

NARRATIVE REPORT ROUTING SLIP

REFUGE DESOTO PERIOD January - April 1962

Mr. Crawford _____ Mr. Ackerknecht _____ Mr. Fermanich _____

WILDLIFE MANAGEMENT: Mr. Banko _____ Mr. Goldman _____ Mr. Stiles S

RESOURCE MANAGEMENT: Dr. Morley _____ Mr. Stollberg _____

OPERATIONS: Mr. Hickok _____ Mr. Regan _____

PUBLIC USE: Mr. DuMont _____ Mr. Monson ju Mr. Kubichek _____

ADMINISTRATIVE SERVICES: Miss Baum _____

DESOTO NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

FOR

JANUARY, FEBRUARY, MARCH, APRIL

1962

PERSONNEL

Kermit D. Dybsetter.....	Refuge Manager
Einar Kaastad.....	Wildlife Technician
Cletus LeBarge.....	Mechanic Heavy Duty
Donald D. Lacy.....	Refuge Clerk
Harry R. Prochnow.....	Operator Gen. (WAE)
Herman H. Allen.....	Operator Gen. (WAE) Separated 2-23-62
Carl Molvig.....	Operator Gen. (WAE) Light Duty
Irvin Miller.....	Laborer

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

BLAIR, NEBRASKA

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I. GENERAL

A. Weather Conditions.

	<u>Snowfall</u>	<u>Precipitation</u>		<u>Max.</u>	<u>Min.</u>
		<u>This Month</u>	<u>Normal</u>	<u>Temp.</u>	<u>Temp.</u>
January	<u>4.0</u>	<u>.26</u>	<u>.65</u>	<u>48</u>	<u>-18</u>
February	<u>14.5</u>	<u>2.01</u>	<u>1.01</u>	<u>60</u>	<u>-21</u>
March	<u>8.0</u>	<u>1.25</u>	<u>1.48</u>	<u>73</u>	<u>-15</u>
April	<u> </u>	<u>.24</u>	<u>2.56</u>	<u>85</u>	<u>23</u>
Total:	<u>26.5</u>	<u>3.76</u>	<u>5.70</u>	Dates of Extremes <u>Apr. 20</u> <u>Feb. 28</u>	

Statistics bear out the local complaint of a long, cold winter. Snowfall totalled 48.3 inches for the winter, about 18 inches above normal. Temperatures averaged five degrees colder than normal last December; six degrees colder in January; one degree colder in February; and seven degrees colder in March.

Precipitation was three inches above normal last reporting period, and two inches below normal this period. The sub normal precipitation of the latter part of this period is beginning to be felt. At this writing (May 14) it has been 64 days since we have received as much as a quarter inch of precipitation in one shower. Crop prospects for this year will depend upon the amount of moisture received in the next two to three weeks.

The last freezing temperatures in April occurred on the 15th (23°) and the 17th (32°).

B. Habitat Conditions.

1. Water. No water level manipulation was done from September 11 to March 12. The lake during this period exhibited a continual rise from 987.0 to 988.7. The river level was below the lake level during most of this time, which continues to point up the fact that ground water percolation can be our primary source of supply -- independent of the river level.

On March 12 the lake outlet gate was opened and the lake drawn down 1.2 feet to accommodate local runoff. The ice went out of the river on March 23, and the level dropped 3.5 feet in the next two days, while the lake regained a foot in elevation from local runoff.

On March 25 the river began a rise which brought the level up an unexpected ten feet in four days to a peak of 997.0. The lake elevation was at 988.6, a differential of 8.4 feet. Seepage into the lake under the upper closure levee was increasing and it appeared that a greater differential might cause undermining that could lead to loss of the levee.

On March 29 both inlet and outlet gates were opened two feet to raise the lake and cut down the differential with the river level. The next morning the river began to drop and the gates were closed. The lake continued to rise to a peak of 988.6 on April 14, when the subsiding river permitted the discharge of water down to the approved maximum level of 987.6 on April 26.

Ice went out of the lake on March 29, two weeks later than last year.

2. Food and Cover. Upland food supplies were more than adequate for waterfowl in the refuge vicinity this spring. Corn and sorghum remaining in refuge fields were completely utilized by the deer herd by mid-March. The deer turned to browse completely and made good use of a 60 acre tract of brush that was cut down as a land clearing project.

Upland cover is adequate for present resident wildlife populations.

II. Wildlife

A. Migratory Birds.

1. Waterfowl. Geese. The first geese were observed February 21 -- a small flock of Snows and Blues that landed in a stretch of open water in the new river channel. Other small flocks of Canada geese were observed to arrive and stay briefly during the next four weeks, apparently testing conditions at this latitude.

A warming trend the third week in March started a general movement up the Missouri River valley. Many fields of harvested corn were flooded by local runoff, making conditions excellent for

waterfowl throughout the bottomlands. The refuge became just a small segment of available habitat in this area and received very little use by geese.

The major stopping place in this area was two miles north of the refuge in an old ox-bow lake area that was drained and is now being farmed. The goose population on that area built up to about 100,000 the last day in March. The area is fondly recalled by local hunters as the greatest hunting marsh "in western Iowa." It was called the Slapps -- in fact there were three distinct marshes they called the First, Second and Third Slapps. The area reportedly contained about 3,000 acres of marsh and was well supplied with water from the Soldier River. On a spring such as this it still traps and briefly holds several hundred acres of shallow water.

*A good
migration
area?
JW*

Ducks. The weather prevented ducks from wintering over here this year. The first ducks (10 pintails) were observed on February 13. Small flocks stayed briefly in the area during the next few weeks, but it was not until March 19 that a general migration got started.

The flooded fields in the vicinity proved more attractive than the refuge to the ducks as well as the geese. The peak movement occurred about March 24. Most of the ducks on the refuge were found on ponded water on the Jones and Stratbucker tracts.

At the close of the period there were still a number of ducks around that appeared interested in nesting. No actual sightings of duck broods have been made on the refuge since it was established -- perhaps this will be the first year.

Coot. Use of the refuge by coot continues low, but the marsh area of Nobles Lake, adjoining the refuge on the east, contained several thousand birds for about a week.

2. Other Waterbirds. No cranes were observed. A few small flocks of cormorants were observed moving through during the last three weeks in April.

Great Blue herons were first seen March 24, and have been commonly seen since. They have a nesting colony two miles north of the refuge, and use the refuge lake to some extent for feeding.

One common egret was observed on April 19.

Pied-billed grebes were present in small numbers -- the only grebe species noted.

Two common loons were noted on April 13 and for several days thereafter.

No pelicans were observed.

3. Shorebirds, Gulls and Terns. The shorebird migration was again light.

Use of the area by gulls also continues light.

Common terns were present in small numbers during April. Flocks of up to 50 black terns were observed in late April.

- L. Doves. Mourning doves appeared again in good numbers.
- B. Upland Game Birds. Pheasants continue in small numbers. Bob-white quail are scarce, but seem to be making some recovery from the heavy losses suffered during the rigorous winter of 1959-60.
- C. Big Game Animals. White-tailed deer have shown a marked increase. Two years ago an aerial count under ideal conditions revealed 161 deer on the refuge and in the immediate vicinity. On February 24 an aerial count revealed a population of 388 deer. This was well above our December estimate of 250.

All animals, with the exception of one, have appeared to be in good condition. A buck was observed on February 4 that was apparently blind and nearly deaf. It walked continuously in circles to the left, and would walk right into a person standing in its path. It would stop and respond like a tame animal when touched and scratched behind the ears.

There was a patch of hair missing on the forehead near the left eye; a small amount of greenish matter was oozing from a break in the skin on the bare spot. We had hoped to be able to continue observing the animal, but efforts to locate it the following day were unsuccessful.

We feel that its condition was the result of an accident. A deer in similar condition was reported by a refuge neighbor (Clarence Case) as having been observed just north of the refuge two years ago.

Reproduction this year is expected to increase the herd to 550 to 600 animals. Initiation of a controlled hunt has been discussed and is being planned for December.

- D. Fur Animals, Predators, Rodents, and Other Mammals. No mammal removals have been made to date. Spot removal of beaver may become necessary at any time in the drainage ditch entering the east side of the lake. Further removals should be made the next trapping season all along the shore.

Mink would support a limited trapping program along with beaver.

Muskrats are few in number.

Coyotes are seen quite often and their tracks are found everywhere on the refuge.

Raccoons are occasionally seen and their tracks can be seen all along the lake shore. Several dead raccoon have been found, suggesting that they are being limited by some disease.

Skunk, opossum and woodchuck continue in small numbers.

Fox squirrels are commonly observed.

The cottontail rabbit population is very low.

- E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies. Observations of hawks were about comparable to last year; no spectacular movements noted.

The following observations of eagles were noted:

1/6 1 immature Bald
3/22 1 adult Bald
3/24 1 adult Bald

The Great Horned owl was the only species noted; no change in numbers.

A few crows remained through the winter. Migration continues light through this area. A few remain to nest.

No magpies have yet been observed here.

- F. Other Birds. No unusual observations were recorded.

- G. Fish. The lake was open to ice fishing during January and February. Fishing pressure was very light; the catch consisted mostly of small crappies and a few small bass and sauger.

Water control gates were open 20 days during the period; fish movement either to or from the river was possible during this period.

- H. Reptiles. Nothing to report.

- I. Disease. The occurrence of an injured or diseased animal was noted under Section II., C.

The finding of several dead raccoon indicates the possible presence of some fatal disease in this species.

III. Refuge Development and Maintenance

- A. Physical Development. The placement of crushed rock on four miles of the new loop road was completed this period and 600 tons were stockpiled for approaches and repair use. The construction of sixteen approaches was completed in April. Final grading of the rock was begun at the end of the period.

A purchase order was issued to a local land clearing contractor for 150 hours of work @ \$16.50 with a D-8 mounted tree and brush cutter. This resulted in the clearing of about 120 acres of land for opening up the east and north shorelines of the lake to help distribute

waterfowl use on the area. During the next period this will be raked, burned and disposed of; the land will be disked, leveled and seeded to wheat for browse.

Seeding of rye and sand vetch was repeated on 85 acres of the sandbar in April. Dry weather and winds halted the operation, and we are still awaiting rains to complete the seeding. Considerable work will be needed in leveling dunes on about 100 acres. If rainfall permits seeding in May or June we will use sorghum seed instead of rye. It appears that the establishment of a stabilizing growth on the sandbar may take several years of continuous seeding.

The planting of 40,000 multiflora rose seedlings was accomplished in April. They were placed in a single row, 8.2 miles long, along the inside of the loop road for a living fence to control future public trespass into the central part of the refuge. Most of the plants are doing well, but there will probably be stretches that will require replacement due to lack of moisture -- no rainfall during the three weeks since planting.

Preparations for the summer public use period involved: re-setting several temporary toilets; grading a parking and picnic area near the south closure levee; installation of signs and gates to control access and advise pertinent regulations; construction of a third lane on the boat launching ramp; construction of two boat docks at ramp; laying out parking areas; grading and widening a quarter mile of road to boat ramp; and numerous minor activities.

Maintenance and repair of several items of equipment acquired as surplus required most of the mechanic's time throughout the period. Acquired during the period were a D-7 with dozer, a D-8 without dozer, a gasoline powered four inch pumping unit, a new eight foot 3-point hitch tandem disk, a gasoline powered air compressor, a metal band saw, and numerous small items of surplus property.

B. Plantings.

1. Aquatics and Marsh Plants. None.
2. Trees and Shrubs. 40,000 multiflora rose plants (1 $\frac{1}{4}$ " size, \$26 per 1,000) planted along 8.2 miles of loop road.
3. Upland Herbaceous Plants. 85 acres of sandbar planted to rye and sand vetch at the rate of 70 pounds of rye, 4 pounds of sand vetch and 80 pounds of 15-15-5 fertilizer per acre.
4. Cultivated Crops. 2,265 acres of cropland are under cooperative agreement with ten local farmers. The refuge share is being shifted to more corn and less browse this year to reflect our expected needs based on last years use.

C. Collections and Receipts. About 70 bushels of rye seed was received from Lacreek Refuge and about 35 bushels from Union Slough.

About 140 bushels of corn were harvested for storage, and about 120 bushels of corn were harvested and transferred to Valentine Refuge. A total of 600# of Sand vetch was purchased for sandbar seeding.

No animal specimens were collected this period.

- D. Control of Vegetation. The control work on poison ivy vines on trees in the future marina site area was continued in January. We were a bit pre-mature in our conclusions that the 2, 4-D sprayed on severed vine stubs would not damage the trees on which they were growing. It is now apparent that the trees on which control work was done a year ago are dead or dying. Those treated this period are completely leafed out now, but will probably die by next winter.

Most of these trees are cottonwoods of 10 to 24 inch diameter. All of the trees on which poison ivy vines were sprayed will undoubtedly have to be removed. This will mean complete clearing at the marina site, and later replanting with new species. Some other method of controlling poison ivy growth will have to be worked out.

- E. Planned Burning. None.

- F. Fires. None.

IV. Resource Management

- A. Grazing. None.

- B. Haying. None.

- C. Fur Harvest. None this season.

- D. Timber Removal. About 120 acres of brush and trees were cut for water-fowl habitat improvement. Cleanup and ground working will be continued next period.

- E. Commercial Fishing. None.

- F. Other Uses. None.

V. Field Investigation or Applied Research

- A. Progress Report. The study of water management and related problems continues.

VI. Public Relations

- A. Recreational Use. Winter fishing was the only recreational use this period. Pressure was very light, with an estimate of only 200 use-days during the open season -- January and February.

B. Refuge Visitors.

<u>Date</u>	<u>Name</u>	<u>Affiliation</u>	<u>Purpose</u>
1/12	D. King	Ia. Cons. Off.	Discuss winter fishing
1/16-17	T. Wahl	Sand Lake Ref.	Transport surplus property
	F. Krege	" " "	
1/23	N. Buell	Wildlife Div. Chief, Wash., D.C.	Inspection and visit
2/9	P. Handwerk	Reg. Supr., Br. of Fed. Aid	Visit and tour refuge
	L. Morris	Nebr. Game Comm.	
2/15	H. Alger	Mo. Valley, Iowa	Visit
3/7	H. Miller	Lake Andes Refuge	Deliver surplus property
3/21	B. Bailey	Proj. Ldr., Game Division, Lincoln, Nebr.	Discuss refuge deer hunting season
	B. Havel	Dist. Supr., Game Dist. III, Norfolk, Nebraska	" " "
3/22	A. Hughlett	Ref. Mgr., Lacreek	Transport surplus property
3/26	I. Miller	Blair, Nebr.	Inquire about job
4/2	B. Lysne	Arrowwood Ref. Clerk	Transport surplus property
4/7	H. Panko	Dana College, Blair	Request info. for paper
4/9	T. Frank	Dana College, Blair	Inquire about job
4/10	J. Wright	Br. of Engr., Mpls.	Visit and tour refuge
	J. Umberger	" " "	" " " "
4/10	S. Runkel	SCS Biologist	Visit and tour refuge
	W. Hamor	" " "	" " "
4/10- 12	J. Dinkle	Br. of Engr., Mpls.	Discuss disputed boundary line
	R. Solfield	" " "	
4/11	L. Harrison	Br. of Wildlife Ref.	Visit and tour refuge
	W. Schmitz	Br. of Fish Hatcheries	" " "
4/12-	F. Carpenter	Reg. Supr., Ref. Br., Mpls	Visit refuge and discuss
13	H. Huenecke	Assn't Reg. Supr., Ref. Br., Mpls.	recreational program
4/13	H. Miller	Lake Andes Refuge	Visit

Occasional:

J. Jauron	Ia. Cons. Comm.
G. Jaeke	Ia. Cons. Comm.
E. Rashley	Missouri Valley, Iowa
G. Smith	Blair, Nebr
B. Lee	Missouri Valley, Iowa
G. Solomon	S.C.S., Blair
N. Buchardt	Fort Calhoun, Nebr.
L. Rasmussen	Fort Calhoun, Nebr.
W. Jones	Fort Calhoun, Nebr.
L. Tietz	Florence Station, Nebr.
W. Chord	USGMA, Sioux City, Iowa
L. Bonde	USGMA, Lincoln, Nebr.
G. Meade	Missouri Valley, Iowa
G. Stratbucker	Omaha, Nebr.
L. Liljedahl	Missouri Valley, Iowa

- C. Refuge Participation. Worked with S.C.S. on completion of a land use plan for the refuge.

The manager attended the Regional Conference in Minneapolis in late January.

The manager gave a talk and showed slides on the refuge at: 1) Kiwanis Club dinner meeting in Logan, Iowa on February 8; 2.) Omaha Bird Club meeting in Omaha, Nebraska on February 14; and 3.) Isaak Walton League Chapter at West Point, Nebraska on March 8.

The manager represented the Bureau along with Mr. Robert Sharp at a meeting with Iowa and Nebraska fishery personnel at Missouri Valley, Iowa on February 20. A cooperative agreement for fishery management at DeSoto was discussed.

The refuge is participating in the Feed Grain Program of the Department of Agriculture.

- D. Hunting. None.
- E. Violations. None observed.
- F. Safety. There were no lost time accidents during the period. A report of injury was prepared for W.A.E. Prochnow when he received poison ivy infection while planting multiflora rose. Medical aid was required.

VII. Other Items

- A. Items of Interest. The Don Lacy's became the proud parents of a new son, their second, on February 21. He was given the middle name of Glenn in honor of John Glenn whose orbital flight occurred the day before.
- B. Photographs. Following the signature page.
- C. Signature. Next page.

SIGNATURE PAGE

Submitted by:

Kermit D. Dybatter
(Signature)

Date: May 24, 1962

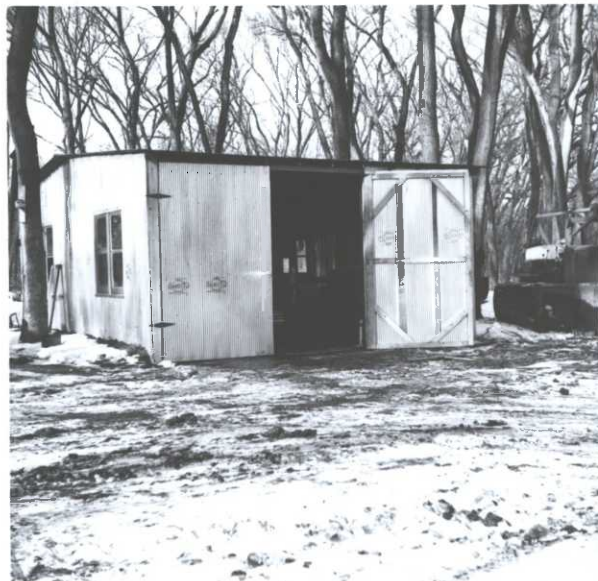
Refuge Manager
Title

Approved, Regional Office:

Date: 5-31-62

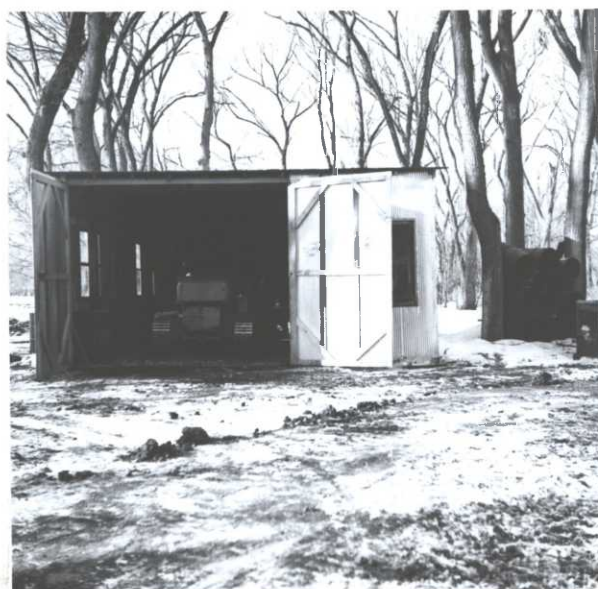
James A. Carpenter
(Signature)

Regional Refuge Supervisor



MAY - 62

0



MAY - 62

0

1/13/62. Views of temporary shop building completed in January. Building is 20x30. It was constructed of salvage material and \$290 worth of new material. It's not exactly "fancy," but is quite an improvement over working out-of-doors.



2/2/62. Poison ivy vines chopped on trees and sprayed with 2,4-D (Marina site area). The vines die within a few months and it appears now, from previous control work, that this treatment will kill the trees also in about a year. We will have to attempt control without 2,4-D, or perhaps by carefully painting it on the exposed end of the chopped vine.



3/7/62. Contractor Bill Lee with his tree cutter mounted on front of D-8. He was hired for 150 hours of work @ \$16.50. He cut 120 acres for an average cost of just over \$20 per acre.



3/7/62. Tree cutter in operation.



3/15/62. Windrowing brush and trees with refuge D-7. Material was cut off at ground level with a tree cutter. The stumps of cottonwood and willow will rot out in about three years. This area along the east side of the "island" will be used for goose pasture.



1/13/62. Nearing completion of hauling and spreading 10,000 tons of crushed limestone on loop road.



3/28/62. Clearing and leveling roadside for multiflora rose planting.



3/28/62. Surplus D-7 acquired from National Guard at Topeka, Kansas. Tractor is in very good condition. Note brush guard installed for material cost of about \$105.



MAY • 62 • 0



MAY • 62 • 0

2/24/62. A buck White-tail (note antler scars). He was observed walking continually in circles to his left-- apparently blind and quite deaf. He had a wound over his left eye, with green matter oozing from it, which may be the cause of his condition (see text).



3/24/62. Missouri River gauge set by Corps of Engineers near our inlet control tube. The level is at 990.5, the day after the ice broke up. The summer navigation level is about 988. The peak of the spring rise reached 997 on March 29.



Lacy, LeBarge, Kaastad, Dybsetter.
The Crew.

W A T E R F O W L

REFUGE DeSoto

MONTHS OF January TO April, 1962

(1) Species	(2) Weeks of reporting period									
	: Jan. 6 : 1	: Jan. 13 : 2	: Jan. 20 : 3	: Jan. 27 : 4	: Feb. 3 : 5	: Feb. 10 : 6	: Feb. 17 : 7	: Feb. 24 : 8	: Mar. 3 : 9	: Mar. 10 : 10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada, Large										20
Cackling, Small Canada										
Brant										
White-fronted										
Snow								5		
Blue								8		
Other										
Ducks:										
Mallard							15	10	15	20
Black										
Gadwall										
Baldpate										
Pintail							10	5	5	10
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked										
Canvasback										
Scaup										
Goldeneye										
Bufflehead										
Ruddy										
Other, C. Mergansers								5	5	15
Coot:										

WATERFOWL
 (Continuation Sheet)

REFUGE DeSoto MONTHS OF January TO April, 1962

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production : Broods: Estimated : seen : total	
	Mar. 17: 11	Mar. 24: 12	Mar. 31: 13	Apr. 7: 14	Apr. 14: 15	Apr. 21: 16	Apr. 28: 17	Apr. 30: 18			
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada, Large	40	60	150						950		
Cackling, S. Canada			250						750		
Brant											
White-fronted			300						1,200		
Snow			200					15	800		
Blue			300						1,200		
Other											
Ducks:											
Mallard	100	800	1,000	100	40	20	15	15	15,000		
Black											
Gadwall		10	20	20	10	10	10	5	550		
Baldpate		20	30	40	20	20	5	5	950		
Pintail	40	450	200	15	5	5	5		5,000		
Green-winged teal		40	100	80	10	10			1,650		
Blue-winged teal					200	400	200	100	6,300		
Cinnamon teal											
Shoveler		15	100	1,500	70	50	20	10	12,300		
Wood					15	20	30	20	550		
Redhead											
Ring-necked		10	40						350		
Canvasback											
Scaup		15	20	20	20				500		
Goldeneye		2									
Bufflehead			2								
Ruddy											
Other, C. Mergansers	20	20	40	60	30	10			1,250		
Coot:				20	30	10	5	5	450		
(over)											

	(5)	(6)	(7)
	Total Days Use :	Peak Number :	Total Production :
Swans	:	:	:
Geese	4,900	1,200	:
Ducks	1,900	44,400	:
Coots	450	30	:

SUMMARY
Principal feeding areas <u>Janes, Stratbucker and Rand Tracts</u>
Principal nesting areas _____
Reported by <u>K.D. Dybsetter</u>

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

- (1) Species: In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and national significance.
- (2) Weeks of Reporting Period: Estimated average refuge populations.
- (3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.
- (4) Production: Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
- (5) Total Days Use: A summary of data recorded under (3).
- (6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.
- (7) Total Production: A summary of data recorded under (4).

MIGRATORY BIRDS
(other than waterfowl)

Refuge DeSoto Months of January to April 1962

(1) Species Common Name	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total Estimated Number <u>Use Days</u>
	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	
<u>I. Water and Marsh Birds:</u>										
Common Loon	2	4/13	2							20
D.-cr. Cormorant	4	4/13	30							200
Pied-billed Grebe	1	3/29	5							100
Great Blue Heron	2	3/24	15							300
Common Egret	1	4/19	1							5
<u>II. Shorebirds, Gulls and Terns:</u>										
Killdeer	1	3/19	20							200
Herring Gull	8	3/24	20							300
Ring-billed Gull	10	3/24	30							400
Franklin's Gull			80							800
Common Tern			10							100

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove		300			4,000
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle					
Duck hawk					
Horned owl		10			1,000
Magpie					
Raven					
Crow		200			7,000
Bald Eagle		See Text			
Red-tailed Hawk		10			800
Rough-legged Hawk		4			300
Marsh Hawk		10			400
Cooper's Hawk		2			30
Sparrow Hawk		8			400
Reported by <u>Kermit Dybsetter</u>					

INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)
 II. Shorebirds, Gulls and Terns (Charadriiformes)
 III. Doves and Pigeons (Columbiformes)
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

3-1752
Form NR-2
(April 1946)

21

UPLAND GAME BIRDS

Refuge DeSoto Months of January to April, 19 62

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked Pheasant									30	
Bob-white Quail									10	

21

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

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

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

22

Refuge DeSoto Year ending April 30, 1962

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	For Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	Popula- tion
								Permit Number	Trappers Share	Refuge share				
Mink														30
Beaver														30
Muskrat														25
Weasel, op.														15
Striped skunk														15
Woodchuck														20
Coyote														15
Opossum														10
Fox Squirrel														100
Cottontail Rabbit														200
* List removals by Predator Animal Hunter														

* List removals by Predator Animal Hunter

REMARKS:

Reported by _____

22

INSTRUCTIONS

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

- (1) SPECIES: Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)
- (2) DENSITY: Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) REMOVALS: Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under headings listed.
- (4) DISPOSITION OF FUR: On share-trapped furs list the permit number, trapper's share, and refuge share. Indicate the number of pelts shipped to market, including furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimeness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: Estimated total population of each species reported on as of April 30.
- REMARKS: Indicate inventory method(s) used, size of sample area(s), introductions, and any other pertinent information not specifically requested.