

NARRATIVE REPORT ROUTING SLIP

REFUGEE DESOTO PERIOD May - August 1962

CHIEF'S OFFICE: Mr. Gillett _____ ~~Mr. Ackerknecht~~ _____ *ea*

Mr. Fermanich _____ *e* Mr. Goldman _____

WILD LIFE MANAGEMENT: Mr. Banko _____ Mr. Stiles _____

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ADMINISTRATIVE SERVICES: Miss Baum _____

DESOTO NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

FOR

MAY, JUNE, JULY, AUGUST

1962

PERSONNEL

Kermit D. Dybsetter.....Refuge Manager
Marvin P. Duncan.....Assistant Refuge Manager
Einar Kaastad.....Wildlife Technician
Cletus LeBarge.....Mechanic Heavy Duty
Donald D. Lacy.....Refuge Clerk
Harry R. Prochnow.....Operator General
Carl O. Molvig.....Operator Gen. (Light Duty) W.A.E
Irvin Miller.....Laborer
Clayton Nietfeld.....Laborer
Michael Alger.....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. 1962

	<u>Precipitation</u>		<u>Ave.</u> <u>Max.</u> <u>Temp.</u>	<u>Ave.</u> <u>Min.</u> <u>Temp.</u>
	<u>This Month</u>	<u>Normal</u>		
May	<u>4.59</u>	<u>3.90</u>	<u>92</u>	<u>39</u>
June	<u>4.79</u>	<u>4.47</u>	<u>88</u>	<u>49</u>
July	<u>4.56</u>	<u>3.17</u>	<u>96</u>	<u>49</u>
August	<u>5.35</u>	<u>3.48</u>	<u>93</u>	<u>51</u>
Total:	<u>19.29</u>	<u>15.02</u>	Extremes <u>96</u> July 7	<u>39</u> May 2

Precipitation was well above normal for the reporting period. Frequent rains during August kept ground conditions unusually wet hampering several phases of construction and farm work. Heavy erosion occurred along the lake banks and roadsides.

May was an unseasonably warm month with the maximum temperature averaging 79°. June and July temperatures were about normal, but August temperatures dipped to the cooler side. Cool temperatures prevailed at the close of the period.

No severe storms, resulting in crop or property damage, occurred during the summer in this area.

B. Habitat Conditions.

1. Water. River elevations taken at the lake inlet control tube varied 3.9 feet during the period from a low of 987.5 on May 8 to a high of 991.4 on July 20.

At the beginning of the period the lake level had been drawn down to the approved level of 987.6. A constant rise in level was experienced during the period and high river levels prevented adequate drawdown to hold to the approved level. A discharge of 0.8 foot was effected, but the level by the end of the period had increased to 989.25. This represents a total increase in level of 2.45 feet during the period.

2. Food and Cover. A small amount of aquatic vegetation began to show up in the lake this summer. Sago and broadleaf pondweed, cattail and bulrush were found in shallow shoreline areas and in the central part of the west arm of the loop. The constantly rising level of the lake and the action of boat motors combined to limit what might have been a very good stand of aquatics in these areas.

The above normal precipitation kept water in a number of shallow ponds that normally go dry in summer. Blue-winged Teal were beginning to use these at the close of the period.

Upland crops are generally good this year, and should provide an abundance of food for fall migrants.

The abundance of moisture has provided a tremendous growth of cover on non-use lands this summer. This should be a real asset to resident wildlife this winter.

II. Wildlife.

A. Migratory Birds.

1. Waterfowl. Geese. The spring migration was virtually complete before this period began. Two stragglers, a Blue goose and a small Canada, were observed on May 12.

Ducks. Movement of ducks was also nearly complete by the beginning of this period. A few pair of ducks remained on the area, as in the past two years, but this year we finally saw the evidence of successful nesting. A brood of Mallards was seen in a small pond on the east side near the Ralph Brown farm, and a brood of "Woodies" was observed among the water skiers at the south end of the lake one Saturday in June. An additional brood or two of Wood ducks was likely reared on the area.

Blue-winged teal were beginning to show up in fall migration at the end of the period.

Coot. Coot used the area very lightly again this spring and none stayed through the summer.

2. Other Waterbirds. Great Blue herons and Pied-billed grebes were again the only summer resident species noted for this group. The herons nest in a colony about two miles to the north and use the refuge waters for some of their feeding.
3. Shorebirds, Gulls and Terns. Piping plover and Least terns again used the large sandbar area for nesting. A few lesser yellowlegs and other small sandpipers began to appear in fall migration the latter part of August.

On August 20 a Woodcock was observed in low willow growth along the lake shore at the south end. This was the first record of this species on the refuge.

4. Doves. Mourning doves nested quite abundantly in this area again this year. A flock of about 100 doves regularly fed in an area along the west boundary of the Rand Tract (110).
- B. Upland Game Birds. A few Bob-white broods were noted during the summer, but the population remains well below the high level of 1959.

The pheasant population continues low; only one brood of young has been observed this period.

- C. Big Game Animals. Another good breeding season for White-tailed deer is apparent. The late winter population was about 400 head; the present population is quite likely between 550 and 600 head. This high population level is causing some damage around the perimeter of cornfields.

Reduction of the herd is planned in conjunction with the Iowa deer season, December 15, 16 and 17. The portion of the refuge in Iowa will be open to an unlimited number of Iowa hunters during this season. A special permit season has been arranged for Nebraskans to hunt the "island" area during this same period; permits will be issued to a maximum of 250 applicants.

Deer of any age or sex will be legal game. Iowa law requires the use of shotguns; Nebraska law requires the use of rifles. The hours open to hunting for Iowans will be 8:00 a.m. to 4:00 p.m. Nebraska law permits its hunters to hunt from one half hour before sunrise to one half hour after sundown.

- D. Fur Animals, Predators, Rodents and Other Mammals.

Mink are occasionally seen; there is probably a small increase over last year.

Muskrats remain few in numbers.

Beaver are apparently still increasing. A removal of about 30 animals would be desirable.

Coyote numbers continue quite high for the area involved. Probably three to five litters of young were raised on the refuge.

Skunk numbers remain very low.

Raccoon sign is evident all along the lake. There appears to be some increase in population.

Opossum numbers continue small.

Cottontail rabbits can be seen with some regularity, but the population is still far below the level of 1959.

Fox squirrels are quite common -- about the same level as a year ago.

No change is noted in the Woodchuck population.

- E. Hawks, Eagles, Owls, Crows, Ravens and Magpies. No significant change was noted in species or numbers for this group this period.

No eagles were observed.

An osprey was observed over the lake on several occasions.

- F. Other Birds. A pair of Eastern bluebirds was observed to use an abandoned woodpecker hole in a tree near the shop area.

Dickcissels were quite abundant this summer.

Lark sparrows were present all summer.

- G. Fish. A fisheries management agreement has been completed with Iowa and Nebraska. A plan for activities this year was drawn up last February. Corrective stocking, as opposed to complete eradication, was the approach decided upon to improve the quality of sport fishing in the refuge lake. The following stocking was accomplished during the period:

<u>Date</u>	<u>Species</u>	<u>Number & Size</u>	<u>Source</u>
May	Walleye	1,000,000 fry	Iowa
May	Walleye	1,000,000 fry	Gavins Point NFH
June 14	Bass	160,000 fingerlings	" " "
June 27	Walleye	28,800 fingerlings	" " "
July 6	Walleye	15,000 fingerlings	" " "
Aug. 13	White Bass	1,350 adults	Nebraska

Three other management measures proposed were not completed during the period because of lack of time and material. They were: 1) placement and marking of 15 to 20 submerged brush fish attracters, 2) placement of channel catfish spawning devices (10 to 12 inch sewer tile), and 3) spot control of gizzard shad with rotenone.

An Iowa fishery biologist, Roger Taylor, is now stationed at nearby

Missouri Valley. He conducted an investigation on portions of the lake area with an electric shocking device during the third week in August; his report has not yet been received.

H. Reptiles. Nothing new to report.

I. Disease. None evident.

III. Refuge Development and Maintenance.

- A. Physical Development. Development, expansion and maintenance of our temporary public use facilities occupied a good share of our time this summer. The crushed rock boat ramp was a continual problem. It was built last year as a two stall ramp and widened this past April to a three stall ramp. In May we found it necessary to widen the ramps still further to accommodate five boat trailers at a time. This was also inadequate, but we made the best of it by directing and controlling traffic during peak use periods on Sundays. Damage to the ramp was frequently caused by someone getting stuck or by heavy rainfall causing washouts and excess fill at the base.

Erosion from wave action made it necessary to install temporary wood plank headwalls in both directions from the ramp. This headwall also served to facilitate the loading and unloading of boats. A third dock was constructed east of the boat ramp to accommodate the new refuge patrol boat. The patrol boat, acquired the end of May, is a 16-foot aluminum Starcraft with a 75-h.p. Johnson Electramatic motor.

The parking lots and access roads were without surfacing and required frequent attention. Two 45-foot wells were driven to provide drinking water at the two access sites. A heavily used swimming beach area at the south access was buoyed off for protection against boaters and water skiers.

We sandwiched in a number of other jobs along with the work on recreational use this summer. Crushed rock hauled in on four miles of the loop road last winter was bladed out and crowned. Sixty acres of brush and trees cut last winter were piled, burned and remains buried. Land leveling and shoreline sloping on this tract was begun; it will be used primarily for goose pasture when seeding is completed.

Boundary fencing was continued. We have about 8.5 miles complete, about two miles partially complete and about seven miles remaining. Use reservations, existing crops and wet grounds interfered with extensive fencing work this summer.

Stabilization work on the sandbar was continued this period. The seeding of rye and sand vetch last fall was lost to browsing geese and winter winds. A repeat seeding in April was lost because of dry

weather and strong winds in late April and early May. In late May we seeded 150 acres of the sandbar to corn and sorghum with a grain drill. The drill box was divided for seeding corn on one side and sorghum on the other; openings for grain were alternately plugged to make 14-inch rows.

There will be no crop from this seeding, but there is sufficient growth to provide winter cover for most of the sandbar. In September, rye will be seeded in the corn and sorghum; this will be followed next spring by a seeding of sand vetch, sand dropseed, sand lovegrass and switch grass to try to attain a permanent grass cover.

Seeding of brome grass and clovers was accomplished on about four miles of ditch and slope along the loop road. Rains in late May and June prevented completion of the work.

The headquarters building layout and west entrance road location was planned and basic survey work accomplished by the Engineering Branch. Shelterbelt plantings were planned with the cooperation of the Soil Conservation Service, and a landscape planting plan was prepared with the cooperation of the National Park Service.

Maintenance of surplus-acquired equipment consumed a great deal of time this period. The major work included the following; HD-5 Endloader - replace fuel pump, repair shift assembly, repair injectors, and replace seal in rear main; Austin-Western motor grader - repair magneto, repair hydraulic pump, and replace clutch pressure plate; D-7 - remove, clean and repair radiator, and replace lining in rear p.c.u.; D-8 - replace steel radiator core, replace seals in rear p.c.u., and construct and install brush protector over operator's seat.

Equipment acquired during the period includes one 8-cubic yard scraper, a D-8 tilt dozer, an 8-foot tandem brush disk, and a new 7-foot sickle mower. A surplus trailer house was received and set up for temporary use at the future headquarters site.

B. Plantings.

1. Aquatic and Marsh Plants. None.
 2. Trees and Shrubs. None. Estimated survival on the 40,000 multi-flora roses planted last period is 90 percent.
 3. Upland Herbaceous Plants. Note sandbar and road ditch plantings mentioned under section "A" above.
 4. Cultivated Crops. Wheat crops averaged between 25 and 30 bushels per acre this year. Corn crops look very good throughout the area this year. The experimental field of proso millet did not turn out well again this year; its future value here is questionable.
- C. Collections and Receipts. The following seeds were purchased during the season: 1,000 pounds sorghum seed, 75 bushels seed corn, 700

pounds brome grass, 16 pounds ladino clover and three bushels red clover.

About 550 bushels of winter wheat were harvested for seed. About 400 bushels of this was transferred to Swan Lake Refuge. About 200 bushels of corn was transferred to Rice Lake Refuge.

- D. Control of Vegetation. Willow spraying on some of the sandbar and beach areas will be reported on next period.

The trees on which poison ivy vines were treated appear to be faring differently -- some are completely dead, some appear to be dying, and many do not yet show outward appearance of damage. The poison ivy treated is completely dead.

- E. Planned Burning. This involved only disposal of trees and brush cut and piled on the 60-acre area north of the marina site.
- F. Fires. There were no wild fires.

IV. Resource Management.

- A. Grazing. None.
- B. Haying. None.
- C. Fur Harvest. None.
- D. Timber Removal. All cutting on 120 acres was accomplished last period; work this period was confined to disposal.
- 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. The outstanding observation to date is that the water supply for the lake can come entirely from local runoff and ground-water percolation. There appears to be no need for drawing water from the Missouri River.

VI. Public Relations.

- A. Recreational Uses. Public use estimates for the period May 1 to Sept. 1 totalled 66,800 people. Of this, approximately 11,200 were fishermen. The other 55,600 participated in general recreation activities such as mushroom picking, swimming, boating, water skiing, picnicking, and observing.

The five lane boat launching facility on the north end of the lake proved satisfactory, but at times inadequate. On several Sundays during the use period over 200 boats entered the lake from the north end. When darkness approached, the boat ramp was a crawling mass of cars and trailers with over eager boaters wishing their old craft was home in the garage. Generally the throng of boaters behaved patiently despite their eagerness to unload and load the family vessel. As yet, public entrance to the boat launching site remains unmarked, but diligent boaters appear to be spreading highway directions quite rapidly to their fellow boating enthusiasts. Peak boating use occurred on August 5 when a total of 235 boats was tallied.

A recreational survey was taken on August 19 to determine the state origin, county origin, and number of occupants per vehicle. The survey indicated that the bulk of public use came from the Omaha-Council Bluffs area. Number of occupants per vehicle was found to be 3.8, which is slightly higher than Park Service surveys. A traffic counter was used at both access roads to measure the average use during a three week period.

The first death attributed to recreational use on the refuge occurred on August 26. A Council Bluffs, Iowa man drowned while attempting to swim out to his boat, which had drifted away from shore. Earlier in the period two accidents to the using public occurred on the lake. One victim suffered a broken leg (4 places) while water skiing in a shallow area. Another accident occurred at the boat launching site when a boater cut his leg severely on the propeller of his outboard motor (not running) while attempting to tilt the motor up. Numerous minor accidents and near accidents occurred in boating and skiing. Many lost items were reported to us during the period.

The most outstanding articles were two sets of false teeth lost by water skiers. The catfish have been biting extra hard lately!

Plans are underway for an additional launching and docking site which will be located on the south end of the lake. This site will be of a more semi-permanent type and should alleviate some of the pressure from the north access site. Plans call for a toilet-change house structure near the swimming beach which will delight the past privy users.

B. Refuge Visitors.

<u>Date</u>	<u>Name</u>	<u>Affiliation</u>	<u>Purpose</u>
5/15	M. Jensen	Blair, Nebr.	Inquire about job
5/28	C. Nietfeld	Blair, Nebr.	Inquire about job
5/28	G. Hansen	Blair, Nebr.	Inquire about job
6/11	R. Sharp	Br. of Fishery Mgt. Services, Mpls.	Discuss fish management on lake
6/14	D. Lamberton	Gavins Pt., N.F.H., Yankton, S.D.	Transport fish to lake
6/20	W. Chord	USGMA, Sioux City	Law enforcement meeting
"	F. Davis	Br. of Mgt. & Enforcement, Mpls.	"
"	W. Newcomb	USGMA, Des Moines	"
"	L. Bonde	USGMA, Lincoln	"
" -21	H. Huenecke	Br. of Ref., Mpls.	"
"	R. Downing	Nebr. Enforcement Supr., District III	"
"	C. Gettman	Enforcement Supervisor, Nebr. Game Comm.	"
"	G. Foster	Fisheries Supervisor, Nebr. Game Comm.	"
"	A. Neilsen	Nebr. Enforcement Off.	"
"	Rollins & Brahem	Enforcement Supervisors, Ia. Conservation Comm.	"
"	R. Cmelik	Ia. Enforcement Off.	"
6/21	H. Van Dyke	Br. of Engr., Mpls.	Hdqtrs. planning
6/27	D. Lamberton	Gavins Pt., N.F.H., Yankton, S.D.	Transport fish to lake
6/29	J. Kawamoto	N.P.S., Omaha	Tour area and discuss development
7/6	J. McGaughlin	"	"
7/6	D. Lamberton	Gavins Pt., N.F.H., Yankton, S.D.	Transport fish to lake
7/9-20	K. Wilhelm	Br. of Engr., Mpls.	Do topography of proposed headquarters site.
7/10	D. Sharp	"	"
7/10	Dr. W. Green	Wildlife Biologist, Winona, Minnesota	Visit and tour area enroute to Squaw Creek Refuge
7/12-13	H. Van Dyke	Br. of Engr., Mpls.	Hdqtrs. planning
8/3	L. Kirsch	Swan Lake Refuge	Seed transfer
8/3	W. Thornsberry	"	"
8/3	K. Johnson	Proj. Ldr., Nebraska Game Division	Discuss proposed deer season
8/6	W. Chord	USGMA, Sioux City	Discuss banding, waterfowl
8/13	P. Todd	Nebr. Game Division, North Platte, Nebr.	Transport fish to lake
8/14-15	D. Bridge	Rice Lake Refuge	Seed Transfer
8/27	W. Jaury	SCS, Council Bluffs	Courtesy
8/29	D. Elston	Nebr. Game Comm., Tekamah, Nebr.	Discuss report on refuge drowning.

<u>Date</u>	<u>Name</u>	<u>Affiliation</u>	<u>Purpose</u>
8/31	J. Sutherland	Wash. Co. Sheriff	Attend meeting to discuss
"	S. Strain	Harrison Co. Sheriff	procedures in handling rescue, drownings, etc on lake.

Occasional

W. Jones	Farm Cooperator, Fort Calhoun, Nebr.
N. Buchardt	Farm Cooperator, Fort Calhoun, Nebr.
R. Scebold	" Missouri Valley, Ia.
M. Stevie	" Missouri Valley, Ia.
G. Meade	" Missouri Valley, Ia.
P. Hoyt	" and Contractor, Mo. Valley, Ia.
C. Case	" Missouri Valley, Ia.
J. Jauron	Iowa Conser. Officer

- C. Refuge Participation. Slide talks and film showings were presented before the Chamber of Commerce in Missouri Valley, Iowa on May 2 and the Grange at Fort Calhoun, Nebraska on May 17.
- D. Hunting. None.
- E. Violations. Digest of Federal and States' regulations pertaining to general use and boating laws were made up for hand-out to the public. These digests were intended to help bring some order and understanding to a situation where two somewhat differing State boating Codes, as well as Federal Regulations, were involved on one small body of water. During the first seven weekends these digests were handed out to each boat operator entering the lake, and were also posted at both access sites (copies appended at end of this report).

A warning system was established whereby each minor boating infraction was recorded and the operator advised that three such warnings against his boat would necessitate its removal from the lake and denial of future use thereon for the balance of the season. This system worked satisfactorily for the "gray areas" of conflicting States' regulations and for minor Federal regulations. A total of 120 warnings were issued; eleven boats received two warnings, and only one received three warnings and was ejected from the lake. An estimated 1,000 different boats were launched one or more times on the refuge lake during the season.

Assistance on enforcement was received from Iowa and Nebraska officers during July and August and from USGMA's Newcomb and Chord on three occasions. Approximately 15 violations were handled by these officers in state courts; the outcome of six cases reported to the refuge indicates \$10 fine and \$4 court cost for each. These involved insufficient life preservers and water skiing without a mirror or observer.

Aside from boating violations several warnings were issued to the public for open wood fires, camping on the area, shooting fireworks, trespassing, unauthorized vending, and after closing hour use.

- F. Sport Fishing. Fishing improved this summer especially with the crappie, bass, and catfish keepers. Bank fishing results were poor to fair. Boat fishing was the most successful method, particularly for bass and crappies.

Nebraska bank fishermen were slighted this season due to the closed access road on the island area, which is in Nebraska. Early this season, district management personnel from Nebraska and Iowa agreed that State fishing licenses from either state would permit fishing from either bank. However, this verbal agreement was later thrown aside by their enforcement personnel who insisted upon following existing boundary water regulations and their "gentlemen's agreement" on transportation of legal catch. The enforcement personnel were, however, unwilling to enforce this change. The need for State clarification of this situation at the highest level is evident.

- G. Safety. There were no accidents or injuries to refuge personnel during the period. The using public did not fare as well -- with one drowning, one leg fracture, one serious leg laceration, numerous minor injuries and quite a number of "near misses". Constant patrol work on Sundays and Holidays probably helped to avert serious boating accidents under crowded conditions.

VII. Other Items.

- A. Items of Interest. The addition of two members to the permanent staff highlights this period. Mr. Harry Prochnow, who had worked under temporary W.A.E. appointment the past two years, received a TAPER appointment as Operator General in June.

In July, Mr. Marvin Duncan transferred as assistant manager from the Ouray Refuge in Utah. Marv has worked previously on the Bear River and Wichita Refuges, and brings with him a good deal of enthusiasm and useful experience.

- B. Photographs. Following the signature page.
- C. Signature. Next page.

SIGNATURE PAGE

Submitted by:

Kermit D. Dybsetter
(Signature) Kermit D. Dybsetter

Date: October 9, 1962

Refuge Manager
Title

Approved, Regional Office:

Date: 10-11-62

[Signature]
(Signature)

Regional Refuge Supervisor



Rental brush rake (Fleco) used in land clearing. Rake is mounted on D-8 received as surplus property from Fort Leonard Wood.



Refuge crew planting multiflora rose hedge along inside of "Loop Road." This 8-mile strip of hedge is expected to serve as a "people-proof" fence for the interior closed area.



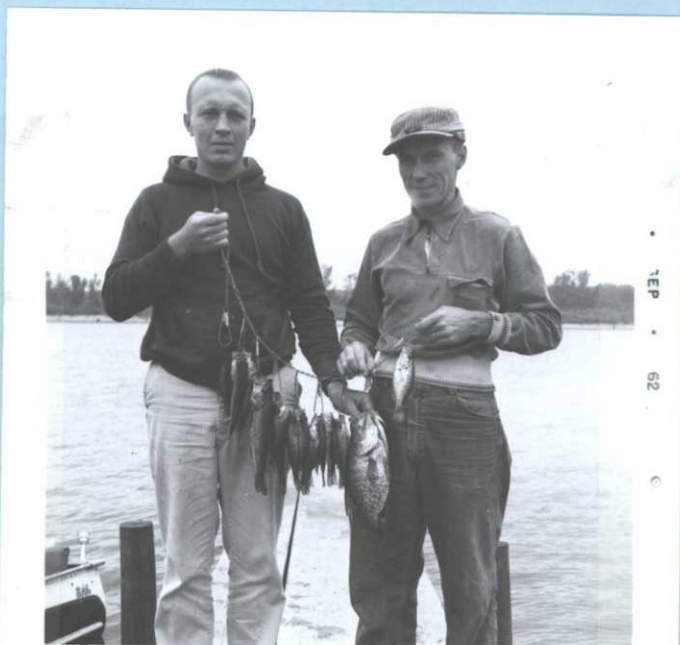
The two scenes above are at the south access to the lake; the lower closure levee now provides a very desirable swimming beach -- partially buoyed off to prevent boat entry. This is the first year of public entry at this site. Congressman Jensen has earmarked \$20,000 of our headquarters appropriations for improvement of recreational facilities. Most of this amount will be spent at this access site.



This scene is the same as on the previous page -- except that it is taken from the other side of the lake.



This was a typical Sunday line-up of cars and boat trailers awaiting their turn on the 5-stall ramp. Peak boating use occurred on August 5 when 235 boats entered the lake at this point.



Fishing success was fair this season. The upper photo was taken in May (note the grandaddy crappie). The lower photo was taken the closing weekend.



The refuge crew and families celebrating the close of the recreational season at the south access picnic area (Sept. 15). Following this session there was some talk of closing the season four of five times next summer.

W A T E R F O W L

REFUGE DeSoto

MONTHS OF May TO August, 1962

(1) Species	(2) Weeks of reporting period									
	May 5 1	May 12 2	May 19 3	May 26 4	June 2 5	June 9 6	June 16 7	June 23 8	June 30 9	July 7 10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard	15	10	5	5	5	5	5	10	10	10
Black										
Gadwall	5	5								
Baldpate	5	5	5							
Pintail										
Green-winged teal										
Blue-winged teal	20	10	10	5	5					
Cinnamon teal										
Shoveler										
Wood	10	10	5	5	5	5	10	10	10	10
Redhead										
Ring-necked										
Canvasback										
Scaup	2	2								
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>	5	5								

WATERFOWL
(Continuation Sheet)

REFUGE DeSoto MONTHS OF May TO August, 1962

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods:Estimated seen : total	
	July 11	July 21	July 28	August 4	August 11	Aug. 18	Aug. 25	Aug. 31			
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada											
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
Ducks:											
Mallard	10	10	10	10	10	10	10	10	1,100	1	1
Black											
Gadwall									50		
Baldpate									100		
Pintail											
Green-winged teal											
Blue-winged teal							5	10	430	0	
Cinnamon teal											
Shoveler											
Wood	10	10	10	10	10	10	10	10	1,100	1	2
Redhead											
Ring-necked											
Canvasback											
Scaup									20		
Goldeneye											
Bufflehead											
Ruddy											
Other											
Coot:									50		

(over)

	(5)	(6)	(7)
	<u>Total Days Use</u>	<u>Peak Number</u>	<u>Total Production</u>
Swans	:	:	:
Geese	:	:	:
Ducks	2,800	60	15
Coots	50	10	:

SUMMARY	
Principal feeding areas	
Principal nesting areas	
Reported by	Kernit Dybsetter

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

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

3-1751

Form NR-1A
(Nov. 1945)MIGRATORY BIRDS
(other than waterfowl)Refuge DeSoto Months of May to August 1952

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										<u>USE DAYS</u>
Great Blue Heron			35							3,000
Pied-billed Grebe			3							400
II. <u>Shorebirds, Gulls and Terns:</u>										
Least Tern			25							2,500
Lesser Yellow legs			75							1,500
Killdeer			25							2,500
Piping Plover			30							2,500

(over)

(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove		500			10,000
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle					
Duck hawk					
Horned owl	10				1,200
Magpie					
Raven					
Crow	50				3,000
Red-tailed hawk	15				900
Sparrow hawk	5				200
Marsh hawk	3				150
Reported by				L. Dyksetter	

INSTRUCTIONS

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge DeSoto

For 12-month period ending August 31, 1962

Reported by K.D. Dybsetter

Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat			(3)	(4)	(5)
	Type	Acreage		Use-days	Breeding Population	Production
I	Crops	1,955	Ducks	1,228,900		
	Upland	1,700	Geese	553,500		
	Marsh	20	Swans	0		
	Water	210	Coots	900		
	Total	4,085	Total	1,782,300		
II	Crops	1,060	Ducks	309,900	4	10
	Upland	1,200	Geese	61,000		
	Marsh	20	Swans	0		
	Water	530	Coots	400		
	Total	2,810	Total	371,300	4	10
III	Crops	650	Ducks	29,750	2	5
	Upland	440	Geese	4,500		
	Marsh	15	Swans	0		
	Water	265	Coots	400		
	Total	1,370	Total	34,650	2	
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
Total	Crops	3,665	Ducks	1,568,550	6	15
	Upland	3,140	Geese	619,000		
	Marsh	35	Swans	0		
	Water	1,005	Coots	1,700		
	Total	8,165	Total	2,189,250		
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			
	Crops		Ducks			
	Upland		Geese			
	Marsh		Swans			
	Water		Coots			
	Total		Total			

(over)

INSTRUCTIONS

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

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

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

Refuge DeSoto Months of May to August, 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'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			1	3					40	
Bob-white Quail			3	5					60	

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

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

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

DIGEST OF BOATING REGULATIONS

DeSoto National Wildlife Refuge

All motor boats shall be properly numbered according to the regulations of the State where registered. No Federal permit is currently required for operating a boat on refuge waters.

All boats shall carry a Coast Guard approved life preserver for each person on board; children under 12 must wear them.

Boat operators shall comply with their own State's regulations with regard to carrying fire extinguishers and horns or whistles.

All boats in use between sunset and sunrise shall display proper lights.

All motors shall be adequately muffled.

Boats shall not be operated in a manner that may injure any person or property, or interfere unnecessarily with other boats.

Any person mentally or physically incompetent or under the influence of intoxicants or narcotics shall not operate or be in control of any boat.

No boat shall be loaded or powered beyond its safe capacity.

Operators shall comply with signs in posted areas and observe Traffic Rules.

Traffic Pattern: Because the lake is long and narrow, the pattern of boat traffic shall be maintained as on highways; turns shall always be made to the operator's left, except when beaching or docking a boat.

Boats towing water skiers, aquaplaners, or similar contrivances shall carry at least two competent persons.

Water skiers shall wear a life preserver that will support an unconscious person in water.

Water skiing is prohibited from one hour after sunset to one hour before sunrise. (Note that the earliest entry to the refuge daily is 4:30 A.M.)

No boat, except sailboats, shall be operated with any person riding or sitting on the gunwales or on the decking over the bow.

Boats shall not approach closer than 100 feet to swimmers or fishermen, except at idling speed.

Swimmers shall stay within 100 feet of the shore unless accompanied by a boat.

Houseboats or other craft designed for use as lodging are prohibited.

Dumping of raw sewage, cans, bottles, or rubbish of any kind in refuge waters is prohibited.

(over)

BOATING REGULATIONS

Observe your own State's law for any boating regulation not covered here.

Any accident occurring on the refuge shall be reported as soon as possible to an officer on duty.

PENALTIES

Persons operating boats in violation of regulations are subject to fine and/or imprisonment by either State or Federal court and/or forfeiture of boating privileges on the refuge.

Boats in violation of regulations may be impounded by the refuge officer in charge or his representative. Owners may redeem same by paying a removal cost of not less than ten dollars, plus storage costs.

DIGEST OF RECREATIONAL REGULATIONS

DeSoto National Wildlife Refuge

HUNTING

Hunting is prohibited, except as may be authorized by special regulations.

FISHING

Fishing is permitted in accordance with State and Federal regulations.
(See Sport Fishing regulations for DeSoto National Wildlife Refuge.)

TRAPPING

Trapping is prohibited, except as may be authorized by special permit.

BOATING

Boating is permitted in accordance with State and Federal regulations.
(See Digest of Boating Regulations, DeSoto National Wildlife Refuge.)

SWIMMING

Swimming is permitted at individual's own risk.

PICNICKING

Picnicking is permitted anywhere within the area open to the public; in future years it will be confined to areas developed and designated for this purpose.

CAMPING

Camping is not permitted on the refuge.

PETS

Pets are not permitted on the refuge.

FIRES

No open wood fires are permitted. Charcoal fires are permitted in privately-owned portable grills, but not on the ground because of the danger to persons walking barefoot and the problem of litter control.

FIREARMS AND OTHER WEAPONS

Use or possession of firearms, air guns, crossbows, bows and arrows, or other weapons is prohibited, except as may be authorized by special regulations.

FIREWORKS

Fireworks of all kinds are prohibited.

DESTRUCTION OF PROPERTY

The destruction, injury, defacement, removal, or disturbance, in any manner, of any public property of any kind--animal, vegetable or mineral--within the boundaries of this refuge is prohibited, except as may otherwise be authorized.

(over)

TRASH

No cans, bottles or rubbish of any kind shall be thrown, dumped, or left on the refuge. Trash in public use areas shall be placed in the containers provided, or removed from the refuge.

TRESPASSING

Unauthorized entry into Closed Areas is prohibited. Entry is permitted only by written permit or in the company of a refuge officer. Public use areas are open only during hours and dates as posted at access sites.

DISORDERLY CONDUCT

Disturbance of the peace or other disorderly conduct is prohibited. No person who is obviously intoxicated shall enter or remain on the refuge.

MOTOR VEHICLES

Motor vehicles shall comply with all traffic signs and State laws. They shall be confined to roads and parking areas open to public use, and shall not be left in any position that may block or impede traffic.

PERSONAL PROPERTY

Any property left unattended in violation of any regulation may be considered abandoned and may be removed by Refuge Officers. Owner may redeem same by paying a removal cost of not less than ten dollars, plus storage costs.

SEASON OF PUBLIC RECREATIONAL USE

4:30 A.M. to 10:00 P.M. daily May 1 through September 15.

MUSHROOM PICKING

The picking of mushrooms is permitted on the area open to public use. Two additional areas, noted on refuge map, are open to public entry during the month of May for mushroom picking only.

VIOLATIONS

Failure of any person to comply with the regulations applicable to the refuge and public use thereon may render such person liable to the penalties as prescribed by Federal and State law and/or invalidation of permission to enter or be upon the area.