GRESCENT LAKE NATIONAL WILDLIFE REFUGE NORTH PLATTE EASEMENT REFUGE

ANNUAL NARRATIVE REPORT
1968

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

ELLSWORTH, NEBRASKA 69340

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I. GENERAL

1968

A. Weather Conditions

	Month	Precipitati Normal	Snowfall	Max. Temp.	Min. Temp.
January	•03	*46	2.0	59	-26
February	.26	*54	4.0	61	0
March	.31	•92	5.0	79	5
April	1.16	1.77	12.0	- 81	9
May	4.05	3.31	3.0	83	28
June	1.71	3.28	e in general de la consciona d	98	38
July	1.67	2.59	spronguling and mind branch deman	99	40
August	5.43	1.74		96	44
September	22	1.49	438mhan-time-mentionations	_86_	31
October	•63	•92	Former Commencements	87	1.7
November	• 45	• 59	•50	65	5
December	.17	•36	5.0	65	-23
Annual Totals	16.09	17.97	31.5 Extrem	es <u>99</u>	~2 6

Total precipitation for the year was 1.88 inches below normal. Again, dry and windy conditions prevailed during the first three months, threatening to retard grass growth. The 1.13 inches above usual moisture received in April and May boosted grass production. Severe blizzard conditions on April 3 dealt a serious blow to local goose and cattle production. Rainfall for June and July was 2.49 inches below usual. By late July water levels in potholes and lakes were low. Precipitation in August (3.69 inches above normal) produced good grass growth, and helped alleviate the effects of the early summer drouth. Snowfall for the year totaled 31.50 inches, as compared to 41.89 inches in 1967.

In early February the lakes started to open. All through February the lakes alternately froze and thawed until March 7th when the lakes opened for good. May 20th's low temperature of 28 degrees was the last frost of the spring.

September 26th's 31 degrees was the first fall frost. On November 7th all of the lakes were frozen over. Alternating cold and mild spells reopened and refroze the lakes until December 14th, when they froze for the winter.

B. Habitat Conditions.

1. Water. Weekly well readings in early August indicate that the well levels were the highest they have been in the last five years, except for Martin Lake. At freeze-up water levels of western potholes and lakes are the lowest they have been since the spring of 1965.

In the eastern one-third of the refuge, water levels are as good as in 1967, due to more abundant summer rainfall there.

2. Food and Cover. Aquatic submergent plant production in Goose, Crane, Deer and Gimlet Lakes was good to excellent. There continues to be a dearth of production of submergents in Island, Hackberry and Roundup Lakes.

Carp continue to keep Island Lake turbid and nearly barren of underwater vegetation. Water chemistry, combined with wind and wave action, appears to be causing unstable bottom conditions which seriously limits production of submergent aquatics in Hackberry and Roundup.

Ring-necked pheasants and mule-deer found the rank horseweed growth in the .65 acre former milo food patch in the north Gimlet meadow much to their liking. Rather than beating our head against the wall in fruitless attempts to raise domestic crops, we hope to maintain this as a weed food patch. By stirring things up every year or two and then letting it go-back, we should be able to

keep this and other similar scattered patches attractive to upland wildlife.

On February 27 we attempted, unsuccessfully, to burn emergent vegetation on the north end of Island Lake. Apparently the growth was too damp and the litter too sparse to carry the fire. Heavy spring grazing on the north end of Smith Lake has slowed down the reinvasion of bulrush around the 33 AN/FO potholes blasted there in March, 1967. It appears that a combination of fire and grazing will be needed to keep the emergents from taking this area over once again.

Attempts to reduce the matting in non-use sub-irrigated meadows in Grouse Study Area No. 3 by experimental light to moderate grazing have been unsuccessful so far. Rather than eat the rank growth in these meadows the cattle prefer to concentrate in the hills of Unit 6b-1. This fall a cross-fence was erected to keep the cattle in the meadows and out of the over-grazed choppy and sands sites. Forcing the cattle onto the meadows during the spring may be detrimental to duck nesting efforts. A rotational system of one year hayed and winter grazed, or fall burned (if it can be done safely), followed by two to four years of non-use may be the most beneficial and effective way to manage this sub-irrigated site.

II. WILDLIFE

A. Migratory Birds.

1. Geese (Resident Flock). Twelve Canada geese, the first of the year, flew over Island and Gimlet Lakes on January 23. By the week of February 19, 60 of the flock were utlizing Gimlet and Goose Lakes.

Selection of nest site was noted in early March. Artifical platforms available include 28 pole platforms, 10 Dill-frame baskets, 10 fiberglas tubs, 5 metal-sided cribs, 2 log cribs, 3 barrels, 2 dirt Islands, 2 steel tubs, and a brooder house roof. Foul weather during the laying and incubation period of late March through early May was detrimental to production. On April 3 a blizzard raged all day with four inches of snow, high winds and a low of 15° F. Minimum temperatures were 9° F on the 3rd and 4th, and dipped below 28° F five other times during the month (including 24° F on the 28th). Snowfall for the first 18 days in April amounted to 12 inches. Despite these adversities we estimated that the flock reared 50 goslings to flight stage (see Table 1.), with the first brood sighted on May 4.

Table 1: GXOSE NESTING USE OF ARTIFICIAL NEST SITES

Artificial Sites	1963	1964	1965	1966	1967	1968
Available	49	52	55	69	69	63
Checked	41	50	55	69	69	61
Used	27	26	3 8	42	34	30
% Used	55%	50%	69%	61%	49%	49%
Attempts			38	44	35	32
Successful		13	26	34	28	23
% Successful			68%	77%	80%	72%
iggs Hatched			111	128	119	76
ggs Infertile			28	48	20	?
iggs Embryonic			11	28	17	2
ggs Aban Dest	Unk.		22	22	7	91
Total Eggs	127	91	172	226	163	167
Avg. Clutch Size	4.70	3.50	4.53	5.14	4.66	5.22
Est. Yg. to Flight (All Nests)	55	81	75	101	75	50

In the last four years a goose has successfully nested on the brooder house 50 yards south of the office. This year a female with a crippled mate began incubating her two eggs at the end of March. While she was off the nest on April 3, the -25° F chill factor froze both eggs solid - we removed the two eggs that evening. The two birds returned the next day for about an hour, and again for a short time five days later. Then on April 19 the crippled male pair and one other goose were seen on the brooder house. From the 20th on, the crippled male was no longer seen with the pair nesting there. He was seen alone numerous times thereafter at the feeder. Apparently the same female was renesting after jilting her former mate. Only one of the three eggs she laid in her second clutch hatched - a rather meager reward for her perseverance.

Heavy rain, snow and chilling winds on May 7 was another blow to production; particularly for newly hatched and hatching goslings. It appears that weather leaves much to be desired for goose reproduction here.

No nesting was known to occur on muskrat houses, compared to five in 1965 and one each in 1966 and 1967. One incubating female finally abandoned her five eggs on a pole platform in Roundup Lake due to harassment by about 25 double-crested cormorants.

(Goose Trapping and Banding). Our plans to trap and band geese were frustrated because the flock was scattered throughout the refuge area all summer. Thinking we might get at least 30-50 birds using the goose feeder, we shut the east gate of the old pinioned flock pen. Following this seemingly harmless act on our part, the birds boycotted the feeder for nearly a month. With that affront from our feathered friends (?), we reopened the east gate and threw in the towel.

(Fall Resident Flock). In the late summer we estimated the population to be 125. Mowed meadows on the north end of Gimlet and on both sides of Goose Lake continue to provide grazing for these geese.

All but three of our locals left by December 19 (the close of the goose season), 5 days after freeze-up. These three stragglers remained at the close of the year, staying in a four feet diameter patch of water kept open by an artesian well flowing into the headquarters ditch. The ditch and jetty should be completed by next fall, along with placement of an experimental artesian well there. This promises to hold these Canadas here until the close of the State's late goose season in mid-December. Then we should be able to determine if the kill along the North Platte has been preventing the expansion of our flock by dipping into the breeding stock.

(Migrant Geese). The first migrants, about 280 Canadas, were seen during the week of March 5. Peak for the spring was only 552 the week of March 19, compared to last year's 1650. At the end of October about 20 new arrivals stopped, the first of the fall. By mid-November a peak population of 910 Canadas were present. Goose Use days exceeded only those recorded in 1966 for the last five years (Table 2).

Table 2: COMPARATIVE GOOSE USE-DAYS AND PEAK NUMBERS 1964-1968

	desidigines para servicio un ofici si milità cipilità con que e vidigio colorido continue anche	1964	1965	1966	1967	1968
Spring (Jan-Apr)	Peak No. Use-days	(409) 26,845	(1441) 25,469	(301) 10,547	(1650) 43,694	(552) 21,231
Summer (May-Aug)	Use-days	41,034*	19,710	17,680	19,437	15,200
Fall (Sep-Dec) Total	Peak No. Use-days Use-days	(1170) 42,942 110,921	(1082) 41,267 86,446	(880) 35,434 63,661	(1404) 32,144 95,275	(910) 35,560 71, 991

^{*} Large summer flock - 345 birds

2. <u>Ducks</u>. On February 27th the first spring arrivals were seen on Island Lake - 30 mallards, 15 pintails and 5 common mergansers. Blue-winged teal did not show up until April 8, three weeks later than a year ago. No spectacular movements were noted. Ducks peaked at about 10,600 in mid-April, lowest of the last five springs. Use-days (423,278) for the first 4 months was exceeded only by 1967's 571,347 for this same period in the last five years.

Habitat conditions favored the breeding population due to abundant water in both large and small wetlands. Good weather conditions made it possible to make the mated pair count from June 4-7. The main brood survey was conducted July 22-26. Both the duck breeding populations and production topped those tabulated in at least the five previous years. (Table 3).

Table 3: DUCK BREEDING PAIRS AND ESTIMATED PRODUCTION 1964-1968

Year	PAIRS		Estimated				
* 407	Puddlers	Divers	Total	Production			
1964	474	84	558	1359			
1965	669	111	780	1584			
1966	737	80	817	1570			
1967	777	75	853	1496			
1968	970	135	1105	1830			

About mid-August baldpates started moving in, and shovellers and blue-winged teal out. Gadwalls, our most abundant fall migrant, peaked at about 3570 birds the last 2 weeks of October. Our peak fall duck population of 13,180 birds, was the highest recorded since 1961. Use-days of 691,110 for the autumn was second best only to 1965 in the last 8 years. This fall's peak for the most abundant species is the highest tabulated in the 1962-1968 period (Table 4).

Table 4: F	EAK	POPULATIONS	466	FALL	PERIOD ((Sept-Dec).	1962-1968
------------	-----	-------------	-----	------	----------	-------------	-----------

	1962	1963	1964	1965	1966	1967	1968
Mallard	600	1440	2100	1275	2115	1670	1305
Gadwall	860	2770	1580	2635	2065	1876	3570
Baldpate	1210	1525	2890	2075	2030	1736	3140
Shoveler	1140	2190	2745	2910	1845	1187	2540
ledhead	230	975	280	1045	850	575	1890
Canvasback	1040	2880	1315	1970	1490	1064	1435
Ruddy	870	1000	1145	1935	2045	688	1100
Bufflehead	770	1050	510	1.440	655	220	1550
Total	6720	11830	12565	15285	13095	9016	16530

August 12 through September 17 we (mainly Duskin) banded 113 bluewinged teal, 62 mallards and 1 green-winged teal - a meager return for the time and money spent. Trapping was done with small, clover leaf, swim-in traps baited with corn and wheat. Those banded included 72 immature blue-wings and 18 "hatching year" mallards.

- 3. Swan. None observed.
- 4. Coot. Production was estimated to be 460, about 50 per cent higher than each of the previous two years. Use-days totaled 294,775, as compared to 1967's 317,592 and 1966's 232,965.
- 5. Water and Marsh Birds. Double-crested cormorants started arriving on March 27. Though the number of artificial nesting platforms used by these "black geese" was the lowest of the last four years, the number of nests was the highest (Table 5). By October 19 only two of the cormorants remained.

Table 5: DOUBLE-CRESTED CORMORANT USE OF NESTING PLATFORMS ON SMITH AND ROUNDUP LAKES

	1965	19 66	1967	1968	Walkington - Wales
No. Platforms Used	6	6	6	4	
No. Nests	41	53	69	75	

Unusal visitors from this group included a white-faced ibis on May 11, and a snowy egret on June 6. Though white pelicans do not nest here they make an annual visit for about a month during late summer. This year a maximum of 250 were counted in late August, compared to 150 in 1967 and 1966's 500.

Sandhill cranes were first observed on March 25, when 60 flew north over headquarters. The last spring sighting was of a flock of 130 over Gimlet Lake. During the fall, migration began over the refuge when 60 sandhills were sighted from the residence area. Forty of these big birds were flushed from Upper Red Kate on November 15 - the last record for this fall. Though thousands pass through this area, rarely do any stop at the refuge.

- 6. Shorebirds, Gulls and Terns. March 29 was the spring arrival date for long-billed curlews.

 Dr. Mary Tremaine, avid Omaha ornithologist who has done much birding here, reported that 1968's curlew breeding population was below those of the recent past. Miss Tremaine's attempts to photograph and study nesting long-bill yielded very little return for her efforts. Next year she hopes to spend about a month here during the late spring to study and photograph nesting activity of these grand sand-pipers. One long-billed curlew, last sighted in the year, flew over headquarters on September 5.
- 7. Mourning Doves. Doves were first seen on March 31, and last noted on September 5. Between June 24 and July 30 the Wildlife Aids banded only 50 of these passerines, about one-half 1967's number. Perhaps differences in population levels are indicated by these banding results, since the same sites and one of the banders were the same for both years. Controversy is building over a bill introduced to reestablish a dove season in Nebraska. Good luck, eh:?

B. Upland Game Birds.

1. Grouse. Dancing ground counts began on April 9 and ended on May 2. Covalt, Duskin and Perkuchin conducted the surveys. By making future counts during the last two weeks in April, we should catch the peak dancing activity. Only one prairie chicken was observed, that being on the east side of Blue Lake.

This year's spring population of 325 male sharp-tailed grouse was the second highest for at least the last five years (Table 6).

Local ranchers reported seeing more broods this spring than in quite some time. Our records, based on observations made incidental to other field work, indicated that grouse production was the best it has been since at least 1963. At the end of December an estimated 700 grouse used the refuge, as compared to 800 in 1967 and 750 in 1966.

Table	6:	SHARPTAIL	GROUND	CHECKS	ON	AND	OFF	REFUGE	AND	BROOD
		SIGHTINGS	1964-19	968						

		and the second second second second	The state of the s			
All Known Grounds	1964	1965	1966	1967	1968	
No. Grounds Checked	37	46	53	52	55	<u>indianes</u>
No. Grounds Active	22	38	42	42	36	
Total Males	279	293	307	379	325	
Males/Active Ground	12.68	7.71	7.31	9.12	9.03	
Same 35 Grounds		THE HARDEST WAS THE RESIDENCE OF THE STATE O				ACCOUNT
No. Grounds Active	19	26	27	28	24	Militarea
Total Males	247	199	202	251	173	
Males/Active Ground	13.00	7.05	7.48	8.96	7.21	
Broods	tak nakawa sa kina tak naka na taka na		Makara sekentingga selapan kapisandan ada selapan rapida			MANIELLA
	10	10	11	18	19	
Observed	12	2. 4	alle elle	20	alles dell	

- 2. Ring-Necked Pheasants. Production, estimated at 250, was below 1967's 408 and above 1966's 235. Only 14 broods were tallied this summer, with 23 seen last year. Headquarters and the north end of Island Lake continue to maintain the biggest concentrations of ring-necks. About 650 pheasants remained in late December.
- 3. Bob-White Quail. Rarely seen, none have been noted since June, 1966.

C. Big Game Animals.

- 1. Rocky Mountain Mule Deer. Fawn sightings totalled 54 (including 16 sets of twins and a set of triplets), compared to 52 for 1967 and 67 in 1966. Though estimated production of 60 is better than 1967's 55, it is short of 1966's 75. As of December 31 about 160 remained, with 115 last year and 205 in 1966.
- 2. White-Tailed Deer. Fourteen fawns (including four sets of twins) were seen, compared to eighteen in 1967 and nine in 1966. Largest concentrations of white-tails were found on the northeast end of Island Lake and near Upper Harrision Lake. There was approximately 55 here at year's end, with 45 late in the previous two falls.
- 3. Pronghorn (Antelope). Antelope were rarely seen this summer, thus precluding sightings of young kids.

By late August scattered small groups of these elusive critters started to show. When we saw one herd of 85 pronghorns in the 7-ponds area, we realized last year's population estimates had to be much too low. Our December 31 estimate is 160 using the refuge. Up to 30 of the 160 head may reside on the east end. The remaining 130 are private land-based animals making intermittent use of the refuge.

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

- 1. Muskrats. Three hundred is a conservative estimate for muskrat houses on refuge lakes this fall. On Deer Lake alone, 75 rat houses were counted, compared to 58 in 1967 and 61 in 1966. Our estimated fall population is 1,480, with 1967's at 1,145 and 1966's at 1,205. In the future, winter house surveys should be conducted to get a more accurate index to fall population levels.
- 2. Mink. One mink was observed on the east side of Martin Lake on March 22, our only record for 1968. An estimated 25 of these secretive furbearers reside here, the same as for the previous two years.
- 3. Weasel. Long-tailed weasels, peak population estimated at 300, are occasionally seen around the headquarters. In winter, both brown and white color phases of these energentic little animals are seen bounding about. Infrequent glimpses of the rascals are one of those tasty morsels that make refuge living so appealing to some of us.
- 4. Covotes. Hearing the voice of the covote at sunset or in the still of the night is another of life's memorable moments for some. Unfortunately, this sentiment is not shared by many, as evidenced by relentless persecution of prairie wolves throughout their range. Discriminate control of problem covotes is certainly warranted at times. Whereas indiscriminate 1080 poisoning, such as that carried out this spring in the vicinity of the refuge (see photo section), appears contrary to the intent and purpose of the Bureau's stated animal control policy. This year 23 sightings were made with an estimated population of 30, compared to 19 observations and a population figure of 25 for 1967.
- 5. Raccoon. Few raccoons are seen, but their sign is abundant around refuge lakes and marshes. An estimate for the total population is 100, the same as last year. To our knowledge their predation is not serious enough to warrant a control program.
- Rabbits. Estimates for jackrabbits are the same as 1967's,
 250 white-tailed and 150 black-tailed. Cottontails

appear to be lower this year than last, with about 250 in the scattered pockets of woody growth through the refuge.

- 7. Badger. Perhaps 25 of these excavators frequent meadow areas where pocket gophers abound.
- 8. Skunk. About 50 of these predators reside here. Only three were sighted, all along the west mail road near Smith Lake. Even their sign is rarely seen.
- 9. <u>Porcupine</u>. Only one was observed. Approximately five porcupines inhabit the marsh edges and scattered tree groves.
- 10. Small Rodents. There was very little trouble with pocket gophers in the yards. Apparently the previous fall's poisoning around headquarters with the burrow builder produced the desired results. Ord's kangaroo rats are the most commonly seen small rodents. Paul B. Robertson, graduate student from the University of Kansas, spent four days here in late spring collecting meadow jumping mice and meadow voles.

E. Hawks, Owls, Eagles, Ravens and Magpies.

- 1. Hawks. One duck hawk, rarely found here, was observed on April 30, sitting alongside the ditch between Smith and Perrin Lakes. Marsh, Swainson's and rough-legged hawks were frequently seen.
- 2. <u>Eagles</u>. At least six golden, and only one bald, eagles were sighted on the refuge this fall. Pheasants on north Gimlet meadow are keeping a wary eye cocked for an adult golden which selected the headquarter's vicinity for his winter hunting ground.
- 3. Owls. One pair of horned owls nested on the Hackberry Lake natural area. Hearing their familiar hooting outside the childern's bedroom window in the middle of the night makes for interesting conversation around the breakfast table the morning after. An estimated 15 western burrowing owl's were produced in five known nests.
- 4. Crows. Uncommon here, a flock of 19 was seen harassing a greathorned owl on the north end of Island Lake October 18.
- 5. Magpies. Though year around residents, their numbers probably do not exceed 20 at any time.
- 6. Other Birds. On September 21 we watched 14 pinon jays flitting about the trees on the north end of Roberts mead-ow. This is the first time that they have been seen here.

Because the refuge lies in the transition zone of eastern and western, as well as northern and southern, species, one never knows what birds they may find on the area.

G. Fish. Good fishing for northern pike was experienced in February on Island Lake, and in July on Crane Lake. In late October the State Game Commission transplanted 175 mature northern pike into Island Lake, and 68 adult bluegill and 877 large perch into Crane Lake.

We assisted personnel from Fishery Services at Valentine in shock sampling Island Lake. Though some nice northern pike, largemouth bass and bluegill showed up in the sample, carp predominated. Two different age groups of adult carp have about tied up the fish carrying capacity of Island Lake and all but ruined its ability to produce aquatic vegetation. Arrangements were made to have the state seining crew seine carp to give Island Lake at least a temporary breather. Until chemical control is possible, this lake will be incapable of providing desirable waterfowl habitat.

H. Reptiles. In five days Mr. Robert Hirdler and sons of Welcome, Minnesota removed 107 snapping turtles from 4 refuge lakes. When the permittee advised us that they removed 76 snappers in 2 days from Hackberry, we decided to terminate the privileges of the Special Use Permit. We did not imagine that someone could be so efficient in catching these reptiles from a boat with a long-handled hook. Nor did we have any idea that snappers were that abundant on the refuge. Unless it can be shown that these marsh monsters, are a problem here, no further removals will be permitted. In addition, a 59 pound snapper caught in Gimlet Lake by refuge personnel, provided some delicious eating at a station picnic.

Bull snakes frequently slithered into view during the summer. Wildlife Aid Jakabosky knocked one out of a tree near the office and forced it to regurgitate the three mestling robins it had just devoured. Jake had been watching the old devil systematically inspect the limbs of two different trees before it found the nest.

I. <u>Disease</u>. About 30 ducks, suspected victims of botulism, were found dead along the north shore of Roundup Lake in late July. There was no other evidence of wildlife diseases noted.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Developments.

1. Roads. Trails and Landscaping. Landscaping for the new residences required hauling of 58 cu. yd of blackdirt fill to Quarters 8 and 452 cu. yd. to Quarters 9. At the new bone yard, it took 54 cu. yd. of gravel and clay from the pit on the northeast end of Crescent Lake for the road, and 133 cu. yd. of blackdirt for the storage area. Gravelling on the west mail road was completed with the spreading there of 406 cu. yd. of gravel this summer from Eldred's pit. In addition 3 cu. yd. of manure for the resident area shelter belt were trucked from Paul Dietlein's.

Covalt and Dietlein put two new cattle guards in the west mail road, at the west boundary and just southeast of Smith Lake. Nine times during the year Covalt bladed the west mail road. The dump received a long overdue cleanup and burial treatment. Installation of a large covered tank receptacle this fall eliminated our previous unhealthy and unsightly open fill setup.

Three redwood entrance signs with pipe frames were erected at the county road entrances into the refuge. Revision of the areas open and closed to hunting necessitated additional posting during the summer.

2. Buildings and Utilities. Quarters 1 received a face lifting with a picture window replacing the two windows and large door in the north end of the livingroom.

All but the kitchen and lower hallway were painted in the interior of Quarters 1. Residences 8 and 9 received two coats of white paint on the exterior, with all of the interior of No. 9 also painted.

This spring, work on a domestic water supply system for Quarters 9 was completed. Television towers, antennas, rotors and boosters were purchased and erected at the three permanent residences. Max Christ, contractor from Scottsbluff, blew rock wool insulation into the ceiling and walls of Quarters 1, and the office walls.

Electrical work (about \$1,050 worth), furnace and gas appliance inspections and repairs, and fire extinguisher refills and purchases improved the safety condition of all headquarter's facilities. A diesel oil tank and pump obtained from excess were put in next to the gas pump. Irey removed the old picket fence around the courtyard and behind the office, and gave the remainder a badly needed coat of paint.

3. Equipment Construction and Maintenance (Major Items). Our D-6

caterpillar tractor received a major overhaul, and had a doubledrum winch installed, at the Western Nebraska Vocational Technical School for \$1,354.34. New brake linings, grease seals, wheel cylinder kits and front wheel bearings were put in jeeps 1 and 2. Two new GE mobile radios replaced the unreliable and troublesome rebuilts in jeep 1 and the new International 4x4.

4. <u>Dugout-Pothole Development</u>. In March six potholes were blasted in low meadowland on the northeast side of Island Lake with an Ammonium nitrate/fuel oil mixture. Using combinations of 12.5 and 25 pound charges in a "Z" pattern, the amount of blasting agent per hole ranged from 137.5 to 412.5 pounds. For the smallest hole 192 cubic yards of dirt were moved at a cost of \$.233 per cu. yd.. At a cost of \$.205 per cu. yd., 576 cu. yd. were moved in the largest pothole. This brings the total of these waterholes on the refuge to 40. Twenty-six duck breeding pairs used the AN/FO potholes this spring — a gratifying response to these developments.

Another 100 feet (278 cubic yards) were dug for the ditch near headquarters with the Bucyrus-Erie dragline. By next fall we plan to have this channel completed with at least one experimental artesian well sunk alongside it to keep a portion open. If we can keep an ice-free area large enough to hold our local Canada Geese until late December, the flock should start to rebuild.

5. Wells and Mills. Seven watering facilities received refuge financed replacement and materials at a cost of \$4,816.82 as follows:

Unit	Well	
lb	#3	8ft. aeromotor, 21-ft. tower, 82-ft. cased well, 20-ft. stock tank, 20 bags cement.
6a - 2	#6	8-ft. aeromotor, 21-ft. tower, 84-ft. cased well, 36-ft. plate steel stock tank with bubble, 54 bags cement.
11b	#25	8-ft. aeromotor and 21-ft. tower.
14b-2	#42	8-ft. aeromotor, 21-ft. tower, 60-ft. cased well.
14b-3	#69	18 bags of cement for stock tank.
16a-1,2	#54	8-ft. aeromotor, 21-ft. tower, 80-ft. cased well.
19c	#52	80-ft. cased well.

All well work was done by Dunbar Drilling, Alliance.

In addition, 12-20 feet stock tanks (\$1,618.80), 11-21 feet towers (\$1,424.50), and 11-8 feet aeromotors (2,318.25) were purchased. Bernstein Bros. of pueblo, Colorado supplied the tanks, and Sanford Larsen of Thedford, Nebraska the mills and towers.

With \$2,511 of expense for sale funds we purchased the following permittee—owned facilities on the refuge: all 6 stock tanks from the Douglas brothers ** mills, towers and tanks at wells #18 and 2 from Mrs. E. Eldred ** 6 ft. aeromotor for well #70; and towers, mills and tanks at wells #55-56-68 from V. Eldred ** mills for wells #15 and 18; and mill, tower and tank at well #22 from L. Keller ** mills, towers and tanks for wells #7-8-9-10 from Mrs. J. Peterson ** mill at well #51 and mill and tank for well #50 from D. Keenan and L. Sutton ** 800 old 7 feet posts and 40 rolls of old barbed wire in Unit 16b-1 from E. Hisel and D. Keenan.

B. Plantings.

- 1. Aquatic and Marsh Plants. Wildlife Aid Hyland hand planted sago pondweed (Potamogeton pectinatus) and coontail (Ceratophyllum demersum) in a bottomless tank embedded in the soft bottom deposits of Hackberry Lake. The 28 inches high sides of this tank protected the plant and oozy bottom material from wind and wave action. This experiment indicates that by stabilizing the bottom of Hackberry, submergent plantlife could grow there. Next summer we plan to check for regrowth at the site.
- 2. Trees and Shrubs. Between mid-April and mid-May 60 Ponderosa and 60 Austrian Pine potted seedlings were planted on the north, west and south sides of Quarters 8 and 9. Five foot post holes were bored in the black dirt fill, manure put in the bottom half and soaked, black dirt placed in upper half of each hole, and then seedlings planted in a depression on top. Old tires placed around each seedling protects them from wind. They were well-watered throughout the summer, and then sprayed with "Selco Deer and Rabbit Repellent" this fall. An additional 30 Austrian pine seedlings will be needed to replace the Ponderosa that died due to poor vigor. It may cost us close to \$1,000 for this shelterbelt and landscaping project before it's completed. But, it finally looks like our efforts to protect and improve these residential sites will be fruitful.
- 3. <u>Upland Herbaceous Plants</u>. No survival has been noted on the one—half acre experimental grass display plot planted in northwest Gimlet meadow during the spring of 1967. Reed canary grass sown on an experimental plot on northeast Smith meadow last year produced fair growth in 1968. The alsike and strawberry clover and alfalfa plantings provided fair to good goose browse in the Goose and Gimlet meadows.
- 4. Cultivated Crops. None.

C. Collections and Receipts.

- 1. Seed or Other Propagules. Altogether 400 bushel of shelled corn for goose feed was picked up with the GMC stake truck from DeSoto and Lake Andes Refuges.
- 2. Specimens. Jakabosky mistakenly shot a 9½ pound bobcat 150 feet south of the office. Believed to be an immature female, this is the first verified record of this species on the refuge. Paul B. Robertson, a University of Kansas graduate student, spent four days here in late spring collecting meadow jumping mice, meadow voles, and owl pellets.
- D. Control of Vegetation. About 12.5 acres of Canada Thistle were sprayed with 2,4-D amine with good control of this year's growth. 2,4-D amine was applied to a 12 square feet plot of leafy spurge to check its spread. Next year we hope to try tordon 212 to really knock these pest plants back. Dalapon was sprayed on 1.5 acres of meadowlands in an experimental attempt to kill brome and other tame grasses. Unless next year's attempts make a vast improvement over 1968's kill, reed canary grass will have to be established some other way.
- E. Planned Burning. An unsuccessful attempt was made in late February to burn extensive areas of emergent aquatics on the north end of Island Lake. Apparently the dampness of the vegetation and the sparsity of the litter would not allow the fire to spread. An adjacent landowner experienced good success in burning marsh vegetation he had mowed in the fall just prior to igniting it. Perhaps by trying this method we can get similar results in the future with badly needed controlled burning.
- Fires. Though our fire hazard was moderate to high in late winter, mid-summer and fall, no fires occured on the refuge.

 Fortunately for us the only two range fires we were called to, on Mrs. Eldred's land (April 28 and August 7), had been extinguished before we got there. April's fire, caused by carelessness (?), occured in a hayed meadow ½ mile south of the refuge. The August blaze, started by lightning, took place about 10 miles northwest of our boundary.

IV. RESOURCE MANAGEMENT

A. Grazing. With our base grazing fee at \$2.50, the actual fee for this year was \$2.72 per AUM. AUM'S for calendar year 1968 were 24,145 for \$65,678.67 revenue, compared to 1967's 24,218 for a return of \$59,601.67. Above normal rainfall in May stimulated good grass growth on summer ranges for the June 1 turn in date. Slight reductions made at turn in remained in force through the season due to the dry weather of June and July.

Permittee Dean Emerson was docked 10 per cent on his AUM's for grazing unit 13e-1,2 because of four seperate violations of the salting and oiling provisions of Special Use Permit No. CL-68-16. Due to three different violations of salting and oiling regulations, Permittee Elton Hisel (SUP No. CL-68-14) and Donald Keenan (SUP No. CL-68-19) each foreited five per cent of the AUM's allowed them for unit 16b-1. These penalities should serve notice that the conditions set forth in the permits are to be taken seriously.

Mr. Ken Weyers, Range and Wildlife Officer for the U. S. Forest Service at Chadron, Nebraska, provided valuable advise and assistance during the summer range utilization checks of September 25 and October 21. As a direct result of these two inspections new maximum rates were established to benefit both range and wildlife on nine summer ranges (Table 7).

Table 7: CHANGES IN AUM RATES FOR SUMMER RANGES

Grazing Unit	Permittee	Avg. 2, 3	Used or 4	Previous years	New Maximum	% Reduction
2	P. Dietlein	barillatin manadas pulacurido	496	ordinary imperior — the standary objective in	372	25
5a	P. Dietlein		353		264	25
13e-1,2	D. Emerson		466		312	33
14a-1,2,4	Douglas Bro	S.	651		553	15
14b-1,2	D. Emerson		774		580	25
14b-3	D. Emerson		645		483	25
17	D. Rounsbor	9	175		149	15
18	D. Rounsbor	OI.	581		505	13

Each of the permittee's affected by these changes received verbal notice with a followup letter of confirmation in October.

Mr. Weyers also made helpful suggestions on cross-fencing and additional stock wells needed for grazing Units 16a-1,2; 16b-1;

17 and 18. This fall, Hisel and Keenan put in about two miles of cross-fence running north and south in Unit 16b-1 to divide that range in half. Also, Dietlein's erected slightly more than two miles of division fence in Unit 6b-1 to stop overgrazing in the soft hills west of Harrision Lake. All material and the John Deere tractor with hydraulic post driver (laborer Locker operating it) were furnished by the refuge. The remaining labor to erect these fences was provided by the permittees. By the 1971 grazing season we hope to have the planned additional 12 miles of division fences and 5 new stock wells installed.

- B. <u>Haying</u>. Hay produced in the west meadows equaled only one—half to three—fourths of that for 1967. Eastern meadowlands had nearly as much hay as they did last year. All mowing took place from July 15, through August. Clover patches in Goose and Gimlet meadows were again hayed to encourage clover growth and browsing by geese.
- C. Fur Harvest. None recommended.
- D. Timber Removal. Not applicable here.
- E. Commerical Fishing. None.
- F. Other Uses. Duskin and Perkuchin each had permits to keep personal domestic livestock on refuge lands. Special Use Permit No. CL-68-31 was issued to Donald Keenan for his continued occupancy of Quarters 6, the Jones buildings. Lloyd Keller received permit CL-68-35 for haying priveleges on Gimlet and Goose Lake meadows browse plots. Also, Keller is authorized to use a refuge trail to drive to his ranch according to SUP No. 39737 effective from June 1, 1965 to May 31, 1970. For trapping snapping turtle during the summer, SUP No. CL-68-33 was issued to Robert Hirdler.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Biological "Tinkering".

1. Preliminary Limnological Study of Hackberry and Roundup Lakes.

The following recommendations resulted from Joe Hyland's study conducted this summer. Both lakes are deep with low limits of visibility. A system of artificial jettys might neutralize the effects of the wind and waves to a point where bottom stabilization could occur. Some method of controlled draw down may allow the bottom to stabilize or the deposits to be blown away. It has been suggested after a check of the bottom samples that sulfur, in one form or another, be applied to the water to help lower the pH of 8.5 and reduce the calcium carbonate in these two lakes. An intensive limnological study of six refuge lakes by a graudate student is needed to determine their biological features and other physical properties. In this way we may be able to improve the wildlife use of Hackberry and Roundup Lakes, particularly.

2. Dummy Nest Study In Different Sites and Land Treatment Areas.

This project was carried out under the direction of Wildlife Aid Wilbur Ladd to help him in his study at Valentine NWR. Until we get Skip's report on his interpretation of the data collected, we will defer comment. Presently, we plan to continue this study at least through 1969.

3. A Plant Analysis of Sandhills Meadow and Uplands Sites Under Different Types of Land Use.

Joel Jakabosky attempted to determine gross differences in percent of species composition and the percentenge of ground cover, litter, and plant cover in meadows and uplands under different types of land treatment. Jake did not complete the report on this study soon enough to present a brief summary of his findings. We plan to include it in 1969's NR.

VI. PUBLIC RELATIONS

- A. Recreational Use. Visitor days are estimated at 3,609 (see Annual Public Use Report that follows) compared to 2,340 in 1967 and 3,865 in 1966. Fishing accounted for about 45 per cent of the total, with 87 per cent of the recreation wildlife-oriented. Good fishing for northern pike on Island Lake in February, April and May attracted three-fourths of the angling use. Crane Lake provided good action for small northerns in July, but few people took advantage of it.
- B. Refuge Visitors. Listed on pages following.
- C. Refuge Participation. Listed on pages following.
- D. Hunting. Approximately 40,900 acres of the refuge was open to the hunting of sharp-tailed grouse, ring-necked pheasants, white-tailed and mule deer, and antelope (see attached regulations and map following this section). Changes for this year included opening an additional 20,900 acres and a season for taking pheasants. In April Bureau Managers from the Nebraska refuges met with Regional Office and Nebraska Game personnel to discuss past and future hunting seasons. This annual event continues to be conducted in a cordial and helpful manner.

Sharp-tailed grouse hunting took place during the regular state season of September 21 through November 17. Similar to last year's, the daily bag consisted of three birds. Fall grouse populations and hunting success were the best they've been in the four refuge hunting seasons. In 215 visits sharp-tail hunters took about 200 grouse.

Antelope permits for the unit in which the refuge is located numbered 150, the same as in 1967. Either sex could be taken during the regular firearm season of September 28 and 29, and October 5 and 6. No more than five pronghorns fell to the mighty cannons of the nimrods pussyfooting about the refuge. Very few are willing to stalk their prey on foot when they can prowl around nearby in four-wheel drive vehicles.

In accordance with state regulations, a bucks only rifle season was held between November 9 and 17, for white-tailed and mule deer. Only 750 permits were available for the Plains Unit. During 1967 1,000 permits, and in 1966 1,500, were available to take antlered deer except the last day. We estimated that during 50 visits big game hunters killed 15 mulies and 3 white-tails here. Only during the firearm deer season was vehicle travel allowed in the open area, that being restricted to four-wheel drive rigs.

Pheasant hunting was permitted here for the first time. The opening

was on December 13, the day after the state's waterfowl season terminated. January 19, the Nebraska closing date, was the final day of the refuge's ring-neck season. An estimated 30 roosters were bagged in 18 visits. Those of us willing to hoof it after these cagey lead shunners had good sport. Though we didn't bring many home for the pot, we sure gave them some "smarts."

Though the split duck season was open from October 12 through 20 and November 16 through December 12, waterfowl hunters in the sandhills had (in effect) a nine day season. Not more than two mallards and one canvasback or redhead could be included in the three bird daily bag limit. Hunting opportunities for mallards, pintails, gadwall, canvasback and redheads were fair to good in the vicinity. Light gunning pressure prevails. Gadwall are usually the most abundant duck in the area during the Nebraska season.

Goose hunting occured from October 1 through November 3, and again from November 9 through December 19. Two Canadas could be included in the daily bag of five. Crescent and Bean Lakes, adjacent to the refuge, provided fair opportunities for neighboring ranchers to shoot honkers.

E. <u>Violations</u>. Trespassing, hunting in closed area, and shooting pheasants out of season are some of the violations we suspect happened on the refuge. Unfortunately we were not in the place at the right time to apprehend the culprits - as is so true too often in law enforcement, eh:?

In two instances violators were apprehended and their cases disposed of as follows:

- Oct. 5 Larry Stegeman, juvenile, Chappell, Nebraska.
 Driving automobile into open area while hunting,
 when closed to vehicle travel. \$20 towing charge.
 Fined \$10 plus costs for trespassing. Apprehended
 by Perkuchin and Duskin. Case taken to court by
 Conservation Officer Don Hunt. (Car was stuck.)
- Oct. 5 Douglas Rehfeld, juvenile, Chappell, Nebraska.
 Using vehicle, when prohibited while hunting in open area. Fined \$10 plus costs for trespassing.
 Apprehended by Perkuchin and Duskin. Case taken to court by Conservation Officer Don Hunt.
- Oct. 6 Jerome Richard Polk, adult, Oshkosh, Nebraska.

 Driving two-wheel drive pickup into open area
 while hunting, when closed to vehicle travel.

 Truck stuck. \$20 towing charge. Fined \$10 plus
 costs for trespassing. Apprehended by Duskin and
 Perkuchin. Case taken to court by Conservation
 Officer Don Hunt.

F. Safety. The following formal safety meetings and discussions were held:

January 30 - Discussed defensive driving (using 5 simulated driving situtations).

February 26 - Defensive driving.

March 26 - Defensive driving.

March 28 - Held fire drill with all fire fighting equipment and went through the different phases of fire supression.

April 22 - Defensive driving and fire fighting equipment.

June 24 - Fire fighting plan, equipment use and fire drill.

July 29 - Fire fighting plan, equipment use and fire drill.

August 19 - Fire fighting plan, equipment use and fire drill.

November 5 - Auto safety equipment.

December 19 - Auto and hunting safety. Two films were viewed, "Tire Hydroplaning" and "Muzzleshy."

Informal discussions on the operation of heavy equipment and fire fighting apparatuses occurred throughout the year.

Due to a disabling injury to Wayne Locker on December 19, he has not returned to work at year's end. Therefore our safety record stands at zero days without a lost time accident on December 31.

Annual MONTHLY PUBLIC USE REPORT

Refuge name		the subsumption	THE R. CO.	LEIM CHER
Crescent	and the second second			
State			-	

State Cor	('ng re ssio		ompleted by W	Vashington Office) Refuge Report	Yr. N	10.	v) - re-en-posses (posses)
	trict Co			Code Period [(8-11)		
(Card Columns)	.12-13	VISITS FOR	19-25 THE MONTH Total	(Card Columns)	26-27 Code	28-32 VISITS FOR Total	33-39 THE MONTH Total
	Code	Number	Hours	ACTIVITI	Code	Number	Hours
Hunting: Big Game	01	80	450	Swimming	21	-	
Upland Game	02	233	1176	Boating	22		
Waterfowl	03			Water Skiing	23		
Other Migratory	04	1 1	y va	Camping	24		
Bow	05			Group Camping	25		
Fishing: Salt Water	06			Picnicking	26		
Warm Water	07	1639	6556	Horseback Riding	27	140	364
Cold Water	08			Bicycling	28	60	103
Bird and Animal Calling	09	151	604	Skiing, Sledding, etc.	29	65	130
Wildlife Photography	10	101	404	Ice Skating	30	38	130
Wildlife Observation	11	620	1860	Fruit, Nut & Veg. Collecting	31		
Dog Training	12			Non-Recreational Use (inspections, audits, etc.)	32	57	146
ld Trials	13			Actual Visits	33	3609	
Wildlife Trails and Walks	14			Peak Load Day	34	75	
Wildlife Tours	15	30	120	* Miscellaneous Non-Wildlife	35	103	194
Wildlife Scenic Veh. Rts.	16	250	250				
Camping (related to above)	17						
Picnicking (related to above)	18	1005	1005				
Wildlife Interpretive Center	19						
*Miscellaneous Wildlife	20	42	184			•	
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Form 3-123	J			Ч	<u> </u>		

Form 3-123 (March 1968)

^{*}Use blank spaces to indicate the types of activities summarized under miscellaneous codes 20 and 33.

Code 10 - Wildlife Photography

Include here all photography occurring on the area--professional, amateur, blind use, etc.

Code Il - Wildlife Observation

This category includes the general sightseeing user. It may involve the "windshield viewer" on some areas and walking observers on areas where trails are not designated.

Code 14 - Wildlife Trails and Walks

This would include all use of designated, self-guided trails and walk areas.

Code 15 - Wildlife Tours

All guided use would be included here--both vehicle tours and foot trail programs.

Code 16 - Wildlife Scenic Vehicle Routes

Don't confuse this category with general sightseeing. Use here refers to designated self-guided vehicle drives.

Code 19 - Wildlife Interpretive Center

This includes visitor center and office/visitor center facility use. To avoid other activity duplications, you should establish an average hour use for this category while visitors are actually in the visitor center. Once they leave the center, they will be recorded in some other activity.

Code 20 - Miscellaneous Wildlife

This category is the catch-all under wildlife-oriented uses. Those visits that do not fit any of the above activities would be recorded here. List the total number of visits and total hours and below the type of activities involved. Included in this category would be fur trapping, varmint hunting, nature studies, girl and boy scout activities, inquiries on hunting and fishing, visits by other agency people to discuss wildlife programs, etc.

Codes 21 to 32

Includes all non-wildlife-oriented uses. Snowmobile use would be put under Code $\overline{29}$ -skiing, sledding, etc.

Code 33 - Actual Visits

This is the actual head count category. Since most visitors will be recorded in more than one activity, Code 33 will be the only place to measure individual visits. The total visits for the month includes both wildlife and non-wildlife-oriented activities.

Code 34 - Peak Load Day

List the largest number of visitors recorded on any one day during the report period.

Code 35 - Miscellaneous Non-Wildlife

Include here those non-wildlife-oriented uses that cannot be placed elsewhere. These could include: Industrial, economic, permittee, businessmen users, tower climbers, hikers, and non-wildlife inquiries.

Note:

A minimum of one hour should be used for all activities.

NAME	ORGANIZATION	PURPOSE OF VISIT	I	DATE
			ARRIVED	DEPARTED
Robert Odell	Dshkosh HS Teacher	Courtesy call	1-13-68	Same
Donald Hunt	Nebr. Game Comm.	Courtesy call	1-13-68	Same
John Sweet	Nebr. Game Comm.	Courtesy call	1=18=68	Sane
Nick Lyman	Nebr. Game Comm.	Courtesy call	1-18-68	Same
Keith Hamel	Tamarac Job Corp	Training new clerk	1-30-68	2-2-68
Donald Hunt	Nebr. Game Comm.	Check on Crane Lake fish die off possibility	3-27-68	Sane
Bob Nieman	Gering, Nebraska	Fishing Information	3=28=68	Same
Nick Lyman	Nebr. Game Comm.	Courtesy call	4-2-68	Same
John Sweet	Nebr. Game Comm.	Courtesy call	4-2-68	Sane -
Jerry Wolford	Farming	Courtesy call	4=2=68	Same
W. D. Holsclaw	Platte Valley Packing	Fishing	4-2-68	Same
Elemer A Petersen	Grolier Society	Courtesy call	4-9-68	Same
Harry Crooks	Denver, Colorado	Fishing	4-11-68	4-13-68
Max Styanski	Golden, Colorado	Fishing	4-11-68	4-13-68
arry D. Elston	Hay Springs, Nebraska	Courtesy call	4-13-68	Same
Terry M. Brentzel	Hay Springs, Nebraska	Courtesy call	4-13-68	Same
Marvin Elston	Hay Springs, Nebraska	Courtesy call	4-13-68	Same

NAME	ORGANIZATION	PURPOSE OF VISIT	DATE	
			ARRIVED	DEPARTED
Frank G Stanton Lt. Col.	Air Force	Sight seeing	4-13-68	Same
Frank G. Stanton	Bellevue, Nebraska	Sight Seeing	4-13-68	Same
Gayle Shickley	North Platte, Nebraska	Birding	4-12-68	4-14-68
Dr. Mary W. Tremaine	Omaha, Nebraska	Birding	4-12-68	4-14-68
Ralph H. Town	W. M. Biologist, USFWS	Grouse counts & Wildlife Studies	4-15-68	4-19-68
Arthur D. Erb	Scottsbluff, Nebraska	Wildlife photography	4-24-68	Same
Ed Duncan	Decatur, Ill.	Wildlife photography	4-24-68	Same
Edward Crozier	BSF&W, Mpls., Minn.	Master planning	5-13-68	5-15-68
Edwin Stevenson	SSF&W, Mpls., Minn.	Master planning	5-13-68	5-15-68
Gus Bonde	BSF&W, USGMA	Courtesy call	5-15-68	Same
Ben Gilmores	Cheyenne, Wyo.	Fishing information	5-18-68	Same
Norman Larsen	Globe Life Ins. Co.	Fishing information	5-20-68	Same
F. M. Davis	Railroad	Fishing	5-21-68	Same
Jim Nuse	Alliance, Nebraska	Fishing	5-30-68=	Same
Bill Brice	Alliance, Nebraska	Fishing	5-30-68	Same
Paul B. Robertson	Univ. of Kansas	Collecting Small Mammals	5-30-68	6-2-68
Richard Muller	Lincoln, Nebraska	Fishing	5-31-68	Same

NAME	ORGANIZATION	PURPOSE OF VISIT		DATE		
			ARRIVED	DEPARTED		
Loren H. Boman	Broadwater, Nebraska	Fishing	6-14-68	Same		
Walter Schmitt	Bridgeport, Nebraska	Fishing	6-14-68	Sane		
Robert Schmitt	Fort Collins, Colorado	Fishing	6-14-68	Sane		
John Spencer	Denver, Colorado	Fishing	6-18-68	Sane		
Bill Morse	Denver, Colorado	Fishing	6-10-60	Same		
D. R. Fortune	Alliance, Nebraska	Sight seeing=	6-19-68	Sane		
Gus Bondie	BSF&W, USGMA	Dove traps	6-19-68	Same		
Robert Wheeler	BSW&W, USGNA	Dove traps	6-19-68	Same		
Nick Lyman	Nebr. Game Comm.	Courtesy call	7/1-68	Same .		
Dan Timm	Nebr. Game Comm.	Courtesy call	7-1-68	Same -		
Dale Pollard	CBSQ Railroad	Sight seeing	7-9-68	Same		
Rev. Robert D. Wigert	Methodist Minister	Sight seeing	7-11-68	Sale		
Leon Bexter & Family	gg grand and the second second	Birding	7-12-68	Same		
Douglas Fiesneld	University of Nebraska	Collecting rodents	7-16-68	7-19-68		
Mr. & Mrs. Art Holmberg	Oberlin, Kansas	Sight seeing	7-25-68	Sane		
Victor Metousek	Lewellen, Nebraska	Fish Weir	8-1-68	Same		
Dennis Shimmin	Lewellen, Nebraska	Figh Weiz	8=1=68	Same		

NAME	ORGANIZATION	PURPOSE OF VISIT	DATE		
diginali salipini kundi ndipinali ndindi sadi ndipini kundini kundini kundini diginali ndipini kundini di ndip Kirikan di ndipini kundini kundini dipini kundini dipini kundini dina dipini kundini dipini di salipini dipini			ARRIVED	DEPARTED	
David Purington	BSF&W, USGMA	Waterfowl Banding	8-3-68	Same	
Nick Lyman	Nebr. Game Comm.	Waterfowl Banding	8-3-68	Same	
Den Timm	Nebr. Game Comm.	Waterfoul Sending	8-3-68	Same	
Lt. Daniel E. Lake	McConnel AFB, Kansas	Courtesy call	8-6-68	Same	
Walter Ekedahl	Garden County SCS	Courtesy call	8-6-68	Same	
Thomas King	Garden County Extension Age	at Get acquainted visit	8=7=68	Same	
William Britton	Range Specialist Garden County SCS	Courtesy call	8-7-68	Same	
Charles Havlicek	Nebr. Game Comm.	Courtesy call	2 ⇔7≈ 68	Same	
Randy Darling	Nebr. Game Comm.	Courtesy call	8-7-68	Same -	
Jack Nerud	Oshkosh Chamber of Comm.	Road Comm.	8-16-68	Same	
C. C. Heugh	Omaha, Nebraska	Courtesy call	8-19-68	Same	
Ben Shole	Hooper, Nebraska	Courtesy call	8-19-68	Sane	
Allen Clark	Blue Cross	Sight seeing	8-22-68	Same	
Rex E. Norris	Blue Cross	Sight seeing	8-22-68	Sahe	
E. A. Krejci	U. S. Post Office	Courtesy call	8-23-68	Same	
E. H. Dringman	Kimball, Nebraska	Birding	9=12=68	Samo	
G. Cumcre	Colombia, Mo.	Birding - photography	9=14=68	Sane	

NAME	ORGANIZATION	PURPOSE OF VISIT	DATE		
			ARRIVED	DEPARTED	
E. B. Mufer	Colo. State University	Coursety call	9-17-68	Same	
Golden & Soms	Sidney, Nebraska	Hunting	9-20-68	Same	
Ken Weyers	U. S. Forest Service	Summer Range Utlization check	9-25-68	Same	
Mr. & Mrs. John Ott	Lincoln, Nebraska	Birding	9-27-68	Same	
Mr. & Mrs. Earle Thomas	Lincoln, Nebraska	Birding	9=27=68	Same	
Daniel Higman	Smitheonian Inst.	Birding, Botanizing	9-28-68	Same	
Den Ladd	Scottsbluff Nat'l Mont. National Park Service.	Hunting	10-9-68	Same	
Dr. L. F. Wheaton	Evergreen, Colorado	Hunting	10-10-68	Same	
B. H. Denahave	Evergreen, Colorado	Hunting	10-10-68	Same	
Wobert E. Waters	Auburn, Alabama	Birding	10-26-68	10=27=68	
H. Granville Smith	Columbus, Ohio	Birding	10-26-68	10+27-68	
Mr. & Mrs. H. P. Dovle	Lincolm, Nebraska	Birding	10-27-68	Samo	
im. H. E. Dovle	Kunsan AFB, Korea	Birding	19-27-68	Same	
Jay Albert	Moore, Okla.	Hunting	11-1-68	Same	
J. R. Eddy	Moore, Okla.	Hunting	11-1-68	Same	
lancel Huffman	Okla. City, Okla.	Hunting	11-1-68	Same	
Guy Arnold	Okla. City, Okla.	Hunting	11-1-68=	Same	

NAME	ORGANIZATION	PURPOSE OF VISIT	DATE		
			ARRIVED	DEPARTED	
Travis Arnold	Moore, Okla.	Hunting	11-1-68	Same	
T. Leit	Sodus, Mich.	Hunting	11-7-68	Same	
Joe A. Hossle	Decatur, Mich.	Hunting	11-7-68=	Same	
Dean Boerer	Geneva, Nebraska	Hunting	11-8-68	Same	
Sob Enerer	Geneva, Nebraska	Nunting	11-8-68	Same	
W. S. Griffin	Mineapolis, Kansas	Hunting	11-8-68	Same	
Bob Griffin	Mineapolis, Kansas	Hubting	11-8-68	Same	
Marvin A Badtke	Omaha, Nebraska	Hunting	11-8-68	Sane	
Wallace C. Cheney	Omaha, Nebraska	Hunting	11-8-68	Same -	
Richard Badtke	Omaha, Nebraska	Hunting	11-8-68=	Same -	
John Carlsen	Ass. Regional Supr.	Inspection	10-28-68	Samu	
Mr. & Mrs William T. Krumnes	Reg. Dir., Albuquerque	Courtesy call	11-17-68	Same	
Mr. & Mrs. David Olson	Lake Andes NMR, BSF&M	Personal visit	11-16-68	11-18-68	
Earl F. Eliason	Regional Office	Housing survey	12-9-68	Same	
Fred B. Bills	Oshkosh, Nebraska	Fishing information	12-18-68	Same	
Ernest Labon	Oshkosh, Nebraska	Fishing information	12-18-68	Same	
	a y	A-2,2 x x 2 y x 2 g		1	

REFUGE PARTICIPATION

1/16	Manager attended meeting regarding reconstruction of high- way 27 in Oshkosh.
1/27	Perkuchin went to meeting of the Nebraska Chapter of the Wildlife Society at Norfolk.
2/5	Manager took part in conservation needs committee meeting at Oshkosh. Also made a courtesy call at Clear Creek State Game Refuge at Lewellyn, and took part in discussion on highway 27 reconstruction in Oshkosh.
2/12-16	Manager attended CSC Training School at Valentine.
2/29	Manager attended Heart of the Hills Rural Fire Protection District meeting in Lakeside.
3/5, 12, 19, 26	Covalt, Duskin, and Perkuchin attended Defensive Driving School at Alliance.
3/7	Manager with SCS Range Specialist, W. Britton to determine wildlife value of marsh near Ashby, Nebraska, and checked reed canary grass reseeding project on the Mule Shoe Bar Ranch, south of Antioch, Nebr.
4/17, 18	Covalt and Duskin attended USFS Fire Supression Training School at Alliance.
4/19	Perkuchin attended USFS Fire Supression Training School at Alliance, and Made courtesy call at District State Game and Parks Office in Alliance.
4/22	Manager made courtesy call at District State Game and Parks Office, and picked up wildlife film.
4/30	Manager presented movie, "Way of Life," and talk on conser- vation to 80 people at Kowanda Methodist Church and four students at District 30 school.
5/16	Duskin and Perkuchin presented talk on refuge program and conducted tour for 13 students and 13 parents from Ellsworth Grade School.
5/17	Staff attended annual District 30 School picnic held in refuge shop.
5/22-24	Manager attended GSA Middle Management School in Rapid City, South Dakota.

7/29	Staff attended Refuge snapping turtle picnic prepared by Mr. & Mrs. Art Covalt.
8/26, 27	Perkuchin, Hyland and Jakabosky attended Central Mountains and Plains Section of the Wildlife Society Meeting at Halsey National Forest.
9/16	Manager presented slides and talk on refuge to Oshkosh Rotary Club.
10/15	Manager presented revenue sharing check to Garden County Treasurer, and showed wildlife movies to Garden Ramblers Garden Club, Oshkosh.
10/22	Manager attended Longhorn and Buffalo auction at Fort Niobrara.
10/23	Manager attended Grassland Ecoligist planning session in Valentine, Nebr.
11/4	Manager attended discussion of range management and inspected ranges at Halsey National Forest.
12/19	Staff attended Christmas Party at Covalt's.

1968 HUNTING REGULATIONS

for

CRESCENT LAKE NATIONAL WILDLIFE REFUGE FISH AND WILDLIFE SERVICE Ellsworth, Nebraska

OPEN AREA: Area delineated on attached hunting map. Posted with both red and green signs - "Public Hunting Area".

CLOSED AREAS: Area delineated on attached hunting map. Posted with white signs - "Area Beyond This Sign Closed". No hunting allowed beyong signs.

PERMITS AND LICENSES: All big game hunters are requested to obtain a "registration card" which will be issued by asking for them, either in person or by mail, from the Refuge Head-quarters, Ellsworth, Nebraska, 69340. Hunters must have a valid Nebraska hunting license and appropriate big game permits for State Management Units.

SPECIES AND SEASONS: No mammals or birds other than listed below may be hunted or shot on Refuge. ALL OTHER STATE REGULATIONS APPLY - PLEASE CONSULT YOUR NEBRASKA LAWS AND HUNTING GUIDES.

Sharp-tailed Grouse September 21 - November 17
Ring-necked Pheasant December 13 - January 19
Antelope - Rifle September 28, 29 and
October 5 and 6

Deer - Rifle November 9 - 17

Deer - Archery November 18 - December 31

VEHICLES-PARKING-ACCESS: Hunters gaining access to Refuge "Open" area will park vehicles in designated parking areas or immediately inside gate used for access.

No vehicles allowed in open area, except for four-wheel drive vehicles during the period of November 9-17.

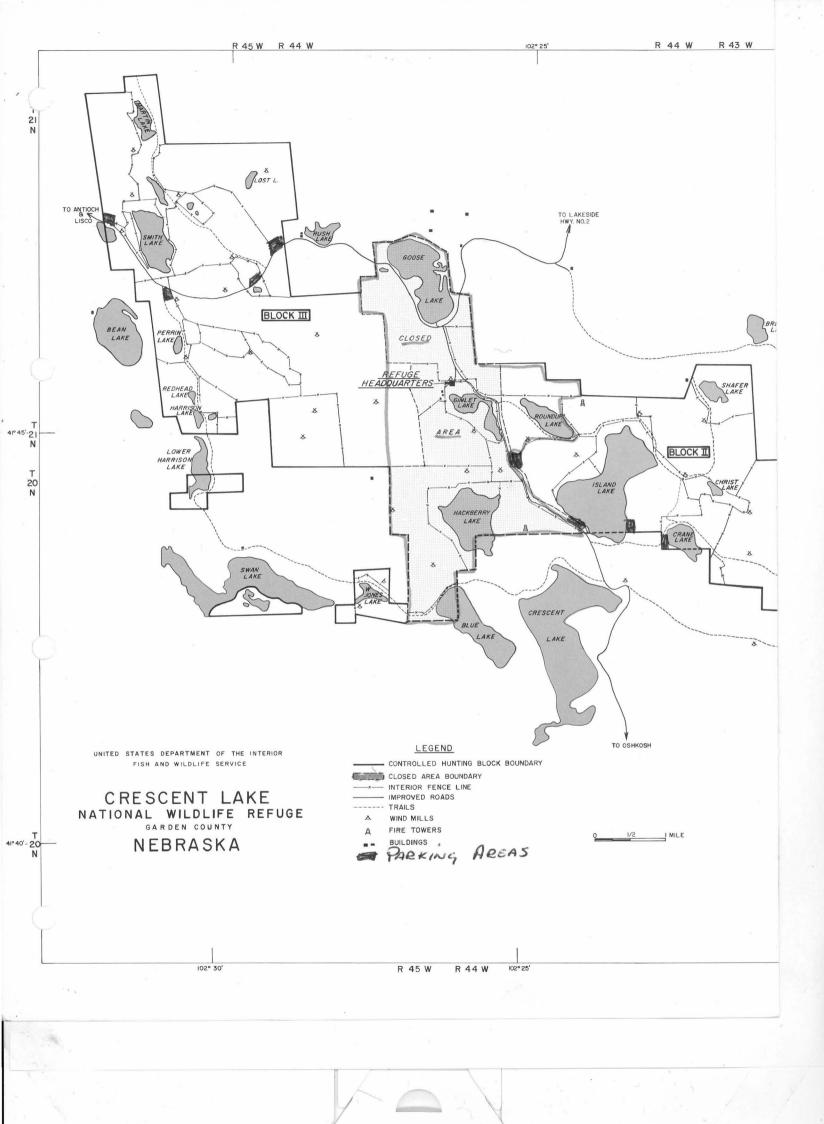
COOPERATION: If you kill a deer or antelope on the Refuge we would appreciate your indicating this to State Check Station operator when you register your animal.

Please keep all gates in Refuge hunting area closed as cattle will be on the ranges.

Due to abundant grass growth, the FIRE HAZARD will be high. If your vehicle is equipped with a shovel, pail and sacks, you will be ready to take prompt action to keep a small fire from becoming an uncontrolled range fire.

Continued seasons on the Refuge will depend on hunter conduct.

IN EVENT OF ANY EMERGENCY OR FIRE CALL: Refuge Manager, Phone Alliance 762-4893



VII. OTHER ITEMS

- A. Personnel. Robert Duskin has been filling the Clerk-Typist position since January 22. Other members of his family include his wife Betty and their four children. Bob was born and raised in the Alliance area, a part of our "neighborhood."
- B. Acknowledgements. Art Covalt, Bob Duskin, Joe Hyland, Joel L.
 Jakabosky and Ron Saunders all contributed
 material for this report. Perkuchin wrote and edited the report
 with Duskin's assistance. All of the typing was done by Clerk
 Duskin. Joel Jakabosky took all the colored and many of the black
 and white pictures. The remaining photographs were taken by
 Duskin and Perkuchin.



DEPARTMENT OF THE INTERIOR Fish and Wildlife Service Regional Information

BUREAU OF SPORT FISHERIES AND WILDLIFE

Crescent Lake National Wildlife Refuge Ellsworth. Nebraska 69340

For immediate release - September 10, 1968

REFUGE TO OFFER INCREASED HUNTING OPPORTUNITY

Ellsworth, Nebraska — About 40,900 acres of the Crescent Lake National Wildlife Refuge will be opened to the hunting of sharp-tailed grouse, ring-necked pheasant, antelope and deer this fall.

Seasons for sharp-tailed grouse, and rifle hunting for antelope and deer will be open during the regular Nebraska seasons. Pheasants may be hunted from December 13 through January 19. Archers may hunt deer from November 18 through December 31.

Don R. Perkuchin, refuge manager, said that all but about 5,100 acres around the headquarters area will be opened. Hunting maps outlining the open and closed areas, and special refuge hunting regulations, will be available upon request at refuge headquarters, Ellsworth, Nebraska 69340.

The refuge, located in western Nebraska, is approximately 30 miles North of Oshkosh, and 50 miles southeast of Alliance.

In addition to State laws governing hunting during the prescribed seasons, the following regulations will apply to the refuge:

Only those animals mentioned above may be hunted.

Hunters will be required to park their vehicles in designated parking lots or immediately inside any gate in the open area used for access. From

November 9 through 17, only four wheel drive vehicles will be permitted to drive in the open area.

Overnight camping is not permitted.



DEPARTMENT OF THE INTERIOR Fish and Wildlife Service Regional Information

BUREAU OF SPORT FISHERIES AND WILDLIFE

Crescent Lake National Wildlife Refuge Ellsworth, Nebraska 69340

For immediate release - October 15, 1968

GARDEN COUNTY NEBRASKA SHARES IN NATIONAL WILDLIFE REFUGE REVENUE

Ellsworth, Nebraska — Garden County recently received a check for \$15,440.91 from the Bureau of Sport Fisheries and Wildlife. This payment represents the county's 25 percent share of the annual net receipts for grazing on the Crescent Lake National Wildlife Refuge. These annual payments from net refuge receipts are expended for the public benefit of both the county's schools and roads.

SIGNATURE PAGE

	Submitted by:
	Don R. Perkuchin (Signature)
Date: March 7, 1969	Refuge Manager (Title)
Approved, Regional Office:	
Data s _{alabanar-arraya-array-array-array-array-array-array-array-array-array-array-array-arra}	
(Signature)	
Regional Refuge Supervisor	

WATERFOWL

	*				(2)					
(1)		•	Week		report	^	period			
Species :	1/1-7	1/0214	1/15-01	1/23-23	1/29-3/4	2/5-61	2/21-18	2/19-25	2/25-3/4	3/5-31
wans:		1	1		T	1	1		1	Ī
Whistling										
Trumpeter						1				
eese:								10 mm		2.7
Canada				1				60	60	354
Cackling		* *				1.00		100	49.49	100
Brant								l l		
White-fronted		32					- Parago			
Snow							The state of the s		100	
Blue					Die Sales					
Other (Total Gagse)					and the same of th			60	60	354
ucks:		CER WATER		Z A CAR AN	10. 10. 10. 10. 10. 10. 10. 10. 10. 10.		-			
Mallard		Nate WAILS		ALCOHOL SALES (FAIL	A4 1 1		and the same of th	30	30	182
Black		.1.								
Gadwall						10.000				13
Baldpate			· · · · · · · · · · · · · · · · · · ·		and the state of t			2.1		110
Pintail							***	15	15	204
Green-winged teal										31
Blue-winged teal					The state of the s					1
Cinnamon teal					Bdisable			Bootstare		-
Shoveler					The state of the s					2
Wood			-		Re-different					**
Redhead										302
Ring-necked		-		-						7
Canvasback							P-457			79
Scaup		-						Marin Control		40
Goldeneye					Re-ellipse			T.		217
Bufflehead										33
Ruddy				and the same of th	10000		William State of the State of t			949
Other C Merganeer					900		- Anna	8	5	167
Course to make Administra					REALISTON					
Total Ducks					All sections and the section of the			50	50	137
oot:		1					*		V	

Cont. N (Rev. March 1953)

WATERFOWL (Continuation Sheet)

REFUGE Croscont Lake						MON	THS OF Ja	puary	TO Ma	٠,	1968
	3		-		(2)			*	\ -/		4)
3		Week			rting	per	iod	(1 day):	Estimated	: Produ	ction
(1)	3/12-18	3/19-25	3/26=4/1	4/2-8	4/9-15	4/16-22	4/23-29	4/30	waterfowl		:Estimat
	11	: 12	: 13 *	* 14	: 15	: 16	: 17	: 18 ;	days use	: seen	: total
Swans:											
Whistling	1				The second second						
Trumpeter											
Geese:											
Canada	419	552	552	552	154	154	154	154	21,231		1
Cackling											
Brant							BEST AND				
White-fronted							Based of the Control				
Snow											
Blue	1					-			9		
Other Total Geese	419	552	552	552	154	154	154	154	21,231		
ucks:										1	1
Mallard	126	459	459	459	147	147	147	147	15,449		1
Black											
Gadwall	131	545	545	545	3,050	3,050	3,050	3,050	79,553		
Baldpate	55	477	477	477	1,386	1,386	1,386	1,386	41,664	and the second	1
Pintail	87	182	182	182	. 66	66	66	66	7,521	and the same of th	
Green-winged teal	26	181	181	181	523	523	523	523	15,706		1
Blue-winged teal					85	85	85	85	1,870		
Cinnamon teal		1						Description And S			
Shoveler	62	272	272	272	1,169	1,169	1,169	1,169	31,878		
Wood		1000		400	-3	23207					
Redhead	1,420	4,253	4,253	4,253	1,290	1,290	,1,290	1,290	129,747	hetibers	and the same of th
Ring-necked	78	57	57	57	10	10	10	10	2,012		
Canvasback	60	357	357	357	450	450	450	450	18,370	V-GRADE	
Scaup	143	698	698	698	1,131	1,131	1,131	1,131	40,821		
Goldeneye	155	152	152	152	19101				5,818		
Bufflehead	30	57	57	57	394	394	394				La Green
Ruddy	30						394 894	39	10,306		
Other C. Merganser	68	51	51	51	894	894	3	894	19,794 2,747		
		- 73	U.A.	w/a	3	3	3				and the same of th
Barrows Goldeneye Total Ducks	2441	7,747	7,747	7,747	10,600	10,600	10,600	10,600	423,278		
oot: lotal MCKS	1	7	7	7	1,618	1,618	1,618	1,618	35,750		Barrier Barrie
				1	AGL)	2000				Design	

	(5) Total Days Use :	(6) (7) Peak Number: Total Production	SUMMARY
Swai	ns :		Principal feeding areas
Gee	se:		
Ducl	ks	10,600	Principal nesting areas
Coot	ts:	-1412	
			Reported by Son R. Perkuchin, Refuge Manager
	INS	TRUCTIONS (See Secs. 7531 through	7534, Wildlife Refuges Field Manual)
(1)	Species:		on form, other species occurring on refuge during the d in appropriate spaces. Special attention should be given ational significance.
(2)	Weeks of Reporting Period:	Estimated average refuge popula	tions.
(3)	Estimated Waterfowl Days Use:		mber of days present for each species.
(4)	Production:	breeding areas. Brood counts s	ced based on observations and actual counts on representative hould be made on two or more areas aggregating 10% of the ving no basis in fact should be omitted.
(5)	Total Days Use:	A summary of data recorded unde	r (3).
(6)	Peak Number:	Maximum number of waterfowl pre	sent on refuge during any census of reporting period.
(7)	Total Production:	A summary of data recorded unde	r (b).

Interior Duplicating Section, Washington, D. C.
1953

WATERFOWL

					(2)					
a	:		Week	sofr	eport	ing	eriod			
(1) Species	5/1-7	5/8-14	5/15-21	5/22-28	5/29=6/4				6/26-7/2	7/209
rans:	1	1	1	1	I	1	1	ī	ī	
Whistling									w =	
Trumpeter					a n					
ese:	İ		-			1				
Canada	100	100	100	125	150	150	125	125	125	125
Cackling							& Car.J	die Alienal	A 60-43	alle Maria
Brant					D1					8 9
White-fronted										
Snow					7.					
Blue										
Other Total Geese	100	100	100	125	150	150	125	125	125	125
icks:				2,00	200	200	260	de divid	2.50	\$ 600
Mallard	285	285	285	285	285	285	- 285	285	660	660
Black			N. C.		,			100.00		
Gadwall	270	270	270	270-	270	270	270	270	446	440
Baldpate	30	10	10	10	10	10	10	10	10	10
Pintail	155	155	155	155	155	155	155	155	460	460
Green-winged teal	50	50	50	50	50	50	50	50	50	50
Blue-winged teal	960	960	960	960	960	960	960	960	1640	1640
Cinnamon teal		1.				-	200	2000	20.40	2010
Shoveler	210	210	210	210	210	210	210	210	245	245
Vlood							-		200	C+0
Redhead	110	110	110	110	110	110	110	110	215	215
Ring-necked				-	220	227	440	220	65.0	&£ 0
Canvasback	5	5	- 5	5	5	5	5	5	5	5
Scaup	30	30	30	30	30	30	30	30	65	65
Goldeneye					200		00	30	. 00	00
Bufflehead										
Ruddy	125	125	125	125	125	125	125	125	160	160
Other Total Ducks	2210	2210	2210	2210	2210	2210	2210	2210	3950	3950
					To Said	Santanda Na	States &	and V	3730	3730
						- Andrews				
ot:	305	305	305	305	***					1
State Court				300	305	305	305	305	765	765

Cont. N (Rev. March 1953)

WATERFOWL (Continuation Sheet)

:		Week	sof		2)			10 0	. \ \ / /	: (1	
	7/10=16		:7/24-30	repo:		g per		(4 days):		: Production: Broods:	
Species :				: 14		1	: 17	: 18	days use	: seen :	
Swans:		1	1	T	T	1	T	1	1	1	oo val
Whistling					-		-		Ì	1	*
Trumpeter							1		Table 1	2.	ý.
Geese:							× =				
Canada	125	125	125	125	125	125	125	125	15,200	32 nest	s 50
Cackling			all the same of th								
Brant			and the same of th		- 1.						1
White-fronted				1		i i					
Snow											
Blue											
Other Total Geese	125	125	125	125	125	125	125	125	15,200	4 3 4	
Ducks:											_
Mallard	660	660	660	660	660	870	870	870	63,960	11	380
Black			969						-	- 17 12	
Gadwall	440	440	440	440	440	280	280	280	41,720	5	175
Baldpate	10	10	10	10	10	125	125	125	3,300		
Pintail	460	460	460	460	460	325	325	325	37,070	9	310
Green-winged teal	50	50	50	50	50	5	5	5	5,340		
Blue-winged teal	1640	1640	1640	1640	1640	880	880	880	149,960	22	760
Cinnamon teal	e Xinaa	200				Brandlewell					
Shoveler	245	245	245	245	245	45	45	45	24,975	1	30
Wood				Benghitt		The state of the s					
Redhead	215	215	215	215	215	110	110	110	18,675	3	105
Ring-necked			Open Control						-	i	
Canvasback	5	5	5	5	5	10	10	10	705		
Scaup	65	65	65	65	65	45	49	45	5,675	1	35
Goldeneye						and the same of th					
Bufflehead		边									
Ruddy	160	160	160	160	160	385	335	385	21,770	1	35
Other Total Ducks	3950	3950	3950	3950	3950	3080	3080	3080	372,750		1630
10 10 10 10 10 10 10 10 10 10 10 10 10 1		-	Mathematical					Maddinos	But Sheet		
1											
Coot:	765	765	765	765	765	400	400	400	61,765	-	460

	(5) Total Days Use	(6) Peak Number:	(7) Total Production	SUMMARY
Swans				Principal feeding areas Gimlet, Smith, Roundup Lakes - Duck
Geese	15,200	150	50	Gimlet and Goose Lakes - Geese. Deer and Gimlet Lakes
Ducks	371,175	3935	1740	Principal nesting areas Near lakes and in meadows
Coots	61,405	765	460	
•				Reported by Don R. Perkuchin, Refuge Manager
	INS	STRUCTIONS (See	Secs. 7531 through	7534, Wildlife Refuges Field Manual)
(1) Spe	cies:	reporting pe	riod should be adde	d on form, other species occurring on refuge during the d in appropriate spaces. Special attention should be given national significance.
(2) Wee	ks of			

(3) Estimated Waterfowl

Reporting Period:

Estimated average refuge populations.

Days Use: Average

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).

Interior Duplicating Section, Washington, D. C.
1953

WATERFOWL

REFUGE	Crescent	Lake	National	Wildlife	Refuge	

MONTHS OF September TO December , 19 68

(1)			Week	ks of	r e p o r	ting	perio	o d		
Species	9/1-7	9/8-14	9/15321	9/22-28	9/29-10/5	10/6512	10/13-19	10/29-26	10/27-11/2	11/3-
Wans:				\ \ \ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\				j	i	
Whistling					Alexander					+-
Trumpeter					Alexander	A CONTRACTOR OF				-
canada	105	105	*05	105			***		1 700	1 . 70
Cackling	125	125	105	105	115	115	115	115	170	170
Brant										-
White-fronted								4		+-
Snow										+-
Blue										+-
Other Total Geese	125	125	105	105	115	115	115	115	170	170
icks:	120	140	103	105	113	115	110	115	110	+-11
Mallard	305	305	610	610	1305	1305	900	900	755	755
Black	303	303	010	010	1300	1303	700	900	133	
Gadwall	820	820	1635	1635	2575	2575	3570	3570	1805	180
Baldpate	1170	1170	2765	2765	3140	3140	2490	2490	2685	268
Pintail	140	140	515	515	340	340	135	135	285	28
Green-winged teal	220	220	110	110	405	405	285	285	275	27
Blue-winged teal	275	275	25	25	15	15	5	5	210	-
Cinnamon teal			ASSET THE TOTAL PORT							
Shoveler	195	195	490	490	905	905	2225	2225	2540	254
Wood						1		Solven		
Redhead	305	305	150	150	1890	1890	745	745	25	1 2
Ring-necked	5	5	5	5	565	565	155	155	10	
Canvasback		De Designation	85	85	790	790	1435	1435	785	78
Scaup	5	5	30	30	35	35	60	60	125	12
Goldeneye				An Harman		E E	A ST. No. Plan			
Bufflehead			10	10	115	115	650	650	1550	155
Ruddy	565	565	610	610	1100	1100	25	25	25	2
Other C. Merganser									A	
Total Ducks	4005	4005	7040	7040	13180	13180	12680	12680	10865	108
ot:	2695	2695	5085	5085	5995	5995	255	255	60	+

WATERFOWL (Continuation Sheet)

		Week			(2)			:	(3)	: (1	
(1)	11/10-16	11/16m23	s of	12/1-7	rting	per:	100	10/00-01	Estimated waterfowl	: Production: Broods:	
Species	11 :	12	13	: 14	: 15	: 16	17	12/29-31:	days use	: seen :	
wans:			1	1	1	1	1	i i	adj b and	1	Toval
Whistling										Market Carlot	
Trumpeter							4 E 1 E 1				
Geese:										7 6	
Canada	910	910	800	800	200	200			35,560	1 1 1 1 1	
Cackling											
Brant											
White-fronted							and the same of th				
Snow					1 1	A					
Blue			10,10,10	100							
Other Total Geese	910	910	800	800	200	200			35,560		1
ucks:									a o g o o o		
Mallard	235	235			100				57,540		
Black			1 4						4.84.40		-80
Gadwall	10	10	1 127				175012	1 2 2 2 2	145,810	- 1177-0	11
Baldpate	770	770	5	5		Magazina	Description of the Control of the Co		182,350		2
Pintail	10				Internation			9 9 9 9 1	19,950		
Green-winged teal	15	15				East Table	Business		18,340	of manifest	
Blue-winged teal						Productive Company		3	4,480		Own Common Commo
Cinnamon teal					State	Section 4	Deed Characteristics		79.200		d)
Shoveler	150	150				Maria San	T- T		91,070		
Wood		age reprise?			404		The state of the s		749010		Olive day
Redhead		3			and the second				49 610		1
Ring-necked						Philosophi			43,610	ERIO DE LA CASA DE LA	The state of the s
Canvasback	10	10					THE TABLE		10,360		7.0
Scaup	35	35					All the second	-	43,470		
Goldeneye	10	10	10	10		9000	Beord		4,060	a series of the series	1
Bufflehead	325	325	20	20			and displayed		280		
Ruddy	10/10/07	10000			71		1		37,100		
Other C. Merganser	5	5	-	0.		CO C	To Constitute of the Constitut		32,550	and the same of th	
Total Ducks		100	5	5					140		
TOTAL NACKS	1575	1575	20	20			Constitution		691,110	The state of the s	
oot:									200 0/0	- Constitution of the Cons	
grootings.					0	NO confide	District Control of the Control of t	1	197,260		g g

	(5) Total Days Use	(6) : Peak Number :	(7) Total Production	SUMMARY
Swans		: :		Principal feeding areas Crane, Goose, Deer and Gimlet Lakes
Geese	35,560	910		
Ducks	691,110	13,180		Principal nesting areas
Coots	197,260	5,995		
3.52				Reported by Don R. Perkuchin

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 (h).

Interior Duplicating Section, Washington, D. C.
1953

MIGRATORY BIRDS (other than waterfowl)

Months of January to April 195.68

S ... 3

(1)	,	2)		3)		4)	concerne	(5)	4	(6)
Species	First	Seen	Peak No	imbers	Last	Seen	1	roductio		Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimate Number
To Street Street	Climate Es	inza Tecc	rd for U	e spectes	for the	Desabl to	ficerped.		1	
I. Water and Marsh Birds:	,							1 22259	'Lfortes)	
Horned Grebe	2	Apr. 20	III. DOY	STORES IN	still	Present	s. Strigi	proes an	A predate	nd R
Eared Grebe	2	Apr. 18	III Des	San Straight	Still P		0.04			
Western Grebe	or in the most	Apr. 16	11 27	enter in the	Still P		na radita i	proesi		
Pied-billed Grebe	ate apace	Mar. 8	OT ALCOHOLD	LAD PINAT	Still P			- willar	des and G	ruitforme.
White Polican	30	Apr. 23	200	Apr. 23	Still P:			. Should	and Vate	mai
Double-crested Cormorant	3	Mar. 27	0.6 (112, 95)	BorEnra	Still P		TOTAL DELL'IN		as sulcad	n appro-
Great Blue Heron	100 0011	Apr. 23	sis rodua	TH THE S	Still P			20 Sp	The second	ed on
Black-crowned Wight Heron	3.	Apr. 24	DiSTRU	TIONS	Still P		DEV FREE	304	24.5 P. COLUM	AE A O U
American Bittern White-faced Ibis	3	Apr. 29	L.F. COMMUNICAL	Landida (L. 16/18/18/18/18)	Still P:	Apr. 30				-
Sand hill Crane	60	Mar. 25	Flying	Chicago Chairm	130		Goy Don B			
Water Page Water	-	CONTRACTOR OF SURVEY	a my ment	ST ALM TO	200	Alex solver 1	DOD B	Perkile	1	
									× .	
		l i		1	1					
A STATE OF THE STA		Am 4 15								
II. Shorebirds, Gulls and		555 CO		1	Prince of	Lup urie				
Terns:	1 000	50 mm		· gen -	mines in					
Long-billed Curles	- 4-	Mar. 15		707 * -	Still P					
Willet	4	Apr. 24			Still Pr			9		
Greater Yellow Lege	4	Apr. 18				e to to to to to				
Lesser Yellow-legs	21	Apr. 11	Property of the		Still P	ropont.				
Poctoral Sandpiper	2.	Apr. 20			St111 P	The same of the sa				
American Avocet	7	Apr. 18	2.20	1.20	St111 P					
Wilson's Phalarope	23	Apr. 20			Still Pr					1
Ring-billed Gull	15	Mar. 1			22	Mar. 22				
Foreter's Tern	16	Apr. 25			St111 P:	resent				
Baird's Sandpieper	2	Apr. 20								*
Wilson's Ship OAB	1	Apr. 11			19311	100000000000000000000000000000000000000			7	
Merbled Gogelt	7	Apr. 30			Still P	resent				
	1		1	1		1	i	i	1	1

					8
(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons:	1 Par 30		Lacron descent		
Mourning dove	1 Mar. 31		Still Present		
White-winged dove	10 100		CTTT design		
			10 /60* 13		
IV. <u>Predaceous Birds</u> : Golden eagle	2 ml 3 /10 2 ml	2/23, 1 100, 4/30			
Duck hawk	1 Apr. 30		1 Apr. 30		
Horned owl Magpie	Year around res		Section 1		
Raven	NODE TO SERVICE TO SER		PERSONAL PROPERTY.		
Crow Bald Eagle	3 Mar. 9 1 ad. 2/15, 1 ad.	5 Mar. 25	5 Mar. 25		
Suaincon's Hauk	1 Apr. 20		Still Present		
- Ned-tailed Hawk - Sparrow Hawk	1 Apr. 18 1 Apr. 2				
-Rough Logged Houk			1 Apr. 22		
Thansh Mosk	1 Apr. 27		Still Present 1 Apr. 27		
Short-eared Cul	2 Apr. 10	PER STANCE	and the second s	by Don R. Perkuchin	1

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

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

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

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.

Estimated total numer of the species using the refug during the period concerned. INT. DUP. SEG., WASH., D.C.

59317

MIGRATORY BIRDS

(other than waterfowl)

Refuge Greecent Lake Refuge

Months of May to August 30 195 68

(1) Species	First		Peak N	3) umbers		4) Seen	cancerned	(5) Production	1	(6) Total
	- Hong on	maper i	f the end	U768 5768	ant in a	1101160	Number	Total #	Total	Estimate
Common Name	Number	Date	Number	Date	Number	Date	Colonies	Nests	Young	Number
T. T. I. and March District	first re	fuga cec.		a anecysa	for the	88880D CC	ne thego:	rans s	L7TGIMee)	
I. Water and Marsh Birds:			IA' BLO	Jacobute 8	T LOTE A PART	COURTOLS	2 2 78	Unk.	50	MB (
Eared Grebe	Pres	1		Se .		present	181	Unko	25	
Western Grebe	Pres		60	July 25	Still	Present present	JSLSG1777	urmes)	· · · · · · · · · · · · · · · · · · ·	7.
Pied-billed Grebe	11 CT - 205	The second second	7.00	5.0	56.111		mes to c	CODITIO	les end o	TALL LOTURES
White Pelican	7.08 60 20308	Aug. 17	250 275	Aug. 22 July 15	Still	present	e abacios	Total	AND MALL	inst t
Double-crested Cormorant	Prost			CAN THE PARTY OF REAL PROPERTY.	100	Aug. 31	2 16173	27 9 079	6 100 69	o wbbro-
Black-crowned Wight Heron	Pros	The same of the sa	Le The	. Jeosfart	Still Still	present	1 4007210	J so Aug	VIDE TIP	1977 017
American Dittern	Pres		as 10 mg	2.4	0 64111	present	DOT TOTAL		ar Etoab	
Great Blue Heron	Pros		INSTRU	July 25	10 to A A A	AR GOOKE	222 2314:		a a a a a a a a a a a a a a a a a a a	TAN A M II
Common Egret	1	June 6	April 6 debuggions		3	May 11				
White-feced Ibis		*				may as				
-Snowy Egret	1	June 6	2			Danner France	Property State	Feet Linear	r, Safuga	SECTION .
	1									
2000				decora.				1 1		
		See See	·							
	l cond					727 1				
II. Shorebirds, Gulls and	2,000	1				CESTAIN !				
Terns:						PERSONAL PROPERTY.				
Killdoor	Pres	en de		- 1	Still	present		char :	İ	
Long-billed Curles	Presi		60	July 19	The state of the s	Aug. 13				
Upland Plover	Pros		111		Unk					1
Western Willet	Pros			K.	Uc			a manage		
Stilt Sandpiper	****	Park 16	-		2	May 30				
Sora hall serve i something	1	-May 11			10000	present	İ	-		
Lesser Yellowlegs	2	May 5		* 47,334		gran a grant a	1	V 12		1
Gommon Snipe		May 5			30.				100	*
Dowitcher	5	May 5		1	1		1			
-Wilson's Phalarope	Press			Î						
- American Avocet	Pres		100	Aug. 22	Still	present				
Franklin's Gull	2	May 5	mpr. 20- 381		ELTT	03.0160m31				Ÿ
Forster's Tern	Pres		50	July 15	\$ \$ en	i.o		10	20	
Black Yern	6	May 12	1974	SATA TO	. 1		4	12	40	
	. (5		18	(over)			1	(9)	l	01

(1)	(2)	(3	lover	(4	4)		(5)		(6)
II. <u>Doves and Pigeons</u> :	Dan son A		2 47 19	C4433	present	1			
Mourning dove White-winged dove	Present			90424					
IV. Predaceous Birds:									
Golden eagle (sightings)	1 ima. 5/2	. 1 im	s. 5/30	1 inn.	6/7	1 1000	7/12		
Duck hawk Horned owl	Present			Se411	present	·£			
Magpie	Year around resi	lents		THE SECTION SEC.					
Raven	13000000	805	2/11/2 10	2	* * * * *				
Crow	1.300 kg			75733	July 19	1	Aug. 3		
Red-tailed Hawk	2 Nay 2			Se111	Prosent	*	110 g		
Swainson's Hawk Swain	Present				present				
Turkey Vulture	1 May 5			1	June 1				
- Barn Oul	Prosent	25	Sees 3			5	15		
Burrowing Cal Short-eared Cal	Present 1 July 23	40	Aug. 1				2.0		
- 01102 C-002 CO VOL	1 0,000	4-			Reported	hw Don B	. Perkuch	in, Refug	Manager

(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)

(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) Lal: Estimated total number of the species using the refus during the period concerned.

INT.-DUP. SEC., WASH., D.C.

MIGRATORY BIRDS AND LOLD GREEN THE COLLEGE GOLDEN

(other than waterfowl)

Months of Soptember to Occapie 195 60 Refuge Grescont Lake

(1) Species	First	2) Seen	Peak N	3) umbers	•	4) Seen	concerned	(5) Production	1	(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimate Number
I. Water and Marsh Birds: Western Grabe Pied-billed Grabe White Pelican Double-crested Cornorant Great Blue Heron Black-crowned Night Heron American Bittern Sandhill Crane	20 5 Pres 4 1 1 40	Sept. 5 Sept. 6 sent ent Sept. 5 Sept. 5 Sept. 5	30 15 200 35 4 1 3	Oct. 3 Oct. 4 Sept. 6 Sept. 19 Sept. 5 Sept. 5 Sept. 19 Nov. 15	6 15 2 2 4 1	Nov. 1 Oct. 4 Oct. 4 Oct. 19 Oct. 3 Sept. 5 Oct. 3 Nov. 15	agl Editi Findilio Fing perio Fines to C Faradriif Fal	an, and late to the abould at local conition praes!	st group lide lie se sched and Wali see and d	in A O.V. od or nai odraga
II. Shorebirds, Gulls and Terns:	Pre 2 1 6 35 10 2 540	sent Sept. 14 Sept. 5 Sept. 19 Sept. 5 Sept. 19 Sept. 5		Oct. 4 lown Sept. 5 Sept. 10 Sept. 19 Sept. 19 Gct. 31 Sept. 5	20 1 6 35 35 3 375	Oct. 4 Oct. 19 Sept. 10 Sept. 19 Sept. 19 Nov. 13 Sept. 19				
II. Doves and Pigeons: Mourning dove White-winged dove	2		gawan					And the second s		The same of the sa
	18	1	19	(over)	14			(8)		7 (6)

(1)	- (3	3)	(3) (0.481)	(4		(5)	(6)
III. <u>Doves and Pigeons</u> : Mourning dove White-winged dove	5	Sept. 19	Unkoowo	5	Sept. 20		
IV. Predaceous Birds: Bald Golden eagle	Eagle 1	Oct. 24 Oct. 31	Unknown Unknown	1 St111	Dec. 1 Present		
Duck hawk Horned owl Magpie	3	Sept.5 Sept. 5	Unknown Unknown	Still Still	Present Present		
Crow Swinson's Hauk	19 2 1 Pre	Oct. 18 Sept. 6 Oct. 18 bent	Unknown Unknown Unknown Unknown		Oct. 18 nown Present Present		
Sperrow Hawk	1	Oct. 4	Unknown	3	Oct. 4		
					Reported by	on A. Perkuchin	

(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 appro-

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. <u>Doves and Pigeons</u> (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) Lal: Estimated total numer of the species using the refue during the period concerned.

INT.-DUP. SEC., WASH., D.C.

59317

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

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UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE

BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Crescent Lake For 12-month period ending August 31, 19

Reported by Don R. Perkuchin Title Refuge Manager

(1) Area or Unit	(2) Habit	at		(3)	(4) Breeding	(5)
Designation	Type .	Acreage	NEW CONTRACTOR OF THE CONTRACT	Use-days	Population	Production
44 3	Crops	0	Ducks	32,787	CIRCUlarity accompliant burgless resembles (Company of the Compan
1	Upland Marsh		Geese Swans		CHECKLORICH CHECKER CHECKER	690 Share Control Date of Control Annual Control Contr
lortin Lako	Water		Coots	7,000	Constructions Control Control Construction Control	eproduces and deproduce to a constant produce of the c
	Total	1094	Total	40.032	Antenderic Comp. (State Comp. State Communications) Constitute Comp. (State Communications)	
CO CO CO CO CO CO CO	Crops	CO CO CO CO	Ducks	40,250	(C) (C) (C) (C) (C) (C) (C) (C) (C) (C)	125
2	Upland	330	Geese			Graph processing the contract to the contract to the contract of the contract
	Marsh	135	Swans		Constitution Const	
mith Lake	Water	-0-0-0-0-0	Coots	7,970		
	Total	546	Total	ORDER OF THE PROPERTY OF THE P		
	Crops	0	Ducks	30,276	130	105
4 3	Upland		Geese	Coldinational Control Control Control	AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS	George Constant Const
	Marsh		Swans	Company of the Compan		
errin Lake	Water	A STATE OF THE STA	Coots	No. and Charles Control Con		An interface contribution of the ending of the Contribution of the
	Total	432	Total	OMO TO THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OF THE OWNER OWNER OF THE OWNER		
	Crops	0	Ducks	20,277	70	60
	Upland	510	Geese	420		times, many participants (age, and panels, properties on the
	Marsh	Mineral Residence	Swans	Charles and the same and the sa	CONTRACTOR CONTRACTOR	CONTINUE NO DESCRIPTION OF THE PROPERTY OF THE
larrison Lake	Water Total		Coots Total	OETIGE-searching County County Install County Count	GOLDON CONTRACTOR OF THE PROPERTY OF THE PROPE	
400 CO CO CO CO CO	TO COTT		TOOTT		00000000000000000000000000000000000000	
	Crops	0	Ducks	20,494	CONTRACTOR	
# 5	Upland Marsh	1109	Geese Swans		CONCERNIONACIONACIONACIONACIONACIONACIONACIONA	CHICATON PROPERTY AND AND AND AND AND AND AND AND AND AND
	Water		Coots	(MINISTRACTOR CONTINUES OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF T	CONTENTS AND REPORT OF THE PROPERTY OF THE PRO	designation (2007) and attack to water the Control State (2007)
ost Lako	Total		Total		Carry Committee	
809 603 600 600 600 600 600	Crops	0	Ducks	323,470	200	a = = = = = = = = = = = = = = = = = = =
# 6	Upland	1200	Geese	43,438	0	
	Marsh	158	Swans			CONTRACTOR CONTRACTOR
Joose Lake	Water	207	Coots	40,020	CORPORATION	
NO 625 625 635 645 645 645	Total	3 60 69 63	Total	C13000000000000000000000000000000000000		
	Crops		Ducks	69,264	110	COLD BASIS AND AND THE COLD BASIS COLD COLD COLD BASIS COLD COLD BASIS COLD COLD COLD BASIS COLD COLD BASIS COLD COLD COLD COLD BASIS COLD COLD COLD COLD COLD COLD COLD COLD
4 7	Upland Marsh		Geese Swans	19,080	Secretaria de la companya del companya de la companya del companya de la companya	
Ginlet Lake	Water		Coots	7.090		
The same of the sa	Total	1020	Total	09.487		

(over)

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.
- Crops include all cultivated croplands such as cereals Habitat: (2)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.

Interior Duplicating Section, Washington, D. C. 27580

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 Crescent Lake For 12-month period ending August 31, 1968

Reported by Don R. Perkuchin Title Refuge Manager

	(2) Habitat		(3)	(4) Breeding	(5)
Designation	Type Acreage	15, 1105	Use-days	Population	Production
	Crops 0	Ducks	13,299	40	35
	Upland 1514	Geese	63 37	CBRCDINST-Incoming into Charles Control that	Continue production of the pro
	Marsh 22	Swans	AND STOCKED CONTRACTOR OF STOCKED CONTRACTOR	GACCHADHICHESDREDHEDHADHICHESDREDHED	OSSERCIA DE COMPANSA CONTROL DE ACCUSADO DE CANTO DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE COMPANSA DE
ackborry Lake	Water 201	Coots		1427	10
	Total 1817	Total		Americanic Cost, Cost Chesty Care Care Care Care Care Care Care Care	Topic of the Control
in man and man and and and a	Crops	Ducks	44,007		85
# 9	Upland 669	Geese		O GRANDSHALDSHALDSHALDSHALDSHALDSHALDSHALDSHAL	G SECTION (STATE OF A STATE ASSAULT AND CONTRACTORS)
	Marsh 27	Swans	GREST TOTAL COMPONENT CONTROL	Constitution of the second constitution of the second constitution of the second constitution of the second constitution of the second constitution of the second constitution of the second constitution of the second cons	финациализмовинования. -
ones-Swan Lake		Coots	421	and and an advantage of the second an appeal	OFFICE AND AND COLUMN C
the state of the s	Total 310	Total	44,523	100	
un mais est map mus est més e	Crops	Ducks	34,698		110
44 8 65	Upland 969	Geese		acceptation of property and pro	Garage and an experience of second second by the second sec
8.10	Marsh	Swans	Company on the State of the Sta	Caretherotyn-engalwanjarites/weign-engalweignategap	resident between the constraint of the constrain
oundup lake	Water 141	Coots	1,042		675. 675.
Officials Terro	Total 1115	Total	37,933	142	
15 6100 600 600 CES 600 620 G	(Trans	Ducks	es es es es es es	110	600 CD 803 CD 800 6
** **	Crops Upland 1152		51,862		6000 manus produces produces produced in the contract of the c
# 11	40000mChriston Christon Geese Swans	# 3 Part A	DOMESTICAL DESCRIPTION OF THE PROPERTY AND THE PROPERTY A	Self-	
	CONSTRUCTION OF THE PROPERTY O	Coots		Chickenstein contraction of the Chickenstein o	
sland Lake	Water 611 Total 1866	Total	CELE-LOS CONTRACTOR DE LA CONTRACTOR DE		15
B. 400 edg eng eng eng eng eng	to the to the total the to	60 00 C7 89	60 60 CD 60 CD 60	60 60 60 60 60 60 60 60 60 60 60 60 60 6	
	Crops	Ducks	90,332	100	85
# 12	Upland 1455	Geese	CLASSIC CONTRACTOR CON	CONTENSIONAL CHINCON CHINCON CONTENSION CHINCON CHECKSONS DANS - AND STREET SPECIAL SP	
	Marsh 9	Swans Coots	7,000	terchestrosporeumphischlightenchendened	
hafer - Christ Lakes	Total	Total	98,500		
3 63 40 60 60 60 60 6	(1) (1) (2) (3) (4) (6) (6) (6) (6) (6)	සා සා සා		CONTRACTOR CONTRACTOR	ජනවාර්තිකරුණනාකුකරුණනාකයක් ජන සහ සහ සහ ස
	Crops	Ducks	153,455	55	45
# 13	Upland 1731	Geese	CONTRACTOR CONTRACTOR	CONCLUSION CONTRACTOR	GZZZZOWO DOWOCO WOOD WOOD WOOD WOOD WOOD WOOD
	Marsh 18	Swans	Св. Замогра ставо на при при при при при при при при при при	CDSCSSSSC MINISTER PROGRAMO CONTROL CO	egyccarchenechensum (Anna charles pro-
zane Lake	Water 90	Coots	115,112	57	
D 403 603 400 900 400 900 4	Total 1839	Total	200,093		
	Crops	Ducks	80,146	80	70
# 14	Upland 99	Geese	CONTINUE TRANSPORT OF THE CONTINUE TO A STATE OF	соифинерацийской инфинистичения соифинерацийской инфинистичения соифинистичения	CONSTRUCTOR CONTRACTOR CONSTRUCTOR CONTRACTOR
	Marsh	Swans	Стана	ондиновозновозновозности	OCCUPATION OF THE PERSON OF TH
Deer Lake	Water 88 Total 275	Coots Total	40,920	CHECKER COMPANY OF THE PROPERT	COLD STATE OF THE

(over)

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.
- Crops include all cultivated croplands such as cereals (2) Habitat: 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
- (3) Use-days: Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-l.

periodic field observations. The sum of these estimates should equal the area of the entire unit.

- (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.

Interior Duplicating Section, Washington, D. C. 27580

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 Crescent Lake For 12-month period ending August 31, 1968

Reported by Don R. Perkuchin Title Refuge Manager

(1) Area or Unit Designation	(2 Habi Type			(3) Use-days	(4) Breeding Population	(5) Production
# 15	Crops Upland Marsh	5173	Ducks Geese Swans	CONTRACTOR CONTRACTOR	Oraclassic Control of	Continue Con
leadows West	Water Total		Coots		G environs/Critic/Microsoft (Construction Construction) Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Cons	
# 16	Crops Upland Marsh	2933	Ducks Geese Swans		Ometime place to recover the contract of the c	Georgia verdi de di line cover contro de dono con Georgia verdi de de la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito de di la composito di la composito di la composito de di la composito di la composit
eadows East	Water Total		Coots		350	
# 17	Crops Upland Marsh	0 21,279	Ducks Geese Swans	24,067 Cardinative Cardinative Commission Commission		140
plands	Water Total		Coots	Contract Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Construction Cons		
Total	Marsh Water	3,369 71.2 1,912 5,996	Ducks Geese Swans Coots Total	1,113,777 68,575 244,837	2210	Residence of the Company of the Comp
	Crops Upland Marsh Water Total	CONTRACTOR CONTRACTOR	Ducks Geese Swans Coots Total	CERTIFICATION CONTROL TO THE CONTROL C	CALCEROLUMO CONTROL CO	CONTRACTOR SCHOOL CONTRACTOR CONT
	Crops Upland Marsh Water Total		Ducks Geese Swans Coots Total	OCCIDENCIA CON CON CON CON CON CON CON CON CON CON	COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS COS	dis ca ca ca ca ca ca ca ca ca ca ca ca ca
- v.a. gar ean en en en en	Crops Upland Marsh Water Total	Case et 00 et 30 et 20 e	Ducks Geese Swans Coots Total	GERB CAC CES DER GES DES GRANDES DES GES DES GRANDES DES GES DES GRANDES DES GRANDES DES GRANDES DES GRANDES DES GRANDES DE GRANDES DE GRANDES DE GRANDES DE GRANDES	Conception (1990) (1990	COST COST COST COST COST COST COST COST

(over)

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-menth 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.
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- Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form NR-1.

mates should equal the area of the entire unit.

- (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.

Interior Duplicating Section, Washington, D. C. 27580

UPLAND GAME BIRDS

Refuge Crescent Lake Refuge Months of James to 4001 , 1960

(1) Species	(2) Density		Your Produc	16	(4) Sex Ratio	R	(5) emova	ls	(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.
harp-tailed rouse	44,066 acres meado and uplands	35			101				650	325 males counted on 55 dancing grounds.
innated Grouse	8,000 acre marsh a better uplands				Unkaoan			4	2	l male within à mile of refuge boundary.
ing-nacked heasant	3,000 acres marsh edges and better uplands					2.5			600	Godd winter survival.
							1 11 F 40			
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			Company or services.							in and the design
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			REAL CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRA					7 : K.A.	ani sa s	
			de realizações de la composição de la co							
			The second secon				ž.			8 ×

Form NR-2 - UPLAND GAME BIRDS.*

. (1)	SPECIES:	Use	correct	common	name.
- 1	-/		050	0027000	O CIMITION	TOPONTO &

- 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 Nc. 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.

UPLAND GAME BIRDS

Refuge Crescent Lake Months of May to August 31 , 19 68

(1) Species	(2) Density		(3 You Produ	ng	(4) Sex Ratio	Re	(5) emoval	ls	(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat		Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Restocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Sharp-teiled Grouse	44,066 acres meado and uplands		19	550	Sport Str.			v	1,000	Very good production
Pinnated Grouse	8,000 acres maedow and uplands	S	Ünkı	own					Unknown	Lest sighting - 1 in April, 1968
Ring-necked Pheasar	t 3,000 acres mars edges and better uplands		14	250	1M : 2F				600	Fair production year
÷	**************************************		9 p) ·				-	
					1					
						-				
							*			

Form NR-2 - UPLAND GAME BIRDS.*

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

- 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 Nc. 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.
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- (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.

UPLAND GAME BIRDS

		Caus Arabahana		Doceanor	- 06	St.
Refuge rescent Lake	Months	of contemper	_ to		, 19	Man.

(1) Species	(2) Density	(3) Young Produced		(4) Sex Ratio	R	(5) emova	ls	(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.	
harp - tailed	44,000 acres meadows and Upland	× 5			1% : 1F	200			700	Good hunting on and around refuge.	
innated Grouse	8,000 acres meadow and uplands	None	Sight	23	tida (1822) e jes Legense (1882)	0	· · · · ·		Unknown	Last sighting - 1 in April, 1968.	
ing - necked heasant	3,000 acres marsh edges and better uplands				14:2	30			650	Good winter population.	
							u u		5) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1		
	saga na e na mini si sa ak e Mashipin						B B B				
				, 1 4 , 12			* * * * * * * * * * * * * * * * * * *				
	,			* -							
					7				*	*	

Form NR-2 - UPLAND GAME BIRDS.*

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

- 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 Nc. 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.
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- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

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

Refuge Crescent Lake

Calendar Year 1968

(1) Species			(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(g) Sex Ratio	
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re-	Sold	For Research	Predation	Disease	Winter	Number	Source	At period of Greatest use	As of Dec. 31	Est. from observ ations	
Rocky Mountain Mule Deer	500 acres of browse and 40,000 acres of grassland	60	15				Un				None	190	160	1 : 1.	
White-tailed Deer	500 acres of browse and 500 acres of marsh borders	25	3		THE PARTY AND TH	nagi vita dinama diggi penggapan diga dinama di nasara diggi penggapan di nasara di nasara di nasara di nasara	Ü	kno			None	65	55	1:2.7	
Pronghorn	40,000 acres of grassland	25	5		CONTRACTOR OF THE PROPERTY OF		*****	tiso	Wi)		None	205	160	1:4	
		Management (Management of Management of Mana													
		- North Community Community (North Community C				Apply or a control to a control to the control to t					ē				

Remarks: Observed during summer and fall

INSTRUCTIONS

Form NR-3 - BIG GAME

- (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 Louisians 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) LCSSES: 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.

Refuge Crescent Lake Refuge Year ending April 30,1968

Species	(1) (2) Species Density		Rem	(3) ovals			(4) Disposition of Furs				(5)				
			#						Share Trapping		ping	uge ped ted			Total Popula-
Common Name	Cover Types		Acres Per Animal	Hun ting	Fur Harvest	Predator Control	For Re- stocking	For Re-	Permit Number	Trappers	Refuge share	Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	tion
Muskrat Maccoon Mink Shunk, Striped Sovetalled Measel Long-tailed Meas	2,634 800 800 44,084 44,084 44,084 44,084 44,084 44,084 44,084 44,084														2,000 90 20 50 Unknown 25 25 300 250 250 5

REMARKS: Muskrat pop. figure based on muskrat house count (class c data). Remaining pop. figures based on casual observations (class D data).

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, shorttailed 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 headingslisted.

(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.

32715

Remarks

	Refuge Crescent Lake	Year 19.05						
>	Botulism	Lead Poisoning or other Disease						
	Period of outbreak July 15 - Aug. 5	Kind of disease None noted						
	Period of heaviest losses July 25-31	Species affected						
	Losses: Actual Count Estimated (a) Waterfowl 30 50 (b) Shorebirds	Number Affected Species Actual Count Estimated						
	(c) Other	Number Recovered						
	(a) Waterfowl (12) 6 50% (b) Shorebirds (c) Other	Number lost Source of infection						
	Areas affected (location and approximate acreage)	Water conditions						
	North central shoreline area of Roundup Lake (5 acres) Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc. Average depth of water between one and two feet.	Food conditions						
	Condition of vegetation and invertebrate life Not known.	Remarks						

Refuge	Crescent L	ake	Year	19	68
Reluge	WARRACTO MI	QB-U	_ tear	19	3

Collections and Receipts (Seeds, rootstocks, trees, shrubs)						Plantings (Marsh - Aquatic - Upland)							
Amount (Lbs., bus., etc.)	(2) C or R	Date	or	ň.	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount and Nature of Propagules	Date	Survival	Cause of Los	
0 trees		3/3/68	ALC).	16.40	None			/ 0.5 acre	60 potted seedlings			Poor seedlin vigor	
60 trees	R	5/3/68	purch.	16.40	None			/ 0.5 acre	1	4/15 - 5/13/6	100%		
			·										
	Amount (Lbs., bus., etc.)	(Seeds, r Amount (2) (Lbs., C bus., or etc.) R	(Seeds, rootstoom Amount (2) (Lbs., C bus., or etc.) R Date	Amount (2) (Lbs., C bus., or etc.) R Date Source 8 5/3/68 purch.	Amount (2) (Lbs., C bus., or etc.) R Date Source Cost Source R S/3/68 purch. 16.40	(Seeds, rootstocks, trees, shrubs) Amount (2) (Lbs., C	(Seeds, rootstocks, trees, shrubs) Amount (2) (Lbs., C bus., or etc.) R Date Source Cost on Hand Area Planted Date Source Location of Area Planted None Headquarters (Gtrs. 3 4 9)	(Seeds, rootstocks, trees, shrubs) Amount (2) (Lbs., C bus., or etc.) R Date Source Cost on Hand Area Planted Planting 5/3/68 purch. 16.40 None Headquarters (Qtrs. 3 & 9)	(Seeds, rootstocks, trees, shrubs) Amount (2) (Lbs., C bus., or etc.) R Date Source Cost on Hand Area Planted Planting Shoreline) Total Amount Location of or Yards of Planting Shoreline) Total Amount Location of or Yards of Planting Shoreline) Total Amount Location of Or Yards of Planting Shoreline) Total Amount Location of Or Yards of Planting Shoreline)	(Seeds, rootstocks, trees, shrubs) Amount (1) (Lbs., C	(Seeds, rootstocks, trees, shrubs) Amount (2) (Lbs., C	Amount (2) (Bs., or Date Source Cost on Hand Strees R 5/3/68 purch. 16.40 None Headquarters 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None Headquarters R 120 trees R 5/3/68 purch. 16.40 None R 120 trees R 5/3/68 purch. 16.40 None R 120 trees R 120 tree	

(1) Report agronomic farm crops on I	Form.	NR-0
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- (2) C = Collections and R = Receipts
- (3) Use "S" to denote surplus

otal acreage planted:	***
Marsh and aquatic	
Hedgerows, cover patches	- 4
Food strips, food patches	
Forest plantings	

emarks: - conspectation and some stony articipate participate for	
Wildlife and reruge personnel will both benerit from this w	indbreak.
inirty more potted Austrian pine seedlings will be planted :	
spring, 1909 to reclace Ponderosa pine seedlings which peri	shed.

ish and Wildlife Service Branc' of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

	1	ittee's		Government'						een Manure,	
Cultivated	Share	Harvested	Ha	rvested	Unha	rveste	d	Tota		ver and Water-	
Crops Grown	Acres	Bu./Tons	Acres	Bu./ Tons	Acres	Bu. /	Tons	Acrea Plant		wl Browsing Cr pe and Kind	ops Tota Acrea
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o of Permittees:	1	Agricultur	al Opera	tions Non	8/8	Havir	ng Ope	ration	s combi	od Crazing Op	erations
o. of Permittees:		Agricultur	al Opera	tions Non		9 8 1 1	9 4			Grazing Op	
			al Opera			16	permi	ttees		rmits as of De	cember 31
ayxx Improved	T	Agricultur ons	al Opera	Cash		9 8 1 1	permi	ttees	- 28 pe	2	
(C) (P)	To Harve	onsx setedx se paring	0	Gash Revenuex		16 zing	Num Anim	itees lber lals	- 28 pe	Cash Revenue	cember 31
Ayxax ImprovedX SpecifyXKind) B CATTLE - HEAD (Jan. 1 - Apr. 15 May 23 - Oct. 31 Nov. 1 - Dec. 31	Tarve Harve	Sheak SetedX E DURING 4,535 3,575 4,608	Acresx PERIOD INC	Cash Revenuex	Gra	zing	Num Anim	ber als	AUM'S	Cash Revenue	cember 31 ACREAGE
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Ayxxximprovedx SpecifyxKind) 3 CATTLE - HEAD Jan. 1 - Apr. 15 Jay 23 - Oct. 31 Jov. 1 - Dec. 31 3 not include 3/	Tarve Harve	568X 56484X 36 DURING 4,535 3,575 4,608 of 1,717	Acresx PERIOD INC	Cash Revenuex	Gra 1. Catt 2. Othe	zing	Num Anim	ber als data left	- 28 pe AUM'S	Cash Revenue	cember 31 ACREAGE

DIRECTIONS FOR PREPARING FORM NR--8' CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only thenumber of acres 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. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. <u>Unharvested</u> Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under <u>Bushels Unharvesed</u> column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops Specify the acreage kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under <u>Cultivated Crops</u>, and perennial hay should be listed in the same manner at time of planting

Total Refuge Acreage Under Cultivation Report total land area devoted to agricultural purposes during the year.

REFUGE GRAIN REPORT

(1)	(2) On Hand	(3) Received	(4)		Grain D	(5) ISPOSED OF	-	(6) On Hand	(7) Proposed or Suitable Use*		
VARIETY*	BEGINNING of PERIOD	DURING PERIOD	Total	Transferred	Seeded	Fed	Total	On Hand End of Period	Seed	Feed	Surplus
Corn	115	400	515			240		275	B	275	
Milo			165			40	ji	125	C very	125	a % 3
								3	N A		
	As a second						¥		8 		
						8		a a			

*See instructions on back.

(10) Remarks

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 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. 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 break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

Refuge

ANNUAL REPORT OF PERSTICIDE APPLICATION

Grescent Lake Proposal Number Reporting Year 68-1, 68-2, 68-3 1968

INSTRUCTIC	ONS: Wildlife Refuges Ma	anual, secs. 3252d, 3394b an	d 3395.				<u> </u>	
Date(s) of	List of	Location	Total	Chemical(s)	Total Amount	Application	Carrier	Metho
Application	Target Post(s)	of Area	Acres	TTood	of	ripplication	and	of

INSTRUCTIO	NS: WIIdilie Refuges Ma	anual, secs. 3252d, 3394b an	la 3395.				<u> </u>	
Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
7/3/68	Leafy Spurge		12° square plot	2,4-0 amine	•0202·	41b./ac.	80 gals. H ₂ 0/ac.	Power eprayer
7/3-24/68	Canada Thistle	Gimlet, Hackberry, Headquarters and U. Harrigon.	12.5	2,4-0 asine	18 lbs.	1.4 lb./cc.	and the same of th	Power Spreyer
Mid-July	Brone and other tame grasses.	So. and SW sides Smith Lake.	1.5	Dalapon	18 lbs.	12 lbe./ec.	50 gals. H ₂ 0/ac	Power Sprayer
		»		,	*			* "
and the second								

^{10.} Summary of results (continue on reverse side, if necessary)

This year's growth of leafy spurge killed. 75% of this year's Canada Thistle growth killed by two treatments of .3 1b/ac. Only about 25% of brone and other tame grasses controlled by Dalapon application.

"That Old Gang of Mine." from left to right: Duskin, Jakabosky, Covalt, Irey, Saunders, Perkuchin, and Hyland. (Roll 4-68-2, August, 1968, CBP)

NE-CRL-816

Mistaken for a tomcat seen in the headquarters area numerous times before, this bobcat was shot in tall grass 150 feet south of the office. Believed to be an immature female, this is the first verified record of a bobcat on the refuge. (Roll 5-68-3, August, 1968, JLJ)

NECRL 816

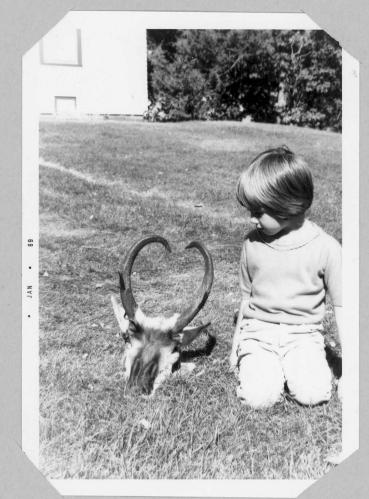


NE_CRL_817

Though not a "Boone and Crockett" trophy, Dawn Perkuchin thought this old pronghorn was a dandy. (Roll 7-68-2, August, 1968, RDD)

NE-CRL-818

Our attempts to nurse this car hit mule deer fawn back to good health were in vain. (Roll 3-68-1, August, 1968, JLJ)



NE_CRL818



NE_CRL_819

Late each winter fresh prairie hay is put in the goose nesting platforms. Looks like Covalt was setting up housekeeping, eh!? (Roll 1-68-1, January, 1968, DRP)

NE-CRL-820

Ev Dietlein and Art Covalt placing new cattle guard into west mail road just southeast of Smith Lake. (Roll 7-68-1, September, 1968, DRP)

NE-CRI-80



NE_CRL_820



NE-CRL 821

Bob Duskin removing a blue-winged teal from swim-in trap on Goose Lake. (Roll 6-68-1, August, 1968, JLJ)

NE-CRI-822

Three happy ice fishermen on Island Lake with Northern pike weighing up to eight pounds. (Roll 2-68-5, February, 1968, RDD)



NE_CRL-822



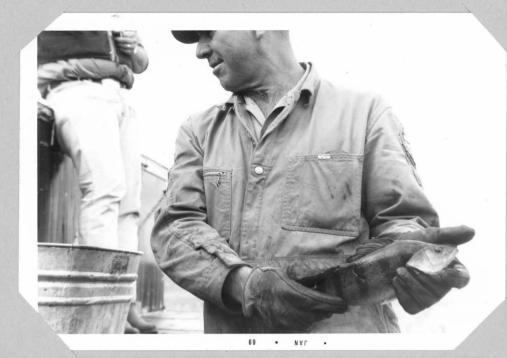
NE-CRI-823

One of the 877 adult yellow perch and 68 mature bluegill transplanted into Crane Lake by the Nebraska Game and Parks Commission. (Roll 7-68-3, October, 1968,,RDD)

NE-CRL_824

From left to right: Dale McLain, Hyland, Gordon Beckett and Perkuchin measuring and weighing fish shocked in Island Lake. Beckett and McLain are with Fisheries services at Valentine, Nebraska. (Roll 5-68-2, August, 1968, RDD)

NE-CRI 825



NE_CRI_824



NECRL 825

Local contractor drilling new well for quarters 9 domestic water supply. (Roll 2-68-1, March, 1968, DRP)

NE-CRL - 826

New stock well being drilled by Ghuck Dunbar, local well-driller, at well site no. 3 on southwest end of Smith Lake, Without the windmills to bring the water forth from the vast underground reservoir, much of the sandhills would be indeed desolate. (Rell 7-68-4, November, 1968, DRP)

NE-CR1-826

Thar she blows! One of six potholes blasted with AN/FO mixture in March along the NE edge of Island Lake. (Roll 2-68-3, March, 1968, DRP)

NE-CRL 828

Blasted pothole (G-12-06) immediately after blast. Despite the lack of wind, the hole had an average depth of 4 feet. With 412.5 lbs. of AN/FO 518 cu. yd. of dirt were moved at a cost of \$.232 per cubic yard. (Roll 2-68-4, March, 1968, DRP)

NE-CAL-829



NE-CRI 828



NE-CRL -829

Old picket fence around courtyard and behind office was removed by Irey to reduce maintenance load. The remainder of the fence around quarters 1 and 5 received a long overdue coat of paint. (Roll 4-68-3, August, 1968, JLJ)

NE-CRL-830

Saunders posted the new portion of the public hunting area and the new 5,100 acre closed area. Approximately 40,900 acres is open to hunting of mule and white-tailed deer, antelope, sharp-tailed grouse, and ring-necked pheasants. (Roll 5-68-1, August, 1968, JLJ)



NE-CRL 830



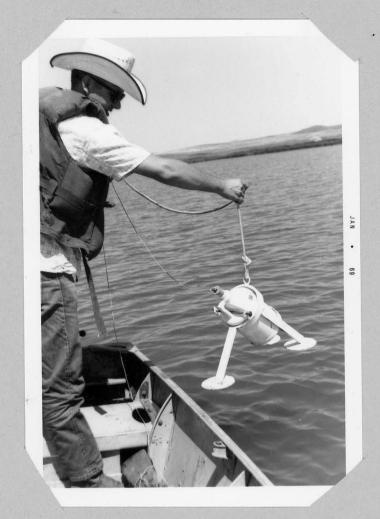
NE-CRL-831

Hyland taking water sample from Round-up Lake with sampler designed and constructed by Covalt. (Roll 4-68-1, August, 1968, JLJ)

NE-CRL 832

Jakabosky used frequency quadrat and point frame to determine gross differences in percent of species composition and the percentage of ground cover, litter, and plant cover in meadows and uplands under different types of land use. (Roll 4-68-4, August, 1968, JLJ)

NE_CRI_832



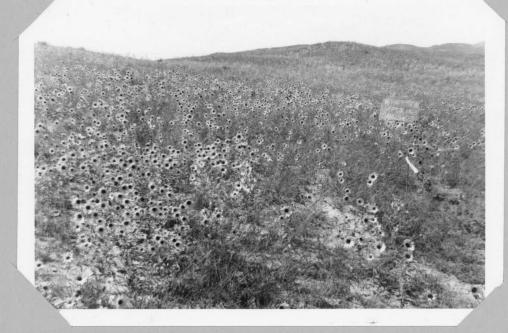
NE_CRL_833



Heavily grazed sands site transect on west side of Harrison Lake. This upland tract was fenced this fall to protect it from further grazing abuse. Heavy rains in August helped produce a bumper crop of wild sunflowers. (Roll 6-68-2, September, 1968, JLJ)

NE-CRL-834

Close-up of frequency quadrat in same site showing abundance of bare soil and undesirable forbs. In sands sites which have not been grazed in the last 20 years, the quadrat would have about 95% litter (covers the bare soil) and only 5% live grass plants. (Roll 6-68-3, September, 1968, JLJ)



NE_CAL-834



NE-CRL-835

Sub-irrigated range site transect (#22) on east side of Harrison Lake. Heavy grazing or prescribed burning every 3-5 years might make this cover more attractive to wildlife. (Roll 6-68-4, September, 1968, JLJ)

NE-CRL-836

Close-up of frequency quadrat in same site showing thick mat of cover. There is about 86% litter, 8% plant cover and 6% bare soil in winter grazed sub-irrigated areas. In non-use sub-irrigated sites there is about 94% litter, 5% plant cover and 1% bare soil. (Roll 6-68-5, September, 1968, JLJ)



NE-CRL 835



NE CRL 837

Clerk Duskin holds head of freshly killed and partially eaten mule-deer fawn. On several occasions the two dead grey hounds lying next to this fawn (apparent victims of lead poisoning) had been seen running free on the refuge for about six weeks prior to this time. How many other deer they killed we do not know, but we are sure they won't be doing it anymore. (Roll 2-68-2, March, 1968, DRP)

NE-CRL 83-8

Remains of four coyotes on southeast shoreline of Crescent Lake, suspected victims of the Bureau's "new role" services to wildlife. Cow hide and bones in right background may be remains of bait station on lands of Mrs. Mary E. Eldred. Just three weeks earlier two adult and one immature bald eagles were flushed from this site. (Roll 2-68-6, March, 1968, DRP)

NE_CRL_ 839



NE-CRL-838



NE_CRI_839

NORTH PLATTE REFUGE

1. General

Located about 70 miles west of Crescent Lake National Wildlife
Refuge, this easement area seldom inspected. Recreational use on
Lake Minatare is administered by the Nebraska Game and Parks
Commission. Our main activity at North Platte is maintaining the
boundary posting to prevent disturbance of waterfowl from October
1 through December 31 each year.

Nebraska Conservation Officer James McCole handles routine patrol and law enforcement work with the occasional help of the USCMA stationed at North Platte, Nebraska. Refuge personnel made no trips to the area this year. McCole was provided with 12 new closed area signs at a cost of \$60.00 (purchased by the Bureau) for posting around Lake Minatare.

Mallards peaked at an estimated 200,000 on December 5, with a peak of 135,000 on November 25 in 1967. On December 5 geese peaked at only 50 Canadas, compared to 500 on November 19, 1967. All waterfowl data were obtained from aerial surveys made by John Sweet, NG&FC Waterfowl Biologist

2. Public Use

The following information is for the record only. It was originally reported by the Bureau of Reclamation, and is always one year behind.

1967

Sightseeing	21,000
Pienicking	23,000
Camping	4,000
Swimming	36,000
Waterskiing	2,500
Boating	21,000
Fining	22,000
	Contract of the Contract of th

Total Visitor Days

130,500

These estimates are based on periodic counts of cars, boats and other uses made by the Nebraska Game and Parks Commission personnel. They were taken from the "Recreation and Wildlife Summary," 1967, Bureau of Reclamation form 7-1613.

WATERFOWL

(1)	Weeks of reporting period										
Species	1	2	3	4	5	6	7	8	9	:	
ans:										+	
Whistling Frumpeter						<u> </u>		1	1	+-	
ese:				-					-	+	
Canada											
Cackling			AZY	not visi	ted during	the porto	• 1750e			+	
Brant				** * * * * *						+	
White-fronted	-	70	orobably	How own		nigention;	awind,	1 1 2 2 3 3 3 3 3 3 3 3		-	
Snow				 	3 4 5 5 5 5					+	
Blue							<u> </u>			+	
Other	- Accession of the Control of the Co	Augumento bajosa en listra programa de la composita de la comp						-		+	
cks:						-				+	
Mallard					ak yanada						
Black					1			-		+	
Badwall		CONTRACTOR OF THE SECOND CONTRACTOR OF THE SEC								+	
Baldpate	- Periodicina management									+-	
Pintail	diameter and the second					-	<u> </u>			+	
Freen-winged teal		A STATE OF THE STA								+	
Blue-winged teal		STATE OF THE PROPERTY OF THE P			_			+		+	
Cinnamon teal	er en automorphism de la companya de			-	-	-		-		+	
Shoveler		STORY STREET, MARKET AND STREET, STREE			-	-	 	-		+	
food						-		-		+	
Redhead				+		+		-		+	
Ring-necked					-	 		-		+	
anvasback					+		Contraction of the Contraction o	+		+	
scaup								-		+	
oldeneye						-	 	-		+	
Sufflehead	Military and a second s							 		+	
Ruddy		provincia productiva (Alexandra III - Alexand			+	_				+	
ther						-		-		+	
onei				-	+	_				+	

WATERFOWL

(1)			Week	s of :	repor	ting	perio	d		
Species	1	2	3	: 4	5	6	7	8	9	10
wans: Whistling										1
Trumpeter										
Canada				and add and		- 3				
Cackling						od, Team				-
Brant	•		11000000	onel nee	Transfer man					
White-fronted										
Snow	app confidence roots a procedure re-re-conditional resolutions	Manager su, englishing and their success, or materialistic employees		rer, trobox		- complant		1		
Blue	-CAREED TEST OF STREET COLOR TO LANGUAGE STREET, THE				4				n (1)	+
Other	40000000 COSS COSS CONTRACTOR CON		Champingh	Contailor	30.					
icks:	*#####################################									
Mallard			** * *							The state of the s
Black	Christian Christ	Generalism asserte asserte asserte como vina revocación de la como de la como de la como de la como de la como	63000	I DDO VOY	Timitol.					
Gadwall		***************************************		<u> </u>						-
Baldpate										-
Pintail	Carlos Ca				<u> </u>					-
Green-winged teal					ļ				Commence of the Commence of th	+-
Blue-winged teal						1				+
Cinnamon teal										+
Shoveler										-
Mood						_	<u> </u>			
Redhead							<u> </u>			+-
Ring-necked					_	_				-
Canvasback	**************************************				-					
Scaup										-
Goldeneye					_	 		1		-
Bufflehead										+
Ruddy					-	 				+-
Other	The state of the s				+	<u> </u>			E 6	-
OMET						 				+-
			The state of the s	The second						
oot:					-	-				+

WATERFOWL

(3)			Week	sof	repor	ting	perio	o d.		
(1) Species	9/1-7	9/8-14	9/15-21	9/22-28	9/29-10/5	20/6-82	10/13-19	20/20-26	10/27-11/2	11/10-9
Swans:					İ		1			
Whistling Trumpeter	***************************************								1	-
Geese:		-								
Canada									-	
Cackling	-								>	—
Brant										
White-fronted										
Snow									1	†
Blue	THE REPORT OF THE PARTY OF THE			1			1			
Other Total Geese	Allegative versions and the comment of the section of the comment								5	
Mallard		Laboration of the Control of the Con			-			1 400	FR 95 20.00	20.71
Black	diversity of the control of the cont			15	300	260	3,275	h,500	7,325	29,63
Gadwall	ARTHUR STREET, AND THE STREET, COLUMN STREET, COLUM			6		25	350			
Baldpate				7		69				
Pintail	GP control of the con			9.5	350 50	25	33.5	30	git	
Green-winged teal		0		3.0	200	20 10	200	270	70	
Blue-winged teal			*	200	300	- 400	200	210	10	
Cinnamon teal				275						
Shoveler					75		40			
Wood					12		C. C.			
Redhead				4.0	300	£ª	3.0	75	70	
Ring-necked				2	30		6340	100	.0	
Canvas back				2				1.0		
Scaup				5			pd.	1,0	- 60	
Goldeneye				2		-		1000	50	
Bufflehead								30		
Ruddy		1		91	96			3,500	30	
Other				35 5	l is	205	135	525	350	- 3
Tobal Ducks				52:0	1,130	580	2,335	5,510	7,715	19,9
oot:		MATRIC PROPERTY STAFF CORPORATION CONTRACTOR	-	380		125			Time	

Cont. NI (Rev. March 1953)

WATERFOWL (Continuation Sheet)

:				(2			_	\$	(3)	: (1	
(1)		Weeks	o f	repor	Committee Commit	peri	od	*		: Produc	
Species :	33/30-36	11/17-23	11/24-3	12/1-7	12/1-14	12/15-21	12/22-20	12/29-31			Estimate
Swans:	1	12 1	، رد	<u> </u>	72	TO :	1/ 3	10 3	days use	seen :	total
Whistling					,						
Trumpeter			A 97 1								
eese:			_A -		2.5						
Canada	5	5	50	50	50		100		9 900		
Cackling	2		20	213	20	20		- a	1,190		
Brant											
White-fronted	Ī.										
Snow											
Blue			* p X -	. 15							
Other Total Coese	5	5	50	50	50	/		, .	1,190		
ucks:					± **					1	
Mallard	19,635	19,635	200,000	200,000	128,580	128,580	2,500	2,500	5,130,900		
Black									The state of the s		V 12
Gadwall									1,260	The Property of	
Baldpate		1						School	l. 900		
Pintail									1,170		
Green-winged teal	5	5			2 1	= 0		3. 1	7,525		
Blue-winged teal								~	3,285		
Cinnamon teal		× ,			1		7 x				
Shoveler	•								805		the other death of the other dea
Wood						-		, * .			
Redhead	15	35					. , .		2,170		
Ring-necked		7 4 7							205		
Canvasback								delinote con	280		
Scaup Goldeneye						2			700		
Bufflehead	m 02				,				35		
Ruddy	35	15	1 7 7 17			y			1,20		
	222	-							230		
Other C. Merganser	330	310							25,295		
Total Ducks	19,980	19,980	200,000	200,000	128,580	128,580	2,500	2,500	£ 360 220		
oot:	-,3,00	and the second	and and	and gurn	## \$200	ಎ೭೮ ಕ್ಷ೦೮೮	69700	2900	5,369,370		
garagegane	5	5	1						6,930	ā .	1

	(5) Total Days Use:	(6) Peak Number:	(7) Total Production		SUMMARY	energina di control co viziona da propieta con control vivo control control control de primi indicato de control de primi indicato de control d
Swan	is <u> </u>	0 :	0			natare, Alice and Minter
Gees	e <u>1,190</u>	50	0		Refuge; surrounding is the River off Refuge.	rigated comfields; and
Duck	s 5,169,370	200,000	(Unknown) Slight	Principal ne	esting areas	
Coot	s 6,930	380	(Unimoun) Slight			
				Reported by	Don R. Perkuchin, Re John Sweet, Waterfow	
	INST	RUCTIONS (See	Secs. 7531 through	7534, Wildli	e Refuges Field Manual)
(1)	Species:	reporting per		d in appropria		refuce during the tention should be given
(2)	Weeks of Reporting Period:	Estimated ave	rage refuge popula	tions.		
(3)	Estimated Waterfowl Days Use:	Average weekl	y populations x nu	mber of days p	present for each specie	S.
(4)	Production:	breeding area	s. Brood counts s	hould be made	on two or more areas a	
9.5		breeding habi	tat. Estimates na	ving no basis	in fact should be omit	tea.
(5)	Total Days Use:	A summary of	data recorded under	r (3).		
(6)	Peak Number:	Maximum numbe	er of waterfowl pre	sent on refuge	e during any census of	reporting period.
(7)	Total Production:	A summary of	data recorded unde	r (h).		

Interior Duplicating Section, Washington, D. C.
1953

Refuge North Platte

MIGRATORY BIRDS

(other than waterfowl)

Months of September to December, 195 68

(1) Species	First	2) Seen	Peak N	3) umbers	,	4) Seen	Colicathac	(5) Production	1	(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimate Number
I. Water and Marsh Bird	<u>s</u> :	Suga Yen			for the	season oc	ncerned,	Passe		, , , , , , , , , , , , , , , , , , ,
Common Loon	2	0ct. 2h	11.5 Doy	0ct. 2h	2002 (Co	Oct. 2:	aaradriii es) s. Striei		g Diegaĝe	bua
	priate space	Groups	I. Kal	er and Mi	rsh Bilds	Gaviif	rmes to 0	generitor	nes and G	Latrio sire
	form, other	species o	cburring. al atteni	on refuge ion shoul	during f	he report p to thes		a sheuld of local	oe added and Nati	in appro- pmal
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(1)	(2)	(3	(CASI	(4)		(5)	(6)
Mourning dove White-winged dove							
IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie					i di		
Raven Crow							
				Panort	ed by		Rofuco Menoces

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 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.

(6) Lal: Estimated total null r of the species using the refu during the period concerned.

INT.-DUP. SEC., WASH., D.C.

59317

3-1750b Form NR-1B

UNITED STATES (Rev. Nov. 1957) DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

reported by	on R. Perkuchin	Title _	Refuge		IL RELATION
(1) Area or Unit	(2) Habitat	read o	(3)	(4) Breeding	(5)
Designation	Type Acreage	J. Cher	Ise-days	Population	Production
ietailed man u	Crops	Ducks		thoda	
1/3	Upland	Geese			
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	Water	Coots	i unknown		
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	Marsh	Swans			
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	Total	Total	09 311111	1700	
	Crops	Ducks			
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	Water	Coots			
	Total	Total .			Y a O page 4 and 1
	Change Change	D- 1		as nat turota	ETDADA
	Crops	Ducks		A F	
	Upland	Geese			
	Marsh	Swans			19) Priduci
	Water	Coots			
litober idebe	Total	Total			

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 entityapart from other areas in the refuge census pattern. The combined estimated acreages of all units should be 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.

Interior Duplicating Section, Washington, D. C. 27580

November 25, 1968

Refuge Manager, Crescent Lake Refuge Ellsworth, Nebraska 69340

Monthly Activities Report July 21 - August 22

I. General

The month started very dry with severe lighting storms, the fire hazard was extremely high. Relief came with above normal rainfall (3.69 inches above normal).

Brood counts were conducted.

II. Activities and Accomplishments

The fire equipment was checked and demonstrated, a emergency alert system was installed, all fire extinguishers were taken to Alliance to be check and recharged the old ones to be replaced. A station safety inspection was conducted by Mr. Lyle Miller, Regional Safety Officer.

The west mail road graveling was completed, all electrial wiring in the headquarters area was checked and improvments made where needed. A new yard light was installed on the front of the office. The picket fence around the court yard and behind the office was removed and the remaining fence received a fresh coat of paint.

A vented diesel fuel tank and pump were installed. Canada Thistle was sprayed on most of the refuge in an effort to control its spread. New signs were posted for the open and closed areas for the coming hunting seasons. Area Biologist Ralph Town payed the refuge a visit and helped us solve the problems we had encountered since his last visit.

III. Public Relations

Visitor use for the period totaled 197, down slightly from last month. A snapping turtle feed was held for the staff and their families with R. Town as a guest. A good time was had by all.

November 26, 1968

Refuge Manager, Crescent Lake Refuge Ellsworth, Nebraska 69340

Monthly Activities Report August 23 - September 21

I. General

This period was a dry one with only .22 inches of rain (normal for this period is 1.49) received. Strong winds accelerated evaporation of surface water from the lakes and potholes. The fire hazard again was high by the end of the month. Duck banding was completed and fall waterfowl surveys started.

II. Activities and Accomplishments

Various repair of refuge vehicles was completed, both of the fire towers were fenced off and gates with locks installed. Hunting regulations and signs for the parking areas were completed, two auto gates were replaced on the west mail road and one new entrance sign placed at the north entrance to the refuge.

A sampling of fish was taken on Crane, Island and Hackberry Lakes by G. Beckett, D. McLain, of Fishery Services at Valentine, and Jack Peterson of the Nebraska Game Commission, Alliance. It was decided to transplant some fish to Island and Crane Lakes this fall and to seine carp this winter from Island Lake.

III. Problems

Portions of the west mail road are extremely dangerous at curves. It was decided to eliminate the dangerous curve at the SW corner of Goose Lake by relocation of that $\frac{1}{4}$ to $\frac{1}{2}$ mile stretch of road about a hundred yards to the south.

IV. Public Relations

Visitor use for the period totaled 148, down from the last period. Manager Perkuchin attended the Central Mountains and Plains section of the Wildlife Society Annual Meeting at Halsey National Forest, attended the District 30 School meeting and presented a slide talk for the Rotary Club of Oshkosh.

December 10, 1968

Refuge Manager, Crescent Lake Refuge Ellsworth, Nebraska 69340

Monthly Activities Report September 22 - October 22

I General

Again this period was dry with only .63 inches of rain (normal .92) received. The fire hazard remains high.

Summer range surveys were completed with the aid of Mr. Ken Weyers, Range and Wildlife Officer, U. S. Forest Service at Chadron, Nebraska.

II. Activities and Accomplishments

TV towers were installed at Quarters 1, 8, and 9, two new entrance signs were installed at the South and West boundaries, cross-fencing was completed in grazing unit 6b-1, two stock watering wells were drilled and a new road was made to the new equipment storage area east of qtrs. 9.

Fish were transplanted in Island and Crane Lakes (105 northern pike, 416 perch and 68 bluegil) by the Nebraska Game Commission.

III. Problems

Three hunters were apprehended for tresspassing on the refuge. After the summer range survey it was decided to reduce the AUM's alloted to several grazing units, and to add cross-fencing and more stock watering wells. These changes in our grassland management program should help improve range conditions and benefit the native plants and animals, particularly.

IV. Public Relations

Manager Perkuchin delivered Revenue sharing check in the amount of \$15.440.91 to the Garden County Treasurer, showed wildlife film to the Garden Rambler Garden Club at Oshkosh, and attended the longhorn and buffalo auction at Fort Niobrara. Visitor use for the period totaled 151.

December 10, 1968

Refuge Manager, Crescent Lake Refuge Ellsworth, Nebraska 69340

Monthly Activities Report October 23 - November 22

I. General

Moisture received for the period was .45 inches (normal .59 inches). This brings total moisture for the year to 15.92 inches, 1.69 inches below normal. Our first snow (a trace) came on the 5th of November, the lakes froze over on the 17th, and reopened off and on during the rest of the period.

Two adult Golden Eagles were sighted.

II. Acitivities and Accomplishments

During this period another load of fish was placed in Island (70 Northern Pike) and Crane (461 Perch) Lakes by the Nebraska Game Commission.

A refuge inspection was conducted by Assistant Regional Supervisor, John C. Carlsen. Two miles of cross-fencing was completed in unit 16b-1. Remodeling of the office was started. The west mail road was graded and the holes filled, refuse was buried at the dump and a trash tank installed.

III. Problems

IV. Public Relations

Visitor use for the period totaled 175. Manager Perkuchin attended the Grassland Ecologist Planning session in Valentine, Nebraska on October 23. With Ned Peabody, Valentine Refuge Manager and Don Heinz, District Ranger at Nebraska National Forest, Halsey, Nebraska, manager discussed range management and inspected range on the Bessey Division of the Forest.

December 23, 1968

Refuge Manager, Crescent Lake Refuge Ellsworth, Nebraska 69340

Monthly Activities Report November 23 - December 21

I. General

Near blizzard conditions brought 3 inches of snow (.12 inches prec.) on the last day of the period. The snow combined with strong winds out of the north-west caused considerable drifting (1' to 2' drifts) and closed all county roads leading to the refuge.

The lakes started opening December 3rd and remained open until December 13th. They remained closed the rest of the period.

The resident goose flock started leaving the 17th of December, and were all gone by the 18th.

Two Golden Eagles, 1 prairie Falcon and 1 Coyote were sighted.

Muskrat house count was completed with results showing an estimated 30% increase over C.Y. 67.

II. Activities and Accomplishments

During this period a domestic well was drilled for the headquarters buildings, and rushes were mowed around Island Lake in preparation for future AN-FO blasting. The west jetty on Gimlet Lake was extended 100 feet.

Program scheduling was completed for F.Y. 70 - 75.

III. Problems

Drifting snow once again reminds us of our susceptibility of being snowed in. Our isolation makes it imperative that we acquire a reliable emergency electrical system.

IV. Public Relations

Manager Perkuchin visited the SCS office in Oshkosh to discuss the grazing rate changes for the 1969 grazing season. The staff attended a Christmas party given by the Covalt's and the District No. 30 school Christmas program.

SOIL AND MOISTURE NARRATIVE STATEMENT - FISCAL YEAR 1968

Crescent Lake National Wildlife Refuge

Ellsworth, Nebraska

Five wells were replaced, and one new well was installed. Six potholes were blasted on the northeast edge of Island Lake in late winter with an ammonium nitrate/fuel oil mixture. These potholes will provide both waterfowl breeding habitat (five pairs of ducks used them this spring) and cattle watering sites. In addition, 18 stock watering tanks, 15 windmills and 16 steel windmill towers were purchased to replace units needing it, as well as for new wells. An one acre tree planting windbreak of Austrian and ponderosa pines for control of wind erosion and drifting snow around quarters 8 and 9 was established.

Treatment of about 10 acres of Canada thistle with Tordon will be necessary next spring. Cross fencing in the larger summer grazing units and installation of new stock watering facilities is planned to allow range deferred grazing on them. This cross fencing will be started with the 3400 wooden fence posts and 114 rolls of barbed wire purchased this fiscal year.

Submitted by:

Don R. Perkuchin

Don R. Perkerch

Refuge Manager

SOIL AND MOISTURE CONSERVATION AND

WOODLAND PRACTICE REPORT

Reporting unit

Fiscal Year

Crescent Lake NWR

1968

		COMPLETED 7	THIS YEAR	Total	FUTURE	NEEDS
ITEM	Unit	Total	S&MC	Completed to Date	Total	S&MC
RESEARCH AND STUDY TRIALS	No.		9			
SURVEYS						
Soil	Ac.			11,000	35,087	35,087
Range	Ac.			42,641	42,641	42,641
Woodland	Ac.					41
Total	Ac.			53,641	77.728	77,728
AND USE PLANNING - Total	Ac.	42,641	14 - 17 - 1	45,996	424	424
OIL MANAGEMENT		7 802 8 9 9 90		101//	7351	7.00.1
Brush control	Ac.					,
Conservation Crop System	Ac.	- 1				
Contour Farming	Ac.	V = 44 (* 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.				
Controlled burning:						
Marsh	Ac.				275	
Range	Ac.				1,000	250
Woodland	Ac.					
Cover crops	Ac.					
Deep plowing	Ac.					
Dune stabilization	Ac.	1	1	53	74	49
Fertilizers	Ac.				50	30
Land clearing	Ac.	* * * * * * * * * * * * * * * * * * * *				
Land leveling	Ac.					.1
Obstruction removal	Ac.		*			
Pasture & hayland planting	Ac.	1 10/20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	*			
Range deferred grazing	Ac.	42,641	1 3 4		42,641	
Range renovation	Ac.					2 13
Range seeding	Ac.			129	80	80
Soil amendments	Ac.					
Strip cropping contour	Ac.	er ar				
Strip cropping wind	Ac.					
Stubble mulching	Ac.					
Timber stand improvement	Ac.					
Tree planting forest	Ac.	-Na - a se - a		- e ^ las		N - N - N - N
Tree planting windbreaks	Ac.	1		57	423	423
Woodland thinning	Ac.	4 4 8 6 8				
Weed control dryland	Ac.	52	2	75	65	30
Weed control aquatic	Ac.	or and a second	100000	2	10	

3-125 (June 1968)

X 777.74	Unit	COMPLETED T	HIS YEAR	Total Completed	FUTURE N	EEDS
ITEM	Unit	Total	S&MC	to Date	Total	S&MC
TER MANAGEMENT						
Bank protection	Ft.					autoritari de la companio del companio della compan
Dam, diversion	No.					The state of the s
Dam, multiple purpose	No.			6	5	3
Debris, basin or check	No.					
Dike and levee	Ft.					National Property and Association and Control of the Control of th
Drainage main and lateral	Ft.		^			
Drainage area improved	Ac.					
Grade stabilization structure	No.			-	-17.	Projektivnika kolonia (r. 1945). Projektivnik se se projektivnik se projektivnik se projektivnik se projektivni
Grassed waterway or outlet	Ac.			fig. 1		
Irrigation ditch & canal lining	Ft.			, .		The transfer of the state of th
Irrigation field ditch	Ft.		7			
Irrigation water management	Ac.	and the state of t				
Ponds and dugouts	No.	6		88	158	133
Ponds acre feet	No.	1		22	24	20
Spring development	No.				,	
Terracing	Ft.					
Tile drain	Ft.				17 CT 18 CT 17 CT	**
Toxic salt reduction	Ac.					
Trough or tank	No.	55	22	153	93	70
Water spreading	Ac.				en en en en en en en en en en en en en e	
Well	No.	6	3	84	20	14
CILITIES						
Bridges	No.					
Fencing	Mi.			155	15	R
Firebreak	Mi.			AND THE THE	**	
Trails	Mi.			13	8	3

SUMMARY OF FUNDS EXPENDED

ITEM	S&MC Funds	Bureau Funds - Other than S&MC	Cooperator Funds	Total Funds
Research and study trials	\$	\$	\$	\$
Surveys				
Land Use Planning		109		109
Soil Management	415	1,976	732	3,123
Water Management	4,500	11,349	410	16,259
Facilities	1,084	2,531		3,615
Operations and Maintenance		3,030	1,647	4,677
TOTAL	\$ 5,999	\$ 18,995	\$ 2,789	\$ 27,76

QUARTERLY SOIL AND MOISTURE CONSERVATION PROGRESS REPORT
Refuge or WPA District: Crescent Lake Nat'l Wildlife Refuge
Period Covered by This Report July-August-September 1967 (FY -68)

	ITEM	Unit	rotal Planned This F.Y.		pleted Thuarter By			eted to s F.Y.	By	43 °
		12	Plan	S&M	BUR.	COOP.	S&M	BUR	COOF	Grand Fotal Compl
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-	Range Renovation	Ac.	-HZ, DHL				al description and the second of the	be readile supplementate sergue, succes serge,	THE PERSONNEL PROPERTY.	COMPANY OF WARE ARRESTED AND AGE
-	Range Seeding	Ac.					the section in the section of the section of	ga i angurarrega sredijihti injus z silasi redij	Section and the party of the section	The state of the s
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⁽a) SCS still working on soil resurvey of Garden County, Nebraska, including Refuge lands.

ITEM		Unit	Total Planned This F.Y			d Th	is	-	eted t s F.Y.	o Date By	frand Total Tou ted This f.Y.
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V. WATER MANAGEMENT	1.1	L a la			- 1	17. 7	111	S well a	1	1	
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Dam, Multiple Pur		No								and other and other statement and other statem	原的
Debris Basin, or (Check	No.					- A Park Spread	·			
Dike and Levee		Ft.			771-6				and the second second second		li e
Drainage, Main or	Lateral	Ft.	7 4 4 4 7 6		(1)						
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Pipelines for Lvs		Ft。						THE RESERVE THE PERSON NAMED IN COLUMN		COMPANY CONTRACTOR	CONTRACTOR OF SECURITION OF SE
Ponds		No.	50	V						-	CONTRACTOR OF THE PARTY OF THE
Ponds Capacity Act	re/Ft.	No.	102	**************************************				-	-		
Spring Developmen		No.								To the same of	
Terracing		Ft.							-		
Tile Drain		Ft.		windowski wolanda waka waka waka waka waka waka waka wa	1	processing and the last of	-			Des des requisits des requisits	
Toxic Salt Reduct:	ion	Ac.		8	-	3	Q	8	3	0	111
Trough or Tank		No.	15	5		6	2	NAME AND ADDRESS OF THE OWNER, TH	-3	-2	12
Water Spreading		Ac.			-				-		-
Well		No.	5	1	-	1		1	1	X	2
VI. FACILITIES		-			30		 	1		-	
Boundary Posting	e manuschine de provincia de la constanta de l	Mi.	30			24	 		24		24
Bridges		No.	- 50		1	Co. V				-	
Corrals		No.					 		-		
Fencing		Mi.	155				75	-	-	75	75
Firebreak		Mi.		THE RESERVE OF THE PERSON OF T	-				STATE OF THE PROPERTY OF	and the second s	
Trails		Mi.	5		1	1	1		1	1	2
VII. PROGRAM COSTS (To I						-4	4				
A man costs.		1 Fu	American Contractor Co	Bu	rean	Fund	is I	Coon	. Fund	S	Gr ota
TTEM	Dog		o Date	1 20	1 000		Date	0000		Date	 Funds To Date
	This Qtr		his F.Y.	This	Qtr.	This	F.Y.	This Q	tr. Th	is F.Y.	This F:
(26)							74.1	Self a significant			
Research & Study Trls.	And the first of t				Side State of						
(26)								records without a representation of		and the second second second second	
Surveys											
Land Use Planning (なる)	And the second s		ele yaan dii joon officen oo filozoo officen oo filozoo oo filozoo oo oo filozoo oo oo filozoo oo oo filozoo o					nnige untersige in tradition revenue to trave gate somegie son eight an eight a sensiti			ACCUMANT AND AND AND AND AND AND AND AND AND AND
Soil Management (27)	205		205	240	. ,	2	40	10			445
Water Management (28)	1228		1228	557		5.	57	131		131	1916
(29.30) Operations & Maint.				484		4	84	997		997	1481
Totals	1433		1433	1281		12		1128		128	: 2
List funds spent on S&M Allotment this								ind Main this Qt	dr.	e. 4,567	

Refuge or Wetland Manager (sign) Donor Perkuchin,

A. c. C. 3,25/ 4 - \$2.39/ No. Laborer -= #2. 15/hr. RDD

Hackberry will Tank 76

16 bags coment

mon his w/crawler = 2 his degging r
filling

assenble/deg forting leveling = 2 men/8 hs 16

fenung much = 1 hr.

browl time & gathe tool = 2 men his.

Cement runing = 8 man his.

Il mlet foke Well 10s (Interest)

16 bogs Cament

Crawler felling Terms = 1 hrs (Includy wan)

trans terms + gathe Tools = 2 hr,

Cement pruning term = 8 hrs (man)

fencing Terms = 1 hrs

preparing Terms = 1 hrs

preparing Terms = 1 man 8 hrs

Average er narmal anstallation Time for installing stock lank

Sam - lot gh. Bureau ec/28 - 544.58 CC/16-544.58 I-5311 Dunbar) ec/28 - 674.50 orm - none I-5309 unstein) art's time (3×3,20) ec/28 - 8:13 I-2264* 3,00 (gas, oil wore/tare) o. monthly Fenance sheet doesn't derate this on of 0 ct 9, 1967 imp. Payrall cc/27 - 205.38 4- Dan (cutting weeds) . (fonds include I.P4 I.H. 6 man days in Aug.) 54 m 27 Ella Ement \$ 205.38 \$ 1227.21 00,00 000,00 Cooperator

Keller's: Johnsen - 2.37/hr Caterpellez - 5.00/hr. Tank installation

Lenit 76. Hackberry

Cat - 2 bos. = 10.00

Lobor 29 hrs = 68.73

Linit 10 A. Hambil

Cat - 1 hr. : 5.00

John 20 hr = 47.40

	No.	F	UNT	5
Soil Mant, ; Comment	Complete	54 M	Burea	coop.
Critical Area Planting : ars. 3 area Laborer Account 1 days		2 75	(27)	
Mulch @ radio tower - Laborer - Coval	-	18	(27)	
Dune Stabilization, Mulch @ radio tower - baborer - Coval)	W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(27)	25	
	1 . ac.		1.	
Range bef. Grazins: Record Keeping -Hamel 5 days	20,0000	77 3 U3	(27))
Mowed goose browse areas (Dicoval	A DOUGH	112	(27)	ĺ
Weed Control i roadsides jetty etc. 3 das I Piepe	50 ac	(3.2)	57	
Weed Control : roadsides jetty etc. 3 da [] Pieper			District Control of the Control of t	
Water Mamt	E .			
the same distribution of the same distribution	towerd.	mills 7)	(28)	(28
Trough or Tank Twell # 21 tower, mill, dank replaced (Fix) 6:	77	#545	#544	1/31
5 New tanks (includes well #175)	5	#675		Permit
Gravel #8.13 FAEC 3hrs, 9.60		(82)		tankel
truck 3hrs. 3,00		8	1300	
		(28)	(28)	Pendina
well # 21 of # 17 (Keller's Units)				
Facilities				
The contract of the contract o				
Boundary Posting U.E. Jones, L.E Jones + Closed Area				
+ carpivalley Condry + closed Area				SALIN SALIN
1 3/4 day 1 5.4. + 38.00				
1/2 day AEC 13,00			(29)	
			95,	i i
120 mi. @ 410/mi, 12,00				(29)
Fencine: Permittees maint fence (75mi. est.)				500
Trails; Assist Co. gravel Zmi. Gooselk. mailroad	diameter of the state of the st		(29)	
Refuge - 2 trucks @ 3,5 days			250	
EN Dietlien @ "		1	73	
D. Covalt - laborett " "	ĺ		66	(29)
County 2 trucks of trax cotor @ 3,5 day		1000		350
2 men @ 315 days				147
	-	1/	- CONTROL MANAGEMENT AND ADDRESS OF THE PARTY OF THE PART	
Totals	1	1433	1281	1128
	7	ĺ		
Code 26		205	240	0
27	5	205		0
28		1228	557	131
29-30		0	484	997
che	eck	1433	1281	1228
		-	000	
		and a second		

Assigned SIM Projects Congleted to End of Agret 1967 FUNDS Bureau Coops SaM Item IV Soils Mant 2Ac Qua 3 area Latover Coralt Hday -mert Coralt Hday -Clerk Hame(> 50+ Critical area planting:

Merk Covalt & dang's

Clerk Hame (2)

Done Stabelegation i trail:

Merk Covalt & Hame (1)

Acre Merk Covalt & Hame (1)

Lange 18+ 25+ Record beging graying Hamel I week Range Def. granging: mow good bromse areas Abt 10Ac Piepes 32 days Hyland 5 (#2.37/hr.) Weed Con hol: I Water Mgmt Tanks (5)

UNITED STATES GOVERNMENT

Memorandum

: Regional Director, Minnespolis, Minn.

DATE: August 25, 1967

FROM : Refuge Manager, Grescent Lake Refuge, Ellsworth, Nebraska 69340

SUBJECT: 1968 S&MC Funds (Mr. Carpenter's memo 8-16-67)

Manager Don Perkuchen and I have agreed that Croscent Lake could get along with \$1000 less S&M funds than has been appropriated. This would reduce our FY 1968 S&M funds from \$6000 to \$5000.

John E. Wilbrecht

W KH B

BSF&W, MINNEAPOLIS, MINNESOTA 55408 August 16, 1967

MEMORANDUM

TO:

Refuge Managers and Wetland Managers,

Region 111

In reply refer to: R

FROM:

Regional Supervisor, Division of Wildlife

Refuges, Minneapolis, Minnesota

SUBJECT: 1968 Soil and Moisture Conservation Funds

You should have now received your Operating Cost Budgets for 1968 Soil and Moisture, Ol70 funds.

Some of you received less 1968 S&M, 0170 funds than you anticipated and perhaps few of you received more than you expected. Restrictions on allotment of 1968 funds did not allow Regional Office to adjust funds between stations to the extent possible in past years. It may be possible to adjust the 1968 S&M funds, through Central Office, if we have good justification.

If you believe you cannot accomplish necessary S&M work planned in F.Y. 1968 with the funds allotted, you should list projects and funds required, indicating the minimum amount of additional S&M funds needed for the current fiscal year.

If you can do necessary S&M work planned for fiscal year 1968 with less S&M, 0170 funds than you were allotted, you should indicate the amount of your 1968 funds you can release.

Please report any desired increase or decrease in 1968 S&M, 0170 funds, together with a brief justification, not later than September 10, 1967.

The amount we may be able to increase 1968 S&M allotments for one refuge will be limited by the total amount of funds another refuge is willing to release for reallocation.

will be get:

Expense for Sales Funde ?

	-		
C. RESEARCH & STUDY TRIALS	No.	1 .	Waterfowl Study - Snake Study (?) (Proposed)
SURVEYS			
Soil surveys	AC	35.087	SES still working on soil survey Garden Co.
I LAND LISE PLANNING	Ac	42,64/	May's world on annual grouging plans, letters to germittens. Permittee sign-up & interviews
I Soils MAMT			
Cons Cropping Sys	Ac	4	Food glot glantings (milo, millet, etc)
Controlled burning	Ac	300±	NEIsland, Martin, Romelli Slongh (etc?)
Critical Area Planting	Ac		Seeding under mulch, voads a blowouts
Dune Stabilization	Ac	20±	mulching a 41
Fertiliyes	Ac		Supherphos. to clove year tys
Pest control	Ac	200±	Bunon Guildes in mendous talong roads
Range Det. Graning	Ac	42.641	Burrow Guildon in meadows 4 along voids (Graning records Calesk) & cuttle counts Summe, Range 27.445 Az Aggrex; Winder Plange 15,196
Range Riogen Use	Ac	42,641	Rege use checks ujses Teal.; a ducation
Weed Conhol.	1		Mow goose brown aves, readsides, jety, etc
I. WATER MANAGEMENT			
102 Ac /Ft / Porc Ava	No.	50	ANJFU holes KW Smith, Romelli Slongh, Martin, NE Ishad
Trough or Tunk Stowers of	No	Tanke + Fills 4 Towers 4	AN/FU hales KW Smith, Romelli Slongh, Markin, NE Ishnot Estimate at this date
wells	1	Est, 4	
I. FACILITIES			
The state of the s		·	Hunting area.
Boundary Posting	mi.	30	shafer, L.E. Jones , school sec, etc.
Fencing	mi.	155	Permittees maintain fences in grazing units Refuge furnishes posts & wire.
Trails	mi,	5	Goose Lk. mail road, Roundup Lk. trail.

RI &M2 - July 1964

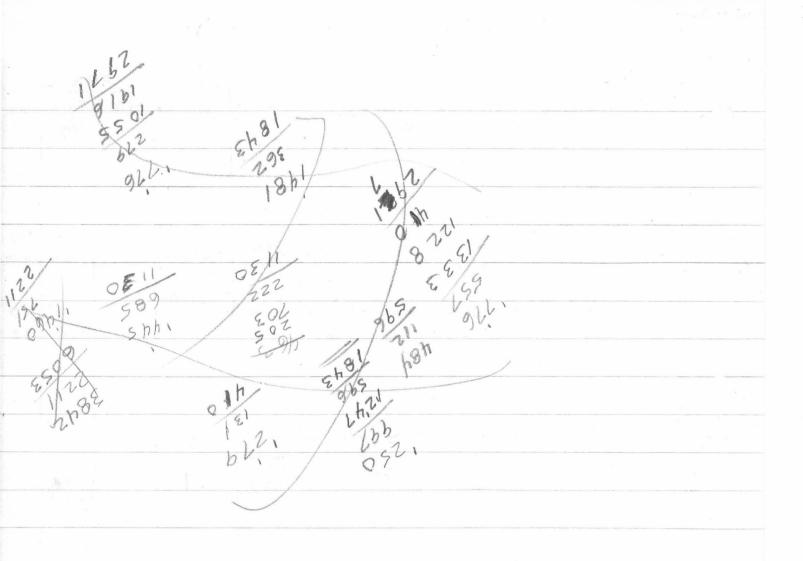
QUARTERLY SOIL AND MOISTURE CONSERVATION PROGRESS REPORT
Refuge or WPA District: Crescent Lake Nat'l Wildlife Refuge
Period Covered by This Report October-November-December, 1967 (FY-68)

	ITEM	Unit	rotal Planned This F.Y.		pleted Th Quarter By			eted to s F.Y.	Bar	Grand Fotal Completed This F.Y.
		10	Tota Plani This	S&M	BUR.	COOP.	S&M	BUR	COOP	ot om bi
Ii.	RESEARCH AND STUDY TRIALS SURVEYS	No.	1							DHOR
&W AND THE MICHAEL	- Soil Surveys	Ac.	35,087	(a)			-	-		
deliconomic	Range Surveys	Ac.					antinomite ortistanta resignamen e regi. mi		THE REAL PROPERTY.	
-	Capability Surveys	Ac.						M Miller Hill: N. All and Manufacture St. and St.		
	Total of Above 3	Ac.	35,087		,				an diversible also week welcom	,
III.	LAND USE PLANNING	A.c.	42,641	Consideration to the second second	42.641	-	THE RESIDENCE OF THE PROPERTY	NA WESTAMORE WAS ANALOGUE OF SEA AND	THE RESERVE OF THE PARTY OF THE	12,641
IV.	SOIL MANAGEMENT	-		#Westerness of the State of the	Sold Sine & Not State State		material representative desired from	7 × 1014 x 100001000 m 10000 10000 1000	revelaucador in Hijaar etas. Hijaa	
manufacture desired	Brush Control	Ac.			 					
***************************************	Cons.Cropping Systems	Ac.	14			 	-			
-	Contour Farming	Ac.			-		-			
***************************************	Contour Furrowing	A.C.			 		-	-		
-	Controlled Burning	Ac.	300					AND DESCRIPTION OF THE PARTY OF	·	The second secon
-	Cover & Gr.Manure Crop	Ac.		deresta de la constanta de la			POR PRODUCEDANCE SALE HOW I HOME HODE ON	LAY MET TO SECURE WELLOWER, SPECK TO	Andread sample and a section of	The second of the second of the second
	Critical Area Planting	Ac.	20		- 		2	1 m Cu - 40: 1 day - 40: 10		2
www.down.com.dow.eu	Crop Residue Use	Ac.					ACTION AND AND AND AND AND AND AND AND AND AN	THE WORLD SEPTEMBER SEPTEMBER SEPTEMBER	remittee after entire constant entere of	Code
-	Deep Plowing	Ac.	——			-		the worlders of French States and the restriction of	and a supplier of the Landston and second	
*****	Dune Stabilization	Ac.	20			-	7		-	9
	Emergency Tillage	Ac.		**************************************		-			NE MEDITALISME, A MEDITAL MEDITAL MEDITAL	
Western School Communication	Fertilizers	Ac.	25			-		DES HOULE HARMANICAN PROPERTY AND	www.subm.negs_acceromoter.co	A STATE OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF T
	Land Clearing	Ac.			100000	-		MARCHARLANDE PARK MARCHARL	h. Vilgan, again waga adangan watar ad	-
	Land Leveling	Ac.	h					a produce operandamental and operanda		- particular vide a radion vide
-	Obstruction Removal	Ac.				-	-	our ordinanded triffe, skripe, autorrecid	audic is solitare melitare. After mendion of	· Cathring of Actual Control
	Pasture & Hayland Plant.	Ac.				-		SATURGUS. WERE ANGELIES AND ANGELS OF THE	with the distribution of the second	- India sangu anga andria eta ar
	Pest Control	Ac.	200			-		an invitate high and an early high way.		-
	Range Deferred Grazing	Ac.	42,641		8-000			28 - 000		28 00
-	Range Proper Use	Ac.	42,641		8,000 27,445			28,000 27,445		20,00
	Range Renovation	Ac.	Colorina & Colorina		C13000	-	-	E11445		F-4 3-1-4-2
******************************	Range Seeding	Ac.						pa i inggravniga area@htti.epur s inbatienna	-	*
	Soil Amendments	A.C.		and the same desired and the same desired	-	Non-		province a page of the page of	Controvers of the service makes to	a di con esti tre esti constituente stratos.
	Striperopping Contour	Ac.		to a magazine graphic constitution all descriptions of the co	-		-	gramminan datar adire mineralari adir	-	1 11 11 11 11 11 11 11 11 11 11 11 11 1
	Striperopping Wind	Ac.			-			gas-sada sanayay sanagal ac satsuaa sigar- daa		-
	Stubble Mulching	Ac.					and a restriction of the sector and	annelle medieve siene valenmede sunde	-	100 200
	Tree Planting	Ac.			-			Acceptive access to the contract access and the	A DESIGNATION AND IN WICHARDS AND ASSESSMENT OF	the second of the second of the second
					+			free someone	-	-
	Tree Planting	No.	50				god god	descender verges, employeepours, or estaboungs	and state of the section of the sect	
	Weed Control, Land	Ac.	50				50	A weight in Midgal are religion in surjection and process to distribute	parties and annual velocity	50
	Weed Control, Aquatic	Ac.			-		are as assert the second second second second	house sets necessary values		Carried Contraction of the Contr
Brown Change	Woodland Interplanting	·Ac ·				-	and and the same of the same o	ginate make weeksmine provider make	-	DEL CARLES MANIES MANIES MENS MENS MENS
SERVICE AND ADDRESS OF THE PERSON NAMED IN COLUMN 1	Woodland Thinning	Ac.	ALM NAT				material and the same of the s	a promption regarder records and a sequent and a		-

⁽a) SCS still working on soil resurvey of Garden County, Nebraska, including Refuge lands.

TTEM		Unit	Total Planned This F.Y.		lete arte:		is		eted to s F.Y.		rrand Fotal ompleted
			다 다 다	S&M	BUR	0	COOP.	S&M	BUR.	COOP.	Lbi bi
V. WATER MANAGEMENT									1	ı	
Bank Protection		Ft.		L. Company							
Dam, Diversion		No.				-			Car advantar masswoom sarawa		
Dam, Multiple Pur		No.			-		11000		Maria Committee		
Debris Basin, or		No.			-	-			grands and state of the grand	The same that th	
Dike and Levee		Ft.	de material time the state of t		-	-		where converge and consuming an approximate			
cin Drainage, Maintor		Ft.	Salar Sunne Care Alberto Care Sun Consultation of the	terrole or description of the state of the s				discussional frant reconstructor resides to	-	and the second s	
Drainage Acres		Ac.		personal processing construction of the second c		-		reproductive and a productive or a CC . When the constitution of	descriptions and transferred transferred		
Grade Stab. Struc		No.							and the same of the same of	- Traction But not produce on	
Grassed Wtrway or		Ac.			-		-		-		1
Irrig.Ditch & Can		Ft.		-	-				-	-	8 - 4 - 5
Irrigation Field		Ft.					The second second second				
Irrigation Water		Ac.				-					A A A A A A A A A A A A A A A A A A A
Pipelines for Lvs Ponds	transferred variety and an income contract of the contract of	Ft.	P/A	-					-	-	The first self-self-self-self-self-self-self-self-
		No.	50		-			-	-	-	100000000000000000000000000000000000000
Ponds Capacity Ac		No.	102		+	1				Standard and standards	1
Spring Developmen		No.						-		-	Volument Volument
Terracing Tile Drain		Ft. Ft.			-	27			un derestantiament decemb		
Toxic Salt Reduct		-	***				-		-	-	
Trough or Tank	NAME OF TAXABLE PARTY OF TAXABLE PARTY.	Ac.	15					8	3	-	
Water Spreading		******	70		-	-		0	- 3	0	11
Well	CONTRACTOR OF THE PROPERTY OF	Ac. No.	- 5		-		-	1	1	-	-
VI. FACILITIES	-	7/10 •	2						me an amenda	n ja virasaisti viis muunteen	
Boundary Posting		Mi.		and the same and t	-	-		dien des des des des des des des des des des	-		
Bridges		No.	and market and the second of		-	-	-				
Corrals	Name and Address of the Owner, where the Owner, which is the Owner, which	No.			(-	-		-	-	
Fencing		Mi.	155		-		25		-	3.00	100
Firebreak	the state of the s	Mi.	322				62		-	100	100
Trails		Mi.	5		-		-	dering and property of the party 1	7	2	
/II. PROGRAM COSTS (To					-		1	-	nia.		
alle liteditati oobib (19	S&M	Accordance to the second	The same of the sa	B ₁	reau	Fund	la I	Coon	. Fund:	2	Gr. Tota
ITEM	Dour		o Date	100	II Gau	TO I	The second second second	0000	TO	Date	Funds To ate
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Research & Study Trls.									21A 613		
Surveys	e en l'élévationes en agée en gré										
Land Use Planning				,	09		109				109
Soil Management			205		63		703	22	2	222	113
Vater Management		c y you	1228	7	76	10	1333	27	9	1:20	2973
Operations & Maint.				1	12		596	250		121:7	1.84
Potals			11:33	21/6			742	751		1879	6053
List funds spent on				e cate	ory (pera	ation a	nd Main			H .
S&M Allotment this	F.Y.	\$6,	000		&M Ba	27. 6	end of	this Qt	r.	4,567	015

7.		No	AND DESCRIPTION OF THE PARTY OF	UNDS	-
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	Mar. 22 hrss	,	.7	109	
L.	Soils Mant.				
	Range Del, Erazing ! Winter Use /2 complete 8,000	ibea			
	Cattle counts drecords; Hos Mars Mars	8,000 Ac.		(27)	200
		27,445 Ac.			
	check w ses tech. Britton(23)	,, . ,		(27)	(27)
	+ Mgr. (#38)	CO-MANNE BERTON		438	#22
	· 354-				
I.	Water Mamt.				
	Stands Ditch 4 Jetty est, 1500 ft. long by 20' wide by 5' deep = 3.5 ac. ft.	0		, .	
	59 ms. 05 126 galine - Labor 6.D. 32 hrs. (Figurt) (A298) (#27) (#231) #83 (About 1/4)	1		(82)	
	Rota tilling Niend Island #33 (AEC 10 hrs. labor)			1669	
	Stock tanks			~	
	Labor to winterize new wells			(28)	-
EC 6	Tank installation by Vieldred # 70+#54			1	
Wir	Tank installation by D. Keenan = #31 +#71 (10/67) (#130)				
	Mgr. review of well of mill records				
JI	Facilities				
2.4-					(29)
	Fencing: Permittees maint fence (est)	25 mi.			250
	Trails: Gravel around hoggers,				
	(AEC 6 hrs . = 20,00	-			
	fatrol Road - 2days (12 hrs.)			(29)	
02.12	-12 hrs. @5:#60, AEC - 16 hrs, = #52			#112	
	Totalss		0	1460	#751



09HI#	Sheck				
211	08-95				
944	82				
594	LZ				
601	25 2600 25 2600	=			\Box
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C S & VU F	WPS				
The state of the s	211 922 594 601 Q9h1#	211 08-62 966 82 894 62 601 52 601 52 601 52	594 0 52 82 834 75 82 511 08-95	594 62 82 894 75 82 211 08-95	59h 62 82 89h 62 801 52 801 52 801 52 801 52 801 52 801 52 801 52

QUARTERLY SOIL AND MOISTURE CONSERVATION PROGRESS REPORT
Refuge or WPA District: Crescent Lake Nat'l Wildlife Refuge
Period Covered by This Report January, February and March, 1968 (FY-68)

	ITEM	Unit	Total Planned This F.Y.		pleted Thuarter By	The Course of th		leted to	Date By	Grand Total Completed This F.Y.
		12	Tota. Plann This	S&M	BUR.	COOP.	S&M	BUR	COOF	ot of
Ţ. II.	RESEARCH AND STUDY TRIALS SURVEYS	No.					Umazi		Test I	DAUE
AM NOW THE AND PARTY.	Soil Surveys	Ac.	35.087	(a)						Design of the conference of th
datidation	Range Surveys	Ac.	heracher		37.5			houseka		c2x6dc3
	Capability Surveys	Ac.				To the state of	nga mga mga mga mga . ag		a military star amplicate Attendings, on	
	Total of Above 3	Ac.	35:087	THE RESERVE OF THE PARTY OF THE						
III.	LAND USE PLANNING		12.611	The state of the s	-		21 SA V	h2.6h3	-	42.647
IV.	SOIL MANAGEMENT	Secretary responses		- que come con the section of the se			edomina manusica etamena eta		water and a state of the second	
designation dates	Brush Control	Ac.			1	1	Marie Amelia Marie Marie Andrewson and			
	Cons. Cropping Systems	Ac.	74	and the second second second second second			The state of the s		THE RESERVE OF THE PARTY OF THE	A DISCOURAGE A STREET OF THE REAL PROPERTY.
-	Contour Farming	Ac.	750				n i dente		and the second second	
	Contour Furrowing	A.c.		2000	The same		**************************************			
- Annual Company	Controlled Burning	Ac.	300				an Street Class and Andrew Valley or a Committee	Control of the same of the sam		Married Schoolstern Constitution of the Consti
************	Cover & Gr. Manure Crop	Ac.			7 40		OR PROMISER SET, 100 TOUR FO	Proper mel di representatione de la ser	STATE CONTRACTOR OF STATE OF S	
	Critical Area Planting	Ac.	20		 		arternatural provident for com-		a window make make amage, make an	
-	Crop Residue Use	Ac.			 	-	MINERAL MARIEN M		TOTAL AND STREET STREET STREET STREET	- Committee of the Carlot
	Deep Plowing	Ac.				1			mar editure global e des l'adjunts insperie	
districted reports	Dune Stabilization	Ac.	20				**************************************		N THEREIL REGISTER PRICES AND SHOP SHOP IN	and an appropriate to the state of the state
Name (Street, Street,	Emergency Tillage	A.c.				1	PARTICIPATION OF THE PARTICIPATION OF THE		en angle review of register deposits register.	Company of the Control of the Contro
	Fertilizers	Ac.	25			-		N. D. C.		-
-	Land Clearing	Ac.				1			A THOMAS AND THINGS AND SHOULD VARIOUS	
-	Land Leveling	Ac.					-		-	
-	Obstruction Removal	Ac.		-				-		- Approved a proper to depresent to stome
ated	Pasture & Hayland Plant.	Ac.							100	
4 1 8 2	Pest Control	Ac.	200			F De Bin	ge mait: retinorquempounds v: Qu			-
	Range Deferred Grazing	Ac.	42,641	******************	4,000		and advantage withhouse spinishers and	32 000	1	32,000
	Range Proper Use	Ac.	42,641		2,000			32,000 29,111		29 1115
-	Range Renovation	Ac.	Sect from \$5 to Surpendin		2,000		destination of the second	. Long State State .		- Low Land Control
	Range Seeding	Ac.		warenders washing over 170 miles and 1800 miles and	1	1		Company of the Control of the Control		President
-	Soil Amendments	ÂC.		Named and Desired Street,	<u> </u>			-		To a straig on a responsible of the
-	Striperopping Contour	Ac.			 				THE COME IS NOT AS A PROPERTY.	
**************************************	Striperopping Wind	Ac.							er ver versteren	processor of the administration with a
	Stubble Mulching	Ac.							-	11106
	Tree Planting	Ac.		TERROLL STANSFORM CONTRACTOR	 			and produce which refer with more sands		pt. harmanic materials to con-
-	Tree Planting	No.			-	BATTER DETERMINENT MEDICAL PROPERTY OF THE PERSON	-	and rice or annual representation	-	BUBW
	Weed Control, Land	Ac.	50				 	+	50	50
****************	Weed Control, Aquatic	Ac.	70		+		-	n grander a major de major de vezir de vezir de de construir de constr	24	72
	Woodland Interplanting	·Ac.				-				The second second second
-	Woodland Thinning	Ac.		**************************************	-		-		and and a second second	DECT THE SHAPE AND ADDRESS OF THE PERSON

⁽a) SOS still working on soil resurvey of Garden County, Nebraska, including Refuge Lands.

ITEM	- 1	Unit	Total Planned This F.Y.			d Thi			eted t s F.Y.	Date By	rand Total Cor eted Thir F.Y.
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V. WATER MANAGEMENT	1		Contains	anger (i	-	Project Control	71 ACC		1	A TOTAL PROPERTY OF THE PROPER	and the second s
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Dam, Multiple Pur		VO 4									
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Dike and Levee		it.	burg.Err.		144						
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	and a make an appropriate and a second secon	-	la paradorrin dicintralita sendiciona di cassado de redas endos							and the first and the second s	
Land Use Planning							109				109
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Water Management	2529		3757	1	757		3090	endelig et film (an monete venneligen ventlikk hille til gesen ette av ven		110	7257
Operations & Maint.	158		158		15/4		750	15	50	1397	2305
Totals	2687		1:120	2	320		5061	33	LO	2189	3370

Refuge or Wetland Manager (sign) on R. Perkuchin

	No.	1 K	ZUNDS	
	completed	Contract of the Contract of th	Bureau	
II. Land Use Planning - 182 4/ 30)			(11.4	(1 7) H ₂ 2 3 1
IV. M. Soils Mant, Clark			# 114	
IV. SRange Defiterations AEC ROD DRP Cattle counts + Records R. TRAN 8:10 #139 #86 #114	4,800 ac.	es cara incomingation of the control	(27)	(z7) #150
	7,00°ac.		(27)	(27)
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Pands DRP = 16 hrs - \$79	The state of the s			
AEC, RDD of ED ED + Blasting 6 hales	lac. Ct.		(28) 4588	
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DRP \$ -450 RDD \$:1-#32			#1130	
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Trails Permittes fence est.	and the second s			medicinal size of the control of the
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QUARTERLY SOIL AND MOISTURE CONSERVATION PROGRESS REPORT
Refuge or WPA District Crescent Lake National Wildlife Refuge
Period Covered by This Report April, May and June, 1968 (FY -68)

	ITEM	Unit	Total Planned This F.Y.		pleted T uarter B			eted to	Bu	47 0
		n	lot 71a	S&M	BUR.	COOP.	S&M	BUR	COOP	Grand Fotal Compl
Ţ.	RESEARCH AND STUDY TRIALS SURVEYS	No.	1			Al Jezi Al Eni				
dat valoreta sederen	Soil Surveys	Ac.	35.087	(a)	1	TT ME			Marris Miller and a security of	generalizative/passed/DRF Hilbary og c sevilate
destruction	Range Surveys	Ac.	- Marie & Marie A.		100	14	ASSIVE THE RESIDENCE OF THE PARTY OF THE PAR		THE PERSON NAMED AND LAST GROOT	BUT MORE MOREOUS, WHISTON WITH
***************************************	Capability Surveys	Ac.		-		4 4 4 4 4 1 1		M	o, tradition also arrection alternating, no	
***************************************	Total of Above 3	Ac.	35.087	theory at the section and provided the section of t		r Val		terindiki entisteratir regisionik terik	now discontinuously week projects	ATT - STATE OF STATE
III.	LAND USE PLANNING	A.c.	42,641	Dennyan dia ayan ayan dan dan dan dan dan dan dan dan dan d		191 259	BOSSA 1	2,641		42,641
IV.	SOIL MANAGEMENT					4 1/2	daema	No garage	providence of the state of the state of	769271
- Constitution of the same	Brush Control	Ac.				- TA -		TO UZ		
	Cons.Cropping Systems	Ac.	Δ		1	1 1 1				
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- 5-5-5-	Contour Furrowing	A.C.	0.00			c last		Management and the second of	AND THE PERSON NAMED IN TH	
- Committee of the Comm	Controlled Burning	Ac.	300				- Spiritellin statutstan same a squarecord, s	ALAMANA WALAMANIA C MICHARING LLA	Tal Mingrangian regularizant.	Same and an annual management of the same
- 61	Cover & Gr. Manure Crop	Ac.			- L	0// 1		AN MET THE SECTION WESTERNESS . SPRINGS THE	provide and provide and provide a section of	
Anna - 110 -	Critical Area Planting	Ac.	20		1			N PAR SCALL PROPERTY STREET, AND STREET, A		
ent-monentum-tum-my	Crop Residue Use	Ac.				1/4		TO MICH. HOS SHICKE HOSE FOR HE	Annual and the second second of	**************************************
-	Deep Plowing	Ac.						te verden i sidem vedenz elek medenes e	AND THE PERSON NAMED IN	-
-	Dune Stabilization	Ac.	20				7	and refer to refer to refer to refer to refer to refer to refer to refer to refer to refer to refer to refer to	AL THERESE SHEETS MINISTER HERE WANTED THE	1
April ()	Emergency Tillage	Ac.				1 2 -		Barring Annald S with parameters indicate and	er negarvengy) is negative degree negative	
***************************************	Fertilizers	Ac.	25	, a				lea esti. A. rette d'activit Soft to Hellous sq	arrage of Cities and process of the Cities and Cities a	
	Land Clearing	Ac.						an menunganaga rasik andar m		
	Land Leveling	Ac.		**************************************	1 7 9 9	i O Aren		in acceptable addressed proceedings of the con-		-
-	Obstruction Removal	Ac.	Cura conce-			3 292	demonstration of the same and t	per melphaselet i light leries, augustus	-	
eral	Pasture & Hayland Plant.	Ac.	014		etau ol		Secure and the second s	leringer vija adpira mistroger in	we a drawn repared w	
W 1 W	Pest Control	Ac.	200	and the party	And the Mill	Amara alm	The said measurement water	SE PROPERTY AND ANDRESS SEED AS THE PARTY WAS	-	
-	Range Deferred Grazing	Ac.	42.641		10,641			12,641		42,641
	Range Proper Use	Ac.	42,641		10,000		1	29,445	The same and the s	20 445
	Range Renovation	Ac.					and Annual Conference of the Annual Conference of Conferen	heriji nguliki lakushu	APP I MONTHAIN ANGE AMERICA	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1
-	Range Seeding	Ac.	2		1		ne State englishe tradestransis enconditore et are surface an	na i jedjemenské medičnim vrjuv z abbilova		- 25 G
***************************************	Soil Amendments	ÂC.					-	general paperer, son. a degreen appropri	Andrewsky or party services andre on	ye in the sea of the other and the other o
***************************************	Striperopping Contour	Ac.			+		-	g Lamingtonin Wilson Wilson Ambiert Argorya Indi	M11-100 1 100-1-1-1-1	- Commence and the commence of
Commission of the Commission o	Striperopping Wind	Ac.						ar ada arres, arabir il Proposition il	er er ver ver er er er er er	produce a space open representation and
	Stubble Mulching	Ac.			=1+		med Street, and an electric confess subject outflet in the	American estern estern esternanterinses	a planeter annue desi	2.1.0161
White and the powder	Tree Planting	Ac.			1			/	PA NORL ANDTON, ME X VICTOR AND AND AND AND AND AND AND AND AND AND	7
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Annual Control of the	Weed Control, Land	Ac.	50		2		manifest service servings, as white service could be ser	52	CONT. NO. OF WACHENDA. OF	52
-	Weed Control, Aquatic	Ac.	- 30				AND AND AND AND AND AND AND AND AND AND			
-	Woodland Interplanting	·Ac .			-		and a spine order over the state of the spine of	Andrew Service State of the Service		The second secon
-	Woodland Thinning	Ac.	***************************************						Target and the St Address ground	an Proceedings and the Control of the Control

⁽a) SCS still working on soil resurvey of Garden County, Nebraska including Refuge lands.

TTEM		Unit	Total Planned This F.Y	Complet Quart			ed This er By		eted t s F.Y.	o Date By	Frand Cor eted Thi F.Y.	
	4.97	. Saario da	4. je	다다	S&M	BUR	0	COOP.	S&M	BUR.	COOP.	p o cta
V. V	WATER MANAGEMENT	FFE Form 1 s	esen.)			7.1	Company Company	71 AUS		1	ı	PHO H
bulentigettemple - descentive and	Bank Protection	T. ORIGINAL P	Ft.				Desired Desired St. Land Co.			-County County County (County County	BARE ARECUTANIE TOWNS, CONSEQUENCES HONESCON	
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	Dam, Multiple Pur	pose	No a							THE RESIDENCE OF THE PARTY OF T	EMPERATURES VIRGINIA PROPERTY CONTRACTOR CON	and the second control of the second control
	Debris Basin, or	Check	No.		- 9 (A A) (A) (A) (A) (A)	200 200 200 200		***************************************		an palating panatives governor	A TOTAL TOTA	
14.9	Dike and Levee		Ft.	10.1327.	\mathbb{R}^{1}	14,						
	Drainage, Maintor	Lateral	F't.	Lagraga			Ţį.					
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321	Grade Stab. Struc	ture	No.	2200	1360					Democratic Committee on Co. 73 on Control	BEAR CHIESCHOOL CHIESCHOOL CONTRACTOR CONTRA	1
	Grassed Wtrway or	Outlet	Ac.	· · · · · · · · · · · · · · · · · · ·				11-11-11			- 14.1	
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terrette region sp que sede	Irrigation Field		Ft.	CONTRACTOR OF THE CONTRACTOR O			Mark County			COMPANY AND AND AND AND AND AND AND AND AND AND	en Orandon velonieli meli meli meli meli meli meli meli	
	Irrigation Water		Ac.	` · · · · · · · · · · · · · · · · · · ·			-					
The state of the s	Pipelines for Lvs		Ft.			-		-				C
	Ponds		No.	50		-				6		CONTRACTOR OF THE PARTY OF THE
	Ponds Capacity Ac:		No.	102	O-110-10-10-10-10-10-10-10-10-10-10-10-10	1					A CONTRACTOR OF STREET	
	Spring Developmen		No.	102		+		-		-	the state of the s	
	Terracing		Ft.			-		 		-		
transfer to the same	Tile Drain		Ft.		***************************************	+		-		-		
	Toxic Salt Reduct		Ac.			-				-	TTT PALESTON CLIMITATION CONTRACTOR	
	Trough or Tank		No.	-	-				and the same of th		and the second s	
analyses for retress formers	Water Spreading	The same of the sa	Ac.	15	-	-	30	-	22	33	3	55
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/ <u> </u> 0	FACILITIES		7.6.9			-		-		-		
	Boundary Posting		Mi.		-						by to address addressed to be addressed to	
	Bridges		No.							and the second s	-	
	Corrals		No.				-			-	-	
	Fencing		Mi.	155		-		40			155	155
	Firebreak		Mi.					1		-		
	Trails		Mi.	5	1		1		1	2		3
VII.	PROGRAM COSTS (To	Nearest D	POCKADIMINATOR IN	Management contractions and a section of	**	-					anning company and a resident projects	Van de
	ITEM	S&M	M Funds		Bureau				Coop	. Fund		Gr tal
				o Date	m	04	To Date tr. This F.Y.		1771- a - 0		Date	Funus To Date
i de la companya de l		This Qtr	o '1	his F.Y.	This	Wir.	This	S F.Y.	This Q	CL. TH	is F.Y.	This Fall
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Land 1	Use Planning]	.09			to meaning and one to made south	109
Soil Management 210		415		864		1976		350		732	3123	
Water	Management	743		4500	825	9	113	349		112	410	16259
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rotal:	S	1879	1	5999	13.9	34	189	005	600	V 1	2789	27. 3
	st funds spent on	VI. Facil	iti	es in th	e cates	corv	Opera	ation a		tenanc		- Stelens Income
(ساده النماد	S&M Allotment this			000					this Qt	1042.77		

TOPEKA MOTOR FREIGHT, Inc.

SERVING KANSAS, MISSOURI AND NEBRASKA



Hourly Rates

Rate / hour

Ron, Saunders #2,46
(Laborer)

EV Dietlien

(Truckdriver) \$2.71

Jake of Joe #2,47 G5-4

DRP #5,23

RDD #2.21

		No.		FUNDS		
Ď,		completed	5+M	Bureau	Coop.	
11.	Land Use Planning -					
	Soils Mant			(27)	(27)	
	Range Det. Grazins:	47,649		#172	#250	
	ROD DRP (Permittee) ROD DRP REXE MAN (F84)	2				
	Weed control DAP D-6 repair (\$10) 0170	2	#210°3	#16	(27)	
63	WBA retters (16) (05/hr) (045/hr) (045/hr)		#210	(27) #676	11/00	
77	Are Room por RS (40) RECORD DOR RS (40) Water Name (40) Water Name (40)		,	100		
	Ponds					
	Stock Tanks ROD \$1,080-8tanks \$1,080-8tanks			(28) 17 230	ę	
	(#4) A Gravel					
	DAP (11) Purchase 10 4ds Int. Dump (12) A (150) REC VAI: (178) F135 (158) RED 171 (135) 258 #1678 Dumbar-oill (150)	,	'678 (28) 65 (28)	(z8)		
	BD) 38743-11towers Settles will		743	1029		
	#108- Keenan Fernae Wooden	0	(29-30) #926	(29-30)	129-3 14 Z S O	
	Posting, 200 200 \$7720 (400 80513) - 0141 biwive	13	3259	(29-30)	, 000	
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NES	ORE SO MITS AND NEW AND	200		\$1536		
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