

*not circulated.*

TULE LAKE REFUGE

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NR Forms 1, 1A, 2 and 4    Grain Report - NR-8A

NARRATIVE REPORT  
TULE LAKE NATIONAL WILDLIFE REFUGE  
January, February, March and April 1946

I GENERAL

A. Weather Conditions.

1946	Precipitation	Max. Temp.	Min. Temp.
January	.83"	52°	- 1° F.
February	.54	56	0
March	1.19	64	23
April	.13	83	25
Total	2.69"		
Extremes		83°	- 1°

1945	Precipitation	Max. Temp.	Min. Temp.
January	.55"	54°	10°
February	1.42	51	20
March	.47	65	18
April	.22	75	23
Total	2.66"		
Extremes		75°	10°

Snowfall was mostly light and melted rapidly, but froze immediately. In late January and early February several storms piled up about 6" of snow. Wind piled this up for three successive days and blocked a number of roads.

Except for small portions, the water area remained frozen over until late in February. Break-up commenced about mid-February.

B. Water Conditions.

1946	High	Low	1945	High	Low
January	4033.63'	4033.44'		4034.05'	4034.03'
February	33.53	33.23		34.05	33.63
March	33.50	33.13		33.64	33.41
April	33.51	33.19		33.59	33.28
Extremes	40 33.63'	4033.13'		4034.05'	4033.28'
Max. Diff.		.50'			.77'

The slightly lower levels prevailing in 1946 were due in part to Reclamation procedure of holding the sumps at a lower level to protect dikes under construction or in need of major repair.

In the Lower Sump, considerable mud flat was exposed by the lower level.



### C. Fires.

There were no fires on the refuge during the period. Hazard was high during most of April. During April, part of the area withdrawn from the Upper Sump for farming use was partially burned over preparatory to farming. Burning of this area was not completed during the period. Much of the stubble and many of the ditch banks on leased lands were burned during April.

## II WILDLIFE

### A. Migratory Birds.

#### 1. Populations and Behavior.

Considering the limited water area open and inaccessibility of natural and stubble field feed, the waterfowl population was fairly high during the early part of the period and increased appreciably prior to the spring break-up. The January (26-28) inventory results for Tule Lake were: 24,400 ducks, 800 Coots, 1679 geese and 2,000 Whistling swans. By February 14, numbers of all had at least doubled, and several hundred White-fronted and Snow geese had come in.

Geese came in gradually from February 14. Migration of geese was heaviest between February 25 and March 25, with a few still straggling through at the end of April.

Duck migration was somewhat later starting. On March 18, the first Cinnamon teal were seen; on the 21st, the first White pelicans and cormorants.

On April 22, the first broods of Canada geese were observed; on the 24th, 7 broods seen had from 4 to 7 young; on the 30th, 20 broods were observed and on May 1, 32 broods were counted.

There were no serious losses from predation.

#### 2. Food and Cover.

Melting snow and rain, followed by freezing, made grain in stubble fields inaccessible to waterfowl. Ice over most of the water area, except in a few spots, kept open by heavy currents or by bird activity, made aquatic food, of which considerable was present, difficult to obtain. Winter irrigation by flooding of fields in the south end of the refuge made more feeding area available but these fields had been fed off and then disked and/or plowed during the fall and did not contain much feed.

For these reasons, rather heavy feeding of barley was commenced late in January, after some experimental feeding early in the

month. Approximately 3,200 bushels were put out on Tule Lake. Of this, approximately 2,000 bushels were put out in and near the areas in which waterfowl were concentrated, including some dumped in the irrigation canals and carried by the water out into the flooded fields during the period January 24 - February 14. Another 1,200 bushels were scattered out along the south shore of the Lower Sump, primarily for migration use to keep birds on the refuge, thus reducing spring damage. This feeding was heavier than absolutely necessary but was done to utilize grain received from share-cropping operations to meet tentative shipping requests for 11 cars, of which only 9 cars were shipped.

All grain put out near concentration points was cleaned up by February 22, and by February 25, between 3,000 and 4,000 Swans moved in on the grain put out for migration use. The swans were soon joined by Canada and Snow geese. The migration feed was cleaned up by March 14, except for a little farthest removed from the water, which was cleaned up by Canada, White-fronted and Snow geese, a few swans and by Pintails and Mallards prior to April 1. It was anticipated that a little of this grain might sprout and provide some green feed, but utilization was too complete.

- |  |       |
|--|-------|
| 3. <u>Botulism.</u>                          | None. |
| 4. <u>Lead Poisoning and Other Diseases.</u> | None. |

#### B. Upland Game Birds.

##### 1. Population and Behavior.

Ring-necked pheasants came through the winter in good shape with only minor losses from predation. During the period, the State Division of Fish and Game released some cocks in the basin, mostly in the area east of the refuge. Twelve cocks were released along the hill on the west side. (Two of these were taken by an Okie the Sunday after release.)

Quail were in evidence early in the period, only in the vicinity of the headquarters. During April, several coveys were seen near Hotel Rock.

The Chukar partridges around headquarters wintered well.

##### 2. Food and Cover.

Ice and frozen snow rather reduced the food available. Pheasants in the south end of the refuge benefited from the grain put out for waterfowl. Some grain was put out primarily for pheasants in the southeast part of the refuge but was not heavily utilized. Grain was also kept out around the headquarters and was used by Chukars and to some extent by Quail. Some grain was supplied the



Park Service for Quail feeding in the Monument.

3. Disease. None.

C. Big Game Animals.

1. Population and Behavior.

There were probably as many as 50 deer on and off the south end of the refuge during late March and early April. All indications were that 15 to 20 deer were making regular use of the refuge.

2. Food and Cover.

There appeared to be a minor amount of feeding on standing rye and some weed growth but the principal use was for water and cover.

3. Disease. None.

D. Fur Animals, Predators, Rodents, and other Mammals.

The muskrat population was not as high as in previous years, according to reports from trappers, checks on houses and other observations during the period. Much of the Upper Sump was frozen solid and there was not a great deal of activity. The Henzel lease and permit area continued to be drained. It was trapped as intensively as possible under prevailing conditions. Trappers had permission to trap the houses. This was to clean the area of 'rats in advance of burning preparatory to farming operations. A number of muskrats were brought in from the area east of the Lost River Channel. While many of these were large, all the skins were very light weight and a very light color. A check on this indicated that these conditions had been peculiar to muskrats from this small area for several years.

There were local reports of winter-kill because of low water and frozen conditions. There was no substantiation of any serious loss from this cause.

The coyote population did not change a great deal. There was some shifting within the refuge as sheep were moved and a little drift into the marsh after the water froze. As a consequence, a few muskrats were taken or damaged by coyotes. Two wild dogs were seen on several occasions in the Upper Sump. One coyote was taken by personnel.

House cats were pretty well under control by the end of the period. Either 10 or 11 were destroyed.

A very few weasels were active. Three were taken incident to muskrat trapping.

Jack rabbits were practically non-existent, and cottontails were very scarce.

E. Predaceous Birds, including Crows, Ravens and Magpies.

Two to four Bald eagles were seen occasionally. Golden eagle population was constant at about 12 until April, after which date only one or two were occasionally seen. Both eagles fed to some extent on muskrats but did not do serious damage. Except for several crippled waterfowl, eagles did not do much damage to birds.

Marsh hawks, a few Swainson's, Rough-legged and Red-tailed hawks remained on the refuge all period.

There was no change in the number of Horned owls along the west side and several checks of roosting areas did not yield any evidence of serious predation on game birds.

There were a few Screech owls around off and on, and quite a few Short-eared owls most of the period.

A very few Ravens came through early in April. No Crows or Magpies were seen.

F. Fish. - None.

### III REFUGE DEVELOPMENT MAINTENANCE

### A. Physical Development.

The shop end of the equipment shed was rewired to specifications. Cupboards, work benches, interior siding of ship-lap, ceiling of celotex and other work in the shop were completed.

Considerable time was required to haul out grain for waterfowl feeding.

One man's time was required for the muskrat trapping program through February and shipping of furs and general cleanup extended the job into April.

Personnel changes kept the staff short handed most of the period.

Acquisition of WRA property required considerable time in April.

## B. Plantings.

- |                                      |       |
|--------------------------------------|-------|
| 1. <u>Aquatics and Marsh Plants.</u> | None. |
| 2. Trees and Shrubs.                 | None. |



3. Upland Herbaceous Plants. None.

4. Cultivated Crops.

No farming was undertaken by refuge personnel.

The share-cropping program continued as in 1945, except that all of Lot 61A was to be farmed by George Frey.

Partly because of shortage of rye for seed and partly for experimental purposes, arrangements were made to have the food patches along the south side of the Lower Sump planted in part to wheat and barley as well as rye.

Except for the Henzel permit and lease area east of the Upper Sump, grain farming preparations were well along by the end of the period.

C. Collections.

1. Seed and other Propagules. None.

2. Specimens. None.

D. Receipts of Seed and Nursery Stock. None.

#### IV ECONOMIC USE OF REFUGE

A. Grazing.

None, except sheep on stubble, Reclamation lease lands. This was practically completed by March 15, and all sheep were off by April 1.

B. Haying. None.

C. Fur Harvest.

Nineteen permits to trap muskrats were issued during the preceding period. Two of these were not used. Two others were not used the entire season.

The quota was set at 15,000; quota per trapper at 800, kits and severely damaged 'rats not to be charged to trapper's quota. Only one trapper made his quota.

Trapping conditions were difficult. The water and marsh remained frozen until late in February. While the ice was heavy enough to prevent use of boats, it was not safe for walking. There was a tendency - carried over from previous years - on the part of several

trappers to defer operations until the spring "run". Unfortunately, this did not commence until about February 23, and trapping terminated on February 27. A total of 8,9~~30~~<sup>40</sup> muskrats, including 459 kits and severely damaged, was taken on Tule Lake.

A few of the trappers who sold part of their skins early received \$1.95 up to \$2.25. All others received \$2.30 straight, plus a "fee" (for skinning and stretching) of \$0.10 to \$0.30 per skin. The price of \$2.30 plus was for every skin sold, including kits and damaged.

D. Timber Removal.

No timber on refuge.

E. Other Uses.

Mr. B. C. Schultz occupied the Tule Lake Boathouse concession, but did very little business.

V FIELD INVESTIGATION OR APPLIED RESEARCH

None.

VI PUBLIC RELATIONS

A. Recreational Uses.

None. There were a number of week-end visitors on the refuge "to look at the birds."

B. Refuge Visitors.

Kenneth F. MacDonald	Reg. Supervisor	WRA Property CCC camp transfer Inspection
Leo L. Laythe	Reg. Director	WRA Property
Alphonse Kemmerich	Ass't Reg. Dir.	WRA Property
Harry D. Willis	Reg. Engineer	Lower Klamath Work.

C. Refuge Participation.

None.

D. Hunting.

None.

E. Fishing.

None.

F. Violations.

One case: Two Pheasants in closed season, on refuge. \$100.00



bail and .22 rifle forfeited. Case initiated by B. C. Schultz.

# VII OTHER ITEMS

## A. Personnel.

Warren K. Leland, Refuge Manager SP-6, entered on Annual Leave on January 29, to be followed by Leave without Pay until May 31, 1946. Mrs. Leland's health failed and Mr. Leland desired to be near her in western Montana during her confinement in a sanitorium.

Mr. Donald M. Deidrich, Refuge Mechanic CPC-6, resigned effective April 19, to accept private employment at a much higher salary.

Mr. Baine H. Cater, Refuge Manager SP-6, returned to duty from military furlough on February 27.

At the end of the period, the following personnel were on duty at the Tule Lake Refuge:


Jean F. Branson	Refuge Manager
Baine H. Cater	Refuge Manager
Howard J. Sargeant	Refuge Manager

Submitted by:

December 30, 1946  
(Date)

Howard J. Sargeant  
Howard J. Sargeant .....  
Refuge Manager

Approved:





3-1750

Form NR-1

(Nov. 1945)

## WATERFOWL

Refuge Tule Lake Months of January to April 1946

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
I. <u>Swans</u> :									
Whistling swan	2,000	1/28 Wintered	6,000	2/15-3/14	5	4/30			7,500
II. <u>Geese</u> :									
Canada goose	1,300	"	6,000				20 (by 4/30)	300 by 4/30	7,800
Cackling goose	300	"	10,000	3/1					15,000
Brant				Ave.					
White-fronted goose	500	2/10-14	50,000	2/25-3/25	30	"			150,000
Snow goose		Strays-Wintered	50,000	"	9	"			125,000
Blue goose									
III. <u>Ducks</u> :									
Mallard	11,400	Wintered 1/28	25,000	3/1	Nested				150,000
Black duck		"			"				
Gadwall		"	10,000	3/15	"				25,000
Baldpate	2,100	"	2,500	2/28	10	3/31			10,000
Pintail	7,200	"	30,000	3/1	Resident				175,000
Green-winged teal			1,500	3/1	Few Resident				5,000
Blue-winged teal					"				1,500
Cinnamon teal	2	3/18			2,000	4/30			15,000
Wood duck									
Red head	700	Wintered 1/28	10,000	3/31	2,500	4/30			25,000
Ring-necked duck									1,000
Canvas-back	1,300	"	3,500	3/31	100	4/30			20,000
Scaup	1,400	"	5,000	"	1,000	4/30			25,000
Golden-eye		"							500
Buffle-head		"	1,000	3/1-15	100	4/30			10,000
Ruddy duck	300	"	4,000	3/31	3,000	4/30			25,000
Shoveller			8,000	4/15	5,000	4/30			20,000
Note: 1/28 date of waterfowl census.									
IV. <u>Coot</u>	800	"	6,000						15,000

(over)



## SUMMARIES

Total Production:

Geese.....300 as of 4/30/46

Total waterfowl usage during period.....828,300

Ducks.....

Peak waterfowl numbers.....228,500

Coots.....

Areas used by concentrations.....Entire refuge

Principal nesting areas this season.....Marsh in NE &amp; E

parts of refuge

Reported by.....Howard J. Sargeant, Refuge Mgr.

## 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 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.

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



3-1751

Form NR-1A  
(Nov. 1945).MIGRATORY BIRDS  
(other than waterfowl)Refuge Tule LakeMonths of January to April 1946

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Eared grebe	20	4/2	5,000							25,000
Western grebe	6	4/5	800							3,000
Pied-billed grebe			500							2,500
White Pelican	4	3/21	500							1,500
Fara llon cormorant	8	3/21	300							600
Treganza's blue heron		wintered	300							600
American egret			200							500
Brewster's egret			100							200
Black-crowned night heron		wintered	500							1,000
American bittern	1	4/30								100
Hooded merganser			50							150
American merganser			75							250
II. <u>Shorebirds, Gulls and Terns:</u>										
Killdeer										500
Wilson's snipe										50
Long-billed curlew										10
Western willet										50
Greater yellow-legs										50
Long-billed dowitcher										-
Avocet	5	4/5								700
Black-necked stilt	2	4/18								100
Wilson's phalarope										300
Nort ern phalarope										-
California gull			3,000							6,000
Ring-billed gull			2,000							4,000
Forster's tern	2	4/27	250							500
Caspian tern										10

(over)



(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove					300
White-winged dove					-
IV. <u>Predaceous Birds:</u>					
Golden eagle					10
Duck hawk					-
Horned owl					20
Magpie					-
Raven					-
Crow					-
Bald eagle					2
Western red-tailed hawk					10
American rough-legged hawk					10
Marsh hawk					100
Short-eared owl					100
Reported by <u>Howard J. Sargeant, Refuge mgr.</u>					

#### 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 (Gaviiformes to Ciconiiformes and Gruiformes)  
 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 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 during the period concerned.



Refuge Tule LakeMonths of January to April, 1946

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked pheasant	Sagebrush, grain fields, ditch banks								2,000	No nesting results observed during period
California quail	Sagebrush, willows								500	
Chukar partridge	Sagebrush, upland grass (hillside back of hdqtrs.								100	



## INSTRUCTIONS

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

- (1) SPECIES: 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.
- (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.



Form NR-4  
(June 1945)

# SMALL MAMMALS

Refuge Tule Lake Year ending April 30, 1946

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs					(5) Total	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control	Fur Re- stocking	For Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	Popula- tion
								Permit Number	Trappers Share	Refuge share				
Muskrats				701				4096						
				769				4084	384	385	385			
				74				4086	37	37	37			
				556				4087	279	279	279			
				582				4079	291	291	291			
				828				4081	414	414	414			
				230				4088	115	115	115			
				265				4089	132	133	133			
				702				4083	351	351	351			
				590				4082	295	295	295			
				527				4078	263	264	264			
				687				4095	343	344	344			
				438				4094	219	219	219			
				312				4091	156	156	156			
				863				4085	431	432	432			
				177				4093	88	89	89			
				636				4092	318	318	318			
	Totals			8939					4466	4474	4474	1	1	
Coyote					1						1		1	
Weasel											4		4	

List removals by Predator Animal Hunter

\* List removals by Predator Animal Hunter

REMARKS:

Reported by Howard J. Sargeant, Refuge Mgr.



## 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 headings listed.
- (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 unprime-ness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: 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.



## Tule Lake Refuge

## REPORTS OF SALES

1945-1946 MUSKRAT SEASON

<u>Trapper</u>	<u>Permit No.</u>	<u>Trappers Share</u>	<u>Reported Sales</u>	<u>Price</u>
Ainsworth, W. C.	T-4096	350	350	\$805.00
Fabianek, Joe	4084	384 *	386 *	885.90
Ferguson, Max	4086	37	19 ***	35.00
Forrester, J. D.	4087	279 *	277 *	637.10
Fox, Clyde	4090	--		
Fox, Ora M.	40749	291	291	669.30
Graybael, Herbert	4081	414	414	946.60
Jones, Robt. L.	4080	--		
McKoen, Mike	4088	115	115	264.50
Moore, Orin H.	4089	132	132	290.80
Parker, Dalton	4083	351	351	786.50
Parker, Ed. F.	4082	295	295	663.40
Rush, Felix C.	4078	263	263	604.90
Schrank, Arnold H.	4095	343**	386	859.80
Schrank, Ben	4094	219**	177	374.90
Schultz, Bernard C.	4091	156	156	343.20
Throop, G. L.	4085	431	431	991.30
Weber, Geo. C.	4092	318	318	736.25
Woodman, Robt. R.	4093	88	No record.	

\* Error in claiming pelts after division.

\*\* Arnold Schrank sold one division of pelts for his brother during the latter's illness, and received credit for the sale, on the Report of Sales.

\*\*\* Incomplete Report.

2361

989345



REFUGE GRAIN REPORT

Refuge Tule Lake

Months of January thru April 1946

(1) VARIETY	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF			(6) ON HAND END OF PERIOD	(7) PROPOSED USE		
				TRANS- FERRED	SEEDED	FED	TOTAL	SEED	FEED	SURP.
Barley	6,724	-	6,724	-	-	3,600	3,600	3,124	1,000	2,124
Oats	280		280					280		280
Rye	146		146		146		146	None		
Wheat	24		24		24		24	None		

- (8) Indicate shipping or collection points Merrill, Oregon
- (9) Grain is stored at Headquarters and warehouse
- (10) Remarks Report covers Tule Lake and Lower Klamath grain.

REFUGEE GRAIN REPORT

NR-8a REFUGEE 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.

(8) Indicate shipping or collection points

(9) Grain is stored at

(10) Remarks



LOWER KLAMATH REFUGE

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NARRATIVE REPORT  
LOWER KLAMATH NATIONAL WILDLIFE REFUGE  
January, February, March and April 1946

I GENERAL

A. Weather Conditions.

Refer to Tule Lake Report.

B. Water Conditions.

Elevations

1946	#3		#4	
	High	Low	High	Low
January	4077.88'	4077.75'	4077.78'	4077.58'
February	77.98		77.83	
March	78.26	78.10	78.17	77.98
April	78.24	78.04	78.12	78.00
Extremes	4078.26'	4077.75'	4078.17'	4077.58'
Max. Diff.		.51'		.59'
1945				
January	4077.72'	4077.04'	4077.22'	4077.04'
February	78.02	77.64	77.76	77.52
March	78.04	77.80	78.10	77.72
April	77.78	77.58	77.76	77.66
Extremes	4078.04	4077.04'	4078.10'	4077.04'
Max. Diff.		1.00'		1.06'

Elevations of Unit #4 reflect elevations in all refuge units except 2 and 3.

All indications were that levels would remain high for a time and possibly become a little higher, due to pumping from Tule Lake and Klamath Drainage District lands.

C. Fires.

One small fire occurred just on the refuge west line, south of the State Line Dike. It started in peat as a result of stubble field burning. Refuge personnel trenched it as a precautionary measure.

II WILDLIFE

A. Migratory Birds.



### 1. Populations and Behavior.

There was little open water on Lower Klamath during the first part of the period and snow was much more heavily drifted than on the Tule Lake side, consequently making considerable field feed unavailable. As a result, not many birds wintered on Lower Klamath.

In proportion to fall flight use, geese did not use Lower Klamath heavily during the spring flight. Some of the ducks, Mallards and Pintails especially, used it more heavily.

Canada goose nesting was less than that in 1945 and less than that on Tule Lake in 1946.

There was not a great deal of waterfowl nesting in evidence on Lower Klamath during the period.

### 2. Food and Cover.

There was very little open water on Lower Klamath during the first part of the Period. Much of the aquatic food present was not available for this reason. Snow followed by windstorms made a great deal of the grain field feed unavailable. The January inventory count indicated upwards to 1,000 waterfowl on Lower Klamath, including over 500 Whistling swans. These were bunched on two or three small areas of open water. To supply these birds with ample feed during the most severe part of the winter, approximately 400 bushels of barley were dumped and spread as close to the concentration areas as possible. This was completely utilized by the end of February. The first few loads were used up almost over night. Heaviest use was by swans. After the ice went out of the pools and off the stubble, there was ample food.

Cover for nesting was lacking. The pool margins, particularly in Units 4 and 9, were fairly good. Units 2 and 3 on the whole were the best off for cover. The interior units did not have any nesting cover except the remains of washed-out dikes.

### 3. Botulism.

None.

### 4. Lead Poisoning and Other Diseases.

None.

## B. Upland Game Birds.

### 1. Population and Behavior.

No Quail or Sagehens were observed on the refuge during the period.

Ring-necked pheasants tended to congregate in the weed patches in the east side grain fields and in the marsh and meadow

growth in the Sheepy Lake - Coyote Butte area.

2. Food and Cover.

Food and cover were ample for the birds wintering on the area and for nesting use.

3. Disease. No indications.

C. Big Game Animals.

1. Population and Behavior.

No big game animals (antelope and mule deer) were observed on the area during the period.

D. Fur Animals, Predators, Rodents, and other Mammals.

Except in the Sheepy Lake area, muskrats were scarce. Little detailed observation of this area was made. There were no indications of disease among muskrats, and no damage of consequence to structures.

Rabbits were practically non-existent.

Coyotes increased in numbers during the early part of the period and continued to travel in small packs in the north part of the refuge.

E. Predaceous Birds, including Crows, Ravens and Magpies.

Golden eagles and occasionally a Bald eagle were seen during the period. Attempts to take ducks off the small open water areas were observed but none seen were successful. There were a very few indications that a few attempts had succeeded.

There were a very few Rough-legged and Red-tailed hawks on the area. Marsh hawks were present all period, gradually increasing in numbers during March and April.

A number of Short-eared owls were seen.

No Crows, Ravens or Magpies were seen.

F. Fish.

Minnows were the only fish seen. Indications after the ice went out were that there was moderately heavy winter kill of minnows.



### III REFUGE DEVELOPMENT MAINTENANCE

#### A. Physical Development.

One crew operated the dragline most of the period on the PLA lateral and dike construction. Minor repairs were made on other roads and dikes, mostly by truck and dozer.

#### B. Plantings.

- |                                      |       |
|--------------------------------------|-------|
| 1. <u>Aquatics and Marsh Plants.</u> | None. |
| 2. <u>Trees and Shrubs.</u>          | None. |
| 3. <u>Upland Herbaceous Plants.</u>  | None. |
| 4. <u>Cultivated Crops.</u>          |       |

All operations continued as in 1945, except for a few of the State Line lots, on which permits expired. Adjoining Reclamation lands, previously leased in large tracts for long terms, were broken down into smaller tracts and leased out for 1 year with 2 annual options to renew. Preference went to veterans. In order to continue policy of combining operations on refuge lands and adjoining Reclamation lands, some delay ensued in handling permit matters.

#### C. Collections.

- |                                      |       |
|--------------------------------------|-------|
| 1. <u>Seed and other Propagules.</u> | None. |
| 2. <u>Specimens.</u>                 | None. |

#### D. Receipts of Seed and Nursery Stock.      None.

### IV ECONOMIC USE OF REFUGE

#### A. Grazing.

Grazing of sheep continued into January on the south end of Unit 4 and the north end of Unit 9. A total of 2,003.2 sheep-months were utilized.

An on-and-off permit for 96 A.U.M.'s of cattle grazing west of Sheepy Lake was issued.

Except for breaking down heavy weed growth, it is doubtful if any benefits accrue to wildlife from grazing. There was and is very little pasture land in even fair condition on the refuge and there are few means of controlling stock on the refuge. In consequence, any use by cattle or sheep tends to be on stubble or marginal marsh

and weed growth. In the one instance food is taken and in the other food and cover are taken from waterfowl.

B. Haying.

There was no haying on the refuge.

C. Fur Harvest.

A total of 457 muskrats were taken by two trappers on the refuge. Most of these were taken early in the period. Trapping conditions were not very good. 230 of the 'rats accrued to the refuge and were shipped to the Seattle Fur Exchange. These were sold at the April sale with the Tule Lake skins, the entire lot bringing an average of \$2.03, or a total of \$466.90 for the 230 Lower Klamath skins.

D. Timber Removal. Not applicable.

E. Other Uses.

Surveys were continued during the period for construction of a secondary state highway to be located for the most part on the refuge State Line Dike. .

## V FIELD INVESTIGATION OR APPLIED RESEARCH

None.

## VI PUBLIC RELATIONS

A. Recreational Uses. None.

B. Refuge Visitors.

See Tule Lake report.

C. Refuge Participation.

See Tule Lake Report.

D. Hunting. None.

E. Fishing. None.

F. Violations.

No arrests made.



## VII OTHER ITEMS

None.

Submitted by:

December 30, 1946  
(Date)

Howard J. Sargeant

Howard J. Sargeant  
Refuge Manager

Approved:

L. W. Smith

Form NR-1  
(Nov. 1945)

## WATERFOWL

Refuge.....Lower Klamath.....Months of January.....to.....April.....1946

(1) Species	(2) First Seen		(3) Peak Concentration		(4) Last Seen		(5) Young Produced		(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for Period
<b>I. Swans:</b>									
Whistling swan	508*	Wintered	1,000	3/1					1,000
<b>II. Geese:</b>									
Canada goose	196*	"	10,000	3/1					12,000
Cackling goose	2*	"	2,000						6,000
Brant									
White-fronted goose			20,000	3/1					50,000
Snow goose			10,000	3/1					35,000
Blue goose									
<b>III. Ducks:</b>									
Mallard	155*	"	10,000	3/1					50,000
Black duck									
Gadwall			15,000	3/15					30,000
Baldpate	104*	"	5,000	3/1					15,000
Pintail	21*	"	15,000						45,000
Green-winged teal									2,500
Blue-winged teal									100
Cinnamon teal									500
Wood duck				3/31					-
Red head			10,000	3/31					30,000
Ring-necked duck			300	3/31					1,000
Canvas-back			500	3/31					1,500
Scaup			2,000	3/31					6,000
Golden-eye									500
Buffle-head									1,000
Ruddy duck	64*	"							10,000
			* Population on duck count 1/28.						
<b>IV. Coot</b>									
	2*	"	5,000	3/31					10,000

(over)



# SUMMARIES

Total Production:

Geese.....

Total waterfowl usage during period.....307,600

Ducks.....

Peak waterfowl numbers.....115,800

Coots.....

Areas used by concentrations.....Entire refuge water area

Principal nesting areas this season.....

Reported by.....Howard J. Sargeant, Refuge Mgr.

## 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 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.

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

(over)



3-1751

Form NR-1A

(Nov. 1945)

## MIGRATORY BIRDS

(other than waterfowl)

Refuge Lower KlamathMonths of January to April 194 6

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. Water and Marsh Birds:										
Eared grebe			3,900							5,000
Western grebe			300							1,000
Pied-billed grebe			500							2,000
White pelican			1,000							2,500
Farallon cormorant			750							1,500
Treganza's blue heron			300							750
American egret			250							500
<del>Rare</del> Browster's egret			150							300
Black-crowned night heron			300							750
American bittern			50							150
Western least bittern			10							10
Hooded morganer			50							50
American merganser			10							50
Sora			50							50
II. Shorebirds, Gulls and Terns:										
Killdeer										600
Wilson's snipe										50
Long-billed curlew										20
Western willet										10
Greater yellow-legs										50
Long-billed dowitcher										300
Avocet										100
Black-necked stilt										30
Wilson's phalarope										100
Northern phalarope										-
California gull										1,500
Ring-billed gull										750
Forster's tern										150
Caspian tern										10

(over)



(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove					200
White-winged dove					-
IV. <u>Predaceous Birds:</u>					
Golden eagle					10
Duck hawk					-
Horned owl					-
Magpie					-
Raven					-
Crow					-
Bald eagle					2
Western red-tailed hawk					10
Am. rough-legged hawk					10
Marsh hawk					150
Short-eared owl					100
Reported by.....Howard J. Sargeant, Refuge Mgr....					

#### 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 (Gaviiformes to Ciconiiformes and Gruiformes)  
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 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 during the period concerned.



[illegible]



## INSTRUCTIONS

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

- (1) SPECIES: 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.
- (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.



Form NR-4  
(June 1945)

# SMALL MAMMALS

Refuge Lower Klamath Year ending April 30, 1946

(1) Species	(2) Density	(3) Removals						(4) Disposition of Furs						(5) Total Popula- tion
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control *	Fur Re- stocking	Fur Re- search	Share Trapping			Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	
								Permit Number	Trappers Share	Refuge share				
Muskrats				237				4098	117	120	120			
				220				4099	110	110	110			
	Total			457										

\* List removals by Predator Animal Hunter

\* List removals by Predator Animal Hunter

REMARKS:

Reported by Howard J. Sargeant, Refuge Mgr.



## 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 headings listed.
- (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 unprime-ness or damaged condition, and furs donated to institutions or other agencies should be shown in the column provided.
- (5) TOTAL POPULATION: 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.

Lower Klamath Refuge

REPORT OF SALES

1945 - 1946 MUSKRAT SEASON

<u>Trapper</u>	<u>Permit No.</u>	<u>Trappers Share</u>	<u>Reported Sales</u>	<u>Price</u>
Hamilton, Marshall M.	T-4098	130	107 *	\$225.50
McKay, Andrew L.	4099	110	No record.	

\* Incomplete record.



NARRATIVE REPORT  
CLEAR LAKE NATIONAL WILDLIFE REFUGE  
January, February, March and April 1946

I GENERAL

A. Weather Conditions.

1946	Precipitation	1945	Precipitation
January	.96"		.54"
February	No record		3.37
March	"		.79
April	"		.35
Totals	-		<u>5.05"</u>

Data are from Reclamation Service, Clear Lake Dam.

B. Water Conditions.

Elevations - Clear Lake Reservoir.

1946	High	Low	1945	High	Low
January	4532.31'	4531.52'		4531.03'	4530.75'
February	32.10	31.60		33.35	31.03
March	33.44	31.78		33.54	33.35
April	34.25	33.40		33.95	33.55
Extremes	4534.25'	4531.52'		4533.95'	4530.75'
Max. Diff.		2.73'			3.20'

Storage was comparable to that in 1945.

C. Fires.

There were no fires on the refuge or adjoining Forest Service lands. Hazard in April was high.

II WILDLIFE

A. Migratory Birds.

The reservoir was frozen over into late February. There was no waterfowl use early in the period and only very moderate resting use during the last part of the period. Several trips over part of the area, dating from late March on, indicated little nesting use in prospect.

Pelicans and some gulls were back by mid-April.

B. Upland Game Birds. No data.

C. Big Game Animals.

From mid-February through March, transient use of the south and west parts of the refuge by mule deer was quite heavy.

Antelope were not seen during the period.

There are no data or observations on other classes of wildlife.

There are no data on other items of the report.

Submitted by:

December 30, 1946

(Date)

Howard J. Sargeant

Howard J. Sargeant  
Refuge Manager

Approved:

L. D. Rayle



NARRATIVE REPORT  
UPPER KLAMATH NATIONAL WILDLIFE REFUGE  
January, February, March and April 1946

I GENERAL

A. Weather Conditions.

No data are available on temperatures and precipitation.

B. Water Conditions.

Elevations

	1946	High	Low	1945	High	Low
January		4141.13'	4140.07'		4138.13'	4137.66'
February		41.29	41.14		39.96	38.15
March		41.28	41.17		40.70	39.98
April		41.79	41.17		41.00	40.72
Extremes		4141.79'	4140.07'		4141.00'	4138.15'
Max. Diff.			1.72'			2.85'

- II WILDLIFE

There are no data for any of these items.

III REFUGE DEVELOPMENT MAINTENANCE

None.

IV ECONOMIC USE OF REFUGE

A. Grazing.

Part of the north end and part of the south end of the refuge are included in Reclamation leases which allow grazing. There was little or no grazing on these areas during the period.

B. Haying.                      None.

C. Fur Harvest.

There were Reclamation permits to trap muskrats in effect on nearly all lands within the refuge. There are no data on take, condition or value of skins taken.

D. Timber Removal.                      None.

E. Other Uses.

None.

V FIELD INVESTIGATION OR APPLIED RESEARCH

None.

VI PUBLIC RELATIONS

None.

VII OTHER ITEMS

A. Items of Interest.

There were reports to the effect that the Forest Service intended to log some 30 million feet BM of timber from lands lying just west of the refuge.

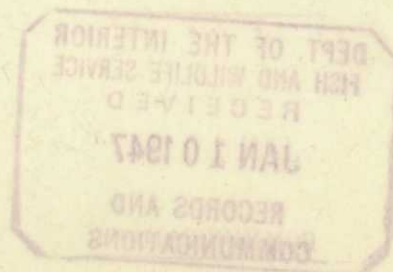
Submitted by:

December 30, 1946  
(Date)

Howard J. Sargeant  
Howard J. Sargeant  
Refuge Manager

Approved:

[Signature]





Other Uses. None.

V FIELD INVESTIGATION OR APPLIED RESEARCH

None.

VI PUBLIC RELATIONS

None.

VII OTHER ITEMS

A. Items of Interest.

There were reports to the effect that the Forest Service intended to log some 30 million feet BM of timber from lands lying just west of the refuge.

Submitted by:

Howard J. Sargent  
Refuge Manager

December 30, 1946  
(Date)

Approved:

[Signature]

