

## ROUTING SLIP

DIVISION OF WILDLIFE REFUGES

DATE: 5-16 1944

MR. SALYER

## SECTION OF HABITAT IMPROVEMENT:

MRS. WOODIN

Mr. Kubichek

~~MR. EIMER~~

Mr. Smith

MRS. CARVIN

~~Mr. Griffith~~

✓ MR. DUMONT

Miss Cook

## SECTION OF OPERATIONS:

## SECTION OF ERA:

~~Mr. Krumm~~~~Mr. Regan~~

Mr. Gustarson

~~Dr. Bourn~~

Miss Baum

Mrs. Fishman

Mrs. Kricun

## SECTION OF LAND MANAGEMENT:

## STENOGRAPHERS:

~~Mr. Barnshaw~~

Miss Whorley

Mr. Ackerknecht

## SECTION OF STRUCTURES:

~~Mr. Taylor~~

## REMARKS:

MEDICINE LAKE NARRATIVE REPORT

Annual Summary

JANUARY-APRIL 1944

Return to: Habitat Improvement



# MEDICINE LAKE NATIONAL WILDLIFE REFUGE

## NARRATIVE REPORT

January, February, March, & April, 1944

### I. GENERAL

#### A. Weather Conditions

Very little snowfall occurred during January, February and March and temperatures were somewhat above normal. April has also been dry with unusually small amounts of rain and snow but temperatures were colder than usual for April.

Precipitation and temperature readings for the period were as follows:

<u>Month</u>	<u>Precipitation</u>	<u>Max. Temp.</u>	<u>Min. Temp.</u>
January	T	54	-17
February	.12	49	-30
March	.39	53	-20
April	<u>1.24</u>	67	18
TOTAL	1.75		

#### B. Water Conditions

The spring runoff began on April 1 and although only a small amount of runoff was received from the Lake Creek drainage the Muddy Creek has continued to flow moderately throughout most of April. The ice did not go out of the Main Lake until April 17. All units are well supplied with water except No. 12 and Katy's Lake.

The present status and summary of water levels of the various units is as follows:

Unit No.	1943 Freeze-up Elev.	1944 Max.Spring Runoff Elev.	1944 Water Management Plan Elev.(Approved Max.)	Spill Elevation
12	1953.04	1953.36	1954.00	1956.00
11	1951.82	1952.60	1952.54	1952.54
10	1944.26	1945.20	1945.50	1945.50
(Med. Lake) 4	1942.10	1942.50	1943.00	1943.00
(Homestead) 6	1936.34	1937.80	1937.80	1938.00
Katy's Lake	1953.50	1953.40	1957.00	no spillway

For further details see Spring Runoff Report submitted April 29.



WATER REPORT

January, February, March, & April, 1944

I. GENERAL

A. Weather Conditions

Very little snowfall occurred during January, February and March and temperatures were somewhat above normal. April has also been dry with unusually small amounts of rain and snow but temperatures were colder than usual for April.

Precipitation and temperature readings for the period were as follows:

Month	Precipitation	Max. Temp.	Min. Temp.
January	7	54	-17
February	12	49	-30
March	30	58	-20
April	1.34	67	19
TOTAL	1.76		

B. Water Conditions

The spring runoff began on April 1 and although only a small amount of runoff was received from the Lake Creek drainage the Muddy Creek has continued to flow moderately throughout most of April. The ice did not go out of the main lake until April 17. All units are well supplied with water except No. 12 and Katy's Lake.

The present status and summary of water levels of the various units is as follows:

Unit No.	1943 Freeze-up Elev.	1944 Max. Spring Runoff Elev.	1944 Water Management : Spill Elevation
12	1953.04	1953.38	1954.00
11	1951.82	1952.80	1952.54
10	1944.26	1945.20	1945.50
(Med. Lake) 4	1942.10	1942.50	1943.00
(Homestead) 6	1936.34	1937.80	1937.00
Katy's Lake	1952.50	1953.40	1957.00

For further details see Spring Runoff Report submitted April 29.





## C. Fires

The extensive field burning conducted by local ranchers throughout this area during the spring season as a result of unusually heavy stubble and weed growth from last year have caused a number of prairie fires that threatened the refuge area but only one of these succeeded in getting within the refuge boundaries. This fire was on the west side of Gaffney Lake area and did little damage, if any. A special report was submitted covering this fire on April 26, 1944.

Our fire truck was remodeled and improved in our service building shop during the past winter and has proven very effective in combatting prairie fires which have threatened the refuge and may have caused considerable damage had this equipment not been available and in perfect operating condition. (Pictures No. 230 & 231)

## II. WILDLIFE

### A. Migratory Birds

#### 1. Population and Behavior

Due to open winter conditions the last of the migratory flight left the refuge just prior to January 1. Many of these birds remained in this general area and spent the winter on the Missouri River near Culbertson, Montana. Spring migration got under way on April 3 when 50 Canada Geese, 200 Mallards, 50 Pintails, 50 Goldeneyes, 3 Ring-billed Gulls and a Crow were first seen at Homestead Lake. Canvasbacks, Shovellers, Snow Geese, American Mergansers and other waterfowl followed within the next few days. No. shore birds had yet reached the refuge at the close of this report period. The absence of White-fronted Geese during the spring season has been very conspicuous. In contrast, we had an exceptionally heavy migration of Speckled Bellies through this area during the fall season. For details of spring migration dates see form NR-1.

#### 2. Food and Cover

There has been an abundance of feed available in stubble fields for Mallards and Pintails as well as in our refuge field plots. Aquatic feed appears to be sufficiently plentiful to meet the needs of other waterfowl.

Cover conditions appear to be adequate throughout the entire refuge and Mallards and Pintails are already taking advantage of this available cover and nesting is under way.

### B. Upland Game Birds

#### 1. Population and Behavior

The Sharp-tailed Grouse, Chinese Pheasants and Hungarian Partridges have come through the winter in good condition with very little loss if any. The Pheasants are showing a rapid recovery from their serious depletion during the March blizzard of last year.



## 2. Food and Cover

Seeds from natural shrubs and other vegetation together with grain left standing in our field plots has been adequate to meet all needs for upland birds throughout the winter season and as a result of mild temperatures and light snowfall little feeding has been necessary.

### C. Big Game Animals

The few deer that was seen on the refuge last summer on various occasions were not observed on the refuge during the winter months and it is believed that they have migrated to heavier cover and timbered areas along the Missouri River or possibly Muddy Creek.

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

As seems to be customary here at Medicine Lake the winter muskrat population has proven to be somewhat less than earlier estimates and it is still unknown as to just what may happen to these fur bearers. It is thought, however, there is a heavy loss through a winter kill. One beaver lodge was located on Bruce Island across from the headquarters residence and considerable damage has been noted to the Chokecherry thicket located there, also to hybrid Poplar trees planted at the headquarters. (Pictures No. 226 & 227). Mink seem to continue to increase on the refuge although they as yet are doing no noticable damage unless it may be to muskrat population. Coyotes and badgers have increased considerably Throughout the refuge and vicinity. Skunk have also increased considerably although these have been reduced somewhat through trapping of the past season.

### E. Predaceous Birds

The two Golden Eagles that gave us some trouble at No. 12 cabin last year returned again this season and have continued to prey upon upland game birds in that area. There are also a few other eagles that migrate to the refuge during the winter season. An exceptionally heavy flight of crows has been noted through the refuge this season and it appears that there will be a much heavier nesting population on the refuge than of last year. Some control measures may be necessary.

### F. Fish

Although there are some indications that the fish plantings that have been made in Medicine Lake are thriving we have had no opportunity as yet to make any real test since we do not have the necessary nets and plans for the State Fisheries to conduct this investigation have not yet materialized although we hope to conduct this investigation some time this spring.

We have not yet received approval for plans for establishing a fishing and boating area here at Medicine Lake and we feel that it is urgent that some action be taken in this matter as soon as possible in an effort to relieve the local pressure for fishing in Medicine Lake and to provide this additional recreation to this community.



### III. REFUGE DEVELOPMENT AND MAINTENANCE

#### A. Physical Development

No refuge construction or developments have been undertaken during this period. A new bridge has been constructed however, across the Muddy Creek overflow channel by Sheridan County. We had planned to cooperate in the construction of this bridge but through a misunderstanding on the part of the County Commissioners we were not able to carry out our plans in this regard. (Pictures No. 232, 233, 234.)

Major refuge maintenance operations during this period are as follows:

1. Repair radial gates at Indian Service Dam (Pictures No. 228 & 229)
2. Remodel, overhaul and paint refuge fire truck (Pictures No. 230 & 231)
3. Crating and shipping of considerable surplus property.
4. General overhaul of '22' and '40' Caterpillar tractors.
5. Inspect and repair boundary fences.
6. Inspection and maintenance of buildings and water control structures.
7. Painting and overhaul of boats.

#### B. Plantings

Because of labor conditions it has not been possible to undertake any plantings on the refuge during this period.

No known damage has resulted to tree and shrub plantings on the refuge as a result of rodents throughout the winter.

Although share-crop cooperative agreements were prepared they were not approved and returned in time so that any crop operations could be undertaken in our field plots prior to the close of this report period. All fields are covered by agreements this season, however, and we anticipate a full crop season.

### IV. ECONOMIC USE OF REFUGE

#### A. Grazing

All grazing units are in good condition and plans are made and in some cases permits issued to cover a full grazing capacity on the various units for the coming season. Some new units are being opened up for grazing through the construction of interior fences by permittees on a fee-reduction agreement.

#### B. Haying

Although plans are prepared for harvesting hay throughout the coming season no permits have been or will be issued until sufficient time as we will be able to determine the quantity of hay available, if any.



### C. Fur Harvest

Our fur harvest plans for this season have been somewhat disrupted through the inability to obtain experienced and conscientious trappers. Neither of the two trappers which we have had have shown any real effort in carrying out trapping operations as authorized under their permit and in most cases their activities in removing only the 'cream' of the fur crop has been obvious. In both cases these men have applied only part time to their trapping operations because of their other work.

See form NR-4 included in this report for details on share-trapping operations and other removals.

### E. Other Uses

Three miscellaneous use permits were issued during this period covering harvest of 60 tons of ice.

## V. FIELD INVESTIGATION AND APPLIED RESEARCH

In continuing our investigation of eagle damage at No. 12 cabin one pellet has been collected for submission to the Denver laboratory for analysis. No returns are available on this as yet.

The seven Canada Geese which were raised at the refuge last year for conducting experiments in attempting to attract this species to the refuge for nesting have come through the winter in good condition. Plans are being conducted for keeping these birds at the refuge continuously and attempting to produce off spring therefrom which would be allowed to migrate in hope that they would return in the spring and to remain here to nest with the adult parent birds and thus establish nesting habits on this area.

## VI. PUBLIC RELATIONS

### A. Recreational Uses

Some skating has been conducted on the Homestead area which is about all the use made of the two recreational areas this period.

### B. Refuge Visitors

<u>Name</u>	<u>Date</u>	<u>Purpose</u>
M. H. McKenzie Des Lacs Refuge, N. Dak.	January 29	Pick up surplus property
Andrew Christensen County Commissioner	February 15	Discuss County bridge construction
Eric Lawson Lostwood Refuge, N. Dak.	April 26	Pick up surplus property
Thomas Paige Treasury Dept. Miles City, Mont.	April 11	Inspect surplus trucks.



### C. Refuge Participation

As a result of my 10-day detail to Lower Souris Refuge in North Dakota from March 20 to March 30, I was not able to conduct any Wildlife Week activities at the refuge or in this vicinity.

### F. Violations

The only occurrence in the nature of violations on the refuge was the illegal use of and damage to refuge boundary gate on the west side of Gaffney's Lake. This illegal use was believed to be by local ranchers in attempting to make a short-cut to Medicine Lake. The gate was finally repaired and locked up with a lock other than the regular refuge lock and posted with a notice warning against further illegal use. (Picture No. 235)

## VII. OTHER ITEMS

During this period I made a trip to California in company with Vernon Ekedahl of the Bowdoin Refuge and George Mushbach of the Bison Range to pick up and return three trucks from the Sacramento Refuge for use on our refuges. In connection with this trip we also had the pleasure of dropping in at the Regional Office for a conference.

Another trip was made to Lower Souris Refuge on March 20 for a 10-day detail for the purpose of becoming familiar with the work and the problems there prior to my transfer to that area during Mr. Henry's military furlough.

The following is a brief summary of accomplishments made and work conducted at the refuge during the past 12-month period. Following this is a collection of photographs illustrating some of the activities conducted as well as forms NR-1, 2 and 4.

### ANNUAL SUMMARY OF ACCOMPLISHMENTS

Period May 1, 1943 to April 30, 1944

Weather and water conditions have been favorable for the propagation of waterfowl during the past year. Upland birds have also flourished and the loss of Pheasants suffered in the March, 1943, storm have been restored. Both waterfowl and upland birds have increased favorably as a whole.

Aquatic plantings of recent years are becoming established in most areas and have been especially noticable the past year along the south and west side of Medicine Lake and in No. 10 lake. Some rush plantings at Homestead have also begun to produce some needed cover during the past year.

As a result of the stop construction order issued on this refuge, no attempt has been made to undertake any new development. Labor conditions have been such that it has been difficult, and in some cases impossible, to conduct certain needed maintenance work to trails, dikes, fences and buildings.



Economic uses have been greatly accelerated on the refuge the past year as a result of war-time conditions and our effort to meet these conditions. The refuge economic use plan has been completely revised to meet changing conditions that have come about since establishment of the refuge and, to meet these war-time demands for economic use of our refuge surpluses. Some of our agricultural plots have been replotted and plans made for seeding all buffer strips and abandoned fields to Crested Wheat or other grasses. Several new grazing units have been established through our plan for interior fence construction by the permittee on a fee reduction plan.

No hunting violations have occurred on the refuge although 4 'after sunset' and 1 'excess bag limit' duck cases were apprehended in the vicinity of the refuge last fall.

Very little botulism occurred on the refuge and it is believed that the practice of a continued water level drop rather than attempting to maintain a constant level as in the past has been a contributing factor in these improved conditions. The fact that all units were thoroughly flushed out during the 1943 spring runoff also undoubtedly had some effect.

Darryl Agee, Clerk, who was granted military furlough last July to enter the armed forces was replaced by Miss Sophia Deem in September. Joe E. Pederson, Laborer-Patrolman who resigned in October to go into farming was replaced by Nile B. Terwilliger on February 1st. At the close of this report plans are nearly completed covering my transfer to the Lower Souris Refuge in North Dakota to replace C. J. Henry for the duration, who is now in the armed forces. I will be replaced at Medicine Lake by Vernon Ekedahl from the Bowdoin Refuge.

Respectfully submitted

B. M. Hazeltine  
Refuge Manager

Report completed May 5, 1944

Approved--Regional Office

Date 5/13/44

By [Signature]



PHOTOGRAPH SELECTION TO ACCOMPANY  
NARRATIVE REPORT

January, February, <sup>March</sup> March and April, 1944  
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#226 & 227. Beaver damage to choke-cherry thicket and food cache on northeast end of Bruce Island. January 9, 1944.



#228 & 229. Installing new timbers and patching steel gates on control structure at Indian Service dam. January-1944.



PHOTOGRAPH SELECTION (Cont'd)



#230 & 231. Improved and reconditioned refuge fire truck, tank, pump, and other equipment was transferred from old 1934 Chevrolet to 1937 Ford -- "Some wagon!" March, 1944.



PHOTOGRAPH SELECTION (Cont'd)



#232. Looking downstream at bridge being constructed across Muddy Creek overflow channel near Medicine Lake by Sheridan County, Feb. 22, 1944.



#233. Looking upstream at county bridge near completion across Muddy Creek overflow channel.  
February 22, 1944



#234. View showing type of construction used on county bridge across Muddy Creek overflow channel. Guard rail not yet installed. Feb. 22, 1944.



#235. Repairing and posting gate east of Gaffney's Lake which was being damaged and used by unauthorized persons! February, 1944.



Form NR-1

## MIGRATORY BIRDS

Refuge Medicine Lake, MontanaMonths of January 1to April 30, 1944

1612

(1) Species	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
Common Name	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
Holboell Grebe	*										
Eared Grebe	30	5/1									2,000
Western Grebe	1	4/29									1,000
Pied-billed Grebe	1	5/1									?
White Pelican	20	4/17	4/20								300
Double crested Cormorant	6	4/25									100
Great Blue Heron	1	4/6	4/20								100
Black-crowned Night Heron	*										
American Bittern	*										
Whistling Swan	4	5/4				4	5/4				4
Canada Goose	50	4/4	4/8								500
White-fronted Goose	*										
Lesser Snow Goose	50	4/6	4/10								2,000
Common Mallard	200	4/4	4/10								25,000
Gadwall	100	4/13	4/20								8,000
Baldpate	100	4/25	4/25								8,000
American Pintail	50	4/4	4/10								30,000
Green-winged Teal	50	4/9	4/10								7,000
Blue-winged Teal	20	4/20	4/25								6,000
Cinnamon Teal	*										
<del>REMARKS: (Pertinent information not specifically requested)</del>											
Shoveller	20	4/6	4/10								5,000
Redhead	10	4/20	4/30								4,000
Ring-necked Duck	*										4,000
Canvas-back	75	4/6	4/10								4,000
Lesser Scaup Duck	5,000	4/13	4/15								5,000



# INSTRUCTIONS

Form NR-1 - MIGRATORY BIRDS (Include species in families Gaviidae through Strigidae; also doves and woodcocks)\*

In case a resident form occurs, such as mottled duck on the Gulf Coast, use only the columns that apply.

- (1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".
- (2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.
- (3) BECAME COMMON: The date the species became common on the refuge.
- (4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.
- (5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.
- (6) YOUNG PRODUCED: Estimated number of young produced based upon 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 are to be omitted.
- (7) 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 manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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



Form NR-1

## MIGRATORY BIRDS

Refuge Medicine Lake, Montana Months of January 1 to April 30, 1944

1612

(1) Species	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
Common Name	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
American Goldeneye	50	4/4	4/10								4,000
Barrow's Goldeneye	*										
Buffle-head	2	4/10	4/30								1,500
Ruddy Duck	*										
American Merganser	10	4/6	4/10								1,500
White-winged Scoter	*										
Sharp-shinned hawk	*										
Cooper's hawk	*										
Western Red-tailed hawk	*										
Swainson's hawk	100	5/1	5/1								500
Ferruginous rough-leg hawk	2	4/4									100
American Rough-legged hawk	*										
Golden Eagle						1	5/1				10
Marsh hawk											100
Duck hawk	*										
Sparrow hawk	2	4/30									20
Sandhill Crane	100	4/6									3000
Sora	*										
American Coot	30	5/1									3,000
Killdeer	2	4/10	4/12								2,900

~~REMARKS (Particular information not specifically requested)~~

Ruddy Turnstone \*

Black-bellied Plover \*

Wilson's Snipe \*

Upland Plover \*



# INSTRUCTIONS

Form NR-1 - MIGRATORY BIRDS (Include species in families  
Gaviidae through Strigidae; also doves and  
woodcocks)\*

In case a resident form occurs, such as mottled duck  
on the Gulf Coast, use only the columns that apply.

- (1) SPECIES: Use correct common names as found in the  
A.O.U. Check List, 1931 Edition, and list  
in A.O.U. order. General terms are to be  
avoided, such as "scaup", "teal", etc.;  
use "green-winged teal" or "lesser scaup".
- (2) FIRST OBSERVED: The first refuge record for the species  
during spring migration, fall migration,  
wintering, or summering, and the number  
observed. In the case of resident species  
this column may be disregarded.
- (3) BECAME COMMON: The date the species became common on the  
refuge.
- (4) PEAK CONCENTRATION: The greatest number of the species present  
on any one date or limited interval of time.
- (5) LAST OBSERVED: The last refuge record for the species  
during the spring or fall migration,  
wintering, or summering, and the numbers  
observed exclusive of obvious cripples  
or non-migrants.
- (6) YOUNG PRODUCED: Estimated number of young produced based  
upon 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 are to  
be omitted.
- (7) 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 manner in  
which birds come through; i.e., in waves or  
all at once. On refuges representing the  
terminus of the flight lane, the figures  
would probably be the same in many cases.

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



Form NR-1

## MIGRATORY BIRDS

Refuge Medicine Lake, Montana Months of January 1 to April 30, 1944

1612

(1) Species	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
Common Name	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
Spotted Sandpiper	*										
Western Willet	4	4/25									1,000
Greater Yellow-legs	*										
Lesser Yellow-legs	6	5/1									800
Pectoral Sandpiper	2	5/1									1,000
White-rumped Sandpiper	*										
Least Sandpiper	*										
Eastern Dowitcher	30	5/1									3,000
Long-billed Dowitcher	*										
Marbled Godwit	4	5/1									900
Avocet	2	4/28									500
Wilson's Phalarope	*										
Northern Phalarope	*										
California Gull	40	4/6	4/10								500
Ring-billed Gull	3	4/4	4/10								600
Franklin's Gull	200	4/30									1,000
Bonaparte's Gull	*										
Common Tern	*										
Black Tern	*										
Western Mourning Dove	*										

~~REMARKS (Pertinent information not specifically requested)~~Burrowing Owl  
Short-eared Owl\*  
\*

\* Recorded species for the refuge but not observed this period.



## INSTRUCTIONS

**Form NR-1 - MIGRATORY BIRDS** (Include species in families Gaviidae through Strigidae; also doves and woodcocks)\*

In case a resident form occurs, such as mottled duck on the Gulf Coast, use only the columns that apply.

- (1) **SPECIES:** Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".
- (2) **FIRST OBSERVED:** The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.
- (3) **BECAME COMMON:** The date the species became common on the refuge.
- (4) **PEAK CONCENTRATION:** The greatest number of the species present on any one date or limited interval of time.
- (5) **LAST OBSERVED:** The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.
- (6) **YOUNG PRODUCED:** Estimated number of young produced based upon 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 are to be omitted.
- (7) **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 manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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



Refuge Medicine Lake, MontanaMonths of January 1 to April 30, 1944

(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'v'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Prairie Sharp- tailed Grouse									800	No actual survey made. Estimate based on casual observations made during regular patrol and other trips over the refuge.
Hungarian Partridge									1000	
Ring-necked Pheasant									700	



# 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.



Refuge Medicine Lake, MontanaApril 30, 194 44

(1) Species	(2) Density	(3) Removals						(4) Disposition of Fur						(5) Total	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control	For Re- stocking	For Research	Share Trapping			Total Refuge Furs Shipped	Refuge Income	Furs Donated	Furs Destroyed	Popula- tion
								Permit Number	Trappers' Share	Refuge Share					
Coyote	Total Refuge				16			See	8		8	Returns			35
Badger	Area= 32,000 acres.				2			below	2			not			250
Skunk, striped					223				223			yet			500
Weasel, long-tailed					7				7			complete.			1000
Muskrat				80	2				40	42	42				800
Mink					1						1				40
Beaver				*1					1/2	1/2	1/2				10
Rabbits, White-tailed	Jack														500
Rabbits, Cottontail															100
Porcupine															20

\* only one Beaver taken on 50/50 basis. Fur shipped with Government shipment and proceeds split with Share-trapper.

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REMARKS: These furs except for those taken by Refuge Personnel, were taken by Share-trappers Ray Norton, under permits No. 130 and 131 and by Edward B. Smith under Permits No. 133 & 134.

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Predators included in Column 3 that were taken by refuge personnel were 8 coyotes, 2 muskrats & 1 mink.



# INSTRUCTIONS

Form NR-4 - SMALL MAMMALS (Include data on all species of importance in the management program; i.e., muskrats, beaver, coon, mink, coyote. Data on small rodents may be omitted except for estimated total population of each species considered in control operations.)

(1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan. "List of North American Recent Mammals" by G. S. Miller, Jr., a very good reference, is now out of print, although a revision is scheduled for publication in the near future.)

(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, bottom land 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) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year. Also show any removals not falling under heading listed.

(4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market and the total income to the refuge by species, including share-trapped furs and furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.

(5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.

REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.

