ROUTING SLIP DIVISION OF WILDLIFE REFUGES DATE: 9-23 1944

____ MR. SALYER _____ ____ SECTION OF HABITAT IMPROVEMENT:

____ MR. ELMER _____ ~~Mr. Griffith~~ REG 11-23

_____ _____ ~~Dr. Bourn~~ DSB 9/23/44

_____ _____ Miss Cook _____

____ SECTION OF OPERATIONS: ____ SECTION OF LAND MANAGEMENT:

~~Mr. Krumes~~ WK 1/2/45 ~~Mr. Barnshaw~~ B

~~Mr. Regan~~ JRR 1/8/45 Mr. DuMont RAD 12/7

Miss Baum _____

____ SECTION OF STRUCTURES: ____ STENOGRAPHERS:

~~Mr. Taylor~~ Nov 1/9/45 _____

_____ _____

REMARKS: NORTH DAKOTA EASEMENT DISTRICT #2 NARRATIVE REPORT

MAY-AUGUST 1944

Return to: Hab. Improvement

8825

Easement Refuges in District No. 2 North Dakota.

Period- May, June, July and August 1944.

1. Lake Ardoch Refuge.

1. General.

A. Weather Conditions. Over most of the district, more than normal rainfall has been received during the four months. It was very dry during the first 1½ months of the time. Most of June and July were damp, wet and very cold months for summer here. It rained almost every other day during June and part of July. Weather information is given below as has been furnished by the Devils Lake Federal Weather Bureau:

	Snowfall	Precip.	Max. Temp.	Min. Temp.	Normal Precip.	Plus or minus Precipitation.
May		4.00	92	21	2.03	+ 1.97
June		5.80	88	36	3.56	+ 2.24
July		2.90	95	46	2.57	+ .33
August		6.55	89	43	2.48	+ 4.07
		19.25			10.64	+ 8.61

B. Water Conditions. Enough rain has been received on and around this refuge to keep up the water level. We are very thankful that no floods have been received in this area during this summer. Last year there was a real flood during the middle of June and again at the middle of July. The water level of the lake has been kept at as near 18" below the top of the gates as possible. Of course it has been necessary for some water to be let out by opening the the gates some. N ot as much rain was received in this area as farther west in the District.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior.

a. The area was visited and work done on it on May 24th. and June 24, 1944. The water in the basin seemed to be quite fresh. Birds were using the area on June 24th. as has been shown on the attached NR-1 Form. Not many birds nest on this area but they commence to use it much about the first part of September some years. Other years they do not use it much until later in October.

b. The birds nest mainly on and around the water areas around the Refuge and then bring their young on to the lake as a safe resting place after they can fly. A year ago last fall the ducks (pintails and mallards) used the water area much as a resting place and then they did much feeding on the nearby cut grain of an evening and night.

2. Food and Cover. The food in the water area is about the same as it has been the past few years of prairie bulrush along the shores at places, much pond weed on north west end where water is fresher coming in from the river, some pond weed between the river entrance and the control gates, some wild millet

grows along the shore at places and there are the fields to feed in.

There is some cover along the shore at places that is made up of grass, brush and the growth on the islands on the west part of the lake. The cover along the shore is better on north west part of the water area where the water is fresh.

B. Upland Game Birds.

1. Population and Behavior. The upland game bird population does not increase much and stay that way. In other words the numbers fluctuates from year to year. The good or poor hatching season has much to do with the number of birds on the area, the kind of winter and food available during the winter. There are a few fox that use the area and they get some of the birds. The bird population has been shown on the attached NR-2.

There is timber on the north part of the Refuge and timber east of the protected area. Many of these upland game birds move to the timbered areas when the winter weather becomes severe and many do not come back to the more open Refuge area.

C. Fur Animals, Predators, Rodents and other Mammals. There are a few mink that use the refuge area some, a few muskrats use the north end of the water area where the river runs into the Refuge water area, a few beaver have been seen at different places along the shore of the lake but they do not stay on the Refuge and there are a few red fox that use the area.

D. Fish. About the same kinds and numbers of fish come up from the Red River of a spring and on into the lake. These fish are bullheads, white buffalo, minnows and a few pike.

III. Refuge Maintenance.

All of the buildings (cabin, garage, boat house and toilet) were painted, some of the windows were repaired and put back in place, grass was cut in the yard and hauled away, a strip was hoed around all of the buildings for fire protection and the parts of the control gates that were dry were painted. The buildings were also cleaned up inside.

2. Billings Lake.

B. Water Conditions. This area was inspected on 7/20, 1944 when the water level was about 12" below the spillway. The spillway and dam were in good shape. The water level has held up well it is believed since there was no spring run-off and not as much rain received around this area as at other places in the District. Mr. Thompson, who farms the refuge land, informed me that not near so much rain was received around this locality as around the Devils Lake area.

II. Wildlife.

A. Migratory Birds.

1. Population and Behavior. When this Refuge was visited there were about 48 ducks that were seen but there were many more along the shore in the grass that could not be seen we are sure. The waterfowl use this area to

nest on out on the land in the high grasses and weeds and then raise their young out on the shallow water area which has a good supply of food in it for a fair number of fowl. The water is rather shallow but it will continue to be used by many of the shore feeding ducks as long as the water level does not get to be extra low. The numbers of birds have been shown on the NR-1 Form.

2. Food and Cover. Coontail, smartweed, clasping leaf pond weed and round stem bulrushes were growing out in the water and furishing food for the waterfowl. There was also some duckweed (L. minor) at places along the shore where the ducks were feeding. Minnows and soft shell snails were noticed in the water.

The cover around this area is good of high grass and weeds on the west side and north end along the water area. The round stem rushes that are growing out in the water, furnish cover for the fowl while they are feeding in the water.

B. Upland Game Birds. No upland game birds were seen when the inspection was made but Mr. Thompson who rents much of the area stated that there were many partridge on the area but that no other species of upland game birds had been seen for some time.

III. Refuge Maintenance.

It was not necessary that any work be done on the dam and spillway this period since they were in good shape. The signs were also in good shape.

3. Buffalo Lake Refuge.

I General.

B. Water Conditions. This area was inspected on July 13, 1944. The water was about 16" below the outlet spillway level. The water seems to be quite fresh. There was but very little or no spring run-off this spring. Even if much rain is received during the summer, not so much of it gets into the water refuge areas since much of it soaks into the ground. This water area will hold up well the rest of this year unless it becomes extra dry. The springs on the north west part of the area furnish some fresh water that helps keep up the water level.

II. Wildlife.

A. Migratory Birds.

1. Population and Behavior. The numbers of birds that it is believe use the area have been given on the NR Form and also the numbers that were seem when the area was inspected. A fair number of young ducks are raised on the north end of the area where the water is fresh. Not many waterfowl nest on this area but they use it mainly during the spring and fall migration as a resting place.

2. Food and Cover. There is very little food in the water area for the ducks. They use it as a resting place and the mallards and pintails feed in the fields some in the fall. The cover is fair along the north side and on the north west end.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen when the area was inspected. It is believed that about the numbers of birds are on the refuge and use it as have been listed on the NR-2 Form. The birds also use the near by areas as well. This is a good area for the upland game birds. Of course the area is some what open especially during the cold winters when snow is deep and they then have a hard time finding enough food. They use the protected area especially of a fall when hunting is being done. They have been noticed flying towards the protected area when disturbed.

2. Food and Cover. The food is plentiful of insects, grain, weed seeds and some berries during all of the year except when the snow is deep and the weather is cold. Then the birds are hard pressed to find enough food. The cover is fair which is made up of the hills, some brush, high grass and weeds. There is much sweet clover on the area which furnished both cover and food.

lll. Refuge Maintenance.

Some new posts were put in the fence line that incloses the goverrment owned land, cabin was swept out, windows were painted green and the door varnished, the grass was cut in the fenced in cabin yard and a strip hoed around the building. We try our best to keep all of the necessary work up in shipshape and then it takes less work each year to keep things up and it is best.

4. Brumba Lake Refuge.

1 General.

B. Water Conditions. This area was gone over on July 8, 1944. Water was running over the shallow spillway to a debth of about 1½". The spillway was left in good shape after some small depressions in the spillway were filled up with stones. This is a comparatively small water area but it furnishes a place for a small number of mallards and pintails to stay and feed on mainly.

ll. Wildlife.

A. Migratory Birds.

1. Population and Behavior. When the area was inspected there were about 14 mallards, 6 shore birds and 4 American bitterns on the water and along the shore. A few waterfowl use this area to nest on and raise there young on the shallow water area.

2. Food and Cover. There is some coontail growing in the water, minnows and many soft shelled snails that furnish a fair supply of food. Grain fields surround the water area and furnish food of a fall. The high banks furnish shelter from the winds. The round stem rushes and high grass along the shore furnish a fair amount of cover for the waterfowl when they need it.

B. Upland Game Birds. No birds were seen on the area when the inspection was made. It is believed that there are about 200 Hungarian Partridge that use the Refuge some. There is not much shelter on this area for the winter and it is believed that some of the birds then moved to more protected areas. There is little or no cover except the higher land along the low places and the natural growth of grass and weeds. Insects and grain forms the food supply.

C. Fur Bearing Animals, Predators, rodents and other Mammals. There are a few muskrats, badgers and mink on the area according to the signs that have been seen. A few muskrat houses were seen last fall at one place along the water edge. Some of the rats go into banks and not much is seen of them.

5. Johnson Lake Refuge.

1. General.

B. Water Conditions. This area was inspected on July 11, 1944. The water is a little higher than it was a year ago. It is believed that much of the low area is covered with water that is about 5' deep. The water seems to be fresh.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. It was estimated that about 5,000 waterfowl were on the area when it was inspected. About 800 of the birds were seen along the shore where the lake was approached at different places. The waterfowl nest on this area in numbers and raise their young on the water area. This is a very good area for waterfowl in every way. No botulism has been noticed along its shores.

2. Food and Cover. Some submerged aquatics are growing out in the water that furnish food, there are many snails in the water, round stem bulrushes, some smart weed, some duck weeds and grain in the fields that furnishes food for the fowl.

The cattails, white-top, phragmites and other grasses are growing out in the water and up along the shore that furnish very good cover. The grass grows right down to the water and this makes good cover for the birds.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen when the inspection was made but it is known that there is quite a number of birds that use this area and the near by rough areas. The numbers that are using the area have been listed on the NR-2 Form.

2. Food and Cover. There is a good supply of grass seeds for the birds, insects, berries and grain in the grain fields. The cover is fair which is made up of the banks around the water area, high grass, some brush and the surrounding hills ~~xxxx~~ break the winds some.

C. Big Game Animals. There are a few deer that are using the area. None were seen when the area was inspected but it is believed that they are doing well since there is a large protected area for them to use and plenty of food available. The deer are white-tails.

D. Fur Bearing Animals, Predators, rodents and other Mammals. There is a fair number of muskrats that are using the area and they will increase some yet it is believed since all seems to be favorable for their increase. A few foxes use the area, skunks, weasels and mink. It is believed that some trapping will be done on the area this coming winter and a better idea of the animals can be had after it is known what has been trapped on the Refuge Area. This is also a good area for the muskrats especially.

6. Kellys Slough Refuge.

1 General.

B. Water Conditions. This Refuge was visited on June 20, 1944 when the water was running over the spillway to a debth of about 3" (about 10' of spillway out in center). The water level of this area stays about the same when the weather is dry but it becomes higher when there are rains received.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. About 300 waterfowl were seen on the area on June 20th. when the inspection was made as were have been listed on the NR Form. Not so many birds use this area to remain on during the summer and nest since the water is slightly salty.

2. Food and Cover. There is a fairly heavy growth of sago pond weed growing out in part of the water area that furnishes food, prairie bulrushes are growing along the west side and the grain fields are around the water area.

Phragmites, prairie bulrushes, brush and grass furnish cover for the waterfowl. The high banks furnishes some shelter from the winds also. The Phragmites and prairie bulrushes grow mainly on west side of the water area. There is a little brush along the south east side of the water area.

B. Upland Game Birds. It has been estimated that about 50 Chinese Pheasants and 200 Hungarian Partridge are using the area and other near by areas. The birds do very well for food and cover on this area for the whole year except during the part of the winter when the snow is deep and it is cold. It is a difficult job for them to get enough food on and around the area then since the snow covers much of it up. The cover is fair.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. A few skunk, weasels, mink, Red fox, Richardson Ground Squirrels, Raccoons, badgers and a fair number of muskrats are using the area. It is not believed that any of these animals will become very numerous on this Refuge since trapping has been done under a permit the last two winters and then the animals are also hunted and trapped off of the Refuge. The trapping was done only on the privately owned lands.

7. Lac Aux Mortes Refuge.

1. General.

B. Water Conditions. At the first part of this period, the water level was about 16" below the spillway level. This water level has held up very well since very little rain fall has been received in this District No. 2 since last July 12, 1943 until during this period. There was but little snow received here last winter and there was no run-off most of places. More than the normal rain fall has been been received during the period as has been shown. At the end of August the water was about 12" below the spillway level. The water seems to be more fresh than it has been during past years. The weather has been very cool which may help to keep the water fresher.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. This area (water) has been patrolled many times during the report period. It has been estimated that about the middle of July there were over 30,000 birds that were using the water area. That is a large number of waterfowl to use any ordinary area but the ducks, gulls and other migratory birds would fly up by the hundreds all along the shore line of the water area, out in the lake and on and around the islands. Young ducks commenced to appear in numbers about the middle of July. The most of the young birds are of late hatches due to the cold May and June of this summer. Many of the waterfowl left the Refuge by the middle of August to feed in the fields and on other areas it is believed. This is a very good waterfowl area.

2. Food and Cover. There is plenty of food and everything is very good for waterfowl to use this area and grow up on it (except the botulism). The sago pond weed, clasping leaf pond weed and other submerged aquatics have made a very dense growth in most of the open water of the lake. There is plenty of grain in the near by fields for the mallards and pintails especially. There are also other natural foods for the waterfowl.

The cover is very good of cattails, phragmites, white-top, river-bulrush, smart weed, round stem rushes growing out in the water and other plants. There are grain fields, grass and weeds on the shore that furnishes shelter and cover on the Refuge.

3. Botulism. This area was first patrolled on July 7, 1944 when only 3 dead coots were found. More dead birds were found as the water area, islands and shore line were patrolled but the loss ~~this summer~~ has not been near so great this summer as it has been during past summers. Of course, this has been a much cooler summer period and there has been a good supply of rain received during the four months which have both been the cause of fewer numbers of the birds being lost it is believed. Also, the waterfowl have been feeding more where the water is deep on the submerged aquatics instead of along the shore in the shallow water where in the past there have always been much rotting vegetation such as piles of phragmites and other plants partly in the water and part on land.

The water area on the north part of the Preserve has been dry during most of this period. Last year there was water on some of the low land. Some ducks were lost there last year and a great many the year before. The low land south of the Refuge has been dry during most of this summer and only a few ducks were found dead there. There were hundreds of dead ducks and other waterfowl picked up there last summer and buried. Below there has been listed the water fowl that were found dead this summer:

Ducks	109	1 dead grebe was found.
Coots	22	
Gulls (Franklin)	183	
Shore birds	None	

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that there are about 300 pheasants and 500 partridge that are using the Refuge Area all or part of the time. We are sure that there are a great many upland game birds on the area. There are many of this years crop of birds but most of them are of the late hatches. The birds stay on and around the Preserve the year around since there is no other place to go. Many of them move up close to the farm buildings during the winter so some grain can be picked up where stock are being fed.

2. There is the greatest of plenty of all kinds of food on and around this refuge for the birds the year around except during the winter when the snow is deep.

The cover is good during the summer time of grass, some brush, high weeds and higher land at places along the shore. Out on the lake, the plants that stick above the ice furnish good winter cover for the birds.

C. Fur Animals, Predators, Rodents and other Mammals. There are some fox, a fair number of skunk, some weasels, a few mink and a large number of muskrats that use this Refuge area. Not many of any of the animals have been seen during the period. The muskrats have made a great many runways across and into the islands and at places they have made their homes in the roads and into the banks. Trapping permits will be issued this winter for trapping on the area if any one wants to trap.

III Refuge Maintenance.

The water area has been patrolled many times during the period, the dead ducks picked up and buried, the grass was cut around the buildings and hauled out and a strip about 2' wide was hoed and has been kept black around each of the buildings for fire protection.

8. Lambs Lake Refuge.

1. General.

B. Water Conditions. This area was inspected July 20, 1944 when the water was about 18" below the top of the spillway. The water seemed to be fresh. There was a very great amount of green algae in the water.

There was so much of the green algae in the water that it was much of a green color. The water level has staid up well in this shallow water area since it is believed that less rain was received here than on other parts of District No. 2.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. The waterfowl were seen on the area that have been listed on MR-1 Form. Only a few waterfowl nest on this area since the land part of it around the water, is closely pastured. The waterfowl use the area of a spring and fall mainly as a resting place.

2. Food and Cover. Only coontail was seen growing in the water of the submerged aquatics. It is supposed that the heavy growth of the algae cuts off the light so other plants will not grow well in the water. The grain in the near by fields furnishes food for the mallards and pintails. The snails in the water will furnish some food for the ducks also.

There is a little cover on the north end of the the water area of round stem rushes, some high grasses and the grass along the fence rows and the grain in the fields furnishes cover.

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that 50 old and young partridge have been using this area some. The birds use this area during the summer and when weather becomes extra cold and snow deep, they use the near by timbered areas and places where there are weeds & some brush.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are a few skunk, badgers and foxes that use this area. None of these animlals have been seen on the area. It was reported to me that the foxes use it some and many badger holes can be seen on some parts of the area. A permit will be issued for trapping to be done on this area this winter if some local person wants to trap there.

111. Refuge Maintenance.

The dam and spillway were inspected and were left in good shape . A number of badger holes were filled up on the dam. This is a good dam and stays in good shape since the water only comes to the base of it.

9. Little Goose. 1. General

B. Water Conditions. This area was inspected on June 20, 1944. The water was up to the spillway level. The water is rather deep above the dam and it evaporates but little even during a fairly long period of dry weather.

11. Wildlife.

A. Migratory Birds.

1.Population and Behavior. A few ducks were on the water area when the inspection was made as is shown on the MR-1 Form. It is believed only a very few waterfowl nest on the Refuge area since most of it is very closely pastured. The waterfowl use this Refuge only as resting place mainly of a spring and fall when on their migrations.

2. Food and Cover. There is a small area on the north ~~of~~ end of the water area where round stem rushes grow that furnish some food for the waterfowl. The birds have to depend on most of their food that they pick up from other area and in the fields since there is but very little available food on the Refuge. The cover is limited to a small area on the north end of high grass and weeds. The rest of the land area is closely pastured.

111 Refuge Maintenance.

The area was inspected and the dam and spillway were left in good shape. Badgers dig holes in the dam some. A close watch is kept as we are able to keep and the holes are filled up when the inspection trips are made.

10. Minnewastena.

1 General

A. Water Conditions. This area was inspected on July 20, 1944 and other times during the period. The water level is about the same as it was last spring. This small water area is fed by springs and the water level stays about the same the year around unless the dry weather should be much prolonged. The water seems to be fresh.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. About 30 Franklin Gulls were noticed on the water area when the inspection was made. No ducks were seen. Not so many ducks use this area when there is plenty of good areas with water in them. The waterfowl use this area some of a spring and fall to rest on mainly.

2. Food and Cover. There is coontail, star duck weed, some round stem rushes and wild millet that furnish some food for the waterfowl. There are also small minnows and soft shelled snails in the water that furnish food for some of the birds. There is no cover to speak of around this water area that the birds can use. Trees and brush surround most of the small lake. It is of little use to the waterfowl.

B. Upland Game Birds.

1. Population and Behavior. A few pheasants use this area to nest on around the edges. They come on to the Refuge when they are hunted of a fall. No other upland game birds have used the area during the period that we know of.

2. Food and Cover. There is but little food on this area for the birds except berries and insects during the warmer part of the year. The pheasants get most of their food on other near by areas that are cultivated. The cover is very good on the Refuge of grass, weeds and brush. There is a little open land on the area.

11. Pleasant Lake Refuge.

1. General.

B. Water Conditions. This area was gone around and inspected on July 13, 1944. The water level was the highest that it has been since there has been water in the lake since the spillway and dam have been put in. The water was within about 10" of the top of the small spillway. The water seems to be fresh. In this locality there has evidently been a fair amount of rain received during this period.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. It was not possible to get up to only a small area of the water at a time. A fair number of birds were seen on the part that could be approached (the water area). The number of birds that were seen has been listd on the NR-1 Form.

It is believed that quite a large number of birds use this area as a resting and feeding place now during the summer. For the size of the water area, a large number of ducks, geese and some swan use it of a spring and fall as a resting place and do some feeding on the water area.

2. Food and Cover. It is not known if there is much food in the water since it was not possible to go out into the water but little. The birds have to depend on other areas to a great extent for their food. The mallards and pintails feed much in the grain fields after the cutting of the crop has started. The cover is good out in and along the edge of the water of cattails, grass and other plants.

B. Upland Game Birds.

1. Population and Behavior. No upland game birds were seen when the inspection was made but it is known that there are a number of these birds that use the area more or less. They flock to the Refuge some during the winter for shelter. It has been estimated as shown on Form NR-2 that 50 Chinese Pheasants and 50 Hungarian Partridge were using parts of the Refuge more or less during the report period. The birds have to depend some on finding their food off of the protected area.

2. Food and Cover. The birds have to depend much for food on the local grain fields. Of course there is plenty of insect life for the birds during the warmer part of the year. The birds feed some near and around the buildings during the winter. The cover is good in the brush around the water area and the growth of cattails and other high grasses out in the lake furnishes good cover during the winter.

12. Prairie Lake Refuge.

1 General.

B. Water Conditions. The area was inspected on July 20, 1944. The water was about 30" below the spillway. There was about 1 acre area of water on the Refuge. It is believed that the water is not much over 2½' deep. The water will be apt to dry up if it is a dry hot fall.

11 Wildlife.

A. Migratory Birds.

1. Population and Behavior. About 40 mallards were on the water area when the inspection was made. There were two bunches of young ones on the water area. One bunch was about 6 weeks old and the young ones of the other bunch were about 3 weeks old. Just a few waterfowl (ducks) nest around this area. A few use it of a spring and fall when there is water in the low place.

2. Food and Cover. It was noticed that there was star duck weed growing in the water, coontail and an unidentified pond weed and soft shelled snails furnish food for the waterfowl. There is good cover along the shore and on the island of cord grass, cattails and other grasses.

111 Refuge Maintenance.

The dam and spillway were inspected and left in good shape. A few badger holes were filled up on the top of the dam. There does not seem to be as many squirrels and badgers around this area as there were about three years ago.

13. Rose Lake Refuge.

1 General.

B. Water Conditions. The water was about 10" below the spillway level. There was so much blue algae in the water on upstream side of the dam that the water was blue out for a ways. N o dead birds or animals were seen on this Refuge. It is believed that the blue algae was mainly just along the dam. The water seems to be quite fresh. Refuge inspected 7/20,'44.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. A few migratory waterfowl and other birds were seen on the Refuge as has been shown on the NR-1 Form. It is believed that there was a fair number of ducks on north end that were out of sight. Many mallards and pintails nest in the fields around this area and then bring their young to the water area to grow up. The waterfowl use this area mainly during their migration of a spring and fall to rest on over night and stay on a short time.

2. Food and Cover. Of the submerged aquatics, only coontail was seen out in the water. It is believed that the water fowl have to depend to a great extent on the grain in the fields for the most of their food. There is some cover out in the water and along the edges of white-top, cattails and some round stem rushes. The cover is fair along the edges of the water but there is not much out in the water.

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that there were about 40 pheasants and 100 partridge on the Refuge and the near by areas when the inspection was made. The birds use the Refuge area the year around and hilly land near by.

2. Food and Cover. The grain fields supply much of the food for the grown birds. They also eat weed seeds and there are the insects that furnish food during the summer time. The cover is fair which is made up of a little brush, high grass, weeds and hills break the wind some.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are a few badgers on this area, skunk, weasels, mink and the fox use it some. For some time no signms have been seen of any of them except the holes of the badgers are very noticeable. A permit will be issued for trapping on this area this winter if some local person wants to trap.

III. Refuge Maintenance.

A number of badger holes were filled up on top of the dam when the inspection was made. The dam and spillway were left in good shape. No signs of squirrels were noticed around the dam.

14. Rock Lake Refuge.

1. General.

B. Water Conditions. This Refuge was inspected on 7/8, 1944 and on 7/17th. with Regional Director, Mr. Johnson. This water area is about 2½' higher than it should be since the water is washing on the upstream side of the dam some and the water was up to the shoulder of the highway in a few places. I also went to the town of Rock Lake(in connection with the high water level of the lake on this refuge) with Regional Director, Mr. Johnson on August 8th. and met Service men, Mr. Hall (Engineer from Regional Office), Mr. Dougall from Minot and Mr. McBride from Salt Lake City, Utah and four men from the North Dakota Highway Offices. The water in the lake is fresh.

There was very little of a run-off into this water area this spring but due to the extra rains that have been received during thmis period, the lake has been raising during the summer period instead of dropping. Of course the lake was well filled with water this spring.

II. Wildlife.

A. Migratory Birds.

1. Population and Behavior. About the number of waterfowl were seen

on the area on July 8th. as have been shown on the NR-1 Form. Most of the ducks were on east end of water area below the dam and along the shore where the water was not so deep. The waterfowl use this area mainly of a spring and fall as a resting and feeding place. The water in the lake is rather deep and does not furnish so much food as it would if it was more shallow.

2. Food and Cover. There is a small amount of submerged aquatics in the lake that furnishes food for the fowl and much grain in the fields. There is a fair amount of coontail growing in the water. There is much green algae growing in the water but it is of little or no value as a food.

There is good cover at places along the lake shore where the land is not pastured and also on the east end xxx below the dam where the water is not so deep. There is very little cover out on the lake of the main body of water.

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that there are about 50 Chinese pheasants and 300 partridge using the Refuge area and the land along the side of the protected area. A fair number of birds have been hatched out on this area but the most of them of a second laying of eggs since the weather was cold in first part of this period.

2. Food and Cover. There is a good supply of food for the birds on and around this area the year around except during the winters of deep snows and cold weather when these birds have a very hard time to find enough food to keep them alive. Also, the upland game birds often need coarse sand in the winter time very much. The coarse sand is hard to find when the snow covers everything.

The cover is just fair of the lake banks, high grass and a little brush here and there at places. There is plenty of cover except for the months of deep snow and cold weather. These birds have not learned to go downinto and under the snow like the grouse and quail do.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. A few skunk, weasels, mink, red fox and badgers use this area. A few beaver have been seen by the local people swiming along the shore of the lake. There are a few Richardson Ground squirrels that live on the area. Many muskrats use the shore line of the lake to make their homes in. Trapping permits will be issued for trapping on this area if some local person wishes to trap on the Refuge.

111 Refuge Maintenance.

No maintenance work has been done on the area during the period. The area has been carefully inspected, the dam and the water level and the same has been reported to the office.

15. Snyder Lake Refuge.

1. General.

B. Water Conditions. This refuge was inspected on July 7th. by the Refuge Manager and again on July 17th. by Regional Director, Mr. Johnson and

the refuge manager. The extra inspection was made especially due to the water being high on another area. When the inspections were made, the water was running over the spillway to a debth of about 2½". The water was fresh and furnsihed much food for the waterfowl, especially on the north end of the water area.

A. Migratory Birds.

1. Population and Behavior. The number of ducks that were seen when the inspection was made have been listed on the NR-1 Form. A number of canvass-backs were seen on the north end of the water area. It is believed that a number of these birds were hatched there this summer. A fair number of ducks nest on this area of summer. A large number use it during the spring and fall migration. No geese have been seen on this area. It is believed that a fair number though use it of a spring and fall.

2. Food and Cover. Some submerged aquatics are growing in the water and furnish food for the waterfowl. There is also grain in the fields which the mallards and pintails feed on mainly of a spring and fall. Of course, most of the other birds get their food out of the water.

The cover is very good on north end of water area of cattails out in the water and along the shore, high grass and other plants. The water is deep on south part of the lake and there are not so many plants growing there but on north end water is not so deep and it is much used. This is a much used and very good waterfowl area.

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that 80 pheasants and 150 partridge have been using this area more or less during the four months. They stay up near some farm building much where there are some trees and brush. There is also some shelter on east side of lake of brush and high grass at other places where they stay.

2. Food and Cover. The food is plentiful during the whole year except during the time of the year when it is very cold and the snow is deep. The birds just have a hard time getting enough food to survive then.

The cover is sufficient (except during the winter time) of high grass, weeds and some brush. Of course the fence rows fursinshes some cover. There is plenty of cover for nesting birds.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are a few mink, skunk, weasels, red fox, badgers and Richardson Ground Squirrels that use this area. There are many muskrats that use the north end of the water area which is very suitable for them . Signs of a few beaver is also still noticeable on the south end of the lake where there are some trees. Trapping permits will be issued this fall for trapping on this area if there are those that want to trap there and have the time. It is well to keep the number of foxes down as much as possible on these areas since they do much damage to all game birds as well as domestic fowl. The other animals will not increase more than they should be in numbers for this area. The muskrats built houses on the north end of the water area late last fall that were about 8' wide at the bottom and 7' high.

16. Sibley Lake Refuge.

B. Water Conditions. This area was inspected on July 11, 1944. It cannot be said just how much, but the water level is higher during the inspection period than it was last spring. There was no run-off in this locality and the level has been kept up this summer by the rain. No signs of alkali were seen along the shore. The water seemed to be much fresher than usual.

1. Wildlife.

A. Migratory Birds.

1. Population and Behavior. Quite a large number of waterfowl were on the area when the inspection was made. This does not look like much of area for ducks but they stay on it as has been noticed many times in the past. It is believed that one of the main reasons why it is used so much, is because there is very good shelter growing over and in the water.

2. Food and Cover. No good plants for food could be seen growing in the water. Of course there are a certain amount of insect life that is to be had on any of these water areas. The mallards and pintails have to depend much on feeding in the fields for their food supply and other ducks that do not feed in the fields must feed in other water areas some.

The cover is very good out on the water of cattails, phragmites, white-top and round stem bulrushes. At places these plants grow in clumps that are about 10' square in size to half acre sized areas. There is good cover for the birds on land on the south, west and north part of the water area. The land on the east side of the water area is closely pastured.

B. Upland Game Birds.

1. Population and Behavior. It is believed that there are quite a few of the upland game birds that use this area more or less. It has good cover and fairly good shelter for winter. The birds also use the surrounding hilly areas. They are able to find food on the south slopes of the hills during the winter when food and shelter could not be found where the land was level.

2. Food and Cover. There are grass seeds, grain, insects and other things that the birds are able to get for food during most of the year. Some berries, buds, and grain are available for food during the winter. The pheasants and partridge feed around the farm buildings some.

The cover is good of the grasses that stick above the ice out in the lake and the timbered area on west side furnishes good winter cover. During the summer there is good cover all around this area except on the east side where the land is closely pastured.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are a few skunk, mink, fox, weasels and a fair number of muskrats that use this Refuge area. There are a few white-tail jack rabbits and Richardson ground squirrels that use the area more or less. It has been planned to have trapping done on this area this coming winter.

17. Silver Lake Refuge.

1. General.

B. Water Conditions. The water level of the lake is about 12" above what it was a year ago at same date. The water seemed to be fresher than it was a year ago. This is very good that the level of this water area has kept up so well since there was no run-off into this lake over the channel by the dam this spring. Refuge was inspected on July 13, 1944.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. A few ducks and about 1500 Franklin gulls were on the water area when it was inspected. Not many ducks nest on and around this water area of a spring and summer. They use it mainly as a resting place of a spring and fall. There is plenty of food in the fields especially of a fall but not so much in the water area.

2. Food and Cover. There is some round stem bulrush on west side and north end of the lake that furnishes some food and just a small amount of sago pond weed growing in the water. There is quite a little of green algae in the water. At places along the shore the blue algae could be noticed. No. dead birds were seen on this area.

The cover is good on west side and north end of high grass, brush and weeds. The cultivated grain crops furnishes some cover. There are but few plants growing out in the water that furnish cover.

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that there are 100 Chinese pheasants, 200 Hungarian Partridge and 20 sharp-tail grouse that used the area during the four months period. The birds on this area as well as on most of the other Refuges, increase much during a good hatching season and then by the next spring they are about down in numbers to where they were the spring before.

2. Food and Cover. There is plenty of food on this area for the upland game birds during all the time of the year except when the weather is cold and snow is deep, then there is not always enough available food for them. During the summer there are the weed seeds, grain and insects to feed on.

The cover is just fair of some brush, high grass and rough land for the winter time. During the summer there is plenty of cover of the crops, some brush and weeds. Close pasturing takes away much cover on many otherwise good areas.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. There are a few skunk, Mink, red fox, Richardson Ground Squirrels, badgers, weasels and some muskrats that use this Refuge area. It is very desirable to keep the numbers of the foxes down as much as possible. A very few years ago, there were no fox in this locality. They have just increased so they are

doing damage that is noticeable the last three years. Trapping permits will be issued for trapping on this area this winter if there is a local trapper that wants to trap on the area.

18. Woodlake Marsh.

1 General.

B. Water Conditions. This area was inspected on July 11, 1944. The water level was about 4" above the spillway level. This is a small area but the water is fresh and the mallards use it very much especially of a late fall and of a spring to rest and feed on. Of course they feed in the fields but there is much food in this water area for the waterfowl.

11. Wildlife.

A. Migratory Waterfowl.

1. Population and Behavior. When the area was inspected, it was sprinkling rain some and a north wind was blowing and not so many birds were where they could be seen. As has been previously reported, the birds use this water area of a spring and fall especially as a feeding and resting place. Quite a number nest around the small water area though, some years.

2. Food and Cover. There is a very good supply of the submerged aquatics that are growing in the water. There are the insects to feed on and grain in the fields. The cover is good around this water area but not many birds nest on the Refuge. The cover is good especially for the ducks that stop here to rest of a spring and fall.

B. Upland Game Birds.

1 Population and Behavior. It has been estimated that 50 Chinese Pheasants, 50 Hungarian Partridge and 10 sharp-tail grouse have been using the area during the period. Pheasants, especially seem to be quite plentiful on the timbered part of the area.

2. Food and Cover. There are the grainfields that furnish food and insects. During the winter, the birds must depend much on the weed seeds and food that they can pick up around the farm buildings. Dried berries also furnish some winter food.

C. Fur Bearing Animals, Predators, Rodents and other Mammals. A few skunk, weasels, mink, Richardson Ground Squirrels and a large number of muskrats use the area according to the size of the Refuge. It is also believed that a few foxes use it some. Trapping will be done on this area this fall if some local man has the time and wants to trap on the Refuge.

19. Stump Lake Refuge.

1 General.

B. Water Conditions. This area was inspected on July 11, 1944. It was believed that the water level was about 6" higher then than it was a year ago. The water is much fresher than it was about 1930 before the lake went dry. There is not a bad smell to the water area that there was a few years ago and

much plant food is growing in the water for the waterfowl to feed on . Of course this water area will become stronger with alkali if a plentiful supply of moisture is not yearly received. It does not look like much as a Refuge but the waterfowl use it much. There is more land on the area than is shown by the map since the water level is lower now than it was when the survey was made.

11. Wildlife.

A. Migratory Birds.

1. Population and Behavior. It was estimated that there were over 2000 ducks and a few hundred of gulls on the water part of the refuge, that is the water between the islands, peninsulas and around them for about a mile on the water. A few birds nest around and on the Refuge and raise their young on this water area but not many. The birds use it mainly of a spring and fall as a resting place and they seem to do much feeding on it during the last few years.

2. Food and Cover. There is a fair amount of sago pond weed growing in the waters of Stump Lake. Some of the largest clumps of seed heads were seen on some of these plants that have been seen on any refuge. The ducks seem to be feeding on it much. Of a spring and fall the swan and geese have been noticed feeding out in the water much (they were sticking their heads under the water and going through all of the motions of feeding and so it is believed they were feeding) and it is supposed that they were feeding on this pond weed.

There are no plants growing in the water that furnishes cover over the water. There is good cover on the islands and peninsulas of grass, weeds and brush.

B. Upland Game Birds.

1. Population and Behavior. It has been estimated that about 20 Chinese Pheasants and 24 Hungarian Partridge use the land area of this Refuge some. It is intended to make it clear that they do not use just this area. There are trees and brush near the area that they use for shelter.

2. Food and Cover. There is some cover on the islands and peninsulas of brush, weeds and high grass. There is food of insects, seeds and some berries on the Refuge area. The birds have to depend much on the grain fields for their food.

Report completed:
September 2, 1944.

Signed Wesley D. Parker
Refuge Manager.

APPROVED
REGIONAL DIRECTOR
9/9/44

Form NR-1

MIGRATORY BIRDS

Refuge Lake Ardeen Months of May 1, to August 31, 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	6/24,'44				3000
Pintail						100					3000
Blue-wing teal											500
Green-wing teal											200
Lesser Scaup											5000
Redhead											200
Baldpate						25					2500
Gadwall						25					2500
Ruddy											500
Unidentified						50					6000
Hutchins Geese											200
Snow											2500
Blue											2500
Canada											2000
Swan											1000
Shore birds											4000
California gulls											2000
Franklin Gulls											15000
Pellican											200
Cormorants											100
Coots											1000
Black-crowned Night Herons											100

REMARKS: (Pertinent information not specifically requested) The majority of the birds listed to the right used the Refuge during the early part of May and then moved on northward, Not many birds stay on this area to nest since it just is not a very suitable nesting area. On all of the Refuges in District No. 2, it has been especially noticed that there have been fewer coots this period than the same period a year ago. (The number of coots is intended to include the old ang young.)

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Lake Ardoch Months of May 1, to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	2 sections, farm, brush & Pasture.	65							20	During the last inspection of the Refuge, only 3 pair of partridge were seen and no other upland game birds and for that reason the numbers of upland game birds on this area have not been increased much over the spring period. This has been a very poor hatching period.
Hungarian Partridge	" "	13							100	
Sharp-tail grouse	" "	21							60	

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.

Form NR-1

MIGRATORY BIRDS

Refuge Billings Lake Months of May 1, to August 31, 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						8	7/20,'44				1000
Pintail											1000
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											2000
Redhead											200
Baldpate											100
Gadwall											100
Ruddy											50
Unidentified ducks						40					2000
Hutchins Geese											100
Snow											1500
Blue											1500
Canada											1000
Swan											200
Shore Birds											5000
California Gulls											2000
Franklin Gulls						20					5000
Pellicans											100
Cormorants											100
Coots						10					1000
Black-Crowned Night Herons											

REMARKS: (Pertinent information not specifically requested)

The water was about 12" below the spillway level. This area is of much help to the waterfowl in this locality as long as it does not dry up and the water remains comparatively fresh. The basin is rather shallow. There seems to be a fair amount of food of aquatics and snails for the birds.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Billings Lake Months of May 1, to August 31, 1944

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	3/4 of a Section of farm land, grass and pasture	Approx. 5							100	No upland game birds have been seen on this area for some time but the man that farms much of the Refuge area land informed me that there were a number of grouse using the land area and a fair number of partridge. It is a fairly good place for the partridge since there is much high grass, some brush land and etc.
Sharp-tail Grouse	" " "	20 24							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.

Form NR-1

MIGRATORY BIRDS

Refuge Buffalo Lake Months of May 1, to August 31, 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							7/13,'44				5000
Pintail											5000
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											5000
Redhead											100
Baldpate											500
Gadwall											500
Ruddy											100
Unidentified Ducks						30					6000
Hutchins Geese											100
Snow											6000
Blue											6000
Canada											1000
Swan											200
Shore Birds						30					5000
California Gulls											1000
Franklin Gulls											4000
Pellican											200
Cormorants											
Coots											2000

REMARKS: (Pertinent information not specifically requested) Generally speaking, this is not a nesting area. (A comparatively few birds do nest on it.) The birds use it mainly as a resting place in the spring and fall. The aquatics are commencing to show up more over the area and more plants are growing out in the water. As this plant growth increases if it does, more birds will use the 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.

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Buffalo Lake Refuge Months of May 1 to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	1200 acres brush, pasture, farm land and hilly areas	4							300	This is a very good upland game area. The birds will increase on this area if they do on any of the areas. The birds have a hard time getting through the winter on all of these open prairie areas when it is extra cold and the snow is deep.
Hungarian Partridge	" " "	8							400	
Sharp-tail grouse	" " "	12							100	
Pinnated Grouse	" " "	20							60	

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.

Form NR-1

MIGRATORY BIRDS

Refuge Bromba Lake Months of May 1 to August 31, 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						14	7/8.'44				1500
Pintail											1500
Blue-wing teal											100
Green-wing teal											50
Lesser Scaup											800
Redhead											100
Baldpate											100
Gadwall											100
Ruddy											50
Unidentified Ducks											1000
Hutchins Geese											
Snow											
Blue											
Canada											
Swan											
Shore birds						6					1000
California Gulls											
Franklin Gulls											200
Pellicans											100
Cormorants											
Coots											200
Bitterns(American)						4					30

REMARKS: (Pertinent information not specifically requested) No geese have been listed as using this area this time on this report since we do not know of any time that they have used the area. It is supposed that they use it some. We would like to see them on the area some before it is reported that so many have used 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.

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Bumba Lake Months of May 1, to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge.	About 1320 acres pasture, grass and farm land.	approx. 6⅔							200	As far as we know, no other upland game birds use this area. Prairie chickens (pinnated grouse) and sharp-tail grouse may use it some during the milder part of the year. We will keep a close watch for them as time goes on.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Johnson Lake Refuge Months of May 1, to August 31, 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						150	7/11,'44				7000
Pintail						150					7000
Blue-wing teal											400
Green-wing teal											200
Lesser Scaup											7000
Redhead											400
Baldpate											2000
Gadwall											2000
Ruddy											500
Unidentified Ducks						500					8000
Hutchins Geese											300
Snow											3000
Blue											3000
Canada											2000
Swan											6000
Shore birds											3000
California Gulls											6000
Franklin Gulls											200
Pelican											200
Cormorants											
Coots											1500
Black-crowned Night Heron											

REMARKS: (Pertinent information not specifically requested) Most of the birds used this area during the first part of May and then moved on northward. There are a great many hundred using it now during this period though. It is a very difficult job to estimate the numbers and be as accurate as we would like to be. We do the best we are able to do. This is a very good Refuge and the birds use it much. The water in this area is comparatively fresh and plants grow all along the shore and out in the water at places that furnish cover.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2

UPLAND GAME BIRDS

1613

Refuge Johnson Lake Refuge Months of May 1, to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx.800 Acres farm, grass and brush land.	4							200	We did not see any upland game birds when the last inspection was made but many have been seen at other times. This is one of the best upland game areas in this district.
Hungarian Partridge	" " "	2							400	
Sharp-tail grouse	" " "	4							200	
Pinnated grouse	" " "	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.

Form NR-1

MIGRATORY BIRDS

Refuge Kellys Slough Months of May 1, to August 31, 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	5/20,'44				1500
Pintail						100					1500
Blue-wing teal						25					100
Green-wing teal											50
Lesser Scaup						50					200
Redhead						25					100
Baldpate											200
Gadwall											200
Ruddy											50
Unidentified Ducks						100					1000
Hutchins Geese											100
Snow											200
Blue											200
Canada											100
Swan											100
Shore Birds											2000
California Gulls											1000
Franklin Gulls											3000
Pelicans											100
Cormorants											100
Coots											200

REMARKS: (Pertinent information not specifically requested) The geese that used this area were on it during the first part of May. Most of the birds use this area as a resting ~~ma~~ and stopping place of a spring and fall. The water seems to becoming a little more fresh since there is now much sage pond weed growing in 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.

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Kellys Slough Months of May 1. to August 31, 1944

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx.1500 acres farm, brush and pasture land.	30							50	We have not seen many of the upland game birds during the last few inspection trips but the birds should be holding their own well on this area as well as on the other Refuges. Of course the predators (mink, weasels and so on) lessen their numbers and hard winters.
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.

Form NR-1

MIGRATORY BIRDS

Refuge Lac Aux Mortes Months of May 1, to Aug. 31, 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						5000	7/24,'44				25000
Pintail						5000					25000
Blue-wing teal						1000					2500
Green-wing teal						300					800
Lesser Scaup						100					17000
Redhead						100					1300
Baldpate						1500					2500
Gadwall						1500					2500
Ruddy						1000					2000
Unidentified Ducks						8000					13000
Hutchins Geese											5000
Snow											100000
Blue											100000
Canada											10000
Swan											2000
Shore Birds						1000					10000
California Gulls						500					5500
Franklin Gulls						8000					38000
Pelican						200					2200
Cormorants						100					600
Coots						1000					6000
Black-crowned night Heron						50					150

REMARKS: (Pertinent information not specifically requested) As was reported, the ice stayed on most of the water areas until the first of May or almost so to that date. For that reason the northward migration was slowed upmuch and the most of the birds that did move on northward into Canada, were on the Easement Refuges during the first week in May and for that reason the numbers of birds in the right hand column for this area is much larger than it would be on an ordinary year with an earlier spring. This area has been gone over almost weekly since the first part of July and on to the end of August. The 7/24, 1944 has been placed up above as Last Observed under No. 5 since on about that date the most birds were on the area for the summer period. Fewer birds were using the area by the first part of August. It is supposed that they moved to feed in the fields and other less crowded areas.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2

UPLAND GAME BIRDS

1613

Refuge Lac Aux Mortes Months of May 1, to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	1500 acres farm, pasture, lake shore & brush land.	5							300	Upland game birds have been seen on this area in fair numbers. Pheasants have been heard calling much. It is believed that the hatch is fair but most of them are late since not many early summer birds were hatched due to the cold and wet early summer.
Hungarian Partridge	" " "	5							500	

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.

Form NR-1

MIGRATORY BIRDS

Refuge Lambs Lake Refuge Months of May 1, to August 31, 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						5	7/20,'44.				500
Pintail						4					500
Blue-wing teal						8					100
Green-wing teal											50
Lesser Scaup											500
Redhead											100
Baldpate											100
Gadwall											100
Ruddy											50
Unidentified Ducks											500
Shore birds						20					200
California Gulls											100
Franklin Gulls						10					1500
Coots.											100

REMARKS: (Pertinent information not specifically requested) A few birds nest on this area but it is used as a resting place of a spring and fall mainly. Only coontail was noticed that grows in the water. There is much green algae in the water so that part of the water area looks to be made up of green water. No blue algae was noticed. No dead birds were seen along the shore. Most of the land area of this Refuge is pastured much or put to other uses.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Lambs Lake Months of May 1 to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	800 acres pasture and farm land.	16							50	The number of birds known has not been increased over that of the last report. It is not believed that there are over 50 partridge on the area. Pheasants have not been listed since none have been seen on the Refuge for some time.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Little Geese Months of May 1 to August 31, 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						20	8/20,'44				400
Pintail						20					400
Blue-wing teal						15					100
Green-wing teal						10					50
Lesser Scaup											100
Redhead						10					50
Baldpate						20					100
Gadwall						20					100
Ruddy											50
Shovellers											10
Franklin Gulls											1500
Coots.											100

REMARKS: (Pertinent information not specifically requested) The water on this area is rather deep and there is not much available plant food in the water for the birds and they do not use it very much except as a stopping and resting place of a spring and fall. The shoveller should be a very common duck in this District of many shallow ponds and lakes but we see very few of them.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2

UPLAND GAME BIRDS

1613

Refuge Little Goose Months of May 1. to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
	About 300 acres of closely pastured land.									No upland game birds are being listed as using this area since none have been seen on it for some time. Partridge have been seen about a half mile to the north but none have been seen on the Refuge for some time.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Minnewaste. Months of May 1 to Aug. 31, 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											150
Pintail											150
Lesser Scaup											200
Golden-eyes (American)											50
Unidentified.											300
Franklin gulls						30	7/20,'44.				1000

REMARKS: (Pertinent information not specifically requested) There is little or nothing different to report about this area than has been previously reported. The water in this small water area is fresh and a few birds use it as a resting place and a place to get the necessary fresh water. There is not much food in the water. There are small minnows, snails and much coontail in the water.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Minnesota Months of May 1 to Aug. 31, 1944

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 150 acres of brush, grass and timber.	3							50	The pheasants use this refuge to go on when bothered in any way. They have to go on other areas to get most of their food mainly. Sharp-tail grouse use the area some during the winter but not during the summer months and none have been listed.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Pleasant Lake Months of May 1 to August 31, 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						20	7/13,'44				2500
Pintail						20					2500
Blue-wing teal						50					500
Green-wing teal											100
Lesser Scaup											200
Redhead											100
Baldpate											200
Gadwall						60					200
Ruddy											50
Unidentified						100					500
Shore birds											2000
California Gulls											1000
Franklin Gulls						100					2000
Pelican											
Coot											
Shoveller											50

REMARKS: (Pertinent information not specifically requested) The water area on this Refuge is rather small but many birds were seen on it when the inspection was made. Many shore birds were seen also. There were several times the number of birds seen that were on the water and along the water edge that were not seen. The water was within 10" of the top of the spillway. This is a rather strange refuge with a small village on the north end and roads all around it but the waterfowl use it much.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Pleasant Lake Months of May 1. to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx. 300 acres farm, hilly pasture and brush land.	6							50	We almost always see a number of pheasants and at times partridge on this area but they cannot increase much due to there being some predators on and around the refuge and the land owners have cats and dogs that are bound to keep the numbers of birds down. The pheasants seem to hold their own fairly well though. What helps them, is the good winter shelter formed by the hills, trees and brush.
Hungarian Partridge	" " "	6							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.

Form NR-1

MIGRATORY BIRDS

Refuge Prairie Lake Months of May 1 to Aug. 31, 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	7/20,'44				500
Pintail											500
Blue-wing teal											50
Green-wing teal											
Lesser Scaup											100
Redhead											50
Baldpate											100
Gadwall											100
Ruddy											
Franklin Gulls											200
Coots.											

REMARKS: (Pertinent information not specifically requested) There was only about an acre size area of water on this Refuge. It is believed that it will not go dry for a time yet. It is just a pot hole now (7/20th.). There were some submerged aquatics growing in the water and the grass along the shore furnished some cover.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Prairie Lake Months of May 1, to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Hungarian Partridge	160 acres of hay and pasture land	8							20	No upland game birds were seen on the area but it is believed there may be a few bunches of partridge that use this refuge some.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Rose Lake Refuge Months of May 1 to Aug. 31, 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	7/20,'44				600
Pintail											600
Blue-wing teal											100
Green-wing teal											50
Lesser Scaup											400
Redhead											200
Baldpate											200
Gadwall											200
Ruddy						2					50
Unidentified Ducks											800
Shore birds											100
California Gulls											100
Franklin Gulls						16					1000
Coots											100
Common Tern						6					500
Black Tern						12					400
Red-winged blackbirds.						100					200

REMARKS: (Pertinent information not specifically requested) The waterfowl use this area mainly of a spring and fall as a resting place. The water is rather deep and there is not any great amount of food in it. The mallards and pintails some falls use it mainly during September as a resting place to feed in the local grain fields. One thing, we have noticed on all of the area that there are very few coots compared with last year and especially year before last. The water near the dam on upstream side was blue due to the ag algae it is supposed. No dead birds were noticed along the water edge or in the water.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Bear Lake Months of May 1 to Aug. 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Apprax. 800 acres hilly grass land, farm & pasture.	20							40	There are a few pheasants that use this Refuge and the near by areas but they hide well in the weeds, grass and rough land.
Hungarian Partridge	" " "	8							100	There are also a fair number of partridge. During the last two years the partridge have not increases or kept up their numbers on this Refuge and this District No. 2 to what they were a few years ago. This is due to a great extent to the last two poor early summer hatching periods it is believed.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Rock Lake Months of May 1 to August 31, 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	7/8,'44.				4000
Pintail						100					4000
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											100
Redhead											100
Baldpate											500
Gadwall											500
Ruddy						16					200
Unidentified Ducks						150					2000
Hutchins Geese											300
Snow											3000
Blue											3000
Canada											500
Swan											200
Shore Birds											1000
California Gulls											1000
Franklin Gulls											2000
Pelican											200
Cormorants											
Coot											1000

REMARKS: (Pertinent information not specifically requested) This is a very good Refuge. It is used mainly by the birds of a spring and fall. The birds use the east end of the water area above the dam much where the water is not so deep and there is more food and cover. The geese that have been listed in the right hand column used the area during the first part of May. More swan were noticed in this District No. 2 this spring than for usual.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Rock Lake Months of May 1 to August 31, 1944

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	About 2600 acres pasture, brush and farm land.	50							50	We do not know that there are any pheasants using this area since none have been seen here.
Hungarian Partridge	" " "	8 Approx.							300	We have not seen any Partridge recently but it is believed that they are doing fairly well. It is a hard job to see many of these birds unless the land is gone over much. We will continue to keep a close watch for them and get more information from the local people.

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.

Form NR-1

MIGRATORY BIRDS

Refuge Snyder Lake Months of May 1 to Aug. 31, 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	7/8,'44				4000
Pintail											4000
Blue-wing teal						10					200
Green-wing teal											100
Lesser Scaup						5					1500
Redhead											400
Baldpate											1500
Gadwall											1500
Ruddy						20					1500
Unidentified Ducks											3000
Hutchins											100
Snow											500
Blue											500
Canada											100
Swan											50
Shore Birds											500
California Gulls											100
Franklin Gulls											500
Pelican											100
Cormorant											50
Coot											100
Black-crowned Night Heron						1					50

REMARKS: (Pertinent information not specifically requested) 8 canvase back seen 600

This area (especially the north end of water area) seems to be a very fine place for the ruddy, canvas-backs and redheads. The water is fresh, it is of different debths and there is a good supply of food growing in the water. We have seen more of the ruddy, canvas-backs and redheads on this area than on any of the other Easement Refuge water areas.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Snyder Lake Months of May 1 to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Approx. 920 acres farm, brush & grass land.	11 Approx.							80	Part of this area has been gone over twice during this report period. No upland game birds were seen either time but it is believed that they are doing well and they should have increased on and around the area.
Hungarian Partridge	" " "	6							160	

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.

Form NR-1

MIGRATORY BIRDS

Refuge Sibley Lake Months of May 1 to Aug. 31, 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	7/11,'44				2500
Pintail						100					2500
Blue-wing teal						50					200
Green-wing teal											100
Lesser Scaup											1500
Redhead											1000
Baldpate											2000
Gadwall						300					5000
Ruddy											200
Unidentified						2500					5000
Hutchins											100
Blue											1500
Snow											1500
Canada											200
Swan											150
Shore Birds											2000
California Gulls											1000
Franklin Gulls											5000
Pelican											300
Cormorants											200
Coot											200
Canvas-back											400

REMARKS: (Pertinent information not specifically requested) This area has very good cover and a fair amount of food in the water. The birds use it much. The geese and many of the ducks listed in the right hand column used the area for a short time during the first part of May. There was a large number of birds on the water area when it was inspected. No coots were seen. The birds were studied by use of a pair of field glasses. It was difficult to get very close to them before they would fly.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Sibley Lake Months of May 1 to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Approx. 700 acres farm, rough grass and brush land.	17							40	The birds use this land area on the Refuge and the other suitable areas around the protected area. No sharp-tail or pinnated-grouse were seen during the inspection but is is believed that a number of the birds use the area more or less. The whole area was gone around. The brush and timbered area on the west part of the refuge is a great help to the birds during severe weather.
Hungarian Partridge	" " "	7							100	
Sharp-tail Grouse	" " "	35							20	
Pinnated 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.

Form NR-1

MIGRATORY BIRDS

Refuge Silver Lake Months of May 1 to Aug. 31, 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	7/13,'44.				1500
Pintail						15					1500
Blue-wing teal											200
Green-wing teal											100
Lesser Scaup											1500
Redhead											100
Baldpate						40					1000
Gadwall						50					1000
Ruddy											50
Unidentified Ducks											2000
Hutchins Geese											50
Snow											200
Blue											200
Canada											50
Swan											50
Shore Birds											1500
California Gulls											500
Franklin Gulls						1500					4000
Pellican											100
Cormorant											50
Coot											400
Canvas-back											300

REMARKS: (Pertinent information not specifically requested) The water level has staid up well on this area since there was no run-off at all this spring. The birds use this water area mainly as a resting place. It is pastured closely around the water area except on the north end. The old mother birds that hatch their young in the nearby fields, bring them to the lake 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.

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Silver Lake Months of May 1 to Aug. 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasants	Approx 2400 acres farm, pasture, timber & hilly brush land.	26							100	This whole land area is farmed, pastured and cropped fairly close and the birds do not have the chance to increase on it that they would if considerable of it was left to grow up in brush and weeds. We have seen many partridge on this area but not many of the grouse and pheasants.
Hungarian Partridge.	" "	12							200	
Sharp-tail Grouse	" " "	120							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.

Form NR-1

MIGRATORY BIRDS

Refuge Woodlake Marsh Months of May 1 to Aug. 31, 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						6	7/11,'44.				500
Pintail						10					500
Blue-wing teal											100
Green-wing teal											50
Lesser Scaup											200
Redhead						4					100
Baldpate											200
Gadwall											200
Ruddy											100
Unidentified Ducks											200
Franklin Gulls											1000
Canvas-back											200

REMARKS: (Pertinent information not specifically requested) A few birds nest around this water area but it is used mainly of a spring and fall by the ducks. It is not believed that the geese use this water area but very little or none since is is small and has timber and higher land around 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.

Form NR-2

UPLAND GAME BIRDS

1613

Refuge Woodlake Marsh Months of May 1. to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Approx 160 acres timber, brush & farm land.	3 Approx							50	It is believed that the upland game birds use some of these Refuges more than they use other land off of the protected areas. On this area we almost always see a number of pheasants but it is believed a large enough number has been placed in the column to the left. The grouse use this area some but they use it most during the winter when buds are used much for food.
Hungarian Partridge	" " " "	5 "	"						50	
Sharp-tail Grouse	" " " "	16							10	

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.

Form NR-1

MIGRATORY BIRDS

Refuge Stump Lake Months of May 1 to August 31, 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	7/11,'44				600
Pintail						50					600
Blue-wing teal											100
Green- wing teal											50
Lesser Scaup											500
Redhead											200
Baldpate											300
Gadwall											300
Ruddy											100
Unidentified Ducks						2000					4500
Hutchins Geese											100
Snow											2000
Blue											2000
Canada											200
Swan											200
Shore Birds											5000
California Gulls						100					1000
Franklin Gulls						500					6000
Pelican											200
Cormorant						4					100
Canvas-back											500

REMARKS: (Pertinent information not specifically requested) Of course, the largest number of birds used this water area the first part of May and then moved on northward but a great many ducks were using it on July 7th. and they were feeding on it. There is a greayt amount of sage pond weed growing in the water. It is believed that it was fruiting very good on this area but the ducks were eating much of the seed. Some very large clumps or bunches of seed were seen. Some gulls and cormorants nest on the islands on this Refuge. The birds use this Refuge much.

INSTRUCTIONS

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

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

(1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".

(2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.

(3) BECAME COMMON: The date the species became common on the refuge.

(4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.

(5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.

(6) YOUNG PRODUCED: Estimated number of young produced based upon observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact are to be omitted.

(7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-2 UPLAND GAME BIRDS 1613

Refuge Stump Lake Refuge. Months of May 1 to August 31, 1944.

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re-stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Chinese Pheasant	Approx. 27 acres grass & short brush land.	1	Approx.						20	A few pheasants use this area and at times there may be more than have been listed. Partridge nest on and around the Refuge land area. Part of the land is suitable for these birds to increase on. Since the water level is now lower than when the survey was made, there is more dry land than 27 acres.
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.

Roll 1 and Exposure 1. Apr. 22, 1944. This is on the Lac Aux Mortes Refuge looking south from the boat house. The water was about 22" lower at this time than it was a year ago when the level was Approx. 16" below the spillway level. We had much rain especially in June and the water raised some.

Roll 1 and exposure 2. Apr. 22, 1944. About 5000 snow and blue geese on Lake Irwin about 1/2 mile west of Lac Aux Mortes. Many times this number of these geese are using the Federal Refuge and the water areas in this locality.

Roll 1 and Exposure 3. May 6, 1944. This shows snow, blue and some Hutchins geese sitting out on the ground on north part of the Lac Aux Mortes Lake shore and wet land. These geese were about 400 feet away. They were studied through field glasses.

Roll 1 and exposure 4. May 6th. This picture shows snow and blue geese flying on the east side of the Lac Aux Mortes Refuge. The birds were feeding in the stubble fields but flew up before a picture could be taken of them.

Roll 2 and exposure 1. July 8th. Outlet west of Norheim's on south east part of Rock Lake where water is moving out on to privately owned land.

Roll 2 and exposure 2. July 8th. This picture shows the upstream side of the Rock Lake dam. The water level is about 4' from the top of the dam. It can be noticed in this picture where due to the water washing up against the dam, the rock have settled down at places. Mr. Norheim needs this dam to use as a road between the different pieces of his land & he said he would put rock in those washed places.

Roll 2 and Exp. 3. July 11th. Johnson Lake cabin that has just recently been painted and the grass cut in the yard around the building for fire protection mainly. Part of the lake can be seen in the background.

Roll 2 and exposure 4. July 11th. This picture shows some of the Johnson Lake water area with the plant growth out in the water. There are some submerged aquatics growing in the water now and much of the plant growth that extends above water which furnishes some food and good cover for the waterfowl. A great many ducks were on the area on July 11th.

Roll 2 and exposure 5. July 11th. This picture was taken from the east side of Sibley Lake and it shows the heavy growth of cattails, phragmites, white top, round stem rushes and other plants that furnish some food for the waterfowl and very good cover.

Roll 2 and exposure 6. July 11th. This picture was taken looking to the east from the peninsula on the north end and shows an island out in the lake. About 7000 ducks were on the water area when it was inspected. This is on Stump Lake Refuge.

Roll 2 and exposure 5. July 11th. This picture was taken from the east side of Sibley Lake and it shows the heavy growth of cattails, phragmites, white top, round stem rushes and other plants that furnish some food for the waterfowl and very good cover.