BRANCH OF WILDLIFE REFUGES NARRATIVE REPORTS

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Land Management

~~MR. ACKERKNECHT~~ _____ ~~MR. KONIEY~~ _____

Habitat Improvement

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Stenographers

_____ _____

REFUGE SQUAW CREEK PERIOD JANUARY-APRIL 1956

N A R R A T I V E R E P O R T

SQUAW CREEK REFUGE

MOUND CITY, MISSOURI

JANUARY THROUGH APRIL 1956

REGULAR PERSONNEL

Bruce P. Stollberg, Refuge Manager
Henry Munkres, Refuge Maintenance Man
Albert J. Yocum, Refuge Clerk
Alva W. Bomar, Dragline Operator
William Ralph Hamilton, Oiler

TEMPORARY PERSONNEL

Walter J. Boyd, Laborer
Henry Mason Snider, Laborer

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I GENERAL

A. Weather Conditions

All weather data is received from the Weather Bureau Office at St. Joseph, Mo., about 35 miles south of the refuge. On April 28 the St. Joseph area had a rainfall of 1.24 inches while this drainage area had approximately .45, which fact has been allowed for in this summary.

Mo.	Precip.	Departure from norm.	Max. Temp.	Min. Temp.	Ave.Temp.	Departure from norm.
Jan.	0.24	-0.91	65	-4	24.7	-2.4
Feb.	0.85	-0.16	66	-6	31.1	-0.7
March	0.29	-1.92	80	10	41.2	-0.7
April	1.03	-2.32	91	25	50.9	-3.6

Jan. Was a cloudy, cold and dry month. The temperatures and precipitation were both below normal. No substantial precipitation has been recorded since early in Oct.

Feb. was a month with the temperature and precipitation slightly below normal. There was a total of 8 inches of snow during the month, with 4 inches on the 6th being the greatest depth. Wind gusts reached 46 MPH on the 24th.

March was the 3d driest on record at St. Joseph. The drier years were 1910 with a trace and 1936 with .14 of an inch. THE PAST FALL AND WINTER MONTHS, NOVEMBER THROUGH MARCH WERE THE DRIEST ON RECORD FOR THOSE 5 CONSECUTIVE MONTHS. There was a total of 1.80 inches of precipitation the past 5 months which is 6.00 below normal. Wind gusts reached 53 MPH on the 28th and 46 MPH on the 10th.

April had the lowest temperatures ever recorded at St. Joseph so late in the spring with 30.0 on the 23d and 29.2 on the 24th.

B. Water Conditions

The Northwest and Northeast pools were dry during this period, as was the Southwest pool.

The east part of the Main pool was at 851.0 at the start of this period, while the west side was .66' lower. We were able to maintain the elevation of the east part with a trickle of water diverted from Squaw Creek, but the west side continued to go down to about a foot below the east side by the end of Feb. In March we diverted water from the east to the west side due to severe washing of the dividing spillway, but part of it washed out anyhow, resulting in the west side rising to about 4" below the east side, at 850.80 by the end of the month. The spillway was built up again, and by the end of April the west side was rapidly lowering. The east part also was going down, so that by the end of the month the level was below the silt at the gates, but about at 850.40.

C. Fires

None other than controlled burning. On the other hand, much of the bottom was burned this spring, probably a combination of factors contributing to our above-normal deer and pheasant populations.

II WILDLIFE

A. Migratory Birds

1. Population and Behavior

The appropriate NR form depicts the pattern of migration here, so it is felt that there is no need for a narration of numbers. Unusual population trends were the high-over-wintering mallard population and the presence at the end of the period of snows, blues and canadas. Blue wings seemed to be below normal as far a peak populations here might imply, while canadas seemed above normal with a similar qualification. Unusual observations were 370 Hudsonian Godwits, the first refuge record; a buff-breasted sandpiper, also a refuge first; a cross between a cinnamon teal and a blue-winged teal; and a concentration of 250 or more Wilson's phalarope. This was an excellent shorebird year, with above-normal numbers of most species, especially Dowitchers. Wood duck numbers were again so low as to be almost negligible, in spite of the fact that we have almost the only suitable wood duck habitat in the vicinity.

2. Food and Cover

When water was diverted to the west side of the Main pool, as discussed earlier, much of the wild seed in that area became available to the puddle ducks, which also preferred the shallow water for loafing. 238 acres of corn averaging 50 to 65 bushels to the acre were knocked down during this period. This should have helped considerably in getting our waterfowl to the breeding period in good physical condition. 135 acres of wheat were available for browse, altho there was very poor growth due to the continued drowth. A considerable quantity of corn and wheat was made available to ducks, mainly blue-wings, through our trapping efforts.

3. Botulism

None noted.

4. Lead Poisoning and Other Diseases

The number of dead ducks on the refuge was far above any known previous numbers. We assume that these were mainly cripples from the past hunting season that died soon after reaching the refuge or were too weak to find adequate food in order to recover. A report from the state veterinary department diagnosed the symptoms of a sample as malnutrition, altho there seems to be some question as to the ability of the pathologist to recognize lead poisoning.

B. Upland Game Birds

This refuge has the highest springtime ring-necked pheasant population it has had in recent years. This is probably due both to good survival due to a very dry winter plus an unusual concentration as a result of cover destruction in the surrounding area by fires. An occasional quail covey is seen, but, if past experience is the rule, no birds will stay to nest.

C. Big Fame Animals

We have an above-normal deer population, probably due to the destruction of their cover in surrounding areas. We also have above-normal numbers of hounds chasing them, a situation which will continue until this state makes up some reasonable, enforceable laws dealing with this problem.

D. Fur Animals, Predators and Other Mammals

Muskrats will continue to be below normal due to the drowth. Mink, beaver and raccoons seem to be at about normal population levels. Red foxes and rabbits are quite abundant and coyotes and skunks relatively scarce.

E. Predacious Birds

There was nothing in this category not covered by the appropriate NR form. One interesting observation was a great-horned owl carrying a coot.

F. Fish

There was a die-off in the west part of the Main pool due to shallow water combined with the fact that waterfowl concentrated in the east part during severe weather. However, practically all the dead fish were gars, plus a few carp, bullheads and channel cat. There should be an abundance of these species in the east part of this pool.

III REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development

Besides routine maintenance of grounds and buildings, roads and equipment, we:

Installed new track pins and bushings, built up rollers and installed new grease seals, and installed new bushings in front idlers of dozer.

Used dozer to clear trees on east side of Davis Creek north of headquarters bridge and to smooth a road for the dragline.

Sloped south levee, applied and levelled sub-base and riprap.

Applied gravel and then graded Davis Creek road from headquarters bridge to south levee, also approaches to new bridge.

Cleaned out side spans under headquarters bridge with dozer and dragline.

Repaired wingwalls of NW pool control structure in NO. 1 levee.

Dumped and levelled spalls to raise spillway on south end of nesting island by six inches.

Deepened drainage ditches in Main pool farm areas with grader and D-6.

Consttructed new ditch on east side of newly plowed area in gumbo.

Constructed a 3 foot levee around about 40 acres to make a settling basin in the Main pool area along Squaw Creek.

Removed mineral and gravel from residence softener and replaced.

Overhauled jeep motor.

Cut trees along headquarters road.

Made up card file for each refuge unit, with a map and farming practices used for each of past 5 years.

Misc. surveys to mark riprap elevation, provide cut data for Davis Creek cleanout, and to obtain levels for settling basin levee.

Seeded pasture in part of refuge farm unit and plowed rest.

Used dozer to repair washed out area in west levee of Squaw Creek at Bales tube.

Trapped, penned,crated and shipped geese and ducks to zoos.

Reorganized banding records and procedure.

Repaired shut-off valves for headquarters water system.

Installed heat-houser on tractor.

Dug up and replanted cat-tail tubers along bare areas of east levee of Main pool.

Moved approximately 24,000 yards of dirt in cleaning out Davis Creek.

Installed new fence around garden area.

Made trailer unit out of light plant motor for night work at Squaw Creek gates.

Controlled burn of part of Main pool cordgrass area.

B. Plantings

1. Aquatics and Marsh Plants

Approximately 6 bushels of cattail tubers were planted in the open areas along the east levee of the Main pool. If successful, a considerable amount of levee protection can be expected in several years with reproduction from this planting and a more active program in subsequent years. No growth has as yet be noted.

3. Permittees planted about 100 acres of sweet clover, which should do well if we only get some rain.

C. Collections

None

D. Receipts of Seed and Nursery Stock

Two bushels of hybrid corn seed were received in order to investigate the possibilities of both growing short corn and also producing black-bird resistant ears. We hope there is sufficient degree between a resistance to blackbirds and to waterfowl, which should certainly be large and therefore possible. The seed appeared to be in very good condition.

IV ECONOMIC USE OF THE REFUGE

A. Grazing

None now.

B. Haying

None now.

C. Fur Harvest

This information is noted on NR-4.

V FIELD INVESTIGATIONS OR APPLIED RESEARCH

The P.R. banding program was continued this spring. The refuge force put in quite a few hours trapping geese for the Milwaukee Zoo.

Mallard	415
Pintail	54
Blue-winged teal	2135
Green-winged teal	46
Coot	163
Other misc. ducks	50
Misc. geese	13

VI PUBLIC RELATIONS

VI PUBLIC RELATIONS

A. Recreational Uses

We had numberous overnight camps by boy scouts who used our fur house. There were also frequent visits by ornithological groups and sightseers. Two doctors from Wisconsin spent almost a week here photographing waterfowl, mainly snows and blues.

B. Refuge Visitors

The more important visitors are listed below. Permittees, sightseers routine business visits, etc. are not listed.

C. Rollings, Asst. Reg. Ref. Sup., re. farm plan	1/8
C. Poole, Boy Scout Field Executive, re. scouting plans	freq.
W. Noland, Cons. Agent, Mo. Cons. Comm, re. enforcement	freq.
W. Newcomb, USGMA, re. enforcment	freq.
O. Swiggart, Cons. Agent, Mo. Cons. Comm, re. enforcement	freq.
G. Kenter, Soil Mapper, SCS, re. farm plan	2/20
J. Thompson, Former Chief, Game Management Div., visit	2/22
E. Sons, Nod-A-Ho Disctrict Boy Scout Commissioner, re. planning	2/23
L. Layton, Regional Boy Scout Executive, re. planning	2/23
L. Helm, Biologist, Mo. Cons. Comm, re. banding operations	2/27
K. Armstrong, Agent, Mo. Cons. Comm., re. enforcement	2/27
J.C. Albrecht, Lecturer, re. photography	2/27
J. Thompson, former Chief, enforcement div., visit	3/4
E. Liers, "The Otter Man," lecturer, visit	3/8
J. C. Albrecht, Lecturer, re. photography	3/10
C. Alexander, USGMA, re. enforcement	3/9
H. Jensen, USGMA, Re. enforcement	3/9
C. Cadieux, USGMA, re. enforcement	3/9
H. Lee, photographer, re. same	3/18-23
R. Landis " "	"
J. Pospichal, USGMA. re. enforcement	3/18
Rev. E. Dehner, OSB, visit	3/21
R. Roach, Agent, Mo. Cons. Comm., visit	4/8
R. Wright, RO Civil Engineer, for survey work	4/11
R. Johnston, RO Civil Engineer, "	4/11
W. Bales, Landowner, re. cooperative drainage agreement	freq.
T. Davis, Field Agent, Mo. Cons. Comm., re. scout camp	4/23
Roy Coy, Director, St. Joseph Museum, to photograph godwits	4/24
R. Reno, Asst " " "	4/24
L. Helm, Biologist, Mo. Cons. Comm., re. banding	4/26

C. Refuge Participation

Jan. 12- The refuge manager attended the annual Nod-A-Ho District Boy Scout meeting and accepted chairmanship for another year.

Jan. 16- The refuge manager showed slides and discussed refuge wildlife at meeting of Mound City Garden Club.

Jan. 20- The refuge manager attended the state meeting for Boy Scout leaders in Jefferson City.

Feb Feb. 17- Attended nonthly Nod-A-Ho district meeting at Skidmore.

Feb. 20- The refuge manager attended a meeting for District Chairmen and Finance Committee Chairmen of Pony Express Council at St. Joe.

Feb. 22- The refuge manager showed slides and discussed wildlife at a fellowship meeting in the Christian Church of Tarkio.

March 21- The refuge manager showed slides and discussed the refuge at the John J. Pershing school in St. Joseph.

March 21- The refuge manager showed slides and discussed the refuge at the monthly social gathering of the Monticello School.

March 24- The refuge manager showed slides and discussed the refuge at the refuge overnite camp of Kansas City Boy Scouts.

March 29- Attended monthly Nod-A-Ho district meeting at Tarkio.

April 2- The refuge manager took the Geography class from Craig High School on a tour of the refuge and discussed wildlife with them.

April 3- The refuge manager took students from the White School on a tour of the refuge and discussed wildlife with them.

April 5- The refuge manager showed slides and gave a talk at the St. Benedict's College, Atchison, Kansas.

April 16- The refuge manager showed the state film - "Cottontail" to the Mound City Kiwanis Club.

April 20- The refuge manager showed slides and discussed the refuge at the monthly meeting of 4-H members and parents at the Forbes High School.

April 24- The refuge manager showed slides and discussed wildlife at a meeting of 6 Cub packs of Tarkio, Mo.

D. Fishing

The refuge season was opened April 21, somewhat before the normal opening, due to the rapid drying of the Main Pool and consequent possibility of a die-off. However, few fish were caught.

VII OTHER ITEMS

A. Items of Interest

The Hudsonian Godwit became a part of our refuge bird list with a flourish on April 23, when 370 were observed in our Main Pool. They were accompanied by above normal numbers of Dowitchers, and later several Marbled Godwits joined them. A Buff-breasted Sandpiper was positively identified on April 29. We had excellent feeding conditions for shorebirds due to shallow water and mud flats, which may have accounted for a concentration of over 250 Wilson's Phalarope on April 29.

B. Photographs

A few follow.

Date Submitted; May 14, 1956

Respectfully submitted,

Bruce P. Stollberg
Refuge Manager

Approved: R. W. Burnside
5/17/56

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

WATERFOWL

REFUGE SQUAW CREEK MONTHS OF JANUARY 1 TO APRIL 30, 1956

(1) Species	(2) Weeks of reporting period 1	2	3	4	5	6	7	8	9	10
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	4500	4500	4500	3000	6000	6000	10000	16000	16000	7100
Cackling										
Brant										
White-fronted								100	100	600
Snow							30	25000	40000	80000
Blue							150	125000	160000	270000
Other										
Ducks:										
Mallard	200000	200000	150000	150000	150000	150000	175000	175000	150000	100000
Black	300	300	500	500	500	400	500	500	500	1000
Gadwall								10	20	20
Baldpate								10	40	60
Pintail							5000	30000	50000	75000
Green-winged teal								5	50	300
Blue-winged teal										1
Cinnamon teal										
Shoveler								200	730	1000
Wood										
Redhead								10	3	10
Ring-necked								4	4	30
Canvasback										20
Scaup										100
Goldeneye										
Bufflehead										
Ruddy								2	2	20
Other										
Coot:								12	12	12

3-7150a
Cont. NR-1
(Rev. March 1953)

WATERFOWL
(Continuation Sheet)

REFUGE SQUAW CREEK MONTHS OF JANUARY 1 TO April 30, 1956

(1) Species	(2) Weeks of reporting period: 11	12	13	14	15	16	17	18	(3) Estimated waterfowl days use	(4) Production: Broods seen	Estimated total
Swans:											
Whistling											
Trumpeter											
Geese:											
Canada	6,100	12,000	4,400	1,100	400	200			733,600		
Cackling											
Brant											
White-fronted	700	500	50	20	20	10			14,700		
Snow	70,000	44,000	10,000	3,500	2,000	1,000			1,928,850		
Blue	125,000	60,000	13,000	3,500	2,000	1,000			5,317,550		
Other											
Ducks:											
Mallard	75,000	27,000	8,000	1,000	500	200			11,960,900		
Black	1,000	100	20						42,840		
Gadwall	50	100	20	10					1,610		
Baldpate	100	200	50	20	20	10			3,570		
Pintail	50,000	7,000	1,000	200	200	100			1,529,500		
Green-winged teal	300	250	400	400	300	200			15,435		
Blue-winged teal	10	100	1,000	1,700	2,500	3,500			61,677		
Cinnamon teal											
Shoveler	900	5,000	2,000	800	300	300			76,650		
Wood	3	6	10						133		
Redhead	10								231		
Ring-necked	40								546		
Canvasback	10					2			224		
Scaup	200	100	50	50	30	20			3,850		
Goldeneye											
Bufflehead											
Ruddy	20	15	15	10	10				658		
Other											
Coot:	40	150	250	400	600	1,000			17,332		

(over)

	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans			
Geese	7,994,700	357,700	
Ducks	13,697,824	205,741	
Coots	17,332	1,000	

SUMMARY

Principal feeding areas Refuge fields and surrounding fields

Principal nesting areas

Reported by Bruce P. Stollberg

INSTRUCTIONS (See Secs. 7531 through 7534, Wildlife Refuges Field Manual)

(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) Weeks of Reporting Period: Estimated average refuge populations.

(3) Estimated Waterfowl Days Use: Average weekly populations x number of days present for each species.

(4) Production: 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.

(5) Total Days Use: A summary of data recorded under (3).

(6) Peak Number: Maximum number of waterfowl present on refuge during any census of reporting period.

(7) Total Production: A summary of data recorded under (4).

Interior Duplicating Section, Washington, D. C. 37944
1953

3-1761
Form NR-1A
(Nov. 1945)

MIGRATORY BIRDS
(other than waterfowl)

Refuge SQUAW CREEK Months of JANUARY 1 to APRIL 30 1956

(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:										
Pied-billed Grebe	2	3/31	20	4/20	3	4/30				
Great Blue Heron	2	3/21	15	4/30	15	4/30				
Little Blue Heron	2	4/26	2	4/26	1	4/29				
E. Green Heron	1	4/28	4	4/30	4	4/30				
White Pelican	15	3/26	600	4/14	50	4/30				
D.C. Cormorant	18	3/28	18	3/28	12	4/30				
B.C. Night Heron	2	4/9	16	4/28	10	4/30				
Y.C. Night Heron	1	4/3	1	4/3	1	4/30				
Sora Rail	1	4/21	6	4/30	6	4/30				
Solitary Sandpiper	3	4/30	3	4/30	3	4/30				
Avocet	1	4/29	1	4/29	1	4/29				
II. Shorebirds, Gulls and Terns:										
F. Gull	100	4/17	400	4/28	30	4/30				
R.B. Gull	1	3/2	50	3/7	10	4/30				
L. Yellow Legs	6	4/5	70	4/25	50	4/30				
Sp. Sandpiper	3	4/29	3	4/29	3	4/30				
Semi Palm. Sandpiper	12	4/29	50	4/29	12	4/30				
Least Sandpiper	3	4/26	7	4/29	7	4/30				
Buff-breasted Sandpiper	1	4/29	1	4/29	1	4/29				
Pectoral Sandpiper	3	4/25	100	4/29	80	4/30				
Hudsonian Godwit	370	4/23	370	4/23	30	4/30				
Marbled Godwit	4	4/28	5	4/30	5	4/30				
Wilson's Phalarope	12	4/26	250	4/29	60	4/30				
Wilson's Snipe	9	4/23	25	4/29	4	4/30				
Willet	1	4/30	1	4/30	1	4/30				
Dowitcher	9	4/23	40	4/29	18	4/30				
[illegible] Yellowlegs	2	[illegible]	8	4/25	3	4/30				
[illegible]ldeer	1	3/4	8	4/30	8	4/30				

(over)

(1)	(2)		(3)		(4)		(5)	(6)
III. Doves and Pigeons:								
Mourning dove	2	2/24	150	4/30	150	4/30		
White-winged dove								
IV. Predaceous Birds:								
Bald [illegible] eagle	70	1/1	70	1/1	2	3/29		
Duck hawk	1	4/7	1	4/7	1	4/7		
Horned owl	1	1/1	2	4/30	2	4/30		
Magpie								
Raven								
Crow	200	1/1	200	1/1	30	4/30		
Sparrow Hawk	1	2/28	2	4/30	2	4/30		
Marsh Hawk	10	1/1	15	2/27	3	4/30		
R.T. Hawk	3	2/21	3	2/21	3	4/30		
Rough L. Hawk	2	2/14	20	2/26	4	4/30		
Sh. Eared Owl	12	1/1	12	1/1	6	3/19		
Barred Owl	2	1/1	2	1/1	2	4/30		
Screech Owl	1	4/2	1	4/2	1	4/2		
Cooper's Hawk	1	2/27	1	2/27	1	2/27		
Sh. Sh. Hawk	1	3/5	1	3/5	1	4/12		

Reported by Bruce P. Stollberg

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 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 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.

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

79858

3-1752
Form NR-2
(April 1946)

UPLAND GAME BIRDS

1613

Refuge Squaw Creek Months of Jan. 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'v'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					M : F 50:50				500	

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.

3-1754
Form NR-4
(June 1945)

SMALL MAMMALS

Refuge SQUAW CREEK Year ending April 30, 1956

(1) Species	(2) Density		(3) Removals					(4) Disposition of Furs						(5)
								Share Trapping						
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator * Control	For Re-stocking	For Re-search	Permit Number	Trappers Share	Refuge share	Total Refuge Furs Shipped	Furs Donated	Furs Destroyed	Total Popula-tion now
Muskrat				402				T-7767	201	201	201			500
Mink				25				"	12	13	13			30
Beaver				8				"	6	2	2			5
Raccoon				3				"	3					30

Permittee's Return (Walter Boyd)
$251.25 for 201 Rats, average $ 1.25
$282.10 for 12 Mink, average $23.50
$ 84.00 for 6 beaver, average $14.00
$ 9.00 for 3 Coon, average $ 3.00

* List removals by Predator Animal Hunter

REMARKS:

Reported by _____

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: 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.

116007

3-1570
NR-8a

REFUGE GRAIN REPORT

Refuge SQUAW CREEK Months of JANUARY through APRIL, 1956

(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 or Suitable Use*		
				Transferred	~~Sacked~~ Sold	Fed	Total		Seed	Feed	Surplus
Corn, hybrid, yellow dent	3803		3803		1496	57	1553	2250			2250
Wheat, Pawnee	60		60			40	40	20		20	

(8) Indicate shipping or collection points Mound City, Missouri

(9) Grain is stored at Headquarters grainery and corn crib

(10) Remarks

*See instructions on back.

16—61482-1

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 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

(1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. 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 break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.

(8) Nearest railroad station for shipping and receiving.

(9) Where stored on refuge: "Headquarters granary," etc.

(10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.

16—61482–1 U. S. GOVERNMENT PRINTING OFFICE

Link-belt dragline cleaning out side-spans of headquarters bridge. D-6 pulls full bucket back and it is dumped in hole previously dug on north side of bridge.

Done.

Planting cattail tubers along parts of the east levee of the Main pool having previously plowed them up in the Marsh. Two or three rows about a foot apart were tried.

We hope to stabilize the entire east levee of the Main pool similar to the above, which happened under natural conditions the first year of the drowth.