ROUTING SLIP	DIVISION OF WILDLIFE	REFUGES	DATE:	194
MR. SALYER		SECTION	OF HABITAT IMPRO	WEMENT:
	11 6/26	Jur.	Griffith PEC	34-8
MR_DUM_NT	JAD 3-10	Dr.	LOS/3	3-9
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SECTION OF OPERAT	IONS:	SECTION	OF LAND MANAGEM	ent:
Mr. Pall		-Mr.	Kent 3/23/	1
Mr. Regen		ur.	Ackerknecht_	024-5
SECTION OF STRUC	TURES:	STENOG	RAPHERS:	
Mr. Taylor _		ak	2-1948	
Mes Johnston	13. 4/9			
REMARKS:				1111
	NATIONAL ELK NARRA	TIVE REPOR	e T	
Jan Miller				
	SEPTEMBER_DECE	BER 1947		
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National Elk Refuge

September, October, November, December

1947

I. GENERAL

A. Weather Conditions. The weather report is taken from the records of the Teton NationalForest headquarters, located on the southwest corner of the refuge, one-half mile from refuge headquarters:

	Precipitation	Max. Temperature	Min. Temperature
September	1.32	87	18
October	.66	73	13
November	1.20	60	-9
December	.43	43	-15
Tota	1 3.61		

The greatest snow depth recorded on the ground was nine inches on November 10. This snow had melted or receded to a depth of four inches by the last of November. On December 31 the measured snow depth on the ground at the Forest office was eight inches and this is about the average snow depth on the refuge, while the snow depth on top of Teton Pass is about thirty-six inches.

B. Fires. No fires of any kind occurred on the refuge during the period. Leaving all of our meadows stand uncut creates a critical fire hazard from the time the plants ripen, early in September, until the snow comes and covers the ground, usually in November.

II. WILDLIFE

A. Migratory Birds.

1. Populations and Behavior. The greater concentration of waterfowl occurred on the refuge during the open season, beginning October 2 and remaining on the refuge through October. Approximately 2,000 ducks and 450 Canada Geese remained in the Flat Creek marsh during that time. These waterfowl used our grain fields near headquarters as feeding grounds and could be seen daily shuffling forth and back between the grain field and the marsh. Following the snow storm that began on November 8, when about a foot of snow fell, many of the geese and ducks left the refuge.

Our trumpeter swan also left the refuge area during November. It is not unusual for the swan to leave the refuge area during the winter months. A year ago, however, when the streams and lakes began to freeze, toward the latter part of November, all of the swan, including

two additional adults and one cygnet, or a total of ten, returned to the refuge and remained during the greater part of the winter in our large springs, where they were fed wheat and barley. This season, as soon as Flat Creek began to freeze the first week in December, we again began placing grain in the springs and since then only two of the swan have been seen at the feeding station for a short period.

Our grain feeding stations in the two large springs have increased our winter waterfowl population as on December 31 there were approximately 700 ducks in the springs, of which the greater number are mallards, pintail and Greenwing teal. A few Canada geese have also been coming into the feeding stations.

The four sand hill cranes remained on the refuge until late October. Large flocks of blackbirds--Brewer's, redwing and a few yellow heads--stopped over in our grain fields during their migration flights in September. Frequently as high as 2,000 blackbirds could be seen fluttering over our grain fields and they would gather occasionally on the green lawn at headquarters.

B. Upland Game Birds.

1. Populations and Behavior. About 250 sage grouse have been staying in the sage brush flats along Flat Creek the past seven weeks. Many of these birds came onto the refuge following the snow storm on November 9.

6. Big Game Animals.

1. Populations and Behavior. On September 10, when the big game season opened to hunting, there were approximately 200 elk remaining in the aspen groves and willow bottoms along the north portion of the refuge. With that portion of the refuge open to elk hunting again this year during the regular state season, approximately 150 hunters entered the area the first day and made a kill of 28, compared to a kill of 47 elk in the same area on the first day of the season a year ago. This year when the shooting began early in the morning the elk in the area seemed to realize the place was not a safe habitat as they quickly headed for the National Forest on the east side of the refuge and, by noon, scarcely an elk could be found in the area. Following the first day until the season closed on October 20, not over five elk were taken by hunters on the north portion of the refuge.

There were a large number of hunters in the big game fields during the entire season throughout the Jackson Hole region. However, with only a light snow fall in the mountains prior to the close of the season, the elk herds remained far back in the high mountains, which made the bulk of the herds inaccessible to car and foot hunters and they were reached only with the use of saddle and pack animals. The local State Warden

is not in possession of all information pertaining to the total number of elk that were checked through checking stations leading out of the Jackson Hole valley. Data on hand indicates a kill, the past season, of approximately 2,000 elk from the Jackson Hole elk herd. As only a small percentage of our local residents were successful in securing their elk, we frequently heard again that familiar story—both before and after the close of the season—that the elk herds within a short time would be only a remmant of former years. However, now that the elk herds have again gathered on the refuge in large numbers, the voice of despair has silenced to a whisper.

Not until following the snow storm of November 9 did the elk herds begin moving down from the mountain ranges. It was reported that as much as three feet of snow fell in the high mountains during the storm. The elk began entering the refuge during the week beginning November 9 and by the end of that week about 2,500 had come in. From that time on the number of elk on the refuge has gradually increased. By the end of December I estimate that between 6,000 and 7,000 are wintering within the refuge area, including a number of small bands seen at the time on the Flatt Creek and Sheep Creek foot hills. The bulk of the herd has gathered on the meadow lands, where they are finding an abundance of feed on the ground since all of our forage plants were left standing uncut, this past season, as pasturage for the elk.

With the exception of a number of bulls with scabies and some of the older animals, the elk appear to be in as good condition as when they first entered the refuge. To date, 13 elk have been found dead on the refuge. From this number 11 are bulls that were heavily infested with scabies and two were old cows.

A few moose and deer were seen on the north portion of the refuge, in the early part of the season, but none have been seen in December.

Fur Animals: Predators and Rodents. The coyotes on the refuge. the past six weeks, have greatly increased and there is now a greater number of these animals than have ever before been seen here. past two weeks it has not been an uncommon sight, at any time of the day, to view with field glasses from the window of the dwelling at headquarters from five to seven coyotes in the field. On December 31, while in the field checking on the waterfowl in the large springs and Flat Creek, I found my waterfowl census prolonged into partially a coyote census. About half way between the two large springs on the slope of the butte the carcasses of five elk, that had died on the meadow lands, had been placed. When we approached within 100 yards of this spot, 8 coyotes scampered out from the tall wheat grass and ran up the hill where, at a short distance, two other coyotes were sitting watching our actions. A quarter of a mile beyond, near the large spring on the west side of the butte, another bull eak had died and two coyotes were feeding on this carcass. Climbing a short distance up the side of the

butte, from which wantage point the entire marsh and lower meadows were in view, I could see, with the aid of field glasses, the carcass of another bull elk that had died near the upper portion of the marsh. Surrounding this carcass ten additional coyotes could be seen. From this same location four coyotes could be seen in the meadows near headquarters. This makes a total of 26 coyotes seen in a short trip around the butte. The coyotes are so thoroughly devouring the dead elk bodies that when spring comes there will not be an ounce of flesh left on the carcasses to create an odor. These coyotes are also seen feeding on meadow mice and pocket gophers in our fields.

What damage the coyotes are doing, if any, while on the refuge, has not been detected. The people of this community have always been opposed to any poisoning operations in Jackson Hole to control the coyotes, as they consider Jackson Hole a recreational area the coyote is a part of the picture and that the local trappers and hunters would keep the coyotes under control. Since there has been little sale value on coyotes for the past two years, this no doubt accounts for the increase. However, with the number of coyotes that we now have on the refuge, there is a possibility we will be criticized by stockmen over the state unless we take some action to reduce their numbers. It could easily be said that we are harboring the coyotes and using the area as a breeding ground. Therefore, I consider it advisable that an experienced trapper, with the use of coyote getters, be detailed to this refuge to reduce our coyote population. — This was derege.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development. All exterior logs in the three buildings at headquarters were given a coat of linseed oil and the roofs on dwelling and service building painted green. Dwelling at Quarters No. 3 has been modernized, with all bath room fixtures installed. At Quarters No. 5 interior walls and woodwork were re-painted. A well was dug down from the basement with a good supply of water available at a depth of 15 feet. The well has been cased in with a 30° galvanized pipe, sealed over at the top, and an electric water pump installed. A sink and hot water tank were installed in the kitchen with hot and cold water now in use in that dwelling. A concrete septic tank has also been constructed and we are hopeful that this building can, within a reasonable length of time, be completely modernized with bath room addition and fixtures.

Two galvanized culberts, 22 feet long and 4 feet in diameter, were installed in Flat Creek near Quarters No. 6 for a permanent road crossing on our main road over the refuge. The culberts were placed side by side a foot apart in the creek channel and anchored at both ends with concrete abutments.

B. Plantings.

- 1. Trees and Shrubs. In October, under the direction of a local horticulturist, 57 spruce trees were transplanted. The trees were taken on Pacific Creek within the National Forest, 41 miles north of the refuge and planted at headquarters. The trees range in height from 4 to 11 feet, are quite bushy and are arranged in accordance with the approved plot plan. Twenty additional large leaf poplar, 4 cotone aster, 4 dogwood shrubs, 2 laurel willow, 6 lilac bushes, 4 small and 2 large honeysuckle were also planted at headquarters.
- 2. Cultivated Crops. All hay and grain crops produced a normal yield with the grass on the range lands in good condition. One hundred and fifty-six bushels of barley were threshed for use as feed for trumpeter swan and other waterfowl.

Haying. With 1,000 tons of hay furnished this season under a cooperative agreement with the Jackson Hole Preserve, Inc., all of our hay meadows were left standing uncut for pasturage for the elk. We cut only a small quantity of our hay for the purpose of maintaining fire guards. The hauling of the 1,000 tons of hay from the Elk Ranch to the refuge was completed on September 16. The hay furnished was a mixed quality of tame and native grasses cured to the best possible condition under varying weather conditions. The 1,000 tons of hay more than completed filling all of our hay sheds, leaving approximately 100 tons stacked in the open near Quarters No. 5. This 100 tons stacked on the outside for which shed space was not available, has been topped with loose hay as a preservative measure and will be the first fed out when the feeding of the elk becomes necessary. Fourteen hundred bales of hay, or approximately 65 tons, was cut from our meadow lands for laying out fire lanes with the hay taken from the lanes placed in storage.

IV. PUBLIC RELATIONS

A. Refuge Visitors. Regional Director Gatlin inspected the refuge October 3-7. Refuge Supervisor Barclay, on a tour of inspection, visited the refuge October 7-10. Mr. Douglas, of the Washington office, and Mr. Color of Region 3 visited the refuge on September 6 while on Fisheries Station inspection. Photographer Haddon of the Washington office photographed game animals on the refuge and in the general vicinity from December 21 to January 2.

Mr. James, Vice-president of the Burlington railroad, and party visited the refuge November 20, observing elk herds.

Many other people, during the past six weeks, have visited the refuge and viewed the elk herds from personal cars. Twenty people from Illinois, Minnesota, Idaho and Wyoming were driven into the field on our sleighs to see and photograph the elk.

B. Violations. No violations were observed or reported on the refuge during the period.

Respectfully submitted,

Almer P. Nelson

Refuge Manager.

January 6, 1948

Approved:

K. C. Kartchner

Acting Regional Director

Form NR-1

MIGRATORY BIRDS

ReTuge_				MO	ntns of _		80		_, I	94	
(1) Species	First 0	2) bserved	Gommon (3)	Became Pook Concentration		(5) Last 0	bserved	Young	(7) Total		
Common Name	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
I Sunn, trampeter	6	0/47				1	12/17	0			
I Goose, Camada	20	0/20	10/2	400	10/20	18	12/81				
Mallards Gadwall Baldpate Pintail Green-wing toal Blue-wing toal Showeler Golden-eye	800 50 20 6 20 10 4 2	1/1/47 10/1 10/1 10/1 10/1 10/1 10/1 10/1 10/	10/2 10/2 10/12	1800 800 260 80	10/20 10/20 10/20 10/20	\$60 4 6 1.50 80 50	12/31 12/31 10/10 12/31 10/80 12/31	Lating the state of the particle of the state of the stat	conditions of the walking them, the fight	on the second of	

REMARKS: (Pertinent information.not specifically requested)

Just before mailing this report to the Regional office eight of our trumpeter summ returned to the refuge and were seen in Flat Creek on the refuge on January 6, 1948.

INSTRUCTIONS

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.

3-1751 Form NR-1A (Nov. 1945)

MI RATORY BIRDS

Refuge National With Months of Months of

(other than waterfowl)

Months of September 1 to December 31 1947

	(6) Total Stimated Number
Number Total # Total E	
	Number
Common Name Number Date Number Date Colonies Nests Young	242
1. Mater and Marsh Birds:	
Grance, Sandhill 4 9/3 4 10/20	
II. Shorebirds, Gulls and	
Terns:	
Constant Secretary Constant Co	
Curlow, long bill 8 9/8 Willet, western 1 9/8 Phslarope, wilson 4 9/3 Killdeer 8 9/8	
Phalarope, wilson 4 9/3 4 9/9	
Phalarope, wilson 4 9/3 4 9/9 Killdeer 8 9/8 2 9/9	
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(ase to I recently	
	(a) Peat
define ted number of young produced based on observations and savet o units.	
at Estanted total number of the smeales wing the refuge during the period concerned.	
(over)	

(1)		(2)		3)		(4)		(5)	(6)
III. Deves and Pigeons:	6	9/47		M Series	ad J	10/10	## 87		Al-HH make (Hova Lyas)
White-winged dove			Y. (2.1)			199 - April 1	-/2		
TY Dud Died-	Product		de 18. jun	5	regions!		nost fayl		s toens
IV. Predaceous Birds: Golden Eagle	2	9/47	sg rod	m/1 j = sss	2	12/47	d rec	musid	omeli, 2 mino
Duck hawk Horned owl Magpie	1 25	9/47	30	12/47	2	12/49			onte dend 6
Raven	30	9/47	50 50	12/47					40
Moran hank Rough-leg hank	6 2	9/47			2	10/20			Treat, mark
									4
						Reported	by		
					-				

Instructions
(1) Species: Use the correct names as found in the A.O.

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 tose species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes)

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes Strigiformes and predaceous Passeriformes)

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

(3) Peak Numbers: The greatest number of the species present ina 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 during the period concerned.

Refuge

Months of September 1 to December 31 , 194

			+		coim	Description Field	VESTIDENES (E)				
(1) Species	(2) Density	et si	(3) Young Produced	(4) Sex Ratio	Re	(5) emova	ls	(6) Total	(7) Remarks		
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'v'd. Estimated Total	Hunting For Restocking For Research		Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.				
Grouse, Sage	stone est lendents communication state to begat as bloom yet value vavus astronel		None	go pocharen galego de galego de galego de de de bildoda esa	lione	E'e	Но	250	About 200 of these birds came onto the refuge in December and are staying on eage brush flats toward upper portion of refuge		
ent.	ren fautus iser anns		in minima been	d , boothers; daylond;		FROM	A COMP	bedseldell besique of	OUT AND THE (A)		
	aboling drages an			each ostegor		lara I	t End	other aped	(S) RENDYALLE		
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				n nobtestoli			bods eg to	indicate and include out	temana (v)		

INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.*

(2)

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

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

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

Refuge Year 194 7

(1) Species	(2) Density	(3) Young Produced		(Rem	4) ova	ls		(Los	5) ses	Intr	(6)	(7) Estimated	(8) Sex Ratio
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Losses	Number	Source	Total Refuge Population as of Dec. 31	Percentage
Elk Deer Hale	one aborsered brains on a place of a land a sense bear an arrival at a sense	Approx 20 of total		sele sele pos subs		en ran Logan Logan Besa beau	はなった。	名はおります。	65	end mal bed idd in	eminedo o emiliologi sti stodo dos estrat sera elque mengi usbo	6,300	4 female to 1 male
Moose	tees to the peeps at a larger and a larger	lie resord	110	30		g jo se ci rosei sg si			Eone	nda; ed ac edeo	their state of no done	1/47 & early spring, Hens as of Dec, 31 About 30 meess wintered on refuge from le	
Sheep, Mt.	Approx 80 mountain about through January until on appring winter on Shoop Co and Flat Creak foothills edjoining refuse.	ly		10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	e e	Can d	20 02 02 03 03 03 03 03 03 03 03 03 03 03 03 03	100 miles	un edd un Lace ng edd made l	edd edd edg	etal +6	Jan. until em apring.	

So alk were taken by inunters past season on refuge with an estimated total kill of mike 2,000 elk from the Jackson Hole elk hord.

INSTRUCTIONS

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.) exclusive of fenced herds. Detailed data may be omitted for species occuring 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 each species on the refuge as of December 31.
- (8) SEX RATION: Indicate the percentage of males and females of each species as determined from field observations or through removals.

Refuge National Elli Year 194 7

		Sport F			al Fishing		ocking	Number re-
Species	Relative Abundance	Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	moved for Restocking
Cutthrout	Abave average	No record	No recent	None	No record	None		None
Brook	Bolow							
White	Attorige					1.		
Suckers 1 1910	•		A					
Thu A	6							Car Car
							作生建立	

REMARKS:

Season open on portion of refuge from Aug. 1 to Sept. 30. He means of checking on number of fisherner or catches made.

PLANTINGS (Marsh - Aquatic - Upland)

Refuge Mationa	Blk	Year	194	-
----------------	-----	------	-----	---

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Plant- ing	Survival	Cause of Loss	Remarks
Sprace Poplar, large Guteme Aster Dogwood Laurel Willew Honey suckle Lilke	licadquarter Loaf		87 20 4 4 8		10-23 to 11-6			Spruce trans- planted from Nat'l Forest, other trans- planted from mursery.

TOTAL ACREAGE PLANTED:

Marsh	and	aquati	C		
Hedge	rows,	cover	pat	ches	
Food	strip	s, foc	d pa	tches_	
Fores	t pla	intings			

CULTIVATED CROPS

Refuge Estional Elk Year 194.7

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f farmed by refuge	Permit	or	Crops	Yield	Ch	100	Harve	ested	Unharv	ested	Compensatory
ersonnel, so indicate)	No.	Loca-	Grown	per	h signer	Bu.Har-			4 8		Services, or
5 2 6 4	8 th 8	tion	FEET 8	Acre	Acres	vested	Acres	Bu.	Acres	Bu.	Cash Revenue
By Refuge	None	Tract 9g	Barley	26 bu	6	156			14		5
To plan	9 0		Cate	9 8 8					180		
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Summary of Crops Grown:	Crop	Acrea	Acre	ttee's Bus		F 6 6 4	Harves		ent's Sh	rveste	Total Revenue
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DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

Cultivated Crops Report Form NR-8 should be prepared on a calendar-year basis for all crops harvested or utilized during the calendar year and submitted with the December 31 refuge report.

 $\underline{\text{Permittee}}$ - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the $\underline{\text{Permittee}}$ column.

Permit No. - List the number of the Special Use Permit issued to the individual.

<u>Use or Location</u> - The Unit No. or name specified in the Economic Use Plan should be listed in this column.

<u>Crops Grown</u> - A separate line of the form should be used for each crop grown by each permittee or by refuge personnel. This is important, since if each crop grown by each operator is not specifically enumerated, the report will be of no value for statistical purposes.

Average Yield per Acre - It is important that the average yield per acre of each crop grown by each operator should be shown.

<u>Permittee's Share</u> - Only the number of acres harvested or utilized by the permittee for his own benefit should be shown under the <u>Acres</u> column, and only the number of bushels of farm crops harvested by the permittee for himself should be shown under the <u>Bushels Harvested</u> column. It is requested that all crops harvested be reduced to bushels wherever possible, or, as in the case with the harvesting of seed such as that of sweet clover, alfalfa, bromegrass, etc., the total harvested crop in pounds may be shown. Timothy, alfalfa, or other hay harvested by the permittee should be shown on Form NR-10 and should not be shown in the <u>Permittee's Share</u> column.

Government's Share or Return - Harvested - Show the number of bushels harvested for the Government and the acreage from which this share is harvested, both for grain raised by refuge personnel and by permittees. <u>Unharvested</u> - show the exact number of acres of crops allowed to remain unharvested as food and cover for wildlife. An estimate of the number of bushels of grain that is available for the wildlife in such unharvested crops should be shown in the <u>Bushels</u> column.

Compensatory Services, or Cash Revenue - Show other services received by the Government in cooperative farming activities, the number of acres of food strips planted for wildlife, the amount of wildlife crops not otherwise reported that are planted by cooperators for the Service, or the cultivation of wildlife plantations. If the permit is on a fee basis, the total cash revenue received by the Service.

REFUGE GRAIN REPORT

Refuge National Elk Refuge	Months	of Santanbar.	thru. recember	1949

(1)	(2) ON HAND	(3) RECEIVED	(4)	maney a		(5) ISPOSED (OF	(6) ON HAND	(7) PROPOSED USE		
VARIETY	BEGINNING OF PERIOD	DURING PERIOD	TOTAL	TRANS- FERRED	SEEDED	FED	TOTAL	END OF PERIOD	SEED	FEED	SURP.
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			e: adne (10 ot Erain				prose mil		Include	ough	
	Corn (ear)	Erain sh -70 lbs lbs., Wil	all be com Wheat-6 let-50 in	sidered Jibe Jibe	ednykejes	b to 2 b 0 ths , 0s , and	nebeli Co		1) - 55 lb 50 lbs	gen.	
	povered by	this nar	cover all rative rep	grain on	hand, Te	peined.	programose	of duri	ig the pe	gog.	

- ME-98 (8) Indicate shipping or collection points National Elk Rofuse
 - (9) Grain is stored at Qtrs. 1 and 2 Elk Refuge
 - (10) Remarks....

NR-8a 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 lbs., Corn (ear)--70 lbs., Wheat--60 lbs., Barley--50 lbs., Rye--55 lbs., Oats--30 lbs., Soy Beans--60 lbs., Millet--50 lbs., Cowpeas--60 lbs., and Mixed--50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately: Corn, wheat, proso millet, etc. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share-cropping, or harvest from food patches.
- (4) A total of Columns 2 and 3.
- (6) Column 4 less Column 5.
- (7) This is a proposed breakdown by varieties of grain listed in Column 6.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters grainary", etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.