HUTTON LAKE NWR - NARRATIVE REPORT - 1968

NARRATIVE REPORT

Hutton Lake National Wildlife Refuge

January through December 1968

REFUGE PERSONNEL

Refuges came under the jurisdiction of Arapahoe National Wildlife Refuge, headquartered at Walden, Colorado.

REFUGE PERSONNEL

Refuge Manager V. Carrol Donner

UNITED STATES DEPARTMENT OF THE INTERIOR
Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
Walden, Colorado

NARRATIVE REPORT 1968

Hutton Lake National Wildlife Refuge

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NARRATIVE REPORT January through December 1968

Hutton Lake National Wildlife Refuge

I. GENERAL

A. Weather Conditions

The following table provides a summary of weather conditions during 1968. Information was taken from records kept by the University of Wyoming, which has a weather station on the campus in Laramie. This weather station is located about 10 miles northeast of the refuge.

Month	Snowfall	Precipita This Month	tion Normal	Temper Max.	ature Min.
PIOTICIT	PHOMISTI	THIS POHEN	Norman	Pidx.	MLII.
Jan. Feb. March April May June July August Sept. Oct. Nov. Dec. Total Extreme	2.8 7.7 2.5 27.8 6.6 T 2.0 6.9 2.3 58.6	.18 .16 .29 2.93 2.31 .62 2.92 1.26 .20 .50 .58 .20	.38 .42 .76 1.25 1.54 1.46 1.73 1.21 .81 .67 .47 .44	51 45 62 67 76 86 87 84 79 73 57	-6 1 5 2 25 34 36 29 21 3

Month	Wind (av. This Month	
January February	8.5	10.2
March	10.1	11.5
April	10.4	10.9
May	10.4	10.1
June	9.0	99.4
July	8.1	7.3
August	7.9	8.3
September	7.8	8.3
October	9.2	8.9
November	8.9	10 .3
December	11.2	10.3
Av. for year	9.2	9.6

Weather during the year showed some variations from normal, but averaged out near normal. Precipitation for the year was above normal, but not greatly so. The most significant fact regarding the precipitation was that above-normal precipitation occurred during those months just previous to and during the growing season.

Temperatures also followed a mildly erratic pattern, but averaged out very near normal.

The month of April provided the people of the Laramie area with a great conversation piece - some of them with some misery and discomfort. On April 3rd and 4th, a real old-fashioned blizzard moved onto the Laramie plains, causing numerous and extensive power failures, stopping transportation and raising havoc with communications. Pictures and stories occupied lots of room in the local paper and occasional comparisons were made with the "Blizzard of 1949".

On April 17, another storm lashed the Laramie area. This was more intense and vicious than the earlier one, but did not last as long nor cause as much interruption in activities.

In summary, the early months and the last months of 1968 were dry, the spring and summer months quite wet. Temperatures and wind followed a near-normal pattern.

B. Habitat Conditions

1. Water

Water for the Hutton Lake Refuge comes from Sand Creek, the main channel of which meanders across only a small corner of the refuge. Refuge water rights are secondary to those of neighboring ranchers, so getting water for the refuge is a "catch as catch can" proposition. Flows, when available, are small, 1 - 5 cfs.

Water from Sand Creek was available from early March to May 3, when rancher priorities began taking all available water. The next Sand Creek water to reach the refuge arrived on August 10. Water recipts from this date to freeze up in mid-November were intermittent and very small, $\frac{1}{2}$ to $l\frac{1}{2}$ cfs.

The long run of water in early spring filled George, Rush and Hoge Lakes and brought Creighton and Hutton Lakes to favorable levels. Above-normal precipitation in April and May and again in July extended the benefit of Sand Creek

diversion water well into the growing season. Lake levels were all quite low at the end of the waterfowl use period, but the refuge supported respectable populations from spring thaw to fall freeze-up.

2. Food and Cover

Lack of additional water coming into the refuge after the closing of the inlet gates on May 3, caused a reduction in production of aquatic plants on some areas. On the whole, however, production was about average on most areas.

Creighton Lake, which receives the least water from spring runoff, showed a reduced growth of sage pondweed,

Potamogeton pectinatus, but an increase in the production of widgeon grass, Ruppia maritima. As the lake level dropped, large mats of this plant were in evidence in shallower portions of the lake. Reduced waterfowl utilization of Creighton Lake during the summer reflected the conditions of the lake, which were dominated by a low lake level and stagnant water.

Hutton Lake again produced a large crop of widgeon grass this year. Waterfowl use was up slightly on this unit, reflecting better food conditions. Pondweed was also produced to some extent on this unit.

Conditions in Hoge Lake appeared to be quite favorable for both transient and summer resident birds. Sago pondweed grew especially thick on the unit this year, and large numbers of birds, including ducks, geese, and coots took advantage of the ideal food conditions. Alkali bulrush, Scirpus paladosus, increased around the perimeters of Hoge this year and provided good food as well as additional cover. Coots used this lake to a much greater extent than other units during the summer months, and large numbers of dabblers were often evident. In addition, the small flocks of introduced Canada geese also found favor with Hoge Lake.

Rush Lake is becoming increasingly infested with marestail, Hippuris vulgaris. This pest plant seems to take root in any shallow water where a seed source is present. In Rush Lake, this source appears to be the inlet of Sand Creek, the main water supply to the refuge. Flooding of infested areas this summer appeared to do little or no good, as the plant is more widespread in Rush Lake than ever. An effective means of controlling this pest has not been discovered by this refuge, as the ever present problem of a nearby seed source nullifies most control measures. Work is continuing on this problem.

Sago pondweed in Rush Lake was again plentiful this year in deeper waters where marestail had not invaded. In addition, a few patches of widgeon grass were present.

Lake George is a favorite unit of several species, not the least of which are the lesser scaup and redhead. These diving species apparently favor the deeper waters of this lake and the good supply of pondweeds and water crowfoot, Ranunculus trichophyllus.

Softstem bulrush, Scirpus validus, again grew in very thick stands in Rush and Hoge Lakes and to a lesser extent in Lake George. Their effectiveness as a source of food and cover is becoming reduced by the fact that they are becoming simply too thick. Burning has been used as a management tool in the past and may be employed again. Pothole blasting is also being considered as a means of opening additional areas in the bulrush. Colonial birds again nested in these thickets this summer, but waterfowl shun the denser areas.

Russian and bull thistles, Cirsium spp, were again sprayed with 2, 4-D in areas where their growth is taking over. However, the hardiness of these species leaves doubt as to the effectiveness of this herbicide. Each year the plants seem to spread to new areas as well as becoming thicker in areas sprayed the previous year. Other controlsmeasures may be necessary.

The community of greasewood, Sarcobatus vermiculatus, which surrounds most of the units was found to be furnishing cover for many dabbler nesters, as well as cover for the small numbers of mule deer which frequent the refuge. On the refuge, as a whole, the shrub appears to be quite beneficial for wildlife, despite its adverse effects on humans!

Refuge rangelands reflected the wise use of grazing permits on refuge lands. Growth during the summer on this short-grass community was about average, and appeared quite favorable when compared to surrounding areas, which are grazed year-round. An exclosure on the refuge shows little difference between ungrazed rangeland and regular refuge grazing areas, but a great difference between ungrazed areas and adjacent ranch land. The present policy regarding the number of animal unit months allowed on the refuge is apparently quite sound.

II. WILDLIFE

A. Migratory Birds

1. Ducks

Total use of the refuge by ducks was up 17% from last year. Use by species shifted both up and down, but most of the shifts are not considered significant. The most noticeable changes by species were mallards and redheads. Mallard use was up over 100% from last year. Redhead use increased by 42% over 1967.

Peak recorded duck-use days for Hutton Lake Refuge was 574,196 in 1963. The following four consecutive years showed a steady drop. 1968 is encouraging in that it shows a raise from 232,008 last year, to 272,188 in 1968.

In spite of the increase in overall duck-use of the refuge, production was down. Main species drop was mallard. Diver production stayed nearly the same, with ruddy production up some.

It might be well to point out here that there was not a resident refuge manager during the 1968 season. There is, however, an approved inventory plan. The refuge clerk and a Senior year student in Wildlife Management from CSU hired as a temporary maintenanceman carried out the inventories. The writer believes they are essentially correct.

2. Geese

The number of geese using the refuge is not great, but an increase in days—use from 1,365 in 1967 to 4,606 is encouraging. No large flocks was recorded at any time. Use—days occured from use made by small groups of from 8 to 30 geese.

Wyoming Fish and Game employees released 22 goslings from the Charles M. Russell game range in early July. This type stocking operation with geese may have some definite possibilities as a means of starting new nesting flocks.

A single brood of six goslings was our total known goose production this year. Apparently the pair of geese that raised 7 last year weren't quite as prolific this year. At any rate, the goose production is encouraging.

3. Whistling Swans

A lone swan was seen during the spring migration. On October 28, a small group of 16 swams, 6 adults and 10 immature, were seen on Hutton Lake. They stayed about 2 weeks.

4. Coots

Coot days-use on Hutton Lake Refuge was down only slightly from last year. Production was estimated at 100 in 1968, 150 in 1967.

5. Other Waterbirds

Many different species of waterbirds make use of the Hutton Lake Refuge in varying numbers. Western, eared, and piedbilled grebes are common summer residents and each species reared young here in 1968. Black-crowned night herons produced an estimated 45 young. Snowy egrets produced 4 young.

California gulls occurred on occasion in numbers exceeding 500. Wilson's phalarope though not occurring in numbers as great as last year, were the second-most numerous birds in this category at a peak of 120.

6. Mourning Doves

None noted.

B. Upland Game Birds

No upland game birds are present on or near the Hutton Lake Refuge.

C. Big Game Animals

A small band of antelope uses the refuge on an intermittent basis. Notes for the year indicate that eleven head was the largest group recorded.

From 1 to 3 mule deer were seen occasionally on the refuge.

D. Fur Animals, Predators, Rodents and Other Mammals

Muskrats inhabit the small marsh areas in limited numbers. Earlier estimates place the number at about 40. Present population is probably unchanged.

Sign and sightings indicate that raccoons, coyotes, weasels and badgers are present, but rather scarce.

Wyoming ground squirrels are numerous as usual and the population of white tail prairie dogs remain stable.

Desert cottontails and white tailed jack rabbits are present but not in significant numbers.

E. Hawks, Eagles, Owls, Other Predaceous Birds

Notes and other records indicate little change in the status of the numerous species of predaceous birds using the refuge.

Forms NR-1A reflect data recorded on these birds.

F. Other Birds

Shortage of personnel and lack of continuity in recording data on these birds leaves us with little information for this section in 1968.

G. Fish

No important fish populations exist in the small impoundments on Hutton Lake Refuge.

H. Reptiles

None noted.

I. Disease

None noted.

III. REFUGE MAINTENANCE & DEVELOPMENT

A. Physical Development

There was no actual development this year.

Maintenance carried out was quite limited. Water control structure, fence, and building maintenance consumed most of the efforts of the limited staff. Wiring of the equipment shed, installation of an outdoor toilet at the work center and equipping of the farm tractor with the required roll-bar for safety make up the main list of accompolishments which lend themselves to individual listing.

Some work carried out on Pathfinder Refuge and appropriately reported separately, centered at the Hutton Lake storage shed.

Bamforth Refuge was visited a few times during the summer. Little activity took place there.

B. Plantings

1. Seed and Propogules

None

2. Specimens

Forty cottontail rabbits were collected by student Robert Krumm as a part of his study "A Population Study of Audubon's Cottontail Rabbits of the Hutton Lake National Wildlife Refuge".

After the carcasses had served the purpose for which Mr. Krumm had collected them, the pelts remaining suitable were made up as study skins for the University of Wyoming museum, as were 38 of the skulls.

C. Collections and Receipts

None

D. Control of Vegetation

None

E. Planned Burning

None

F. Fires

None

IV. RESOURCE MANAGEMENT

A. Grazing

1. Hutton Lake Refuge

One special use permit, issued annually to Mrs. Mildred Goetz for grazing cattle covers the resource management program here. This permit is for 225 AUM's during fall and winter months at a rate of \$2.00 per AUM.

2. Bamforth Refuge

Grazing on the Bamforth Refuge is on an off-and-on basis. Ninety-nine AUM'S of grazing at \$1.50 per AUM is permitted.

B. Other Uses

None

V. FIELD INVESTIGATION OR APPLIED RESEARCH

A. Progress Report

Since 1966 when permission was granted to Dr. Larry N. Brown of the University of Wyoming for a student research study, the pressure for this type activity has increased. Several requests were granted and during 1968 four such studies were in progress.

1. Normal Behavior, Social Structure, Activity Patterns, and Population Dynamics of the White-tailed Prairie Dog (Cynomys leucurus) in Southeastern Wyoming.

This study was started in 1966 by student Tim Clark, under the direction of Dr. Larry N. Brown, and was completed in 1968. A copy of the report on this study will be furnished the refuge.

2. A Population Study of Audubon's Cottontail Rabbits of the Hutton Lake National Wildlife Refuge.

Student Robert Krumm, under the direction of Dr. Kenneth Diem, started this study in 1967 and completed it in 1968. As soon as the report on this study is completed, a copy will be furnished the refuge.

3. Analysis of Field Operations and Live Trapping Operations for Determining Sex Ratios of Spring Migrating Redhead Ducks in Southeastern Wyoming.

This study was carried out by student George Wilson, under the direction of Dr. Kenneth Diem.

4. Spring Trapping of Redhead Ducks on the Hutton Lake National Wildlife Refuge, Wyoming.

This study was carried out by student Robert Krumm also under the direction of Dr. Kenneth Diem. The latter two studies were made during the same operation. In 1967, the refuge entered into a cooperative agreement with Dr. Kenneth Diem, Professor of Zoology, University of Wyoming. This agreement covers an annual duck-banding program wherein the refuge furnishes most of the needed materials, including bands. This project is designed at giving a few of Dr. Diem's students some practical experience at trapping and banding ducks and to provide opportunity for various types of study projects in conjunction with the operation.

Dr. Diem is very cooperative and easy to work with on this project and we feel it is quite worthwhile.

No investigations were made by refuge personnel.

VI. PUBLIC RELATIONS

A. Recreational Uses

The form of data reported in this category has been undergoing change during the past few years and all in all has changed considerably. Regardless of the form or type of reporting done, it is obvious that recreational use on public lands is increasing rapidly. Presently, use of the refuge is relatively rather small, but the ratios of increase are great.

The 1,979 total visits in 1968 nearly tripled the 698 reported in 1967. The largest increase again this year was in the category which includes the student activity reported previously. Mail inquiries requesting information about the refuge and other indicators lead us to believe that public use of the Hutton Lake Refuge will continue to increase quite rapidly.

B. Refuge Visitors

There were no official inspections or visitations in 1968. Several personnel from higher level offices of the Bureau including the Central and Regional offices made stops at the refuge office for courtesy calls.

Personnel from nearby field offices of the Bureau stopped by the office occasionally as did personnel of the Wyoming Game and Fish Commission and representatives of other local organizations.

C. Refuge Participation

Refuge Manager Marlatt attended the January meeting of the Laramie chapter of Isaac Walton League. He also met with personnel from the Saratoga Fish Hatchery in setting up a "Federal Career Days" program at the University of Wyoming.

After Mr. Marlatt's departure from this station in mid-February, refuge participation came to a virtual standstill.

D. Hunting

No hunting is permitted on the refuge. Little is known by the writer regarding 1968 hunting activity in the vicinity of the refuge.

E. Violations

No violators were apprehended.

F. Safety

No formal activity in this line. With the total staff being a refuge clerk and a temporary-intermittent maintenanceman from April until October, there was little opportunity for meetings. Last years report made mention of having passed the 12-year mark without a lost-time accident. Nineteen sixty-eight made the 13th year without a lost-time accident.

VII. OTHER ITEMS

A. Items of Interest

After nearly four years here, Refuge Manager Marlatt was promoted and transferred to the Washita Refuge in Oklahoma. He and his family departed Laramie for their new home on February 14.

Mrs. Vera Collins was acting refuge manager from that date until November 15. For her highly effective efforts during this time, she was recommended for and received a \$250.00 Incentive Award.

On December 9, 1968, Mrs. Collins transferred to the Forest Service in Laramie after 10 years as clerk at the Hutton Lake Refuge. Her clerical skills and knowledge of the Hutton Lake and Pathfinder Refuges has been sorely missed by the new refuge manager. However, Mrs. Collins' interest in the refuges and this Bureau did not die with her transfer and she has continued to be very helpful in orienting the new manager.

With the assignment of a Refuge Manager at the new Arapaho National Wildlife Refuge at Walden, Colorado on November 15, administration of the Hutton Lake and Pathfinder Refuges changed. They are now operated as satellite refuges under the Arapaho Refuge.

Mr. David Heffernan, a student in Wildlife Management at CSU in Fort Collins spent his second summer working as a temporary maintenanceman on an intermittent basis. David entered on duty in April and was terminated in October. His steady nature and good work contributed favorably to a worthwhile summer's activities in the absence of a resident manager.

B. Photographs

Photographs appended were taken by refuge personnel with a government camera and film and processing was at government expense.

C. Credits

With the exception of Section I-B-2, this report was written by Refuge Manager Donner with the help of Mrs. Collins and some good notes left by Mr. Heffernan. Section I-B-2, Food and Cover, was written by Mr. Heffernan before his termination in the fall and was included with only very minor editing.

This report was typed by Mrs. Barbara Smith, clerk-typist at the Arapaho Refuge. Mrs. Smith is new with the Bureau and her patience and diligence in typing this report along with learning all phases of refuge clerical work is appreciated. Submitted by:

May 23, 1969

W. Carrol Honner

V. Carrol Donner Refuge Manager AK

Reviewed by:

DE chimid t

Assistant Regional Director-Operations

JUN 2 4 1969



Student going to duck traps on borrowed snowmobile, following April storm.

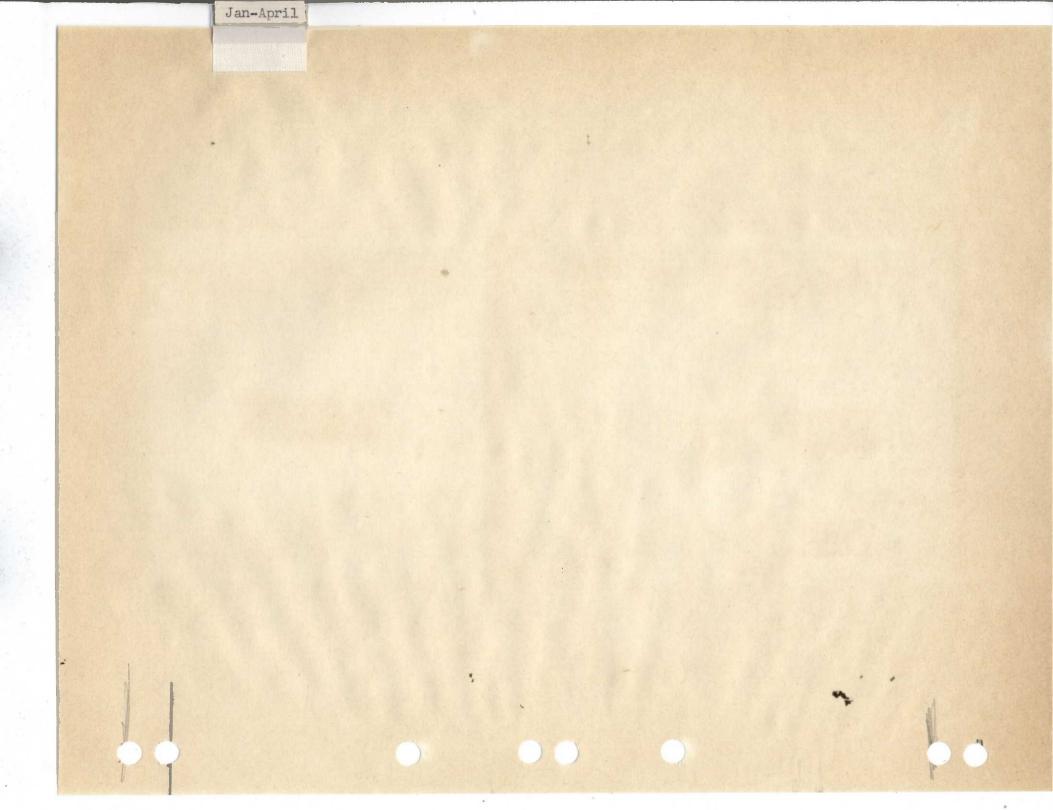


Showing snowdrifts at equipment storage shed.



Showing more of wind's work on snow - during April storm.





WATERFOWL

	:				(2)					
	•		Week	sof		ting	perio	d		
(1)	:12/31-1/6	5 1/7-13	:1/14-20	:1/21-27	1/28-2/3	: 3/1-10	: 3/11-17	: 2/18-21	: 2/25-3/2	: 3/3-9
Species	: 1 ;	2	: 3	: 4	: 5	: 6	: 7	: 8	: 2/25-3/2 : 9	: 10
wans:										
Whistling										
Trumpeter										
eese:										
Canada										
Cackling							1			
Brant										
White-fronted										
Snow										
Blue										
Other		7,								
ucks:					- No wate	rfowl obs	erved			
Mallard										8
Black										
Gadwall										Ę.
Baldpate										
Pintail										
Green-winged teal										
Blue-winged teal										7
Cinnamon teal										
Shoveler										
Wood										
Redhead										
Ring-necked									100	
Canvasback										
Scaup	4									
Goldeneye					1				•	
Bufflehead										
Ruddy								1		
Other										
Total ducks										8

Cont. NR-1 (Rev. March 1953)

WATERFOWL (Continuation Sheet)

TO April _, 19 68 MONTHS OF January Hutton Lake REFUGE : Weeks of reporting period : Estimated : 3/10-16:3/17-23:3/24-30:3/31-4/6:4/7-13:4/14-20:4/21-27: : waterfowl : 11 : 12 : 13 : 14 : 15 : 16 : 17 : 18 : days use : Production :Broods:Estimated Species : seen : total Swans: Whistling Trumpeter Geese: reed 8n dosers) a 168 Aonus), b ogacel Canada Cackling Brant White-fronted Snow Blue box graff kelit Other Ducks: 550 11,816 Mallard 8 240 380 27 175 300 Black 9.142 Gadwall 430 310 320 235 Baldpate 25 2.275 15 235 50 Pintail 106 80 85 330 160 175 6.552 Green-winged teal 75 65 2.667 33 35 1.5 120 Blue-winged teal 81, 72 Cinnamon teal 5 231 3 12 12 Shoveler 75 1.288 15 60 30 Wood Redhead 475 19,243 420 700 600 500 Ring-necked 15 20 385 20 Canvasback 65 125 6.454 350 160 220 86,513 Scaup 630 26 700 800 20.972 7110 700 Goldeneye 20 65 20 7 812 Bufflehead 40 168 60 1,351 Ruddy 120 3.150 -130 100 100 Other C. Merganser 10 3 91 16 2,045 Total ducks 261 1,025 3,762 2,650 2,592 86,513 Total Days D 250 2.80 500 300 100 14,980 410 Coot: (over)

	(6) se : Peak Number : Tota	(7) 1 Production	SUMMARY
Swans Camer Banser7	1 261 1.025	3 0/2	Principal feeding areas Divers on deeper lakes;
ieese 168	: 83 : 30	130	dabblers on shallow lakes and edges of deeper lakes
ucks 86,513	3,762	630	Principal nesting areas No duck nesting observed;
ll4,980	500	50	possible goose nesting on Rush Lake
	li li	15	Reported by Vera M. Collins, Acting Refuge Manager
Cinnsmon teal	1	3	12 5 12 231
(2) Weeks of Reporting Perio	to those species	of local and r	ed in appropriate spaces. Special attention should be given national significance.
(3) Estimated Water:			
Days Use:		pulations x nu	umber of days present for each species.
(4) Production:	breeding areas. breeding habitat.	Brood counts s Estimates ha	aced based on observations and actual counts on representations should be made on two or more areas aggregating 10% of the aving no basis in fact should be omitted.
(5) Total Days Use: (6) Peak Number:	A summary of data Maximum number of	717-11/0-11/	esent on refuge during any census of reporting period.
(7) Total Production	Neeks of	(5)	(3) (1)
EFUCE Hutton La	60		MONTHS OF January TO April , 19 68.

(Continuation Sheat)

Interior Duplicating Section, Washington, D. C.
1953

62.5

Refuge_

MIGRATORY

DS

(Other than Waterfowl)

Months of January Hutton Lake

<u>, 19 68</u> to April

(1) Species	(2 First		Peak Cond	3) gentration	(4 Last			(5) Product:	ion	(6) Total
Common Name	Number	Date	Number	Inclusive Dates	Number	Date	Number Colonies	Total a		Estimated Use
Water and Marsh Birds: No notes for per	iod.								n cagle n cagle hawk d owl	Colde Duck Borne Magpi Raver Crow
Shorebirds, Gulls and Terns: No notes for per	Edition of dition of particol it	t, 1931 - In a porting	(See Sec . Chackii tern", et ing the r	d followed a me	terms as curring c l attents	conorsi ectes or Specia	the correct r Avoid , other sp te spaces.	noi noi elwg	Species:	(1)
associated bus see	erolilub moligius	g (Char) formes) ormes,	a and Ter is (Columb (Falconi	birds, Gul	II. Shor	Groups	ificance.		First Sem:	(s)
					1.7					(8)
	beare	ison con	ing the se	peciet duri	for the	zoosz s	pries lasi	ini	Last*Secat	(4)
.eJm	ctual com	bas and	observati	to beand he	ung px odu	eg de ye	lowa bejam	Esti	Productions	(5)
refuge during the	sent) of	days pr	ion X no.	cage populati	(over)		mated spen		Totali	(8)

(1)	(2)	(3)	(4)	(5)	(6)
III. Doves and Pigeons:	April	January Co	Months of .	Refuge Hutton Like	
Mourning dove White-winged dove	Res	(4) last Seen	(3) Peak Contention	1) (2) cies Pirst Seep	
tel # Total Estimate	Number E		Inclusive		
IV. Predaceous Birds:	Colonies	Mumber Dete	Number Dates	ame Number Date	Common M.
Golden eagle				davalt	bea wassw .I
Duck hawk					tabaki
Horned owl Magpie					
Raven				for period.	SESSOR OF
Crow					
	1. 7. 1.1				
			Кер	orted by	

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

II. Shorebirds, Gulls and Terns (Charadriiformes)

11. Shorebirds, Guils and Terns (Charadrillormes

III. Doves and Pigeons (Columbiformes)

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

- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of youngproduced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1752 Form NR-2 (April 1946)

UPLAND GAME BIRDS

Refuge Hutton Lake Months of January to April , 19 68

(1) Species	(2) Density	er est	Yo	3) ung uced	(4) Sex Ratio		(5) Remov	als	(6) Total	(7) Remar	ks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd.	Estimated Total	Percentage	Hunting	For Resstocking	For Research	Estimated number using Refuge	Pertinent inf specifically List introduc	requested.
None obse	to furnish the designative, Examples: ottomland hardwe.bevre didlife Management Se d should be based on Survey method used	enougi neral and, l i in V bmitte	tiled he ger urc l liste es su	oe deta cure l griculi mbols Figur tive	types should much as to ob , revérting a	eo ebo ge ge gw wb	etc. etc. used d cou	land irie, sid b ous a	observati		
	tions and actual coun)Serv	о поф	sased v	ng produced, ing habitat.					YOUNG PRODUCED	
по	s, etc. Include date	inasan	gy, ph	turke			lles f ave	m apy	This column	SEX RATIO:	(4)
	the report period.	ring	wed di	y reme	i each catego	l z	daun	otal	Indicate	REMOVALS:	(5)
seasons.	ort period. This may efuge during certain	ie rep	ing th	ige dui grating	using the refolus those mi	ter ds	imun tid a	total sider	Estimated include re	TOTAL:	(a)
	covered in survey. A squested.	area lly r	n and	ulatio	determine pop information	to ent	used ertin	ethod her	Indicate m	REMARKS:	(7)
				used.	ed should be	970	bol t	taq a	icable to th	nly columns appl	

Form NR-2

Refuge Hutton Lake

INSTRUCTIONS

to April . 19 68

Form	NR-2	-	UPLAND	GAME	BIRDS,	*

(1) SPECIES:	Use correct common name.	(4) Sex	(3) Young	(2) Density	(1) Species
(2) DENSITY:		hose specie	s considered	in removal programs (publ	ic
Pertinent information not specifically requested. List introductions here.	hunts, etc.). Detailed do numbers. Density to be exinformation is to be prefinumber of acres in each coinformation need not be referred.	lata may be expressed in aced by a second type frepeated exc	omitted for a acres per an tatement from ound on the nept as signif	species occurring in limitalism by cover types. Thin the refuge manager as to refuge; once submitted, the ficant changes occur in the	ed s the is e area
	information but not so mu swamp, upland hardwoods, grass prairie, etc. Stan No. 7 should be used wher	nch as to ob reverting a dard type s re possible. on represent	scure the ger griculture la ymbols listed Figures sub ative sample	enough to furnish the desi- neral picture. Examples: and, bottomland hardwoods, d in Wildlife Management So mitted should be based on areas. Survey method used under Remarks.	spruce short eries actual
(3) YOUNG PRODUCED:	Estimated number of young in representative breeding		based upon ob	oservations and actual cou	nts
(4) SEX RATIO:	This column applies prima other species if availabl		d turkey, phe	easants, etc. Include data	a on
(5) REMOVALS:	Indicate total number in	each catego	ry removed du	ring the report period.	
(6) TOTAL:				ne report period. This may the refuge during certain	
(7) REMARKS:	Indicate method used to dinclude other pertinent i			area covered in survey.	Also

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

Refuge Hutton Lake Year ending April 30, 1968

(1) Species	(2) Density	of bate bearet	101	Rem	(3)		a 26	D		(4) tion of	Furs	10125	10 (d	(5) Total
it, sid. i of North	on on being at his	forrlæp dra sa	121			en ve	means	Shar	e Trap	ping	nge bed	ted		Popula
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hun ting	Fur	Predator	For Re- stocking	For Re-	Permit Number	Trappers	Refuge	Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	tion
	the refuge manager and	mont in	eza:	ertae eae	rd T	50000		at at	no 11					
	eine cons legglot eil gaedo taxolliquie se s	aora pe	600	17 8	301	200	4223	taxe, art	255		-			
No notes f	or period.	es suce	08		and a				ed3					
	empflootign gottrever	divocas	maf	densi	gir "g	anva .	3573.0	11111	1202					
		af Almo		52.0	rom Pr	2 TOS	1000							
		Liarras		nuit s	no	3000	90	Lincoln -50	10 100					
	ners to acre algams to	ARIS SE	0.73%	usy B	4.760			na selas	18.00					4 4
	linga sonis bevosen ge	geses d	1.33	rebn	1,300	mun I	1203	edf estat	(Basil)		:2	LAYOR		
	eruge-by Service Preda	r off so miller	08 803		ia gi mer	EDUCTO EDUCTO	nd	ELA TO	******					
	o, trapperfe share, as	duent #2	1280	6252	tak)	BTLE?	barge	911-9700		gut 10	1011	£059	50 - Cu	
		ion of h	99	ia a	Dec	10 10	faure	odl sine	theri					
		Motor 2		rad.	10 11	CERT	Ladol	Lands was	194					
	te in amiferitant of	Sept.			17.5		1 12 12 12 12 12 12 12 12 12 12 12 12 12	in of hi	10 000 1 10 100 1					

ladicate investory mother(a) used, also of cample area(a), introductions; and

REMARKS:

INSTAUCTIONS

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

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, short-tailed weasel, gray squirrel, fox squirrel, white-tailed jackrabbit, etc. (Accepted common names in current use are found in the "Field Book of North American Mammals" by H. E. Anthony and the "Manual of the Vertebrate Animals of the Northeastern United States" by David Starr Jordan.)

(2) DENSITY:

Applies particularly to those species considered in removal programs. Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottom land hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

(3) REMOVALS:

Indicate the total number under each category removed since April 30 of the previous year, including any taken on the refuge by Service Predatory Animal Hunter. Also show any removals not falling under 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:

Recorded by Vera M. Collins, Acting Reluge Mgr.

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.

May-Aug.

3-1750 For NR-(Rev. Ma. h 1953)

WATERFOWL

	:				(2)					
(1)	: 1. /20 F	/\: < /c 11	Weel	cs of	repor	ting p	eriod	6/26 00	• 6/02 00 •	(120 211
Species	· 4/ 40=5/	: 2	: 3/12-1	: 4	5 5/20-0/1	6	7 :	8	6/23-29	0/30-1/0
Swans:										
Whistling										
Trumpeter										K- III-
Geese:							/			
Canada	11	111	8	8	8	8	8	8	8	8
Cackling										
Brant										
White-fronted	10.77						MINERAL PROPERTY			
Snow			1 Maria							
Blue										Marine Marine
Other										
Ducks:					3 may 100 m				LIU SNY	
Mallard	300	300	250	200	150	100	35	35	30	30
Black -										
Gadwal1	300	200	150	150	100	50	25	25	80	60
Baldpate	50	40	40	30	20	20	20	20	20	20
Pintail	150	120	50	50	25	15	15	15	15	75
Green-winged teal	60	50	50	40	30	30	5	5	6	6
Blue-winged teal		5	10	10	10	10	8	8	2	2
Cinnamon teal	10	10	10	5	5	5	3	3	2	
Shoveler	25	25	20	20	20	10	10	10	10	10
Wood										William To
Redhead	400	350	350	250	250	200	150	150	200	200
Ring-necked				1,1971						
Canvasback	100	100	40	40	30	30	20	20	10	10
Scaup	500	400	200	200	100	50	10	10	10	10
Goldeneye	7	10								A TANKS
Bufflehead	25	20	10	10			Light Street			
Ruddy	90	70	70	40	40	40	20	20	1,0	1:0
Other C.Merganser	5	5	5	5	5	5	. 5	5	5	ς
Total ducks	2,022	1,705	1,255	1,050	785	565	326	326	430	408
Coot	450	400	350	350	300	150	80	80	120	120

3 -1750a Cont. March 1953)

WATERFOWL (Continuation Sheet);

REFUGE Hutton Lake						MONT	HS OF	May	TO Aug	ust,	19 68
(1) : Species :	7/7-13		of	7/28-8/3:8: 14:	ting			8/25 - 31	(3) Estimated waterfowl days use	: (4 : Produc :Broods:	tion Estimated
Swans: Whistling Trumpeter	801	g samesi svecavnik	of dete	2.00 or god	apqal ()	HO DELLE	EH THOC	100.60101 668	Sureseare		
Geese: Canada Cackling	8	30	30	30	30	30	30	30	2,128	SE SICH OF	6
Brant White-fronted Snow	BRAD OUT	FA91886 A	BANKA NO	arsercus.			ECROBA 1.	0. 09(3) 0.	50108.		
Blue Other Ducks:	5.70G1	6.0000000000000000000000000000000000000	WARTER	ternes be	0.61.9.61.099						
Mallard Black	30	30	180 75	180	180	180	180 75	180	17,990	10	150
Gadwall Baldpate Pintail	60 20 15	60 45 15	70 30	75 70 30	75 60 25	75 60 25	60	75 60 25	11,970 5,075 4,620	1	30 10 15
Green-winged teal Blue-winged teal Cinnamon teal	8 5	8 5 L	15 15 20	15 20 20	15 20 5	15 20 5	15 15 5	15 15 5	2,716 1,260 819	2	10 10
Shoveler Wood	10	8	15	15	15	15	15	15	1,876	1	10
Redhead Ring-necked Canvasback	150	150	180	180	180	180	170	150	26,880	3	80
Scaup Goldeneye	10 10	10	30 15	30 15	30	30 lı	30	30	4,200 10,822. 119	2	20
Bufflehead Ruddy	<u>)10</u>	6 10 5	2 160	160	2 160	2 160 5	160	160	553 10.570 588	1).	1/10
Other C.Merganser TOTALS	363	396	813	818	776	776	750	730	100,058	35	475
Coot:	120	150	150	120	120 er)	120	150	150	24,360		100

DOT	(5) Total Days 1	Jse :	(6) Peak Number	: Total	(7) Production	776 776	750	SUMMARY	100,058	35	PJR
Swans		Jio	110	160	TO OT	Principal	feeding are	as All	refuge lakes	- 77	TNO
Geese	2,128	_:	31		6				119		
Ducks	100,058	To	2,022	30	475	Principal	nesting are	as At a	nd near refuge	lakes a	ind 50
Coots	24,360	130	450	180	100	West 40.	170	120	26,880	3	80
				20 15	20	Reported b	Vera M.	Collins,	Acting Refuge	Manager	10
oka: Gallard Hack	Species:	INST	In addition reporting p	to the	birds liste	th 7534, Wildled on form, ot led in approprinational sign	her species	occurring	nual) g on refuge dur l attention sho	ring the	given
(3) E	Reporting Period Estimated Water Days Use:				refuge popul	ations.	present for	r each sp	ecies.		
(4) F	Production:		breeding ar	eas. Br	rood counts		e on two or	more are	tual counts on as aggregating omitted.		
(5) I	otal Days Use:		A summary of	f data	recorded und	ler (3).					
	Peak Number:	17-13	Maximum num				ge during ar	y census	of reporting p	eriod.	

MIGRATORY (DS (Other than Waterfowl)
Months of , 19 68 Refuge__ August Hutton Lake May to

(I) Species	(I) (2) Species First Seen			3) centration	(4 Last		F		(6) Total	
Common Name	Number	Date	Number	Inclusive Dates	Number	Date		Total #	Total Young	Estimated Use
. Water and Marsh Birds:									algaë :	Duck Duck
Western grebe Eared grebe Pied-billed grebe White-faced ibis Snowy egret Black-crowned	6 50 5 4 1	6/10 6/10 6/24 6/10 6/10	14 107 15 4 13	8/7 6/24 7/29 6/10 8/13	11 11 3	present " " 6/24 present	Present Present Present Present		10 40 10	1,000 10,000 1,000 100 800
night heron Virginia rail Sora	Pre	6/10 sent sent	60 10 20	7/29	16 11	11 11	2	20	45	5,000 1,000 2,000
Shorebirds, Gulls and Terns:		7532, 9 t, 1931	(See Sec . Checkli tern", et	SHOTTONS in the A.O. coagull",	SNI brino 3 si	a sumac :	the correction	ost bro	Spaciast	(1)
California gull Franklin's gull Forster's tern Black tern Wilson's phalarope American avocet Killdeer	130 17 2 18 10 6	6/10 7/15 6/24 6/10 6/24 6/10 6/10	530 25 2 18 120 15	6/24 7/29 6/24 6/10 7/29 7/29 8/13	2 6	6/24 7/29 present	a other apaces.	for freq ets ets	Piper Se	40,000 1,000 14 1,200 7,500 1,200 800
iles occurred.	berret	поэ поан	ng the se	species duri	for the	Maggar s			Posk Numb	(4)
			observeti	ad based or rage populati	(over)	er of year	imated numb	m: Est	Production Total:	(8)

II. Doves and Pigeons:	785964 03		NA.	1	o sri	trink!		100000				
					-			92444	noggue			
Mourning dove White-winged dove					olla	(3) Cončentr	Peak	10	(2) First Se		2	
Total # Total Estimate	Number Colonies	Data		1 9	vi m		Decision 1					
Golden eagle Duck hawk Horned owl							HILDES.	2 2	1 1908		s vesti iahari	1.1
Magpie Raven	Present	resent II	2	38	176/57		present	OL 9	9		ertern ared gr	100
Crow	Present	272	2	1 1 - 1 - 1	6: //	11	tt tt	MS O	15		Lid-bal	100
Marsh hawk Swainson's hawk Ferruginous hawk	Present Present 1 7/29	hesent	5	6/15-7/	0	11	11 11	ot/9	T I	1 Janua	3	400 510
refruginous nawk	1 1/29	21 21	1 11	7/29	63/1		0 1	6/10	16 Prope	neron Fail	night irgini	7

INSTRUCTIONS (See Sec. <u>7532</u>, Wildlife Refuges Field Manual)
Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.

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 migration record for the species for the reporting period.

(1)

000.04

1,000

- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of youngproduced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1750ъ

UNITED STATES Form NR-1B DEPARTMENT OF THE INTERIOR (Rev. Nov. 1957) FISH AND WILDLIFE SERVICE

BUREAU OS SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Hutton	Lake	For 12-month period ending August 31, 196							
Reported by V	era M. Collins	Title_	Acting Refuge Manager						
(1)	(2)	tetidet practice	(3)	(4)	(5)				
Area or Unit	Habitat		area's dreams a	Breeding					
Designation	Type Acreage		Use-days	Population	Production				
bus cam hofte	Crops	Ducks	260.001	300	1,75				
	Upland 1.368	Geese	2.422	2	6				
	Marsh 200	Swans	7						
	Water 400	Coots	56,980	80	100				
-qlases mis	Total 1.968	Total	319.410	382	581				
	Crops	Ducks		1800 E					
	Upland	Geese							
Land out tours	Marsh	Swans	FO SHIPSON	errewith entrepe	*********				
	Water	Coots	ADDESO NA CO	(a Revo					
anly inte	Total	Total	ngo Frant Lagran	ro troir					
	Crops	Ducks	gay daga tr	discurr					
ge foods;	Upland	Geese	thickers not	Food (%					
	Marsh	Swans	will educative.	duran					
	Water	Coots	produced to	refore k	4-7				
	Total	Total	em a Cdada .	Cault +					
	Crops	Ducks	110101	Veget					
	Upland	Geese							
	Marsh	Swans							
	Water	Coots	erdens ersten						
	Total	Total	orlest mach	and of					
	Crops	Ducks							
	Upland	Geese							
	Marsh	Swans							
	Water	Coots							
	Total	Total	roo Aleeda	pata-					
	Crons	Ducks							
\$ 10 10 00	Crops Upland	Geese			ar g (3				
4 - HILV sam	Marsh								
	Water	Swans		7590b					
	Total	Coots Total							
	10001								
	Crops	Ducks	TWANT TO WAR	hetro	reversides				
	Upland	Geese							
flight age.	Marsh	Swans	Intak bets	le lokudi saas	M4				
	Water	Coots							
	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 entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter need only be submitted to report changes in unit boundaries or their descriptions.

(2) Habitat:

Crops include all cultivated croplands such as cereals and green forage, planted food patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type foods; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.

(3) Use-days:

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

Breeding Population:

An estimate of the total breeding population of each category of birds for each area or unit.

(5) Production:

Estimated total number of young raised to flight age.

3-1752 Form NR-2 (April 1946)

UPLAND GAME BIRDS

19 68 August Hutton Lake May Months of; Refuge to (1) (2) (3) (4) (5) (7) (6) Density Young Species Sex Removals Total Remarks Produced Ratio

Number broods obs'v'd. For Restocking For Research Hunting Estimated by cover types. This number Pertinent information not cefuge manager as to Cover types, total using specifically requested. List introductions here. Common Name acreage of habitat Percentage Refuge to furnish the desir bna qu , queva Lucks reverting a None observed. sis: grass prairie, mbols lists Standard type s No. 7 should b should be based on actual Figures supmitt observations a Survey method used nts on represent beiss bal s areas should size of a mple area or under Estimated number of young produced, assed upon observations and actual courts in representative breeding habitat. This column applies primarily to will turkey, pheasants, etc. Include date on f avidable. other species Indicate otal number to each category removed diring the report period. Haringted total number using the refuge during the report period, This may include resident birds plus those migrating into the refuge during certain seasons. Indicate method used to determine population and area covered in survey. A so include of her sertisent information sot specifically requested. * Only columns applicable to the period covered should be used.

UPLAND CAME BIRDS

Porm NR-2 (April 1946)

Hutton Lake

Form NR-2 - UPLAND GAME BIRDS.*

August

(1) SPECIES:	Use correct common name.		(2) Density	
(2) DENSITY:	Applies particularly to t			ic
Pertinent information specifically request List introductions here	hunts, etc.). Detailed do numbers. Density to be exinformation is to be prefinumber of acres in each conformation need not be referred.	ata may be omitted for sper and acres per and aced by a statement from over type found on the re-	pecies occurring in limit imal by cover types. Thi the refuge manager as to efuge; once submitted, th	ed s the is
	of cover types. Cover ty information but not so mu swamp, upland hardwoods, grass prairie, etc. Stan No. 7 should be used wher observations and counts o size of sample area or ar	ch as to obscure the generic reverting agriculture lard dard type symbols listed e possible. Figures submarrepresentative sample a	eral picture. Examples: nd, bottomland hardwoods, in Wildlife Management S mitted should be based on areas. Survey method use	spruce short eries actual
(3) YOUNG PRODUCE	D: Estimated number of young in representative breedin		servations and actual cou	nts
(4) SEX RATIO:	This column applies prima other species if availabl		asants, etc. Include dat	a on
(5) REMOVALS:	Indicate total number in	each category removed dur	ring the report period.	
(6) TOTAL:	Estimated total number us include resident birds pl			
(7) REMARKS:	Indicate method used to d include other pertinent i			Also

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

Sept.-Dec.

3-1750 For VR (Rev. Ma.ch 1953)

WATERFOWL

					(2)					
(1)	9/1-7	:o/2_1L	Week	s of	repo:	ting 5 10/6-12	perio		:10/27-11/2	13/2-0
Species -	1	2	3	4	5	: 6	20/27-67	. 8	: 9 :	11/3-9
Swans:										
Whistling						1 2 2 1 1 1 1			16	16
Trumpeter										
eese:										
Canada	30	30	30	30	30	30	30	30	30	39
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
ucks:		A STATE OF THE PARTY	A Laborate					100		
Mallard	130	200	300	100	450	1,00	300	250	250	200
Black -										
Gadwall	75	70	70	50	50	100	30	20	0.0	
Baldpate	60	100	300	1400	400	500	300	300	250	200
Pintail	25	50	5(3)	100	125	50	30	30	10	
Green-winged teal	15	50	300	3160	125	50	LO	30		
Blue-winged teal	15	75	30	10	10					
Cinnamon teal	5		5	5	1		A DESTRUCTION			255
Shoveler	15	20	50	50	60	100	20	20		10
Wood										
Redhead	150	150	150		155	150	100	100	150	20
Ring-necked				5		TO	36)	10	10	
Canvasback	30	30	50	50	55	20	10			
Scaup		300	100	100	11.5	150	200	200	200	150
Goldeneye										
Bufflehead				1	23	50	150	2:03	300	200
Ruddy	160	110	100	300	85	80	. 80	80	608	
THERE Com. Horg.					2		THE THE STATE OF			
TOTAL DUCKS	730	930	1285	1520	1676	21110	1270	1220	1240	780
Coots	150	150	100	100	100	50	50	50		

3 -17 3 Cont. hn-1 (Rev. March 1953)

(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

MONTHS OF September TO December , 19 68 Hatton Lake REFUGE (3) Weeks of reporting period Estimated : Production 11/10-16 11/17-25 11/21-30 12/1-7 12/8-11 12/15-21 12/22-28 12/29-31 :Broods:Estimated waterfowl Species days use : seen : total Swans: 224 Whistling Trumpeter Geese: 2,330 30 Canada Cackling Brant White-fronted Snow Blue Habou Ayun B Other Ducks: Mallard 200 10 23,950 Black Gadwall 2.975 Baldpate 140 do Pintail Green-winged teal 2 Blue-winged teal 1,20 Cinnamon teal 168 Shoveler 10 Wood Redhead 20 B_TRE Ring-necked 364 Canvasback 1.715 Scaup 150 20 10,465 Goldeneye Bufflehead 250 50 8,561 Ruddy 6 335 TENEX Com. Herg. 780 TOTAL DUCES: 110 91,077 5,250 Coot: (over)

	(5) Total Days Use:	(6) (7) Peak Number: Total Production	SUMMARY
Swan	: 22h :	16	Principal feeding areas Refuge lakes and mad flate
Gees	se 2,310 :	30	
Duck	cs <u>91,077</u> :	1,676	Principal nesting areas
Coot	5,250	150	
			Reported by V. Carrol Donner
(2)	Weeks of Reporting Period:	Estimated average refuge popu	ulations.
nos.	Reporting Period:	Estimated average refuge popu	ulations.
(3)	Estimated Waterfowl Days Use:	Average weekly populations x	number of days present for each species.
(4)	Production:	breeding areas. Brood counts	oduced based on observations and actual counts on representative s should be made on two or more areas aggregating 10% of the having no basis in fact should be omitted.
(5)	Total Days Use:	A summary of data recorded un	nder (3).
(6)	Peak Number:	Maximum number of waterfowl p	present on refuge during any census of reporting period.
(7)	Total Production:	A summary of data recorded un	der (h).

3-1751 For NR (Aug. 1952)

MIGRATORY ADS

Refuge Hutton Lake

(Other than Waterfowl)

Months of September

to December

, 19<u>63</u>

(1)		2)		3) centration		(+)		(5)	evel vent	(6) Tetal
Species Common Name	First	Date	Number	Inclusive	Number	Seen	Number Colonies	Production Total # Nests	Total Young	Total Estimated Use
. Water and Marsh Birds:			Zydano o z		110000	2400		10000	eous Bird a daglo tawk	IV. Frede Golde Duck
lestern grebe lared Grebe lied-billed grebe lack-crossed	14 100 15 13	9/1 9/1 9/1	1h 100 35 13	9/1-10 9/1-10 10/1-15 9/1-15	11 2 35 7	10/5 10/5 10/5 10/5	1/6 3/3 2/6 3/3 2/6 3/3		ivo i	300 2,000 500 200
night heron	60	9/1	60	9/1-15	0	Z	7/6 7		sheet ear	800
A Domine		ted by	Керог							
I. Shorebirds, Gulls and Terns:	ildlife B Edicton dicton lo	1881 ,3	(See Sec. Check!!! tern", et	RUCTIONS n the A.O. seagull",	INS : bngol a sa amie	names e	the correct r. Avoid	seU spo	:sakoeq8	(I)
California gull Franklin's gull Filson's phalarope Insrican avocet	50 25 120 15	9/1 9/1 9/1 9/1 9/1	50 25 120 15	9/1-30 9/1-30 9/1-15 9/1-30 9/1-15	9 10 5 2 1	10/5 10/5 10/5 10/5 10/5	other epite spite of the control of	arol Mirq Ogla	A1	1,800 250 2,000 500 150
	period.	2017109	for the re	he species	nol buo:	etion rec	first migra	edi in	First See	(2)
les occurred.	the spec	go nol3	eak popula	lates when p	b evicular	L boa m	mated number	ars: Kati	Feak Runb	(8)
				pecies duri		6		1 13	Last Sean	(6)
unts.				to bound by	s pubord Sur	10 Z 30 Z	mared number	n: Vett	Production	(2)
	sent) of	days pr	ion X no.	age populat	(over)	ies days	mated speci	res .	Total:	(9)

(1)	(2	2)	(3)	Self made ((4)		(5)	(Class	(6)
III. Doves and Pigeons: Mourning dove White-winged dove	3	10/5	3(A) st Seen	10/1-10	(3) £	10/15	Seer	S)		l lo
tal # Total " Estimate ssts Young Use	on red	Nur Colu	edeC 2	edmud ev.	Inclusi C Dates	Number	Date	Number	элай фолио	0
IV. Predaceous Birds: Golden eagle Duck hawk Horned owl Magpie Raven Crow Kareh hank Sudneon's hank Terraginous hank	2 2 5 5 5 1	9/1 9/1 9/1 9/1 9/1	9 2 5 5 1	10/1-20 9/1-30 9/1-30 9/1-10 9/1	2 2 1 1	12/31 10/5 11/1 10/5 9/1	100000000000000000000000000000000000000		ter and Marsh cols: cols	300 60 200 50 5
						Reporte	ed by_	V. Carr	ol Donner	

(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 (Gavilformes to Ciconilformes and Gruilformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

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

- (2) First Seen: The first migration record for the species for the reporting period.
- (3) Peak Numbers: Estimated number and inclusive dates when peak population of the species occurred.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated species days use (average population X no. days present) of refuge during the reporting period.

3-1750c Form NR (Sept. 1960)

WATERFOW: JNTY KILL SURVEY

Year 196

Refuge Hutton Lake

(1) Weeks of Hunting	(2) No. Hunters Checked	(3) Hunter Hours	(4) Waterfowl Species and Nos. of Each Bag	(5) Total ged Bagged	(6) Crippling Loss	(7) Total Kill	(8) Est. No. of Hunters	(9) Est. Total Kill
	days	d authus	opening day and ends at the close of l	lik animed	midmad To	ret week Succes	(1) The fi	
	ord d be to care	robition	Refuge Closed to Hunting.	have comple of the wee od. Whin th	those who ng each da ort expend n to colle	nly from ted duri nter of be take	data collec the h shoul	
		6667 00	order of mambers bagged. Sample entry (11), Widgeon (6), Coot (1), Canada Goo	ng kacamanh a	species i Redbend (1	aterfow 1 (36)	(h) List Pinta	
	in the state of	r Marketon	,begg	waterford ba		lesT Letof		
			ported knocked down but not recovered.	w. I				
	iding	ek, incl	who hunted on the refuge during the wa	rejoud le r	ums 5 and 6 total numbe ed (Column	ate the	mijsE (8)	
			c. Column 9 - Column 8 x Column 7.					
	03-848	08	(over)					

of Hunters

Est. Total

3-1/50c Form MR (Sept. 1960)

No. Humbers

INSTRUCTIONS

Waterfowl Species and Nos. of Each Bagged | Bagged

- (1) The first week of hunting begins with opening day and ends at the close of hunting 6 days later. Successive weeks follow the same pattern.
- (2) The goal is to survey a minimum of 25 percent of refuge hunters each week and to record data only from those who have completed their day's hunting. This information should be collected during each day of the week and in each area hunted in relative proportion to the hunter effort expended. When the 25 percent goal cannot be achieved, particular care should be taken to collect representative data.
- (3) Record the total number of hours the hunters spent hunting on the refuge.
- (4) List waterfowl species in decreasing order of numbers bagged. Sample entry: Mallard (61), Pintail (36), Redhead (16), Gadwall (11), Widgeon (6), Coot (4), Canada Goose (3), Greenwinged Teal (1).
- (5) Record total numbers of waterfowl bagged.
- (6) Record total numbers of waterfowl reported knocked down but not recovered.
- (7) Total of Columns 5 and 6.
- (8) Estimate the total number of hunters who hunted on the refuge during the week, including hunters checked (Column 2).
- (9) Kill sample projected to 100 percent. Column 9 = $\frac{\text{Column } 8}{\text{Column } 2}$ x Column 7.

3-1752 Form NR-2 (April 1946)

UPLAND GAME BIRDS

(1) Species	(2) Density			3) oung luced	(4) Sex Ratio	(5) Removal		SECTION AND ADDRESS OF	(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 Resstocking	For Research	Estimated number using Refuge	Pertinent ins specifically List introduc	requested.
actual	Rose observed.	eral eral end, l in l mitte areas		e dota pricult mbols Figur tive	mech as to ob reverting a madard type s	ods Se wh mtg	etc. etc. upe d co	and itie, ild bi me æ	graes pre No. 7 sho observatu		
83	nuos largas bas anoli	Serva		rased v	ng produced, ing habitat.					YOUNG PRODUCES	
no	s, etc. Include data	0118261	y, ph	turius l			eolf va 1			SEX RATIO:	
	the repert period.	galm	ib bev	omer g	n each catego	l i	dana	laso		REMOVALS:	
seasons.	ort period. This may efuge during certain									TOTAL:	
08.	covered in survey. A equested.				determine po					REMARKS:	(7)
			1.0	used.	ed bloods bet	eve	a bol	e per	licable to ti	nly columns app	

UPLAND GAME BIRDS

Form NR-2 - UPLAND GAME BIRDS.*

(1)	SPECIES:	Use correct common name.			(2) Density	
	DENSITY:	Applies particularly to the hunts, etc.). Detailed dat numbers. Density to be expinformation is to be prefact number of acres in each covinformation need not be rep	a may be omeressed in a led by a state of the four type four	considered in nitted for specucres per animal tement from the node on the refu	removal programs (pubies occurring in limil by cover types. The refuge manager as tge; once submitted, t	ted is o the his
		of cover types. Cover type information but not so much swamp, upland hardwoods, regrass prairie, etc. Standa No. 7 should be used where observations and counts on size of sample area or area	s should be as to obsc verting agr rd type sym possible. representat	e detailed enougure the general iculture land, abols listed in Figures submittive sample are	gh to furnish the des l picture. Examples: bottomland hardwoods Wildlife Management ted should be based o as. Survey method us	ired spruce , short Series n actual
(3)	YOUNG PRODUCED:	Estimated number of young p in representative breeding		sed upon obser	vations and actual co	unts
(4)	SEX RATIO:	This column applies primari other species if available.		turkey, pheasa	nts, etc. Include da	ta on
(5)	REMOVALS:	Indicate total number in ea	ch category	removed during	g the report period.	
(6)	TOTAL:	Estimated total number usin include resident birds plus			그 프로그램 그리고 있다면 그 프로그램 이 없었다면 하는데 하는데 그리고 있다면 그리고 있다.	
(7)	REMARKS:	Indicate method used to det include other pertinent inf				Also

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

BIG GAME

Button ...ke Refuge_

Calendar Year 1968

(1) Species	Density	(3) Young Produced	oung Removals			de di	(5) Losses			Ir	(6) troductions	Estin Total Popul	(8) Sex Ratio	
Common Name	Cover Types, Total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At Period of Greatest Use	As of Dec. 31	
Antelope	1,250 Acres of grassland interspersed with greass- wood flate	bilparie; bi boil; met liod	tte lur	md u	81 695 188	rigur ile a ir Re	mes baru	ald av ba	poesi entata dicar	ers pres l ed	d be used vounts on recessional designation of the contract of	130 25 43 0	20 (6)	20:100
Hule dear	1,300 acres grassland, greasewood flate and acres acres and acres are a formation and acres are a formation and acres are a formation are a formation are a formation and acres are a formation are a formatio	the or a noved dub and the control	a idi	gor	y a	sach brds	in	TS	l numl	tota sis	Indicate On the be	MALS:	MEIS (A)	20:100
	indicate count lusges to c stock was secured: stock was secured: a rebuse at persod of the		gg.	age 222 ach	36	egu te	ı b	is pop		the	Indicate	ODUCTIONS: L REFUGE LATION:	TMI (8)	
	refuge at speriod of its a beneficially at the specific as determined from the specific as the specific and the specific as the specific and the specific as t	e lo asl		bai	1 85	lam 1 dgud	e s and	353	es rock	erit erve	Indicate Indicate field ob	RATIO:	ENS (H)	
									×					

Remarks:

Reported by

V. Carrol Donner



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 Louisiana white-tailed deer.
- (2) DENSITY: Detailed date 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) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE
 POPULATION: Give the estimated population of <u>each</u> <u>species</u> on the refuge at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.

markst

great afrest

eported by W. Cherron Bonsor

Refuge Hutton Lake

Year 19 68

	Botulism None not	200	Lead Poiso	oning or other Disc	ease	*
Period of outbreak			Kind of disease			
Period of heaviest los	ses		Species affected			
Losses: (a) Waterfowl (b) Shorebirds (c) Other	Actual Count	Estimated	Number Affected Species	Actual Count		
Number Hospitalized	No. Recovered	% Recovered	Number Recovered			
(a) Waterfowl (b) Shorebirds (c) Other			Number lost Source of infection			
Areas affected (locati	on and approximate	acreage)	Water conditions			
Water conditions (aver areas	age depth of water, reflooding of ex		Food conditions			
Condition of vegetation	n and invertebrate	life	Remarks			
Remarks	3.3					

1.		,				(1)
NONAGRICU.	JRAL	COLLEC.	INS,	CEIPTS,	AND	ANTINGS

Refuge Rutton Lake Year 19 68

	(See		s and Re		Plantings (Marsh - Aquatic - Upland)						
Species	Amount (Lbs., bus., etc.)	Date	Method or	(3) Total Amount	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
BORD											

(2) C = Collections and R = Recaipts	If contact up \$
(3) Use "S" to denote surplus	
Total acreage planted:	
Marsh and aquatic	
Hedgerows, cover patches	
Food strips, food patches	
Forest plantings	
	763.6

3-1759

Forn. R-E

(Rev. Jan. 1956)

Fish and \ .dlife Servi 1 nch of Wild. e Refuges

CULTIVATED CROPS - HAYING - GRAZING

Button Lake Albany Refuge County State Woming Permittee's Government's Share or Return Green Manure, Share Harvested Harvested Unharvested Cultivated Total Cover and Water-Acreage Crops fowl Browsing Crops Total Acres Bu./Tons Acres Bu./Tons Acres Bu./Tons Type and Kind Grown Acreage None Fallow Ag. Land No. of Permittees: Agricultural Operations Haying Operations Grazing Operations Hay - Improved GRAZING AUM'S ACREAGE Tons Cash Number Cash (Specify Kind) Harvested Acres Animals Revenue Revenue 1. Cattle 75 225 150.00 1200 2. Other 1: Total Refuge Acreage Under Cultivation Home Hay - Wild 2. Acreage Cultivated as Service Operation Home

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.

<u>Cultivated Crops Grown</u> - 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 the number 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 Unharvested</u> column,

<u>Total Acreage Planted</u> - 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.

<u>Hay - Improved</u> - 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.

8-1570 NR-89 (4/54

REFUGE GRAIN REPORT

LHY .- DOP. SMC., BABH., D.C. A7065

Button Lab Months of September through December , 195/63 Refuge (5) Grain Disposed of (7) Proposed or Suitable Use* (1) (2) (3) (4) (6) ON HAND ON HAND RECEIVED VARIETY* TOTAL END OF BEGINNING DURING PERIOD OF PERIOD PERIOD Transferred Seeded Fed Total Seed Feed Surplus Sweetclover, yellow 2 2 Corn (Unknown) 5 (10) indicate here die source of grain shipped in, destination of grain transferred, dain on con-Millet, Siberian Where stoned on "Meddquarters grangey." 23 23 on for shipping and receiving. Mile. Bedfern 10 Milo, Redbine 15 72-00 au ph Aurierics of Er and 10 10 Wheat (Unknown) (4) A total of columns 2 and 3. Barley, Otis 1 Report all grain received during period from all sources, a ch as trans er, share cropping, or include only domestic grains; aquatic and other seeds will be listed on MR-9. as specific delans are necessary in considering transigr of seed a o, new era cowpeas, engano soy beans, etc. stere hamng as corn, wheat, and soybeans and corn, garnet wheat, red May wheat, durnin wheat, pring wheat proso male grain separately and specifically, as that form, yellow tent corn, square done in computating vomine of granaries multiply the cubic o'mtents (cu. t.) by 0.8 bushels. 50 lb., rye -55 lb., oats -50 lb., apy beans - 70 lb., millet -50 lb., cowpers -6 a shall be considered equivalent to a bushel: Corn (stelled)-to lb., corn (sar)-70 lb. wheatme purpos e of fills i (8) Indicate shipping or collection points (9) Grain is stored at ______ (10) Remarks _____ *See instructions on back.

District TOTAL

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.

0

- (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.

6.0

(10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

3

100

2

153

	-	
Re	See.	~
RΕ	IU	20

Proposal Number Reporting Year

ANNUAL REPORT OF PESTICIDE APPLICATION

Date(s) of oplication	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)
one								

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