# Narrative Report Routing Slip

Mr. Salyer	Mr. Chain un Da
Mr. Crawford	
Ac	ministrative Services
Miss Baum	
	Operations
Mr. Fermonico	Mr Regan 74 MC
	Public Use
Mr. DuMont	Mr. Kubichek
Mr. Stollberg 3	
	Resource Management
Dr. Morley	Mr. Hickok
	Wildlife Hanagement
Mr. Banko	Mr. Stiles
Mr. Goldman	
Defense Invitation Lauri	7 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
Refuge HUTTON LAKE	Period Jan Apr. 1961

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HUTTON LAKE NATIONAL WILDLIFE REFUGE

January, February, March, April 1961

300		RI	EF	UC	E	]	PEF	RS	ON	NE	L		
Refuge	Manager					•					Wayne	E.	Gueswe]
Refuge	Clerk .									•	Vera	M.	Collins

UNITED STATES DEPARTMENT OF THE INTERIOR Fish and Wildlife Service
Bureau of Sport Fisheries and Wildlife
Laramie, Wyoming

### NARRATIVE REPORT January, February, March, April 1961

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# NARRATIVE REPORT January, February, March, April 1961

Hutton Lake National Wildlife Refuge Laramie, Wyoming

#### I. GENERAL

### A. Weather Conditions.

Weather data contained in the following table was obtained from the University of Wyoming weather station, Laramie.

		Precipit	ation	Max.	Min.	Mean	Normal
	Snowfall	This Month	Normal	Temp.	Temp.	Temp.	Temp.
Jan.	3.5"	0.26"	0.40"	51	-28	25.0	22.0
Feb.	3.2	0.28	0.43	57	4	28.0	23.7
March	14.4	1.17	0.73	57	6	30.8	29.6
Apri]	1 10.7	0.96	1.36	66	12	37.1	38.4
	31.8"	2.67"	2.92"	66	-28	30.2	28.4

It will be noted in the table above that total precipitation for the period was again below normal, with March the only month above normal.

Since Laramie is situated on the plains, with surrounding mountains, both temperature and wind velocity vary a great deal within a few miles. In January, the University weather station recorded a low of 28 degrees below zero, while the Airport, which is nearer the refuge, recorded a chilly 40 degrees BELOW zero. Laramie had the dubious honor of being the cold spot of the nation.

In spite of the low temperatures, the winter has seemed milder than usual, due to the less-than-normal wind through March. Contrary to the usual pattern, much of the wind activity occurred at night with the days cold, clear and sunny. April was a windy month with the average overall wind velocity at 12.2 m.p.h., with gusts up to 57 m.p.h. Besides being cold and unpleasant, April's winds dried much of the precious moisture from the top soil.

### B. Habitat Conditions.

### 1. Water.

A very small trickle of water was entering the refuge through the Sand Creek structure at the beginning of the period. However, it petered out early in January and did not commence again until March 15th. At this time, Rush, Hoge and Hutton Lakes were dry. We received about two c.f.s. from March 15th until the Sand Creek and Hoge Dike openings were dozed shut on April 22nd by our eager neighbors. During this period, Rush and George Lakes were filled; Creighton was raised about three feet; and Hoge was filled to a depth of nearly two feet.

We were mighty happy to get every drop received but watched with just a wee bit of emotion as our friends began irrigating meadows before snow and ice had completely disappeared. Small ponds were spread over much of their hayland and frost was yet present just below the surface of drier sites. Neverthe-less, it's their water and they ain't gonna let it get away!

### 2. Food and Cover.

In this section of Wyoming, nearly all lands are under ranch-type operations and no appreciable amount of farming is practical. Consequently, we are, at present, depending almost entirely upon aquatic plants as a source of waterfowl food. Under these conditions little or no food is available until the ice cover disappears from the lakes. This did not occur until after mid-April this year. It appears that establishment of refuge food plots may lengthen the season of waterfowl use in the Hutton Lake area. The Laramie River, which is open several weeks longer than the refuge lakes and passes within approximately a mile of the refuge, would serve as a source of open water. We hope to try a few acres of experimental planting this season.

No grazing occurred on the refuge during the winter months. Range conditions have been good.

### II. WILDLIFE

### A. Migratory Birds.

No swans or geese were observed on the refuge but several whistlers and a small flock of Canadas were reported on Lake Hattie during latter March and April. Lake Hattie, a large lake, is situated about ten miles northwest of the refuge.

Ducks began arriving nearly a month earlier than last year. However, numbers have been disappointingly low. Weekly totals have averaged nearly 50 percent below those of last year with the greatest decrease noted in redhead numbers. Estimated total duck days use is about 37 percent below that of last year.

Again this period, use by dabblers showed much less decrease than did divers. In fact, gadwall, baldpate, and green-winged teal increased somewhat. However, shovelers, which reached 300 a year ago, have not yet arrived this spring. Ruddys continued to hold their lead over last year while lesser scaup held relatively steady. Our most serious downfall has occurred with redhead and canvasback populations. Redhead use dropped nearly 72 percent and use by cans dipped about 60 percent below that of a year ago.

We have two possible explanations for the sharp drop in redhead and canvasback use this period. One: according to several more-reliable observers, use at Lake Hattie by these species has been not only earlier but much heavier than normal. Since the larger Lake Hattie was de-iced by strong winds weeks before our smaller refuge ponds, it's very possible that the larger flights were lured away from the refuge. Two: maybe there just ain't as many birds as there used to be.

Coot use also has dropped sharply this period. This we can stand. Total use days amounted to about 4,800 which is near 60 percent below that of last year.

A few water and marsh birds and charadriiformes arrived late in the period. The bulk of these birds usually arrives during early May.

Mourning doves have not yet made an appearance. Their arrival seems to be a bit overdue.

### B. Upland Game Birds.

None observed.

### C. Big Game Animals.

Although pronghorns probably used the refuge intermittently during the period, none was observed by the writer.

No mule deer were seen on refuge lands.

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

Prairie dog numbers appear to be somewhat lower than last year. Sightings have been only occasional.

Muskrats, too, seem to be declining in force. Two animals were seen during the reporting period. Perhaps the series of dry years and periodically dry lake bads at Hutton has caused them to seek more dependable waters.

With jackrabbit carcasses bringing 55¢ to 60c each at a local mink farm, much hunting occurred during the winter. Also, this species could well be at a low point cyclically because very few white-tailed jackrabbits can be found in this part of the Laramie Plains. Less than half a dozen have been using Hutton. Cottontails are common over much of the refuge.

Tracks observed during the period indicate not more than two animals make up our coyote population. Badgers have not been seen but their diggin's give 'em away. Total refuge population is probably not more than two.

## E. Hawks, Eagles, Owls, Crows and Magpies.

Our first marsh hawk arrived early in March and the population has increased to five birds at the close of the period.

Occasionally a red-tailed, Swainson's, rough-legged, or sparrow hawk was seen hunting on the refuge.

One great horned owl first appeared on the refuge on January 3. This solitary individual chose a hump of spoil near the north slice canal at Hoge Dike and could be found at this spot most any time of day through March. No mate or nest could be found—maybbe why he left.

Two golden eagles, one an immature bird, used the refuge off and on. An adult bird was present most of the winter.

Several magpies wintered on and near the refuge. Two common crows were first seen early in April and are still with us at the close of the period.

Numbers and species of this entire category have been near normal.

### F. Other Birds.

Nothing to report.

### G. Fish

If any fish were present last fall they were probably winter-killed.

### III. REFUGE DEVELOPMENT AND MAINTENANCE

### A. Physical Development.

Because of adverse weather and frozen soil conditions, relatively little physical development was accomplished. Much of the period was spent on soil and moisture, construction, and other development plans.

A supply of fire tools was purchased for caches at Hutton.

A five-drawer map file was purchased and metal stand constructed for it. The unit is not only more handy but also much more attractive than the two cardboard boxes it replaced.

The duck trap at George Lake was disassembled, repaired with new wire, and reassembled.

A frame and six-foot double gate were constructed to be placed in the north slice of Hoge Dike. The concrete portion of the control structure will be poured as soon as water conditions permit. The structure will relieve us of that annual task of removing about ten cubic yards of earth with ye old idiot stick. The plug is dozed into the opening each spring by our neighbors.

A four-foot Parshall measuring flume was purchased to be placed below the above structure.

### B. Plantings.

None.

C. Collections and Receipts.

None

D. Control of Vegetation.

See Planned Burning.

### E. Planned Burning.

Two attempts were made to open the dense stand of bulrush in Rush Lake. After succeeding in burning over a total of ten or fifteen acres, both attempts were snuffed by snow storms. However, this may give some indication as to the value of burning.

### F. Fires.

No fires occurred on the refuge proper during the period. One fire was started just west of the refuge and was crawling rather swiftly toward it but was squelched by ranchers, Laramie's rural fire truck, and one half of the refuge crew before reaching the refuge. A few acres of meadow and four stacks of hay were consumed.

### IV. RESOURCE MANAGEMENT

## A. Grazing.

No grazing by livestock occurred on Hutton or Bamforth Refuges during the period.

# V. FIELD INVESTIGATION OR APPLIED RESEARCH

### A. Banding.

None.

### B. Snow Retention.

A few comments on our snow retention experiment may be of interest. As previously reported, approximately 1300 feet of snow fencing was erected at several locations on Hutton to

determine the feasibility of such a tool to fill small ponds, recharge small ground reservoirs, and accomplish localized range improvement.

To sum up the winter's results very briefly, refuge snow fences didn't stop a flake. However, instead of being discouraged, we are yet optimistic. State Highway Department and Union Pacific Railroad fences created large drifts (see photos). Some factors that need further study are: angle of fence to prevailing winds, design of fence, and topographical locations.

### VI. PUBLIC RELATIONS

### A. Recreational Uses.

During winter months there is very little recreational use of Hutton Lake Refuge except for a few hardy individuals whose fervor for Indian artifacts cannot be cooled by Wyoming wintery winds.

### B. Refuge Visitors.

Whe	en:	Who:	What:	Why:
Jan.	23	Ed Cornelius	PARC trapper	Report on coyote control
Jan.	25	George Barclay	Regional Supervisor, R.O., Albuquerque	Official visit
Jan.	25	Willie Garner	Engineer, R.O., Albuquerque	Water control structure survey & water rights
Feb.	8	Oscar Olson	IWLA State director	Discussion of legis- lation
Feb.	21	Marion Needham	Pastor, Nazarene Church	General interest & loan of film.
Mar.	2	Leonard Johnson	Rancher, Laramie	Grazing at Bamforth
Mar.	10	Roe Meyer	USGMA, Cheyenne	Courtesy
Mar.	17	Bob Boulter	ASC Office Mgt.	Courtesy

When	: Who:	What:	Why:				
Mar. 1	7 Ralph Dark	Contractor, Laramie	Pathfinder construction				
Mar. 2	l Mike Kiernan	Univ. Student	Summer employment information				
Mar. 2	9 Hugh F. Frazier	GSA, PBS, Denver	Routine visit				
Apr. 8	Burton Marson	Pres., State Chapt. IWLA	Legislative proposals				
Apr. 2	6 Richard Lake	Contractor, Laramie	Headgate construction				

### C. Refuge Participation

In January, a "Show Me" Elk Studies meeting was attended in Rock Springs, Wyoming. Another Elk Studies meeting was attended in Laramie at the University in April. The public has become very interested in the elk management problems, especially those at Yellowstone Park where herd reduction is necessary.

A legislative meeting was attended in Cheyenne while the legislature was in session. The meeting was called the Izaak Walton League and Federation of Sportsmen's Clubs and was attended by State Game and Fish personnel, outfitters, stockment and State legislators of the Game and Fish Committee. Purpose of the meeting was to air opinions concerning proposed legislation by represented organizations before the legislative Game and Fish Committee. Purpose of the Refuge Manager's attendance was to learn the status of the enabling act.

The film, "Behind the Flyways" has been shown to several groups. In February the film was shown to a group of Boy Scouts and a short talk on flyway management was given. In March the film was shown to the Carbon County Conservation Club, Sinclair, Wyoming, and a talk was given on the procedures for setting hunting seasons and bag limits. The film was also shown to the local chapter of IWLA, Laramie, and was loaned to the Nazarene Church group. We were gratified at the interest shown and the questions asked after each showing of the film.

A talk on the refuge system and its purposes was given to the Lion's Club, Wheatland, Wyoming

Interagency meetings of the State Game and Fish Department were attended in Lander and Laramie during April.

The State Convention of the Izaak Walton League was attended in Newcastle on April 14 and 15. Monthly meetings of the local chapter were also attended.

Again this year this office assisted in judging the essays of the Junior High Division in the Youth Conservation Essay Comp test. The theme for the essays was "Multiple Use of Our Natural Resources."

### D. Hunting.

No hunting allowed.

### E. Violations.

None.

### VII. OTHER ITEMS

### A. Items of Interest.

Mrs. Collins received a Superior Performance award for performance "above and beyond" during the absence of a refuge manager in April, May, June and July of 1960. (See clipping) During this four-month period, refuge activities were conducted in a commendable manner--not advisable for refuge managers to let this happen too often.

Wyoming still does not have an enabling act which provides for expenditure of duck stamp funds in the state. It seems that Mr. John Q. Wyoming has a hazy idea that the enabling act would be solely for the establishment of refuges rather than for the use of duck stamp funds. Also, there is much bitter opposition to any additional federal land ownership. It appears that there is an increasing awareness and knowledge of the refuge program. It is possible that with added effort in our public education program and the support of several groups, and enabling act will be passed when the next legislature convenes.

Credit for preparing Sections IA and VI of this report is due . Mrs. Collins.

### B. Photographs.

Attached.

Submitted by:

May 10, 1961

Wayne E. Gueswel
Refuge Manager

Reviewed by:

g Pegional Director

6/17/4/

3-1750 Form NR-1 (Rev. March 1953)

# WATERFOWL

					(2)					
(1) :	1/3	1/12	Weeks 1/19:	1/25 :	2/1 :	2/6	eriod 2/14:	2/23	2/28 :	3/6
Species :	1	_	3 :		5 :	6		8 :	9 :	10
Swans:										
Whistling					A					
Trumpeter					Assertion Street					
Geese:										
Canada			4 A 350		81	e v P				ACT LA
Cackling						• 40.				
Brant					100					
White-fronted				9:2						
Snow										
Blue										
Other										
oucks:					Y					
Mallard										
Black				To A Line 18						
Gadwall										
Baldpate										
Pintail									28	
Green-winged teal										
Blue-winged teal										
Cinnamon teal										
Shoveler										6 /
Wood										
Redhead										
Ring-necked			100				A Salaranger			
Canvasback										
Scaup			1 - 1 - 20 - 11 - 11					100	11 11 11	
Goldeneye				1			- Line			
Bufflehead										
Ruddy										
Other										
				1 1 10 1						
Coot:										,

3 -1750a

Cont. NR-1

(Rev. March 1953)

### WATERFOWL (Continuation Sheet)

Hutton Lake REFUGE MONTHS OF January 1 TO April 30 , 1961 -(2) (3) (4) Weeks of reporting pariod Estimated : Production 3/16: 3/21: 3/31: 4/5: 4/19 4/10 : :Broods:Estimated 4/24 : : waterfowl Species 11 : 12 : 13 days use : seen : total Swans: Whistling Trumpeter Geese: Canada Cackling Brant White-fronted Snow Blue Other Ducks: Mallard 175 138 140 345 250 8.946 200 30 Black 2 150 135 77 54 Gadwall 2.926 Baldpate 75 55 87 30 1.729 Pintail T 100 425 485 295 55 115 12,131 Green-winged teal 75 305 270 145 75 6.090 Blue-winged teal Cinnamon teal Shoveler Wood 56 Redhead 2 330 200 130 5.026 Ring-necked Canvasback 28 40 85 92 1.764 19 155 453 Scaup 300 7.070 Goldeneye 20 560 Bufflehead 211 16 20 Ruddy 37 135 1.204 Other 4 154 295 4.851 10 230 Coot: (OVET)

	(5) Total Days Use :	(6) (7) Peak Number: Total Production	SUMARY
Swans	None		Principal feeding areas Creighton, George, Rush,
Geese	None :	10 10	and Hoge Lakes.
Ducks	147,4462	1,570	Principal nesting areas
Coots	4,851	295	330 200 130 5,026
	15.		Reported by Wayne E. Gueswel, Refuge Manager
	inged teal		
	eeks of eporting Period:	to those species of local and r  Estimated average refuge popular	
	stimated Waterfowl	Average weekly populations x nu	mber of days present for each species.
(4) P:	roduction:	Estimated number of young productions breeding areas. Brood counts s	ced based on observations and actual counts on representative hould be made on two or more areas aggregating 10% of the wing no basis in fact should be omitted.
(5) T	otal Days Use:		
	0 000	A summary of data recorded unde	r (3).
(6) P	eak Number:	3 75 1 73 1 31 1	sent on refuge during any census of reporting period.

-BELLICE

3-17	51
Form	NR-1A
(Nov	. 1945

# MIGRATORY BIRDS (other than waterfowl)

Refuge Months of to 195

(1) Species	(2) First		(3 Peak Nu		(4 Last		I	(5) Production	ob begat	(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total #   Nests	Total Young	Estimated Number
I. Water and Marsh Birds:						P\r	njeurii.		Signo Mwa Iwo	
Eared Grebe	1	4/21	2	4/24	Still	Present	COLON TO			5 S
Great Blue Heron	1	4/18	1		1	4/18				deval 1
American Bittern	1	4/24	1		1	4/24	f		abanii bedi awai o'n	tud-bog 1 bentend
			ACCEPT.	d asa				7		f=ug bott v desett
Topspen surley .Levaust .	CINER IS	betroqui	V. Ohec	EMOT	DURTRIAL DURTS AND A	Sensu F	in the second	Use	20100	
I. Shorebirds, Gulls and Terns:	nolfibbs berree m	eto. la	"mist". Al gazani	bguler	eo entel Certing C	Laneger Section of	hiow/ D nadjo	miol miol		
Killdeer	2	4/24	2	bluone at	Still	Present	and legal of	prim		5
California Gull	28	4/5	35	4/10	Still	Present				150
		semotini	ole (felse	ta aveso	ons toly	enaes au		4/1	r real Jes	
	to Isvio.	al befle		eserg ae,			restant	e e d'a	epinek Na	
	ncerned	э поевее	ent gala	pecies d	fer the	03.00047 65	pillum had	entr	tueog tu	
	feedor as	n enolis	Table st	Detail bel	opged 3m	og 20 70	hum Sets	lije:	go 24 pube	
	on odd and	and agule	r ells gal	(over)	is ody to	reduce la	ital betw	Feth	Links	

(1)	(;	(5)	(;	3)		2 1 1 1 1 1 1 1		(5)		(6)
II. <u>Doves and Pigeons</u> : Mourning dove		07	(Iwo1	o edinodi	Tento)				inteR .	ov. 1945)
White-winged dove	eng .	fter	Last S	2 219		110	(R). First S		(1) eelne	6
IV. Predaceous Birds:	Tednol	2 _ats0	Tedard	Date	01177	40	reduni		spell go	mo3 .
Golden eagle	Pres	ent	1		Still	Present				2
Duck hawk Horned owl	1	1/3	1		1	3/31		13071	deneil by	1
Magpie	Pres	ent	5	2/28	Still	Present			ad no	12
Raven Crow	2	4/5	2		Still	Fresent			AND LONG	6
Red-tailed Hawk	1	3/31	1		1	4/5			imoglicities in	1
Swainson's Hawk		4/5	1	I Y I I I I I I I I I I I I I I I I I I	1	4/19	Harris			1
Rough-legged Hawk_	1	3/21	1		1	4/5				2
Marsh Hawk	1	3/9	5	4/24	Still	Present				10
Sparrow Hawk	1 1	4/18	1		Still	Present				2

#### INSTRUCTIONS

(1) Species:

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

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. <u>Predaceous Birds</u> (Falconiformes, Strigiformes and predaceous Passeriformes)

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

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

(4) Last Seen: The last refuge record for the species during the season concerned.

(5) Production: Estimated number of young produced based on observations and actual counts.

(6) Total: Estimated total number of the species using the refuge <u>during the period</u> concerned.

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

3-1752 Form NR-2 (April 1946)

# UPLAND GAME BIRDS

Refuse Hutton Lake Months of January 1 to April 30 , 19 61

(1) Species	(2) Density	(3) Young Produced		(4) Sex Ratio	Re	(5) emoval	ls	(6) Total	(7) Remarks		
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd. Estimated	Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.	
None Observed	en to furnish the largery pettunian hardwo i Wildlife Managene ted should be base as Survey method for Kenarks.	renes be renes bral e l beda ladou ra elq cu bad	di anko udirah udirah i piela enval	ed la sede sys sys sede sede in la	types choos much as to a reverting tamind type here possibl a on represe areas shoul	ne mod per di percent r bes r bes r per	e Ju ersi eto c er ed brs ets o	igy) ( nabi nabi triba biros biros biros biros	aves to seroini , quest g sarg ts ' .ak avecdo lo exia		
counts	Implementation and actual		qu be sa	d e	ung produced Mug habitest	or to	neo avid	ura le idinezi	denisai il mpa ni	(3) YOUNG PRODUCK	
no adub	nts, etc. Include		Market L	EG.	learlly to w	iq o	AL qq	nman ente	This col other sp	FOLDAR MER (A)	
	s the report perior		Women's	T SI	edso niceo mi	rod	any L	tota	Indinate	(5) EMOVALE:	
may ain seasons,	sport period. This		irad darin Langar	orte rain	e eds garan eods only	rodor altri S	n Lo I dns	F63 B	obploci	(6) TOTAL:	
oelA .	evuma ni beravon z "badasopan		toegs its	1001	enimiese e olsemnolmi i i bluoda be in	j be mai		laem ceniae ceniae	ebuleni ebuleni et eldapil	(7) ASLANISA (7)	
42372											

#### INSTRUCTIONS

### Form NR-2 - UPLAND GAME BIRDS.\*

(2) DENSITY:

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

Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series Nc. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.

- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

<sup>\*</sup> Only columns applicable to the period covered should be used.

3-175	54
Form	NR-4
(June	1945

### SMALL MAMMALS

Refuge Hutton Lake Year ending April 30, 61

(1) Species	(2) Density		(3) Removals				(4) Disposition of Furs						(5)	
e i i i i i i i i i i i i i i i i i i i	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest Predator	200 200		stocking For Re-	Share Trapping		ping	nge	ted		Total Popula
Common Name					Predator Control	For Re- stocking		Permit Number	Trappers Share	Refuge share	Total Refuge Furs Shipped	Furs Donated	Fure Destroyed	tion
Coyote	Greasewood dominated flats, grassland, marsh lowland, and lake bottoms - 1900 acres	950	ent fo fo ted pes	See	Rema:	'ks	alet al ea a j us	eron lo literiol co lo e int beri	ino in					2
Badger	Grassland and grease- wood flats, marsh lowland - 1600 acres	ot .bbot de .bts ab of hi anolitava lo site	ebe sod sod ban	nd 5: bx 2 8: · S · Lai Jean	uple q se e No ect bod			riga : si abookti manak si bluoda areas	igandi d buaj Malik Malik Sigam					2
Prairie Dog	Grassland and grease- wood flats - 1400 acres	14	ds so	io ti	pon Aus	ro denn ga bh	I ant	ed under te the te	ackhri esteri			: 0.JAX	018:4	100
Wyoming Ground Squirrel	Grassland and grease- wood flats - 1400 acres	7	) in	190 4 1914	di s		ul b	ddaig-e.	aga ma Maga M Mga Afini	1.800	TO 160	TP126	se in	200
Muskrat	Marsh and Water - 400 acres	10	3 d 0 52	80 E 103 3	al 20 au aus i	nedec 1910 19 ec	n IA noo	right le	noeved S ensk Divode					40

REMARKS:

Two animals were taken immediately outside the refuge boundary by local PARC trapper because of predation on neighbor's sheep. No complaints after the two animals were removed.

Population estimates based on field observations.

### INSTRUCTIONS

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

(1) SPECIES:

Use correct common name. Example: Striped skunk, spotted skunk, 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:

Mayne E. Greswel. Heliam Manager

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.

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Because of the slight amount of wildlife usage, census records were not maintained for Bamforth Refuge during the period.

Bamforth Lake has been very low.



Mrs. Vera Collins, left, is shown receiving a Superior Performance award of \$150 from Wayne Gueswel, Refuge Manager of the United States Fish and Wildlife Service. In a letter from the regional director in Albuquerque, Mrs. Collins was cited for performing duties above that expected of her position. In the absence of a refuge manager she conducted waterfowl censuses and investigations, obtained informal bids and supervised construction activities, hired a crew to erect snow fences and maintain boundary fences. Due to her efforts activities continued smoothly with no interruption. Mrs. Gollins has been with the Wildlife Service two years and was formerly with the registrar's office at the University of Wyoming.

Laramie Boomerang - 4/4/61



North slice of Hoge Dike after being dozed shut by our neighbors. This dam, about five feet in height, must be removed before the refuge can receive water. As soon as water conditions permit a new water control structure will be installed.

R 10, #18.



Duck trap after being caught in ice and before repair. R-10, #4



After repair. R-10, #16

Rush Lake showing dense stand of bulrush before burning,.... R-8, #5

.....and after flooding. This looks much better to us--we hope it appeals to the ducks. R-10, #17









The State favors this portable-type structure but some picket-type fences are sued effectively. Refuge fences are of picket type. R=9,#8



Resulting drift below state highway fence near refuge. Water from a well-packed drift of this size would do much toward filling a small pond. R=9,  $\#11_1$ 

