

NARRATIVE REPORT ROUTING SLIP

REFUGE NINEPIPE

PERIOD May-August 1963

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NINEPIPE NATIONAL WILDLIFE REFUGE
NARRATIVE REPORT
May 1 to August 31, 1963

REFUGE PERSONNEL

Cordia J. Henry, Refuge Manager, Moiese, Montana
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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SPORT FISHERIES AND WILDLIFE
FISH AND WILDLIFE SERVICE
Charlo, Montana

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NINEPIPE NATIONAL WILDLIFE REFUGE
Narrative Report
May 1 to August 31, 1963

I. GENERAL

A. Weather Conditions

The weather for this past period can be considered generally cool and dry. The only warm weather was experienced during part of August. Weather conditions for the period were as follows:

<u>Month</u>	<u>Snowfall</u>	<u>Precipitation</u>		<u>Max. Temp.</u>	<u>Min. Temp.</u>
		<u>This Month</u>	<u>50-Yr. Normal</u>		
May	0	0.38	2.15	85	27
June	0	3.06	2.46	90	37
July	0	0.45	1.09	91	38
August	<u>0</u>	<u>0.20</u>	<u>1.05</u>	<u>95</u>	<u>40</u>
	0	4.09	6.75	Extremes 95	27

May was an extremely dry month with much wind and considerable cloudiness. Rainfall for this month was only 17% of the 50-year normal.

June was the only month during this period that equaled or succeeded the 50-year normal of rainfall. During this period 3.06 inches fell, which was 124% of normal. Only seven clear days were recorded during June. Days for the most part were cool, with only one day reaching the 90° mark.

July, like May, was generally cool and dry with only three days reaching the 90° mark or above. Precipitation occurred on seven days of this month, for a total of .45 inches, or 41% of normal.

August weather conditions were a continuation of July, although the weather was somewhat warmer with seven days of 90° or above. Rainfall occurred on seven days of this month and was only 19% of normal.

3. Habitat Conditions

1. Water

Runoff was generally poor for this watershed despite the near normal conditions in the Mission Range. This can be attributed to the cool weather during the period. Irrigation water was in demand early in May and had the month of June been dry, extreme water shortages would have occurred. Due to the slow runoff, water was not started into the reservoir until the heavy rains occurred in June. The reservoir level raised to a peak of 3007.2 by the second week of July and then dropped rapidly. By the end of August the level stood at 2996.0. The high level of 3007.2 was 4.8 feet below the maximum elevation. Water levels were so low that no water could be diverted into the children's fishing pond. Generally the pot holes held up well this year. This can be attributed to the heavy snowfall in the valley this last winter, and a comparatively cool summer.

2. Food and Cover

Food and cover were generally good throughout the period, although some of the marginal areas on the reservoir failed to produce good stands of emergents due to the low water level. Spike rush and sago barely got started over much of the area when the drawdown occurred. Very little, if any, smartweed flowered this year. Grasses generally fared well and were grazed lightly by permittee's cattle. The overall winter cover for pheasant will be good. During August most birds began feeding flights to the adjacent grain fields, which had excellent crops this year.

II. WILDLIFE

A. Migratory Birds

Total waterfowl use for the period dropped about 40% over last year. As in past years, extreme water drawdown and fisherman disturbance, especially after mid-August, is thought to be the main reason for the decrease in bird use. Water levels were so low that fishermen could wade almost anywhere on the reservoir.

No swan were observed on the refuge during this period.

Canada goose use shows about a 210% increase over the same period last year. This large increase can be attributed to the excellent hatch throughout the Flathead Valley this year. On Ninepipe reservoir there were 24 broods of 124 goslings, as compared to 47 goslings in 1962 and 83 goslings in 1961. The build-up in goose numbers started the last week of July and peaked with 756 birds the second week of August. By the first of September the numbers of geese had dropped to 250. It seems likely that this was caused by the dropping of the water level and disturbance by fishermen. Almost all of the birds driven off Ninepipe moved to Kicking Horse reservoir or the Flathead River where there was a much larger water area.

By the third week of June all geese were flightless, but by the second week of July most geese were going out on feeding flights to the surrounding grain fields on the Montana State Management area. There were no reports on depredation this year.

Four snow geese were observed on the reservoir during the first week of May. No white-fronted geese were seen this period.

An approximate 20% drop in overall duck use-days occurred as compared to last year. By species, the largest drop was a 48% decline in mallard use. The mallard population built up to 4,000 birds during the first week of August, but due to the small water area

and disturbance by fishermen, most of the mallards moved to the Kicking Horse reservoir.

The pintail population was up considerably over last year. The first big influx occurred on August 5, when 3,000 birds moved into the area. The peak of the pintail population occurred during the week of August 11 through 17, when an estimated 5,000 birds were on the reservoir. By the end of the period there were only 1,000 pintails present.

All other species of ducks were present in about the same numbers, or slightly less, than last year.

Redheads arrived in the reservoir from the surrounding pothole areas about July 1, and left for other larger water areas for the molt.

Although Ninepipe experienced the best goose hatch in its history, duck production was down from last year. The low water levels this spring prevented the goose nests from being inundated. However, when the water was started into the reservoir on May 3 many duck nests were inundated. Hardest hit were the gad-wall and mallard. The only species to show a definite increase in nesting was the blue-winged and/or cinnamon teal. A survey on the islands in early July revealed the shorelines strewn with many eggs from nests that had been inundated. Twelve gadwall nests were found on the higher ground. These nests averaged around six eggs and it was suspected that these were the result of renesting.

Of particular interest was the first refuge record of a wood duck brood on the south side of the reservoir. Generally there was very little disturbance to nesting birds by fishermen in this area. Keeping the south side closed until July 15 protected the best of the nesting area.

In the surrounding pothole areas, nesting results were considered excellent by state officials.

Coot nesting was about 78 percent of last year on the reservoir and this can be attributed to the late influx of water that inundated many nests.

Water and Marsh Birds

Western, red-necked and pied-billed grebes nested again this year on Ninepipe, however, success was very low due to the late bounce of the water levels. Thirty western grebe nests were observed in two colonies, but all but two were inundated by the rising water. No eared or horned grebes were observed nesting on the area this year, but were present until the first week of June. Again this year the bird-watchers were awed by the spectacular mating dances of the western grebe.

American bittern were present throughout the period. One nest of four young was observed near the Allentown Motel. During August one bittern used the pond just behind the Ninepipe quarters, apparently not bothered by the civilization that surrounded him.

Common loon were present only during the first two weeks of May, and had not returned by the end of the period.

Great blue heron were present throughout the period. Feeding conditions were excellent for these birds due to the low water conditions during the late summer. On August 10, a peak of 175 birds was reached. This was almost double that of the previous year.

One white pelican was observed this period on May 17.

Of special interest was the sighting of four immature black-crowned night herons on July 9 around the south side of the reservoir. This is a refuge record to be added to the bird list. This sighting was made by Allan Cruickshank, Audubon Society photographer, who spent over a month on the area photographing nesting birds, adding much to the ornithological information on this area. Notes

Shorebirds, Gulls and Terns

Killdeer were again abundant throughout the period, peaking with an estimated 600 birds the first part of August.

Common snipe were in usual numbers and nests and young were again observed this year.

Greater yellow-legs were first observed May 10, and peaked during the fall migration with 500 on August 7. This species was absent during June and part of July. At the end of the period they were still present in large numbers.

Lesser yellow-legs did not appear in numbers until the middle of August, when 250 were observed. The two species of yellow-legs spent their time feeding on the mud flats around the reservoir.

Of special interest were two white-faced ibis observed on the reservoir on July 28 by Mr. Cruickshank. This is a refuge record. *N.A.*

Avocet were common during the nesting period. An estimated total of 25 broods were raised this year on the area as compared to none last year. The avocet left the area during the first week of August and were absent the rest of the period.

Wilson's phalaropes were not observed during the first two months of this period, but during the last week of July there was a spectacular migration through the Flathead Valley.

Spotted sandpipers were present throughout the period and nested successfully on the area.

Solitary sandpipers were first observed on July 26 through the end of the period.

Baird's sandpipers were the most common sandpipers during the period. They were first observed on August 6 and peaked the 23rd of August, when 125 were observed. This bird was still present at the end of the period.

All three of the "peeps" were present on the refuge during the period. Least sandpipers were the most numerous and were present from the first of August to the end of the period. The western and semi-palmated sandpipers were present during August on the refuge.

It was a common sight to see all three of the "peeps" feeding together in the morning or evening. The western and semi-palmated sandpiper are not recorded on the present refuge bird list. The western was observed last year, but the semi-palmated can be considered a new record.

On May 10, 150 marbled godwit were observed resting and feeding in a group on the reservoir. Six weeks later 36 more were seen. These birds stayed for just one day before continuing their spring migration. One godwit was seen on August 10.

Semi-palmated plover were first observed on July 20, and were still present at the end of the period.

Black-bellied plovers were seen during June, but none were recorded during the fall migration.

Long-billed dowitchers were present during May and August in small numbers.

One western willet was observed on the area July 7.

Forster's terns arrived at Ninepipe on May 17 and were present throughout the period. Peak numbers were reached on August 6. This species nested on Tern Island, but had poor success due to inundation of nests.

Common tern arrived on May 10, but were absent during the nesting season. They reappeared during the middle of August and were still present at the end of the period.

Black tern were first observed on May 17 and were present throughout the period. No nesting occurred on the refuge, however, a small colony was observed on an adjacent pond.

Ring-billed gulls were present throughout the period and peaked in August with 600 birds. They were still present at the end of the period.

Franklin's gulls were first seen on May 10 and peaked on May 17 with 15 birds. This bird was absent

during the breeding season. One immature Franklin's was seen on August 17.

B. Upland Game Birds

The ring-necked pheasant enjoyed an excellent nesting season on the refuge and surrounding state management area. The brood size averaged approximately six. By August half-grown birds were frequently observed along the highways. In almost all other areas lacking good cover the pheasant hatch was considered poor.

Mourning doves were observed during the whole period. Two nests were found in the Russian olive trees on the south side of the reservoir. Numbers were generally down during August, as compared to last year. The cool nights during the last week of August pushed most of the birds out of the area.

C. Big Game Animals

None were observed on the refuge this period.

D. Fur Animals, Predators, Rodents and Other Mammals

Muskrat remain low in numbers with the only houses observed in the surrounding potholes.

No mink were observed this period.

A long-tailed weasel den was found in the rip-rap on the main dike this period. Generally the numbers of both the long-tailed and short-tailed weasels are high. Their main diet consists of field mice.

One badger was observed on the refuge this period. It is suspected that this animal wandered in from the state area where there are several dens.

Meadow mouse and white-footed mouse populations are extremely high on the area and are the main-stay of the hawk's, owl's and weasel's diet. It is hoped that this will be the peak year.

The striped skunk population was again extremely high this year in the general area. Measures were taken

to control the population on the refuge, but with the high population in the surrounding area it has been almost impossible to maintain a low population. Road kills in July and August were much in evidence.

E. Hawks, Eagles, Owls, Crows and Magpies.

No golden or bald eagles were observed this period. One duck hawk was seen on June 5. A pair of red-tailed hawks nested just off the refuge during this period and were frequent visitors. Sparrow hawks were numerous throughout the period, as were short-eared owls. No great-horned owls nested on the refuge this period, but several appeared around the first of August, as did both the sharp-shinned and Cooper's hawks. Two ospreys were visitors throughout the period. No ravens were observed this period. Magpies nested and were much in evidence on the area. Control measures were taken to keep the numbers low. Crows were present throughout the period in moderate number.

F. Other Birds

Mist net operations during the period added eleven new species to the refuge bird list. They are as follows: orange-crowned warbler, yellow-bellied sapsucker, northern water thrush, brown thrasher, pine siskin, Swainson's thrush, McGilleveray's warbler, Cassin's finch, red-eyed vireo, solitary vireo, and an Empidonax flycatcher (probably Traill's). ↑
Note

During Allan Cruickshank's stay in the area he added the western tanager and Traill's flycatcher, black-crowned night heron and white-faced ibis to the list.

The netted brown thrasher is a record for Montana west of the Continental Divide. All species of swallows were present this spring.

The black swifts came down out of the mountains during the cold weather in July. The yellow-throat was the most numerous nester of the warbler's on the refuge. Bobolinks were observed on July 2 and 14. Both the Savannah and vesper sparrows were observed nesting on the area, as was the yellow warbler.

As usual, the red-winged and yellow-headed black birds were very prolific this period.

During the last week of August a migration of yellow warblers was in evidence on the area.

G. Fish

Bass fishing during the second week of May was "red-hot" with many limits taken. The largest fish of the season was a nine pound bass taken off the main dike. Bass fishing on Ninepipe was sporadic after the last of May, and was generally slow until the opening of the south side on July 15. Surface plugs in the early morning and late evening proved best until the first of August. From then on fishing was very slow until the end of the season on September 3.

The children's fish pond all but dried up this period, as the water level of the reservoir was not high enough to permit water to be let into the pond. Because of this situation the children's pond was not stocked this year.

Fishing was high in May, but by August had trailed off to nothing.

H. Reptiles

Populations of Bell's painted turtles and water snakes remained high.

I. Disease

There was no known disease this period.

III. REFUGE DEVELOPMENT

A. Physical Development

1. One major project was undertaken this period at the Ninepipe refuge. This was the addition of a dining room on the Ninepipe quarters. The large cement front porch served as an excellent foundation for the addition. The front door and window were removed and a

large archway was created between the living room and new dining room. Two four by five thermopane windows were put in the south and east walls of the dining room, while the door was put in the west wall of the dining area. The interior was finished in knotty pine to match the living room. The floor was laid with vinyl tile. The exterior of the addition was finished in log facing to match the logs of the rest of the house. A large porch and steps were poured.

Two excellent carpenters were hired to do the job. The refuge was fortunate to obtain the services of the carpenter who helped build the quarters and service building here at Ninepipe in the late 30's and did all of the log work.

The following is a list of cost of materials and labor required for the job:

Labor	\$ 700.00
Lumber, insulation, flooring & Preservative	534.24
Cement	95.00
Light fixtures	25.80
Two 4'x5' thermopane windows	<u>198.50</u>
	\$1553.54

2. Two cupboards were built and installed in the kitchen at the Ninepipe headquarters.

3. Two new storm doors were installed on the front and back doors at the Ninepipe quarters.

4. The display shelter constructed on the Bison Range and was hauled to Ninepipe and installed on a cement foundation.

5. A quarter mile of interior fence was built by a permittee with the Service supplying the materials. This divided the north side of the refuge into two grazing units.

6. Two duck traps were completed.

7. The picnic area shelter's roof was given a coat of stain.

8. The picnic area was mowed and cleaned several times and wood hauled for the fireplaces.

9. Posting of open and closed fishing areas was done as needed.

10. Other work entailed general clean-up and maintenance of buildings and grounds.

Nothing to report this period for B through F.

IV. RESOURCE MANAGEMENT

A. Grazing

The grazing period started on May 15, with 45 head of cattle being put into the north side of the refuge. Generally the refuge was lightly grazed again this year, except for the north side which had close to the proper number of AUM's taken off. The south-east side was sparsely grazed, as was the area west of the main dike. The area east of the highway was not grazed at all.

The permittee put in a quarter mile of partition fence on the north side of the refuge, splitting this side into two grazing units. He has also started a partition fence along the west face of the main dike. This will make another grazing unit out of the west end. It is hoped that other partition fences can be built this next year so that more equitable use may be had.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

Regular waterfowl population censusing was conducted throughout the period along with range inspections.

Areas were baited at Ninepipe on August 6. Trapping was started on August 21. By the end of this period only 168 mallards had been banded. Of these 123 birds were immature, or a ratio of one adult to 2.9 juveniles. The lowwater and disturbance by fishermen prevented a large build-up of mallards on the reservoir with the incoming birds moving to Kicking Horse reservoir. It is hoped that with the closing of the

area to fishing on September 3 the mallards will build up in sufficient numbers so that trapping will pick up.

The 1962 band returns data on mallards will be worked up and included in the September-December narrative report.

VI. PUBLIC RELATIONS

Fishing is by far the major recreational use on the refuge, however, it was down from last year. This can be attributed to the sporadic fishing and the lack of water in the children's fishing pond. May was the best fishing month, with July second. August was the poorest.

Ninepipe seems to be becoming more and more popular with bird-watchers. During this period people came from as far away as Florida and Philadelphia, Pennsylvania, to see the birds.

Public visits were recorded as follows:

<u>Month</u>	<u>Fisherman Use-Days</u>	<u>Picnic Use-Days</u>	<u>Bird Watcher Use-Days</u>
May	720	100	110
June	310	75	105
July	530	70	70
August	<u>95</u>	<u>25</u>	<u>90</u>
	1655	270	375

The total for public use-days for Ninepipe was 2,300.

B. Refuge Visitors

Cordia J. Henry, National Bison Range, several visits in regard to Ninepipe operations.

Victor B. May, National Bison Range, Several visits.

Mr. & Mrs. Allan Cruickshank, Cocoa Beach, Florida, photographing birds.

Marion Malone, Flathead Irrigation District, water matters.

Gene Allard, Post Creek Grazing Association, matters concerning Ninepipe grazing.

Fay Couey, State Game Department, two visits.
Wayne Gibson, County Agent, weed control.
Clem Rose, County Agent, two visits.
Bob Dusenberry, BIA, fencing at Pablo.
Vic Lewin, with ornithology class from M.S.U. Biological Station on Yellow Bay.
Jerry Salinas, Montana State Game Department, several visits.
Bob Lambeth, State game warden, two visits.

C. Refuge Participation

5/20/63	Attended Federal Businessmen's Association Meeting in Missoula
5/21/63	Officiated at Ronan's Children's Fishing Derby.
7/12/63	Delivered talk and tour to M.S.U. Ornithology class from Biological Station at Yellow Bay.
8/9/63	Attended A.S.C. meeting in Ronan on review of wildlife practices.
8/15/63	Judged photography exhibit at Lake County Junior Fair.
8/28/63	Attended the preliminary Interagency Wage Survey Planning Session in Missoula.

D. Hunting

None this period.

E. Violations

None this period.

SIGNATURE PAGE

Submitted by:

Alon A. Southfield
(Signature)

Refuge Manager
(Title)

Date: September 20, 1963

Approved, Regional Office:

Date: OCT 1 1963

Richard E. Griffith
(Signature)

Chief, Division of Wildlife
(Title)

Approved, National Bison Range:

Date: September 20, 1963

J. Henry
(Signature)

Refuge Manager
(Title)

W A T E R F O W L

REFUGE Hinopipe; Charlie, Montana

MONTHS OF May 1, TO August 31, 19 63

(1) Species	(2) Weeks of reporting period									
	May 5-11	May 12-18	May 19-25	May 26-June 1	June 2-8	June 9-15	June 16-22	June 23-29	June 30-July 6	July 7-13
	1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	78	152	175	250	185	150	180	175	175	175
Cackling										
Brant										
White-fronted										
Snow	4									
Blue										
Other Total Geese	82	152	175	250	185	150	180	175	175	175
Ducks:										
Mallard	1800	1500	1550	1500	1235	1200	1400	1500	1600	1600
Black										
Gadwall	500	180	150	150	152	60	80	60	125	235
Baldpate	100	100	85	85	75	25	25	120	120	200
Pintail	150	150	125	125	200	100	125	200	200	180
Green-winged teal	180	50	25	35	25	10	25	25	25	45
Blue-winged teal	750	800	710	500	400	160	200	200	230	450
Cinnamon teal	65	75	80	80	24	25	25	25	25	45
Shoveler	200	200	120	100	27	15	15	15	15	25
Wood					4	8	8	9	17	19
Redhead	420	475	440	325	200	220	220	600	650	650
Ring-necked	80	25	25	25	5	14	20	45	45	45
Canvasback	20	25	10	10		17	20	20	20	20
Scaup (lesser)	100	150	80	65	5	5	5	15	15	15
Goldeneye								2	2	5
Bufflehead	2	4	4	2	2	3	4	4	4	4
Ruddy	220	350	150	150	100	100	100	100	100	100
Other Wooded Wargan.	4	4	4						4	4
Comm. Warganser						1		2	2	2
Total Ducks	4156	5730	3400	3362	2435	2500	2698	3032	3259	3650
Coot	2100	1000	700	600	100	150	150	84	200	250

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Cont. NR-1

(Rev. March 1953)

WATERFOWL
(Continuation Sheet)REFUGE Ninpipe; Charlo, MontanaMONTHS OF May 1, TO August 31, 1963

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen: total	
	July 14-20	July 21-27	July 28-Aug. 3	Aug. 4-10	Aug. 11-17	Aug. 18-24	Aug. 25-31				
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada	175	350	551	150	756	450	250		30,219	14	72
Cackling											
Brant											
White-fronted											
Snow									28	0	0
Blue											
Other Total Geese	175	350	551	150	756	450	250		30,247	14	72
Ducks:											
Mallard	1,500	1,600	2,500	4,000	2,908	2,500	3,000		232,645	30	250
Black											
Gadwall	200	200	300	400	400	400	400		22,194	2	150
Baldpate	200	200	200	200	400	1,000	1,000		27,302	2	22
Pintail	150	200	250	3,000	5,000	3,000	1,000		101,463	4	80
Green-winged teal	45	45	100	700	800	400	400		10,235	1	15
Blue-winged teal	450	600	600	400	300	400	200		52,252	32	160
Cinnamon teal	45	100	100	100	100	50	25		6,233	2	30
Shoveler	25	25	50	50	50	50	50		7,444	2	52
Wood	17	17	17	17	17	17	25		1,250	1	7
Redhead	350	250	100	50	50	25	25		45,870	15	100
Ring-necked	25	25	25	15	15	20	20		2,152	0	0
Canvasback	20	20	20	20	100	125	75		3,222	0	0
Scaup (Lesser)	15	15	15	15	25	25	25		3,220	2	15
Goldeneye	5	4	4	4	4	4	4		236	0	0
Bufflehead	4	-	3	3	10	10	10		511	0	0
Ruddy	30	100	100	125	125	125	125		16,450	4	32
Other Hooded Merg.	4	2	2	2	2	2	2		282	0	0
Common Merg.	2								63		
Coot:											
Total Ducks	3,155	3,603	4,486	9,301	10,348	8,153	4,386		549,983	95	1,055
	500	1,000	2,000	2,000	2,000	1,000	1,500		107,313	50	200

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production	SUMMARY
Swans	:	:	:	Principal feeding areas
Geese	:	:	:	
Ducks	:	:	:	Principal nesting areas
Coots	:	:	:	
				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).

3-1751

Form NR-1A

(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)Refuge Minneapolis, Charlie, MontanaMonths of May 1, to August 31, 1963

(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. Water and Marsh Birds:										
Common Loon	Previous Period		3	5/10	1	5/13	-	-	-	25
Red-necked Grebe	"	"	88	8/ 2	Still Present		-	11	2	115
Horned Grebe	"	"	5	5/17	2	6/ 7	-	-	-	30
Rare Grebe	"	"	15	5/17	15	5/17	-	-	-	120
Western Grebe	"	"	200	8/ 2	Still Present		2	30	4	450
Pied-bill Grebe	"	"	40	8/ 2	"	"	-	4	2	100
Great Blue Heron	"	"	175	8/10	"	"	-	-	-	200
Black Crowned Night Heron	4	7/ 9	4	7/ 9	4	7/ 9	-	-	-	4
American Bittern	Previous Period		10	period	Still Present		-	1	4	20
White Pelican	1	5/17	1	5/17	1	5/17	-	-	-	-
II. Shorebirds, Gulls and Terns:										
Killdeer	Previous Period		500	8/ 7	Still Present		-	Unknown	350	1,000
Common Snipe	"	"	25	period	"	"	-	" "	15	60
Greater Yellowlegs	1	5/10	500	8/ 7	2	"	-	-	-	1,200
Lesser Yellowlegs	5	7/17	250	8/17	"	"	-	-	-	500
Whitefaced Ibis	2	7/28	2	7/28	2	7/28	-	-	-	2
Avocet	Previous Period		65	6/ 7	7	8/ 7	-	Unknown	25	150
Wilson's Phalarope	"	"	250	8/17	Still Present		-	-	40	500
Spotted Sandpiper	"	"	15	8/17	"	"	-	4	10	35
Solitary Sandpiper	1	7/26	5	8/ 6	"	"	-	-	-	25
Baird's Sandpiper	3	8/ 6	125	8/23	"	"	-	-	-	300
Western Sandpiper	2	8/ 6	10	8/23	1	8/30	-	-	-	25
Least' Sandpiper	25	8/ 2	25	8/ 2	4	8/23	-	-	-	55
Semi-palmated Sandpiper	2	8/ 2	4	8/10	4	8/10	-	-	-	15
(Shorebirds continued on second sheet.)										

(Shorebirds continued on second sheet.)

(over)

(1)	(2)		(3)		(4)		(5)			(6)
III. <u>Doves and Pigeons:</u>										
Mourning dove	Previous Period		35	8/ 7	Still Present		-	4	8	150
White-winged dove										
IV. <u>Predaceous Birds:</u>										
Golden eagle	None this period.									
Duck hawk	1	6/ 5	1	6/ 5	1	6/ 5	-	-	-	-
Horned owl	2	8/16	2	8/16	Still Present		-	1	2	6
Magpie	Previous Period		45	7/24	"	"	-	10	30	-
Raven	None this period									
Crow	Previous Period		25	8/16	"	"	-	2	4	-
Red-tailed Hawk	"	"	4	8/30	"	"	-	1	2	6
Marsh Hawk	"	"	15	8/31	"	"	-	3	9	20
Sparrow Hawk	"	"	20	5/17	"	"	-	Unknown		
Short-eared Owl	"	"	15	period	"	"	-	Unknown		
Cooper's Hawk	1	8/ 6	2	8/17	"	"	-	-	-	5
Sharp-shinned Hawk	1	8/17	1	8/30	"	"	-	-	-	5
Osprey	2	period					-	-	-	2
Reported by.....Leon A. Littlefield.....										

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.

3-1751
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl) (Continued)

Refuge...Minnekahta, Charles, Montana... Months of May 1,... to August 31,... 1957 63

(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>										

(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					
Raven					
Crow					
				Reported by.....	

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.

3-1750b
Form NR-1B
(Rev. Nov. 1957)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE
WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Chapin

For 12-month period ending August 31, 1958

Reported by John A. Littlefield

Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat Type Acreage	(3) Use-days	(4) Breeding Population	(5) Production
Entire Refuge is considered as one unit.	Crops <u>None</u>	Ducks <u>5,937,330</u>	<u>480</u>	<u>1055</u>
	Upland <u>2784</u>	Geese <u>240,163</u>	<u>48</u>	<u>124</u>
	Marsh <u>724</u>	Swans <u>2,054</u>	<u>0</u>	<u>0</u>
	Water <u>1672</u>	Coots <u>567,443</u>	<u>300</u>	<u>200</u>
	Total <u>20234</u>	Total <u>5,846,990</u>	<u>828</u>	<u>1379</u>
	Crops _____	Ducks _____	_____	_____
	Upland _____	Geese _____	_____	_____
	Marsh _____	Swans _____	_____	_____
	Water _____	Coots _____	_____	_____
	Total _____	Total _____	_____	_____
	Crops _____	Ducks _____	_____	_____
	Upland _____	Geese _____	_____	_____
	Marsh _____	Swans _____	_____	_____
	Water _____	Coots _____	_____	_____
	Total _____	Total _____	_____	_____
	Crops _____	Ducks _____	_____	_____
	Upland _____	Geese _____	_____	_____
	Marsh _____	Swans _____	_____	_____
	Water _____	Coots _____	_____	_____
	Total _____	Total _____	_____	_____
	Crops _____	Ducks _____	_____	_____
	Upland _____	Geese _____	_____	_____
	Marsh _____	Swans _____	_____	_____
	Water _____	Coots _____	_____	_____
	Total _____	Total _____	_____	_____
	Crops _____	Ducks _____	_____	_____
	Upland _____	Geese _____	_____	_____
	Marsh _____	Swans _____	_____	_____
	Water _____	Coots _____	_____	_____
	Total _____	Total _____	_____	_____

(over)

INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) **Area or Unit:** A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.
- (2) **Habitat:** Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) **Use-days:** Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.
- (4) **Breeding Population:** An estimate of the total breeding population of each category of birds for each area or unit.
- (5) **Production:** Estimated total number of young raised to flight age.

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

Refuge Nine Mile Months of May 1 to August 21, 19 46

(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.
Ring-necked Pheasant	Grass Marsh	275A 500A	.19 .33	24 200	1M: 4F	None			1500	

INSTRUCTIONS

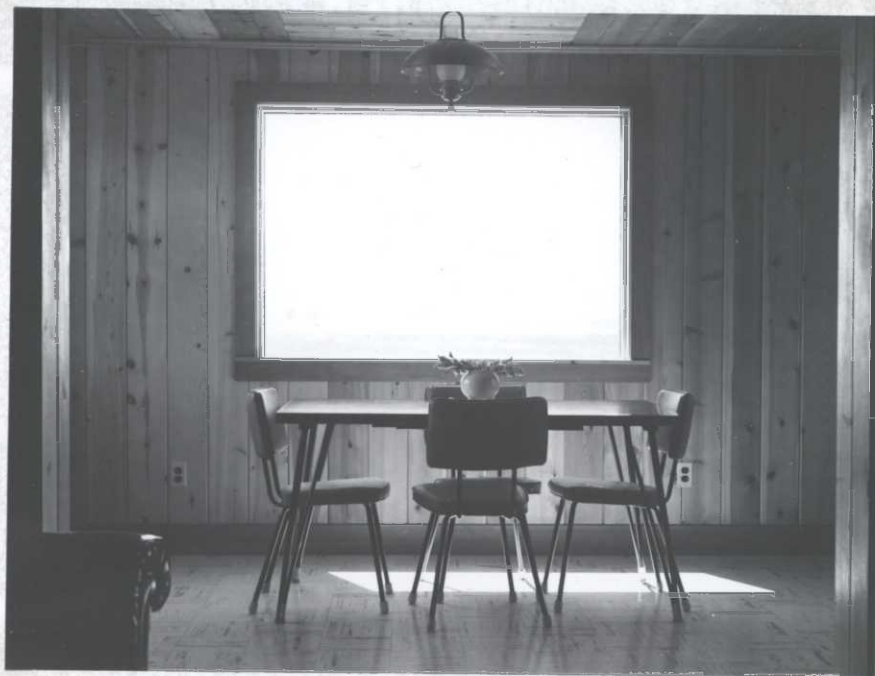
Form NR-2 - UPLAND GAME BIRDS.*

- (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.



Exterior view of dining room addition to Ninepipe quarters #1.



Interior view of dining room addition to Ninepipe quarters #1.



Display shelter installed at Ninepipe headquarters.