

ROUTING SLIP

DIVISION OF WILDLIFE REFUGES

DATE: 5-12 1944

✓
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SECTION OF LAND MANAGEMENT:

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SECTION OF STRUCTURES:Mr. Taylor *WV 5/25*

REMARKS:

N. D. DISTRICT #2 EASEMENTS NARRATIVE REPORT

JANUARY-APRIL 1944

Return to: Habitat Improvement

Regional Director, Minneapolis, Minnesota.

May 16, 1944.

Warren S. Bourn, Acting in Charge, Section of Habitat Improvement, Division
of Wildlife Refuges.
Omission of NR-1 forms, etc.

In the January-April 1944 Narrative Report from the North Dakota Encasement Districts No. 2, Mr. Parker submitted only four NR-1 forms omitting these for:

Billings Lake
Brumba
Johnson Lake
Kellys Slough
Lamba Lake

Little Goose
Minnevastema
Pleasant Lake
Prairie Lake
Rose Lake

Snyder Lake
Sibley Lake
Silver Lake
Wood Lake Marsh
Stump Lake

Mr. Parker in this report submitted no NR-2 forms for upland game birds and no NR-4 forms for the fur animals and other small mammals for the various encasements.

Trapping activities were mentioned in the case of several encasements, but no information except general statements was given relative to the removal of fur animals. This information should be incorporated in the NR-4 forms for the areas. In some cases it may be difficult to get the information from the local trappers, but every effort should be made by the refuge manager in so far as possible to collect this type of information. It will be appreciated, therefore, if this office is supplied with the appropriate NR forms in duplicate from such of these areas as it is possible for Mr. Parker to obtain this information.

Warren S. Bourn.

WSB:efn

Easement Refuges in District No. 2 North Dakota.

Period- January, February, March and April 1944.

1. General.

1. Lake Ardoch Refuge.

- A. Weather Conditions. Some snow has been received during this period and rain but less than the normal amount of moisture has been received in this district during this period and the last five months of last calendar year. The water areas in this District No. 2 are lower at the end of April than they have been for a few years. Many of the wells are commencing to go dry and some people are having a difficult job getting enough water for their use and the needs of the stock animals. A few good rains would again furnish enough moisture for the crops and other uses. Up around Rock Lake Refuge and east in the Ardoch Locality, more snow was received during the winter (than around the other Refuges) and more water is in the soil and water areas. Below there has been given the weather information as has been furnished by the Devils Lake Federal Weather Bureau:

	Snowfall	Precipitation	Max. Temp.	Minimum Temp.	Normal Precip.	Plus or Minus Precipitation.
January	1.5	.12	48	-14	.47	-.35
February	1.5	.12	33	-26	.50	-.38
March	13.4	.98	46	-12	.78	+.20
April	trace	.72	69	-2	1.52	-.80
		1.94			3.27	-1.33

- B. Water Conditions. Patrolman Torkildson was working on control gates and do other work in buildings from Mar. 23 to 31st. I inspected the area on April 13th. in evening and on morning of 14th. of April. In the morning the gage reading was 8.10. This level is about 1' below spillway level with both gates open. The water has not flowed over the spillway this spring. There is much less moisture draining into Ardoch Lake this run-off period than there was last spring. The level was at flood height last spring. The run-off was very light this spring as compared with the past few years.

11. Wildlife.

A. Migratory Birds.1. Population and Behavior.

a. It is estimated that 3000 ducks (about half pintails and the other half mallards), 100 swan, 200 blue geese, 200 snow geese and 50 Canada geese were using the area when the last inspection was made. The waterfowl were feeding mainly though on the flat flooded land just east of the dam. This low land was flooded to a depth of about 1 foot.

b. In this locality, most of the water areas were still frozen over. This is a late spring. There is not much open water for the waterfowl to rest on and feed in. It is believed that the most of the birds are

are yet to come from the south to use this area. The ducks and geese were feeding in the local stubble fields.

2. Food and Cover. The food and cover are about the same as they were last fall. Of course they are feeding in the water where the land has ~~been~~ ^{just} flooded ~~it~~ this spring. They get in the shelter of the higher land or dam according to the way the wind is from.

B. Upland Game Birds. No upland game birds were seen on or around the refuge this spring. It is supposed that these birds (pheasants and Hungarian Partridge) were staying in the brush in the locality. We will keep a close watch for these birds on the next inspection trips. Of course, some of the birds could have been lost since there was some cold and snowy weather received in this locality in February and March.

C. Fur Animals, Predators, Rodents and other Mammals. It is believed that the muskrat population has increased or that there are about 100 of these animals living on the area now. One medium sized beaver was seen swimming in the water and then up on the dam near the control gates. It was believed that he was eating prairie bulrush bulbs. No other animals were seen on the area.

D. Fish. It is supposed that number of bullheads, white buffalo and minnows coming up into lake from the Red River is about the same as during past springs. I saw no fish this time though.

111. Refuge Maintenance.

Patrolman Torkildson was to the Preserve from Mar. 23rd. to the 31st. cleaning the gates, painting them again, cleaning out the buildings and doing other jobs. It took longer to do the work since there was a snow storm during the period.

2. Billings Lake Refuge.

1. General

B. Water Conditions. This area was inspected on April 14th. The dam and spillway were in good condition. The water level was about 14" below the spillway level. It is believed that the water will raise some yet when the snow and ice melts farther to the north and the water runs down into the water area. The snow fall seems to have been light in this locality during the winter.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. The water was open about 10 feet along the east and west sides and on south end near the dam. There were about 6 pintails, 8 mallards and 16 California gulls on the water area when the inspection was made. A few crows were flying and walking along the shore.

2. Food and Cover. There were the old submerged aquatics where the water was open that would furnish some food and the grain that could be picked up in the stubble fields.

The cover is good of a heavy growth of high weeds and grass on the west side and north end. They brake the winds from those directions and furnish nesting shelter and etc.

B. Upland Game Birds. No upland game birds were seen on this spection trip on the Refuge. It is believed from the reports of people living near by that there are now about 100 partridge and possibly a few grouse that are using the area. We will watch out closely for these birds in the future.

C. Fur Animals, Predators, Rodents and other Mammals. No animals were seen on the area except a few Richardson ground squirrels. Poisoned oats were put out for these animals on and near the dam where every there were signs of them. Some trapping was done on the Refuge during the winter and a few rats were taken.

3. Buffalo Lake Refuge.

1. General.

B. Water Conditions. This area was inspected on April 12th. The water level was about 1' foot below the outlet spillway or the same as it was last fall. The run-off was very light on this Refuge. Most of the area was still covered with ice.

11. Wildlife.

1. Population and Behavior. About 100 mallards and 50 pintails were seen on the water area near the dam on the south end and around the spring hole on the north end near the highway. No other waterfowl had yet arrived up until the time this inspection was made.

2. Food and Cover. There are some of last years aquatic growth in the open water that will furnish some food and there is some grain still in the stubble fields. The cover on this water area, that is in the water and along the shores is poor except on the north end where it is good around the spring.

B. Upland Game Birds. About 6 Hungarian Partridge and 10 Chinese Pheasants were seen on the Refuge. It is estimated that there are about 100 pheasants and 200 Partridge on the area at the end of this period.

The food for these birds is fair on the north side of the Refuge where there are grain fields and some land that is not farmed. On north side where the land is not farmed, there is some rough hilly land and brush that furnishes good shelter. The rest of the area is closely pastured or farmed and does not furnish much shelter.

111. Refuge Maintenance.

The cabin was swept out when the inspection was made. The grass was cut short late last summer and a strip made black around the cabin. All is in good shape around the building. This work of keeping the strip black and grass cut will be ~~be~~ done again this summer along with the other necessary work.

4. Brumba Lake Refuge.

1 General.

- B. Water Conditions. This Refuge was inspected on April 22, 1944. The spillway was in good shape. It was sunken down about 4" where stock had used to walk across but it was still in good shape as far as the use it was needed for. The water was running over the spillway to a depth of about $1\frac{1}{2}$ " for a width of about 3'.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. There were about 30 mallards and 40 pintails on the Refuge when it was inspected. Ice still covers most of the water area except along the shore. Some birds will stop to nest along the shore of this area a little later but the birds moving northward now seem to want to keep on moving northward.

2. Food and Cover. There are some of the submerged aquatics in the open water that are furnishing some food. There is also grain in the stubble fields of the mallards and pintails.

The land on the sides of this narrow lake furnish shelter since the land is higher than the water by about 2' or more. There is also high grass along the east and west sides of the lake that furnishes some cover.

- B. Upland Game Birds. No upland game birds were seen on this area when the inspection was made. It is estimated that there are at least 100 Hungarian Partridge that are now using the area more or less. The shelter and food is just fair for these birds.

- C. Fur Bearing Animals, Predators, rodents and other Mammals. There are a few muskrats, about 2 mink and 6 badgers using this area it is estimated by the signs. No animals were seen on this inspection trip.

5. Johnson Lake Refuge.

1 General.

- B. Water Conditions. This Refuge was inspected on April 17, 1944. The water level was about the same as it was last fall but it is lower than it was a year ago. It is believed that most of the water area is covered with water to a depth of about 5'. This water area is holding up well but there must be a good supply of moisture this summer or the level of the water is bound to go down. This is a very good water area.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. As near as could be decided by checking over the birds on Apr. 17th., there were 50 mallards, 50 pintails and

40 California Gulls on the water area. Of course, much of the area was still covered with ice. There were more waterfowl along the shore at other places we are sure where the observer could not see. The migration had just gotten well started on April 17th. As a rule, several hundred of geese use this Refuge of a spring and fall.

Of course, the most of the ducks fly on northward to nest but many hundreds of young ducks are raised on this water area each year when it is well filled with water.

2. Food and Cover. The food and cover at the end of this period is the same as it was last fall. There is a good supply of submerged aquatics in the water and grain in the near by stubble fields. The ice has pushed down most of the plants that were growing out in the water but they will soon be up again. There is good shelter along the shore line of most of the water area.

B. Upland Game Birds.

1. Population and Behavior. 4 pheasants and 23 sharp-tail grouse were seen when the inspection was made. It is believed that there are at least 50 pheasants, 100 sharp-tail grouse, 30 pinnated grouse and 150 Hungarian Partridge that are using the Refuge more or less now. Much of the land around this water area is hilly and rough. The upland game birds move around a reasonable amount and use the hills as well as the lower land according to the weather, food supply and the water supply.

C. Big Game Animals. There are a few white-tail deer that are still using this Refuge. None of the animals were seen this trip but it is believed that they are doing well.

D. Fur Bearing Animals, Predators, rodents and other Mammals. Some trapping was done on this Refuge during the N. Dak. open trapping season last winter. It is not known just how many animals were taken but it is believed that the number of foxes has been lessened enough so less damage will be done to game birds and domestic fowls. It is believed that there are still a fair number of muskrats left on the Refuge at the end of April 1944.

Note: The grass was cut in the yard around the cabin last fall. Also, a strip was made black about 2' wide around the cabin and toilet. But the buildings could have been damaged by fire. There had been a real prairie and stubble fire that burned up to about 1/8 of a mile from the cabin on the south before it had been put out.

6 Kellys Slough Refuge.

1 General.

B... Water Conditions. This area was inspected on April 13, 1944. The water was flowing over the spillway (about 2/3 of it) to a depth of about 1 1/2". This water area is kept up during the times when little rain or snow is received by springs. The water level stays about at the same level the year around except when the ice retards the flowing of the springs. The dam and spillway were in good shape.

11 Wildlife

A. Migratory Birds.

1. Population and Behavior. About 40 pintails were seen flying around over the area but no waterfowl were seen on the water or land. Of course a little later more birds (about 3000 ducks, 300 Canada geese, 5,000 snow and blue geese and 400 swan) will use the refuge mainly as a stopping place. Much of the low land to the east and below the dam was covered with water to a depth of about a foot. A number of flocks of pintails and mallards were resting and feeding there below the dam.

B. Upland Game Birds. No upland game birds were seen on the Refuge when the inspection was made. There ^{are} a few Chinese Pheasants and about 50 Hungarian Partridge on the Refuge now it is estimated.

The birds have to depend on the grain that they can get out of the fields for food during the colder part of the year. Of course when the weather is warm, there are the usual insects that they feed on to a great extent. They find some cover along the fence rows and the rest of it is composed of the high grass on the low land, some brush and a few patches of small trees.

C. Fur Animals. Muskrats seemed to be quite numerous last fall but none were seen when the area was inspected and but few signs of them were noticed. It is believed that many of the rats move to other areas as winter comes on due to the shortage of food. Some trapping was done on the area under permit last winter but it is not known just what furs were taken.

7. Lac Aux Mortes Refuge.

1. General.

B. Water Conditions. This area was inspected on April 22, 1944. Water level was about 16" below the spillway level. The snow fall was light in this locality and not so much moisture was available to fill up the lake. There was about half the amount of water running into the lake that was running into the lake during the main part of the run-off period last spring. Some rain will be needed to fill this lake up to spillway level this spring it is believed.

A. Migratory Birds.

11. Wildlife.

1. Population and Behavior. When the inspection was made, there were on the Refuge about 2000 pintails, 2000 mallards, 2500 blue geese and 2500 snow geese. Just $\frac{1}{2}$ mile to the west of the Refuge on Lake Irwin, there were approximately 2500 snow geese and 2500 blue geese

The geese do not stay and nest in this locality but move on northward as it becomes warmer. A large number of the ducks and gulls nest on and around the water area though as has been reported in the past. Besides the birds mentioned there were noticed a few coots, 1 pair of baldpates, 1 pair of blue-winged teal and 3 ruddy ducks. As far as we know, only the Franklin Gulls nest on this area.

2, Food and Cover. This spring there is the same or about the same foods available that there were late last fall. As the ice thaws out, there are the submerged aquatics (that were listed in the past) that will furnish food and the grain in the stubble fields.

Also, the cover on this area for waterfowl is about the same as it was last fall. The ice will take some of the plants like phragmites, cattails and other plants down but it is believed that areas of them will stand to furnish cover. There is also fair cover of the old plants along the shore line.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen when the inspection was made. It is estimated that there are left on the area at the close of April, 150 pheasants and 200 partridge. We have seen many pheasants on this area in the past and it is a good area for partridge. The past winter was very mild and if there is a good summer for raising young birds, there should be a record hatch of upland game birds in this District No. 2. When warm weather comes many of the birds that have stayed much of the winter on the Refuge, move out on to other land where there is less shelter.

2. Food and Cover. There is plenty of available food on this area for the upland game birds the year around except during the winter when the snow is deep. The cover is also good of the lake banks or higher land surrounding the lake most of places, some brush and high grass.

C. Fur Animals, Predators, Rodents and other Mammals. Permits were issued to three trappers. They did not report to me how many furs were taken as was requested but we are sure that about 300 muskrats were taken and some other animals. The foxes have been scattered out due to the ice melting on the lake and some of them have been trapped. They will not be apt to be quite so numerous this fall since people understand them more and will try to keep their numbers down. Poisoned oats were put out around the government buildings for the Richardson Ground Squirrels.

111. Refuge Maintenance.

No maintenance work has been done on the area during the past period. The spillway was inspected and also the buildings and all found to be in good shape. Some work will be done on and around the buildings this summer as we get time to do it.

8. Lambs Lake Refuge.

1 General.

B. Water Conditions. This area was inspected April 13th. The water level was about 16" below the top of the spillway. The dam and spillway were in good shape. Poisoned oats were carefully put out on and around the dam and spillway where there were signs of squirrels and mice. There are badgers in this locality and they will be apt to dig more holds. They will be watched carefully and filled up on the next inspection trip.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. About 6 mallards, 10 pintails and 20 California Gulls were on the open water along the shore and the ice when the inspection was made. Most of the area was still covered with ice (the water area). It is estimated that about 3000 ducks will use this area as a stopping place and move on northward and 300 geese. The blue and snow geese use this water area as a stopping place mainly. About 50 mallards, 50 pintails, some blue-winged teal and a few green-winged teal will nest around this water area and then bring there young to the water when they have hatched.

2. Food and Cover. There is a small amount of plant food in the water area for the birds to feed on, some stickle back minnows and the stubble fields with grain in them. There will be plenty of insect life on and in the water as it warms up and the young birds are hatched out and ready for the food. The cover is fair on the north end of round stem bulrushes mainly.

B. Upland Game Birds.

1 Population and Behavior. It has been estimated that there are 12 pair of Hungarian Partridge on the Refuge at the end of April that are nesting or getting ready to nest. When fall and cold weather comes, it is believed that many of the birds move to some near by patches of timber or rougher land for shelter and food.

C. Fur Animals, Predators, Rodents and other Animals. There are a few badgers that use the land area, possibly a few skunks and a few Richardson Ground Squirrels. A permit was issued for trapping to be done on the area during the open season. It is not known just what animals were taken.

111 Refuge Maintenance.

Some badger holes were filled up on the dam, poisoned oats put out for the squirrels and signs checked. They were all left in good shape.

9. Little Goose.

1 General.

B. Water Conditions. This area was inspected on April 13, 1944. The water was at spillway level when the inspection was made. There was but very little water running out of the lake though. This water area will be apt to hold up well for some time even though we do not get much rain since the water is rather deep.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. When the inspection was made, there were

10 mallards and 8 pintails on the water and 20 Canada Geese flew up off of the water. About 400 Canada Geese, 600 blue geese, 600 snow geese, 1500 mallards, 1500 pintails and 1000 scaup use this *area* of a spring but most of them move on northward to nest. A few mallards, pintails and some blue-winged teal will remain to nest around the water area and then raise there young on the water.

2. Food and Cover. There is but little food in the water for the birds except on the north end where the waterfowl stay mainly when they are on the water area. On the north end of the water area there are a few acres of shelter of high grass where the land is not pastured. Most of the area is over pastured.

111 Refuge Maintenance.

The dam and spillway were inspected and were left in good shape. Poisoned oats were put out on and around the dam where ever there were any signs of squirrels. Much care was taken when the oats were put out so no stock would be harmed.

10. Minnewastena.

1. General.

A. Water Conditions. This area was checked over on April 19, 1944 as well as a number of other times during the period. The water level is about a foot lower this spring than it was last spring it is believed. We have had very little rain and a very light snow fall was received last winter.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. Of a spring about 300 scaup, 100 mallards, 100 pintails, a few blue-winged teal and some golden-eyes use this area. A few golden-eyes nest in the hollow trees around this small lake. The other birds move on to other areas to nest.

2. Food and Cover. This small lake has the same food in it this spring that was there last fall. There are the submerged aquatics and some soft shelled snails. There is no cover around this area that the birds can use.

B. Upland Game Birds.

1. Population and Behavior. It is estimated that about 12 pair of Chinese Pheasants will nest along the outside of this area. There is some open land around the outside where these birds go for food much of the time. No other upland game birds are on the area now it is believed. About 30 sharp-tailed grouse used it some for feeding on buds during last winter.

2. Food and Cover. There is no food on the area except berries and

insects and that is during the warm weather. The cover is good of brush, high grass and on the north end there is some phragmites.

11. Pleasant Lake Refuge.

1 General.

- B. Water Conditions. This area was inspected on April 12th. The water level was about 18" below the small spillway. The low place or channel from the lake to the spillway had water in it to the base of this spillway. This is the highest that we have known this water level to be. The springs must have furnished more water than usual. Most of the water area was still covered with ice.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. About 40 mallard ducks were seen along the edge of the water. Comparing the use of this water area by the birds with that of other years, it is believed that about 3000 mallards, 3000 pintails, 1000 scaup (lesser), 1000 blue geese, 1000 snow geese and 500 Canada Geese will use it on the northward flight this spring. Swan ~~are~~ often stop on this water area. About 20 pair of pintails and the same of mallards stop to nest around this water area.

2. Food and Cover. There is some food out in this water area but it is not believed there is very much since the low place was a closely pastured area for a number of years. The birds have to feed in the near by grain fields much and other water areas. There is a heavy growth of high grass, some cattails and other plants that are standing out in the water area that will furnish shelter and possibly a little food.

B. Upland Game Birds.

1. Population and Behavior. When this area was inspected, the main part of it was drove around. 11 Cock Chinese Pheasants were seen. It is believed that at least 20 pheasant hens will be nesting on this Refuge. It is estimated that about 15 pair of Hungarian Partridge will nest on the area this spring and summer.

2. Food and Cover. There are the grain fields that furnish food for the birds and many of them feed right up around the farm buildings. The shelter is good of brush, high grass and some rough land.

12. Prairie Lake Refuge.

1 General.

- B. Water Conditions. This area was inspected on April 13th. The water level was about 2' below the top of the spillway. This area will go dry this summer unless there is much moisture received in this immediate locality. The dam and spillway were in good shape.

11. Wildlife.

1. Population and Behavior. The water area of about 5 acres was free of ice. No waterfowl were seen on the ~~ice~~^{area}. A few ducks use it as a resting place on their northward flight of a spring but few of them will nest around it and raise their young if the dry weather continues since it will go dry.

2. Food and Cover. There are some of the last years old pondweeds in the water that will furnish some food and the mallards and pintails can feed in the near by stubble fields. This little Refuge helps the Waterfowl when there is plenty of rain and the water is spread out over a much larger area but when it is dry and the level is low, it is of little value to the birds that it is intended to be a help to.

111. Refuge Maintenance.

The dam, spillway and signs were left in good shape. Poisoned oats were put out on the dam where there were signs of mice and squirrels working in the grass.

13. Rose Lake Refuge.

1 General.

B. Water Conditions. This area was inspected on April 13th. The water level was about 18" below the spillway level. The dam and spillway were in good shape. The water above this dam is rather deep and it should not go down much if the dry weather does not continue too long.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. No waterfowl were in sight on the Refuge when the inspection was made. Several hundred ducks will stop on the lake this spring when they are on their northward flight and also about 300 blue and snow geese. Canada Geese do not stop on this area much. As a rule about 20 pair of mallards and 20 pair of pintails nest in the high grass around the lake.

2. Food and Cover. The food and cover are just the same this spring as they were last fall. The submerged aquatics will furnish a fair amount of food and then there are the stubble fields where some grain can be found. Of course as the water becomes warm, there will be a good supply of insect life in and around the water for especially the young birds.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen on this inspection trip. It is estimated that there are about 20 pheasants and 50 Hungarian Partridge on the Refuge at the end of April.

2. Food and Cover. There is a good supply of weed seeds and grain

on this area for these birds. When the young have been hatched, there will be a good supply of insects for them to feed on in the fields. The cover is good which is made of up of the hills or rough land, some brush and the high grass and weeds that covers much of the area immediately around the lake.

- C. Fur Bearing Animals, Predators, Rodents and other Mammals. No animals as are listed above were seen on the Refuge this spring. There are a few muskrats, skunk, weasels, mink and badgers on the area. A trapping permit was issued to a local man to trap on the Refuge last winter but it is not known what animals he was able to trap.

111 Refuge Maintenance.

The dam and spillway were inspected carefully and were left in good shape. Poisoned oats were put out for the Richardson Ground Squirrels that come on to the dam to dig holes. They usually come on to the dam later on in the summer more though.

14. Rock Lake Refuge.

1. General.

- B. Water Conditions. This Refuge was inspected on April 22nd. The dam was in good shape. The lake level was about 4" lower than it was a year ago (according to Mr. Rudolph I. Norheim who lives near the dam and the dam is on his land). No water has flowed out to the south over privately owned land for which there was much complaining the past two wet years. Mr. Norheim informed me that the water in the low places to the south of the lake on the privately owned land was there due to the winter snow melting and the run-off but not from Rock Lake. When the lake was higher the past two years and some water flooded privately owned land to the south, the channel through which the water did flow to the south has been filled up with manure during last winter and it should keep water from flowing to the south for some time.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. When the inspection was made, it has been estimated that there were 2000 mallards, 2000 pintails and 1000 ^{other} ducks on the lake. On the dam and just to the east of the dam it was estimated that there were 2500 blue geese, 2500 snow geese and 300 Canada Geese. Large numbers of mallards, pintails, some redheads, a few Canvasbacks, many ruddys and other ducks will nest on this area and around it. No reports have been received as to Canada Geese nesting on the area.

2. Food and Cover. There is a fair amount of food for the birds of the submerged aquatics, much insect life on the water and some in it and grain in the grain fields. There is not so much cover on the main part of the lake since the water is rather deep. There is good cover in the shallow water east of the dam and at places along the shore where the land is not pastured.

B. Upland Game Birds.

1. Population and Behavior. It is estimated that there were 50 Chinese Pheasants and 150 Hungarian Partridge on the Refuge this spring. The weather was mild and more of the birds come through the winter. This is a fair area for upland game birds. It would be a wonderful area for these birds if there was more cover and a good supply of winter food available.

2. Food and Cover. There is a good supply of available food for the birds of grain in the fields and insect life when the weather is warm. When the snows are deep in the winter time, most of the winter food is covered up.

The cover is fair of low banks around the lake, some brush, high grass and weeds in places. Also, some of the farmers are raising corn in this locality which helps out for winter food for the birds.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are many muskrats, some badgers and other animals on the area. Some permits were issued for trapping on this area last winter. One man informed me that he trapped 258 muskrats and 2 mink on the Refuge. I did not get to see the other trappers but it is believed that they also trapped a fair number of animals on the area since the prices for furs was very good.

III Refuge Maintenance.

No work was done on the area this period but the dam was carefully inspected and the low place to the south side of the lake on the north end where in the past some water has flowed out of the lake and flooded privately owned land to the south. This is a very good Refuge.

15. Snyder Lake Refuge.

B. Water Conditions. This area was inspected on April 22nd. The dam and spillway were in good shape. No holes of any kind were noticed on the dam or near it. The water level was about 8" below the spillway level. There was much ice on this water area yet.

A. Migratory Birds.

1. Population and Behavior. When the area was inspected there were 50 lesser scaup, 100 mallards, 100 pintails, 20 coots and 6 ruddys on the north end of the water area where the ice had disappeared. Even though this April 22, 1944 when the inspection of this area was made, the most of the geese and ducks ^{were} ~~were~~ still to come from the south. This spring is about 20 days later than most of our springs. It is estimated that at least 10,000 ducks of all kind will use this water area for a stopping and resting place on their way north this spring. About 200 mallards, 200 pintails, 20 ruddys, some redheads and canvas-backs will remain to nest on and around this water area this spring. This is a very good water area for the birds to use.

2. Food and Cover. There is a fair amount of aquatics growing in the

water (submerged) on the north end of the water area, other plants and the grain fields that furnish food for the waterfowl. The food supply is the same this spring as it was last fall. The cover is fair of some of last years cattails and other plants that grow in the water and the high grass, weeds and brush especially on the east side of the lake. The high shore lines also provide good shelter from the winds.

B. Upland Game Birds.

1. Population and Behavior. At the end of April it has been estimated that there were 50 chinese Pheasants and 100 Hungarian Partridge using the Refuge. If the hatching season is good, there should be a good crop of upland game birds on and around this Refuge this fall.

2. Food and Cover. The food is sufficient for the mature birds of grain and weed seeds this time of the year and there will be plenty of insect life for the young birds when they are hatched out. The cover is fair of high grass, weeds, some brush and the uneven land around the water area furnishes some cover from the winds.

C. Fur Bearing Animals, Predators and other Mammals. There were many muskrats, some mink and other animals on the north end of this Refuge especially last fall. There were a number of large rat houses and one mink was seen in the day time last fall and a large one again when the inspection was made. No trapping permits were issued for the trapping on this area since no one got permission from the land owners and sent them to Sullys Hill for trapping on the area. Last fall the matter of trapping was talked over with some of the local people and they were informed how to go about getting permits to do the trapping. It is supposed that there was too much work that had to be done in that locality during the trapping period. There are still some beaver on the south end of the lake. they do not seem to be doing very much damage to the trees on the south end of the water area as yet.

16. Sibley Lake Refuge.

B. Water Conditions. This area was inspected on April 17th. The water level was a little lower this spring than it was last fall. The ice was off of most of the water area. It is believed that it will go dry if much rain is not received this summer.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. When the inspection was made there were about 200 mallards and 200 pintails on the water area. The pintails and mallards arrive first as a rule in this locality. It is believed that about 5000 ducks and a few geese will use it this spring as a feeding and resting place. As the water level goes down, the birds are going to use the area less and less.

2. Food and Cover. As has been previously reported, it is believed that there is not much available food in this water area. The birds

use this area as a protected resting place and have to get their food out of other water areas or the fields. Old plants that are standing out in the water furnish some cover for the birds while in the water. On the north and west side of the water area there is some land that has grown up to weeds and there is brush that furnishes good cover.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen when the inspection was made. It is estimated that 20 ~~pair~~ ^{pair} of pheasants, and 40 Hungarian Partridge are using the area now. Sharp-tailed grouse use it some during the summer but it is believed they use it more during the winter for shelter and to feed some on the buds.

2. Food and Cover. There is a fair amount of food in the grain fields, the weed seeds on the old weeds on the north and west part of the water area and when the weather becomes warmer there will be a good supply of insect life.

17. Silver Lake Refuge.

1. General.

B. Water Conditions. This area was inspected on April 12th. There was no run-off in this area at all this spring. The water is a number of feet (about 5' to lake level) lower than the spillway level. It is believed that the water level of this lake will go down much this summer since it would take an extra amount of rain to raise the lake during the summer. To fill up this water area, it is necessary to have a good spring run-off.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. No waterfowl were seen on the area. The lake was mainly frozen over. A few thousand ducks will stop on this lake to rest while on their northward flight this spring it is believed. It is believed that about 1000 or a few more geese will use it some this spring. The birds do not use this water body much only as a resting place since there is not much available food in the water area for them.

2. Food and Cover. There are some submerged aquatics in the water of this Refuge but the waterfowl have to depend mainly on other water areas and the fields to furnish them with their food. There is a fair amount of cover on the north end of the lake where the shore line is not pastured much or none.

B. Upland Game Birds.

1. Population and Behavior. It is estimated that about 30 Chinese Pheasants and 80 partridge are using this Refuge as a nesting area at the end of April 1944. No birds were seen when the inspection was made.

2. Food and Cover. There is food in the fields for the birds and later on there will be plenty of insects for these birds if we receive a fair amount of moisture. There is only cover suitable for nesting birds on the north end of the lake. Of course as soon as the small grain crops get to be a few inches high they will also furnish cover.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are not very many animals as listed above on this whole area. A permit was issued for a man to trap on part of this area last winter and he just recently informed me that he has caught 9 foxes, 25 skunk, 2 badgers, 10 weasels, 1 mink and 6 muskrats. Some of the furs were trapped on land that was not part of the Refuge the trapper informed me. It will be a help to all of the game birds that the foxes were taken and also the skunk.

18. Woodlake Marsh.

1. General.

B. Water Conditions. This Refuge was inspected on April 17, 1944. The dam and spillway were in good shape. About 2" of ~~moisture~~^{water} were running over the spillway. The dam was carefully checked. Most of the water area was still frozen over. This area has been staying up to about the same level the year around.

11. Wildlife.

A. Migratory Waterfowl.

1. Population and Behavior. 18 mallards and 8 pintails were counted on the water area when the inspection was made. About 500 mallards, 500 pintails and 400 other ducks will use the water area to feed on when making their northward flight during April and early May. It is believed that not over about 10 pairs of mallards and the same of pintails with a few other ducks nest on this Refuge. The birds use it mainly as a resting place we have found.

2. Food and Cover. There is a good supply of submerged aquatics in the water and some grain can be found in the grain fields this time of the year. The cover is good all around the water area. This Refuge is rather small but it is a good Refuge, that is many birds use it during the year.

B. Upland Game Birds.

1. Population and Behavior. Three rooster pheasants were seen when the inspection was made. It is estimated that there are about 16 Chinese Pheasants and 10 pair of Hungarian Partridge on the Area now. Birds come on to this area some of a winter for shelter.

2. Food and Cover. There are the grain fields around the area especially to the north that will furnish some food and after a time there will be insects for food. There is a good supply of sweet clover and other weed seeds at places on the area also.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There were a fair number of muskrats on this water area and some other animals as were listed in the last narrative Report. A trapping permit was issued in the usual way to a local man to trap on the area but he has not informed me the animals taken. If possible, it is desirable to know and report the animals on each area but time is not available to find all of the trappers of a spring. Not many of them report the animals that they have taken. It is supposed that as a rule they forget to make the reports.

19. Stump Lake Refuge.

1. General.

B. Water Conditions. This water area was inspected on April 17, 1944. The water level seems to have stayed up well over winter, that is the level seems to be the same as it was last fall or a little higher. Of course, it is believed that much snow drifted into banks along the edge of the low area and helped to keep the level up. As has been reported, plants are growing in the water and it seems to be much fresher than it was a few years ago.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. When this area was inspected, there were about 300 ducks and 150 swan on the water area. These birds were feeding out in the water and seemed to be getting plenty of food the way they were working in the shallow water. Many birds use this area as a safe resting area and then they move on to other areas to nest. Not many ducks nest on this Refuge. Some cormorants and California Gulls nest on the north island. Geese use this area and the swan much of a spring and fall. Geese were heard on Refuge (behind the south island it is believed) but they were not in sight.

2. Food and Cover. The food this spring is just the same as it was late last fall of some prairie bulrush along the shore at places and some pond weeds that are out in the water. There seems to be quite a little of the submerged aquatics since the swan and geese feed on this water area much of a spring and fall. The number of swan in this District No. 2, N. Dak. are on the increase, that is the number that we see and use the water areas.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen on the Refuge when the inspection was made. It is estimated that about 12 Chinese Pheasants and 24 Hungarian Partridge are using the Refuge for a nesting area at the end of April. There may ~~also~~ be a few sharp-tail Grouse using the area also.

2. Food and Cover. The cover on this area (along the shore line) is good of silver berry brush, other brush, weeds, sweet clover and grasses. The insects are plentiful when it becomes warm. The birds also feed more or less on the near by grain fields.

In the past, this has been a very good waterfowl area. If plenty of moisture is received for a few years, the lake will keep raising in level and more and more birds will use it as more submerged aquatics grow in the water and the water becomes fresher.

Report completed
May 6, 1944.

Signed Wesley D. Parker
Refuge Manager.

W. D. Parker
5/11/44

Note: The weather has been dry in this District No. 2 since last July 12, 1943 when the last rain was received. We have had some rains since then but they were very light and soon evaporated or were used up by the plants. The snow was very light during last winter and there was little moisture in it.

In the sense of the word, Run-off as we understand it, there has been none in this District No. 2 this spring. The water level of the water on each area is given on each report for the separate areas. Most of the water areas each has a fair amount of moisture in them but much rain will be needed to keep them up.

Some of the Refuges in this District are small and do not amount to much for the use of the waterfowl but take the District as a whole, The federal Refuges furnish food and resting places for thousands of birds. Also, large numbers of the birds nest on these areas. It has been estimated that 350,000 ducks and 300,000 geese use this District during the spring migration. In the fall it has been estimated that 200,000 geese and 600,000 ducks use the Refuges in this District. For some cause we see fewer geese in the fall than in the spring.

No government employee lives on any of these Refuges. We inspect them and do the work that is required three times a year except where it is necessary to go to Ardoch due to floods like last summer and the botulism on Lac Aux Motes. NR-1 Forms are being furnished for the more important of these areas judged by the use the waterfowl make of them.

Much time has been taken to get the information for this report (19 Refuges) and it is as near correct as it is possible to make it by inspecting the areas about three times a year. We will be very glad to furnish other information if it can be secured and suggestions from the office will be heeded and kindly received.

Easement Refuges in District No. 2 North Dakota.

A Summary of the Fiscal Year's Activities and So Fourth,
Until April 30, 1944.

According to the Devils Lake Federal Weather Bureau, there has been received in the Devils Lake Locality during the last 10 months (July 1, 1943 to April 30, 1944), a total of 5.76". To have received the normal amount of moisture, there should have been received 12.42". For that period, this Devils Lake locality is short 6.66" of moisture. Some of that moisture evaporated and was used up by last years plants. If a number of good rains are received during the next three months, this locality will still be in fair condition as to moisture required.

More geese passed through this District this spring than for a great many years. Also a large number of ducks moved northward but they were not seen so much since they did much of their flying at night. It has been estimated that 350,000 ducks and 300,000 geese use the Refuges in this District No. 2 of a spring. In the fall it has been estimated that 200,000 geese and 600,000 ^{ducks} use the same areas. We do not see so many geese of a fall. They must move southward over other areas and many of them remain up north until it becomes very cold and then they never stop in this District No. 2.

During July, August and September there were 2,052 waterfowl, 16 shorebirds, 517 coots and 790 gulls picked up on the Lac Aux Mortes refuge and buried. They had died of botulism. Other water areas around this Refuge for about 10 miles around had more or less losses from the same cause during the same 3 months period. The botulism on and around Lac Aux Mortes Refuge was about the same during the summer of 1943 that it was during the summer before. Birds were not lost on any other Refuge in District No. 2 due to botulism during the same period as far as is known.

The upland game birds increased some on these areas last summer but not as much as during the summer of 1942. During the spring and summer up until after middle of July, the weather was too cold and wet for young birds to do well. For that reason only a comparatively few grew up. This same wet weather was the cause of fewer ducks being hatched out to grow to mature birds in this area.

Fur bearing animals have increased much on all favorable areas. Permits were issued to trap last winter where there were trappers that wanted to trap and there ~~were~~ were surplus animals that should be trapped.

The Refuges have all been checked three or more times, depending on the work to be done on each and etc. Ardoch Refuge and vicinity were flooded with much rain middle of July 1943 and water was above normal on this Refuge. Dams, spillways and buildings have all been inspected and are in good shape or are being put in good shape.

It still looks very promising for a big hatch of all game birds in this locality this summer. In order for the ducks to hatch and do well though, a fair amount of rain must be received during the next four months or large numbers of all of the water areas will dry up in District No. 2 and young ducks will be lost due to the lack of fresh water to live and grow on. A fair amount of rain will tide us over.

Signed

Wesley D. Parker

Refuge Manager.

MIGRATORY BIRDS

Refuge Lake Ardock Months of Jan. 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
Mallard	1500	4/13, '44									6000
Pintail	1500	"									6000
Blue-wing teal											500
Green-wing teal											100
Lesser Scaup											3000
Redhead											200
Baldpate											200
Cadwall											200
Ruddy											100
Unidentified ducks											6000
Hutchins Geese											1000
Snow	200	"									4000
Blue	200	"									4000
Canada	50	"									1000
Swan	100	"									500
Shore birds											4000
California Gulls											1000
Franklin Gulls											6000
Pellican											200
Cormorant											200
Coot											3000
Mask-crowned Night Heron	6	"									50

REMARKS: (Pertinent information not specifically requested) Estimates of the numbers of birds using the area during the period have been put in the right hand column. It is a very difficult job to estimate the birds that use this area since they stop on this refuge to feed a little and then move on northward. As a rule they do not stay long on this area since there is not much food in the water area but it is a safe resting place.

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 Lake Artoch Refuge Months of Jan. 1, to Apr. 30, 1944.

(1) Species	(2) Density	Acres per Bird	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat		Number broods obs'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	2 sections, farm, brush & pasture	213				0	No pheasants have been seen on the area during the period.
Hungarian Partridge	" " "	13 approx.				100	It has been estimated that at the end of April, that there were 100 partridge using this area.
Sharp-tail grouse.	" " "	43 " "				20	There is a fair number of grouse that use this area.

43
30/1 2 80
1 2 0
80

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 Lake Ardach RefugeApril 30, 1944

(1) Species	(2) Density	(3) Removals	(4) Disposition of Fur										(5) Total Popula- tion	
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
								Permit Number	Trappers' Share	Refuge Share				
Muskrate	1/2 a mile of north shore line													100
Skunks- striped	2 sections of brush,	128												10
Richardson ground squirrel	farm land & lake shore.													100
Mink	" " " "	13												8
Beaver	" " " "	213												4
They use the shore line of lake where there is 270 brush and trees. A permit was issued to one trapper and he trapped: 1 skunk 1 mink														

REMARKS: All of the land is used by the land owners and it is not believed that there are many more animals using the area than have been listed. One beaver was seen near the control gates eating bulrush bulbs it is supposed. The beaver come from Forest River on the north and possibly at times they come up from the Red River.

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.

MIGRATORY BIRDS

Refuge Billings Lake Months of Jan. to Apr. 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
Mallards	8	4/14, '44.									1000
Pintail	6										1500
Blue-wing-teal											200
Green-wing teal											100
Lesser Scaup											300
Redhead											50
Baldpate											200
Gadwall											100
Ruddy											200
Other ducks											2000
Snow geese											2000
Blue geese											2000
Canada "											1000
Swan											200
Shore birds											5000
Franklin gulls											2000
California Gulls	16	"									2000
Pelicans											1000
Cormorants											100
Coots											2000
Hutchins geese											200
Black crowned night heron											

REMARKS: (Pertinent information not specifically requested) This water area was later opening up- that is the basin filling with water and the ice melting or breaking up and moving down the river- and accordingly not so many birds used it during the period as have used it at times in the past.

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.

Months of Jan. 1 to Apr. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	There is about 3/4 of a section of open farm land mainly.	9							50	When the inspection was made, no birds were seen. It has been estimated that at the end of the period there were 50 partridge on the Refuge.

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 Billings LakeApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Richardson Ground squirrel	About 500 acres of pasture and farm land	5												100
White-tail jack rabbit.	" " " "	50												10
Muskrats	Use of the about 100 acres of water area	1												100
Badgers.	500 Acres of farm land.	100												5
Paul Thompson, Lema, W. Dak. trapped on this Refuge under a permit.				10										10 muskrats only were trapped.

REMARKS: If enough rain is received this year to keep up the level of the water area, the number of muskrats should increase some. Since most of this area is farmed or pastured, the other animals will increase but little or none.

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.

MIGRATORY BIRDS

Refuge Buffalo Lake Months of March, 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
Mallard	100	4/12.	'44.								6000
Pintail	50										5000
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											6000
Redheads											300
Baldpates											200
Catwall											200
Ruddy											100
Other ducks											6000
Hutchins Geese											300
Snow "											10000
Blue "											10000
Canada "											2000
Swan											300
Shore birds											6000
California Gulls											2000
Franklin Gulls											4000
Pelicans											200
Cormorants											300
Coots.											6000

REMARKS: (Pertinent information not specifically requested) Most of the birds listed above used the area during the last few days of April. The stopping period by most of the birds on this area this spring was later than usual since the ice was still covering most of the area on April 12th. Many ducks nest on and around this water area. The other birds use it only as a resting place and then move on northward.

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 Buffalo Lake Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	1200 acres brush and cultivated farm & pasture land.	12							100	The upland game birds are on the increase on this Refuge. It is believe that if anything they have been slightly under estimated rather than over estimated . Of coures the mild winter that has just passed has had much to do with the increase in the number of birds.
Hungarian Partridge	" "	8							150	
Sharp-tail grouse	" "	15							75	
Pinnated Grouse	" "	40							30	

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 Buffalo Lake Refuge April 30, 1944

(1) Species	(2) Density	(3) Removals						(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Striped skunk	1200 acres brush, farm & pasture land	50													24
Red Foxes	" " "	300													4
Weasel- short-tail	" " "	100													12
Jack-rabbits- white tail.	" " "	60													20
Richardson Ground Squirrel.	" " "	12													100
Muskrate	They use about 40 acres of the shallow water area on north end of Refuge.														200
No trapping was done on this Refuge during the past trapping open season.															

REMARKS: From all indications, the only animals that are increasing much are the muskrats. It may be that we can get some person to trap on this area next winter.

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.

MIGRATORY BIRDS

Refuge Bronck Lake Refuge Months of Jan. 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
Mallards	30	4/22, 1944.									2000
Pintails	40										2000
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											1000
Redhead											200
Baldpate											100
Oldsquaw											100
Buddy											100
Shoveller											50
Unidentified ducks											1000
Mitchins geese											
Snow "											
Blue "											
Canada "											
Swan											
Shore birds											
California gulls											
Franklin gulls											
Pelicans											
Cormorant											
Coots.											1500

REMARKS: (Pertinent information not specifically requested) Far as we know at this time, the geese do not use this area much. We do not know much about this area since it was just placed in District No. 2 last fall. It / S it meant that we do not know just how much the waterfowl make use of it. We will have to study it more for another spring and fall.

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 Bumala Lake Refuge Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	About 1320 Acres pasture, grass and farm land.	13 Approx.							100	No Chinese pheasants were seen on the area when the last inspection was made and for that reason, none have been listed in this report. This is mainly open land except for the land that is a little higher (about 4 to 5 feet) than the rest of the land and the heavy growth of grass and woods, there is no shelter.

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 Drum Lake RefugeApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	1320 A. farm land, pasture and grass.	220													0
Wink	" " "	660													2
Weasels- short tail	" " "	220													0
Muskrats	About 50 acres of the water area.														150
Badgers	1320 A. of the farm land, pasture & grass.	220													0

REMARKS: No trapping was done on this area last winter since there was ^{no} trapper that wanted to trap there. The animals should increase more this summer with a fair amount of rain. We will try to locate some one that wants to trap there.

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.

MIGRATORY BIRDS

Refuge Johnson Lake Refuge Months of Jan. 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
Mallards	50	4/17, '44									5000
Pintail	50	"									5000
Blue-wing teal											1000
Green-wing teal											200
Lesser Scaup											4000
Redhead											200
Baldpate											1000
Gadwall											1000
Ruddy											400
Shoveller											150
Unidentified ducks											4000
Rutchinn Geese											500
Snow "											6000
Blue "											6000
Canada "											2000
Swan											300
Shore birds											5000
California Gulls	40	"									2000
Franklin "											2000
Pelican											500
Cormorants											100
Coots											1500

REMARKS: (Pertinent information not specifically requested) It is a difficult job to estimate for this report the number of waterfowl that have used the area during April since only part of the waterfowl arrived during this report period. Large numbers of them arrived during May due to the late spring and the ice disappearing. Many ducks stop and nest on this area but most of the other waterfowl move on northward for their nesting.

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 Johnson Lake Refuge Months of Jan. 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'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 300 acres fern, grass and brush land.	16				50
Hungarian Partridge	" " "	5				150
Sharp-tail grouse	" " "	8				100
Pinnated grouse	" " "	25 Approx.				30

All of the upland game birds listed do not stay on the Refuge all of the time. They use other areas next to the protected area and nest where ever it seems best. This is a good upland game area.

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 Johnson Lake Refuge April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	Approx 800 acres farm, hilly pasture and grass land.	80													10
Weasel- short tail	" " "	80													10
Mink	" " "	200													4
Red Fox	" " "	200													4
Richardson Ground Squirrel	" " "	8													100
Badger	" " "	200													4
Muskrats	These animals use the islands & lake shore line.														200
Permits were issued for 5 men to trap on this area. After writing to all of the trappers and waiting some time only 4 reported the number of animals taken. The four trappers reported that they trapped the animals as shown below: 7 skunk 2 weasels 123 muskrats.															

REMARKS: With favorable weather, all of the animals listed above should increase during the this summer period and especially the muskrats. The water is comparatively fresh, there is a fair amount of plant food in the water and the water area should be very suitable for the muskrats to increase much on.

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.

MIGRATORY BIRDS

Refuge Kellys Slough Refuge Months of Jan. 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
Mallard	40	4/13, '44									1000
Pintail											1000
Blue-wing teal											
Green-wing teal											
Lesser Scaup											500
Redhead											100
Baldpate											
Osprey											
Ruddy											
Unidentified ducks											400
Mitchins Geese											100
Snow "											2500
Blue "											2500
Canada "											300
Swan											400
Shore birds											2000
California Gulls											1000
Franklin Gulls											1000
Pelican											100
Cormorants											50
Coots											200

REMARKS: (Pertinent information not specifically requested) The ice covered much of this water area when it was inspected and not so many waterfowl were seen on it for that reason. This water area has a fair amount of salt in it and not so much food. The birds use it mainly as a resting place of a spring and fall.

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 Kellys Slough RefugeMonths of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 1500 acres farm, pasture & brush land.	75							20	
Hungarian Partridge	" " "	30							50	There are a few upland game birds on this area as have been estimated. They do not seem to increase much though. The cold winters with much snow keeps the numbers down. Also, each of the farm homes have some cats and dogs that take a toll of the birds.

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 Kellys Slough Refuge.April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	1500 A. Approx of farm, brush & grass land.	150													10
Weasel-short tail	" " "	100													15
Mink	" " "	250													8
Red Fox	" " "	750													2
Richardson Ground Squirrel	" " "	15													100
Raccoons.	" " "	375													4
Badger	" " "	375													4
Muskrate	The muskrats use about 1 1/2 miles of the shore line of the lake.														200
The animals listed below were trapped under permit on this Refuge:															
9 mink															
3 weasels															
5 skunk															
2 rats.															

REMARKS: Some of the animals listed above are going to increase very much more than the estimated numbers that have been listed it is believed since there is not a large supply of foxes for them and the farm dogs take some of them each year. Raccoon tracks have been noticed along the shore of the lake.

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 unprimness 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.

MIGRATORY BIRDS

Refuge Los Ann Mortos Months of Jan. 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
Mallard	2000	4/22	5/2	8000	5/2						18000
Pintail	2000	"		8000							18000
Blue-wing teal											1800
Green-wing teal											500
Lesser Scaup				8000							18000
Redhead											1200
Maldpate											1000
Cadwall											1000
Buddy				1000							1000
Unidentified ducks				5000							20000
Butchins geese				2000							8000
Snow "	2500	"		25000							100000
Blue "	2500	"		25000							100000
Canada "				300							10000
Swan				1000							2000
Shore birds											10000
California Gulls											8000
Franklin gulls											20000
Falliean											2000
Cormorants											500
Coots				500							8000
Black-crowned night heron.											100

REMARKS: (Pertinent information not specifically requested) The most geese used this area at the end of April and first part of May that have used it during the last four years. The ducks were also very plentiful but they were more scattered out than the geese. More swan were using this area than usually use it.

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 Las Lun Mortes Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	1500 acres farm, lake shore & brush land.	10							150	The upland game birds should increase much in numbers this summer if there is a good hatching period since there is a fair number of green birds on this area as well as on most of the other Esmeralda Refuges in District No. 2.
Hungarian Partridge	" " "	7½							200	

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 Les Aux HerbesApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	About 1500 acres farm, pasture & lake shore land.	100													15
Weasel-short-tail	" " "	100													15
Mink	" " "	214													7
Red Fox	" " "	750													2
Richardson Ground Squirrel	" " "	15													100
Badger	" " "	150													10
Muskrat	They use the lake shore of water area & the islands.														300
Permits were issued for two men to trap on this area and according to their reports that have just been received, they both to-gether trapped the fur bearing animals as listed below: 596 muskrats. 47 skunk. 6 foxes. 5 badgers.															

REMARKS: The numbers of animals on the Refuge as of April 30, 1944 have been estimated as carefully as possible. Just a very few years ago, this area was dry and there were no muskrats on it at all. They have increased much during the last two summer especially. All of the animals will increase and especially the muskrats if the weather is favorable for their growth and we get a fair amount of rain.

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.

MIGRATORY BIRDS

Refuge Lambs Lake Refuge Months of Jan. 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
Mallard	6	4/13, '44									700
Pintail	10	"									700
Blue-wing teal											100
Green-wing teal											100
Lesser Scaup											700
Redhead											50
Baldpate											50
Cadwall											50
Ruddy											100
Unidentified ducks											350
Shoveller											100
Hutchins geese											
Snow "											100
Blue "											100
Canada "											100
Swan											
Shore birds											200
California Gulls	20	"									400
Franklin gulls											500
Pelican											
Cormorants											
Geese											500

REMARKS: (Pertinent information not specifically requested) This water area is rather small and most of it is not very deep and there is but little food in it for the waterfowl. They use it as a resting place mainly.

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 Lambda Lake RefugeMonths of Jan. 1, to April 30, 1944.

(1) Species	(2) Density	Acres per Bird	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat		Number broods obs'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	800 acres pasture and farm land.	16				50	This is a rather small area of open prairie farm land. There is but little shelter on it except the high grass and woods in places.

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 Lanka Lake Refuge April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunks - striped	800 acres pasture, farm & hay land.	200													4
Badger	" " "	100													8
Richardson Ground Squirrels	" " "	16													50
Fox (red)	" " "	400													2
A permit was issued for one man to trap on this area. He was not able to trap any animals from the Refuge but he did trap 11 foxes just outside the Refuge. It is a sure thing that some of the foxes used the Refuge more or less.															

REMARKS: This Refuge is made up of an area of water with open prairie land around it. The few animals will not increase much since the farm dogs will keep them down and there is not so much cover for them.

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.

MIGRATORY BIRDS

Refuge Little Goose Months of Jan. 1, to Apr. 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
Mallard	10	4/13, '44									1500
Pintail	8	"									1500
Blue-wing teal											
Green-wing teal											
Lesser Scaup											1000
Redhead											100
Baldpate											
Cadwall											
Ruddy											50
Unidentified ducks											1000
Hutchins Geese											100
Snow "											500
Blue "											500
Canada "	20	"									400
Swan											100
Shore birds											200
California Gulls											100
Franklin Gulls											5000
Pellican											200
Cormorants											
Coots											500

REMARKS: (Pertinent information not specifically requested) Not so many birds use this area except for a resting place on their migrations. The lake is rather small and most of it ^{1/2} of water that is from 6 to 15' deep. There is some cover on north west end of water area.

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 Little Goose Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
	Approximately 300 acres of closely matured land.									No upland game birds are being listed as using this area since none have been seen on it at any time since recently.

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 Little GooseApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Wink	300 acres hilly pasture land.	150												2
Badgers	" " "	30												10
Richardson Ground Squirrel.	" " "	2												150
No trapping was done on this area.														

REMARKS: There are not so many badgers on the area it is believed but they do dig numerous holes and some of them are on the dam. We fill up the holes on the dam each time that the area is inspected. Of course the badgers as a rule make holes to dig out the squirrels. Poisoned cats is put out in and around the squirrel holes when visits are made to the area.

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 unprimness 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.

MIGRATORY BIRDS

Refuge Minnow-stone Months of Jan. 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
Mallards Pintail Lesser Scaup Golden-eye (American)											100 100 300 20

REMARKS: (Pertinent information not specifically requested) No birds were seen on the small lake when it was inspected. A few birds use this area of a spring and fall. Only a few of the golden-eyes nest in hollow trees around this small body of water. The most of the water area is from a few feet to 15' deep and there is but little food for birds except those that dive.

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 Minnesota Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 150 Acres of brush, grass and timbered land.	6 Approx.							24	The pheasants nest around the outside of the area and feed much in the cultivated places outside the Refuge. A few of the sharp-tail grouse come into the area during bad winter weather to feed on dried berries and buds. They nest outside on the prairie during the summer time.
Sharp-tail grouse	" " "	5							30	

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 Minnesota April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	Approx. 150 acres brush, grass & timbered land.	75													2
Weasel-short-tail	" "	37													4
Mink	" "	75													2
Raccoon	" "	15													10
Maskrats	They use the lake shore of the small lake for a distance of about 1½ miles.														50
No trapping was done on this area.															

REMARKS: This area has some of all of the animals listed above on it. They do not seem to increase much or none since they all wander more or less and they are trapped and hunted as soon as they get off of the Refuge. Indian dogs also take a toll of all of the animals.

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.

MIGRATORY BIRDS

Refuge Pleasant Lake Months of June 1, to Apr. 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
Mallard	40	4/12, '44.									3000
Pintail											3000
Blue-winged teal											200
Green-wing teal											50
Lesser Scaup											1000
Redheads											100
Baldpate											200
Gadwall											200
Ruddy											100
Unidentified Ducks											1000
Mitchins Geese											100
Snow "											1000
Blue "											1000
Canada "											500
Swan											100
Shore birds											1000
Californial Gulls											500
Franklin Gulls											2000
Pullman											200
Cormorant											
Coots											2000

REMARKS: (Pertinent information not specifically requested) This is just a shallow area of water out in the prairie but the birds have been using it much of a spring and fall since a fair sized area has been covered with water. A few pairs of mallards and pintails remain to nest around this water area and then take their young to the water to grow up.

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 Pleasant Lake Refuge Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 300 acres of farm, hilly pasture & brush land.	10							30	The pheasants and partridge stay around and on this Refuge since there is good shelter on it for them. It is believed that they must do much of their feeding offsite of the area since there is not so much food available for them on the Refuge.
Hungarian Partridge	" " "	10							30	

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 Pleasant Lake April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Richardson Ground Squirrel	About 200 acres of pasture & some farm land.	5													40

REMARKS: There might be a skunk or two that use this area and possibly some other animals but we have not seen any of them or signs of them.

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.

MIGRATORY BIRDS

Refuge Prairie Lake Months of Jan. 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
Mallard											1000
Pintail											1000
Blue-wing teal											100
Green-wing teal											50
Shoveller											50
Snow geese											100
Blue geese											100
Franklin Gulls											500
Coots.											500

REMARKS: (Pertinent information not specifically requested) This area was inspected on April 18th. No waterfowl were seen on the area. The water area was rather small and shallow this spring and it is believed that not many birds will be using ^{it} as they did when the water level was higher and the area larger.

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 Prairie Lake Months of Jan. 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'd. Estimated Total	Percentage	Hunting For Re- stocking For Research	Estimated number using Refuge Pertinent information not specifically requested. List introductions here.
Hungarian Partridge.	100 Acres of Hay and Pasture.	10				10 We have seen no upland game birds using this area but it is believed that a few partridge may see it at times.

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 Prairie LakeApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Richardson Ground Squirrel.	Approx 300 Acres of pasture and meadow.	6													30
Badger	" " "	75													4

REMARKS: On this small area the small animals are about the same as they have been for some time. The people hunt and trap the badgers as soon as they are off of the Refuge and the badgers dig after the squirrels where ever they find them. The badgers have made many holes on the area but one badger makes many holes.

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.

MIGRATORY BIRDS

Refuge Ross Lake Months of Jan. 1, to April 30, 1944

1612

(1) Species Common Name	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
Mallard											3000
Pintail											3000
Blue-wing teal											100
Green-wing teal											50
Lesser Scaup											2000
Redhead											100
Redpoll											100
Gadwall											100
Ruddy											100
Unidentified Ducks											2000
Hutchins Geese											100
Snow "											100
Blue "											100
Canada "											100
Swan											100
Shore Birds											500
California Gulls											3000
Franklin "											5000
Pelicans											100
Cormorants											2000
Coots											2000

REMARKS: (Pertinent information not specifically requested) This area was inspected on April 13th. No waterfowl were in sight when the inspection was made. Much of the water area was still covered with ice and the real migration northward had just started.

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 Rose Lake Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx 800 Acres hilly grass land, farm & pasture.	40							20	No upland game birds were seen when the last inspection was made. It is believed that about the numbers estimated were using the area at the end of April.
Hungarian Partridge	" "	16							50	

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 Rose Lake April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Skunk - striped	Approx. 800 acres grass land, hilly pasture and farm.	100												
Short-tail weasel	" " "	200												8
Mink	" " "	200												4
Red Fox	" " "	200												4
Badger	" " "	40												20
White-tail jack rabbits	" " "	40												20
Richardson Ground Squirrels	" " "	8												100
A permit was issued to one trapper and he reported to me that he trapped the animals listed below: 2 skunks 1 badger 1 fox.														

REMARKS: It is not intended to report that the above listed animals use the Refuge all of the time but about that number use the area off and on. They visit it some due to the water area ~~upstream~~ where some of their food would be secured from. So far, no muskrats have been seen on this area.

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.

MIGRATORY BIRDS

Refuge Rock Lake Months of Jan. 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
Mallard	2000	4/22, '44									15000
Pintail	2000										15000
Blue-wing teal											2000
Green-wing teal											500
Lesser Scaup											15000
Redhead											500
Baldpate											2000
Cadwall											3000
Ruddy											1000
Unidentified Ducks	1000										10000
Hutchins Geese	100										5000
Snow "	2500										20000
Blue "	2500										20000
Canada "	300										10000
Swan											1000
Shore birds											2000
California Gulls											2000
Franklin Gulls											5000
Pellisen											500
Cormorant											100
Coots											5000

REMARKS: (Pertinent information not specifically requested) This Refuge is on the through (Lac Aux Mortes, Snyder, Brumba and other Refuges to the south) migration route from the south. The waterfowl make full use of this area. We are sure that about as many waterfowl use this area as use the Lac Aux Mortes Area. It will be necessary for more inspection trips to be made to this area before a fair estimate can be made of birds using it since we have only been looking after this area since last fall.

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 Reek Lake Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	About 2600 acres of pasture, farm and brush land.	15 Approx.							150	No upland game birds were seen when the last inspection was made of the area. It has been estimated that there ^{were} were about the birds listed on the Refuge on 4/22, 1944. The winter was more severe in this locality on upland game birds since there was much more snow here than on other parts of District No. 2 and it was also colder.
Chinese Pheasants	" " "	50 " "							50	

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 Rock Lake RefugeApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Skunks- striped	2600 acres farm, pasture & some brush land.	100												26
Weasel-short tail	" " "	130												30
Mink	" " "	170 Approx												18
Red Fox	" " "	480 " "												6
Richardson Ground Squirrel	" " "	12												200
Badger	" " "	170												15
Muskrats	About 700 acres of the water area.	700												500
Beaver	" " "	350												2
Permits were issued for five men to trap on this area. (A note was put on the permits for each trapper to make a report of his catch income at the end of the trapping season. This spring, letters were sent to each trapper, requesting each one to make a report of the fur bearing animals he had taken on the Refuge.) Only two men reported their catch as listed below:														
301 muskrats. 2 skunks. 2 weasels. 5 mink.														

REMARKS: This is one of the most suitable areas for the small fur bearing animals to increase on. Mr. Norheim that lives near the dam, reported to me recently that he saw one beaver near the dam. Not many beaver will use this area since there is but very little of their kind of food around the lake. It is believed that all other animals will keep on increasing and especially the muskrats.

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.

MIGRATORY BIRDS

Refuge Snyder Lake Months of Jan. 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
Mallard	100	4/22, '44									2000
Pintail	100										2000
Blue-wing teal											200
Green-wing teal											50
Lesser Scaup	50										2000
Redhead											50
Baldpate											50
Gadwall											50
Ruddy	5										100
Unidentified Ducks	200										200
Hutchins Geese											
Snow "											
Blue											
Canada "											
Swan											
Shore birds											1000
California Gulls											200
Franklin Gulls											300
Pelican											200
Cormorant											
Coot	20										1000

REMARKS: (Pertinent information not specifically requested) This water area is not so large but the ducks seem to make much use of it especially on the north end. The water is rather deep for the ducks to use it much on the south part. It is not believed that the geese use it much. We have not seen geese on this area.

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 Snyder Lake Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx 920 acres farm, brush & grass land.	18							50	No upland game birds were seen on the area when the inspection was made but it is believed that there were the numbers listed on the area at the end of April. There was a fair number of birds on the Refuge last winter and the cold weather period was not so severe as usual.
Hungarian Partridge	" " "	9							100	

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

Snyder Lake

April 30, 1944 1944.

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Skunk-striped	Approx 920 acres of farm land, lake shore & a little brush land.	92												10
Weasel- short tail	" " "	230												4
Mink	" " "	92												10
Red fox	" " "	450												2
Richardson Ground squirrel	" " "	9												100
Badgers	" " "	450												2
Muskrats	About 3 miles of the water area shore & the shallow water is used by these animals	2												430
Beaver	They use mainly about 1/2 mile of lake shore on south end of the Refuge													4

REMARKS: No trapping was done on this area last winter since no one in this locality had time or wanted to trap on this Refuge. We will try to get some one to trap here next trapping season.

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 unprimness 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.

MIGRATORY BIRDS

Refuge Sibley Lake Months of Jan. 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
Mallard	200	4/17, '44									1000
Pintail	200										1000
Blue-wing teal											50
Green-wing teal											50
Lesser Scaup											100
Redhead											50
Baldpate											50
Cadwall											50
Ruddy											50
Unidentified Ducks											1000
Hutchins geese											100
Snow "											500
Blue "											500
Canada "											500
Swan											200
Shore Birds											1000
California Gulls											500
Franklin gulls											2000
Pelican											200
Cormorant											
Coot											1000

REMARKS: (Pertinent information not specifically requested) It is not believed that so many waterfowl will use the area during April since there was much old plant growth still standing out in the water and the water level had gone down much lower than it was a year ago. In the past when the water level was rather high, a large number of all kinds of waterfowl used this area of a spring and fall especially.

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 Sibley LakeMonths of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Approx. 700 Acres farm, rough grass and brush land.	35							20	The land is rather rough around this Refuge and the birds use the Refuge & rough land. The birds would increase much on this area if there was more winter shelter & food available during cold weather and deep snow.
Hungarian Partridge	" " "	18							40	
Sharp-tail grouse	" " "	35							20	

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 Sibley Lake Refuge April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	700 acres farm, rough pasture, timber and grass land.	70													10
Mink	" " " Also about 300 A. of shallow lake area	125													8
Fox	700 A. of land area	175													4
Richardson Ground Squirrel	" " " "	7													100
White-tail Jack rabbit	" " " "	60													12
Weasel- short-tail	All the land area & about 300 A. of lake	125													8
Muskrate	300 A. of lake area.	1½													200
Permits were issued for two trappers to trap on this area and they trapped a total of 210 muskrats on the area. No other furs were taken on the Refuge.															

REMARKS: The animals listed to the right above use the Refuge area part of the time but they also use the other suitable land areas around the Refuge. The water level is rather low in the lake now. If it stays at about the same level during the summer, the rats will be apt to increase much during the summer. Grass and other water plants are growing in most of the area of water.

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 unprimness 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.

MIGRATORY BIRDS

Refuge Silver Lake Months of Jan. 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
Mallards	None seen of the inspection date	4/12, '44									2000
Pintail											2000
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											3000
Redhead											100
Baldpate											100
Gadwall											100
Ruddy											50
Unidentified ducks											2000
Mutchins geese											100
Snow "											500
Blue "											500
Canada "											300
Swan											200
Shore birds											2000
California Gulls											1000
Franklin Gulls											3000
Pellican											100
Cormorant											100
Coot											2000

REMARKS: (Pertinent information not specifically requested) There was no run-off into the lake on this Refuge this spring. The water level of the lake is lower now at the end of April than it was a year ago and not so many birds will use it as would have used it if the water level had been a little higher.

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 Silver Lake Refuge Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	2400 acres farm, pasture, timber and hilly brush land.	80							80	In the locality of this Refuge, the winter just passed was very mild and a fair number of birds should be on the area as of April 30, 1944.
Hungarian Partridge	" " "	30							80	

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 ~~Silver Lake~~

April 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Skunk-striped	Approx 2400 acres farm, pasture & hay land.	400												6
Mink	" " "	400												6
Red fox	" " "	300												6
Richardson Ground squirrel	" " "	12												200
Badger	" " "	400												6
Muskrats	They were about a mile of the lake shore & some of the channel that leads water into the lake													100
Weasel-short- tail	" " "	200												12
	One trapper trapped in the Refuge (and some right next to the Refuge)													
	last winter:													
	9 foxes.													
	25 skunk													
	2 badgers													
	10 weasels													
	1 mink													
	6 muskrats.													

REMARKS: From the number of animals trapped on the area and right next to it, it does not appear that enough animals have been estimated as of the end of April but ~~snakes~~ two females or more of any kind of animal, produce a number of young each year and some of them will have young twice a year and the numbers soon increase much.

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.

MIGRATORY BIRDS

Refuge Woodlake Marsh Months of Jan. 1, to April 30, 1944.

1612

(1) Species Common Name	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
Mallard	18	4/17, '44.									500
Pintail	8										500
Blue-wing teal											50
Green-wing teal											50
Lesser Scaup											200
Redhead											50
Baldpate											50
Cadwall											50
Ruddy											50
Unidentified ducks											
Hutchins geese											
Snow "											
Blue "											
Canada "											
Swan											
Shore birds											
California gulls											100
Franklin gulls											200
Pelicans											
Cormorants											
Coot											500

REMARKS: (Pertinent information not specifically requested) It is not believed that the waterfowl used this area much this spring since the ice was late melting off of the water and the birds when they came from the south a little later than usual, the most of them kept moving on northward and did not stop.

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 Neodlake Marsh Months of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Approx. 160 acres timber, brush & farm land.	8							20	Pheasants are often seen on and around this area. The partridge are more a prairie bird and not so much is seen of them on the Refuge.
Hungarian Partridge	" " "	8							20	

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 Woodlake MarshApril 30, 1944

(1) Species	(2) Density	(3) Removals						(4) Disposition of Fur						(5) Total Popula- tion	
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	
								Permit Number	Trappers' Share	Refuge Share					
Skunk- striped	About 320 acres of grass land, brush & hilly land.	50 Approx.													6
Weasel- short- tail	" " "	50													6
Mink	" " "	80													4
Richardson Ground Squirrel	" " "	3													100
Muskrat	They use the shore line of a lake and low wet land about 1 1/2 miles around.														80
	A permit was issued to one trapped. He took the fur bearing animals listed below: 4 mink 1 skunk 119 muskrats 5 weasels 2 fox														

A permit was issued to one trapped. He took the fur bearing animals listed below:

4 mink

1 skunk

119 muskrats

5 weasels

2 fox

REMARKS: Most of the animals listed above use other surrounding lands as well as the Refuge area. The refuge lands are used by the animals mainly due to the available food in the water area and the shelter furnished by the trees and brush. The man trapping on the area last winter a year ago, reported that the muskrats he caught on this Refuge were rather small. It is supposed that there is not quite the food for the rats on this area of water that there is on some other water areas & the muskrats just not grew as large.

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 unprimness 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.

MIGRATORY BIRDS

Refuge Stump Lake Months of Jan. 1, to Apr. 30, 1944

1612

(1) Species Common Name	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
Mallard	150	4/17, '44.									4000
Pintail	150	"									4000
Blue-wing teal											500
Green-wing teal											200
Lesser Scaup											5000
Redhead											200
Baldpate											500
Cadwall											500
Ruddy											500
Unidentified Ducks											6000
Hutchins geese											100
Swan "											8000
Blue "											5000
Canada "											6000
Swan	150	"									500
Shore birds											5000
California Gulls											5000
Franklin Gulls											5000
Pellican											200
Cormorant											800
Coot											2000

REMARKS: (Pertinent information not specifically requested) Cormorants nest on the north island. Some ducks nest on the south island and the two peninsulas. The ducks have been using this Refuge (the water area) also the geese and swan, much during the past few years since more rain has been received. This is a much used Refuge by the waterfowl if the waterlevel will just stay up.

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 Stump LakeMonths of Jan. 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'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 27 acres grass & short brush land.	2 approx.							12	No upland game birds were seen on the area when the inspection was made on April 17, 1944. It is believed that about the number of birds listed were on the area on April 30, 1944.
Hungarian Partridge	" " "	1 "							24	

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 Stamp LakeApril 30, 1944

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion
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
								Permit Number	Trappers' Share	Refuge Share				
Skunk - striped	18 A. Approx. of sandy grass and brush land.	4												4
Weasels- short-tail	" " "	2												2
Rabbit- white-tail- jack.	" " "	4												4

REMARKS: No trapping has been done on this area. There may be a few more animals that wander on this area at times but we do not know that they use the area.

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.)

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- (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.



Roll 1 & Exp. 5. 4/13, '44. Kellys Slough, south west side showing water area and the cover here and there out in the water and along the shore.



Roll 1 and Exp. 6. 4/13, '44. Main water area of Kellys Slough Refuge . This picture shows the plant growth along the water edge & etc.



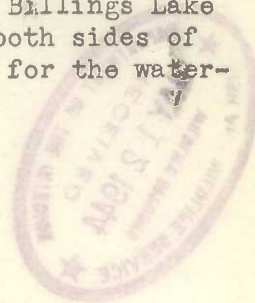
Roll 2 and Exp. 1. 4/14, '44. Showing the Ardoch Control gates, both open and gage reading at 8.10. There is not near as much of a run-off this spring as there has been during the past recent springs. There is plenty of water to fill up the lake to the desired level after some of the surplus water has been allowed to drain away.



Roll 2 and Exp. 2. 4/14, '44. Lake Ardoch free of ice showing the lake towards the buildings from the dam.



Roll 2 and Exp. 3. 4/14, '44. This picture is of Billings Lake taken from the dam and to the north. The high grass on both sides of the water area can be seen. The grasses make good cover for the water-fowl that want to remain on this area and nest.



Roll 3 and Exp. 3. 4/14, '44. This picture is of Ballings taken from the dam and to the north. The high grass on both sides the water area can be seen. The grasses make good cover for fowl that want to remain on this area and nest.

