•	ROUTING	SLIP	DIVISION OF	VILDLIFE F	REFUGES DA	TE: 1/30 194.5	
		MR. SALYER MR. ELMER			SECTION OF HABIT Mr. Griffit Dr. Bourn	AT IMPROVEMENT: AT REG 2- WSB 2-	m 5
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0	REMARKS	North Da	k <u>Fesement</u>	Dist. #6			
		Sept-Dec	. 1944				
					Return to:		

NORTH DAKOTA EASEMENT REFUGES D DISTRICT No. 6.

BONE HILL CREEK CHASE LAKE HALF WAY LAKE HOBART LAKE LAKE GEORGE STONEY SLOUGH TOMAHAWK LAKE

The easement refuges in this area had a fair supply of water during the fall. The water levels were brought up by the rains during November, and as a result have a good carry over of water for next year. The marsh and aquatic plants in most of the units are as good as could be expected. Numerous waterfowl stopped on these refuges during the fall migration to feed both on the refuges and in the vicinity.

BONE HILL CREEK

The main pool back of the dam was about five feet below spillway crest during November. This dam has a leakage under the earth enbankment amounting to about ten gallons per minute, which accounts for the low water back of the dam, except after heavy rains. The slough in the south west quarter of section 33 had a supply of water all fall, although during October it became rather dhallow. The aquatics were represented fairly by smartweed, spike bulruches, duckweeds, and a few round stem bulrushes. Due to livestock grazing on the area the plants do not make much of a showing.

Migratory birds made fair use of the area. Upland birds consist . mainly of pheasants, grouse and hungarian partridge. Food is sufficient for all upland game birds as much of the land is cultivated and grain the main crop.

From indications a few muskrats are staying in the coules back of the dam.

CHASE LAKE

The fresh water unit No. 1 frome over at about 1.4 feet below the orest of the natural spillway. The structures were in a good condition except for a few muskrat holes. These were dug up and refilled. No muskrats were found in the holes. There was only one muskrat house on the unit, and that house was not being used. We were unable to eliminate any of the muskrats present as they evidently were living in the banks. Plans have been made to take care of the muskrats in the spring. The aquatic and marsh plants are well represented on the fresh water unit; they consisted of sago pondweed, milfoils, duckweeds, hardstem, prairie bulrush and spike rushes. Good nesting cover is available both on the refuge and in the vicinity.

The main lake or salt water unit had a higher water level at freezeup than a year ago so that the water is considerably less saturated with salts. Waterfowl appear to use the lake as a resting place frequently.

The pelican and gull nesting island was visited on December 14, and 20 dead pelicans were counted that failed to mature before the cold weather set in. Coyotes had been feeding on the pelican carcasses.

No deer were seen but there were indications that several had been around.

HALF WAY LAKE

The unit froze over with a good supply of water present. There are no structures on the refuge making it fifficult to determine the exact stage of the water. Food was plentiful for all diver ducks with plenty of food in the vicinity for surface feeding ducks that used the refuge as a resting plance. Dispite the fat that the water area is mall many birds used the area - both migratory and upland birds.

HOBART LAKE

ir

The south fresh water unit No. 1 froze over with/about six inches of spillway crest. The water level in unit No. 2 appeared to be slightly higher than a year ago. The structures between the two units were in good condition except for a crack in the concrete along the crest of the spillway. This crack was filled with tar once during the summer but will need some more before the spring run-off.

Waterfowl made good use of the area during the fall migration. According to reports many geese were shot in the vicinity of the refuge during the fall.

About a half a mile north of the structures fifteen muskrat houses were counted in the bulrush area. The dam and spillway was checked for burrows but none could be found.

Plenty of food and cover was available for upland game birds present.

LAKE GEORGE

The fresh water unit No. 2 at the south end of the refuge was in a very excellent condition and a flow of about ten sec. ft. of fresh water was passing over the spillway on November 9th. The fresh water unit No. 1 at the north end continued to wover only about five acres of area due to the lack of a structure. The main natural bodies of water remained about the same.

Vegatation is fairly good over much of the refuge. Hardstem and Prairie bulrushs have fine stands in the south freshwater unit.

Numerous waterfowl again used the refuge during their migration to the South. Feeding in the vicinity was very good.

Sufficient food and cover is present for upland game birds. According to local hunters upland game hunting was considerably better this year in the vicinity of the refuge.

STONEY SLOUGH

All units on the Stoney Slough "efuge were about three-fourths full at freeze-up except for Nol and No. 2 which were dry. All dikes, control structures, spillways and ditches were in a very good condition. The vegatation about the refuge was very good even though some of the refuge lies in pastures. Waterfowl made very good use of the refuge during mignation. Both duck and goose hunting was very fine in the visinity of the refuge during the fall. Numerous whistling swan stopped on the refuge.

Trapping permits were issued to several farmers living on the refuge for the purpose of taking such fur-bearing animals as muskrats, mink, weasels, skunks, etc.

Through the cooperation of a farmer's son living on the refuge a violation case consisting of four hunters killing three geese on the Stoney Slough Refuge was reported to us. Edvick Nelson was convicted on January 20th on transporting geese that had been illegally shot on the refuge. He was fined \$20.00 and paid \$5.40 costs before a Justice of Peace at Valley City, North Dakota. The other cases are still pending.

TOMAHAWK LAKE

The structures at Tomahawk were in good condition, although some seepage has been noted on the lower side of the dike. According to Mr. Warren E. Hall's report on November 10th, 1944 the seepage likely comes from a sub strata rather than through the embankment. The water level was about three and one-half feet below the crest of the spillway.

Canvasbacks and redheads made good use of the sage pondweed on the area, especially on the water area at the north end of the refuge. The fall migration of waterfowl used the area extensively.

This refuge has a good supply of upland game birds for its size.

PHOTOGRAPHS: Attached.

January 26, 1945 Submitted by:

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Refuge Manager

Remarks by Regional Office.

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PHOTOGRAPHS: Attached.

January 26, 1945 Submitted by:

Kefuge Manager

Remarks by Regional Office.





Chase Lake Easement Refuge; Dec. 14, 1944. View of Muskrat burrow dug out in dam. R-54-6. Form NR-1

MIGRATORY BIRDS

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Refugen D. Harmant-Infages Dist. No. 6 Months of Sentember to December

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(1) Species	(2 First Ob) se rve d	(3) Became Common	(4) Peak Concer	ntration	(5) Last Ob	Berved	Young	(6) Prod	uced	(7) Total
Common Name	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
BONE HILL CREEK Mallard Gedwall Baldpate Pintail Green Winged Teal Blue "" Shoveler Redhead Canvasback Lesser Scanp Willets Marble Godwits Avceets Chase Lake White Felican California Gulls Ping-billed Gulls Mallard Gedwall Baldpate Pintail	Use correct common number as found in the A.O.U. Check List, 1931 Edition, and L A.O.U. O.U. order. General terms are to avoided, such as "scanpu", "teals, etc.	a the first refer out of the second sufficient of the second s	characterize of the second of the second sec	refuge. The greatest music of the species proc to any one date or limited interval of	during the spring or fall migration, white the summering, and the number observed exclusion of obvious original or non-migrants.	Satimated number of young produced base upon observations and actual counts on representative breading areas. Brood	datidation of the solution of the solution of the second o	ur un the star to the and the star of the second start and the start the start and the second start and s	all at one of the flatter is the factor of the factor of the flatter is the factor of the flatter is the factor of the flatter	20 6 8 35 0 15 10 7 7 7 4 20 120 1200 1200 1200 100 20 40 75	500 100 250 400 20 50 50 50 50 50 50 50 50 50 50 75 100 6 4 20 2100 10 100 2600 200 300 2000

REMARKS: (Pertinent information.not specifically requested)

Form NR-1 - MIGRATORY BIRDS (Include species in families Gaviidae through Strigidae; also doves and woodcocks)*

- In case a resident form occurs, such as mottled duck on the Gulf Coast, use only the columns that apply.
- (1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".
- (2) FIRST OBSERVED: The first refuge record for the species during spring migration, fall migration, wintering, or summering, and the number observed. In the case of resident species this column may be disregarded.
- (3) BECAME COMMON: The date the species became common on the refuge.
- (4) PEAK CONCENTRATION: The greatest number of the species present on any one date or limited interval of time.
- (5) LAST OBSERVED: The last refuge record for the species during the spring or fall migration, wintering, or summering, and the numbers observed exclusive of obvious cripples or non-migrants.
- (6) YOUNG PRODUCED: Estimated number of young produced based upon 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 are to be omitted.
- (7) TOTAL: Estimated total number of the species using the refuge during the period. This figure may or may not be more than that used for peak concentrations, depending upon the manner in which birds come through; i.e., in waves or all at once. On refuges representing the terminus of the flight lane, the figures would probably be the same in many cases.

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

Form NR-1

MIGRATORY BIRDS

R.

Refuge N.D. Research Refuges Dist. No. 6 Months of September to December , 194 4

(1) Species	(2) First Observed	(3) Became Common	(4) Peak Concer	itration	(5) Last Ob	served	(Young	6) Produce	ed	(7) Total
Common Name	Number Det	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. m Size T	sti- ated otal	Number Using Refuge
Green Winged Teal Blue Shoveler Redhead Canvasbaok Losser Seaup Wilsen Phalerope Willet Avecot HALF WAY LAKE Mallard Baldpate Pintail Green Winged Teal Blue Shoveler HOBART LAKE Mallard Gadwall Baldpate Pintail Green Winged Teal	<pre>if nl bruch as seman nome of of a form of a form of a formation of a formati</pre>	this column may be disregarded.	refuge. The greatest number of the species profit on any one date or limited interval of	during the spring or fall migration, withering, or summering, and the number observed exclusive of obvious oripples or non-migrants.	East become a proving the second produced base manual second and second produced by an analysis of the second seco	aggregating log of the bracking inditation and the brack are the log of the state of the set of the	recommended const recent of the spectra the shift of the period. This fig of the period of the solution of the	commentation and an and an and an and an and an and an and and	7 60 20 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 9 20 10 30 0 10 5 5 50 7	0 800 300 100 250 300 8 8 8 40 500 30 500 7 200 40 500 200 350 200 550 2000 1

REMARKS: (Pertinent information.not specifically requested)

1612

Form NR-1 - MIGRATORY BIRDS (Include species in families Gaviidae through Strigidae; also doves and woodcocks)*

In case a resident form occurs, such as mottled duck on the Gulf Coast, use only the columns that apply.

- (1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".
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- (3). BECAME COMMON: The date the species became common on the refuge.
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Form NR-1

MIGRATORY BIRDS

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Refuger.B. Hassand Haffages Dist. No. 6 Months of September to December ____ 194 _

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M M Q 4	N2	1	2				8		1612
(1) Species	(2) First Observ	(3) Became Common	(4) Peak Concen	tration	(5) Last Ob	served	(i Young)	6) Produced	(7) Total
Common Name	Number De	ate Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Esti- nated Size Total	Number Using Refuge
Blue Winged Teal Shoveler Redhend Canvasback Lesser Scaup LAIE GEORGE Mallard Pinteil Blue Winged Teal Lesser Scaup STONBY SLOUGH Mallard Gadwall Baldpate Pistail Green Winged Teal Blue Shoveler Re head Canvasback Lesser Scaup Willets	<pre>1. Durof as seman nome o Jost Durof II bu 1. bus anothing f(si is is is bound and a long a long is 0.0. 1. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.</pre>	to draw the second second and adapt and adapt and a second	aerq saloaqs add lo radmin jestserg adf 101 lo Lavradni betinii ro adab ano yna no metees add mol feeren andlar thai adf	duning the spring or fall migration, wintering, or summering, and the number observed exclusive of obvious cripples or non-mignante,	Read hearborng grund lo Tomme hedenthe hear of young provide an upon operation and actual counter through the second in the second of history are seen as	aggregating low to the break and the subtant and a set of the set	w derreage and is retrain instance and marked all all all all all all all all all al	40 16 16 24 7 60 70 50 70 50 7 100 100 7 100 40 20 50 100 7 40 20 50 7 40	500 40 150 500 400 5000 2500 1500 1500 1500 1500 1500 4600 450 600 450 600 450 600 450 600 4000 7 2000 800 500 800 500 800 500 800 500 800 500 800

REMARKS: (Pertinent information.not specifically requested)

Form NR-1 - MIGRATORY BIRDS (Include species in families Gaviidae through Strigidae; also doves and woodcocks)*

In case a resident form occurs, such as mottled duck on the Gulf Coast, use only the columns that apply.

- (1) SPECIES: Use correct common names as found in the A.O.U. Check List, 1931 Edition, and list in A.O.U. order. General terms are to be avoided, such as "scaup", "teal", etc.; use "green-winged teal" or "lesser scaup".
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- (3) BECAME COMMON: The date the species became common on the refuge.
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* Only columns applicable to the period covered should be used.

(7)

Form NR-1 Refuge_	N. D. Easem	ent Refu	M.	IGRATORY BIR	DS Seths of	ptembor	to	ecember	_, 194	1612
(1) Species	(2) First Obse	erved	(3.) Became common	(4) Peak Concen	tration	(5) Last Ob	se rve d	Young	(6) Produced	(7) Total
coffinationame	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Esti- Size Tota	- Number 1 Using 1 Refug 2
Avcosts Lesser Yellow legs Great Blue Heron Baffleheads TOMAHAWI LARS Nallard Baldpate Pintail Green Winged Teal Blue """ Shovelor Redhead Canvasbask Lesser Somp	<pre>use correct common names an round in us A.0.U. Check List, 1931 Exititor, and 1 a volded, order, General terms vous use "gracen-winged termin", "termin are use "gracen-winged termin" or "leaser are </pre>	a during agring manual of the second of the second	. hetragerath ed yam murico aidt	Tothe active of the testane testane the testane testane the testane te	autorians and the solution of solution and solution and the spectrum to such the solution beveased and solution to be solution to solution to the solution of	heard becuthory gnury lo tedmin hedamidal no etimot Landa has and actual counts on representative breeding areas. Hoord source are ord no sham ed bluods admine		tel actorque any lo request larios becaution ught shift .bofreq ent guitur aguter add act tot bear tait nedt eron ed don yen to uppman add noogu guibusqub .snolfsrdneonoo	40 30 60 7 60 20 3 7	8 40 10 200 200 1000 1 800 200 200 200 200 200 200 200 200 200

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Form NR-1 - MIGRATORY BIRDS (Include species in families Gaviidae through Strigidae; also doves and woodcocks)*

TOTO

In case a resident form occurs, such as mottled duck on the Gulf Coast, use only the columns that apply.

(1)	SPECIES:	Use correct common names as found in the
		A.O.U. Check List, 1931 Edition, and list
1	E E E	in A.O.U. order. General terms are to be
	10 C	avoided, such as "scaup", "teal", etc.;
	00	use Warsen-winged teall on Wassen soum
	G IS	ase "Algen-writher rear, or tesser acarb."
(0)		
(2)	FIRST OBSERVED:	The lirst reluge record for the species
	9 6	during spring migration, fall migration,
		wintering, or summering, and the number
		observed. In the case of resident species
0		this column may be disregarded.
(3)	BECAME COMMON:	The date the species became common on the
2	64	refuge.
10		
(4)	PEAK CONCENTRATION:	The greatest number of the species present
-	8	on any one date or limited interval of time.
	11	
(5)	LAST OBSERVED :	The last refuge record for the species
	2	during the spring or fall migration,
		wintering, or summering, and the numbers
		observed exclusive of obvious cripples
	E	or non-migrants.
(6)	YOUNG PRODUCED:	Estimated number of young produced based
(0)	Toolig Thopeologi	upon observations and actual counts on
	a 20	representative breeding areas - Prood
	NO P	counts should be used on the on more should
		counts should be made on two or more areas
		aggregating 10% of the breeding habitat.
10	E	Estimates having no basis in fact are to
		be omitted.
12.		the first of the second s
(7)	TOTAL:	Estimated total number of the species using
		the refuge during the period. This figure may
	1000	or may not be more than that used for peak
P	2 25	concentrations, depending upon the manner in
	0 10 -	which birds come through: i.e., in waves or
	12 12 14 12	all at once. On refuges representing the
1	D IN R	terminus of the flight lane, the figures
10		would probably be the same in many cases
	0.00	the stand of the same the marth cooge

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

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Refuge I.D. Resement Refuges Dist. Ho. 6 Months of September to December , 194 6

(1) Species	(2) Density	(3) Young Produced	(4) Sex Ratio	(5) Removals	9	(6) Total	(7) Remarks
Common Name	Cover types, total per acreage of habitat 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.
BOWE HILL CREEK Phoasants Grouse Partridge Hun. Chase Lake Phoasants	500 A. Crop and grass land 5 25 50 20 A. Grass brush	25 5 8	reverting a dard type s re possible. In represent tess should b	lardwods, etc. Sta u used whe ud cousts area or a	drie, drie, wid b cns s ample	100 20 10	
HALF WAY LAKE Phoesents Grouse Partridge Hun. HOBART LAKE	100 A. Brush, ercy land and grass 2 6 10 600 A. Brush, ercy	20 10 5	; produced, i ky habitat, wily to wild e.	er of poun the breed plies brin plies prim t	attato entat an ap	40 15 10	(3) YOUND PRODUCED:
Phoasants Grouse Partridge Hun. LAKE GEORGE Phoasants	and grass land. 4 ? it); 1000 A. Brush grass & orop land 7	100 7 7 7 40	each categor dug the raft us those mig	naber in 1 aasber u 1 aasber u	total total oride	150 ? ? 150	(5) REMOVALE: (6) TOTAL:
Grouse Partridge Han. STONEY SLOUGH Phoasants Grouse	1000 A. Grass, Broch and crop land 5	50 7 160	otersine pop nformation n	d used to o	notion timer	100 7 200 7	(7) REMARKS:
Partridge Hun. TOMAHAWK LARE Pheasants Grouse Partridge Hun.	200 A. Grass, brush & orop land 5 ?	20	ed bluods b	ravko boln	ing ed	10 40 1 7	* Only columns appli
1613	Note all Groups ner	iloned ere	nharp tail a	d pinnated	-		

Form NR-2 - UPLAND GAME BIRDS. *

SPECIES: (1)

Use correct common name.

(2)DENSITY:

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

Refuge N.B. Research Refuseen Dime. No. 6

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RECURUS AND COMMUNICATIONS

- (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.
- **REMOVALS:** (5) Indicate total number in each category removed during the report period.
- Estimated total number using the refuge during the report period. This may (6) TOTAL: 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. OF THE INTERIOR FISH AND WILDLIFE SERVICE ¥ RECEIVED

E NOT Stol 63 NI