BRANCH OF WILDLIFE REFUGES

NABRATIVE REPORT

ROUTING SLIP

DATE February 18,195 2

Mr. Salyer	Mr. DuMont PAD
Mr. Krummes	Miss Bann
SECTION OF OPERATIONS: Mr. Bell Mr. Rosen 149R	De Horton Sem
SECTION OF HABITAT IMPROVEMENT:	
Hr. OTHER DEG	Mr. Kubichek
Dr. Bourn	Mr. Stiles
SECTION OF LAND MANAGEMENT:	NE Davis Class
STENOGRAPHERS:	
REFUGE Calhoun & Batchtown	
PERIOD September-December, 1951	

CALHOUN AND BATCHTOWN REFUGES NARRATIVE REPORT SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1951

I. GENERAL

A. Weather Conditions:

The maximum temperature in September and December was higher during this period than last year. Minimum temperatures were lower in 1950 in every month except October, which was the same. Weather conditions were better for the duck hunter this year than last year for there were not many cold days to keep hunters out of the fields. All but two days were good weather for duck hunters during the 45 day season. Many days were very warm, and most of the hunters were pleased with weather conditions this season.

Relative readings are shown below:

Month	Year	Maximum	Minimum	Prec	ipitation
September	1950	91	36		1.77
	1951	97	39		3.67
October	1950	90	35		.98
	1951	85	35		2.07
November	1950	88	6		2.69
	1951	75	13		2.27
December	1950	68	2		.80
	1951	73	27		.20
				1950 total	6.24
				1951 total	8.21

B. Water Conditions:

The river stage in Pool 26 was good throughout the period, with essentially normal levels prevailing part of the time, and slightly above normal readings the rest of the time. This resulted in more favorable hunting conditions in the pool, especially in areas which are difficult of access during low or normal water. Generally, conditions in Pool 26 were the most favorable in several years.

A comparison of pool levels in Pool 26, compared to the same period in 1950, is shown in the following table:

II. WILDLIFE

A. Migratory Birds: 1. Populations and Behavior: a. Waterfowl:

Ducks started coming into the area in late September, and increased during the rest of the period. Blue-winged teal arrived late this year, coming in on September 29, compared to August 23 in 1950. Pintails were first observed on September 29, also, while in 1950 they were first seen on September 20. Mallards came in on September 29, compared to September 11 last year.

The peak concentration occurred on November 22. At that time, a big flight of ducks went through, with few stopping on the refuge. These birds were moving through ahead of a snow storm.

The peak concentration on the Calhoun Refuge this fall was 321,000 ducks, compared to 150,000 in 1950. Ducks would pile up in the refuge in goodly numbers; then they would be greatly reduced; and then they would build up again. It is believed that with warmer weather following early season cold, many ducks moved back from the south again.

The peak concentration on the Batchtown area occurred before the season opened. On October 23, a peak of 49,400 ducks were observed, compared to 79,400 last year. At no time during the waterfowl season did the population exceed 19,000 birds. This was most unusual, for normally high populations are built up and held in the closed area throughout the season. Unfavorable water conditions in this pool, as discussed previously, were responsible for the reduction of birds using the Batchtown area this fall.

In both the Batchtown and Calhoun areas, ducks fed in cornfields and were in good condition throughout the season. Since most of the feeding was done after shooting hours, some hunters disliked this feeding habit this fall.

b. Geese:

Canada geese started to stay on the refuge on October 27. They remained there all season, and they were present in about their peak numbers by mid-December. The peak concentration occurred on December 7, with 500 geese being noted compared to the peak of 200 in 1950. It is estimated that 15 Canada geese were killed in the vicinity of the refuge this year.

Blue and snow geese showed a good increase this year. They started coming into the area on October 20, and peaked at 12,000 on December 7. Quite a number of these birds were still present on the Calhoun Refuge at the close of this report period. The 1950 peak of blues and snows was 4,000 birds. It is estimated that 75 of these birds were killed in the vicinity of the Calhoun Refuge during the past waterfowl season.

c. Swans:

None were observed on either area this period.

d. Egrets:

Egrets were numerous all during the season. By the time the duck season opened, most of them had pulled out. The peak concentration occurred October 8, with an estimated 2,000 birds in the area compared to 800 birds last year.

e. Shorebirds:

Wilson snipe showed an increase this year, with an estimated 150 in the area, compared to 50 for the same period in 1950.

There was also an increase noted in killdeer, with 600 present this year compared to 400 a year ago.

2. Food and Cover:

Excessive and prolonged high water during the early part of the growing season resulted in a reduced production of natural foods this year, and consequently the food conditions in the closed areas were not up to the usual abundance. This shortage of food in the closed areas did not have an adverse effect on waterfowl useage, however. Higher than normal water levels during the season in Pool 26 made considerable food available, when marginal smartweeds, millets, etc., were flooded with a few inches of water.

In Pool 25, food conditions during the season were very poor, because the almost complete lack of water on normal areas rendered the good crop of smartweed and millet seed unavailable to ducks.

In both pools, however, the presence of machine-picked cornfields aleviated any shortage of natural foods, and waterfowl fed in these fields in large numbers throughout the fall.

B. Upland Game Birds:

No upland game birds are present on either the Batchtown or Calhoun Refuges.

There is ample food and cover present on both areas to sustain fairly high populations of these birds in event any should become established in the areas. Perhaps high water in the spring discourages upland game from using the bottomlands.

C. Big Game Animals:

No big game animals are present on either area.

D. Fur Bearers: a. Muskrats:

The muskrat population is low in this portion of the river. Very few signs were observed during the season, and there was very little trapping done this year. It is probable that prolonged high water had a deleterious effect on this species.

b. Minks:

Trappers report that minks are scarcer this year than last. Very few of these animals were taken by trappers this year.

c. Skunk:

No skunk sign has been noted on either area this fall.

d. Beaver:

Beavers seem to be on the increase this year. Almost all islands have beaver signs on them, and a new house was built on Six-mile Slough near Swan Lake this fall.

For the first time in many years, Illinois had a beaver season this fall. An estimated 15 animals were removed from the vicinity of the Calhoun Refuge.

e. Otter:

No otter signs have been seen on either area.

f. Raccoon:

Trappers and coon dog handlers report raccoon are plentiful throughout the bottoms this fall, and some of them report taking 6 or 7 in one hunt. This species continues to increase in this area.

g. Foxes:

Foxes are plentiful in areas, and in the entire portion of the river in this vicinity. Trappers are taking a lot of foxes and report that these animals are increasing.

E. Predaceous Birds:

Eagles remain static, although this fall 27 were seen, compared to 25 for the same period in 1950.

Hawks are common in all areas. Red-tailed hawks seem to be in the majority, and appear to be on the increase.

A goodly number of owls have been observed in the timbered areas. These birds seem to be on the increase in this locality.

F. Fish:

Fish are plentiful in all lakes in the area. The Illinois and Mississippi Rivers seem to have plenty of rough fish as some commercial fishermen report good results. Pole and line fishermen report that there are plenty of game fish in all lakes and sloughs.

III. REFUGE DEVELOPMENT AND MAINTENANCE

B. Plantings:

4. Cultivated Crops:

Although 8 share-cropping permits were issued, no crops were planted because the area was so badly flooded out during the prolonged high water this spring.

VI. PUBLIC RELATIONS

A. Recreational Uses:

Boating and picnicking were extensively done throughout the fall on both the Illinois and Mississippi Rivers. Pecan

picking, always a popular activity after the first frost, was noticed and it was as extensive as in the past.

B. Refuge Visitors:

Dr. W. E. Green, biologist for the Upper Mississippi Refuge, spent the first week of the waterfowl season here helping to check hunters and secure bag check data.

C. Refuge Participation:

There is nothing to report under this heading.

D. Hunting:

Duck hunters in Pool 26 had a good season. The better duck hunters took plenty of ducks, although high shooting was still very common, and high shooters often were unsuccessful. All areas checked showed a greater hunter success this year than in the past, with the exception of the Batchtown area, where hunting was poor as a result of low water throughout the season. Excellent hunting weather prevailed throughout the 45 day season this fall. Hunting pressure on the Illinois River, Pool 26, was greater this year than normally, because low water at Batchtown forced many who usually hunt there to do their hunting in Pool 26.

In the Batchtown area this fall, a total of 535 hunters were checked, with 926 ducks, for an average daily bag of 1.73 per hunter. This compares to the data collected from 1947 hunters taking 2884 ducks for a 1.48 average in 1950. No hunters went out in the State managed area for the first week of the season, because of extremely low water. During the entire season, only 45 hunters were taken out, and they succeeded in bagging only 15 ducks.

In Pool 26, a total of 2,579 hunters were checked, with 2,981 ducks, for a daily average of 1.15 ducks per hunter day. In 1950, a total of 1,561 hunters were checked with 1,436 ducks, for an average of 0.91 birds per day.

The Diamond Island Club in Pool 26 showed the biggest increase this fall, with a total of 482 hunters taking 1,031 ducks, for an average of 2.13 ducks per day. In 1950, it was found that there were a total of 184 hunters with 257 ducks, for an average of 1.30 ducks per day.

It is interesting to note that while hunting conditions in Pool 25 were generally considered very poor, the success rate

was higher this year than last, for in 1950 the average for the entire pool was 1.48 birds per day; while this fall, the pool averaged 1.73 ducks per day. It should be pointed out, however, that hunting pressure was only 27.47 percent as great as in 1950.

E. Fishing:

Pole and line fishing was fair during the early part of the period, but was over by the first of November. Crappie, bass, and bluegill fishing was better than last year.

Commercial fishing was better this fall than last year too. Fishermen report that the high water put new fish in the area and they expect better results. Most of them say this was a better year than last year.

F. Violations:

No cases were made during this period. Hunters in this area were the best behaved that have been noticed for several years. The sanctuaries were respected more this year than at any time since they were established.

January 5, 1952.

Superintendent of Refuges

Regional Director January 11, 1952

Mores ould column Refuge Calhoun our reported by Months of September 12 to December 19 51

	(1) Species	(2) First Seen		Pook Cone	entration	Last		Young P	5)	(6) -
								Broods	Estimated	Estimated
	Common Name	Mumber	Date	Number	Date	Number	Date	Seen	Total	for perio
I.	Swans:	sentativ	s breedin	g areas. B	sood counts	should be	made on t	TO OF HOTE	grees aggr	egating
	Whistling swan	Estimate	d number	of Joung pr	duced basi	d on obser	ations an	actual o	sunts on re	bre-
II.	Geese:	hormore.								
	Canada goos e	200	10/27	500	12/7	500	12/9	SOUTH THE	ane report	500
	Cackling goose Brant	dina Just	and June 1	mount for the	a about ac	during the	300,000 00	noamed in	the nerons	200
	White-fronted goose	THE PLAN			Sannan Sanna	-	-		200	
	Snow goose	300	10/20	6,000	12/7	6,000	12/9	erwal of t	Zinja -	6,000
	Blue goose	300	10/20	6,000	12/7	6,000	12/9			6,000
	ST ATER SEEDS	mendari.	red den n	imber, seen .	me shecras	mm developed	SERNOR C	resident	pecies.	
II.	Ducks:	The Mrs		record for		dwarfing the		encerned 1	the repor	CENTER III
	Mallard	100	9/29	245,800	11/22	89,300	12/7			300,000
	Black duck	100	10/20	2,000	11/22	500	12/9			4,000
	Gadwall	500	10/27	500	10/27	200	11/8	TING ON P	duge durin	5,000
	Baldpate	200	10/6	5,000	11/13	200	12/9	bring on r	fluor durin	11,500
	Pintail	50	9/29	40,000	11/22	10,000	12/9			120,000
-	Green-winged teal	300	10/27	500	11/3	200	11/22			4,000
	Blue-winged teal	150	9/29	500	11/3	100	11/13			5,000
- 1	Cinnamon teal			1.77.6	100	Remorkad br	-	Sdm	A A. Davis	-12.00
	Shoveller	400	10/27	2,000	11/13	200	12/8			3,000
	Wood duck	200	9/29	3,000	11/8	50	12/9			5,000
	Redhead	100	10/27	200	11/13	200	11/13			200
- 1	Ring-necked duck	1	20,2.		/	-	/			10.00
	Canvas-back	100	10/27	300	11/13	100	11/24			300
Anil	Scaup	100	10/27	10,000	11/3	3,000	11/22	o season		10,000
	0.35	100	11/13	100	11/13	50	12/9			100
	Buffle-head	50	11/3	100	11/22	100	11/22			100
		100	10/27	300	11/13	200	11/22	-		300
	Hundy duck	100	20/21	000	/-	sed byroca	- Santia	Smen &	Chart Lat	
IV.	Coot:	500	10/6	20,000	10/27	50	12/8	2°200 950	20,000	20,000

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449 Form NR-1

(nest tage)	TURBUTOR - INDITIONALINE PROPERTY	charge some suppliered among manual
2-T120	Walter Walter Control of the Control	SUMMARIES

3-1750

Dates waterfowl counts mad	е		1	Total waterfowl usage during period 500,000						
Percent of waterfowl area	covered _	10/6	80,000	Peak	waterfowl nu	mbers 32	1,300 ducks	20,000 coot		
Dates brood counts made	200	motor.	200	Areas	used by con	centration	Swan & Gil	bert Lakes		
Percent of area covered in	brood co	ounts	100	27/33	700	11/32		100		
Total production:	100	10/27	70,800	Princ	ipal nesting	areas thi	s season	10,000		
Ducks	300 300	25/27 2/29 10/27	8,000 8,000	11/13	90	12/9		8,000 8,000		
Coots		0/20	- 900	11/0	Reported by	200	Edward	A. Davis		
(2) First seen: (3) Peak concentration: (4) Last seen: (5) Young produced:	The fir period, The greater the last period.	st refuge and the n	record for number seen. per of the s	the species. This col	tional signi	season con apply to mited inter season con	ncerned in the resident spent of time cerned in the	e reporting		
(6) Total:	sentati 10% of Estimat may or	the breeding the breeding the breeding total may not be	ng areas. Hing habitat.	Brood count Estimate he species that used	s should be s having no using the re	made on tw basis in fa fuge durin	o or more ar act should b	eas aggregating		

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

WA TERFOWL

Months of September

to December 19 51

(1) Species		(2) First Seen		Peak Conc		(4) Last S		Young P		(6) Total
	Common Name	Mumber	Date	Number	Date	Number	Date	Broods Seen	Estimated Total	Estimated for perio
I.	Swans: Whistling swan	Estimate sembativ	d number s breedi	of young pro	duced bear	d on observe	ations un mede on t	actual o	aress aggr	pre- egating
II.	Geese: Canada goose Cackling goose Brant	The last period.	refuge :	soord for th	e specios	during the	86680B CO	ncermed in	the report	puë
	White-fronted goose Snow goose Blue goose	The great	nad we r	anner ween.	This colu		apply to	resident	becres.	
	2) First seems	The farm		record for t	ne abecres	SOUTHE THE		The state of the s	che repor	eing
II.	Ducks: Mallard	25	9/29	10,000	10/23	3,000	12/7			20,000
	Black duck	100	10/20	300	10/23	100	12/7			600
	Gadwall	100	10/23	100	11/8	100	11/8	enial atte	thon shoul	400
	Baldpate	100	10/6	3,000	10/23	200	11/8	wing on r	fuge durin	3,000
	Pintail	50	9/29	20,000	10/23	200	12/7			35,000
-	Green-winged teal	100	10/23	100	10/23	50	11/24			200
	Blue-winged teal Cinnamon teal	150	9/29	1,000	10/23	100	11/3	G A. DAVI	100	1,000
	Shoveller	200	10/23	200	11/8	200	11/8			200
	Wood duck	200	9/39	300	11/23	100	11/8			300
	Redhead	25	10/23	100	11/3	50	11/8		-	100
	Ring-necked duck					10 10 10 10			1	
	Canvas-back	100	11/3	100	11/29	100	11/29	S DOCTOR	1	100
	Scaup	5,000	11/3	5,000	11/3	200	11/24			5,000
	Golden-eye	50	11/8	50	11/8	50	11/8	-	1	50
	Buffle-head	50	11/3	50	11/3	50	11/3			50
	Ruddy duck	25	11/3	100	11/8	100	11/8	a Schatton	Car of olice	100
IV.	Coot:	300	10/6	6,000	10/20	500	11/8	THE PARTY	40,400	6,000

3-1750 (over) (Sept.1950) Interior - Duplicating Section, Washington, D.C. 82449 Form NR-1

(Sept. 1950) Interior - Duplicating Section, Washington, Date 52449

POTE ME-L

Dates waterfowl counts made	-	-		Total	waterfowl us	age during per	riod 75,000	
Percent of waterfowl area	covered _	10/6	9,000	Peak	waterfowl num	bers	49,400	6,000
Dates brood counts made			-	Areas	used by conc	entrationsE	Satchtown closed	areas
Percent of area covered in	brood cou	nts	50	11/5	20	11/8		26
Total production:	100	31/8	5,000	Princ	ipal nesting	areas this sea	son	8,000
Geese	38	70\08		32				700
Ducks		8/35		11/88	100	11/0		200
Coots	180	2/22	1,000	30/39		Edward A.	Davis	5/m/s
Pintell Sream-singed feel	786	1/10	and the same	RUCTIONS	900	17/22		500
(2) First seen:	reportingiven to The firsperiod,	g period s those spe t refuge r and the nu	should be a ecies of lo record for mber seen.	dded in ap cal and Na the specie This col	propriate spantional signiful of during the lumn does not	ces. Special icance.		d be
tration: (4) Last seen:	The last period.	refuge re	scord for t	he species	during the s	eason concerne	ed in the report	ing
(5) Young produced:	sentativ	e breeding	g areas. B	rood count	s should be m	ade on two or	al counts on remore areas aggrahould be omitted	egating
(6) Total:	may or m	ay not be		that used			e period. This epending upon th	

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

BUT EDIED ON D

3-1751 MIGRATORY BIRDS Form NR-1A (Nov. 1945) (Other than waterfowl) Calhoun Months of September to December 1951 vol maintenance Refuge..... (1) (2) (3) (5) (6) (4)Species First Seen Peak Numbers Last Seen Production Total Total # Estimated Number Total Common Name Colonies Number Date Number Date Number Date Nests Young Number Horned owl I. Water and Marsh Birds: 9/4 9/4 10/9 12/7 паука 300 Blue heron 30 200 2 10/8 12/1 Egrets 2,000 3 75 5,000 12/7 5,000 8,000 10/28 Cormorants 20 10 alvel . A Branch . vi betroge .U.O.A mi quote fail bns .. filst, 1991 Edition Stenies: In addition to the birds listed on II. Shorebirds, Gulls and Terns: to those priate spaces significance. 9/4 12/7 12/7 Gulls 100 2,000 2,000 5,000 Killdeer 9/28 12/7 100 600 25 600 10/23 12/7 Wilson snipe 150 2 150 for the species for the season conterned. The first refrge record First Seen The greatest number of the apecies present in a I mited interval of time. Penk Mumbelm Demieondo nomes eds animals seisees ens not broom enter ses en? Last Scent Estimated number of young produced based on observations and actual counts.

(over)

Estimated total number of the species unital the r

(1)	(2	(;	3) 1)		(5)	(6)
II. <u>Doves and Pige</u> Mourning dove White-winged d	Deposites 195	rl) Liegiender to	MICRATORY BIRDS (Other than waterfo	escottal	Refuge	orm NR-1A Nov. 1945)
(6) Total	(5) Production	(4) Last Sten	(3) Peak Numbers	(2) First Sen	(1) sectes	
IV. <u>Predaceous Bir</u> Golden eagle			Winder Date	Jumber Date	on Name	
Duck hawk Horned owl Magpie Raven Crow		e here in big numb	e/or cos	30 08 78 78 20 80	d March Birds:	
				Reported by Edward	A. Dowie	

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)

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

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

Last Seen: ' The last refuge record for the species during the season concerned.

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

(6) Total: Estimated total number of the species using the refuge during the period concerned. (Tevo)

Interior-Duplicating Section, Washington, D. C.

82362

3-175	51
Form	NR-1A
(Nov.	1945)

MIGRATORY BIRDS
(Other than waterfowl)

Refuge Batchtown Months of September to December 1951 1951

(1) Species	First	2) Seen		3) Jumbers		4) Seen		(5) Productio	n	(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. Water and Marsh Birds: Blue heron Egrets Cormorants	10 20 100	9/17 9/17 9/7	100 1,000 3,000	10/3 10/3 10/28	3 2 5	12/7 11/15 12/7	Ronidenta		1wo	150 1,500 5,000
I. Shorebirds, Gulls and Terns: Gulls Killdeer Wilson snipe	300	etc. In	"tern", uring th	a the A.O seagull" refuge 4	erms au urring of	general		enU ebro mrol ning ngis	:Belog	6,000 300 100
Passeriformes)		noo noza	e edf to	species	edf rol	gooer eg	Ner Janii	The	lrst Seen	(2) F
	to invie	ni betimi	1 s n1 f	paerq as	the spec	number of	taetaeng	edT :an	edauk das	(3) P
	.beareone	season c	edt gnin	pecles d	for the	ge record	plet feat		ant Seen:	(4)
counts, .	Lautos bu	n sholter	теадо по	beesd bet	ing produc	you lo led	myn bedan	i Roti	roduction	E (8)
	ing the p	nub egule	edf gn	(over)	1	redenn Le		Lýsli Lodistona	otal:	(G) (3)

(1)	(2	(3)	4)		(5)	(6)
I. <u>Doves and Pigeons</u> : Mourning dove White-winged dove		(Iwo)	MICRATORY BIRD (Other than water) Months	1999	RefugeBako	orm NH-1A lov. 1945)
(6) (6)		(A)	(3) Peak Mumbers	(2) First Seen	(1)	2
V. Predaceous Birds:	stoT redmuM	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	- 0,000			
Golden eagle		Number Date	Sumber Date	Number Date	on Name	Comm
Duck hawk Horned owl Magpie						. Water ap
Raven		- 274	1,000 10/8	10 017	00%	of suls
Crow	Residents	all year.	1,000 10/80	200 97	ate	Corpora
					50.00	
				A A A		
			I	Reported by	Edward A. Davis	1

(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 Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiiformes) significance.

II. Shorebirds, Gulls and Terns (Charadriiformes)

III. Doves and Pigeons (Columbiformes)

IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)

82362

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

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

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

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

Estimated total number of the species using the refuge during the period concerned. (6) Total: Interior -- Duplicating Section, Washington, D. C. (Tevo)

Refuge Calhoun and Batchtown

Months of September to December , 194 51

(1) Species	(2) Density	nt be	You Produ	ng	(4) Sex Ratio	R	(5) emova	ļs	(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 Restocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Saries Saries on actual	Nothing to repor	eers of	que d	witte	e guidestors e eggé brain e possible trace grant hirora saer	short sd8 sdw ! sdn:	so be	8 8 8	Po. 7 short observable of series of	
	o faujos bus emoijs	resido	mpon 1	erand	becaused a		de v		Betinkted in repres	(3) YOUNG PRODUCTOL
	is, etc. Include d	none de	· Corp.	nys b	arily to will	ebro- falls	endir		union spill other spe	(4) SEC RATIOS
	boltsq freque add	go Prob	beven	-	ogođao dose	nt m	edistant	Into	Indicate	(5) REMOVALS
	oort period, Thin	ox bild or bild	galras nl ga	ogi derz	low and gale	d app	descen i	bota atde	hetseldel riebsled	(6) TOTAL
	covered in survey.		den ar	taliro	og enhræteb noldsmelni	oa j amen	nerids three		to stanibuli	(7) DEMARKS
				bess	ed hIvoria be	revo	bob	mq e	id od sidet	tique amuleo vieo w

Form NR-2 - UPLAND GAME BIRDS.*

(2)

DENSITY:

(1)	SPECIES:	Use	correct	common	name.
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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 Calhoun and Batchtown

Year 19/ 51 WAD 018 - C-8K #104

(1) Species	(2) Density	(3) Young Produced	dis	(4) (5) (6) Removals Losses Introductions		(7) Estimated Total	(8) Sex Ratio						
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter	Number	Source	Refuge Population as of Dec. 31	Percentage
galles exites teated	Nothing to report under	this.	100	orta arta arta	inon dring ner	septem bene bene bene	Linds, Local Section of Local	はなると	Lareson tool o tools to tools to	edition of the second	endicate problem line problem sub- tion arong to be seen		
	during the resr.		rbe	nd 2	ence ide	e to	eeds and	em	Lates Lates	OCES WEEK	LOUIS ACRES	COUNT PRODUCT	9
	sates indicate total losses		Lie	70	all sens	rocor by ad	(10 to 10 to		to alta gozy d	otes	o no doss lini 188	1 EXERCITE (0
	n the refuge as of December	anteon		n 30				bad	001200		sv.kD	TOTAL REFUE POPULATION	9
	nimmodeb as eslecte done	o deleme?	ha ha	n ne dauc	I an	20 8	section.	201	endo b	orac Colt	lind	SHOTEMN ZES (

Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.) exclusive of fenced herds. Detailed data may be omitted for species occuring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated total number of young produced on refuge.
- (4) REMOVALS: Indicate total number in each category removed during the year.
- (5) LOSSES: On the basis of known records or reliable estimates indicate total losses in each category during the year.
- (6) INTRODUCTIONS: Indicate the number and refuge or agency from which stock was secured.
- (7) TOTAL REFUGE
 POPULATION: Give the estimated population of each species on the refuge as of December 31.
- (8) SEX RATION: Indicate the percentage of males and females of each species as determined from field observations or through removals.

Year 19/ 51

Refuge	Calhoun	and	Batchtown	

Botulism	Lead Poisoning or other Disease
Period of outbreak	Kind of disease
Period of heaviest losses	Species affected
Losses: (a) Waterfowl (b) Shorebirds (c) Other Actual Count Estimated	Number Affected Species Actual Count Estimated
Number Hospitalized No. Recovered % Recovered (a) Waterfowl (b) Shorebirds (c) Other Areas affected (location and approximate acreage) Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.	Number Recovered Number lost Source of infection Water conditions Food conditions
Condition of vegetation and invertebrate life	Remarks Nothing to report under this.

Refuge Calhoun and Batchtown

Year 19/51

		Sport 1	Fishing	Commercia	l Fishing	Rest	ocking	Number re-
Species	Relative Abundance	Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	moved for Restocking
	Nothing to	report under	this.					

REMARKS:

Form NR-7

PLANTINGS (Marsh - Aquatic - Upland)

Refuge Calhoun and Batchtown Year 19 51

Species	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount & Nature of Propagules	Date of Plant- ing	Cause of Loss	Remarks
Nothing t	o report und	er this.					

TOTAT	ACREAG	T DI	A RITHER A
ILII AI.	AL PERMIT		A IVI I P. III

Marsh and aquatic	
Hedgerows, cover	patches
Food strips, food	patches
Forest plantings	

CULTIVATED CROPS

The Cartes		Refuge	Calhoun			Yea	ar 19#	51.			42675
Permittee If farmed by refuge ersonnel, so indicate)	Permit No.	Unit or Loca- tion	Crops Grown	Ave. Yield per Acre	Sh	ttee's are Bu.Har- vested	Harve		Unharve		or Return Compensatory Services, or Cash Revenue
Nobert La Marsh Noe Navaire Nenry C. Weigel Nohn Held Narry Bimslager Nohn Sherman Nugust Toffmeyer N.F.Duncan	167 168 169 170 171 172 173 174	60 acres 6 acres 20 acres 8 acres 80 acres 10 acres 6 acres	none none none none none none none	Spoats ander the Wall	persons out dads toat	the form should be the talk	ume checrited In pr	e Special nee Letai	nd od bluode sadi n	periode of prepared	ED GEOBS ESVECTIO EDUM NEF-B
Note: Although these per which made cultive				planted	this	spring b such as a spring by such as a spring	ecause of the contract of the	of ex of manger of	breme and	d prolonge Tolong Sora Refuge Tolong	ed high water,
Summary of Crops Grown	: Crop	Acrea	ge Perm Acr	ittee's es Bus	Share hels		Go Harvest res		ent's Sha Unha Acres	rvested	Total Revenue

DIRECTIONS FOR PREPARING FORM NR-8 CULTIVATED CROPS

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

<u>Permittee</u> - List each permittee separately. If lands of the refuge are farmed by refuge personnel or hired labor, this should be indicated in the <u>Permittee</u> column.

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

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

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

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

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

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

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

3-1759 Form NR-9 (April 1946)

COLLECTIC AND RECEIPTS OF PLANTING STOCK (Seeds, rootstocks, trees, shrubs)

Refuge Calhoun and Batchtown Year 19/51

		Coll	ections	R A	Rece	ipts	FIELD STOR	Maria E
Species	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source	Total Amounts on Hand	Amount Surplus
othing to report	under thi	s.						
	*							
				*				
					*			
The same of the sa	JA LE LO							

3-1	760
Form	NR-10
(April	1946)

HAYING AND GRAZING

Refuge Calhoun and Batchtown Year 1945	Refuge Calho	un and Batchtown	. 5	Year	194
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Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Use	Tons of Hay Har- vested	Period of Use From - To	Rate	Total Income	Remarks
Not	hing to repo	ert under t	his.		4				
				2					
						a a			

Totals:

TIMBER REMOVAL

	Re	Refuge Calhoun and Batchtown					Year 19/.51			
Permittee	Permit No.	Unit or Location	Acreage	No. of Units Expressed in B. F., ties, etc.	Rate of Charge	Total Income	Reservations and/or Diameter Limits	Species Cut		
Nothing to rep	ort under thi	•								
			ø							
					lui a					

Total acreage cut ov	θΓ	Total income	······································
	B. F. Cords Ties		disposal
