

BRANCH OF WILDLIFE REFUGES

Narrative Report Routing Slip

Date Sept. 24, 1953

~~Mr. Salzer~~ \_\_\_\_\_

~~Mr. DuMont~~ PAD

~~Mr. Krummes~~ \_\_\_\_\_

~~Miss Baum~~ \_\_\_\_\_

Section of Operations

~~Mr. Ball~~ \_\_\_\_\_

~~Mr. Marley~~ RCM

~~Mr. Regan~~ \_\_\_\_\_

Section of Habitat Improvement

~~Mr. Griffith~~ \_\_\_\_\_

~~Mr. Kubichek~~ \_\_\_\_\_

~~Mr. Bourn~~ WBSB

~~Mr. Stiles~~ WBS

Section of Land Management

~~Mr. Ackerknecht~~ \_\_\_\_\_

~~Mr. Davis~~ \_\_\_\_\_

Stenographers

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Refuge UPPER SOURIS

Period May-August 1953

## TABLE OF CONTENTS

I. GENERAL	PAGE
A. Weather Conditions - - - - -	1
B. Water Conditions - - - - -	1
II. WILDLIFE	
A. Waterfowl- - - - -	3
1. Populations and Behavior - - - - -	3
2. Food and Cover - - - - -	4
2a. Table I (summary of brood counts) - - - - -	5
3. Botulism - - - - -	6
B. Other Migratory Birds - - - - -	6
C. Predaceous Birds - - - - -	6
D. Upland Birds - - - - -	7
1. Populations and Behavior - - - - -	7
2. Food and Cover - - - - -	7
3. Disease - - - - -	7
E. Big Game Animals - - - - -	7
1. Populations and Behavior - - - - -	7
2. Food and Cover - - - - -	8
3. Disease - - - - -	8
F. Fur Animals, Predators, Rodents and Other Mammals	8
G. Fish - - - - -	8
III. REFUGE DEVELOPMENT AND MAINTENANCE	
A. Physical Development and Maintenance - - - - -	10
B. Plantings - - - - -	10
1. Aquatic and Marsh - - - - -	10
2. Other Plantings - - - - -	11
IV. ECONOMIC USE OF THE REFUGE	
A. Grazing- - - - -	11
B. Haying - - - - -	11
C. Fur Harvest - - - - -	12
D. Timber Removal - - - - -	12
E. Gravel Sales - - - - -	12
V. FIELD INVESTIGATIONS OR APPLIED RESEARCH - - - - -	12
VI. PUBLIC RELATIONS	
A. Recreational Use - - - - -	12
B. Refuge Visitors - - - - -	12

TABLE OF CONTENTS(CONT.)

C. Refuge Participation - - - - -	13
1. Attendance at Meetings - - - - -	13
2. News Releases - - - - -	13
3. Talks - - - - -	14
4. Tours - - - - -	14
5. Radio - - - - -	14
D. Hunting - - - - -	14
E. Fishing - - - - -	14
F. Violations - - - - -	14
VII. OTHER ITEMS	
A. Drownings - - - - -	15
B. Photos, Clippings, Etc. - - - - -	15

NARRATIVE REPORT FOR  
THE UNITED STATES DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
UPPER SOURIS REFUGE  
MAY THRU AUGUST, 1953

Frank R. Martin  
Refuge Manager

Elmer M. Richwalski  
Maintenance Man (Equip)

Clarence H. Buer  
Maintenance Man (Gen'l)

Robert G. Schwab  
Refuge Clerk

TEMPORARY EMPLOYEES, 1953

Alvin M. Miller-----	painter
Emery A. Rostad-----	painter
Earl J. Sauer-----	laborer
Wilfred W. Sauer-----	laborer
Frederick D. Sauer-----	laborer
Marvin D. Mason-----	laborer
Raymond J. Stach-----	laborer
Lyle A. Bock-----	laborer

## I GENERAL

A. Weather Conditions

Month	1953 Precipitation	25 year ave.	Max. Temp.	Min. Temp.	Max. Ave. Temp.	Min. Ave. Temp.
MAY	3.68	2.00	85	27	64	42
JUNE	7.64	3.00	91	36	74	51
JULY	.43	3.50	93	45	82	56
AUG	1.05	1.90	91	46	81	54
TOTAL	12.80	10.31	EXTR. 93	27	82	42

The increase in precipitation over last year was 4.80 inches for the four month period. According to our records this was a record high for rainfall for the summer period. In view of the fact that more than half of the total rain fell in June, after the spring run-off, it caught everyone off-guard.

The large increase in moisture was sorely needed to increase the ground water although it was unwelcome from a few other standpoints. Dried up sloughs and pot-holes that have been dry for the past few years held water throughout the period and it appears at the time of this writing that they will hold water all next winter in view of the new high water table.

The rising water levels, relatively cool weather and frequent rains had a definite effect on the nesting of both waterfowl and upland game birds.

B. Water Conditions

In view of the lack of snow during the 1952-53 winter the outlook for moisture was poor when considering past averages. It was therefore decided that Lake Darling should be allowed to rise to a gauge of height of 19.5 instead of 18.00. Then the unusual rains came and we had flood conditions in Minot and in other downstream areas. Holding back water for a month or so in Lake Darling (#83) caused considerable local discomfort at Mouse River Park at the upper end of the Lake. And downstream around Towner the hay meadows were getting too much water.

The unusual conditions were capable of causing the most damage downstream so the water was held back. Even so, the No. 83 spill way was running for more than

a week in mid-July when the gauge reading got up over 21.00. The peak was reached on July 12 and 13 when Lake Darling was at a gauge height of 21.56.

Previously the largest summer rise in inflow was experienced in June 1949. At this time the peak flow reached 682 second feet and the total monthly flow reached 6544 acre feet. This year however, the peak flow into the refuge reached 1710 second feet and the total monthly flow from June 9 to July 20 amounted to nearly 110,000 acre feet.

The high water for such a long period in the Mouse River Park, coupled with frequent rains, antagonized the Renville County Park Board which tries to run the area on profit basis. The concession there had a poor season and therefore is suing the County for loss of guaranteed business. The County, in turn, has informed us that they are going to sue us for \$27,000 for loss of trees (alleged drowning), loss of profits and other damage. Inspection there has indicated that the trees have died of old age and that other claims are un-warranted. However, it appears that the FWS failed to get flowage easements in this area and we may have to condemn the whole area and buy it to solve this problem.

In addition to the above damage, a windstorm of 30 minutes duration on June 24 nearly washed out the Soo Line Grade across Lake Darling near Greene. It was necessary to authorize the Soo Line to make immediate emergency repairs to this grade. We were able to get authority to use Shiely Company 3 to 6 inch washed gravel and this provided excellent rip-rap for the job. The railroad repair train placed 1200 tons of this excellent rock on the badly eroded section and made the crossing passable for routine work. An additional 2200 yards of rock will be needed to repair this crossing. It is felt that this will end our troubles there as the pit-run gravel that has been placed there in the past is well beached out and the 3-6 inch rock will stay in place if placed about 12 inches thick.

Marsh management work in B pool, which calls for pumping off the last foot or so of water in this unit, was impossible to carry out this summer. Three times

the unit was pumped down and each time an unseasonable rain filled it again. We were able to get 300 pounds of Early Fortune Millet seeded by air on one stretch of mud, but this area too was eventually under a foot of water and the plants drowned out. Finally, at the end of the reporting period, we were able to get this area dried up and ready for the farming equipment.

The discharge rate from Lake Darling at the end of the reporting period was 100 secondfeet. The inflow at this time was 90. It appears from this that we will be releasing a relative large amount of water all winter in order to get the lake down for the spring run-off. The necessity for passing large amounts of water downstream all summer has disrupted management plans for the Lower Souris Refuge too. We understand that they were able to do very little of the aerial seeding that they had planned on due to the impossibility of draining their marsh lands.

## II WILDLIFE

### A. Waterfowl

#### 1. Population and Behavior

Outstanding feature for the period was the lateness of the hatch. The first observed duck nests were found the last week in May. Four different nests (two Mallard and two Pintail) under observation were destroyed by predators. It was impossible to determine whether the predator destroyed the nests after desertion or whether the nests were really active at the time of loss. We believe, that often destroyed nests are merely clean-up work by predators after the nest's owner has deserted for some other reason.

The large number of late broods observed this year are very good proof that there was a good deal of re-nesting. Reports of nest destruction by summer fallowing and haying were coming in as late as the week of August 2 to 8. Our breeding count on Lake Darling this year showed an increase of 28 percent over 1950. There were no records found for 1951. Total production for the refuge is down over last year in terms of broods counted but we believe that the refuge and refuge vicinity produced more birds than last year. The large increase in nesting habitat outside the refuge, say within ten miles, due to more potholes in

existence, probably accounts for more nesting off the refuge than in the past few years. The larger influx of birds in August seemed to bear this out too. Brood data for the season is shown in Table 1.

Five pair of Canada Geese had territories and two nests were found. One was destroyed by predators. One had seven eggs and brought off three young to the flying stage. Two other pair were successful in bringing off broods of four and six to the fully feathered stage, although the nests were never found. The fifth pair was unsuccessful. Total young produced was 13, the same as in 1952.

The captive goose flock (97 birds) in the new 22 acre goose pen did no nesting. Non-breeding Canada geese totalling about 15 birds, disappeared from the refuge in June and reappeared the second week in August. Hatching date for one Canada goose nest was during the week of May 17-23.

Observations during the first week in August showed that our waterfowl were building up rapidly in the marshes below Lake Darling. We conducted an aerial count with the help of Pilot Biologist Don Smith on August 18 and recorded 10,000 birds. A later count (September 7) in the north end revealed only 1,000 birds there. By this time, however, the birds concentrated in the south end of the refuge had increased to 20,000. An aerial count on July 28, 1952 revealed 6,000 birds.

Even with this fair concentration of birds we had no depredation reports during the period. The harvest weather was excellent and at the time of this writing more than 3/4 of the grain is in the bins in this part of North Dakota.

## 2. Food and Cover

Food conditions were excellent. Pondweeds and bulrush seeded heavily this year and this may account in part for the birds reluctance to leave the refuge for grain field feeding early in the harvest period. The combined fields will undoubtedly receive much attention from the mallards and pintails later on this fall. The wheat crop was better than average and there is much waste grain available. Reports from both Lower Souris and the Des Lacs refuges indicate that they too have had no depredation troubles this period. Rumors from the north, in Canada, indicate that some areas have had late August depredation troubles.

TABLE I  
SUMMARY OF BROOD COUNTS

SPECIES	TOTAL BROODS		YOUNG PER BROOD (1949-50 data)		TOTALS
	OBS*	CALC*			CALC
MALLARD -----	18	-- 72	----- 6.52	-----	469
GADWALL -----	8	-- 32	----- 7.09	-----	227
PINTAIL -----	10	-- 40	----- 6.10	-----	244
B. W. TEAL -----	17	-- 68	----- 6.80	-----	462
REDHEAD -----	1	-- 4	----- 6.31	-----	25
CANVASEBACK -----	2	-- 8	----- 6.18	-----	49
SCAUP -----	0	-- 0	----- 5.88	-----	0
SHOVELLER -----	1	-- 4	----- 6.33	-----	25
COOT -----	2	-- 8	----- 3.87	-----	31
UNIDENT. -----	10	-- 40	----- 6.50**	-----	260
TOTALS	69	276			1,792

CANADA GEESE, 3 broods (3, 4 and 6) 13 bird total

Table I. Brood Count Data for the 1953  
 Nesting Season on the Upper  
 Souris Wildlife Refuge.

\* Observed broods seen on one-fourth the total nesting habitat, based on two counts 14 broods from basic data eliminated as repeats in second count.

\*\* Assigned a 6.5 average under assumption that these broods are most likely mallards, pintails or teal.

### 3. Botulism

None observed.

### B. Other Migratory Birds

Pelicans reached a high of 1,000 birds (about the same as last year) by mid-August.

Cormorants showed no change over previous years. They continue to use lower Lake Darling and the spill area below structure #83 for feeding all summer. The cormorants and pelicans are about our only control over the sucker population which is causing some concern in Lake Darling.

Two Western Grebe colonies were observed in the course of brood counts this period. One was located at the old Brian Ranch site, now called the Ray Vendsel Ranch, along the west shore of Lake Darling more than half way to Grano from Dam #83. This colony consisted of about 150 birds. A few nests were seen at this site but no eggs or young were observed. Farther north on the west shore, just south of Grano, another colony of about 250 adults was found. Forty or fifty nests were found at this place and there were fifteen or twenty nests containing eggs there during mid-July. A hail storm there the second week in July, however, just about wiped out the eggs and what young probably were present. Two dead ducklings were found near the grebe colony. Although partly decomposed they appeared to be teal. This same hail storm, reputed to have been 15 miles in length, wiped out a big swath of grain land near Grano.

Two Snowy Egrets were seen on A Pool on June 10. They were seen again on June 11 and then apparently left the refuge.

No change could be noted in the numbers of Great Blue Herons or Black-crowned Night Herons. Both are common.

### C. Predaceous Birds

Swainson's and Red-tailed hawks were seen occasionally during the period. Marsh hawks were seen almost daily and two nests were located. One of these, containing four eggs, was unsuccessful and deserted late in incubation for some undetermined reason. The other was not checked again after it had been located. A number of young marsh hawks on-the-wing

have been seen since mid-August. A marsh hawk was flushed from a freshly killed bullhead along the west side of C pool early in June. During brood counts a marsh hawk was flushed from the carcass of a dead duckling at the grebe colony near Grano. It was one of the ducks which we felt had been killed by the hail storm.

The first duck hawk of the season was seen on August 31.

#### D. Upland Birds

##### 1. Population and Behavior

Sharp-tailed grouse, our most common upland game birds on the refuge, are present in about the same numbers as last year. Some large broods have been observed and the late season did not seem to result in a noticeable number of late broods. Hungarian partridge broods have been seen more often than in 1952 and the size of these broods indicates an excellent hatch for this year.

Ring-necked pheasants may have suffered more than sharp-tails from the later season and the frequent rains in the early summer. Only three different broods were recorded in the lower half of the refuge. The State has decided to have no season on pheasants and partridge but are still undecided on the question of sharp-tails and ruffed grouse. The only ruffed grouse area is in the Turtle Mountains about 100 miles northeast of this refuge.

Prairie Chickens are still very low or perhaps completely gone from the refuge. Last record on this bird for this refuge was reported in the summer on 1952.

##### 2. Food and Cover

Food and cover conditions for the upland birds was excellent due to the mild weather and unusual amount of precipitation.

##### 3. Disease

None observed.

#### E. Big Game Animals

##### 1. Population and Behavior

White-tailed deer were seen occasionally during the

period. In nearly every instance the does had twin fawns with them. No Mule deer were seen. Regardless of what the State Game and Fish Department had decided on a deer season the refuge was planning on a closed season for this fall. The State, however, decided in late August that conditions did not warrant an open season this year and the entire state is to be closed to deer hunting this fall.

## 2. Food and Cover

Food and cover conditions for these animals is excellent.

## 3. Disease

None observed.

## F. Fur Animals, Predators, Rodents and Other Mammals

Muskrats have shown no noticeable increase although food and cover conditions seem excellent in many parts of the refuge. Our relatively high mink and raccoon population may be an important factor in keeping them down.

Beavers are still abundant and the harvest of over 80 of these animals last season did little to relieve our ~~troubles~~ troubles. They will have to be reduced further this fall, especially in the vicinity of the new goose pen, where they have continued to dig under the fence and liberate our captive geese from time to time.

Coyotes and Red Fox are still present in fair numbers and the Predator and Rodent Control men from Minot have been giving us some help in keeping these animals controlled during the last two periods. Some plane hunting will be needed next winter to help reduce the foxes.

Beaver castors collected and dried after the beaver season last winter are being sent to Mr. Noble Buell, Predator and Rodent Control Agent at Mitchell, South Dakota.

## G. Fish

Fishing success during the summer season was excellent. The five refuge fishing areas received heavy use throughout the entire season and although many large northern pike were taken, the record set last year with a 25-3/4 lb. fish was not broken. The largest fish taken this period weighed

22-1/2 pounds. A large number of fish in to 16 to 18 pound class were taken.

During the month of August the average weight of northern pike taken from the lake was eight (8) pounds. There was a surprisingly small number of fish taken that weighed less than three pounds. Later in the season the lake did produce some smaller specimens.

Although the lake contains large numbers of wall-eyed pike there were only three or four taken during the summer. The law which prevents the use of minnows makes it difficult to take these fish. Attempts with frogs have not been successful. The first week-end of the season a five-pound 2-ounce female wall-eye, ripe with spawn, was taken on a black and white spoon. The fish was weighed and measured at refuge headquarters. Fisheries surveys have shown that the wall-eye is even more numerous than the northern in Lake Darling.

Perch are very numerous too but we have had difficulty getting them harvested. Below the lake in Fishing Area No. 4 and No. 5 some very large perch were taken. Several that were weighed at headquarters exceeded one pound. A one-pound fifteen-ounce perch was reported from the Baker Bridge (Fishing Area #5). The section on Photos at the end of this report shows one of the large perch taken from this area. We have attempted in our radio and television appearances to promote the perch fishing and the response was good during August and early September. Next year there will be many more people trying to take perch. We believe, also, that a good many more people will be interested in trying for perch through the ice this coming winter after having had a taste of these fish during the late summer and early fall.

During the period our public use and creel census tally revealed 16,920 use-days. The use resulted in the harvest of 3350 northern pike at an average weight of 5.5 pounds. The remaining 15 days in the season may well bring the total fish harvest to 9-1/2 tons this year for northern pike alone. This about doubled the estimated harvest last year. It is felt that last year's estimate was too conservative. Special efforts were taken this year to get accurate creel data and one man spent full time on week-ends and holidays contacting fishermen and counting cars and boats. All the basic data used in making the computations are on file at the refuge so that future estimates can be made comparable.

### III REFUGE DEVELOPMENT AND MAINTENANCE

#### A. Physical Development and Maintenance

##### Repair and Maintenance of Equipment

Repaired irrigation pump (Gardiner-Denver) and reset on lake shore.  
Assembled new lawn mower and seeder.  
Checked and made brake adjustments on refuge vehicles.  
Overhauled Hanson Crane with personnel from Lower Souris and Des Lacs helping.  
Repaired tandem disk.  
Installed new front end shackles and bumper on International pickup.  
Made 5000 mile check on Reo truck and repaired broken axle.  
Installed new clutch in Willys pickup.  
Steam-cleaned all truck engines.

##### Physical Development and Other Maintenance

Graded new road to CCC camp and constructed road into new goose pen.  
Installed culverts and repaired roads in refuge areas.  
Excavated basement for quarters No. 2.  
Exposed septic drain field at Res #1 and laid new field.  
Repaired and put up fences at refuge grazing areas.  
Made signs for refuge fishing areas.  
Poured foundation and floor for garage for Res. No. 2.  
Moved garage for quarters No. 2 from old secondary.  
Sprayed willows on dike, wolfberry and leafy spurge in fields.  
Back-filled basement and leveled yard.  
Constructed 1/4 mile of new road along ditch bank leading from A pool east to north side of B and C pools.  
Mowed all trails in refuge south of Dam No. 83.  
Shingled warehouse at CCC camp.  
Painted Res. 3, Res. 4 & garage, CCC warehouse, "blacksmith shop", Oil house and CCC garage.  
Cleaned up Fishing areas as needed.  
Spent about ten man days moving equipment between refuges in North Dakota.

#### B. Plantings

##### 1. Aquatic and Marsh

B pool was pumped down three times in an attempt to repeat the aerial seeding that was carried out last year. Unseasonable rains however, prevented the seeding as planned.

One small area of mud was exposed for a short time and 300 pounds of Early Fortune Millet was seeded by air on this mud. Another rain, however, inundated this seeding and further attempts were not made.

At the time of this writing the pool is dried up and although the growing season is over, we are working up the marsh preparatory to next year's work.

## 2. Other Plantings

Thirteen acres of hybrid corn (Kings Cross, 80 day) was planted just south of the Galvin granary. It has done very well and we will be getting enough good corn to carry our captive goose flock through the winter.

Three acres of buckwheat (Necedah Seed) was sown and will give a poor to fair yield. It was planted on the first field east of the old CCC camp as an experiment. About 2 acres of Early Fortune Millet was planted along the south edge of the buckwheat to round out this field as a food patch.

## IV ECONOMIC USE OF THE REFUGE

### A. Grazing

The timely rains in the early part of the summer placed all range land in excellent shape and it was necessary, as planned, to reduce the grazing pressure this year. It is the first time in a long, long time that the hills remained green until late July.

A total of 25 grazing permits were issued. Two new grazing units were established during the period. One an extension on G-2, is a 270-acre tract along the west shore of Lake Darling at a point where we acquired additional land. The other is a new unit, G-20, located just south of the Grano crossing on the east side of the Lake. This unit contains 150 acres.

### B. Haying

Good moisture conditions were responsible for large hay crops this year. Hay was cut from nearly all units. It was necessary to wait quite some time before cutting was possible on some of the low land meadows. A total of 14 permits were issued.

A new hay unit, H-13, was established on the west side of the entrance road toward Foxholm. This tract contains 100 acres.

C. Fur Harvest

None.

D. Timber Removal

None.

E. Gravel Sales

A permit was issued to McKinney Township to remove 5000 yards of pit run gravel from the Swensen pit north of Mouse River Park. They have not started hauling yet.

The Soo Line Railroad was issued a permit on 1500 tons of crusher fines from the Shiely Pit.

Crushed aggregate removed from the Shiely Job amounted to 44,242 tons from last October 1 to June 22, 1953. They are billed quarterly and to date have removed 936,798 tons of washed rock for the Garrison Dam job. This has brought in a return of \$93,679.83 to the Service.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

Pest plant control work carried out this period will be reported on in the September-December report.

VI. PUBLIC RELATIONS

A. Recreational Use

Fishing, sight-seeing, and picnicing amounted to about 18,000 use days. Use was heaviest on week-end and holidays of course but it was surprising how many used the lake and the other fishing areas during the week days and evenings.

B. Refuge Visitors

	<u>Date</u>	<u>Name</u>	<u>Purpose</u>
May	5	Mr. Smith & Mr. Olson, Corps of Engineers	Shiely Job.
	27	Mr. Crosby, Minot, N.D.	S.C.S.
	28	Mr. R. L. Bagwell, Bismarck (MRBS)	Fish pressure info.

June 13 Mr. Feldner, Bismarck, N.D. Dist. Warden, mutual prob.  
 13 Mr. Nygard, Minot, N.D., Farm Mgr. Visit (grazing)  
 29 Mr. Salyer, C.O., Inspection  
 29 Mr. Gillett, R.O., Inspection  
 29 Mr. Christensen, Minot, N.D. St. Wtr. Com. Gripping about high water.

July 3 Mr. Lincoln, St. Paul, Minn. Corps Engr. Water conditions  
 7 Mr. Ken McKeague, Dist Warden, Kenmare, N.D. Enforcement  
 7 Mr. W.W. Ramsay, Prov. Man. Engr. water conditions  
 19 Mr. Ken McKeague, Dist Warden, Kenmare, N.D. Enforcement  
 22 Mr. " " " "  
 24 Mr. " " " "  
 24 Mr. Farley, Dir. FWS, Inspection  
 24 Mr. Janzen, R.O., Inspection  
 26 Mr. Henderson, Minot, N.D. Mammal Control Agent

Aug. 9 Dr. Robert Cammell, Kenmare, N.D. Visit  
 20 Mr. Smith, Riverdale, N.D., Engr. Visit  
 30 Mr. Carpenter, R.O. Inspection  
 31 " " "

### C. Refuge Participation

#### 1. Attendance at Meetings

On June 30, 1953 the manager attended a meeting held in Minot by Refuge Chief, Mr. J. Clark Salyer. The purpose of the meeting was to point out to farmers, sportsmen and other interested parties the reasons for opening parts of the Lower Souris to Waterfowl hunting during the 1953 season.

The manager attended a meeting of the Minot Rifle and Pistol Club on August 26 and discussed the proposed Hunter Safety Course that may be carried on this fall to teach hunter safety to youths who will be hunting for the first time this fall.

#### 2. News Releases

During the period that the flood waters were threatening the city of Minot we gave many news releases to the Minot Daily News. Many of these were called in by telephone and a few longer articles resulted from interviews at the news office.

Items appearing in other papers and those appearing in the Minot paper were sent to the Regional Office. Only on rare occasions do we get enough copies of clippings to enable us to place them in the narrative report.

### 3. Talks

The refuge manager gave a slide-illustrated talk to a Boy Scout troupe at the First Lutheran Church in Minot on July 7, 1953.

### 4. Tours

On July 17, 1953 the Biology class from Minot State Teachers College was escorted about the south end of the refuge to identify birds. The short trip was highly successful and students will be encouraged to make the same trip next year.

### 5. Radio

The manager helped present the weekly program, Wildlife Review, on KLPM, Minot, N.D. on May 27, June 10, July 15, August 12, 19 and 26. Subjects discussed on these programs were usually fishing and waterfowl. Much emphasis was placed on the new state boating regulations and as the season wore on the questions and discussion dealt more and more with waterfowl. The sports announcer, Russ Smith, is an avid waterfowl hunter. Managers from Lower Souris, Upper Souris, Des Lacs and Lostwood split up the appearances so that all the work does not fall on one refuge and also to keep the listening audience from becoming bored with hearing from just one area each week. Whenever possible, guests such as State Wardens, visiting Ornithologists, Regional Office personnel etc. are taken along to the program.

### D. Hunting

None

### E. Fishing

Discussed under Fish, above.

### F. Violations

The new District Game Warden, Kenneth McKeague, stationed at Kenmare has given us a great deal of help enforcing state regulations on the refuge this summer. Two cases were successfully prosecuted during the period. One involved a man fishing without a license and brought a \$25.00 fine. The other case, on which the Warden was helped by Refuge Clerk, Robert G. Schwab, resulted in a \$50.00 fine and revocation of two licenses for the remainder of the year. This case involved a man and wife who were caught using minnows in Lake Darling.

OTHER ITEMS

A. Drownings

Three drownings occurred on the refuge during the period. One man, a Jacob Sutter from Minot, who drowned at the St. Mary's bridge on July 19, was a brother of the Sutter who drowned in Lake Darling in September, 1952.

In this first case in 1953 it was difficult to tell just what had happened as the party with whom he was fishing left the scene. It was reported that he jumped off the bridge to go for a swim. However he could'nt swim. We were unable to re-vive him after two or three hours in the water.

Mr. Vance Remington and James Murfit of Burlington, N.D. drowned in Lake Darling around 6:00 p.m. on July 20, 1953. Their 11 foot 3 inch boat was swamped when they attempted to cross Lake Darling during the storm. Two boys were with them in the boat and this greatly overloaded the small craft. One boy had a preserver and the other held onto the boat and rode it out. We organized dragging parties and dragged the lake until 1:00 a.m. The search was resumed at 4:00 a.m. and the bodies recovered at 6:00 and 6:30 a.m.

It is notable that in both cases the drownings were the result of violations. One involved swimming in a closed area and the other resulted from carrying four passengers in a boat which was rated for two.

B. Photos, Clippings Etc.

Following the section on NR forms is a series of photographs taken during the period. Also attached is a story about fishing on Lake Darling which appeared in the Western Sportsman (May-June, 1953).

September 10, 1953

Submitted by:

Frank R. Martin  
Frank R. Martin  
Refuge Manager

Approved by:

B. B. Burrice  
Sept. 16, 1953.

# WATERFOWL

Refuge UPPER SOURIS Months of MAY to AUGUST 19 53

(1) Species		(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name		Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for period
I. <u>Swans:</u>										
Whistling swan									Calc.	
II. <u>Geese:</u>										
Canada goose - - - -		Present	- - - -	66	8/31	- Still Present		3	13	3,700
Cackling goose										
Brant										
White-fronted goose										
Snow goose										
Blue goose										
III. <u>Ducks:</u>										
Mallard - - - - -		Present	- - - -	10,000	8/31	Still Present		18	469	400,000
Black duck										
Caddwall - - - - -		Present	- - - -	2,500	8/31	Still Present		8	227	90,000
Baldpate - - - - -		Present	- - - -	1,000	8/31	Still Present				59,000
Pintail - - - - -		Present	- - - -	5,000	8/31	Still Present		10	244	215,500
Green-winged teal - -										
Blue-winged teal - -		Present	- - - -	1,500	8/31	Still Present		17	462	80,000
Cinnamon teal										
Shoveller - - - - -		Present	- - - -	200	8/31	Still Present		1	25	3,000
Wood duck										
Redhead - - - - -		Present	- - - -	300	8/31	Still Present		1	25	26,400
Ring-necked duck										
Canvas-back - - - - -		Present	- - - -	100	8/31	Still Present		2	49	11,800
Scaup										
Golden-eye										
Buffle-head										
Ruddy duck - - - - -		50	5/7	100	8/31	Still Present				10,500
Hooded Merganser - -		Present	- - - -	15	8/31	Still Present				125
Un-identified - - - -								16	260	
IV. <u>Coot:</u> - - - - -		Present	- - - -	1,000	8/31	Still Present		2	31	63,000

# SUMMARIES

Dates waterfowl counts made WEEKLY

Percent of waterfowl area covered \_\_\_\_\_

Dates brood counts made 3rd wk. July, 3rd wk. August

Percent of area covered in brood counts 25%

Total production: \_\_\_\_\_

Geese 13

Ducks 1792

Coots 31

Total waterfowl usage during period 963,025

Peak waterfowl numbers 30,781

Areas used by concentrations Marshes below Lake Darling

Principal nesting areas this season Grassy areas

bordering marsh. Meadows along lake.

Reported by Frank R. Martin

Frank R. Martin, Refuge Manager

## INSTRUCTIONS

- (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) First seen: The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
- (3) Peak concentration: 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 in the reporting period.
- (5) Young produced: 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.
- (6) Total: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the Summaries receive careful attention since these data are necessarily based on an analysis of the rest of the form.

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

MIGRATORY BIRDS  
(Other than Waterfowl)

Refuge UPPER SOURIS

Months of MAY

to AUGUST

195 3

(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. <u>Water and Marsh Birds:</u>										
White pelican	Last Period		1000	6/1-8/15	Still present			0	0	77,000
Double-crested cormorant	Last Period		1200	7/1-8/31	Still present		3	150	300	75,000
Great Blue Heron	Last Period		150	5/1-8/31	Still present		2	25	60	18,000
Western Grebe	Last Period		400	7/1-8/20	Still present		2	50	0	20,400
Snowy Egret	2	6/10	2	6/10-6/11	1	6/11		0	0	4
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer				7/1	Still present					
Upland Plover				7/15	" "					
Greater Yellowlegs				8/20	" "					
Lesser Yellowlegs				8/20	" "					
Marbled Godwit				7/15	" "					
Dowitcher				8/20	" "					
Avocet				8/20	" "					
Spotted Sandpiper				8/20	" "					
Common Tern				7/15	" "					
Black Tern				7/15	" "					
Ring-billed Gull				7/1	" "					5,000
Franklin's Gull				7/15	" "					15,000

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u> Mourning dove White-winged dove					
IV. <u>Predaceous Birds:</u> Golden eagle Duck hawk - - - - - Horned owl Magpie Rayen Crow - - - - - Marsh Hawk - - - - -	1 - - - 8/31 - - - - -      Last Period - - - - -	      500 75	      7/15-8/31 7/1-8/31	1      - - - - - - - - - -	      22,500 4,650
Reported by <u>Frank R. Martin</u>				Frank R. Martin	

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.

## UPLAND GAME BIRDS

Refuge UPPER SOURIS Months of MAY to AUGUST, 1946

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks	
Common Name	Cover types, total acreage of habitat	Acre 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.
Ring-necked Pheasant	17,000 acres short-grass type weedy coulees Bottom land brush	52	3 (10) 60	50/50		325	
Sharp-tailed Grouse	Same		11 (40) 200			1200	
Hungarian Partridge	Same		6 (20) 200			550	
Prairie Chicken	NON OBSERVED						NON OBSERVED

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

## INSTRUCTIONS

## 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.

## REFUGE GRAIN REPORT

Refuge \_\_\_\_\_ UPPER SOURIS NAT'L WILDLIFE REFUGE

Months of MAY through AUGUST, 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
WHEAT	1150		1150	800				350		350	
OATS	140		140					140		140	
BARLEY	80		80					80		80	

(8) Indicate shipping or collection points 800 bushels of wheat transferred to Lower Souris Refuge for feed.

(9) Grain is stored at Greenman and Galvin and Secondary Granaries.

(10) Remarks

\*See instructions on back.

## REFUGE GRAIN REPORT

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

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

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (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.



Lake Darling Northern - 17-1/2 lbs.



Pound and one-half Perch caught by State Warden at the Baker Bridge Fishing Area.



Pouring basement wall for Res. #2. Man leaning on shovel  
is no longer with us.



Preparing to excavate basement for Res. #2. Hanson Crane being used.



Pouring foundation footing for Res. #2 (Clerk's residence) which will be moved in September.



Soo Line grade damage at Greene Crossing



Regional Engineer, Dougall & Soo Line Engineer  
inspecting Soo Line grade damage at Greene Crossing



Mouse River Park cottages on July 22 after water had receded. High water mark can be seen on the lower part of the buildings.



Boyd Light, Minot, N.D., with his catch of big northern~~s~~ taken in Lake Darling.