

ROUTING SLIP

DIVISION OF WILDLIFE REFUGES

DATE: 5/21 1945

\_\_\_\_\_ MR. SALYER \_\_\_\_\_

\_\_\_\_\_ MR. ELMER \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_

\_\_\_\_\_ \_\_\_\_\_

SECTION OF HABITAT IMPROVEMENT:

~~Mr. Griffith~~

~~Dr. Bourn~~

~~Miss Cook~~

REG 5-23

WSB 6-21

JWC 6-21

SECTION OF OPERATIONS:

~~Mr. Krummes~~

~~Mr. Regan~~

Miss Baum

W 6/1

WGR 6/2

SECTION OF LAND MANAGEMENT:

Mr. Earnshaw

Mr. DuMont

PAD 5/25

SECTION OF STRUCTURES:

~~Mr. Taylor~~

STENOGRAPHERS:

WV 6/2

REMARKS:

Big Lake

(Summary F.Y. 1945)

Jan-April 1945

Narrative Report

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Grain Report



## BIG LAKE NATIONAL WILDLIFE REFUGE

## MANILA, ARKANSAS

JANUARY 1

A PRIL 30, 1945

## I. GENERAL

A. Weather Conditions:

	<u>Precipitation</u>	<u>Max. Temp.</u>	<u>Min. Temp.</u>
January	4.03 inches	64°	15°
February	5.41 "	75°	16°
March	7.28 "	87°	29°
April	9.00 "	85°	34°
TOTAL	25.72 "EXTREME	87°	15°

The precipitation records are from the U. S. Department of Agriculture Weather Station taken at Big Lake Bridge, Manila, Arkansas. The temperature records are from the U. S. Weather Bureau at Elytheville, Arkansas.

The temperature for January and February was about normal, but the latter part of March and the first two weeks in April were warmer with almost continuous showers.

The rainfall during these four months was the heaviest in years, totalling 25.72 inches, of this amount 16.28 inches fell during March and April. It rained on 20 of the 30 days in April and rained on 63 of the 120 days during this four months period.

B. Water Conditions:

Water fluctuation for this period was 8.30 feet as compared with 7 feet in 1944 and  $3\frac{1}{2}$  feet in 1943. On February 25 the reading at headquarters was 236.18, reaching a high of 241.58 on April 6 and 238.60 on April 30 causing all refuge lands inside the levees to be flooded during this entire time. The old levee breaking about two miles north of the refuge permitted a large volume of water to flood the lands east of Big Lake, thus saving the Game Warden's Lodge on Ditch 17, as the water at its crest was up over the floor causing the building to lean about six inches. The area around the patrolman's house was flooded during the months of March and April, the water reaching a depth of four feet, making the place inaccessible except by boat. The area around headquarters was flooded with the exception of the mound where the office and residence are built, the water being five feet deep in the chicken yard and garden.

All gates were removed from the North Floodway Dam, but caused very little relief during this high water. The heavy winds and high water caused the channel leading from headquarters to the north end of the refuge to be blocked four different times by drifting logs and tree tops. This required about 25 man days and the use of the inboard boat to remove same.

C. Fires.

There were no fires on the refuge during this period.



## II. WILDLIFE

A. Migratory Birds:

## 1. Population and Behavior.

A. Waterfowl.

The highlight in the waterfowl population during this period was the number of Canada, Snow, Brant and Blue Geese on the refuge. During the week of March 19, there were 300 Canada, 10 Snow and 100 Brant and Blues mixed, a majority being Blue. From April 4 through April 12 there were approximately 1200 Geese using the refuge. Of this number 1,000 were Canada, 25 Snow and the remainder being Brant and Blues, with the Blues making up a majority.

The duck population began to fall off as the water began rising the latter part of February, as there was very little food available for the surface ducks which make up a majority or about 85% of the ducks using this refuge.

As all of the land north and south of the refuge in the floodway and several thousand acres of farm land outside the levees were inundated, and practically no shooting, the ducks had the use of an enormous amount of territory for feeding.

B. Doves and Woodcock:

Doves are very plentiful in this section and very few were killed during the past season due to the scarcity of ammunition. There were two nests within one hundred yards of the service building. The gravel road leading from headquarters to Manila is one of their favorite spots. It is common to see from 35 to 100 birds in this  $2\frac{1}{2}$  miles.

Due to the high water there were fewer than usual Woodcocks using the refuge, but one walking along the levees could flush one very easily.

## 2. Food and Cover:

Food for waterfowl during this time was exceptionally scarce mostly due to high water and the large areas covered by lotus last spring and summer. However, if the water had remained at a normal stage, food would have been sufficient for the small number of waterfowl here. The Gadwall, Baldpate and Coot used the refuge for food during these four months.

There is an overabundance of cover, well distributed throughout the refuge, consisting mostly of willow, cypress, buttonbush and lotus.

On April 20 the first White Water Lily was seen, being the only aquatic plant to reach the surface by the end of April. This was due to the depth of the water and the cool weather.

There was practically no food on the refuge for the doves. However, they used it for cover and nesting as it is practically the only suitable place in this vicinity for them.

perhaps  
will  
have  
some  
lotus.  
PEG

B. Upland Game Birds:

## 1. Population and Behavior.



## 1. Population and Behavior (continued)

The Bob White Quail and wild turkey<sup>?</sup> are the only upland game birds using the refuge. The turkey were not observed during this period and the writer believes they have moved to higher land adjacent to the refuge. The Bob-white quail used the old levees and the high lands on the west side of the refuge around headquarters and the picnic area.

## 2. Food and Cover;

Food was plentiful as the most of the farm lands adjacent to the refuge were planted in corn and soy beans and the butterfly pea is common along the edges of the refuge. There is a plenty of well distributed cover for the quail and turkey.

C. Big Game Animals:

No big game animals were recorded during this period.

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

The fur bearing animals using the refuge are the Mink, Raccoon, Muskrat and O'possum. In the past two years the Muskrat has become well established throughout the refuge whereas prior to this time, they were found mostly in the central and lower sections of the refuge. It is the opinion of the writer that through the regulated trapping program, the population of these animals has ~~reach~~ increased to the carrying capacity of the refuge.

The Raccoon is found on all ridges and high land throughout the refuge and was in better shape during the last trapping season than during the preceding year. This was contributed to the large drops of wild grapes and mast on the refuge. The trapping of the Raccoon was not as successful as I had hoped as the lake was frozen a majority of the trapping season, thus, not permitting the trappers to reach some sections of the refuge.

The Mink, like the Raccoon, is found throughout the refuge. There was practically no damage caused by the Mink to the Muskrat houses and ducks this season.

The Bob-cat is the only predator which uses the refuge and this animal was not seen during this time, whereas four were caught on the refuge by the Commercial trappers in 1943-44 trapping season. I believe when the timber cutters moved from the lands adjacent to the refuge on the north-east that this animal moved to the cut-over area. No complaints were received from any of the farmers in this vicinity relative to the bob-cat.

E. Predaceous Birds, including crows, Ravens and Magpies:

The predaceous birds consist of the Red-tail, Red-shoulder, Marsh. Rough-legged, Coopers, Sharpshin and Sparrow Hawks. The Great Horned and Barred and Hoot owl are also users of the refuge. None of these birds are here in large enough numbers to be considered detrimental. Their chief foods are rats, mice and other rodents.

See distribution how  
it will compare to the  
limited by the  
food supply  
REG



#### F. Fish:

There are about 7500 acres of water well suited for Buffalo, Carp, Drum and catfish which are caught by the 13 commercial fishermen holding permits. The Buffalo and Carp making up a majority of the rough fish. The game fish are plentiful throughout the lake, consisting of the Large and Small Mouth Bass, Crappie, White Bass, Goggle-eye, Bream and Bluegill Sunfish.

### III. REFUGE DEVELOPMENT, MAINTENANCE

#### A. Physical Development.

Screens were made and installed on the patrolman's house. Timbers were cut and floated to the house to replace the rotten pillars which are now causing the house to sag. These could not be replaced during this period due to the high water. The doors on the service building were remodeled to open from the outside in case of fire. The office was painted and asbestos was placed around the flues in the service building and office. The  $1\frac{1}{2}$  ton stakebody truck was given a complete overhaul. All boats were painted and the necessary repairs made to put them in good condition. A boat was built to be used in lotus control.

### IV. ECONOMIC USE OF THE REFUGE

#### C. Fur Harvest.

The trapping program ended on January 15. During this season we removed 786 Muskrats, 199 Raccoon and 144 Mink. This fur was caught by 9 commercial trappers who were issued permits to remove a specified number of Muskrats from the territory assigned to each trapper. This fur was handled on a 50-50 basis between the trapper and the government. The edible Raccoon carcasses being divided in a like manner, the government's share of the carcasses being sold to the highest bidder. The government received \$182.00 for these carcasses which was \$2.00 each.

Each trapper was required to run his trap line each day and not to leave the refuge until he was checked in by Patrolman Wright or myself. He would then wash his catch and hang it to dry with the tail down. The trappers also took care of the skinning and stretching of all pelts. Each Monday I would take one trapper at the time into the curing room where his fur was divided into two equal piles, he being permitted to take one pile and the government the other. The government's share was then stamped with a perforator and hung to complete curing. After the sale, all trappers were required to furnish me with the amount received for their fur and the name of the buyer. The trappers received the sum of \$2,030.50 for their share of the furs, averaging \$15.00 each for Mink, \$2.00 each for Raccoon and \$2.00 each for Muskrat.

In the dividing of the fur, the government received 12 muskrat pelts, 2 Mink pelts and 3 Raccoon pelts more than the trappers. This came about in dividing the fur into two ~~equal~~ piles equal in value instead of equal numbers.

The government's share of 429 Muskrat, 73 Mink and 101 Raccoon were shipped to the New York Auction Co. and at this writing complete returns have not been received for this fur.

Of the 429 Muskrats, 21 were killed by the live-trappers and 3 were caught by the commercial fishermen in their tackle.

The trappers sold their furs to the highest bidder. The buyers at these



### C. Fur Harvest (Continued)

sales were Charlie Newcomb, Riley Dunkin and Marshall Taylor of Manila, Ark., J. P. Chandler of Missouri and C. P. Powell of Luxora, Arkansas

All refuge regulations and state laws were complied with in the handling and disposition of this fur.

### E. Other Uses.

A special use permit was issued to the Arkansas Game and Fish Commission to live trap 200 Muskrat for restocking purposes. This trapping was begun on November 17 and was discontinued on December 20. A total of 134 were trapped. (The reason for this discussion in this report is, this information as to the total number trapped was not available for the report ending Dec. 31, 1944.)

A special use permit was issued to Gilbert Lott to sell cold drinks, fish bait and rent boats at the boat house on the south end of the refuge. The government received \$50.00 for this permit.

A special use permit was issued to Ervin Jackson to cultivate 10 acres of land in any crop except cotton for the sum of \$50.00.

## VI. PUBLIC RELATIONS

### A. Recreational Uses.

Sport fishing was the only use made of the refuge during this period from a recreational standpoint. Approximately 1,500 fishing days were enjoyed. A majority of the fishermen living within a radius of 20 miles of the lake.

### E. Fishing.

A majority of the fishing during this period was conducted by the commercial fishermen who hold special use permits. During this period from January 21 to April 30, there were 147,403 pounds of commercial fish harvested from the refuge. The sport fishing was good in February and the latter part of April. The remainder of this period was not suitable for sport fishing due to the water being extremely muddy.

### F. Violations.

One man was apprehended and convicted for trapping on the refuge without a special use permit. He pleaded "not guilty", but was found guilty and fined \$25.00 and costs. This man had 3 traps about 8 feet over a well marked boundary line on the refuge.

Patrolman Wright and I cooperated with Joe Whitley of the Arkansas Game and Fish Commission in apprehending a man for hunting ducks out of season. This man was tried in the court at Blytheville, Arkansas and was fined \$85.00 and costs.

## VII. OTHER ITEMS

### A. Items of Interest.

People from Blytheville and the other nearby towns are beginning to

A. Items of Interest ( Continued)

appreciate the refuge. This is due mostly to their being able to purchase commercial fish to help out during the meat shortage. In the past ~~two~~ months the commercial fishermen have always had buyers waiting at the landings when they return from running their tackle. This competition among the buyers has caused the price to almost double, Catfish bringing .40 per pound in the rough, Buffalo and Drum 25¢, carp 15¢ and 20 ¢. There is also an excellent demand for turtles, softshell turtles bringing 50¢ per pound.

A recent letter from Patrolman John W. Ellis, who is now on military furlough with the Seabees, states he has been in the Marshall Islands, Caroline Islands, Phillipines and is now at an undisclosed location, but is looking forward to returning to the States and assuming his old duties at Big Lake.

*Joe Morton*  
 \_\_\_\_\_  
 Joe Morton

\_\_\_\_\_  
 Jr. Refuge Manager

May 12, 1945

\_\_\_\_\_  
 Date

*William J. Moore 7/18*  
 \_\_\_\_\_

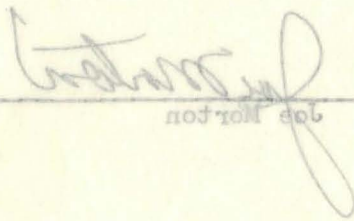




A. Items of Interest (Continued)

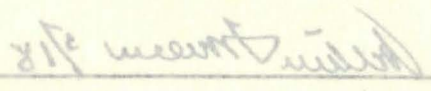
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\_\_\_\_\_  
Joe Morton

\_\_\_\_\_  
Jr. Refuge Manager

\_\_\_\_\_  
Date May 12, 1945

  
\_\_\_\_\_  
William Brown 5/18





## HIGHLIGHTS OF THE YEAR'S ACTIVITIES

The structures at the North Dam were overhauled by replacing rotten braces and tie posts. The west wall was extended 12 feet by driving 3X12 Wakefield pilings and installing tie posts and braces. The three center spans were lowered three feet each to enable more water to pass through this structure during the spring run-off and wet seasons. Three acres of willows were cleared near headquarters and about 40 acres of lotus were kept cut in the main body of water east of headquarters. Three large breaks and five small ones were repaired along Ditch 17 which required several hundred cubic yards of gumbo. This was handled with a crawler-type tractor and a rotary-type Fresno. The patrolman's unit was painted with two coats of paint inside and screens were built and installed and other necessary repairs were made. The sixty foot bridge across Ditch 16 was repaired and a twenty foot bridge was built. These bridges lead to the patrolman's unit. About twenty miles of boundary was posted by placing additional signs and painting the trees. A five hundred gallon water tank was installed at headquarters to serve as a sediment tank. All equipment and boats were put in as good condition as possible with the funds and man power available. During the year 1944 there were 250,000 pounds of commercial fish removed from the refuge. This was a great help to the people in this vicinity during the meat shortage. A boat with blades was constructed to be used in the control of Lotus.



## MIGRATORY BIRDS

Refuge Big Lake National Wildlife Months of January to April 30 194 5

(1) Species  Common Name	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
American Egret	2	4-6									50
Eastern Green Heron	1	4-23									15
Canadian Goose			3-17	1000	4-10	3	4-29				3500
Blue Goose			3-17	125	4-10	8	4-17				350
Brant			3-17	75	4-10	5	4-17				200
Mallards											25000
Black Duck						3	4-5				1200
Gadwall						20	4-29				400
Baldpate						10	4-24				250
Pintail						5	4-16				2000
Green Wing Teal						12	4-8				700
Blue Wing Teal											1800
Wood Duck											900
Ring Neck						5	4-20				200
Ruddy Duck						4	3-8				300
Hooded Merganser						2	3-16				150
Pied Bill Grebe						3	4-20				250
Great Blue Heron											75
Coot											15000
Sharp Shinned Hawk											25
Coopers Hawk											30
Red Tail Hawk											75

REMARKS: (Pertinent information not specifically requested)



Refuge Big Lake National Wildlife Months of January to April 30 1945

(1) Species	(2) First Observed		(3) Became Common	(4) Peak Concentration		(5) Last Observed		(6) Young Produced			(7) Total
Common Name	Number	Date	Date	Number	Date	Number	Date	No. Broods Obsvd.	Avg. Size	Esti- mated Total	Number Using Refuge
Red Shouldered Hawk											100
Marsh Hawk											30
Sparrow Hawk											25
Mourning Dove											10000
Woodcock											75

REMARKS: (Pertinent information not specifically requested)

Refuge Big Lake National WildlifeMonths of January to April 30, 1945

(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 specificoally requested. List introductions here.
Bob White Quail	Woodland and Old fields, 400 acres	2				175	This is the number of quail using the refuge to some extent.
Turkey	Oak, Cypress and Willows 1000 Acres	45				20	These birds use the refuge mostly for cover.



# 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.



Refuge Big Lake National Wildlife RefugeApril 30, 1945

(1) Species	(2) Density		(3) Removals					(4) Disposition of Fur						(5) Total Popula- tion	
Common Name	Cover Types & Total Acreage of Habitat	Acres Per Animal	Hunting	Fur Harvest	Predator Control	For Re- stocking	For Research	Share Trapping			Total Refuge Furs Shipped	Refuge Income	Furs Donated	Furs Destroyed	
								Permit Number	Trappers' Share	Refuge Share					
Muskrat	Willows, Cypress & Lotus	7½		786		134		T-3344 thru T-3352	387	399	429				1000
Raccoon	Same as the Muskrat	30		199				Same as above	98	101	101				200
Mink	Same as the Muskrat & Raccoon	40		144				Same as above							150

REMARKS: Six of the Muskrat shipped were trapped by the refuge personnel where they were damaging the mound at headquarters



# 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. "List of North American Recent Mammals" by G. S. Miller, Jr., a very good reference, is now out of print, although a revision is scheduled for publication in the near future.)   |
| (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, 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. Also show any removals not falling under heading 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 and the total income to the refuge by species, including share-trapped furs and furs taken by Service personnel. Total number of pelts of each species destroyed because of unprimness 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.  |



QUARTERLY GRAIN REPORTStation Big Lake National Wildlife Refuge Period Ending April 30, 1948

This report should cover all grain received, or disposed of, during the quarterly periods ending January 31, April 30, July 31, and October 30. Reports in duplicate, clipped to, but not bound as a part of, the quarterly narrative report, should reach the Regional Office by the 10th of the month following the close of the period covered by the report. The Regional Director, after approval, will forward the original to Washington.

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., and Mixed--50 lbs. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels. Report all grain received during period from all sources, such as transfer, share cropping, or harvest from feed patches.

Variety	On Hand Beginning of Period	Received During Period	Grain Disposed of				On Hand End of Period	Proposed Use		
			Trans- ferred	Seeded	Fed	Total		Seed	Feed	Surplus
Corn	30	0	10	0	0	10	20	Surplus		
Wheat										
Barley										
Rye										
Oats										
Mixed										

1. Indicate shipping or collection points Manila, Arkansas2. Grain is stored at Big Lake Headquarters

3. Remarks \_\_\_\_\_

Approved by: \_\_\_\_\_

Submitted by: \_\_\_\_\_

Refuge Manager

Regional Director

Signature and Title