ROUTING SLIP	BRANCH OF I ILDITE R	EFUGES DATE:	9/19 194 9
MR. SALYER		SECTION OF HABITAT	IMPROVEMENT:
LIR. KRUMMES		MR. GRIFFITH	REG 10-
MR_DUMONT	PAD 1-5-50	DR. BOURN	WSB10-
MISS PAUM		Mr. Kischen	
SECTION OF OPERATI	ONS:	SECTION OF LAND MAN	AGEMENT:
MR. BALL		MR. KEWI	
MR. BEGAN		AN AUTORIONISCH	TWO.
Moder	Kem		
SECTION OF STRUCTU	RES:	STENOGRAPHERS:	
MR. TAYLOR			
MR. JOHNSTON			
	NARRATIVE RE	PORT	
REFUGE:	NORTH DAKOTA EAS	SEMENT REFUGES - DISTR	RICT NO. 6
PERIOD:	MAY - AUC	GUST 1949	

NORTH DAKOTA EASEMENT REFUGES - DISTRICT NO. 6

BONEHILL CREEK

CHASE LAKE

HALFWAY LAKE

HOBART LAKE

LAKE GEORGE

STONEY SLOUGH

TOMAHAWK LAKE

The small spring run-off caused the water supply on many of the easement refuges as well as other ponds and sloughs to drop below the normal of the past five years during the first part of May. It was fortune, however, that the summer brought several heavy rains enough to refill several areas to spillway crest.

Most of the grain crops about the refuges were poor due to the rains not coming when badly needed. Many grain fields around the refuges were not harvested.

The waterfowl picture also looked very poor up until birds began coming in the last of July. It is apparent that since there was a poor water supply early this spring the ducks didn't stay but moved northward; in April it appeared to be more ducks around than previous years.

BONEHILL CREEK

This unit had a good run-off in the spring but the water dropped fast. Rains that came in June and July helped to bring the water back up to where it was attractive to waterfowl. The water control structures are in a good condition.

The slough in the SW had a fair amount submerged squatics and numerous bunches of roundstem bulrushes but grazing was heavy so that the plants did not get very far. The cover along the ditch and along fence lines was good.

Due to the shift in the duck breeding area not as many nested on the refuge or locally as last year, although this unit was not affected as badly as others.

Upland game birds made very little moticeable increase due to the low breeding population of pheasants last spring. Food and cover conditions besides favorable weather should have brought forth an increase.

The only predatory animal that appearred to be on the increase were the skunks and badgers. The market value of the skunk and badger pelts

have been next to nothing; the only time any are killed is when they begin to bother around the poultry yards or if the farm boys go out to dig them out for the sport that is in it.

CHASE LAKE

There was not much change in the water levels on the main lake nor in the fresh water unit over last year. The spring run-off in this vicinity was better than on some of the other areas - that and some fair rains kept the water levels up.

The duck nesting population was down some over last year; pelicans were up while California's and Ring-billed gulls were about the same. Several duck nests were found on the pelican island - several of which were gadwalls.

When the refuge was visited on July 11th it was estimated that the total population of old and young pelicans was over 4,000; this was the largest number of adult pelicans ever observed on the refuge - about 1100 young pelicans were raised. Three hundred young pelicans were banded. The pelican diet consisted of about 95 per cent salamanders and balance minnows, carp, bullheads and erayfish.

On June 17th a group of 4-H Club boys from Kensal accompanied the refuge personnel to study birds and to assist with the banding. One hundred California gulls and four hundred ring-billed gulls were banded besides a few pelicans. The gull hatchwas good; the ring-billed gulls were also nesting on the sandbar to the west of the island but due to the wave action the success was not too great.

Upland game birds which consist of pheasants, sharptail, prairie chickens and Humgarian partridges in the area did not show any appreciatable increase. Food and cover conditions were very good.

No deer were observed on or near the refuge but no doubt there are some around as tracks to the fresh water unit were observed.

Predatory and fur animals are below normal apparently. There are few farm places in the vicinity. Sheep raising is given way for more grain farming.

HALFWAY LAKE

The conditions on this area remained about the same as a year ago. A nice refuge and for its size handles many birds. Marsh conditions are very good besides many submerged equatics furnish good for divers.

The nesting population of ducks was down some but this was not due to any condition on the refuge but to the general shift of the nesting ducks to the north.

There is no apparent increase in upland game birds. Pheasants

are the most common.

Predatory animals are on the increase, especially skunk, badgers and red foxes; mostly the first two. Crows that nest in the groves on the east side of the lake, no doubt destroy some duck nests.

HOBART LAKE

Conditions looked bad for this area in April and May since the spring run-off did not bring any water in. However, several heavy rains above normal, later filled the fresh water unit to spillway crest. Water continued flowing over the spillway slowly for several weeks. One severe rain storm brought about four inches, damaging many crops besides creating sloughs in grain fields.

The north alkali lake area which had begun to dry up in many places was much benefitted by the rain also, although the drainage to this area is not as great.

The poor water conditions in the spring materially aided in cutting down the number of nesting ducks and also the non-mesters. This area had the lowest duck population it has had in several years. Nesting conditions were very good and the food supply both upland and in the water units was fair.

Upland game birds remain about the same even though nesting conditions were very favorable. An increase in the population of pheasants should be noticeable since several hens were observed on the east side in the heavy covered waste land. The west side of the north unit also has much waste land which makes a good mesting area.

Predatory animals are on the increase especially skunks.

The spillway was given its first tryout after the repair work done last fall at which time piling was put in back of the spillway wall in order to stop the seepage. It was inspected several times this summer after the rains brought enough water to fill the fresh water unit above spillway crest. There were no signs of any seepage.

LAKE GEORGE

The south fresh water unit was very good again this summer - with a good stand of rushes, excellent cover and a fair amount of submerged aquatics. The main lake water level was about the same as a year ago by the end of the period.

The nesting population of ducks dropped some but not as much as on some of the other refuges in this district. There was plenty of food both upland and in the fresh water units available.

Some predatory animals such as foxes, skunks and badgers appear to be on the increase. Coyotes are held down by local farmers and by the trappers from the Predator and Rodent Control Division since there are quite a few sheep raised in the vicinity.

It is believed that a few deer are staying on the refuge most of the time according to local farmers. Cover and browsing material are not too good for deer.

STONEY SLOUGH

This area received very little spring run-off water and as a result, before the rains came, the pends were quite low on water. A cloudburst through the area in June filled the entire refuge to full capacity by keeping the control gate closed and diverting it to units 2 to 5. The water in units 1 and 2 was slowly drained so as not to damage pasture and hayland; only the channels were left filled with water.

The duck mesting population was extremely low - no doubt because of the poor water conditions on the refuge as well as in the area surrounding the refuge. However, on August 25th when the area was inspected, it was surprising to find such an influx of ducks that early. It is estimated that nearly 23,000 ducks were on the three main units - mostly in unit 3; about 6,000 were mallards and 8,000 pintails.

About 250 black crowned night herons were observed in the trees bordering unit 5. Several great blue herons were also noted.

A few pheasants were observed but no noticeable change over last year. Nesting and food conditions were very favorable.

Predatory animals are similar to last year, it is believed. Crows possibly were the biggest destroyer of eggs since several groves of trees are not too far from the refuge. Some of the sportsmen from Hastings, North Dakota, including the postmaster destroy quite a few crows about these groves.

TOMAHAWK LAKE

The water levels on this area held up good all summer. The water control structure was in good condition. A few yards of small rock was hauled on the face of the dam to further protect the top portion; this was put on by the township.

The duck nesting population though was not what was expected; this area followed the same trend as the other refuges in this district. Food and cover conditions were very favorable.

No upland game birds have been observed on the refuge while checking it, but no doubt a few pheasants frequent the area since some have been observed only a half a mile south of the dam.

Muchrat activity appears to be picking up but none as yet are working near the dam.

Photographs and NR Forms Attached

Prepared by:

Nelius B. Nelson, Refuge Manager

Approved by

Acting Regional Director

19 49

(1) (2) (3) (6) (5) (4)First Migrants Seen Peak Concentration Species Last Migrants Seen Young Produced Total Broods Estimated Estimated Seen Total Common Name Number Date Number Date for Period Number Date 1. Swans: d on chas ractons a Whistling swan 2. Geese: t reinge record for the apecter during the season conderned in the reporting Canada goose 0 Cackling goose Brant _ The gratest number of the species present in a limited in White-fronted goose Snow goose beared sug the mimber seem! This column does not apply 1 168106 Blue goose The tiet reluga record for the species during the season 3. Ducks: to those aprotes of lotal and National significance ,20 50 Mallard reporting period should be a ded in appropriate spaces. Becial a 0 Black Duck birds lineed on fort, other sectes occ In addition to the 10 Gadwall 30 18 Baldpate 60 15 Pintail 0 0 Green-winged teal 250 25 Blue-winged teal 0 0 Cinnamon teal 20 Shoveller 0 0 Wood duck 0 Redhead 0 Principal nesting areas 0 Ring-necked duck 10 0 Canvas-back 20 0 Scaup 0 0 Golden-eye 0 0 poncentrations. Areas used by Buffle-head Q Ruddy duck Waterfowl pumpers Waterfow L usage during per 20 Form NR-1 4. Coot:

3-1750 (June 1949)

REFUGE

SUMMARIES

Total Production:	DOMMANIED
Geese	Total waterfowl usage during period
Ducks	Peak waterfowl numbers
Bull'16-dead Ruddy duck	
• Coots_	Areas used by concentrations
Canvas-back Scaup	
Ring-necked duck	Principal nesting areas this season
Redhead	Trinospaz nos ving aroas unis scapon
Shoveller Wood duck	
Cinnamon teal	Reported by
Green-winged teal Blue-winged teal	
Pinisi	INSTRUCTIONS
Baldpate	
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2) First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak Concentra- tion:	The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since the data are necessarily based of an analysis of the rest of the form.

to <u>AUGUST</u>, 19 449

(1)	(2		(3)			4)	me, depe	(5) about	ne nat (e)
Species	First Mig	rants Seen	Peak Conce	entration	Last Mig:	rants Seen		Produced	Total
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Coogo	period			Marie San Control of the Control of		3			
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Cackling goose									0
Brant	THE PT	arest mais	r of the s	mantes bue	IN THE	701 000 70	SLAST OF	rame.	0
White-fronted goose		***			Y HILL				0
Snow goose	period	and the n	uper seem	This col		it apply to	reside	it. Species.	0
Blue goose	The fi	st refuge	record for	the species	during t	te season	1011Ge Lindi	I im the rep	rting
Ducks:	Secon	to suone ob	scies of 10	sor one un	TOWAT DIE	TTTTOUTOS:			
Mallard			should be a				pecial a	45	11d be 80
Black Duck Gadwall			e birde lis						65
Baldpate						500 M 005		55	80
Pintail			I	ASTRUCTION	2			176	400
Green-winged teal								0	0
Blue-winged teal					Repo	rted by		140	290
Cinnamon teal Shoveller								10	27
Wood duck								0	0
Redhead			1	dans	other near	ing areas	cure eas	10	30
Ring-necked duck				Prin	dian't need	114 01000		10 (11-520) (120)	0
Canvas-back				-				10	25 35
Scaup Golden-eye							A STATE OF	0	0
Buffle-head				Area	s used by	concentrat	Tons	0	0
Ruddy duck				7. (3.09)	waterfowl	umioete-		6	22
Ducks	d. The								
Geese				Tota	I waterfow	I usage du	ring per	Tod	
Coot:	着							40	FOR NR

3-1750 (June 1949)

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since t'e data are necessarily based on analysis of the rest of the form.

of the migrational movement.

MONTHS OF

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(6) (2) (3) (5) (1) (4) First Migrants Seen Peak Concentration Last Migrants Seen Young Produced Total Species Broods Estimated Estimated Seen Total for Period Common Name Number Date Number Date Number Date 1. Swans: I young produced based on obse vations a to serve garrag og unappr Whistling swan 2. Geese:
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3-1750 (June 1949)

Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.

(6) 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 nature of the migrational movement.

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(June 1949)

to AUGUST

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(1)	(2		(3			4)	ma ' gabi	(5)	(6)
Species	First Mig	rants Seen	Peak Conc	entration	Last Mig	rants Seen	Broods	Produced Estimated	Total Estimated
Common Name	Number	Date	Number	Date	Number	Date	Seen	Total	for Period
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Mallard Black Duck Gadwall Baldpate	report	ug beriod	s birds lis should be a poiss of lo	ded in ap	propriate	apaoes 3	irring o	40	600 0 50 100
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Shoveller Wood duck Redhead Ring-necked duck				Prin	cipal nest	ing areas	this sea	16	25
Canvas-back Scaup Golden-eye								0 0	20 120 0
Buffle-head Ruddy duck					waterfowl	numbera	Jons	10	20
Geese				Tota	1 waterfor	el usage du	Ling Pol	60	80 Form NR-

Total Production:	SOMIMARIES
Total Hoduction.	Form WR-
Geese	Total waterfowl usage during period
Ducks	Peak waterfowl numbers
€ Coots	Areas used by concentrations
Scaup Golden-eve	0 750
Ring-necked duck Canvas-back	
Redhead	Principal nesting areas this season
Shoveller . Wood duck	
Blue-winged teal Cinnamon teal	Reported by
Green-winged teal	
Baldpate	INSTRUCTIONS
(1) Species:	In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance.
(2) First Seen:	The first refuge record for the species during the season concerned in the reporting period, and the number seen. This column does not apply to resident species.
(3) Peak Concentration:	The greatest number of the species present in a limited interval of time.
(4) Last Seen:	The last refuge record for the species during the season concerned in the reporting period.
(5) Young Produced:	Estimated number of young produced based on observations and actual counts on representative breeding areas. Brood counts should be made on two or more areas aggregating 10% of the breeding habitat. Estimates having no basis in fact should be omitted.
(6) Total:	Estimated total number of the species using the refuge <u>during the period</u> . This figure may or may not be more than that used for peak concentrations, depending upon the nature of the migrational movement.

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(1) Species	(2 First Mig	2) grants Seen	Peak Conce			4) rants Seen	Young Broods	(5) g Produced Estimated	(6) Total Estimated
Common Name	Number	Date	Number	Date	Number	Date	Seen	Total	for Period
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2. Geese: Canada goose Cackling goose	The lampartor	t refuge r	poord for t	species	during th	spason c	nce rned	in the repo	0
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Green-winged teal Blue-winged teal Cinnamon teal					Repo	rted by		175	400
Shoveller Wood duck								20	40
Redhead Ring-necked duck Canyas-back				Prin	oipal nest	ing areas	this sea	25 0 20	39 0 35
Scaup Golden-eye				WI GO	a maga ah	concentrat		10	150
Buffle-head Ruddy duck					waterfow!			15	20
Geese				Tota	1 waterfor	l usage du	ning par	fod	150
4. Coot: Brognerion:								60	Form NR-1

3-1750 (June 1949)

Note: Only columns applicable to the reporting period should be used. It is desirable that the <u>Summaries</u> receive careful attention since the data are necessarily based of an analysis of the rest of the form.

(1) Species		(2 First Mig) rants Seen	Peak Conce			4) rants Seen	Voun	(5) g Produced	(6) Total
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Common Na	ame	Number	Date	Number	Date	Number	Date	Seen	Total	for Period
		ARRON MARKET	Mash madding		oot connec	THE RESERVE AND ADDRESS.	The second second second		The areas agg	regating
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Whistling s	swan	Figitime	ad antimban d	L Monda Will	Miles and Post	d on cheen	UP FINNS SY	A CANADA	AMELITY OF ACT	0
		period				Secretary All Secretary				
2. Geese:	eeu:		c Leinge Le	cold tot st	e abecres	anirug cue	sesson of	Defice	in the repor	CINE
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Cackling go	oose									0
Brant	<u> </u>	The gre	atest numbe	r of the a	entes bres	ent in a	imited in	erval o	VINO.	0
White-front	tea goose									0
Snow goose		period,	and the hi	mber seem.	This colu	mn does no	t apply to	reside	t apecies.	0
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3. Ducks:										
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Black Duck				thould be a				secial a		0
Gadwall	186	In add	tion to the	birds lis	led on form	i, other s	pecies com	ILLIUM O	10	300
Baldpate									20	800
Pintail	<u> </u>				STRUCTION	-			30	8000
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Shoveller					-				8	60
Wood duck				ALIE ALIENSE		State of the			0	0
Redhead	1000				LLTD	orbut mear	ing areas	this sea	0	0
Ring-necked									9	20
Canvas-back									0	30
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Ruddy duck									0	0
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Geese					Tota	I waterfow	l usage du	ring par		60
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3 1750	uction:					13.		42 A		

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(June 1949)

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MONTHS OF

to AUGUST , 19

(1)(2) (3)(4) (6) (5) First Migrants Seen Peak Concentration Young Produced Total Species Last Migrants Seen Broods Estimated Estimated Common Name Number Number Date Seen Total for Period Date Number Date ve breedli 1. Swans: ogut prognoed n hones be enormed based on observations and seren Whistling swan 0 2. Geese: Canada goose The last refuge record for the species during the season concerned in the reporting Cackling goose Brant ____ The gratest number of the species prefent in a imited in erval of time. White-fronted goose Snow goose period and the number seen. This column does not apply to reside t species. Blue goose The infer refuge record for the species during the season poncerne, in the reparting 3. Ducks: given to those appoies of lopal and Marional significance Mallard reporting period should be aided in appropriate spaces. Special a test 19, she ald be Black Duck In addition to the birds listed on form, other species occurring of ratuo during theo Gadwall 10 20 Baldpate 20 70 ASTRUCTION Pintail 90 20 Green-winged teal 0 0 Blue-winged teal Reported by 30 110 Cinnamon teal 0 0 Shoveller 15 Wood duck 0 Redhead 12 Principal nesting areas this season Ring-necked duck 0 Canvas-back 10 Scaup 0 50 Golden-eye 0 Areas used by concentrations, Buffle-head 0 0 Ruddy duck Feat waterfowl numbers Total waterfowl usage during period 10 Form NR-1 4. Coot: Production:

3-1750 (June 1949)

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of the migrational movement.

may or may not be more than that used for peak concentrations, depending upon the nature



Chase Lake Refuge: 6-17-49 - Banding a few pelicans on the island. R83-1.



Chase Lake Refuge: 6-17-49 - Gulls and pelicans on Chase Lake Refuge. R83-2.



Chase Lake Refuge: 7-11-49 - View of Chase Lake from the west. R84-1.



Chase Lake Refuge: 7-11-49 - Shows pelicans and gulls on Chase Lake - island in background taken from the west.

R84-2.



Chase Lake Refuge: 7-11-49 - The east shoreline of the island on Chase Lake - gulls and pelicans in background.
R84-3.



Chase Lake Refuge: 7-11-49 - One group of young pelicans on the island and also showing the largenumber of adults in the background.

R84-4



Chase Lake Refuge: 7-11-49 - Banding party at Chase Lake eating lunch on the island.
R84-5.



Chase Lake Refuge: 7-11-49 - Adult pelicans in background - shows heavy growth of marsh elders where pelicans nested.

R84-6.



Hobart Lake Refuge: 8-25-49 - View of east shoreline on the north alkali unit just north of the dam. Numerous birds present. R88-5.



Hobart Lake Refuge: 8-25-49 - Protective cover along south side of the dam - looking west.
R89-1



Stoney Slough Refuge: 8-25-49 - Unit No. 5 nearly full of water. R89-2.



Stoney Slough Refuge: 8-25-49 - Unit No. 3 where several thousand ducks were staying. A colony of black crowned night herons nested in the trees in the foreground.

R89-3.