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NARRATIVE REPORT

SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1947

DES LACS NATIONAL WILDLIFE REFUGE

&

EASEMENT REFUGES - DISTRICT IV

Forrest A. Carpenter Refuge Manager

Roy W. Carlson Maintenance Man, General

> Malvin E. Jensen Mechanic-Patrolman

Chesley M. Dinkins Laborer-Patrolman

William J. Schmitz Refuge Clerk (Clerk-Typist)



January 16, 1948

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I. GENERAL

A. Weather Conditions.

The weather this period has been generally characterized by below average precipitation and somewhat less fluctuation between temperature extremes. Minimum temperatures were generally higher (10 days, only, of minimum temperatures of zero or below) but maximum temperatures were generally lower (November and December had 20 days, only, of maximum temperatures above freezing). The first general snow occurred on November 10 but, contrary to the fall of 1946, the snow fell on dry, unfrozen soil and has not subsequently thawed. It is likely, therefore, that much of the spring run-off will be absorbed by the ground. Strong winds have not been to0prevalent and the early snow did not drift to any appreciable extent. Consequently, all areas are covered by a thin mantle of ice and crusted snow. Following is a tabulation of weather conditions for this period and for the corresponding periods of 1945 and 1946, as compiled from the records of the Kemmare Weather Station:

			Temper	atures
1947	Snowfall	Precipitation	Max.	Min.
September	None	•94	91	22
October	Trace	.19	82	27
November	11"	1.06	60	-4
December	9"	•69	42	-20
Total	20"	2.88 Extremes	42 91	-20
1946				
September	None	.87	96	30
October	12"	2.48	83	17
November	3 ¹¹	.76	61	-12
December	3 ⁿ	.64	48	
Total	18"	4.75 Extremes	96	-27 -27
1945				
September	None	1.13	99	24
October	None	.80	84	14
November	4**	1.23	54	-9
December	7 ⁿ	.73	45	-26
Total	11"	3.39 Extremes	99	-26

Of interest is the fact that calendar year 1947, with a total precipitation of 21.76 inches, is the second "wetest" year on record (dating from 1894) for this locality, exceeded only by the 22.96 inches of 1943.

B. Water Conditions.

The water remained open in all units until November 4th at which time successive days of sub-freezing temperatures froze the entire area solidly. Several hundred mallards kept a hole open in the Upper Lake until November 19 and no waterfowl have been present since that date.

As might be expected, none of our pool areas are deficient of water and the Upper Lake (Unit No. 1) is at a record winter height. While pools No. 2 to 8 are slightly below their respective spillway crests, the margin in every case is so small that a very nominal spring run-off will fill them to overflowing. To hold the rise in Unit 1 to a minimum next spring it is our plan to halt any diversion of the overflow of Units 3 and 4 into Unit 1 by passing this surplus water south and out of the refuge. The following tabulation shows the ice levels prevailing this winter and during the previous four winters:

Pool No.	1947	1946	1945	1944	1943
1	13.64	10.74	10.64	10.80	10.60
2	8.42	7.72	7.40	7.60	8.70
3	8.98	8.56	8.20	9.12	9.60
4	9.03	8.02	7.68	9.30	9.60
5	7.36	7.16	7.25	7.50	7.50
6	5.96	5.58	5.70	6.20	6.60
7	4.96	3.34	3.82	6.10	6.34
8	5.84	5.30	5.14	6.10	6.50

C. Fires.

It has been a banner year from the standpoint of refuge fires!. No fires occurred this period and we had only two fires, totalling less than 3 acres, during the entire year. Because of the dense forage growth conditions were very hazardous during September and October and "lady luck" surely had us by the hand during this time. The carry over of dense stands of dead vegetation is likely to present a similiar hazard next spring prior to the time that the new growth becomes dominant.

II. WILDLIFE

A. Migratory Birds.

1. Population and Behavior. Extremely favorable weather during September and October, combined with an over abundance of good water-fowl food, made the Des Lacs Refuge a favored rendezvous for the south-bound migrants this fall. They came early and remained for a longer period than usual, several species choosing to remain far beyond their usual departure date.

Peak concentrations, which occurred during late October and early November were 48% greater than those of 1946. We question whether this is a true index of population increases in the flyway, however, since the conditions mentioned above combined to hold for a longer period the birds which would have normally moved on through. In other words, the difference between "peak concentrations" and "total for period" has been smaller than usual this fall.

At the beginning of the period we had a population of approximately 10,000 waterfowl on the refuge, consisting primarily (in order of abundance) of mallards, pintails, coots, blue-winged teal and gadwalls. An

airplane census on September 15 revealed a population of 8275 water-fowl proportioned as follows: 25% mallards, 20% pintails, 15% blue-winged teal, 15% coots, 10% ruddy ducks, 15% others (including canvas-backs, redheads, gadwall, baldpates, green-winged teal and shovellers). This would indicate that between September 1 and September 15 we had an exodus of many of the resident species, particularly of gadwalls, coots, blue-winged teal and shovellers, and an appearance on the scene of increased numbers of ruddy ducks, canvasbacks, redheads and green-winged teal.

Another airplane census on November 5, shortly after the peak migration was reached, showed a population of 63,000 waterfowl on the refuge. Of this total, at least 60,000 were mallards, 600 were lesser scaup and the balance were pintails, green-winged teal and canvasbacks.

As mentioned previously, several duck species remained on the refuge beyond their usual departure date. Notable in this respect was the bluewinged teal, several of which were still present as late as October 29. A few of the other normally early-departing species, such as the gadwall, baldpate and shoveller, were here until mid-October. Practically all waterfowl departed with the freezing of the water areas on November 6th. Some 3000 mallards, including 30 hunting cripples, made an heroic effort to maintain an open water hole in the Upper Lake but heavy snows which covered the neighboring stubble fields convinced the 100 remaining "diehards" of the futility of remaining here longer and all that could fly departed on November 19.

The goose flight through this area was extremely poor and did not favorably compare with the poor flight of last fall. Our only observation of white-fronted geese was on September 24, when a flock of about 40 birds was observed. A few small, scattered flocks of Canada geese were observed from time to time until early November.

Rather peculiarly, not a single whistling swan was seen or reported as being seen in this locality this fall. The sandhill crane flight through the Des Lacs Valley was insignificient. A single flock was observed passing over the refuge on September 20 for our only sight record.

A large portion of the eared grebe population remained until after October 1st and two individuals of this species remained until November 19 in a water hole kept open by a concentration of mallards. These appeared to be healthy, adult birds but for some reason were reluctant to leave. The Western grebes also remained later than usual, with a large population still present on October 1. Twenty-four individuals were observed on October 19 and two were last seen on the refuge on October 29. Very few white pelicans were present here this fall but two individuals, either ailing or merely being individualistic, chose to remain with us until ice conditions drove them out or resulted in their destruction. They were last observed on November 3 and 4 in the middle of a large raft of mallards.

The shorebird migration this fall was not spectacular in any

respect and no unusual observations were made. Greater and lesser yellow-legs, long-billed dowitchers and Wilson's phaloropes were present during early September but not in numbers comparable to previous years. Franklin's gulls were very abundant in this locality during the first half of September, an estimated 15,000 being present on the refuge on September 8.

On September 24 a new refuge record for the Townsend's solitaire (Myadestes townsendi) was established. This bird remained in the vicinity for two days and was positively identified by three reputable observers.

The annual Christmas bird count was made on December 21 in cooperation with Dr. and Mrs. R. T. Gammell of Kenmare. A total of approximimately 642 individuals, represented by 13 species, were seen. The weather was ideal for a winter bird count but deep, crusted snow made travel almost impossible except on well-travelled roads. We were therefore unable to reach some of the better areas or to observe some of the species which we knew were present.

2. Food and Cover. Food and cover conditions on the refuge have been excellent in every respect. Large beds of sago pondweed, smart-weed, and other aquatics and the residue from better than average agricultural crops have been extensively utilized. While most of the refuge crop lands were harvested this season for depredation feeding on other refuges, the Service's share of the crops in agricultural units No. 15, 16, 17, 19, 20 and 22 comprising approximately 407 bu. of wheat, 740 bu. of barley and 50 bu. of durum were swathed and left in the fields for wildlife food. In some instances this grain was not utilized to any appreciable extent.

While it did not appear at the beginning of this period that duck depredations would present any problem this season, there were a few complaints of damage during early September. In every instance the damage appeared to be a direct result of too long a delay between the time the grain was swathed and the time it was picked up with the combines, a delay not occasioned so much by adverse weather as by the understandable desire of the farmers to take advantage of good weather and high prices and till every possible acre of land regardless of whether they had the facilities for harvesting the crops within a reasonable time. In spite of the good weather prevailing during September and October many farmers in this locality were still threshing and combining flax when the November snows arrived.

- 3. Botulism. For the first time in several years there was no evidence of botulism any where on the Des Lacs Refuge this season.
- 4. Lead Poisoning and Other Diseases. There was no evidence of loss from lead poisoning or other diseases among waterfowl this period. Our observations lead us to believe, however, that the crippling loss during the hunting season was greater than normal.

B. Upland Game Birds.

- 1. Populations and Behavior. As has been indicated in previous reports the present status of the ring-necked pheasant in this locality is not favorable. Early season nesting conditions were not good but there was evidence this fall of a fairly successful late hatch among the small nucleus pheasants which survived the winter of 1946-47. Weather conditions in the early fall were ideal and this factor, together with a closed hunting season in this part of the state, enabled the late-hatched birds to mature. In spite of the protection afforded the pheasant this season our fall population of this bird is not more than 50% of what it was a year ago. Another disasterous winter, and the prospects at this writing are not encouraging, will eliminate the pheasant as a legitimate game bird in this locality for several years to come. Indications are that the European partridge is holding its own, with no definite population trend either way. On the other hand, the sharp-tailed grouse population in this locality appears to be continuing to increase and we estimate that the refuge is contributing this winter to the support of approximately 500 of this species. Prairie chickens continue to border on extinction with a single observation considered as a rarity.
- 2. Food and Cover. Until the advent of snows in early November the food and cover conditions for upland game birds in this locality were extremely good. Agricultural crops were good and the seasonal growth of native shrubs and seed-bearing plants has been excellent. Unfortunately, however, the 20 inches of snow received this period has not drifted to any appreciable extent but has largely lain where it fell, thereby covering the stubble and scattered grain in the agricultural fields. The snow has packed and crusted and there is little liklihood that the fields will again be bared until the spring thaws. Some feed for the pheasants is available in scattered straw stacks but prospects are that the pheasant mortality will be extremely high again this winter. It is not expected that our grouse will encounter any difficulty in surviving the winter since they are not as dependent on ground feeding as is the pheasant. Rose hips and other winter buds are bountiful.
- 3. Disease. There has been no evidence of disease among the upland game bird species. There was no open hunting season this fall on any of these species in this section of the state.

C. Big Game Animals.

1. Populations and Behavior. This refuge was not opened to deer hunting this fall. All areas surrounding the refuge were opened, however, and the refuge deer population, which ranges in and out at will, was consequently reduced to some extent. The area outside the refuge in Ward County was opened to the taking of one deer of either sex while the area in Burke County was restricted to bucks. The hunting pressure here was comparatively light because of the good hunting offered by the

Souris refuge and as near as we can determine about 50 deer consisting of one-half bucks and one-half does were removed from this area. This reduction just about offsets the season's increment and we would judge that our wintering population is approximately the same as that of a year ago. This estimate will be verified or corrected by an aerial census sometime in January.

- 2. Food and Cover. Ample browse is available in the wooded coules for the resident deer population and we do not expect that there will be any food deficiencies for these animals this winter.
- 3. Disease. There has been no indication of disease among any of the deer and the animals taken during the hunting season were fat and in good condition. The orippling loss resulting from the hunting season has been negligible. We have a report of only one orippled deer and after a careful post-season examination of most of the favored concentration areas we have failed to observe a single orippled or dead animal.

D. Fur Animals, Predators, Rodents, and other Mammals.

Our population of fur-bearing animals this winter is not large. As indicated in previous reports, our refuge muskrat population is at a very low point as a result of freeze-outs during the 1946-47 winter. A total of six muskrat houses was counted in our aerial census of November 5 and these were at scattered locations in the Upper Lake. Mink signs are occasionally seen and we are undoubtedly supporting about the usual number of these animals. Weasels seem to be almost absent from the area and skunk and raccoon signs this period have not reflected as large a population of these animals as our spring and summer estimates have shown to be present. A few beaver are present at scattered points on the refuge and badgers are common in the upland areas. We have not observed a single fox or coyote on the refuge and it is only occasionally that any signs are encountered. Without doubt the increasingly-popular practice of hunting these animals from airplanes has resulted in a marked reduction in their numbers in these prairie regions and as long as this type of hunting continues the populations of these predators should not again reach serious proportions in this locality.

Rabbits continue on an upward cyclic trend with the snowshoe showing probably the greatest percentage of increase. The numbers of these rodents, however, still are far below the peak which they attained a few years ago. Porcupines are common to abundant and some control of these rodents should be carried out.

E. Predacious Birds, including Crows and Magpies.

The southward migration of crows was much reduced from that of last year with approximately 1,000 passing through in early September. With the advent of winter snows increased numbers of magpies have been

seen in the protected coulees and we have probably 200 of these birds wintering here. The previously-reported "hawk depression" appears to have abated somewhat since we had fairly satisfactory migrations of red-tailed and Swainson's hawks in September. A few American roughlegged hawks have been present this fall and an occasional golden eagle was observed during the early winter. A few great horned owls are present without any perceptible change in their numbers from year to year. A snowy owl was observed adjacent to the refuge on December 2 and two additional individuals were observed on December 21.

F. Fish.

No revised data is available on refuge fish life. Some bullheads are reported to be present in the Middle Des Lacs Lake but we have not seen so much as a single individual. The fish life in the Upper Lake is still an unknown quantity, although we are of the opinion that it is supporting some desirable game fish species.

III. REFUGE DEVELOPMENT - MAINTENANCE

A. Physical Developments.

No new construction projects were undertaken on the Des Lacs Refuge this period. Following is a list of the principal maintenance projects which were completed:

- 1. Transported wheat and barley from fields to granary at Welch
- 2. Loaded grain trucks from Lower Souris Refuge with 485 bu. of Des Lacs wheat and several bushels of grain from Lostwood and assisted Refuge Manager Carter in hauling barley from Upper Souris, Lostwood and Des Lacs Refuges and loading it in boxcar at Kenaston for shipment to Bosque del Apache Refuge.
- 3. Measured hay cut on Des Lacs and Theodore Roosevelt Refuges.
- 4. Mowed weeds from refuge service trails and dikes for second time during the season.
- 5. Cleaned burning torches and burned firebreak around Helle buildings.
- 6. Supervised insulation of Welch residence by contractor and painted kitchen, dining room, living room, entryway to kitchen and stairway of this residence.
- 7. Moved and reinstalled section of refuge boundary fence south of Helle place to inclose new acquisition.
- 8. Replaced damaged and obsolete boundary markers in northern area of refuge and installed additional markers along unfenced portion of refuge.
- 9. Assisted contractor in cleaning furnaces and flues in Qtrs.
 No. 1 and 3 and in office building, installed new filters
 in furnaces of Qtrs. No. 1 and office, and installed new
 stovepipes in pumphouse.

- 10. Remodelled, papered and painted interior of Qtrs. No. 8 and repaired storm windows for this residence.
- 11. Installed new hot water coils in furnace of Qtrs. No. 1.
- 12. With motor patrol repaired service trail along west side of Upper Lake in places where improper drainage and erosion had caused damage.
- 13. Installed another concrete culvert in service trail north of Welch place.
- 14. Repaired Government-owned water meter on City line at Welch place.
- 15. Checked condition of electrical wiring with electrician, installed weather stripping around doors and remodelled coal bin of Welch residence.
- 16. Cut emergent growth from upstream side of No. 8 spillway, raised flashboards on No. 3 spillway and dropped them on No. 4 spillway.
- 17. Cleaned and installed storm windows at headquarters and at repair shop.
- 18. Transported coal from local mine to refuge buildings at least once each week since October 23rd.
- 19. Loaded and shipped several barrels of copper sulphate to Fisheries Stations in the south.
- 20. Constructed and installed auxiliary gasoline tank on Ford Stake truck, Tag #I-16948.
- 21. Constructed new grain box for Ford Stake Truck, Tag No. I-16948.
- 22. Maintained, serviced and made some extensive repairs to refuge automotive and other equipment units to keep them in satisfactory operating condition.
- 23. Installed new hot water heater and insulation jacket for tank in Qtrs. No. 8 and installed insulation jacket on tank in Qtrs. No. 3.
- 24. Expended 390 man-hours of maintenance and repair labor on equipment being used on Job 5070 at the Upper Souris Refuge.
- 25. Expended 102 man-hours of clerical labor on Job 5070 at Upper Souris Refuge.
- 26. Two and one-half man-days spent at Lostwood Refuge with motor patrol leveling back slopes and tops of unfinished service trails and dam.
- 27. Assisted manager at Lostwood Refuge in replacement of dome in furnace of headquarters residence.
- 28. Bladed snow from road into refuge headquarters.

B. Plantings.

- 1. Aquatics and Marsh Plants. None.
- 2. Trees and Shrubs. None.
- 3. Upland Herbaceous Plants. None.

4. Cultivated Crops. None by refuge personnel. A total of 1613.4 acres of refuge agricultural land were leased this season under cooperative agreements. Of this total, 1157.9 acres were planted to crop and 455.5 acres (approximately 28%) were summer fallowed.

The following tabulation presents some comparative data on production and yields for this year and for 1946:

	1946	1947	1946	1947
Crop	Acreage	Acreage	Bu. per Aore	Bu. per Acre
Hard Wheat	667.3	453.4	5.6	12.5
Barley	357.6	334.1	7.1	18.0
Durum	000-000	56.6	-	10.9
Oats	22.7	124.4	17.6	23.5
Flax	158.8	189.4	6.0	5.4
Oats-Millet	7.6	es 00		mp 600
Summer Fall	ow 263.5	455.5		
Totals:	1477.5	1613.4		

It will be noted from the above that our average yields for 1947 of hard wheat and barley were 123% and 154% respectively, over those of the 1946 season. The average oat yield was 34% better and the flax was slightly under that of 1946.

As a possible means of improving the quality of our agricultural lands our share-cropping permits have all been issued for 5-year terms with stipulations to provide for crop rotations and for the summer fallowing of at least one-third of the total acreage each season. In line with this, it will be noted that our summer fallow acreage this season was almost double that of 1946.

On a monetary basis, and using average market prices of \$2.77 for wheat, \$1.98 for barley, \$2.70 for durum, \$1.03 for cats, and \$6.50 for flax, we have secured some rather interesting data on the refuge crop production this season:

	Value	Value G	ov't Share	Total	Gross Returns
Crop	Permittee's Share	Harvested	Unharvested		Per Acre
Hard Wheat	\$10,456.75	\$4099.60	\$1127.39	\$15,683.74	\$34.59
Barley	7,286,40	3134.34	1465.20	11,885.94	35.58
Durum	1,526.20	-	135.00	1,661.20	29.35
Oats	3,011.72	-	-	3,011.72	24.21
Flax	6,708.00			6,708.00	35.42
Totals:	\$28,989.07	\$7233.94	\$2727.59	\$38,950.60	

During the 1947 season 1200 bu. of wheat and 470 bu. of barley, valued at \$4,250, were transferred to the Lower Souris Refuge for depredation feeding and 1239 bu. of wheat and 1026 bu. of barley, valued at \$5460, were transferred to the Tennessee and Bosque del Apache Refuges.

C. Collections.

1. Seed er other Propagules. None.

2. Specimens. None

D. Receipts of Seed and Nursery Stock. None.

IV. ECONOMIC USE OF REFUGE.

A. Grazing.

While the pasture utilization on the Des Lacs Refuge was considerably greater this season than last, it was still far below the carrying capacities established for the refuge. All grazing units with the exception of GU-8 were leased this season but in almost every instance the units were not stocked to the approved capacity. There has been a tendency in recent years by the farmers in this locality to reduce their livestock herds and concentrate their efforts on the production of soil crops. All areas had a luxuriant forage growth and there were no instances where of over-utilization.

B. Haying.

There was a brisk demand for hay from the better haying units on the Des Lacs Refuge this season and the forage growth was heavy. We have consequently had a much larger cutting of hay on the refuge this year than for the past few years.

As a public relations gesture and to reduce the fire hazard potentialities we have this season issued hay cutting permits on the Theodore Roosevelt Refuge to those ranchers in the locality who demonstrated a need for additional hay. A total of 138.7 tons were removed from the North Unit and \$10.1 tons from the South Unit, bringing incomes of \$84.41 and \$155.05 respectively.

C. Fur Harvest.

As an added inducement to trappers to offset the discouragingly low price of most furs, our fur harvest program was liberalized to some extent this season. The program was set up to permit the unrestricted take of all species authorized for removal (which include mink, weasel, skunk, raccom, badger, fox and coyote) and to allow the trappers to retain the pelts of all animals taken with the exception of mink and weasel. The latter were to be shared as usual on a 50-50 basis. Because of the excessively low populations no muskrats or beaver were authorized for removal. As expected, the response to our local appeal for trappers has been negligible. A local farmer has greed to trap during his spare time and a permit has been issued to him but he has not had any success as yet. It was thought that refuge personnel might be assigned this fall to the removal of some of the more abundant predator species but the excessive demand of other high-priority activities has made it impossible to devote any time to this activity.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Progress Report.

No projects of this type were under way this period.

VI. PUBLIC RELATIONS.

A. Recreational Uses.

The Tasker's Coulee Recreational Area was heavily used by the local public as long as good weather prevailed. Little other use has been made of the refuge this period since fishing in the Middle Lake has not been attempted and the ice has not been satisfactory for skating.

B. Refuge Visitors.

Date	Name	Title-Dep't	Purpose
9/1	Jesse Thompson	Reg. Supvr., Law Enf.	
	Roy Ferguson	Pilot	Trans. Thompson
9/2	F. C. Gillett	Reg. Refuge Supvr.	Refuge Inspection
	Dr. Cottam	Asst. Director	Refuge Inspection
	Dr. Swanson	Chief, Research Div.	11 11
	H. S. Peters	Flyway Biologist	11 11
	C. E. Addy	Biologist	12 19
	D. H. Janzen	Regional Director	11 11
9/8	John Steenis	Biologist	Look over refuge
	Seth H. Low	Refuge Mgr-Salt Plain	
9/9	C. L. Horner	Game Mgt. Agent	Duck Depredations
9/27	Harry A. Jensen	Game Mgt. Agent	Grain transfers
10/1-2	Mr.&Mrs.Dick Bird	Canadian Photographer	s Visit
10/7	Harry A. Jensen	Game Mgt. Agent	Enforcement Patrol
	E. S. Brynjolfson	State Warden.	# **
	F. S. Dart	Mgr-Upper Souris	Secure truck
	Clarence Buer	Patrolman "	11 11
10/8	Harry Al Jensen	Game Mgt. Agent	Enforcement Patrol
	E. S. Brynjolfson	State Warden	n n
	Mr. Feldner	N.D. State Hy. Dept.	Hy. repairs
10/10	Harry A. Jensen	Game Mgt. Agent	Enforcement Patrol
	E. S. Brynjolfson	State Warden	11
	W. J. Schmitz	Clerk-Upper Souris	Visit
10/20-21	Irwin Torkildson	Sullys Hill	Secure materials
10/22	Ira Stanley	Reclamation Service	Irrigation plans
10/23	A. G. Huey	Regional Engr.	Plans Upper Souris Proj.
10/27	Wm. J. Schmitz	Clerk-Upper Souris	E.O.D. Des Lacs
	F. S. Dart	Manager " "	Deliver trucks
	J. L. Stillings	Mechanic "	Deliver trucks
	Clarence Buer	Patrolman "	11
10/28	Fred Ege	Const. Foreman	Deliver truck
10/29	E. S. Brynjolfson	State Warden	Enforcement patrol

Date	Name	Title-Dep't	Purpose -				
11/3	M.C. Hammond	Biologist	Bandling data				
11/4	Wm. V. Taylor	Engineer	Inspect structures				
	A. G. Huey	Reg. Engineer	n				
11/5	Ed. Wellein	Pilot-Biologist	Wildlife census				
11/6	Wm. V. Taylor	Engineer	With members of				
	A. G. Huey	Reg. Engineer	Joint Water Commission				
	Fred Ege	Const. Foreman	Look over lumber				
11/17	Willis Bandy	Bu. Land Mgt.	Return keys				
11/19	E. S. Brynjolfson	State Warden	Roosevelt Patrol				
11/20	Johnny Pickar	Mech-Lacreek	Lumber for Upper Souris				
11/25	Babe Kendall	Mech-Long Lake	Service Pickup				
12/9	Ira Stanley	Reclamation Service	Minot Convention				
	E. J. Purcell	11 11	11 11				
12/12	J. U. Fitzgerald	Mont-Dakota Utilities	Power line right-of-way				
12/13	Morris Wright	n n	100 100 100 100 100 100 100 100 100 100				
12/21	Hohnny Pickar	Mech-Lacreek	Load stove & wire				
12/31	Fred Ege	Const. Foreman	Upper Souris plans				
12/31	Mr. Moberg	Dragline Operator	H H H				

C. Refuge Participation.

The manager attended the Research Conference at Bottineau, North Dakota on September 4, 5, and 6, at which time much was learned concerning the over-all waterfowl picture and the difficulties encountered in establishing the annual waterfowl regulations.

The motion picture "Fighting Large Brush and Grass Fires" was presented, in collaboration with the Lostwood Refuge, to the Kenmare Public Schools on October 3. It was viewed by 250 students and teachers and was very well received.

D. Fishing.

The fishing season closed on September 15 in the Middle Lake. No fishing was done on the refuge this period.

E. Hunting.

By the closing date of the waterfowl hunting season a total of 376 duck stamps had been sold by the Kenmare post office. This would mean that nearly one person out of every five in the town hunted migratory waterfowl this fall. Because of the "bluebird" weather, reduced bag limits, and primarily the restriction on shooting hours the individual duck Kill was not large. The best hunters did not average more than three birds per trip and a large number made many hunting forays without success. It is our opinion that crippling losses this fall were higher than normal—a result of the clear, bright weather and mid-day shooting which tended to make the birds fly high and to induce the hunters to attempt kills at too great a distance.

The deer hunting in this locality was highly successful this fall and a majority of the large number of hunters who went into the field had no difficulty in bagging an animal. The Souris refuges with their controlled hunting and large deer populations were favored by most of the hunters. Consequently, the pressure was not great in the open territory surrounding this refuge. As near as we can determine, approximately 50 deer were removed from this locality. This will about equal the season's increment.

F. Violations.

While as much enforcement patrol was undertaken as refuge operations would permit, no violations were apprehended by Des Lacs Refuge personnel during this period. Patrol assistance was furnished by Game Agent Harry A. Jensen and State Warden E. S. Brynjolfson during the first four days of the season and Mr. Brynjolfson furnished some splendid cooperation during the balance of the waterfowl season and during the subsequent open deer season.

VII OTHER ITEMS.

A. Items of Interest.

Mr. William J. Schmitz entered on duty on October 27, 1947, as refuge clerk (clerk-typist) by transfer from the Upper Souris Refuge. We have been without clerical assistance since the transfer of Mr. Harrison to the Lower Souris Refuge last January and Mr. Schmitz, with his background of experience, is a very welcome addition to our family.

B. Photographs. None.

Prepared and submitted by:

Forrest A. Carpenter Refuge Manager

January 16, 1948

Approved:

Date:

Acting Regional Director

JAN 23 1948

Refuge Des Lacs Refuge Months of September to December 194 7 and of special september 194 7 (1) (6) (2) (4) (5) (3) Peak Concentration Young Produced Species First Seen Last Seen Total Estimated Estimated **Rroods** Common Name for Period Number Date Number Date Date Seen Total Number I. Swans: Whistling swan Home II. Geese: 10/15-50 100 Canada goose 50 Cackling goose rue report Brant 9/24 9/24 40 40 80 White-fronted goose Snow goose Tem Blue goose Hone III. Ducks: 10/25-11/15 11/19 Mallard 60,000 100 62,000 Black duck Hame bhose, Gadwall 1 1000 9/1-20 10/13 1500 Per ug berro Baldpate 9/10-20 10/15 500 500 Per 11/7 Pintail 9/10-10/15 2000 Several 3500 11/7 Green-winged teal 9/20-10/5 200 Per 200 Blue winged teal 9/1-20 10/29 1500 2000 Several Cinnamon teal Tone Shoveller 9/10-20 10/13 200 Tow 200 Wood duck Tane 10/13 9/15-21 Redhead 200 Fow 500 Ring-necked duck Tone 9/10-10/5 11/7 Canvas-back 400 700 Per 10/25-11/1 11/7 Scaup 600 600 Pow Golden-eye None observed Hane Buffle-head

3-1750 Par BLogne grows (July 1946)

IV. Coots

Ruddy duck

Am. Morganser

(over)

9/10-20

9/1-5

700

2500

10/23

11/13

Pour

Mone observed

11/19

Form NR-1

Hone

750

10

(July 1946)

Total Production:										
Geese	Total waterfowl usage during period 75,140 Peak waterfowl numbers 69,690									
Coots	Areas used by concentrations No obvious preferencegover	ned								
Brook ye - pood (4)	MODE DESCRIPTION OF THE PROPERTY OF THE PROPER									
Golden-eye	largely by location of grain field when they were feeding	•								
Scaup	000 10/25-11/6 10W 11/7									
Canvae-back	-Principal nesting areas this season									
Radhead Ring-necked duck	200 19/16-21 100 19/10									
good duck	de la companya de la									
Shoveller	Reported by Forest A. Carpenter, Refuse Mgr.									
Cinnamon teal	TORR STATE TOTAL STATE TO STATE STAT									
Green-winged teal	INSTRUCTIONS									
Crear-singly teal	roop latro-moles seasier rra									
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.									
(2) First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.									
(3) Peak Concentra-	The greatest number of the species present in a limited interval of time.									
tion:	The greatest number of the species present in a limited interval of time.									
(4) Last Seen:	The last refuge pecerd for the species during the season concerned in the reporting									
Canada goose	period.									
(5) Your Produced										
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.									
(6) Total:	Estimated total number of the species using the refuge during the period. This figure									
Species 13	may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.									

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

MATERY OWL

2338

Form NR-1

3-1751 Form NR-1A MIGRATORY BIRDS (other than waterfowl) III. Doves and Pi Port (Nov. 1945) Refuge Des Lacs Refuge Months of September to December (5) (2) (1) (3)(4) Total Species First Seen Peak Numbers Last Seen Production Estimated Number Total # Total Colonies Nests Young Number Common Name Number Number Date Date Number Date Duck h I. Water and Marsh Birds: 11/19 9/1-20 100 2 Eared Grebe 9/1-20 10/29 500 Western Grebe Pied-billed Grobe 2 11/4 White Pelicaneses 9/1-20 Double-Created Cornersut 300 10/29 Creet Blue Heron 9/1-20 10/11 Black-crowned Hight Heren 100 Fow . 9/1-20 American BitterBesses Several 9/20 9/20-21 effendhill erane Iwo how We sandhill granes actually used refuge; observations were of those passing through on migration. , and a . will you hallooms and .Hamus) .T .I U. Checklist, 1931 Editio .U.O.A ai quora jail bas .a A edd at Use the correct names as found Species: to the birds listed on noijibbs al etc. "tern" Seagull. general terms as Avoid II. Shorebirds, Gulls and ooliaa maijioger o other species occurring on refuge aring th Terns: M Das Isool to to those species 9/1-10 priete spaces Greater Follow-logs of the Cavilformes to Ci significance. 9/1-10 Lesser Tellow-legs erns (Charadriifo 200 ·II 9/1-15 Long-billed Dowitcher 500 mbiformes Several 9/15 Wilson's Phalarepe... Passerifoling stalldast 15,000 9/1-10 11/3 17,500 The first refuge record for the species for the season concerned. irst Seen: eak Numbers: The greatest number of the species present in a limited interval of (8) The last refuge record for the species during the season (oncerned ast Seen:

Estimated number of young produced based on observations and actual counts.

(over)

Estimated total number of the species using the refuge during the reriod concerned.

(6)

100

500

100

100

300

20

100

20

100

100

200

500

100

:nolioubor

(1)	(2)	(3	3)	(4	1)	tole he are	(5)		(6)
I. Doves and Pigeons: Mourning dove	Decarber	ot	the state of the s	Ald raura than wate Months o	MIGH (other	9	Lace Refu	sollog	Refu	Form NR-1A (Nov. 1945)
White-winged dove	19	een	(4) Last S	8190	(3) Peak Num	een,	(2) First S		(1) becies	2
V. <u>Predaceous Birds</u> : Golden eagle	T redmuN	10/18	Number	Date	CONTRACTOR OF THE PARTY OF THE	Date.	Number		non Name	01 Com
Duck hawk Horned owl	••••••	01/19	10 200	Resident 11/1-12/3		9/10		:abria	nd Marsh	8 TOTA 10 I
Raven		03/0/	1000	9/1-20	g oos Few	11/3			00 00020	1000
Red-tailed Hawk Sminson's Hawk Am. rough-legged hawk Sparrow Hawk	1	11/8	100	9/20-26	Still h		*******	want. Heren	an. ded Corne Heron	200 200 10
Short-eared Owl	1	12/7 10/24	0 0 0	/1-20	36111.h	11/17	Latovos		therm	10
, mo.A.	onsta no	dwordt g	minang as	ed to er	mr amolds					assistance
				INSTRUCT		R. T. G	umell.			in A.O.U.

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes, and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes; Strigiformes and predaceous Passeriformes)

Long-billed Dowitcher

(2) First Seen: The first refuge record for the species for the season concerned.

17,600

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the refuge during the period concerned.

Refuge Des Lacs Refuge, Kenmare, H. Dak. Months of September to December , 1947 (3) (4) (5) (7) (1) (2) (6) Young Sex Species Density Remarks Removals Total Ratio Produced Number broods obs'v'd. Estimated Total For Restocking For Research Estimated Hunting number Pertinent information not Acres Cover types, total using specifically requested. per List introductions here. acreage of habitat Bird Percentage Refuge Common Name 400 There was no open hunting Ring-necked Pheasant 2,000 acres agric. OZOseason in this locality this land, 8,000 acres year on any of the upland game 150 grass, 5,000 acres 87 OTTO: Europ. Partridge bird species. brush: 15,000 acre 500 total of upland 0/40 Sharp-tail Grouse game bird habitat 10 1300 Tone-Prairie Chicken tly to wild turing, pheasants, etc. univer saligns invior shift dalleva th seboors gande before total sumber in each octagors respond during the report perford. debinated total mumber us ing the refuse during the reacht partod. This ma ntaries and the entire and pint intrapels send all gerald resident election SHOULDES. Indicate in bosses in the determine population and area downed in envery nologie oblem pertinent information out specifically re . .. * Only columns applicable to the period ofverel should be

Form NR-2 - UPLAND GAME BIRDS.*

(1)	SPECIES:	Use correct common name.	
		(1) (5)	
(2)	DENGTTV.	inplies newticularly to these enestes considered in recovery programs (nub	74

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.

Refuse Dos Laco Beruse, Montero, H. Mail. Months of

- (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.

BIG GAME

Refuge Des Lacs Refuge, Kenmare, N. Dakon Calendar Year 1947

(1) Species	(2) Densi	er, white-tai	(3) Young Produced	losid ron Re	(4)	b elu	M .		(5) sses	In	(6) troductions	Estime Total Popular	ated Refuge	(g) Sex Ratio
	Cover types	habitat seger	Samuel - Balling	Hunting For Re-	Sold	For Research	Predation	Disease	Winter Loss	Number	sm stab beli	At period of Greatest use	As of Dec.	
White-tailed deer	The second secon	ltural land	ed in Will disconline vey metho	. 8:	lode ge gest gest	te eg e elg e elg	nas bace	ora La ev be	Stand possi entati bdidat	tc. here pres		und 200 has a no		M-2 to F-3
	* The	refuge was no	ub bevome	o lunt	ng	doss	OVE	ls	shown	are		ealav		
		th stock was a			s 20	noi	slu	iod	nated	estí		ODUCTIONS:	(7) TOT	
	determined fr	ach species as	alea of e								Indicate	RATIC:	(8) SEX	

Remarks:

Reported by

merca 000, El

Sex

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: 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 total number of young produced on refuge.
- (4) REMCVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE
 POPULATION: Give the estimated population of each species on the refuge at period of its
 greatest abundance and also as of Dec. 31.
- (8) SEX RATIC: Indicate the percentage of males and females of each species as determined from field observations or through removals.

Remarks:

Refuge DAS MAR MAR (DAMA NOD) AND THE DEED

Year 194 7

Botulism	Lead Poisoning or other Disease
Period of outbreak Period of heaviest losses Losses: Actual Count Estimated (a) Waterfowl (b) Shorebirds (c) Other	Species affected Number Affected Species Actual Count Estimated
Number Hospitalized No. Recovered % Recovered (a) Waterfowl (b) Shorebirds (c) Other Areas affected (location and approximate acreage)	Number Recovered Number lost Source of infection Water conditions
Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc. Condition of vegetation and invertebrate life	Remarks

Refuge Des Lass National Wildlife Refuge

Year 194_

		Sport Fishing			l Fishing	Rest	ocking	Number re-
Species	Relative Abundance	Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	moved for Restocking
Dallhood	Pour	10	Four					
Perch	To evidence		Home					
Grappies	No evidence		Im					
	The above in	coma then ap	lies to Mi	idle lake,	the only po	rtion of	estage	
	open to publicum doubtedly a						re are	
.,,								

REMARKS:



PLANTINGS (Marsh - Aquatic - Upland)

Refuge Des Lacs National Wildlife Refuge Year 1947

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature	Date of Plant-ing	Survival	Cause of Loss	Remarks
plantings made this	period.	Town of the						
	Land.							
Pro E.								
kr-1-4								

TOTAL ACREAGE PLANTED:

© → © N O		wernge	0 0	. 14	. 2		ai 134.	2	E 7	15	42675
Permittee	5 5 5 5	Unit Ave. Permittee's Government's Sha									are or Return
(If farmed by refuge	Permit	or	Crops	Yield	Sha	are	Harve	ested	Unharv	rested	Compensatory
personnel, so indicate)	No.	Loca-	Grown	per	14	Bu.Har-	- E	100	L 6 5		Services, or
D. 4 0 1 5	2 3 2 -	tion	5 8 5 5	Acre	Acres	vested	Acres	Bu.	Acres	Bu.	Cash Revenue
Alvin Stroklund	17349	AU-1	S. fallow	-	81			-	9	- 8	12.0 acres fallow
Orin Ankenbauer	17345	AU-2	S. fallow		B .		-		***	2	18.0 acres fallow
4 4 5 5	Cal	AU-19	Wheat	10.0	-	-			27.5	275	1.Q E
9 70 9 4	D 20 10 10 10 10 10 10 10 10 10 10 10 10 10	AU-20	Wheat	8.9	54.3	485 350	-		20.6	247	8 8
T 8. 2	00° 00° 00° 00°		S. fallow	12.0	29.0	980	market Cours		20.0	221	\$2.0 acres fallow
8 9 5 4	9 0 2 0	AU-21	hheat	8.9	61.2	548	C VEHICLES	platikes of Act		DILINITE COLOR	
A MARKET	10 8 6	118	2010			0 0 0	0	70		3	O O NA
Maurice Thompson	17544	AU-S	Wheat	15.8	85.4	1336	28.5	449			B IN
Alfred Helson	17844	AU-4	Wheat	13.6	21.0	300	7.0	82			A T M
		6 7 10	8. fallow	-	-	-	-		-	-	11.5 acres fallow
2 2 6 7 6	100		O N N N	8.8		F 6 E	8		1	(W O	N O CO
Bolvin Jenson	17365	AU-5	Barley	19.2	28.5	448	7.9	156		9 8	11.8 acres fallow
100 4 64 10	HO BE	102	S. fallow			5 5	-	***		a di	17*0 #dies 1#170#
Johannes E. Nielsen	17548	AU-6	Dustan	11.2	41.6	466	8 0				og Si
CORTAGO B. MECHON	11080	B 00 2	Barley	15.2	40.7	646	27.4	387+			3
TY DO DE	E C	1 2 6 1	S. fallow	18	-	-	BAL		-	-	32.0 acres fallow
Percy Wade, Jr.	17547	AU-7	S. fallow	5 2	-	9		-	-		73.3 acres fallow
10 2 2	50	0 0 0	during day	B EV S		11 9 11	5 10		(Inclu	des 30	bu. eaten by deer)
. 14 8	W.T.	9 4 9 5	0 0 0 1 0	9		D 74 P	9 0	0	E 19	N III	
Summary of Crops Grown	Crop	Acrea		ttee's		200			ent's Sl		Total Revenue
Y I I I I	THE TANK	10 10	Acres	s bus	hels		Harvest res	Bu.	Acre	arveste	a Bu. \$
W - 9 L 9 E	1000	TO DE	Ed de	9 17 9	A A	O G AC	162	Du.	ACT		Ψ
9 th th as 2 10	2 2 3 5	P 2 2 2	SEE FOLICHIE	ic seine	FOR S	SUPLIARY)	5	5, 100	0 0	9 49	7
D D H 0			2 1 1			2 0				3 3	(0)
2,54,54	0 0 0 0 0		4 5 5 6 4	9 1	6	a. op 0d .	60		H W		

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

<u>Permittee</u> - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the <u>Permittee</u> column.

Permit No. - List the number of the Special Use Permit issued to the individual.

<u>Use or Location</u> - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

<u>Crops Grown</u> - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. <u>Unharvested</u> - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the <u>Bushels</u> column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

CULTIVATED CROPS

Des Lacs Refuge

0 12 0 00	9 7 6	verug	044	ANA ANA		1e	ar 194.	2	E 5			42675
Permittee	1 2 0 1	Unit	10 8 图 6 年	Ave.	Permi	ttee's	OHE	G	overnmer	it's Sha	are or Retur	n
(If farmed by refuge	Permit	or	Crops	Yield	Sh	are	_Harve	ested	Unhary	rested	Compens	atory
personnel, so indicate)	No.	Loca-	Grown	per	8	Bu.Har-	- 10	2			Service	s, or
5, 50, 5	8 9 9	tion	6 6 4 4 1	Acre	Acres	vested	Acres	Bu.	Acres	Bu.	Cash Re	venue
Julius Hansen	18245	AU-8	Barley	33.8	41.1	1590	-	-	-	-	B	
H G B B H	000		S. fallow				-	-		-	45.8 acres i	allow
and	D. P.	AU-9	Barley	20.0			20.0	404		-		
4 4 5 6 7	E & E	0 +	Flax	8.0	32.1	256	***	-		-	Q K	
	LA THE	AU-11	Wheat	16.2	6.7	108	31.7	512			8 . 8	
	(1) 52 20 10	- 70 P	Flex	7.9	48.6	384	-				60 181	
900	8g 0 0	AU-12	Wheat	15.2	26.6	404		F12 (1911)	-	-	E 68	
Billie Mortensen	17559	AU-10	Wheat	10.3	15.5	130	39.8	437		U	5 5 5	
	11298	¥0-10	Oats	21.2	105.9	2200	29.8	451		200	66	
- W 6 2 E	10 11		S. fallow	6406	200,0	2/300	-				58.4 acres i	N. 17 ans
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Roelf Aufforth	17350	AU-14	Berley	9.7	13.1	65	37.9	430			1. 1.2	
一	4 2 3 3	Letter 1	Flax	3.5	100.5	350	-	-		2.0	2 20	
	100	「	S. fallow	5	-	O TO STATE OF THE PARTY.		-	-		79.8 acres 1	allow
2 2 4 4 4 4	12 to 10 to		E E E	14		10 00 10	1 2	- 91	22	7.5	4	
Floyd Bryan	17540	AU-15	Wheat	10.6	18.9	200	-				100	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	00 00		Barley	25.0	8.0	180			10.8	260	0 0	
	20	AU-16	Durum	10.0	10.0	100	-		5.0	50		
20 E 0 E 0 E	0 5 6	5 2 18	S. fallow			-	-				23.7 acres i	allow
	10	の情には	0	D. E. S.		181	2 6		18 1			
T S B La	5 %	t Sha li	0 0 5 4 6	2 3 3	HA C	0.0	200 m	44	CHAP	9 5	Section 1	Market Land
2.0	1 2 2	0 4 6	000000000000000000000000000000000000000	1			9 0		E 18		9	
Summary of Crops Grown	: Crop	Acres		ttee's		1 2 2 6			ent's Sh			Revenue
V I I I I I I I I I I I I I I I I I I I	中 图 日 四	1.6 6	Acre	s Bus	hels		Harves			rveste		
D D D D D D D D D D D D D D D D D D D	100	0 0 0	De de		0 0	AC	res	Bu.	Acre	es el	Bu. \$	
0 0 0 0 0	0 0 0	(90)	FOLLOWING	SHIDDER TO	OR STAG	IADA)		E la	0 0	0 0	0	
2 4 0 0	8 0 0 0	4 4 8	S. S. S. MILAND	Aritinar 'L'	Ort 19 OPER	MARKET J.				4 00		N
V La Strate	0 0 0 0 0		0 5 5 5 5	8	9	0 00			B 2	B. 0		10
LL 42 4 10 4								• • • • • • • • • • • • • • • • • • • •				

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

<u>Permittee</u> - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the <u>Permittee</u> column.

Permit No. - List the number of the Special Use Permit issued to the individual.

<u>Use or Location</u> - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

<u>Crops Grown</u> - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

<u>Permittee's Share</u> - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the <u>Acres</u> column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the <u>Bushels Harvested</u> column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's <u>Share</u> column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. <u>Unharvested</u> - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the <u>Bushels</u> column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

Flax

5.4 bu.

CULTIVATED CROPS

Refuge Des Lacs Refuge Year 194 7 42675 Permittee Unit Permittee's Government's Share or Return Ave. (If farmed by refuge Permit or Crops Yield Share Harvested Unharvested Compensatory personnel, so indicate) Services, or No. Loca-Grown Bu. Harper Acres vested Cash Revenue tion Acre Acres Bu. Acres Bu. 9.8 19.5 264 132 13.5 Wheat AU-17 Richard Hansen 17346 9.8 193 19.7 19.5 385 Barley 19.7 acres fallow S. fallow 216 Barley 20.9 10.3 218 10.4 Myrl V. Kleinsmith 17342 AU-17a 724 35.3 20.5 AU-18 Oats -20.4 acres fallow S. fallow 4.1 40 9.8 Joe Ankenbauer 17841 AU-22 Barley -5.1 6.2 42 Flax -6.1 acres fallow S. fallow Summary of Crops Grown: Crop Permittee's Share Acreage Government's Share Total Revenue Acres Bushels Harvested Unharvested Avg. Yield per Acre \$ None Acres Acres 107.0 309.1 3775 Whoat 453.4 103.6 185.2 3680 1583 Barley 334.1 740 12.5 bu. 45.3 libeat 566 5.0 18.0 bu. 56.6 51.6 0 0 Barley Datema 124.4 124.4 2924 Durum 10.9 bu. Oata 189.4 189.4 1032 Oats 23.5 bu.

Summer fallow

455.5

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

<u>Permittee</u> - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the <u>Permittee</u> column.

Permit No. - List the number of the Special Use Permit issued to the individual.

<u>Use or Location</u> - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

<u>Crops Grown</u> - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. <u>Unharvested</u> - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the <u>Bushels</u> column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

Refuge Des Less Matismal Wildlife Refege Year 194 7

		Colle	ctions	Rece				
Species	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source	Total Amounts on Hand	Amount
None								
	EL ST.							
				3 x 2 x				
	1 . A L. 10							
						意识者,		
				Service Control				

REFUGE GRAIN REPORT

Refuge Des Lacs Refug	e. Komere	. N. Dale.				a generalization con	Months of.	Sept.	thru Do	19 ⁴	17.
(1) boired	(2) ON HAND	(3) RECEIVED	(4)	viegei "	GRAIN DI	(5) ISPOSED ((6) ON HAND	ed fil	(7) ROPOSED US	SE
VARIETY	BEGINNING OF PERIOD	The state of the s	TOTAL	TRANS- FERRED	SEEDED	FED	TOTAL	END OF PERIOD	SEED	FEED	SURP.
Corn cad1 c	20	a) <u>Amoo</u>	20	slegt to	vinger bed sincer	conside	ed 1 and o	20	rigines.	20	0
Wheat emulov guit	845	531	1876	485	— araqindi afantnoo	51000	485	891	ensed te to	91	8000
Barley viso ebs	538	603	1156	702	A CAPTER FORM	• 80	782	404		54	380
Screenings	75	on MR-9.	bele 76 ed	litw.sba	sa indro	atic and	ups enler	01 75 mg			75
Spelts ee -618de	191	s douge .s	191	mora bo	ring gairs		per mista restraction	191	(5)	191	0
							Columns 3		(A)		
							eps Column			AN I	
	umu 6.	ed in Col	grain list	lo seld	by varie	nwabylaan	d beaugorg	inis is a	(7)		
	1		elving.	out bus	gniqqida	ion moli	ilroad sta	er Jearask	(8)		
			ry", etc.	e grains	retraupha	eH" : eg	diel no be	Mare, stor	(0)		
rred, data	in transfe	erg to no	destinati	ni heqq	ide aisty	10 0011	oz edi ere	. 975024	(01)	1 - 1 - 7	

- (8) Indicate shipping or collection points Keymare, North Dakota
- (9) Grain is stored at ** Lake Ilo Des Lacs grain stored in Welch and Powderhouse granaries.
- (10) Remarks * Eaten by deer while stock piled in field. 485 bu wheat transferred to Lower Souris and 702 bu. barley transferred to Bosgne del Apache Refuge this period.

Ban Lery

gylang.

Refuse Jon Laca Server, Mermare, H. Golf.

REFUGE GRAIN REPORT

NR-8a

FRE

9

REFUGE GRAIN REPORT

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

Report all grain in bushels. For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lbs., Corn (ear)—70 lbs., Wheat—60 lbs., Barley—50 lbs., Rye—55 lbs., Oats—30 lbs., Soy Beans—60 lbs., Millet—50 lbs., Cowpeas—60 lbs., and Mixed—50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately: Corn, wheat, proso millet, etc. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share-cropping, or harvest from food patches.
- (4) A total of Columns 2 and 3.
- (6) Column 4 less Column 5.
- (7) This is a proposed breakdown by varieties of grain listed in Column 6.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters grainary", etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

(8) Indicate shipping or collection points ... Markets, Market Delecte

(9) Grain is stored at winter the Das Inco grain stared in Welch and Pomicrhouse grannian.

(10) Remarks * Return by Adam valids at sail at the fait of the former transferred to Lower Courie

and you am being from Jorged to Mengalo del America and toy here

HAYING AND GRAZING

Refuge Des Lacs Refuge, Kermare, North Dakota Year 194.7

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Use Months	Hav Har-	Period of Use From - To	Rate	Total Income	Remarks
Ankenbauer	17526 17525	GU-11 GU-4	385 185	178.00 56.81 59.74		7/1-11/15/47	.50 1.00 .50	89.00 36.81 29.87	Cattle Horses Cattle
John Aufforth Floyd Bryan	17550	GU-9b	220	96.22		6/1-11/15/47	.50	48.11	Cattle
Levi Emmel	17529	GU-la	180	104.74		7/1-11/15/47	.50	52.87	Cattle
Clarence Gissel	17528	GU-10	205	54.52			.50	27.26	Cattle
Frans Gissel	18255	GU-1	195 •	87.5		7/1-10/15/47	.50	48.75	Cattle
Clarence Hillestad	18619	GU-7	1415 **	44.61		9/3-11/15/47	1.00	44.61	Horses
Guy H. Johnson	18254	GU-1		38.		7/1-10/15/47	.50	19.00	Cattle
F. G. Kaufer	17524	GU-2	115	74.20	Hardense 1	7/1-11/15/47	.50	.87.10	Cattle
Lawrence Mott	15614	GU-9	228	152,62		7/20-11/15/47	.50	76.31	Cattle
J. E. Nielson	17525	GU-5, 8	320	95.24		7/1-11/15/47	.50	47.62	Cattle
Paul Overton	18048	GU-7	••	42.58			.50	21.29	Cattle
J. B. Schou	18064	GU-8	285	159.58	A Same	7/1-10/31/47	.50	69,69	Cattle
Percy Wade Jr.	17527	GU-76	890	121.88		7/1-11/18/47	.50 1.00	60.69	Cattle Horses

Totals:

Acreage grazed 4128

Animal use months 153214

Total income Grazing \$710.08

Acres out for have

Tong of hav out

Total sincere Herine.

HAYING AND GRAZING

Refuge Des Lacs Refuge, Kennare, N. Dak. Year 194 7

Permittee	Permit No,	Unit or Location	Actual Acreage Utilized	2000	Tons of Hay Har- vested	Period of Use From - To	Rate	Total Income	Remarks
E. Ankenbauer	17501	HU-40,5,5a	120		18.54	7/1-11/15/47	1,00	18.54	
0. Ankenbauer	17506	HU_1, 7	121		41.86		1.00	41,86	E
John Aufforth	18618	HU_10	85		9.42	8/4-11/15/47	- 50	4,71	
Floyd Bryan	17504	HU-40	15		4.81	7/1-11/15/47	1.00	5.00	Down payment exceeded
Gunnar Gagnum	17508	HU-8	50		22.94		1.50	11,47	total paym. required
Richard Hansen	17521	HU-4b	22		11.67		1.00	11.67	
Myrl Kleinsmith	17502	HU-6	20		10.00		1.00	10.00	
Alfred Nelson	17505	HU-1B	5	1	2,22		1.00	2,22	
				,				1	
4.0				T ger			T. W.		
		a yell					A Partie		
14 14 14 14		a size		· E			2		
		la l				<u>-</u>	1,545	10-45/	
.,				- - 2	7 7 8	-		T. HE & Touris	

Totals:

presectives conseques Desc

TOTAL TRANSMISSION OF THE PROPERTY OF THE PROP

Acreage cut for hay 888

Tons of hay cut 121.46

Total income Haying \$105.47

Refuge Des Lace National Wildlife Nofage Year 194 7

Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B.F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut
None								
						,		

Total acreage cut over	Total income
No. of units removed B. F	Method of slash disposal

Ties_

2

LAKE ILO REFUGE.

I. GENERAL.

A. Weather Conditions.

Precipitation was below normal at the Lake Ilo Refuge during the September-December period. Temperatures were above normal and the small amount of snow received during the period had almost disappeared by the end of the period. Following are data on maximum and minimum temperatures and precipitation for the periods

Month	Precipitation	Snowfall	Max.Temp.	Min.Temp.
September	•66		89	25
October	.35	2.0	84	24
November	.52	4.2"	59	- 2
December	•33	4.7"	47	-10
	1.86	10.9" Ext	remes 89	-10

B. Water Conditions.

The lake level was 6" below spillway crest at the beginning of the period and 9" below spillway on November 1. The lake froze over on November 9 with the exception of a small hole near the center which has been kept open by the ducks. The ice level at the close of the period was 9" below spillway crest and a measurement on December 31 revealed that it was 15" thick.

C. Fires. None.

II. WILDLIFE.

A. Migratory Birds.

Approximately 6,000 ducks were using the refuge at the beginning of the period. By October 1 this number had increased to 15,000 and a peak concentration of approximately 40,000 was reached during late October and early November. We estimate a total waterfowl usage of 69,200 for the report period. Approximately 6000 Canada and whitefronted geese used the refuge during migration. None of the migrating goose flocks were large and none remained on the refuge for any great length of time. Five lesser scaups and approximately 8,000 mallards were present on December 31 on the open water of the lake. An albino shoveller was present on the area the latter part of October.

Between 3,000 and 4,000 shorebirds used the refuge this period. Ninety white pelicans were present at the beginning of the period and remained until the latter part of October. Forty great blue herons were present on the area on September 1 and remained until early October.

B. Upland Game Birds.

Nesting conditions for upland game birds were not satisfactory this season due to the late spring and heavy June rains. The broods were small and a number of nests did not hatch. Approximately 150 pheasants were present on the refuge prior to the hunting season and this number had increased to approximately 200 by the close of the season. There was less hunting in this vicinity than for the past several years and the hunting around the refuge was much lighter than usual. The refuge populations of sharp-tailed grouse and European partridge appear to have decreased approximately 50%. Probably 50% of the local farm lands were posted this season and this, together with the decreased number of birds, prompted a large number of prospective hunters to seek their quarry elsewhere. Most of the local citizens felt that an error was made in opening Dunn County to upland game bird hunting this fall.

The farm crops in this locality were excellent this season and winter food for upland game birds is abundant. With favorable weather prevailing thus far the prospects are that the upland game birds will survive the winter without excessive mortalities.

C. Big Game Animals.

No big game animals were seen on the refuge this period.

D. Fur Animals, Predators, Rodents and other Mammals.

The muskrat population, while still not large, appears to have increased considerably over that of last year. Several houses are in evidence in the southwest portion of the refuge and we would estimate that a present population of 100 of these fur bearers. Probably 20 to 30 mink are using the refuge. Four have been caught to date by the share-trapper. The water level is higher than usual this winter and the mink seem to stay in their dens or do their travelling under the ice. The skunk population is not large. Three have been caught to date by the share-trapper. No coyotes have been observed on the refuge this period but there appears to be a few present as tracks have been observed several times. Rabbits appear to be on the increase again as more have been observed than last year. Two beaver were present on the refuge this period. They out 74 cottonwood trees and numerous willows in the recreational area and, to prevent further destruction, were removed in live traps by members of the State Game and Fish Department on October 18.

E. Predacious Birds, including Crows, Ravens, Magpies.

Four golden eagles, three prairie falcons, a duck hawk, and a few great horned owls were present on the refuge during the latter part of the period. The hawks have been catching ducks from the wintering flock and the eagles were observed taking the captured birds away from them on several instances.

F. Fish.

The catch of fish from Lake IIo this season appears to be about equal to 1946. Fish populations have undoubtedly increased since water conditions were very good this year. Approximately 15,000 wall-eyed pike were planted in the lake during October by the State Game and Fish Department. Approximately 300 man-days of fishing occurred this period up until September 15 when the season closed. The September catch was principally perch, bullheads and bluegills. As reported on Form NR-6, the total estimated catch during the three-month fishing season was: bass, 500; bluegills, 4,000; crappies, 8,000; perch, 4000; catfish, 200; bullheads, 4,000; and suckers, 800.

III. REFUGE DEVELOPMENT-MAINTENANCE.

A. Physical Development.

Mr. Dinkins was on annual leave during the greater portion of the month of September, spent most of October on the dike repair project at Pretty Rock, and devoted a large portion of the month of November to easement refuge inspections and deer hunting patrol at the North Roosevelt Refuge. The following maintenance projects were undertaken, however, at Lake Ilo during the period:

- 1. Moved storage building from below dam to a site near headquarters. Installed new sills and wind braces and placed building on temporary foundation. This project has not been completed.
- 2. Cleaned out creek channel below spillway to lower water impounded on apron and in bowl of spillway. The channel was lowered approximately 18" for a distance of 200 yards.
- 3. Serviced and performed minor repairs on Ford dump truck I-16956, Chevrolet Pickup #I-16946 and the Delco electric generating unit.
- 4. Mowed and removed weeds from refuge roads.
- 5. Hauled two loads of scoria and repaired surface of road.

B. Plantings.

72 acres of wheat, barley and millet were planted this season under cooperative agreement. The refuge share was left unharvested but was either swathed or dragged to permit better utilization by wildlife. The crops this season were above average.

IV. ECONOMIC USE.

A. Grazing.

A grazing permit was issued to Mr. Fred Larsen of Killdeer, North Dakota, for 30 head of cattle for the July 15-November 15 season.

B. Haying.

Three hay harvesting permits were issued this season, under which 69 tons of hay were cut. Due to the good quality of the prairie hay there has been considerable demand for refuge hay harvesting privileges.

C. Fur Harvest.

A trapping permit has been issued to Mr. A. B. Rosendahl of Dunn Center, North Dakota, to authorize the taking of mink, weasel, skunk, fox and coyote from the refuge. The mink and weasel pelts are to be shared on a 50-50 basis and the trapper is allowed to retain the pelts of the other animals taken. As has been indicated above, his catch as of December 31 consisted of 4 mink, 1 weasel and 3 skunks. Mr. Rosendahl has sold his share of the mink for \$37.50 each.

VI. PUBLIC RELATIONS.

A. Recreational Uses.

The recreational area which is maintained by Dunn County under cooperative agreement was not kept up to its usual standards this season due to the impossibility of securing adequate help. The area was kept clean and the trees were cultivated but the grass was not cut. Since freeze-up several skating parties have been held in the area. It is believed that the public use of this area has been equal to previous years.

B. Fishing.

The fishing was good this season and the fish were much better eating than usual because of the improved water conditions. Crappies were the principal fish taken during the early part of the season but these were replaced by perch, bluegills and bullheads during the closing days of the season.

CHARLES LAKE

I. GENERAL.

The snowfall and precipitation was below average in the vicinity of the Charles Lake Refuge this period. The crops in this locality were good. This area was not visited by refuge personnel during the period. The beaver have thus far been successful in maintaining their dam acress the outlet and the water level has remained higher than in the past.

II. WILDLIFE.

Waterfowl unquestionably used this refuge to some extent during the fall migration and we are estimating a population comparable to previous years. Ring-necked pheasants continue to be numerous in this locality. The hunting pressure was extremely heavy here, however, and the refuge undoubtedly furnished a sanctuary for record numbers of these birds.

III. PHYSICAL DEVELOPMENTS.

To our knowledge the Mott Sportsmen's Association has not made any attempt to repair the damaged spillway on this area.

HIDDENWOOD

I. GENERAL.

Precipitation and snowfall in this area were below average for the period. The water level was lated the high spring level when visited on November 5. The bulrush growth is much sparser than it has been in the past.

II. WILDLIFE.

We estimate a total waterfowl usage of 9880 for this area during the period with a peak population of 7260 birds during late October. Very few upland game birds were present on the area this period but there are probably as many as last season.

The muskrat population is probably 1/6 of what it was last season but mink appear to be more numerous. Trapping permits have been issued to local parties to remove mink, weasel and fox from the fefuge.

III. PHYSICAL DEVELOPMENT.

No repair work was done on this area during the period.

LAKE OLIVER

I. GENERAL.

This area was not visited during the report period. It is believed that the water level remained satisfactory. It was one foot below spill-way crest on August 29 and has probably not receded a great deal from this level. Precipitation and snowfall were below normal for the period. Crops were good in this locality.

II. WILDLIFE.

We are estimating a fall waterfowl usage comparable to last year for this area. This includes a peak waterfowl population of 2,780 and a total usage of approximately 3,800 birds. A few ring-necked pheasants and European partridges are present on this refuge and we believe that a few mink can be found here.

III. PHYSICAL DEVELOPMENT. None.

LAKE PATRICIA

I. GENERAL.

Very little water remained in Lake Patricia when it was visited on October 24. Farm crops in this vicinity were fair, only, and precipitation for the period was below normal.

II. WILDLIFE.

It is estimated that 1,440 waterfowl used this refuge during the period and that peak waterfowl numbers were about 1,170. There has been a marked decrease in the attractiveness of this area for waterfowl this season as a result of the extremely low water supply.

Ring-necked pheasants are abundant in this vicinity and it is estimated that 800 were using the area when visited on October 24. Rather peculiarly, however, the only pheasants observed in this vicinity were on the refuge. Local farmers reported that the hunting pressure was extremely heavy in this locality and they feel that too large a percentage of the birds were killed. Sharp-tailed grouse and European partridge populations appear to remain about the same.

Mink are reported to be numerous and trapping permits have been issued to two landowners for removal of these fur bearers from the refuge.

III. PHYSICAL DEVELOPMENT.

The weeds were cleaned out of the diversion ditch and the boundary markers were checked and repaired.

LEGION LAKE

I. GENERAL.

The water level on this area was just a few inches below spillway crest at the beginning of the period and was six inches below crest on November 5. Precipitation and snowfall in this area have been below average for the period.

II. WILDLIFE.

It is estimated that 23,150 waterfowl used this refuge during the period and that the peak concentration reached 16,500 in late October. A local farmer has reported the use of this area by 450 Canada and white-fronted geese this fall. Ring-necked pheasants, sharp-tailed grouse and European partridges make some use of this refuge but their numbers are not large.

A landowner has been issued a permit to trap fur bearers from the refuge during the open State season. A few muskrats are using the area and a number of mink should be caught as signs are common. A few beaver are still to be found on the refuge.

III. PHYSICAL DEVELOPMENT.

None. The structures and posting are in good condition on this area.

MCLEAN

I. GENERAL.

Precipitation and snowfall were below normal in this area. The water level was 18 inches below spillway crest when visited on November 5.

II. WILDLIFE.

The waterfowl use of this refuge this fall presents quite a contrast to its usage last year. Stabilized water conditions have restored the attractiveness of this area and approximately 8,100 waterfowl used it during the period. Peak waterfowl numbers were about 5,200. A few sharp-tailed grouse and European partridges used the refuge during the period.

III. PHYSICAL DEVELOPMENT.

A total of $12\frac{1}{2}$ cu yds of rock were hauled from a distance of $3\frac{1}{2}$ miles and placed on the spillway slope. This work completes the spillway reconstruction project on this area.

PRETTY ROCK

I. GENERAL.

Precipitation and snowfall have been below average for the period in this locality. The water level was 6" below spillway at the beginning of the period and one foot below spillway on October 23. Farm crops were very good in the vicinity of the refuge.

II. WILDLIFE.

Approximately 39,000 waterfowl used the refuge during the period and peak waterfowl numbers were 30,600 in late October and early November. Approximately 450 Canada and white-fronted goese used the refuge during migration.

Ring-necked pheasants are abundant in this locality and it is estimated that 200 found sanctuary in the refuge during the hunting season. Hunting pressure was extremely heavy in this vicinity this fall. A few sharp-tailed grouse and European partridges were observed on the refuge at various times during the period.

A permit has been issued to a landowner to trap muskrats, minks and skunk during the open State season.

III. PHYSICAL DEVELOPMENT.

- l. 114 cu yds of rock were hauled from a distance of 6 miles and placed on the dike at points where erosion had occurred during the previous period as a result of high water levels.
- 2. 25 cu yds of fill were loaded and placed on dike to repair upstream face and muskrat runs.
 - 3. Boundary markers were checked and repaired.

STEWARD LAKE

I. GENERAL.

Precipitation and snowfall were below normal in this vicinity during the period. The water level was 8" below spillway crest at the beginning of the period and 20" below crest on November 3. Very good crops were harvested in this vicinity.

II. WILDLIFE.

Approximately 10,000 mallards were present on this refuge when visited on November 3. Present also were 50 lesser scaup, 300 shovellers, 43 white-fronted geese and one golden eagle. On December 28, 2,000 mallards were still present on this area. Total waterfowl usage for the period was approximately 25,000 and peak waterfowl numbers were about 18,300.

A few ring-necked pheasants, sharp-tailed grouse and European partridges used this area during the period. The season was closed in this county on upland game birds.

A trapping permit has been issued to a landowner to remove muskrats, minks, skunks and weasels from the refuge.

III. PHYSICAL DEVELOPMENT. None.

WHITE LAKE

I. GENERAL.

Precipitation and snowfall in this area were below normal for the report period. Very good crops were grown on the refuge and in the vicinity. Some hail damage occurred in this locality and the damaged grain furnished some excellent feed for the ducks. The water level was 16" below spillway crest at the beginning of the period and had receded to about $2\frac{1}{2}$ feet below crest on November 3. It is believed that the lake froze over at approximately this level.

II. WILDLIFE.

Approximately 6,000 mallards, 800 shovellers, 300 lesser scaup, 30 coots and 92 white-fronted goese were observed on this refuge when visited on November 3. The total waterfowl usage is estimated at 18,675 during the period with peak waterfowl numbers of 14,450.

A few muskrats are present and mink signs are common. A few skunk are also believed to be using the refuge. A permit has been issued to a landowner to trap on this area. A few ring-necked pheasants, sharptailed grouse and European partridges used the refuge during the report period.

III. PHYSICAL DEVELOPMENT.

- 1. The concrete mixer used on the spillway construction project during the previous period was returned to Des Lacs.
- 2. Structures and boundary markers were checked and found to be in acceptable condition.

NOTE: The report this period for Lake Ilo and the District IV Easement Refuges is based entirely on data supplied by Mr. Chesley M. Dinkins, Laborer-Patrolman.

	(1)	(2	1	(3)		(4)		(5)	(6)
	Species	First		Peak Conce		Last Se	en	Young Pr		Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
I.	Swans: Whistling swan	Nome at	018 press	ng areas. Eng habitat.	rood count	s chould b naving r	mide on to basis in	to or more fact shou	d be omitte	egating
II.	Geese: Canada goose	65	10/18	100	10/18-50	100	10/28	d actual o	ounts on re	200
10	Cackling goose	The las	e Salver a	sactand for	ba specios	during th	a description	acerned la	che Meport	TUS
*	White-fronted goose Snow goose	None Se	9/27	200	10/1-20	100	10/28			600
	Blue goose	period,	and the	Domper seen	This col	mn does n	to apply to	resident	species.	
II.	Ducks:	The fir	at reinge	50,000	10/20-51	8,000	(Present 1	DISCOULTED !	n the repor	50,000
	Black duck Gadwall	None S	MAN	500	9/25-10/10		10/28	GOTHT GOO	meron sport	000
	Baldpate Pintail	In addi		\$00 6,000	9/25-10/10	60	10/28	reing on	eiuge durin	9,000
	Green-winged teal		••••••	800	9/20-10/11	80	10/51			1000
	Blue winged teal Cinnamon teal	None S	en				THE REAL PROPERTY.	EVECTOR.	- Set Set Tetal	5,000
	Shoveller wood duck	Name S	on	. 2,000	10/20-11/	150	11/7	ciepties	M. Director	8,000
	Redhead Ring-necked duck	120 Hene S	10/27	800	10/28-51					- Anna Santa
	Canvas-back Scaup	130	10/27	400	10/27-81	80	10/81 (Present 1	2/81)		600 600
	Golden-eye Buffle-head	None S	een			ocire embe	- C7.68*			
	Ruddy duck	None S	The state of the s		Area	i he eq. ph.	oncentrati	ons		
IV.	Coots			600	9/20-10/20	80	10/81		47,450	000
	Caese				Loter	L Waterfow	mage dur	rug benro	66*800	

SUMMARIES

Total Production:					1
Geese		Total	waterfowl usage du	ring period 69.200	
Ducks		Peak wa	aterfowl numbers_	41,480	900
Coots	Hone Seen	Areas	sed by concentrat	ions	
Golden-eye Buffla-head	none coen	Ret	tre unter area.		
Canvae-back Gosup ************************************	100 10/57 500 100 10/57 500	Princi	pal nesting areas	this season	200
Redhead	120 10/27 50	TO SEAT	- NATH EXPLOSE		1
Mood duok			Reported by	Chesley H. Dinkin	
Cinnamon beal	7(000) 00001	30/20-11/5		Laborer-Patrolina	E - E CAX
Dine winged beat		INSTRUCTIONS	200 200 200 200 200 200 200 200 200 200		2000
(1) Species: (2) First Seen:	In addition to the bird reporting period should given to those species The first refuge record period, and the number	be added in approof local and National for the species	opriate spaces. Sonal significance. during the season	pecial attention show	ald be
BTES ROOSS					
(3) Peak Concentra- tion:	The greatest number of	the species preser	nt in a limited in	terval of time.	900
(4) Last Seens	The last refuge pecerd	for the species d	uring the season c	oncerned in the repor	ting
Canada goose	period.	10/10-50	100 10/28		200
(5) Young Produced:	Estimated number of you sentative breeding area 10% of the breeding hab	s. Brood counts	should be made on	two or more areas agg	regating
(6) Total:	Estimated total number may or may not be more				
Species	of the migrational move		Tabt Seen	AOMINE MANAGEMENT	1008

III

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

FORM NE-1

	(1) Species	(2) First Seen		(3) Peak Conce	(3) Peak Concentration		(4) Last Seen		oduced	(6) Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
•	Swans: Whistling swan	TO SOL	ope preed	ing habitea	Na crimara	L hayer n	The state of	ract whom	id be omitted	
	Will of This awaii		ed number	or house in	Loog gomuş	s should b	ande on a	C SCHOOL	Comme on 19	
	Geese:			000 0000	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100	or this pat		5-3-42×42-60	
	Canada goose Cackling goose	The less period.		e period.		encous en		San Constitution	suo rebota	under San
	Brant	1000 1000			10/100	100				
	White-fronted goose Snow goose		ean de							
	Snow goose Blue goose	The gre	Atest num	per of the s	ipacies ore	sent to a	Maited Int	GLAST OL	ine,	
	Duralma	periods	and the		This col		of apply to	resident	Species.	
	Ducks:	The first	at refuge	2,000	10/20-51	e during e	se bestedu o	oncorned	in the repor	2,500
	Black duck	given t	o ppose s	pecies of l	cal and Na	Mional sign	of Pichoce.			
	Gadwall Baldpate		rion to b	speary pe	The state of the s	propriate	thecse, St	scial att	moton shoul	R. Arra - Land
	Pintail	•••••	•••••	400	10/21-31	Maria de la compansión de	The same of the same		Contract of the same	500
	Green-winged teal Blue-winged teal •••	Children Co	andread of the	50	10/1-20					100
	Cinnamon teal	i dise					4	product	mer.ordan	
	Shoveller **********************************		*******	100	10/20-51	Repo	red by	(New Yes)	· bymayna	200
	Redhead	1323			40/344	4				
	Ring-necked duck	Done	Sport		10,924					the state of the s
	Canvas-back Scaup	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		- 300	30 Prin	Mpal nest	INE GREAT P	Ms acasor		
	Golden-eye	Killio	Brest.			ighe hereit	esec*		2 11 11	
	Buffle-head Ruddy duck	115 4	North				total out at a			
					Area	IN OIL PA	iono entra ti	OUS TO THE REAL PROPERTY.		
	Dacks				Peak	waterfowl	nmspare	F 7 15 32	2550	
	Coots				Tota	T MST001.70H	mage dur	TOR BUTTON	7500	

(3461 Tial)

IA"

Total Production:	
Geese	Total waterfowl usage during period \$500
Coots	Peak waterfowl numbers 2550
Ducks	Peak waterfowl numbers 1550
Coots	Areas used by concentrations_
Buffle-head	Britire water area.
Golden-eye	
Canvas-back	Principal nesting areas this season
Ring-necked duck	
Wood duck	Reported by Chesley M. Dinking
Cinnamon teal	Laborer-Patrolum
DING WINDS POST PER	
Charles and mark through	INSTRUCTIONS
(1) Species: (2) First Seen:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. The first refuge record for the species during the season concerned in the reporting
(2) FIISO Seems	period, and the number seen. This column does not apply to resident species.
(3) Peak Concentration:	The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge pecerd for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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

FORM NEW J

	(1) Species	(2 First		(3) Peak Conce		(4) Last Se	en	Young Pr		(6) Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I.	Whistling swan Geese: Canada goose	period. Estimati sentati	To go		odwced bas grood count Estimate	ed on obse s should b s having n	this refe	d actual (wo or more fact show	ounts on re areas aggr d be omitte	gating 1,
	Cackling goose Brant_ White-fronted goose Snow goose Blue goose		stest num	period.		ent in a			ilme. c. e. . the report	
II.	Ducks: Mallard Black duck Gadwall	given i The fir period,	o those s at refage and the		10/28-11/5	a Germania a	spaces, sq nificance, ne sesson o et apply to	oncerned	ntion should n the report	8,600
	Baldpate Pintail Green-winged teal Blue-winged teal Cinnamon teal	ZU VQQ	erov ea e	60	10/20-51 10/20-51 9/50-10/15 9/50-10/15	a, other s	ecias occ	tapes on	eluge durin	78 500 30
	Shoveller Wood duck Redhead Ring-necked duck		••••••••	. 50	10/15-10/50	Repo	red by	Charley !	. papitine	100
	Canvas-back Scaup Golden-eye Buffle-head	••••••	• • • • • • •	400	10/1	ilyo yaber Mpal mast	eroe.	A Senso		100
	Ruddy duckessessessessessessessessessessessessess			. 80	10/1-20	waterfowl	numbers ioncentrati	OLID	.3°500	
IV.	Coots	100		200	9/20-10/5	L waterfow	usage dur	TUR boxton	a¹sso	500

SUMMARTES

3-17 (0)43	Total Production:	SUMMARIES	orm MR
IV.	Geese	Total waterfowl usage during period 9,860 Peak waterfowl numbers 7,260	200
	Ducks Coots	Areas used by concentrations Areas area.	
	Ring-necked duck Cenvae-back Scauperssissessissis	Principal nesting areas this season	1000 1000 1000
	Mood duck	Reported by Cheskey N. Dinkins Laberer-Patrolena	
		INSTRUCTIONS In addition to the birds listed on form, other species occurring on refuge during to reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.	
III.	(2) First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.	ıg
	(3) Peak Concentration: (4) Last Seen:	The greatest number of the species present in a limited interval of time. The last refuge pecied for the species during the season concerned in the reporting	
I.	(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggrega 10% of the breeding habitat. Estimates having no basis in fact should be omitted.	
	(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This fig may or may not be more than that used for peak concentrations, depending upon the nof the migrational movement.	

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

. Form MR-1

	(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
I.	Swans: Whistling swan	10% of	ppe preed	ng areas. 1 ing habitaas.	The second secon	a baving a		A STATE OF THE PARTY OF THE PAR	d be omitte	aga ring
ı.	Geese: Canada goose	Seylmai	ag lumper	og homis hi	condect para	es ou opee			romite ou ta	
	Cackling goose Brant	The las	o reinga		The second secon		s session of	ncerned t	r ppe tabons	
	White-fronted goose Snow goose Blue goose	The Gre	abaat num		pecies pre	sent in a	that ted int	erwal of	And.	
	Ducks : Law 20002	The fill period,		Oneper reent	gpys coj	mi good is a success a	or apply to		n the repor	
	Mallard Black duck Gadwall	Gyaeu (o chose a	2,000	10/20-81 9/25-10/10	aroung nift	ifficance,		year have	3,000
	Baldpate Pintail	Tu veni	aton to s	400	9/25-10/10 10/10-31	1, other spropriate	Decies occu	brang on a	efuge durin	50 500
	Green-winged teal Blue-winged teal Cinnamon teal	••••••			8/20-10/18 8/30-10/2					150
	Shoveller Wood duck	••••••	••••••	189	10/20-11/3	yebo:	ped by	neeley K.	Projects	
	Redhead Ring-necked duck Canvas-back					a act of la				50
	Scaup Golden-eye	Trans.	******		Prin	A Dr. J. Deag.		Mis sesso		50
	Buffle-head Ruddy duck				YLOS		oncentrati	опа		the Control
	Coots				Peak	Waterfowl			2,750	100
	Gesse				Tota	waterfow]	mage dur	fug period	A,000	

SUMMARIES

IA

III

Total Production:	
Geese	Total waterfowl usage during period 6,050
Ducks	Peak waterfowl numbers 2,780
Coots	Areas used by concentrations_
Golden-eye Buffle-head	Rutire water area.
Redhead Hung-hecked duck Canvas-back Soaup	Principal nesting areas this season
Wood duck	Reported by Checky M. Dinking Laborar-Patrolman
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species. The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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

WALER OUT

KOLE ME-T

CV:	(1) Species	(2 First		(3) Peak Conce	ntration	(4) Last Se	en	Young Pr	oduced	(6) Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I.	Swans: Whistling swan	sentata 10% of	This	area had ver	er 15ttle v	nter durin	r the part	de or mor	areas aggr d be omitte	Security .
I.	Geese:	Batimet	ed number	THE RESERVE OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TW					ounts on re	
	Canada goose	bezzog	No go	ese mare ob	served duri	ng the per	iod.			
	Cackling goose Brant	The las	c retuin	waded for t		Control of the Contro	sesson co	DC BLUEG TO	t the report	Bury Sury
	White-fronted goose					2017 1000	CANADASS OF			
	Snow goose	The gre	atest num	per of the B	pecies pre	sent in a	Limited int	erval of	dime.	
I.	Ducks:	perdod,		number seen	JULY COL		to apply to		in the repor	
	Mallard	The fit	st refuge	500	10/20-31	a ducting t	va semson o	onderned :	in the repor	500
	Black duck Gadwall	given t	o those a	100	9/30-10/20	elorgi alg	The second second	ra describinaçãos de di-	and details and details	200
L COMMON	Baldpate	THE STOCK	RECH SO S	50	ned by ret	go osuer si	spaces, Spaces		ntrub agries	100
	Pintail Green-winged teal			200	9/10-10/1					250
	Blue winged teal	*******	• • • • • • • • •	100	9/30-10/1		Jan Marite			150
	Cinnamon teal	100						ngelea+3m	sko juwu	100
	Shoveller Wood duck	*******	*******	100	10/20-31	Repo	ted by	had lay M.	Winking.	
	Redhead			OWNER TO SERVICE						
	Ring-necked duck Canvas-back	- 124				Tourse of at				
	Scaup	Karalani waka		- 1		Mrs I nest	ing areas t	Ms season		
	Golden-eye Buffle-head			No. of the last of	END	rio heroi i	200*			
	Ruddy duck	and the second	Manager Company		Area	used by	oncentrati	OUR		
17	Dooks			200	0 /20 30 /	waterforl	numbers		1,170	100
7.	Coots			100	9/30-10/	Materion	meege gm	THE SHAPE	3,440	200

Total Production:		
Geese	Total waterfowl usage during period 1,440	Print.
Ducks_	Peak waterfowl numbers 1,170	3
Coots	Areas used by concentrations	
Golden-eye Baffle-head	Entire unter area.	
Redhead Bing-necked duck Canvas-back Scaup	Principal nesting areas this season	
	Reported by Chesley M. Dinkins	
Cinnamon teal		
	INSTRUCTIONS	
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during reporting period should be added in appropriate spaces. Special attention shoul given to those species of local and National significance.	ng the
(2) First Seen:	The first refuge record for the species during the season concerned in the report period, and the number seen. This column does not apply to resident species.	rting
(3) Peak Concentration:	The greatest number of the species present in a limited interval of time.	
(4) Last Seen:	The last refuge peceed for the species during the season concerned in the report period.	ing
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on resentative breeding areas. Brood counts should be made on two or more areas aggrands of the breeding habitat. Estimates having no basis in fact should be omitted.	egating
(6) Total:	Estimated total number of the species using the refuge during the period. This may or may not be more than that used for peak concentrations, depending upon the	figure ne nature
Species	of the migrational movement.	7048

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

Form NR-1

7000	(1) Species	(2 First		(3) Peak Conce		(4) Last Se	en	Young Pr		(6) Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
I.	Swans: Whistling swan	10% of		ing babites.	gaequare	s baving n	o basis in		td be omitte	d _e
	(5) Young Produced:	Estimat centati		ot young p					ounts on re	
I.	Geese: Canada goose	bes.rog	To ge	ese observe	d during th	is period.				
	Cackling goose	The las	M IN INFO (2015) 对原络	Acuse Tox	STATE OF THE PROPERTY OF THE STATE OF THE ST	during th		ocerned i	the report	
	Brant_White-fronted goose									
	Snow goose	The gre	stest num	ber of the	becres ble	sent in a	Linglited int	erval of	:lme.	
	Blue goose	Berrou,	arki the	umper seen	This col	and does H	ot apply to	restoens	sbecres*	
	Ducks:		at refuge	4,000	10/20-51	35 35		oncerned	in the repor	6,000
	Black duck	given t	o those s	becres or n	Detail Street Mee	MODET SER	Alficance.			
	Gadwall Baldpate	- pabone	ng perdod	50	9/25-10/10	propriets	spaces. Sp		erage durin	
	Pintail			600	10/20-31		paulae outs	Majad da	efted duvin	1,200
	Green-winged teal Blue-winged teal			120	9/30-10/10					200
	Cinnamon teal Shoveller			125	10/20-31	A Mest			Potreben	250
A	Wood duck	*******		180	10/20401	Repo	rted by	- Sheelow	C. Maria	
	Redhead Ring-necked duck									
	Canvas-back	4(5A-75			BATU	Mpal nest	ing areas t	ma season		
	Scaup Golden-eye	*******	••••••	100	10/20-11/	meria ara	A SECT		SCHOOL SECTION	200
	Buffle-head		The state of							
	Ruddy duck		A STATE OF THE		Area	s used by	concentrati	ODE		
7	Ducks	1		100	9/20-10/	Waterlowl	nuabers		6,208	200
7.	Coots			100	8/20-10/4		mage dur	ruf berroe	8*000	

Total Production:	COMMITTEE
Geese	Total waterfowl usage during period 8,090
COOPS	you lever-joyee
Ducks	Peak waterfowl numbers 5,188
Coots	Areas used by concentrations
Ballite-bead	
Corresponde	Extire enter area,
20800 . 4 * * * * * * * * * * *	**************
Canvae-back	Principal nesting areas this season
Ring-necked duck	
Redhead	
воос алек	
SUDAGTISL *******	Reported by Charley M. Dinking
Cimnamon tesi	Laborer-Patrelman
	* * * * * * * * * * * * * * * * * * * *
Green-winged teal	INSTRUCTIONS
LIUCATT DOWN	TO THE PARTY OF TH
(1) Species:	**In addition to the birds listed on form, other species occurring on refuge during the
Cadeall	reporting period should be added in appropriate spaces. Special attention should be
Black duck	given to those species of local and National significance.
Mallard	a south the second to the seco
(2) First Seen:	The first refuge record for the species during the season concerned in the reporting
	period, and the number seen. This column does not apply to resident species.
Bine goose	
(3) Peak Concentra-	The greatest number of the species present in a limited interval of time.
tions mad Room	
Brane	
(4) Last Seen:	The last refuge pecerd for the species during the season concerned in the reporting
Canada goose	period. The Course optended characterists plan bearings to the same and the course of
Gesse:	
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on repre-
Whistling swan	sentative breeding areas. Brood counts should be made on two or more areas aggregating
Swans s	10% of the breeding habitat. Estimates having no basis in fact should be omitted.
Constoti None	unipat bare unipat bere union bere land
(6) Total:	Estimated total number of the species using the refuge during the period. This figure
No. of the last of	may or may not be more than that used for peak concentrations, depending upon the nature
Species	of the migrational movement.

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

MYJESTOMT

Form NR-1

	(1) Species	(2 First		Peak Conce		(4) Last Se	en	Young Pr	oduced	(6) Total
	/A) *AAN**	MAY OF	NEAL MORE P	a people than	spis name	CONT. DON'T	moentratic	Broods	Estimated	Estimated
	Common Name	Number	Date	Number	Date	Number	Date	Seen	Total	for Perio
I.	Swans:	TOR OF	che breed	ing habitat	Es pineace	a Butane b	peers in	fact shou	d be omitte	79
	Whistling swan	sentati	AS PLEGGT	R areas.	rood count	s should b	nade on 1	NO OF MOP	areas aggr	
I.	(5) Young Froduced:	Estimat	ed number	or honey he	odies ed lans	ad on obder	rvations ar	d actual	counts on re	one-
10	Geese: Canada goose			78	10/10-51	(Reported	by Farmer			150
	Cackling goose	The las	e tetnie		20/20-02		RENBON CO		O'LOW TARKET	200
	Brant	Who las	E reflies	recked for t	P-4 322004 00	dusting the	Resido do	merned 1	This various	
	White-fronted goose			150	10/10-51	(Reports	by Farmer			300
	Snow goose	The gre	sees num	per of the :	pactes pre	sout in s	A STATE OF THE PARTY OF THE PAR	SLAST OI	THE'	
	Blue goose						COSK - ALKON	of the second state of		
		period,		univest seen!	This sol	mu coes u	or apply to	resident	species.	MAN AND STREET
I.	Ducks :	The fil	st refuge	record for	Olus pheers	sodurang b	he season d	outerned	in the repor	
	Wallard Black duck			15,000	10/10-51				AL TOTAL STATE OF	20,000
	Gadwall	given t	o those s	50	9/28-10/10	flonel sim	Milicance.			100
1116	Baldpate	FU 9903	DESCRIPTION OF	50	9/25-10/10		Maddenning	LLIN OU	eluge durin	100
	Pintail			400	9/80-10/10		GOVE NO. NAME	WATER AN A	a Tues And a	1,000
	Green-winged teal			25	9/30-10/10					50
	Blue-winged teal			40	9/30-10/2					150
	Cinnamon teal							COULER-KO	LOYEUN	/
	Shoveller	*******	*******	*** 400	10/20-31	Repor	rbed by	megral at	Marine 15	800
	Wood duck									
	Redhead Ring-necked duck	A. T. Shall	- white the		a distant care	Albertan e				
	Canvas-back			30	10/5-30	Tpal nest	ruff eress r			100
	Scaup	•••••		200	10/20-31	M nal neat	ng areas t	his season		400
	Golden-eye	100		THE PERSON SERVICES		10 71.6 X87.61	123.00 *	CIRCLE STATE		400
	Buffle-head	TO ELECT	7 5 75 7	divine plants		de Carago apparature				
	Ruddy duck		the same	· · · · · · · · · · · · · · · · · · ·	YLOR	med by	oncentrati	oute		Tropic Salatonias
İ					15-194_ST.					
	Ducks			No.	Peak	Materionl	munbera		1-21	
7.	Coots			100	9/25-10/10					200
	Geese	The same of			Tota	L waterfow	usage dur	ing period	10.100	THE PROPERTY.

SUMMARIES

(July 1946)

3-17	Total Production:		SURPARIES	
	Geese	Netholica	Total waterfowl usage during period 25,1	.50
IV.	Ducks	700	Peak waterfowl numbers 18,8	20
	Coots	· rando de comunicación que	Areas used by concentrations	
	Golden-eye Buffle-head		Entire water area,	
	CHIVE-DECKED SUCK	500 xxxxxxxxxxxxxx 80 x	Principal nesting areas this season	70
	Redhead	the contract of the contract of the contract of	The state of the s	
	Cinnamon teal Shoveller	**************	Reported by Chesley M. Dinkins	- 1
	Pine winged cont		STRUCTIONS	- 1
	Green-winged teal	***********	a\00+10\rd	7100
	(1) Species:	reporting period should be	sted on form, other species occurring on refuge du added in appropriate spaces. Special attention sh ocal and National significance.	
III.	(2) First Seen:		the species during the season concerned in the re. This column does not apply to resident species.	
	(3) Peak Concentra-	The greatest number of the	species present in a limited interval of time.	
	Auration: upog Sacas	720	10/10-81 (Reported by Farmer)	80
	(4) Last Seen:	The last refuge pecard for period.	the species during the season concerned in the rep	orting
I.	(5) Young Produced:	sentative breeding areas.	produced based on observations and actual counts on Brood counts should be made on two or more areas a Estimates having no basis in fact should be omi-	ggregating
	(6) Total:		he species using the refuge during the period. The that used for peak concentrations, depending upon	
	Species	of the migrational movement		10.00)

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

MATERFORL

FOUR NR-L

	(1) Species	(2 First		(3) Peak Conce		(4) Last Se	en	Young Pr		(6) Total
	Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Perio
I.	Swans: Whistling swan	· log of	ve breed	ng habitat.	Estimate	s having n	besis in	mo or mor	areas aggr d be callte	ye of a serie.
II.	Geese:	Estimat		of Janua pi	oduced bas		rvations ar		ounts on re	
	Canada goose Cackling goose	25	10/23	75	10/20-81					180
	Brant	100 Jac	10/7	180	10/18-51	during th	s sesson co	no street 1	the report	800
	Snow goose Blue goose	The gre	375	ber of the s		sent in a	Limited int	erval of	ime.	300
I.	Ducks:	The fire period;	st refuge and the	number seen			t apply to		n the repor	
	Mallard Black duck		Market b	25,000	t be aboute			Observed	n pps Leout	\$0,000
	Gadwall Baldpate	reporti given t	ng period o those s	200	9/25-10/10	Sunning a tipe is	rpaces. Sp ifficance.	ecial att	intion shoul	400
	Pintail Green-winged teal			3,000	9/30-10/30		nedles occu	rafag on 3	efuge durin	8,000
	Blue-winged teal	•••••	•••••	200	9/30-10/20		Company (Company)			400
	Shoveller Wood duck	********	*******	1,200	10/20-51	Repo	ted by	Chapter #	Districts Groletic	1,800
-	Redhead Ring-necked duck	•••••	•••••	80	10/5-51				S. S. J. June 20	100
	Canvas-back Scaup			80	10/5-51	ifpal nect	ing areas t	his season		100
	Golden-eye Buffle-head		· ·			estic becom	. 83.6%*			
	Ruddy duck	*******	••••••	25	9/30-10/30	need by	ioncentrati	ons		50
v.	Coots			1,000	9/30-10/20	Waterfowl	nimbers		60,400	1,200
	Geese				Tota		L usage dur	ing period	20, 200	

SUMMARIES

IA"

Total Production:		la l	
Geese	section posts	Total waterfowl usage du	ring period_ 88,780
Duc ks	1,000	Peak waterfowl numbers_	50,600
Coots	<u>.</u>	Areas used by concentrat	ions_
Golden-sys Baffle-head		Erbiro unter area,	
Hing-medked duck Canvas-back Scaup ************************************	20	Principal nesting areas	this season
Redberd **********	*******	70/0-22	
Cinnamon teal Shoveller	7,800	Reported by	Chesley M. Dinkins Laborer-Patrolman
Green-winged teal	INS	STRUCTIONS .	70
(1) Species:	reporting period should be a given to those species of lo	ted on form, other species occuded in appropriate spaces. Specal and National significance.	pecial attention should be
100000000000000000000000000000000000000		This column does not apply t	
(3) Peak Concentration:	The greatest number of the s	pecies present in a limited in	terval of time.
(4) Last Seens	The last refuge pecerd for to period.	the species during the season co	oncerned in the reporting
(5) Young Produced:	sentative breeding areas. I	oduced based on observations as brood counts should be made on Estimates having no basis in	two or more areas aggregating
(6) Total:	Estimated total number of the may or may not be more than of the migrational movement.	e species using the refuge durithat used for peak concentration	ing the period. This figure ons, depending upon the nature

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

MATERFOWL

Form NR-1

II. Smans: Whistling swan II. Geese: Canada goose Cackling goose Brant White-fronted goose Show goose Blue goose Blue goose III. Ducks: Wallard Black duck Gadwall Blue-minged teal Blue-minged teal Blue-minged teal Showeller Wood duck Redhead Scaup Golden-eye Buffle-head Ruddy duck IV. Coots: 200 9/80-10/80 P/80-10/80 P/80-11/15 P/80 P/80 P/80-11		Refuge		late	Mont	hs of Bept	contrors	to December	194	Ticat of th	e form.
Common Name								en			
Nhistling swan So 10/20-31 (Reported by Farmer) So Carking goose Erant White-fronted goose Snow goose Blue goose Slue goose Snow goose Blue goose Snow goose Slue goose Snow goose		Common Name	Number	Date	Number	Date	Number	Date	PRINT PRINTS 15001	THE PERSON NAMED IN COLUMN 2 I	Estimated for Period
III. Gees:	I.					rood count			No. of the last of		
### Brant	II.	Geese: Canada goose	pertod.	0.73	50	11 11 11 11	(Reported	by Farmer			80
Blue goose		Brant	45	11/3/47	180		45	11/5	interreral	elizelt so.	
Ducks Mallard Black duck Gadwall Baldpate 200 9/30-10/10 200		Blue goose								We la West	
Gadwall Baldpate 200 9/50-10/50 Pintail Green-winged teal Blue-winged teal Shoveller Wood duck Redhead Canvas-back Scaup Golden-eye Buffle-head Ruddy duck IV. Coots 200 9/50-10/50 9/50-10/50 9/50-10/50 9/50-10/50 9/50-10/50 9/50-10/50 9/50-10/50 10/50-31 1,500 9/50-10/50 10/20-31 1,500 9/50-10/50 10/20-31 1,500 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 9/50-10/50 200 200	III.	Mallard	The fir	at refuge	Lacota, Fot	min.phoots	s environ e	in namedle of	este es sten		20,000
Green-winged teal Blue-winged teal Cinnamon teal Shoveller Wood duck Redhead Canvas-back Canvas-back Scaup Golden-eye Buffle-head Ruddy duck IV. Coots So 2/30-10/20 200 2/30-10/20 1,000 10/20-51 1,500 10/20-51 75 80 10/20-51 75 80 10/20-51 75 80 10/20-11/15 80 200 9/50-10/20 200 9/50-10/20 200 200 200 200 200 200 200		Gadwall Baldpate			200	9/30-10/30	CAPET S	pecies ocou pecest Si			500
Shoveller Wood duck Redhead Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck IV. Coots 1,000 10/20-51 10/20-51 10/21-51 10/20-11/15 200 9/30-10/30 200		Blue-winged teal	•••••								
Ring-necked duck Canvas-back Scaup Golden-eye Buffle-head Ruddy duck TV. Coot: 200 9/30-10/30 10/21-51 10/20-11/15		Shoveller Wood duck					Repor	ted by		, Binicina Serolmen	
Golden-eye Buffle-head Ruddy duck IV. Coot: 200 9/30-10/30		Ring-necked duck Canvas-back	(80		a pal nest	ing areas t	his season		75
IV. Coots 200 9/30-10/30 200		Golden-eye Buffle-head				2/50-30/21	cira sota	0 2.00°*			
IV. Coot: 200 9/80-10/80		Control				Lagy	MERCHTONT		ONS	70 ³ 000	
Total waterfow usage during period 34,900	IV.	Coots Geene			200	9/80-10/80	L waterfow		ing period	84*800	200

Total Production:	SUMMARLES
Geese	Total waterfowl usage during period 24,900
Duc ks_	Peak waterfowl numbers 18,290
Coots	Areas used by concentrations
Golden-eya Buffla-head	Butter unter area.
Ring-necked duck Cenvas-back Scaup	Principal nesting areas this season
Rednead *********	PROCESSES AND TRANSPORT OF THE PROCESSES AND ADDRESS AND ADDRESS OF THE PROCESSES AND ADDRESS AND ADDRESS OF THE PROCESSES AND ADDRESS
Cinnamon teal Shoveller	Reported by Chesley N. Dinking Laborer-Patrolma
Green-winged teal	INSTRUCTIONS
(1) Species:	reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. The first refuge record for the species during the season concerned in the reporting
(3) Peak Concentration:	period, and the number seen. This column does not apply to resident species. The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge pected for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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

FORM NR-1

	(1) Species	Finet		Peak Come of		(4)			(5)	(6) Total	
	Species	First	Seen	Peak Conce	ntration	Last Se	en	Young Pr Broods	Rstimated	Estimate	
	Common Name	Number	Date	Number	Date	Number	Date	Seen	Total	for Peri	
[.	Swans:	JOH OT	she breed	ing habitat.	. Estimate	s purpos se	o bosis in	race spor	n be omitte.	Te Control of	
	Whistling swan	Rembati		Ang arress . 5	Frood count	s should be	nade on t	HO OF BOT	areas aggr		
	Coope stormed s	Botinat	ted number	r of young pr	power of ban	ed on obser	rvations an	d actual	tourbe on re	DE 6-	
•	Geese: Canada goose	berreq*	198 181	50	10/20-51	(Reported	by Farmer			100	
	Cackling goose		et reinge	THE RESERVE OF THE PARTY OF THE	ue obsores	online on	9899011-00	minutes and of	win pabor	Artice .	A
	Brant							Ex. Carlo	257 7-135		A
	White-fronted goose	12	9/27		10/20-51	92	11/3			300	A
	Snow goose Blue goose	The gre	estest num	aper of the s	species pre	eent in a l	Limited int	erval of	fine,		
	DING BOOL	bearon?	and the	DAMPSI BOSU"	· Jure con	mn does no	ot apply to	z.co roem	species.		
	Ducks:			s record for	oue specie	during ti	Ne Beagon o	onderned :			
	Mallard Plack duck			12,000	10/20-51	6,000	11/5	A STATE OF THE STA	A LANGE CONTRACTOR	15,000	4
	Black duck Gadwall	given t	to those a	100	9/30-10/30	Money ade	Tiligance.		and the second	100	
	Baldpate		of bearon	100	9/30-10/30	to other al	paces, Sp		reinge during metion shoul		
	Pintail	***************************************	***************************************	600	9/30-10/20					1,000)
	Green-winged teal	The state of the s		50	9/30-10/20)		-		75	5
	Blue winged teal Cinnamon teal	**********		- 200	9/30-10/20					800	À
	Cinnamon teal Shoveller			800	10/20-11/1	800	11/8	Te polos	- Webrolush	1,000	
	Wood duck		The state of		20/20-24-		24/5		A. Displan		4
	Redhead		********	1. 20							
	Ring-necked duck	Mark Street			- 4						
	Canvas-back Scaup			300	10/20-11/5	300	THE STATE OF	his season		500	
	Golden-eye	******	•••••	•• 550	10/20-17/0		11/3				A
	Buffle-head										
	Ruddy duck				Area	used by	donc entrati	one			
	Dacks				Luke	MACOLIOMA	Dambers				
7.	Coots			100	10/5-50	80	11/8		W, 660	200	
	Geese				Total	Materion		ing perio	7-7-	The state of the state of	4

Total Production:	
Geese	Total waterfowl usage during period 18,675
Duc ks_	Peak waterfowl numbers 14,450
Coots	Areas used by concentrations
Bolden-eye Eaffle-head	Entire unter area.
Redhead Bing-necked duck Cahvas-back	Principal nesting areas this season_
Cinnamon teal Shoveller Nood duck	Reported by Chesley M. Dinkins Laborer-Patrolina
Green-winged teal	INSTRUCTIONS
(1) Species: (2) First Seen:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak Concentration:	The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge percent for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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

MATERFORD

MIGRATORY BIRDS

(other than waterfowl)

December

Lake Ile Months of September Refuge ...

(1) (5) (2) (3) (4) (6) First Seen Species Peak Numbers Last Seen Production Total Number Total # Estimated Total Common Name Number Date Number Date Number Date Colonies Nests Young Number I. Water and Marsh Birds: 9/15-25 Common Loon 5 9/10-20 Western Grebe 50 10/20 9/1-10/20 53 White Pelican 90 200 9/10-30 12 Double-created Cornerant. 15 10/26 9/11-30 Great Blue Herom 90 40 9/10-30 10/30 1 15 12 American Bittern 10/11 10/12-20 10/28 2000 2000 Sandhill Crane 500 1000 9/1-30 Rared Grebe 50 saley H. Dishing .U.O.A ni quong fail bas routiba Mei , tail Species: anitibbs of ...ote terms as II. Shorebirds. Gulls and bolied as a refuge Terns: uring th Killder on Jak bas Isool 9/10-30 | identis to those species of seesar eleita 100 100 Wilson's Saipe B. Berrolling Saviifornes to Cit 9/20-10/10 50 9/5-30 7012 11 Greater Tellewiege 800 200 9/5-30 700 Lesser Yellow-Less 600 Sandpipers (egf) Iq. ons semidilgitts semiolin 9/10-30 350 250 Dewitcher 9/10-30 50 50 The Circl refige record for the 9/10-30 100 ason concerned. Avocat 100 9/10-30 1000 500 Galls (sp?) 9/10-30 The received number of the spec 20 Warbled Gedwit 20 9/10-30 200 Wilson's Phalarope 200 edt 50 9/10-30 The last refure record for the Willet season concerned Estimated number of young produced based on observations and actual counts. Estimated total number of the squevo using the refuge during the period concerned.

The control of the co					3_1751
(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove	er to Decembe	10 9/1-20 M	redjo)	oli elaiog	(Nov. 1945) CO Reft
White-winged dove	en Pr	(4)	(3)	(2) First S	(1) Species
IV. <u>Predaceous Birds</u> : Golden eagle	2 10/25 sd	5 11/1-20	2 (Present	12/31)	Comnon Name
Duck hawk Horned owl Magpie Raven	1 9/26 2 11/20 2 12/10	8 10/20-51 6 12/1-51 5 12/10-50	e ce	: <u>abn18</u>	T. Stier and Marsh Company Loop Western Organ
Suning on 's Hawk: Am. Rough-logged Hawk: Marsh Hauk: Sparrow Hawk	1 12/12	1 12/1-50 1 12/1-51 10 2/10-50 3 9/10-50 50 9/10-50 20 9/1-50	00 00 00 00 00 00 00 00 00 00 00 00 00	E 000S	- 1 30 10 30 20
			Reporte	d by Chesley N.	Dinking
		INSTRUCTION	ONS		

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes).

Gulls (cpf)

dollEW

Wildon's Fralarops

(2) First Seen: The first refuge record for the species for the season concerned.

OUS.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.....

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1751 (8) MIGRATORY BIRDS Form NR-1A (Nov. 1945) (other than waterfowl) to December 1994 Fin saved III Months of September Refuge Charles lake (6) (5) (1) (2) (3) (4) Production Total Peak Numbers Species First Seen Last Seen Total # Number Total Estimated Common Name Number Colonies Nests Young Number Date Number Date Number Date Durch li I. Water and Marsh Birds: Horned siussi6 9/10-30 Great Blue Heren Reven eported by (Messior W. Diskins -STRUCTION Use the correct names as found in the A.D.U. Checklist, 1951 Edition, and list group in A.D.U. (I) Species: "Liugsae" "tern", etc. In addition Avoid general terms as II. Shorebirds, Gulls and o refuge during the reporting period other species occurring o Terns: and has Isool id selosque exont of neving ed bluode no Special attenti printe spaces Cavillornes to Ciconiiformes and Gratiformes Groups: sign ficance. 9/10/30 10 erns (Charadriiformes) 9/10-30 20 Lesser Wellow-Logs as semicligitle semicline .Passeriformes). The first refuge record for the species for the season concerned. First Seen The greatest number of the species present in a limited interval of time. eak Numbers: The Last refuge record for the species during the season concerned ast Seen Est mated number of young produced based on observations and actual counts. roduotion Estimated total number of the story using the large during the period concerned. :Istor

Doves and Pigeons: Mourning dove White-winged dove	Docember		(Iv	almatem a		Service Con	STATE OF	THE RESERVE OF THE PARTY OF THE		THE STATE OF THE PARTY.
White-winged down		O.J	disadges 3	o adjace	(other tha		estal mate	eg	. Refu	Nov. 1945)
(5) Total Total	79	nee	(4) Last S	bers	(3) Peak Num	neen	(2) First S		(1) pecies	a
. Predaceous Birds: Golden eagle	Number T	Date	redust	Date	Number	Date	Vumber		non Name	Com
Duck hawk Horned owl								Birds:	nd Marsh	I. Water a
Magpie Raven Crow			. 100	9/10-30	0			1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Howest .	200
Narsh Hawk				0/10-50						
									-14	
						Reported	by Ches	ley M. D	inkins	

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

3-1751 (1) Form NR-1A MIGRATORY BIRDS III. Doves and Piver (Nov. 1945) (other than waterfowl) Months of September Hiddenwood Refuge..... (5) (1) (2) (3)(6)(4)Species First Seen Peak Numbers Last Seen Production Total Number Total # Total Estimated Common Name Number Number Date Number Date Number Date Colonies Nests Young Duck h I. Water and Marsh Birds: 9/10-80 SE Great Blue Heron 10 9/10-30 20 Ob Rayon Western Grebe 9/10-30 American Bittern 10 OF enley M. Dinkins deported by STRUCTIONS in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. Use the correct names as found ote. In addition to the birds listed on Ilumsea. Avoid general terms as II. Shorebirds, Gulls and lorger of eguler other species occurring o Terns: M bits Legal to selbega headt of Specia 9/10-50 Cautiformes to Ciconiiformes and Toolifymes Eggord 9/10-50 Wilson's Spipe (semiolilibers 50 9/10-30 Lessor Tollow-Logs 9/10-30 Marbled Godwit 9/10-30 Passeriformes) #200VA 9/1-80 Willet eason concerned, The first reluge record for th rst Seer 9/1-30 Wilson's Phalarobe The greatest number of the species present in a limited interval of eak Numbers: The last refuge record for the species during the season concerned ast Seen: Estimated number of young produced based on observations and actual counts. roduction Estimated total number of the decies using the refuge during the region concerned. : [sto] (over)

(1)	(2)	(3)	(4)	(5)	(6) 1-8
III. <u>Doves and Pigeons</u> : Mourning dove White-winged dove	er to Becaula	onths of	dj redjo) .	Refuge Hidlerwood	Form NR-1A (Nov. 1945)
IV. Predaceous Birds:	een Pr	cs Last S	en . Peak Number	(1) (2) ecies	Spi
Golden eagle Duck hawk Horned owl	.Date Colonies	redmul 938	mb)	oh Name Number Number 1 Marsh Birds:	
Magpie Raven Crow		80 11/1-12 .200 9/10-50	01 08	e Baron rebe	arecreed 6
Am. Rough-Logged Hawk March Hawk		10 9/1-30	/51		10
			Reporte	d by Chee ley M. Dinking	

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U.

order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

Wilson's Saign

Wallet

Louger Yellow-Loge

ederaladi stmoniav

First Seen: The first refuge record for the species for the season concerned.

The greatest number of the species present in a limited interval of time. Peak Numbers:

(4) Last Seen: The last refuge record for the species during the season concerned.

Production: Estimated number of young produced based on observations and actual counts.

3-1751 MIGRATORY BIRDS Form NR-1A (other than waterfowl) (Nov. 1945) III. Doves and Pircons: Months of September to December 194 7 Refuge Lake Oliver (3) (1) (2) (5) (6) (4) Last Seen Species First Seen Peak Numbers Production Total Total # Estimated Number Total Common Name Number Number Date Number Date Number Date Colonies Nests Young Duck h I. Water and Marsh Birds: Iwo benroH alagpie 9/10-30 Great Blue Heren Raven Crow. La de de sera a OL ar 08-1 control of control of beinger NSTRUCTIO Use the correct names as found in the A.D.U. Checklist, 1881 Edition, and list group in A.O.U. etc. In addition to the birds listed on Avoid general terms as "seagull" II. Shorebirds, Gulls and other seedies occurring on refuge i Terns: sW bas issued to astrong seeds of Special attention should be given priate spaces Cavifformes to Ciconifformes and Cruilformes) Groups: I. Water significance. 9/10-30 Killdeer erns (Charadriifo 50 9/10-30 Lesser Tellow-Logs 20 20 9/10-30 10 10 Willet accessors 10 Marbled Gedwit 10 9/10-30 9/1C-30 100 Wilson's Phalurepe The first reluge record for the rst.Seen The greatest number of the species present in a limited interval of time. Reak Numbers: The last refuge record for the species during the season concerned. Iast Seen Estimated number of young produced based on observations and actual counts. Production Estimated total number of the species using the refuge during the period concerned

(over)

(1)	(2)	(3)	(4)	(5)	3-17(8)
III. <u>Doves and Pigeons</u> : Mourning dove	ber to Decemb	ATORY BIRDS than waterfowl) Months of Septes	MIGR	RefugeIalo Oliver	Form NR-1A (Nov. 1945)
White-winged dove	en Pr	(4) Ders Last S	(5)	(1) (2) eoies First S	S
IV. <u>Predaceous Birds</u> : Golden eagle Duck hawk	Number T Date Colonies T	Date Number	Date Number	redmuN emsN no	
Horned owl Magpie Raven Crow		ds=01/4			I. Water an
Marsh Hawk		10 8/1-50			10
		TACMBUOM		by Chesley N. Dinkins	

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. <u>Doves and Pigeons</u> (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

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(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

3-1751 Form NR-1A MIGRATORY BIRDS (Nov. 1945) (other than waterfowl) Refuge Lake Patricia Months of September (2) (5) (1) . (6) (3) (4) Species First Seen Peak Numbers Last Seen Production Total Total Estimated Number Total # Number Common Name Number Date Number Date Number Colonies Nests Young Date I. Water and Marsh Birds: Horned 9/1-80 10 ogagpid Great Blue Heren Crow CHAIR eported by ... Wester M. Disking Use the correct names as found in the A.O.U. Checklist, 1951 Edition, and list group in A.O.U. ste. In addition to the birds listed on II. Shorebirds, Gulls and luring the reporting period other species courring o Terns: to bus lacol to seroega esont of attenti Special priate spaces Cavillornes to Ci contilormes and Cruscollina 9/1-30 50 I. Water 50 sign ficance. Lesser Tellow-Logs (sempolitabers (0) anne 9/1-30 100 200 9/1-80 Avenut 50 80 II. Dove 9/1-30 Marbled Godel's 10 20 Passeriformes) tellin 9/1-30 20 20 Gulls (sp?) 9/1-80 100 The first refuge record for the tat Seent The greatest number of the species present in a limited interval of time. eak Numbers: (8) The last refuge record for the species during the season concerned. ast Seen: Estimated number of young produced based on observations and actual counts. notioubor Estimated total number of the species using the refuge during the period concerned.

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons: Mourning dove White-winged dove	to December	than waterfowl) Months of Septemb	HDIM Tedfo)	Refuse_ Lake Futuisio	Form NR-1A (Nov. 1945)
(5) . (b) . (c) . (d) (d)	en Pr	(4) Ders Last S	een Peak Num	(1) (2) Secies First S	2
IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow	10/24 d	10/24-12/		non Name Number .	
March Hauk		20 9/1-30			20
			Reporte	d by Sheeley E. Dinkins	

(1) Species:

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes, Strigiformes, and predaceous Passeriformes)

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(2) First Seen: The first refuge record for the species for the season concerned.

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

3-1751 Form NR-1A MIGRATORY BIRDS (other than waterfowl) (Nov. 1945) Months of September to December 194 Tob Relation Refuge lake Spain (Melesa) (1) (6) (2) (3) First Seen Peak Numbers Species Last Seen Production Total Estimated Number Total # Total Common Name Number Number Date Number Date Colonies Nests Young Number Date I. Water and Marsh Birds: eigno! Great Blue Beren 9/1-30 9/1-30 Workern Grobe 10 20 10 10 9/1-50 American Bittern 10 THE Chesley M. Dinkingvc bedroges STRUCTIONS n the A.C.U. Checklist, 1931 Edition, and list group in A.O.U. ot names, us found "tern", etc. In addition to the birds listed on terms as Larener II. Shorebirds, Gulls and borned and in shirt and against other species occurring e Terns tall bas Isopi to server esont of mevin ed bluede no attenti Specia priate spaces Cavillor nes to Ci conillormes and Crones 9/1-80 I. Wate ficance. 50 erns (Charadrifformes) Lossor Volley-Loss 9/1-80 II. Shor 30 9/1-80 .II Dove 30 Willet angeressesses IV. Pred 9/1-30 Avoort Buososberg bas sauteligitle semisline olago 50 Wilson's Phalarene sassa 9/1-30 50 first refuge record for the species for the season concerned. restest number of the species present in a limited interval of time. Peak Numbers The last refuge record for the species during the season doncerned. Last Seen: Estimated number of young produced based on observations and actual counts. Readuction

(1)	(2)	(3)		(4)	(5)	(6) 1-8
III. <u>Doves and Pigeons</u> : Mourning dove White-winged dove	nadapens of	erfowl)	then wat Months		else Seste (No	Form NR-1A (Nov. 1945) Refu
(5) Over the state of the state	en Pro	(4) Last S	8180	(3) Peak Num	(2) First Sec	(1) Species
IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow		Tedmul	9/1-50	Nate Number	I redmut	Common Name I. Water and Marsh Great files Beron Mestern Crebe American Bittern
				Report	ed by	Dinkins

(1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National

priate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

(2) First Seen: The first refuge record for the species for the season concerned.

08

08

100

100

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

3-1751 MIGRATORY BIRDS Form NR-1A (other than waterfowl) (Nov. 1945) Months of September to December 194 7 bas seved .III Refuge Legion Lake (6) (1) (3) (4) First Seen Peak Numbers Last Seen Production Total Species Number Total # Total Estimated Number Common Name Number Date Number Date Number Date Colonies Nests Young Duck h I. Water and Marsh Birds: Morned Great 11m Heren यम्बर्ग्या 03 20 003 0.0 Crow .. 0.0 08-1/8 OR March Hawk deported by Cheeley M. Dinking ISTRUCTIONS Use the correct names as found in the A.D.U. Checklist, 1931 Edition, and list group in A.O.U. Species: II. Shorebirds, Gulls and In addition "tern", etc. as amied feneral blovA "seagull" during the reporting period other species occurring on refuge Terns: jak bus facol to selosque eacht of mevig ed Special attention chould priate spaces (Gaviiformes to Ciconiiformes and Grysodville 9/1-20 100 Groups: I. Water 100 significance. erns (Charadrifformes) 9/1-10 10 WAlllet 10 9/1-20 50 Greater Yellow-Legs 50 III. Dove 9/1-20 IV. Pred 100 Lesser Yellow-Legs 100 9/1-20 100 Passeri (spf) tressel 100 9/1-30 200 Long-Billed Dowitcher 200 season concerned. The first refuge record for the rst Seen 9/1-10 10 Godwit 9/1-10 50 50 Avocet The greatest number of the spec sak Numbers: 9/1-20 500 Wilson's Phalarebs 300 9/1-20 500 Gulls (sp?) season concerned The last refuge record for the ast Seen: Estinated number of young produced based on observations and actual counts. Production Estimated total number of the species using the refuge during the period concerned. Total:

- 1	(1)	(2)	(3)	(4)	(5)	(6)
III.	Doves and Pigeons: Mourning dove	Tedanosa of Ted	than waterfowl) Months of Septem	redjo)	Logica Lake	(Nov. 1945) Refuge
f	White-winged dove	een Produc	(4) Ders Last S	(3) Peak Num	(2) First Seen	(1) Species
IV.	Predaceous Birds: Golden eagle	Number Total Date Colonies Nest	Date Number	e Number	Number Dat	Common Name
	Duck hawk Horned owl Magpie		. so 11/2-42-40	9 08	: <u>ab</u>	I. Water and Marsh Sir
	Raven		. 500 0/2-20			Grand Silve Baron
	Baroh Rook		80 8/1-80			
				Repo	orted by	
			THOMPHOM			
	(1) Species:	order. Avoid general form, other species of	terms as "seagul? occurring on refuge	A.O.U. Checklis L", "tern", etc during the re	e. In addition to to porting period show	ld be added in appro-
	100		s: I. Water and Ma	arsh Birds (Gav		formes and Gruilformes)
	100	200	III. Doves and P:	igeons (Columbi	Cormes, Strigiformes	and predaceous
	(2) First Seen:	The first refuge reco	ord for the species	s for the seaso		-
	(3) Peak Numbers:	The greatest number of	of the species pres	sent in a limit	ed interval of time)
R	(4) Last Seen:	The last refuge recor	rd for the species	during the sea	son concerned.	Gulle (sp?)
14	(5) Production:	Estimated number of 3	young produced base	ed on observati	ons and actual cour	nts.
	(6) Total:	Estimated total number	er of the species	using the refug	ge during the period	concerned.

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

MIGRATORY BIRDS

(other than waterfowl)

Refuge Rock Months of September to December 194.7

(1) (6) (2) (3)(4) Species First Seen Peak Numbers Last Seen Production Total Number Total # Total Estimated Number Common Name Number Date Number Date Number Colonies Nests Young Date I. Water and Marsh Birds: 1 9/1-30 10/23 Great Blue Heron 20 iggs 20 9/1-80 10/23 American Bittern 10 1 nevs 10 Crow 08-1 eported by Clealey M. Dinking STRUCTIONS Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. (I) Specient no befail abrid off of noilibbs hi .oje as emred istenes blovA II. Shorebirds, Gulls and during the reporting period refuge other species occurring o Terns: tall bas lacol to seloegs esont of neving ed attenti Birg Cavillornes to Ci conliformes and Carolilys 9/1-30 10/25 significance. 100 100 'erns (Charadriiformes) Lesser Yelles-Less 150 9/1-80 150 9/1-30 Willet 30 30 Marbled Godwit 20 9/1-30 20 10/10 9/1-30 Passeriformes) 50 Avoces 9/1-30 eason corcerned. 100 150 Wilson's Phalarope The first refuge record for the rst Seen Gulls (sp?) 500 9/1-80 500 The greatest number of the species present in a limited interval of sak Numbers: The last refuge record for the species during the season dencerned. Estimated number of young produced based on observations and actual counts. Estimated total number of the species using the refuge during the period concerned. (over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove	elmaned of 4	than waterfowl) Months of September	Tenfo)	tefugeProtty Rock	Form NR-IA (Nov. 1945)
White-winged dove		(4) Ders Last Se	en Peak Num	(2) First S	(1) Species
IV. Predaceous Birds: Golden eagle	10/18	4 10/80-12/8	Date Number	ume Vumber	Comach Na
Duck hawk Horned owl Magpie •••••••• Raven	1 11/20	1 11/20-12/3			I. Water and Man Great Blue Here American Mitter
Crow March Mark		15 9/1-50			20
			Reported	by Cheeley No Di	pldine
ord	der. Avoid genera	l terms as "seagull	.O.U. Checklist, I	931 Edition, and list in addition to the birding period should be a	ds listed on .

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes. Strigiformes, and predaceous Passeriformes)

(fea) siles

(2) First Seen: The first refuge record for the species for the season concerned.

190

(3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

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

MIGRATORY BIRDS

(other than waterfowl)

Refuge Stewart leke

Months of September to December

(1)	(2)	(3)	(4)	(5)	(6)
Species	First Seen	Peak Numbers	Last Seen	Production	Total
				Number Total # Total	Estimated
Common Name	Number Date	Number Date	Number Date	Colonies Nests Young	Number
				dw.	Duck he
I. Water and Marsh Birds:				Iwo	Horned
Great Blue Heren		6 9/1-50			Magpie
					Rayen
Rared Grebee		80 9/1-50			W 300
American Bittern	THE SECOND SECOND	5 9/1-50		The state of the s	de 5
					the section are not below
					1
darkura og Asta	deported by				
II O A mt more tall but a	-14150	STRUCTIONS	MI.		
n, and list group in A.O.U. to the birds listed on	DIFIDE TOWN, JEIL	Herself Hiller	ot names as found in	pecies: Use the corre	(1)
	boired gnifoder		general terms as "no pecies occurring on		
Terns:	setopas prodt of	courts ad blunds a		priate spaces	
Killdeer ond Grundling	Cavilformes to Ci	80 9/1-50		significance.	50
(890)	erns (Charadriifo	birds, Culls and	II. Shore		
Losser Tellow-logs	(aemrolidm	50 9/1-80	Doves III		50
ormes and predaceous	niformes, Strigit	Seons Birds Falc	IV. Preda		20
Passeriformes) ###OVA		20 9/1-50			65
Wilson's Phalarepe	asson con cerned.	50 9/1-50	uge record for the	lot Jetil Odi - Licol Jeti	100
	to Isvret il betimi	The state of the s	thouse out he madeus		
	TOTAL TOTAL	P B HT AMPGOID SO	number of the speci	eak Numbers: The greatest	(3) F
	season concerned	nectes during the	ge record for the s	ast Seen: The lest refu	(4)
				1000 760	2
counts.	tentoe end actual	ed based on obser	ber of young produc	roduction: Estimated num	(5)
eriod concerned.	ofuge during the p	ecies using the r	al number of the ap	toj bejsmijal : Isto	T (8)
		(over			

(1)	(2)	1- (3)		(4	1)		(5)		(6)
III. <u>Doves and Pigeons</u> : Mourning dove	to Recomber	Morfowl)	ATORY BI than was Months	nemino)		ortal stro	radūeg	Refu	. Form NR-1A (Nov. 1945)
White-winged dove	n Pr	(4) Last See	pers	Peak Num	nee	(2) First S		(1) pecies	3
IV. Predaceous Birds: Golden eagle Duck hawk	1 00 11/8	O SadmuV 1	1/1-18/3	Number	Date	Mumber	Binds:	emsN hom	Com
Horned owl Magpie Raven Crow		50	9/10-30	08					50
March Hawk			0/1-50	73				greddi	and course
					Reported	l by	beeley E.	Dinkins	

(1) Species:

03

Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gavilformes to Ciconliformes and Gruilformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

Lagar Tollog-Long IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

Wilson's Finlarope

First Seen: The first refuge record for the species for the season concerned. (2)

Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

Estimated number of young produced based on observations and actual counts. (5) Production:

Estimated total number of the species using the refuge during the period concerned. (6) Total:

3-1751 MIGRATORY BIRDS Form NR-1A (other than waterfowl) III. Doyes and Pi Pier (Nov. 1945) Months of September White Labe December Refuge Mourning dove (5) (6) (2) (3) (4) (1) First Seen Peak Numbers Last Seen Production. Total Species Estimated Total # Total Number Number Common Name Colonies Nests Young Number Date Number Date Number Date I. Water and Marsh Birds: Horned oleggs 10 10 9/1-30 Great Blue Horan Crow OI DE-DE OF sported by Welster M. Diskins STRUCTIONS in the A.D.U. Checklist, 1951 Edition, and list group in A.O.U. Use the correct names as found (1) (Species: etc. In addition to the birds listed on terms as II. Shorebirds, Gulls and boined gnifroger edt gnirul other species occurring on refuge Terns: all bas facol to selbegs paoff of attention should De given Special priate spaces Killdoor D bas semiolitated to of semiolityro 9/1-30 50 significance. 60 erns (Charadriifo 9/1-30 20 20 Willet 9/1-30 100 100 Lesser Yellow-Legs 8/1-30 20 20 Avocet 100 Wilson's Phalerepe 9/1-30 100 300 8/1-30 The first refuge record for the 200 Gulls (sp?) The greatest number of the species present in a limited interval of Peak Numbers: The last refuge record for the species during the season concerned. Last Seen: Estimated number of young produced based on observations and actual counts. Readinofion Estimated total number of the species using the refuge during the period concerned. Total; (over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove	ber to broater	than waterfowl) Months of Coptes	THE RESERVE AND ADDRESS OF THE PARTY OF THE	efuge. Shite Inke	Form NR-1A (Nov. 1945)
White-winged dove	nea nea	(4) Ders Last S	(3)	(2) First S	. (1) · Species
IV. Predaceous Birds: Golden eagle	Date Colonies T	11/1-12/5	Date Number	me Vumber	Compon Na
Duck hawk Horned owl Magpie Raven		1/1-30	O.E.		I Water and Mar
Crow Marsh Howk		10 9/1-30			10
			Reported	by Gheeley M. Dis	
			CONS 1.O.U. Checklist, 1	931 Edition, and list	group in A.O.U.

Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous

(2) First Seen: The first refuge record for the species for the season concerned,

3) Peak Numbers: The greatest number of the species present in a limited interval of time.

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

Refuge Lake Ile & District IV Easement Refuges.

Months of September to December , 1947

		Kel	ugos.	common name.	des correct	(1) SPECTES:
(1) Species	(2) Density		(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total per acreage of habitat Bir	mber bods s'v'd timat	Percentage	Hunting For Restocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Pheasant Sharp-tailed Gr Hung. Partridge	tted should be base esuc	h betall alod Ludva serveti La elomae evi		d hardwoods, see ebc. Stand there is and counts of the area or ar	200 20 20	Hunting pressure light around refuge.
CHARLES LAKE Phonont Sharp-tailed Gr Hung, Partridge			habitat.	ative breeding	25 mm/los skill	Hunting pressure heavy around refuge.
HIDDENWOOD Phospart Sharp-tailed Gr Hung. Partridge	am stur "noting arbder	eds garbub e	pler end gn	al number in	d bedsmide	(5) REMOVALS: (6) TOTAL:
Phonount Sharp-teiled gr Hung. Partridge		re bha ndidal	termine popu		20 sto that	(7) REMARKS:
Pheasant Sharp-tailed Gr Hung. Partridge		sed.	nt ed binons i	period covers	800 20 Ida 50	Hunting pressure very heavy in this vicinity.
1613	A Comment of the Comm				A	8

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES: Use correct common name.

(2) DENSITY:

house bight suresery galam

Pertinent information not because the property of the property

List introductions here.

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.

Refuge Lake INe & District IV Resement

- (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.

Sharp-tailed Grouse Emag. Fartridge

Sharp-telled G

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

Refuge labe lie & District IV Easement Months of September to December 194 7

				common name.	Joerroo eall	(1) SPECTES:
(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	(6) Total	(7) Remarks
Common Name	Cover types, total	Number search broods obs'v'd. Estimated	Percentage	Hunting For Restocking For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Sharp-tailed Gr Hung. Partridge	Midlife Management s ac should be based and as Survey method use	culture land, in a color of the land, in a color of the lample areas indicated under	possible. F	nd hardwoods, ite, etc. Stand her her her stand oounks on the stand of arts.	10 0 0 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Sharp-tailed Gr	ations and actual cou		. habitat.	nibeerd svide	40	(3) YOUNG PRODUCED: (4) SEX RATIO:
Phononet Sharp-tailed Gr Hung. Partridge STEWART LAKE	refuge during certain	during the repoting into the s	ng the refus us those migra	dent birds pl	d becamined to	Hunting pressure very heavy during season. Estimated 60% of pheasants in this locality killed during hunting season.
Hung. Partridge	vevuus ni berevop bejasuper				80	(7) REMARKS:
Phoasant Sharp-tailed Gr Hung, Partridge		, bei	should be us	period covere	20 15 20	* Only columns applifo
1613						

Months of

Form NR-2 - UPLAND GAME BIRDS.*

(1) SPECIES:	Use	correct	common	name.
----	------------	-----	---------	--------	-------

Applies particularly to those species considered in removal programs (public (2) DENSITY: Species .. 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 .besesuper vilsolitoeca Mat introductions here. 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.

Sharp-bailed Groups Hung, Parkridge

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

Refuge Lake Ile & District IV Essenert Calendar Year 1947 Refuges.

(1) Species	(2) Density	(3) Young Produced	(t)	(5) Losses	(6) Introductions	(7) Estimated Total Refuge Population	(g) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	200 000	the first that the contract of	Predation Disease Winter Loss	Source	At period As of Dec. Greatest 31	
ano B	Lake Ilo or any of to calendar year 1947. have used the Steway	mals wors he Distri	observed or relative to the contract of the co	ported as be refiger duri sw intelope	ing on wo saw of ing may	o bas is to	2 4 6
	nt sessol istor etaction a	estimate	Tas	f known rece during the J	On the basts a	(L) REMOVALS: (5) LOSSES: (6) INTRODUCTIONS:	
	n stock was secured,	t no seio	ion of each ape	ated population	Gize the satia	(7) TOTAL REFUGE FORUMATION:	
	ch species as determined fro	les of es			Indicate he p	(8) SEX HATIO:	P-topped to

Remarks:

Reported by Chesley M. Dimbins.

Heruges.

Mag

o litar

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: 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 total number of young produced on refuge.

Reported by Charley M. Dinking.

- (4) REMCVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE
 POPULATION: Give the estimated population of each species on the refuge at period of its
 greatest abundance and also as of Dec. 31.
- (8) SEX RATIC: Indicate the percentage of males and females of each species as determined from field observations or through removals.

Remarks:

Refuge Lake Ile & District IV Resement Refuges. Year 1947

			Di abina	Commonois	7 Fishing	Post	à a lai na	Number re-	
	Relative		Fishing Number	No. of	l Fishing Pounds	Number	ocking	moved for	
Species	Abundance	Man days Fishing	Taken	Permits	Taken	Stocked	Area Stocked	Restocking	
	Abundance		Idadii		Idaon	DOCCEG	Area booked	Resoucking	
PAGE 1470		1,600		None					
Large-Houth Base	Common		500						
Blue Gilla	Common		4,000					Calcinition of the second	
Grappies	Abundant		8,000					300 adult 7"	
Perch	Abundant		4,000					200 adult 8"	
Catfish	Common		200						
Bullhoads	Abundant		4,000					Ly Parks of the same	
Suckers	Abundant		800					THE RESERVE OF THE PARTY OF	
Wall-eyed Pike	Contractor and	eyer or a common of		State College		15,000	Entire labe		
CHARLES LAKE		200		Hone		None		None	
Large-mouth Bass	Common		100		The same of the same of the same of				
Grappies	Common	BUILD TO Y	600						
Perch	Common		400					A STATE OF THE STATE OF	
Bullhoads	Abundant		2,000					are a second field to be a presentation of	
Suekers	Abundant		500						
Carp	Abundant		500						
HIDDRINGED		None		None		None		None	
INB OWNE		Home		None		None		None	
INB BARRON		Nome		Nome		None		None	
LATE SUBIR		None		None		None	de sérgie en la la particular de la company	None	

REMARKS: At lake Ile very few suckers or base were taken as the fishermen preferred the other species for eating.

Refuge lake the & District IV Baccount Refuges. Year 1947

		Sport Fishing			al Fishing		ocking	Number re-	
Species	Relative Abundance	Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	moved for Restocking	
EGOS IACE Babbacka Suckora	Common Common	Im	Tone Tone	Tome		Feme		Too	
Sulthunds Onep	Common Abundant	Home	Hone Home	None		Jone		None	
Catrick Bullhoads Suckers	Gumum Abundant Abundant	100	200 600 460	Home		Santo		None	
Builboods Suchers	Abundant Abundant	200	2,000	Hone		Ico		Jano	

REMARKS:

CULTIVATED CROPS

Permittee If farmed by refuge	Permit	Unit or	Crops	Avg. Yield		ttee's	Harve		<u>Unharv</u>			ensatory
ersonnel, so indicate)	No.	Loca- tion	Grown	per Acre	Acres	Bu.Har- vested	Acres	Bu.	Acres	Bu.		rices, or Revenue
Fred Larson 199	17368	AU-1 & 2	Barley Millet	30 15	17.5 Cut f	525 or hay	=	••	12.5	375		
Charles V. Schollneyer	11944	AU-4 & 5	Wheat Barley	26 45	19,25	500	S A S	=	8.25	870	27.5 ac	res fallo
tee pear	eated car	hetreyis in eyser	sket crown for shown for crown for c	to red	instruction	deared o		and an analysis	Toda	Sold for	AVIED CE	TRESPEC
remin a con s con s con s con s	th to edi	H - nrut	sh agora	the num	To all the L	for the u	. 0n JI			er egule	To the second	TONE TON
permit i	VI eatims	Te or Re	i siedens idend of	VinO - e	T AGE	stego do	TITO OOT		зоппет от	r erej. I	Panaga Papara	DIRECT
Torward Ser	ATTGITE	Telago	d crob seed a legross	HIS ON	A PA 95	A TOL BY SE	10 T P P P P P P P P P P P P P P P P P P		i ke per	Fire December	0.000	
Summary of Crops Grown:	Crop	Acrea	ge Permi Acre	ttee's s Bus	Share	I Ac:	Harvest		ent's Sh Unha Acre	arveste		Tone
od vente	Barley	\$8,25 19,25	17.		525	00		-	20.	75 7	45	

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

Permittee - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the Permittee column.

Permit No. - List the number of the Special Use Permit issued to the individual.

<u>Use or Location</u> - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

Crops Grown - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

Permittee's Share - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the Acres column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the Bushels Harvested column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the Permittee's Share column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. <u>Unharvested</u> - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the <u>Bushels</u> column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

(Vbir 1 1846 2-1128

HAYING AND GRAZING

Refuge Lake Ilo & Easement Refuges, District IV Year 194 7

	J V Mayor V A Saturba Labbrary a	Unit or	Actual Acreage	Animal Use	Hay Har-	Period of Use		Total	
Permittee	Permit No.	Location	Utilized	Months	vested	From - To	Rate	Income	Remarks
Fred Larsen	13613	GU-3	120	78		7/15-11/15/47	-50	87.50	
Fred Larson	18617	HU-1 & 2	20		16	7/15-11/15/47	1.00	4.00 8.00	
Charles Schollmsy	r 13616	HU-4	20		16	7/16-11/15/47	1.00	16.00	
Cage W. Searles	18611	EU-5	80		87	7/16-11/15/47	1.00	37.00	
							10-10-2		
								1 5	
.*.	112	1.103			*				

Totals:

Acreage grazed 120

Animal use months 75

Total income Grazing 87.60

Acreage cut for hay 70

Tons of hay cut.

Total income Haying 65.00

HAYING AND GRAZING

Refuge Theodore Roosevelt Refuge Year 194 7

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Mark	Tons of Hay Har- vested	Period of Use From - To	Rate	Total Income	Remarks
Bon Baye	18316		128 Est.		63.82	7/15-12/31/47	.50	31.91	
Andrew Hill	18613				0	8/4-12/31/47	.50	1.50	No hay out-paym.forf.
Fred Johnson	18317		78 Est.		36.4	7/15-12/81/47	.50	18.20	
Verne King	18526		115 Est.		57.2		50	28,60	
Norstog & Dahl	18552		79 Est.		39.5		.50	19.75	
Wm. O'Connell	18324		151 Est.		76.8		.50	87.65	
Wm. J. Ray	18318		246 Est.	- 2	125.2		.50	61.60	
James Stevens	18323		36 Bet.		18.0		.50	9.00	
Loyd Stevens	18315		45 Est.		22.46		.50	12.50	Down paym. exceeds
Thomas Tarnavsky	18331		24 Bet.		12.92		.50	18.75	tons harvested. Down paym. exceeds tons harvested.
.,,									



Acreage cut for hay 897 Est.

្តិបានទេស្នាស្ថិត្ត ស្ថិត្ត ស្

Tons of hay cut 448.80

Total Income Grazing

Total income Haying \$239.46