99	6.8	30%	Share in other crop
Lindberg, Marvin		A-41 A-53	Alfalfa Wheat Sun. fallow Flax/alfalfa Flax Sun. fallow		10 12.8 13 7 20 14	100% 192	5.2	78			Share in other crop Froze out

CULTIVATED CROPS

Refuge Lentwood Year 1953

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Nelson, John M.		A-60	Flax/alfalfa		11	100%					Share in other crops
			Sum. fallow		9.5						
			Wheat	12	6.6	79	4.4	53			
			Wheat/grass	18		100%					
		A-53, 54	Alfalfa		28	100%					Far seeding retired crop land.
			Wheat	12	29.5	554	14.5	174			
		A-20, 96	Barley/ alfalfa	2.6	2.8		.7				Share in other crop
			Sum. fallow		25.5						
			Barley	15	6.7	100.5			2.8	42	
			Barley	15	7.6	114	1.9	29			
			Wheat/ alfalfa	12	4	48	1	12			
			Wheat	12	9.7	118	.3	4			
			Wheat	12	5.6	67			2.4	29	

CULTIVATED CROPS

Refuge Leetwood Year 1953

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Acres	Bu. Har- vested	Harvested		Unharvested		
							Acres	Bu.	Acres	Bu.	
Niskol, Raymond		A-82	Barley/alfalfa		26				5	100%	
			Sum. fallow								
		A-83	Barley		9	100%			14	100%	Share in other crop
			Barley/alfalfa								
		A-84	Alfalfa/grass		16.8	845	2	--			
			Sum. fallow								
		A-85	Alfalfa/grass		26.4	100%	4.2	(baled)			Share in other crop
			Wheat	82			6.6	211			
			Barley	34							
Vaage, Donald		A-85, 86	Sum. fallow		20						Share in other crop
			Alfalfa		22	100%					
			Wheat	12	44	528	11	132			
			Barley	20	11.7	234	6.5	126			
			Wheat	12	9.6	115	2.4	29			

Summary of Crops Grown:		Crop	Acreage	Permittee's Share		Government's Share		Total Revenue		
				Acres	Bushels	Harvested	Unharvested			
						Acres	Bu.	Acres	Bu.	\$
Wheat	18.2 bu./acre	Wheat	313.2	241.4	3311	71.7	1187	4.9		
Barley	12.7 bu./acre	Barley	107	772	854	18.2	277	11.2		
Oats	24.2 bu./acre	Oats	72	54	993	18	516			
		Flax	98	88	100%					
Interior Duplicating Section, Wash.D.C.										

Interior Duplicating
Section, Wash.D.C.

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

(April 1946)
Form NR-8
3-1758

REFUGE GRAIN REPORT

Refuge LostwoodMonths of September through December, 1956

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Corn	55bu.					5bu.	5bu.	50bu.			
Barley		277bu.		260bu.				15			
Oats		316		300				20			
Wheat		1187		1120				65			

(8) Indicate shipping or collection points Lostwood Refuge(9) Grain is stored at Headquarters, Lostwood(10) Remarks 1780 bushels of grain were shipped to Lower Souris

*See instructions on back.

(10) Remarks

NR-8a

(8) Grain is stored at

(8) Indicate shipping or collection points

REFUGE GRAIN REPORT

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

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

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

16-61482-1 U. S. GOVERNMENT PRINTING OFFICE

Variety	Grain on hand beginning of period	Grain received during period	Total	Grain disposed of				Grain on hand end of period	Proposed for seed use		Surplus
				Transferred	Seeded	Fed	Total		Seeded	Feed	
(1)	(2)	(3)	(4)	(5)				(6)	(7)		(8)

Refuge

Months of

through

192

REFUGE GRAIN REPORT

~~HAYING~~ AND GRAZING

Refuge Lostwood and Zahl Year 1955

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Anderson, John	26830	G-6B	1120	396.88		7/2 -11/5	1.00	396.88	
Anderson, John W.	26831	G-4B	916	384.30		7/2 -11/12	1.00	384.30	
Anderson, Kenneth	24735	G-1(Zahl)	745	94.83		7/1 -10/6	1.00	94.83	
Anderson, Marvin	26832	G-6A	2830	525.00		8/1 -11/15	1.00	525.00	
Ekberg, Gustave	26836	G-4D	98	36.74		7/2 -10/22	1.00	36.74	
Gissel, Harold	26840	G-4A,C	1208	177.85		7/20 -11/8	1.00	177.85	
Lindberg, Albert	26818	G-12	920	184.91		8/17 -10/17	1.00	184.91	
Lindberg, Duane	26811	G-10	640	96.00		8/1 -10/31	1.00	96.00	
Lindberg, Walter	26810	G-10	—	57.00		8/1 -10/31	1.00	57.00	
Lucy, Ben	24737	G-2	1551	306.42		8/18 -10/31	1.00	306.42	
Lucy, Tim (Mrs.)	24739	G-1	588	188.16		8/9 -11/6	1.00	188.16	
Olson, Edna	24740	G-4A,C	—	94.44		7/2 -10/30	1.00	94.44	
Tinjum, Clarence	26801	G-8	1514	414.93		7/2 -11/8	1.00	414.93	
Tinjum, Erwin	26802	G-9	1133	491.40		7/2 -11/7	1.00	491.40	

Totals:

Acreage grazed 12,758 Animal use months 3478.86 Total income Grazing \$ 3478.86
Acreage cut for hay Tons of hay cut Total income Haying

HAYING AND GRAZING

Refuge Lostwood and Zahl

Year 1955

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use		Rate	Total Income	Remarks
						From	To			
Edwards, Alford	26855	H-17,70	75		19.95	7/15	11/15	1.50	25.00	Down payment forfeit
Edwards, Milford	26854	H-21,22	25		16.7	7/15	11/15	1.50	25.05	
Engel, Obert	26859	H-19,20	15		6.5	7/15	11/15	1.50	15.00	Down payment forfeited
Erickson, Martin	26857	H-4-7,9-11	60		82.8	7/15	11/15	1.50	124.20	
Esterby, Albert	26805	H-1(Zahl)	40		7.08	7/15	11/15	1.50	10.62	
Lindberg, Albert	26807	H-40	40		99	7/15	11/15	1.50	148.50	
Lindberg, Arthur	24754	H-40	—		0	7/15	11/15	1.50	5.00	Down payment forfeited
Lindberg, Eamon	24755	H-55,56	45		5.81	7/15	11/15	1.50	15.00	Down payment forfeited
Lindberg, Harry	26806	G-10	—		91.5	7/15	11/15	3.00	273.90	Clover
Lindberg, Marvin	26809	H-25	50		8.7	7/15	11/15	1.50	15.05	
Lindberg, Walter	26804	G-10	—		24	7/15	11/15	3.00	72.00	Clover
Lucy, Ben	24756	H-15	60		19.4	7/15	11/15	1.50	29.10	
Lucy, Wm. J.	24758	H-18	60		68.6	7/15	11/15	1.50	102.90	

Totals:

Acreage grazed.....

Animal use months.....

Total income Grazing.....

Acreage cut for hay 470

Tons of hay cut 559.94

Total income Haying 859.32

LAKE ILO REFUGE

I. GENERAL

A. WEATHER CONDITIONS.

Total precipitation for the period was below normal. September precipitation was 0.40 inches, 0.98 below average; October 0.35 inches, 0.42 below average; November 0.60 inches, 0.04 above average; December 0.39 inches, 0.06 below average.

Temperatures were slightly below average for September and slightly above average for October, November and December. Temperatures were much above average for the latter part of December. All of the snow melted and there was 0.12 inch of rain on December 28. There was a small amount of run-off on this date.

Monthly maximums occurred as follows: September 27, 91°; October 3, 84°; November 11, 56°; and December 1 & 3, 48°. The coldest day for November was the 22nd with 3°. December's coldest day was the 7th and 8th with a -18°.

Weather data for the period and for corresponding periods in 1955 and 1954 are shown below:

Year	Month	Snowfall	Precip.	20-year ave.		Temperatures	
				Precipitation		Max.	Min.
1956	Sept.	- -	0.40	1.29		91	29
	Oct.	- -	0.35	0.77		84	20
	Nov.	3.0	0.60	0.56		56	3
	Dec.	3.0	0.39	0.45		50	-18
	Total	6.0	1.74	3.07	Extreme	91	-18
1955	Sept.	- -	0.92			93	28
	Oct.	- -	0.60			82	14
	Nov.	8.0	0.35			52	-19
	Dec.	2.0	0.20			43	-29
	Total	10.0	2.07		Extreme	93	-29
1954	Sept.	- -	- -			100	26
	Oct.	2.0	2.78			71	17
	Nov.	1.0	0.80			70	8
	Dec.	1.0	0.09			55	-9
	Total	4.0	3.75		Extreme	100	-9

B. WATER CONDITIONS.

The water level was 26 inches below spillway crest on September 1, and the ice level was 32 inches below spillway crest

on December 28.

The lake froze over on November 8, with the exception of a small hole kept open by the ducks. The lake opened up again during the latter part of November and froze over on December 4. There were several open places in the lake during the last three days of December.

Ice measurements were as follows: November 10 - 2 inches; November 30 - 1 inch with one-fourth of the lake open. December 8 - 6 inches; December 15 - 12 inches and December 31 - 12 inches with a small amount of open water.

C. FIRES. None

II. WILDLIFE

A. MIGRATORY BIRDS.

1. Population and Behavior.

Approximately 7,800 ducks and 2,000 coots were on the refuge the first week in September for a total of 9,800. Waterfowl numbers increased to 11,550 ducks and 6,000 coot the latter part of September. During October the waterfowl population increased to 45,700 ducks. During the second week in November the waterfowl population increased to 50,600. This was the peak population during the fall migration. The peak population of mallards which was 35,000 was reached during the week October 4. to 10. Most of the ducks left on November 6 and 7. Ten thousand mallards and 50 scaup were present on the refuge from November 11 to 17, 8,000 mallards November 18 to 24, and 6,000 mallards November 25 to December 1. The first week of December there were 3,000 mallards present on the refuge. This number decreased to 300 on December 21 and this was the last waterfowl seen on the refuge during this past period.

The peak concentration of ducks was higher than last year and above average since the refuge was established.

The usual number of White Pelican, Sandhill Cranes, Double-crested Cormorants and shorebirds used the area during September and October.

2. Food and Cover.

The food for field feeding ducks was very good due to the good corn crop and poor small grain crop that was not harvested. Ducks fed in the corn field where cattle were feeding mostly.

Very few were seen feeding in fields where there were no cattle feeding in them.

B. UPLAND GAME BIRDS.

1. Population and Behavior.

It is estimated that 200 Ring-necked pheasant are using the refuge this winter. This is 250 less than last winter. It is possible a few more may concentrate on the refuge if the weather gets bad. So far the winter has been very mild without any snow. The Ring-necked pheasant population is considered very small in the vicinity of the refuge compared to previous populations.

A few Sharp-tailed grouse have been seen on the refuge during the report period. Their number is about the same as last year, but smaller than in the past. There were very few hunters out after these birds and it is believed only a small number were killed during the hunting season.

An estimated 150 European Partridge used the refuge during the report period. There was a 38 day hunting season on Huns in vicinity of refuge this fall. Very few were bagged.

2. Food and Cover.

Food and cover conditions are good on refuge and near by vicinity. The weather conditions have been very good for upland game birds.

C. BIG GAME ANIMALS.

A number of Antelope were seen in the vicinity of the refuge this period. Sixty-three were counted ten miles north of refuge and 26 were counted five miles south of refuge. None were observed using the refuge.

Four Mule deer and three White-tailed deer were observed. It is believed more deer used the refuge than ever in the past. Their tracks are numerous along shore-line in the mud.

There was a deer-bow and gun season in vicinity of refuge. Several deer were killed during bow season on Knife River 10 miles south of refuge. It is believed the hunters in the Badlands and on Knife River were very successful during gun season. I would estimate that over 90% of the hunters got their deer. There were 10 hunters in the party I hunted with and we all filled out license.

D. FUR ANIMALS, PREDATORS, RODENTS AND OTHER MAMMALS.

The Muskrat population is estimated to be 25 or 30. Their number is the smallest since the refuge was established. Only one was trapped during trapping season. It was caught in a mink set.

No Weasels were trapped on the refuge this trapping season. Two were seen during the period. Their number is small on the refuge and vicinity.

The Mink population appeared to be larger than usual this summer but very few were using the refuge during trapping season.

Three Skunk were trapped on the refuge this period. It is believed the skunk population on refuge and near by vicinity is smaller than usual.

More Raccoon were seen on refuge this period than ever in the past. They were seen feeding on plums and sand cherries in shelter belts on refuge many times.

No Beaver were trapped on the refuge during the period. There is one beaver cache in creek on refuge. It is estimated that one to three beaver are present.

Two Coyote were seen on refuge this period and five were killed near refuge by predator hunters in airplane.

Several Fox were seen on refuge this period and they are numerous in this vicinity. Their number is approximately the same as last year which was considered the largest ever in this vicinity.

E. PREDACIOUS BIRDS, INCLUDING CROWS, RAVENS, MAGPIES.

The usual number of Hawk's were present during the period, consisting of Marsh Hawks, Swanson's, Rough-legs, Sparrow Hawks, and Duck Hawks. Several Prairie Falcons and Golden Eagles have been using the refuge this winter.

A few Crows used the refuge this fall during their migration but not as many as usual. A few magpies have been seen on the refuge this winter.

Three Great Horned Owls were seen this period. No Snowy Owls have been seen yet.

F. FISH.

Fishing was fair during the first part of September. The season closed September 15.

The winter fishing opened December 15 and success has been considered poor on Perch and Northern Pike but better than usual on Walleyed Pike. More Walleyed Pike have been caught than ever in the past. A large number of fishermen used the area during the latter part of December. There are 20 fish houses on the lake.

A dissolved oxygen analysis was made in the lake by Mr. Henry McKirdy, Fisheries Biologist from State Game and Fish Department, on December 28. The following are the readings from the various depths of the lake: Surface - 11.9 p.p.m.; three and one-half feet down - 11.5 p.p.m.; seven feet down 10.3 p.p.m.; pH value 5.5 to 6.8. Total hardness 192 p.p.m. (this is total calcium carbonates). The lake looks good at the present time and is possibly in better condition after the warm weather and the small run-off that occurred the latter part of December.

Fifty thousand fingerling, Northern Pike, were planted in the lake by State Game and Fish Department on June 6, 1956.

III. REFUGE DEVELOPMENT-MAINTENANCE.

A. PHYSICAL DEVELOPMENTS.

1. Excavated and extinguished burning coal vein near headquarters. It is believed this coal vein was set fire by fishermen and had been burning for some time.
2. Checked and repaired telephone line from headquarters to town.
3. Surveyed contouring on refuge. (for tree plantings and farming)
4. Harvested millet and barley on refuge. (400 bu. millet
820 bu. barley)
5. Received and erected steel granary. (built concrete base)
6. Hauled and placed barley and millet in granary at headquarters.
7. Returned dump truck to Long Lake Refuge.

8. Removed grass and weeds from around buildings on refuge.
9. Mowed weeds on refuge trails, dam and on county roads along refuge boundary. Removed weeds off refuge roads.
10. Bladed refuge roads three times during the period.
11. Assisted Mr. Carter, Realty Officer from Regional Office with land negotiation on refuge.
12. Excavated for garage site, built forms, poured concrete foundation and floor. (hailed 7 cu. yds of sand and 8 cu. yds of gravel from Dickinson)
13. Hauled 25 cu. yds of Scoria and placed on driveway at headquarters. Hauled and spread 15 cu. yds of Scoria on refuge roads.
14. Constructed toilet for Stewart Lake Recreational area 75% completed.
15. Moved garage No. 4 from near residence to new location 50 feet north of garage No. 1.
16. Measured hay harvested on refuge.
17. Installed new sills under garage No. 4 and installed new chimney.
18. Moved old foundation from garage No. 4 and placed it on shoreline for rip-rap. Moved old concrete floor from garage No. 4 and place it near new location of garage No. 4. This concrete slab is to be placed in front of door of garage No. 4 next spring.
19. Remove Box-elder trees from tree plantings near headquarters as advised by State Forester.
20. Hauled and stacked piled 75 cu. yds of rock to be placed on shore line after freeze-up.
21. Cultivated trees with Ferguson tractor in shelter-belts near headquarters and on north side of lake.
22. Made trip to Des Lacs Refuge after supplies.
23. Observed birds, checked structures and water levels.
24. Patrolled around refuge and vicinity during hunting season.
25. Made minor repairs to Dodge pickup, Diamond T truck, Ferguson tractor and Chevrolet truck.

26. Issued trapping permit and divided furs.

B. PLANTINGS.

1. Aquatics and Marsh Plants. None.

2. Trees and Shrubs.

Eight hundred miscellaneous trees and shrubs donated by the local SCS were planted in three small shelter belts. Two of the shelterbelts were planted near headquarters and the other one on north side of lake near recreational area. One hundred ten pine trees and 29 spruce trees were planted in yard at headquarters. The pine trees were transplanted from the Badlands and the spruce trees were purchased from the Esmond, North Dakota nursery. All of the trees showed excellent survival with the exception of the pine trees. Approximately 20% of these survived the dry summer.

3. Cultivated Crops.

Seventy acres were planted to millet and barley in the Lee Paul Slough by refuge personnel. This slough has been covered with water for 17 years but went dry during the summer of 1955 and did not fill up last spring. Ten acres of the millet and 20 acres of the barley were harvested for bird feed and stored in granary at headquarters. A total 380 bushels of millet and 720 bushels of barley were harvested and stored in granary at headquarters.

Five acres of alfalfa were planted last spring on land that contained a large amount of salts. The alfalfa did very well and grew to a height of 30 inches. Seventy-eight acres of corn, wheat, barley and oats were planted by permittees this season under cooperative agreement. The refuge shares of corn and barley were left standing. Crops were very poor in this vicinity. Only 9 acres of the 49 acres of small grain planted on refuge by permittees were harvested. Fourteen acres of oats were cut for hay and the other grain was left standing.

C. COLLECTIONS. None

D. RECEIPTS OF SEED AND NURSERY STOCK.

Twelve hundred miscellaneous trees and shrubs were received from SCS. Fifty-five Colorado Spruce were purchased from the C. L. Jensen Nursey at Esmond, North Dakota.

IV. ECONOMIC USES.

A. GRAZING. None

B. HAYING.

Two haying permits were issued to local farmers. Forty-five and one-half tons were harvested with a cash return of \$68.25.

V. FIELD INVESTIGATION OR APPLIED RESEARCH.

None

VI. PUBLIC RELATIONS.

A. PUBLIC USES.

1. Hunting Use. None

2. Fishing Use.

An estimated 4,000 man-days were spent fishing on the refuge in 1956.

3. Miscellaneous Uses.

An estimated 3,000 visitor-days for the year. The recreational area, which is under the management of the Dunn County Park Board, was maintained in good order. During the period trees were cultivated and 26 Colorado Spruce were planted in park. These trees were purchased by the County Park Board.

B. VISITORS.

<u>Date</u>	<u>Name</u>	<u>Affiliation</u>	<u>Purpose</u>
9/11,12	Mr. R.M. Davis	SCS Work	Land Use
9/16	Mr. Charles Schollmeyer	Local Farmer	Harvesting grain on refuge
9/7	Mr. F.B. Morse	Local Farmer	Harvesting grain on refuge
10/9	Mr. Tom Donohoe	Local Farmer	Selling land to Govern.
10/22	Mr. Harold A. Corter	Realty Officer	Land Negotiation
26		R.O. Mpls.	
11/13	Mr. John Bray	Trapper	Trapping on Refuge
15			
11/27	Mr. R.M. Davis	SCS Work	Soils Maps Survey

<u>Date</u>	<u>Name</u>	<u>Affiliation</u>	<u>Purpose</u>
11/27	Mr. Lenard Wolf	SCS Work	Soils Map Survey
12/20	Mr. Gene Strandemo	State Game & Fish	Law Inforcement
12/3	Mr. John Bray	Trapper	Share Furs
12/27	Mr. John H. Doyle	Ornithologist	Bird Study
12/27	Mr. Larry Crowley	Ornithologist	Bird Study

C. REFUGE PARTICIPATION. None

D. HUNTING.

No hunting is allowed on refuge. Duck hunting was considered fair in this vicinity. Field and creek shooting was good up until the ducks left. All of the sloughs and potholes were dry this fall. There was a large concentration of ducks during October and first week of November that presented good corn field shooting. Hunting pressure was believed light.

E. FISHING.

A fair number of fishermen used the area during the first 15 days of September prior to the closing of the summer season. Winter fishing opened on December 16 in accordance with refuge regulations. Many fisherman were present during the latter part of December. The weather was very mild with no snow. Fishing was considered poor.

F. VIOLATIONS.

No violators apprehended.

DISTRICT IV. EASEMENTS

HIDDENWOOD

I. GENERAL.

This area was visited once during the period on November 14. Crops were considered good in the vicinity. Precipitation and snow fall were below average. The water level was 6 inches below outlet culvert at the time of freeze up. The lake was frozen over when visited on November 14.

II. WILDLIFE

A good number of ducks used the area during the fall migration as reported by local farmers and hunters.

More pheasant are using the area than there has been for several years. Four were seen on November 14.

The muskrat population is small on this area. A number of mink signs were seen during the summer.

A trapping permit was issued to a farmer living near the refuge to trap fur bearing animals. No report of catch has been received to date.

III. PHYSICAL DEVELOPMENT.

1. Water levels and refuge markers checked.
2. Trapping permit issued to local farmer.
3. Local farmers contacted.

PRETTY ROCK

I. GENERAL.

Precipitation and snow fall were below average during the period. The water level was very low this year as there was no run off in this vicinity last spring. The water level was three feet six inches below spillway crest when visited on October 19. The water level is about the same as last year but below normal.

There was good food and cover for upland game birds and field feeding for the ducks. There was a good corn crop in this vicinity.

II. WILDLIFE.

The area was visited on October 19 and the following

birds were seen on the area: 3,000 mallard, 400 blue-wing teal, 150 widgeon, 120 shoveler, 200 pintail, 100 scaup, 40 redhead and 12 canvasback. It is believed less waterfowl used the area during the period because of the low water level.

III. PHYSICAL DEVELOPMENT

1. Checked water levels and structures.
2. Checked and repaired refuge markers.
3. Contacted farmers living on and near refuge and issued trapping permit to farmer living on refuge.

MCLEAN

I. GENERAL.

Precipitation and snow fall were below average for the period. There was good food and cover for upland game birds and good field feeding for the ducks. Good crops were harvest in the area.

The water level was two inches below spillway crest when visited on November 13 and 14.

II. WILDLIFE.

This area was not visited ^{by} writer during fall migration but it was reported by farmers living near refuge that a large number of ducks used the area during migration. Duck hunting was considered good in this vicinity.

A trapping permit was issued to farmer living near refuge. No report as to catch has been received to date.

III. PHYSICAL DEVELOPMENT.

1. Water levels and structures checked November 13 & 14.
2. Local farmers contacted and a trapping permit issued.
3. Weeds cleaned off dam.

STEWART LAKE

I. GENERAL.

Rainfall and snowfall were below average during the period. Very poor crops were harvested in this vicinity due to dry weather and hail damage. There was very little feed if any for field feeding ducks. Food and cover was poor for upland game birds.

The water level was two feet below spillway crest at the beginning of the period and receded to three feet by October 17. The area was not visited after this date.

II. WILDLIFE.

On October 17 the following birds were seen: 2,000 mallard, 70 widgeon, 200 pintail, 50 shoveler, 25 blue-wing teal, 12 green-wing teal, 25 redhead, 20 ruddy and 100 coot. The area was not visited after this date during fall migration. It was reported by farmers living in this vicinity that there were very few ducks on the area during hunting season. It is believed less ducks used the area due to the fact that there was no food in this vicinity.

No pheasant were seen on the area during the report period. Their number is believed small on refuge. A very large percentage of the pheasants were killed by hail storms during the summer.

No sharp-tailed grouse or European partridge were seen on the refuge during the period.

Antelope and mule deer are present in this vicinity. None were seen on the refuge, however it is believed a few used the area.

A few muskrats and mink are present but it is believed their number is small. Two trapping permits were issued to local farm boys. No report as to catch received to date.

III. PHYSICAL DEVELOPMENT.

1. Checked water levels, structures and refuge markers.
2. Contacted local farmers and observed birds.

WHITE LAKE

I. GENERAL.

Rainfall and snowfall were below average during the period. Crops were very poor in this vicinity due to dry weather and hailstorms. Most of the wheat crop was put in the Soil Bank.

The water level was 20 inches below spillway crest at the beginning of the period and receded to 30 inches by October 17, and approximately three feet by the end of the period.

II. WILDLIFE.

The area was visited on October 17 and the following birds were seen: 800 mallards, 20 gadwall, 120 widgeon, 30 blue-wing teal, 20 green-wing teal, 60 shoveler, 200 pintail, 20 red-head, 12 ruddy, 200 coot and 3 great blue heron. The area was not visited after this date. Mr. Mike Koffler, a farmer living on the refuge, was contacted and he stated there were less ducks on the area this fall than ever in the past. He believed the shortage of ducks was due to a lack of grain crops in this vicinity.

A few pheasant were seen on the area but their number is believed very small.

A few sign of mink, muskrat, skunk and raccoon were observed on the refuge. A trapping permit was issued to a farmer living on the refuge and he reported that he caught three mink.

A few mule deer and antelope used the area during the period.

III. PHYSICAL DEVELOPMENT.

1. Checked water levels and structures.
2. Observed birds and contacted farmers living on refuge.
3. Checked and repaired refuge markers.

CREDITS.

The Lake Ilo and Easement Report was written by Chesley M. Dinkins, refuge aid at Dunn Center, North Dakota. The complete typing of this report was accomplished by Donald L. Berg, clerk-typist at Des Lacs Refuge, Kenmare, North Dakota.

W A T E R F O W L

REFUGE Lake Ilo

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period									
	9/2-9/8	9/9-9/15	9/16-9/22	9/23-9/29	9/30-10/6	10/7-10/13	10/14-10/20	10/21-10/27	10/28-11/3	11/4-10/10/4
Swans:										10/10
Whistling										7
Trumpeter										
Geese:										
Canada					9	17	17	22	13	13
Cackling										
Brant										
White-fronted					9	23	26	39	26	26
Snow					40					
Blue					2					
Other										
Ducks:										
Mallard	2000	2000	3000	3500	3500	5000	7000	12000	20000	35000
Black										
Gadwall	200	200	250	300	300	300	300	200	300	300
Baldpate	300	300	700	1000	1000	1000	1200	1300	2000	2000
Pintail	2000	2000	3000	3000	3000	4000	4000	2000	2000	2000
Green-winged teal	100	150	200	300	300	300	300	100	200	200
Blue-winged teal	100	1500	2000	2000	2000	2000	300	400	200	100
Cinnamon teal										
Shoveler	150	200	300	700	800	1000	1200	1200	2000	3000
Wood				50	100	200	300	400	1000	1000
Redhead										
Ring-necked									200	200
Canvasback				100	150	300	300	300	300	300
Scaup	50	50	100	200	300	1200	1000	1000	6000	6000
Goldeneye								25	100	100
Bufflehead								50	200	200
Ruddy							200	300	1000	400
Other										
Am. Merganser								10	20	
Coot:	2000	2000	2000	6000	7000	7000	1000	500		

WATERFOWL
(Continuation Sheet)

REFUGE Lake Ilo

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total	
	11/11-17	18-24	25-12/1	2-8	9-15	16-22	23-29	30-31			
Swans:											
Whistling	7								147		
Trumpeter											
Geese:											
Canada									707		
Cackling											
Brant											
White-fronted	1								1,255		
Snow									280		
Blue									14		
Other											
Ducks:											
Mallard	10000	8000	6000	3000	200	300			927,500		
Black											
Gadwall									21,550		
Baldpate									77,000		
Pintail									203,000		
Green-winged teal									22,750		
Blue-winged teal									81,900		
Cinnamon teal											
Shoveler									11,750		
Wood											
Redhead									22,800		
Ring-necked									1,400		
Canvasback									16,450		
Scaup	50								112,550		
Goldeneye									1,575		
Bufflehead									3,150		
Ruddy									14,700		
Other											
Am. Merganser									210		
Coot:									220,500		

(over)

(OASL)

Coop:

	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans	147	22	
Geese	2,254	56	
Ducks	1,517,785	56,320	
Coots	230,500	7,000	

63,398

SUMMARY

Principal feeding areas

Principal nesting areas

Reported by Shirley H. Perkins

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

Interior Duplicating Section, Washington, D. C. 37944

1953

3-1750
Form NR-1
(Rev. March 1953)

W A T E R F O W L

REFUGE Stewart Lake

MONTHS OF September TO December, 1958

(1) Species	(2) Weeks of reporting period										
	1	2	3	4	5	6	10/14-10/20	7	8	9	10
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard							2000				
Black											
Gadwall											
Baldpate							200				
Pintail							70				
Green-winged teal							12				
Blue-winged teal							25				
Cinnamon teal											
Shoveler							50				
Wood											
Redhead							25				
Ring-necked											
Canvasback											
Scaup											
Goldeneye											
Bufflehead											
Ruddy							20				
Other											
Coot:							100				

Int. Dup. Sec..

Int. Dup. Sec.,
Wash. D. C. 20540

W A T E R F O W L

REFUGE White Lake

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	10/14-1-20 7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard							800			
Black							20			
Gadwall							200			
Baldpate							200			
Pintail							20			
Green-winged teal							30			
Blue-winged teal							70			
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback							20			
Scaup										
Goldeneye										
Bufflehead										
Ruddy							12			
Other										
<u>Coot:</u>							200			

W A T E R F O W L

REFUGE Pretty Rock

MONTHS OF September TO December, 1956

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	10/14-10/20 7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard							3,000			
Black										
Gadwall										
Baldpate							150			
Pintail							200			
Green-winged teal										
Blue-winged teal							400			
Cinnamon teal										
Shoveler							120			
Wood										
Redhead							40			
Ring-necked										
Canvasback							12			
Scaup							100			
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>										

Not
visited
after
this
date

3-1751
Form NR-1A
(Aug. 1952)

MIGRATORY BIRDS
(Other than Waterfowl)

Refuge Lake Itasca Months of September to December 1956

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Use
I. Water and Marsh Birds:										
Red-necked Grebe	Common		180	9/20-30						
Horned Grebe	"		150	9/20-30						
Barred Grebe	"		200	9/10-30						
White Pelican	"		10	9/10-30						
Double Crested Cormorant	"		20	9/10-10/10						
Great Blue Heron	"		20	9/10-30						
American Bittern	"		20	9/10-30						
Sandhill Crane			200	10/10-30						
II. Shorebirds, Gulls and Terns:										
Common Snipe	Common		20	10/1-15						
Western Willet	"		20	10/1-15						
Greater Yellow Legs	"		200	10/1-15						
Lesser Yellow Legs	"		20	10/1-15						
Hewitts	"		20	10/1-15						
Marble Godwit	"		20	10/1-15						
Avocet	"		8	9/10-30						
Wilson's Phalarope	"		200	9/10-30						
Killdeer	"		200	9/10-30						

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	Common	400	9/1-20		
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle		8	11/20-12/10		
Duck hawk		8	10/11-11/10		
Horned owl	Common	8	12/1-20		
Magpie	"	8	11/20-20		
Raven	"				
Crow		100	10/20-20		
Snowy Owl	None seen				
S wainson's Hawk		8	10/1-20		
Rough-legged Hawk		6	10/1-20		
Marsh Hawk	Common	15	10/10-20		
Sparrow Hawk		10	9/10-20		
Prairie Falcon		8	11/10-20		
Reported by <u>Chesley M. Dinkins</u>					

INSTRUCTIONS

(See Sec. 7532, Wildlife Refuges Field Manual)

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
II. Shorebirds, Gulls and Terns (Charadriiformes)
III. Doves and Pigeons (Columbiformes)
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

1613

Refuge Lake Ile & Easements 340 Months of September to December, 1958

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge
<u>Lake Ho</u>						
Sharp-tailed grouse						35
European partridge						150
Ring-necked pheasant						200
<u>Pretty Rock</u>						
Sharp-tailed grouse						30
European partridge						20
Ring-necked pheasant						200
<u>Stewart Lake</u>						
Sharp-tailed grouse						10
European partridge						20
Ring-necked pheasant						10
<u>White Lake</u>						
Sharp-tailed grouse						10
European partridge						20
Ring-necked pheasant						10
<u>Hiddenwood</u>						
Sharp-tailed grouse						20
European partridge						20
Ring-necked pheasant						20
<u>Lake Susie</u>						
Sharp-tailed grouse						15
European partridge						20
Ring-necked pheasant						10

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES:	(2) DENSITY:	(3) YOUNG PRODUCED:	(4) SEX RATIO:	(5) REMOVALS:	(6) TOTAL:	(7) REMARKS:
Use correct common name.	Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.	Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.	This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.	Indicate total number in each category removed during the report period.	Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.	Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

* Only columns applicable to the period covered should be used.

Refuge Lake Ile

Year 1945

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Large Mouth Bass	Few	200	200					4
Blue Gills	None							
Crappie	None							
Yellow Perch	Moderate	1200	5000					
Northern Pike	Moderate	4000	12000					
" "	" "					50,000	Lake Ile	
Walleyed Pike	Moderate	1200	4000					
Bullheads	Heavy	400	4000					
Common Sucker	Moderate							
Golden Shiner	Heavy							
Carp	Few							

REMARKS: Last winter 12/15/55 to 3/15/56 it was estimated that 12,000 Norther Pike were taken. Only a few were taken this summer, and very few this winter. More Walleyed Pike were taken last spring and this ~~summer~~ winter than ever before in the past. Yellow Perch fishing was the poorest during the year than ever in the past since fishing was allowed on the refuge.

3-1756
Form NR-6
(April 1946)

FISH

Refuge.....Stewart Lake

...Year 19458

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number removed for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
Yellow Perch	Moderate	Est. 200	2,000					
Bullheads	Moderate	Est. 200	2,000					
Northern Pike	Few		Few					
Common Sucker	Moderate							

REMARKS: There was less fishing this year than usual, and less fish were taken.

3-1757
Form NR-7
(April 1946)

PLANTINGS
(Marsh - Aquatic - Upland)

Refuge Lake Ilo Year 1946

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Planting	Survival	Cause of Loss	Remarks
Alfalfa	NE $\frac{1}{4}$, Sec. 29 Land tract 12	20#/Acre	5 acres	100#	4/20	100%		
Trees & Shrubs	Land tract 7 & near Hqs			1200	5/14	95%	Dry weather	
Colorado Spruce	Headquarters			80	5/14	100%		
" "	Park			28	5/14	100%		
Pine	Headquarters			110	4/24	20%	Dry weather	
Spruce & Cedar	Headquarters			190	4/29	10%	Dry weather & poor stock	

TOTAL ACREAGE PLANTED:

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

CULTIVATED CROPS

Refuge Lake Ilo

Year 195 6

Permittee (If farmed by refuge personnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Avg. Yield per Acre	Permittee's Share		Government's Share or Return				Compensatory Services, or Cash Revenue
					Share		Harvested		Unharvested		
					Acres	Bu. Har- vested	Acres	Bu.	Acres	Bu.	
Charles Schollmeyer		A-4,5	Wheat	8	23.5	45					14 acres of wheat plowed up.
			Corn	10	14	140			7	70	
			Barley	4	1.75	none			10	40	Share in wheat
Tom Donohue		A-1,2	Corn	15		none			7	105	
			Oats	10	14	none					Share in corn
			Fallow								7 acres fallowed

Summary of Crops Grown:

Crop	Acreage	Permittee's Share		Government's Share		Total Revenue
		Acres	Bushels	Harvested Acres	Unharvested Acres Bu.	
Wheat	23.5	23.5	45			
Barley	11.7	1.75	none		10 40	
Corn	25	14	140		14 175	
Oats	14	14	out for hay			

Interior Duplicating
Section, Wash.D.C.

DIRECTIONS FOR PREPARING FORM NR-8
CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

Use or location - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. Unharvested - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the Bushels column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

82V1-5
8-AM 1170A
(2401 1170A)

REFUGE GRAIN REPORT

Refuge Lake IloMonths of September through December, 1956

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
Wheat	34	none	34					34			
Barley	55	720	775					775			
Corn	20		20					20			
Millet		400	400					400			
Totals	109	1120	1229					1229			

(8) Indicate shipping or collection points _____

(9) Grain is stored at Barley, wheat, and millet stored at Lake Ilo Headquarters.(10) Remarks Ten bus. corn stored at headquarters and 10 bus. stored at Tom Donohue on refuge.

*See instructions on back.

(10) Remarks

NR-8a

(3) Grain is stored at

(8) Indicate shipping or collection points

REFUGE GRAIN REPORT

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

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

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

16-61482-1

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Bushels	OF PERIOD BEGINNING ON HAND	PERIOD DURING RECEIVED	TOTAL	Grain Disposed of				PERIOD END OF ON HAND	Proposed or Salvage Use		
				Transferred	Seeded	Feed	Total		Seed	Feed	Shipping
(1)	(2)	(3)	(4)	(5)				(6)	(7)		

Refuge

Months of September

through December

1926

REFUGE GRAIN REPORT

COLLECTIONS AND RECEIPTS OF PLANTING STOCK
(Seeds, rootstocks, trees, shrubs)

1620

Refuge Lake ElcYear 1956

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
Sweet Clover	160 lbs	Left from last yr.					160	0
Millet	200 lbs	Seeded					0	
Alfalfa	300 lbs	Left from 1955	100 lbs seeded 1956				200	0
Trees & Shrubs					1200	SCS	0	0
Pine					100	Badlands	0	0
Cole. Spruce					95	C. L. Jensen Edmond, N. D.	0	0
Cedar					95	SCS	0	0
Cole. Spruce					95	SCS	0	0

HAYING AND ~~GRAZING~~

Refuge Lake Itasca Year 1946

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
Tom Donohoe	186 DL(LI)	HU-1,2,3	100		37.5	7/15-11/15	1.50	56.25	
Charles Schollmeyer	187 DL(LI)	HU-4	15		8		1.50	12.00	

Totals:

Acreage grazed.....	Animal use months.....	Total income Grazing.....
Acreage cut for hay <u>115</u>	Tons of hay cut <u>45.5</u>	Total income Haying <u>68.25</u>