



BRANCH OF WILDLIFE REFUGES

NARRATIVE REPORT

ROUTING SLIP

DATE Feb. 12, 1954

~~Mr. Salyer~~ \_\_\_\_\_

~~Mr. DuMont~~ PAD 3-16-54

~~Mr. Krummes~~ \_\_\_\_\_

~~Miss Baum~~ \_\_\_\_\_

Section of Operations:

~~Mr. Ball~~ \_\_\_\_\_

~~Dr. Morley~~ RCM

~~Mr. Regan~~ MR

Section of Habitat Improvement:

~~Mr. Griffith~~ \_\_\_\_\_

~~Mr. Kubichek~~ \_\_\_\_\_

~~Dr. Bourn~~ WBR

~~Mr. Stiles~~ \_\_\_\_\_

Section of Land Management:

~~Mr. Ackert~~ WA

~~Mr. Davis~~ DAV

Stenographers:

Carter

REFUGE CALHOUN & BATCHTOWN

PERIOD September-December, 1953

CALHOUN AND BATCHTOWN REFUGES  
NARRATIVE REPORT

SEPTEMBER, OCTOBER, NOVEMBER, DECEMBER, 1953

1. GENERAL

A. Weather Conditions:

The maximum temperature in September, October, and December was higher than during the same time last year. However, the November, 1952 maximum temperature was higher by two degrees. The minimum temperature was higher in 1953 in every month except December which showed 15 degrees colder than last year.

Relative readings are shown below:

Month	Year	Maximum	Minimum	Precipitation
September	1952	94	41	.97
	1953	104	43	.70
October	1952	94	24	.37
	1953	95	36	1.59
November	1952	78	17	2.12
	1953	76	19	.74
December	1952	61	20	.59
	1953	62	5	.52
1952 TOTAL				4.12
1953 TOTAL				3.55

B. Water Conditions:

The river stage in Pool 26 was more nearly normal this year than last, although some fluctuations occurred. During portions of the period, the river was below normal pool, resulting in low water in marginal areas. This low water on the margins rendered some areas unsuitable for hunting. The Diamond Island Club, for instance, was out of existence this fall because there was no water near their blinds. The Godar Swamp area, too was almost completely dry, and no hunting could be done there.

Water conditions at Batchtown were ideal. Nearly normal pool levels occurred throughout the fall, providing plenty of water in the shooting areas. Because of high stream flow during the summer, the gates at Dam 25 were open for a large part of the summer. This resulted in exposure of mud flats in the Batchtown area, and on these exposed flats extremely dense beds of smartweed came in. When the dam was closed in early fall, it put water over these smartweed beds, creating ideal feeding conditions for ducks, and making the Batchtown area more favorable than it has ever been.

A comparison of pool levels in Pool 26, with 1952 is shown in the following table.



Month	High	Low	Difference	Year
September	15-4	14-7	.4	1952
	15-3	14-7	.6	1953
October	15-1	14-8	.3	1952
	15-2	14-6	.6	1953
November	15-4	14-7	.7	1952
	15-4	14-8	.6	1953
December	15-1	14-5	.6	1952
	15-4	14-7	.7	1953

Maximum monthly variation in 1953 was .7 with the same variation in 1952.

### C. Fires:

No fires occurred on refuge areas.

## II. WILDLIFE

### A. Migratory Birds:

#### 1. Populations and Behavior

##### a. Waterfowl:

Ducks were present in fair numbers when the period opened, with 1,550 at Batchtown and 1,900 at Calhoun Refuge. The numbers started increasing as the period opened, and continued to build up steadily throughout the fall.

In the Batchtown Refuge, a small peak of 57,700 birds was reached the week ending October 17; but the numbers dropped to 34,440 the following week before bouncing back to 61,100 the week ending October 31. Another drop then occurred to 38,500 the week ending November 7, and then built up rapidly again. The week ending November 14 had 303,300 ducks present at Batchtown, and the peak of 1,001,800 was reached the next week. The week ending November 28 showed a drop to 652,900, but numbers increased to 753,900 birds the following week, and to 808,500 the week ending December 12. A big drop then occurred, and for the next two weeks, only 161,500 birds remained in the area. As the period closed, 155,300 birds were still present.

Populations at Batchtown were largely mallards and pintails. Mallards were above 150,000 from November 7 to the end of the period, with the peak of 750,000 being recorded the week ending December 12. As the period closed, 150,000 mallards were still present. Pintails hit high numbers earlier in the season than did mallards, with 40,000 observed the week ending October 10. From that date until the week ending December 12, this species remained near 50,000 birds, and peaked at 300,000 the week ending November 21. At that time, there were 700,000 mallards present also, and the fall peak of 1,001,800 ducks occurred for the area. Only 2000 pintails remained on the Batchtown Refuge at the close of the period.

This is the first year that the Batchtown Refuge peaked higher or had more days use than the Calhoun Refuge. The reason for the change this year can be attributed to the enormous amount of smartweed available on the Batchtown Refuge this fall. It was not until cold weather started closing the Batchtown Refuge that numbers on Calhoun reached anything like normal numbers.

While last year the Batchtown peak occurred before the hunting season opened, this year it hit in the middle of the shooting season.

On the Calhoun Refuge, 1,900 ducks were present as the period opened. This number built up steadily until the week ending November 21, when there were 175,000 ducks present. This was the same week that the season peak occurred at Batchtown. However, numbers at Calhoun dropped to 99,800 the following week; to 52,400 the next; and the fall peak of 302,000 birds was reached the week ending December 19. At that time, the numbers at Batchtown had dropped from 808,000 ducks to only 161,500. This reduction at Batchtown was the result of cold weather, and the ducks merely moved "over the hump" to Calhoun where there was still plenty of open water. As the period closed, 201,200 birds still remained at the Calhoun Refuge, while only 155,300 were at Batchtown.

On the Calhoun Refuge, as at Batchtown, mallards made up the bulk of the ducks. The mallard peak at Calhoun was 300,000 mallards during the same week as the fall total peak of 302,000 occurred. Not even pintails were common at Calhoun this fall, for the species peaked at only 3,000 birds.

A comparison of peak concentrations on the two Refuges for the past four years is shown in the following table:

	1950	1951	1952	1953
Batchtown	79,400	49,400	192,000	1,001,800
Calhoun	150,000	321,000	478,000	303,000

This fall, there was a total of 38,720,535 duck days use made of the combined areas, of which 29,907,500 days use was made of Batchtown and 8,813,035 days use made of Calhoun Refuge. This represents an increase of 501% on the Batchtown Refuge and a decrease of 25% on the Calhoun Refuge. For the combined refuges however, there was an over-all increase of 133%.



A comparison of duck day use for the two refuges for the 1952 and 1953 seasons is shown in the following table:

DUCK DAY USE TABLE

	1952	1953	Change
Batchtown	4,972,128	29,907,500	501% increase
Calhoun	11,611,705	8,813,035	25% decrease
TOTAL	16,583,835	38,720,535	133% increase

Hunting pressure was high in the vicinity of both refuges. However, this fall for the first time, a State Managed Public Shooting Program was in effect over a large portion of the shooting area in the vicinity of Calhoun Refuge.

Because of the extremely dense cover in the vicinity of Batchtown, together with water levels which would not permit wading to recover birds, it is felt that crippling losses there were quite high. In the vicinity of the Batchtown Refuge, crippling data indicate that there was 1 duck lost for each 1.8 ducks bagged on the State Managed Area; 1 lost for each 1.74 bagged at the Massey Club; and 1 lost for each 7.11 bagged at the Batchtown Sportsmen's Area. This is an over-all loss for the pool of 1 duck for each 3.18 ducks bagged, or a crippling loss of 31.44%.

At the Calhoun Refuge, crippling losses showed 1 duck lost for each 4.73 ducks bagged in the Stump Lake Area; 1 duck lost for each 8.87 ducks bagged at Calhoun Point; and an over-all loss for the area of 1 duck lost for each 7.10 ducks bagged. This represents a loss of 14.08% for the Calhoun Area.

Data were obtained on 3,930 hunters in the Batchtown Area with 6,061 ducks, for an average of 1.56 ducks per day; and from 6,185 hunters in the Calhoun Area with 3,657 ducks for an average of .59 ducks per day.

In the Batchtown Refuge, ducks did not leave to feed in cornfields until late in the season, and then not to any extent. Food supplies in the refuge afforded adequate nourishment for the large numbers of ducks resting there. Ducks from Calhoun Refuge however, fed cornfields regularly, although their flight was later because of the additional hour of shooting provided this fall.

Coot peaked at 10,000 on the Batchtown Refuge the week of November 7; and used the area a total of 303,100 days. At Calhoun Refuge, the peak of 8,000 was reached the same week and total use was 145,600 days. Combined total use of both areas was 448,700 days.

(b) Geese:

Very few geese used the Batchtown Refuge this fall, and only 385 days use was recorded. The peak number of 35 Canadas was reached in this area the week ending December 12.

On the Calhoun Refuge, however, much more use was made by geese. A total of 223,440 goose days use was recorded, with a peak of 3,100 of all species the week ending October 31.

As the period opened, 60 Canada geese were observed on Calhoun Refuge. This number built up to the peak of 700 the week ending November 28. As the period closed, 500 were still present.

Blues and snows both made their appearance on Calhoun the week ending October 10, when 200 of each species were seen. Snow geese peaked at 1,100 birds the week ending November 28. Blue geese peaked at 2,000 the week ending October 31.

The peak of blues and snows last year was 4,000, compared to this year.

All three species of geese used the Gilbert Lake portion of Calhoun Refuge more this year than usual. Canada geese totalled 48,440 days use on Calhoun Refuge this fall; while snows were present 75,600 days and blues were there 99,400 days.

It is estimated that 60 Canada geese and 100 blues and snows were killed in the vicinity of Calhoun Refuge this fall.

(c) Swans:

None were observed on either area this period.

(d) Egrets:

Egrets were numerous all summer and early fall, but were gone a few days after the duck season opened. The peak concentration was on September 15, with 2,500 present compared to 2,000 last year, when the peak was on September 13.

(d) Shorebirds:

Wilson snipe showed an increase again this year, with an estimated 500 using the Batchtown Refuge compared to 100 last year; and 500 using Calhoun Refuge compared to 200 in 1952.

Killdeer showed a small increase, with an estimated 1200 on both refuges compared to 1100 a year ago.



## 2. Food and Cover:

Food conditions in Pool 26 were fair this fall. There was a lot of sago pondweed present in the water areas. Good marginal growth developed during the summer, but this fall, the water had dropped over large portions of the margins in the pool, and so this marginal food was not available to ducks. This did not seem to have an adverse effect on early fall waterfowl use, however, as there were ample cornfields to feed in.

Food conditions in Pool 25 were by far the best they have ever been. High stream flow during the summer resulted in the gates at Dam 25 being held partly open, with the result that large expanses of mud flats were exposed throughout most of the growing season. On these mud flats, extremely heavy smartweed together with some millet came in. This growth was very rank and heavy, and so tall that it was almost impossible to traverse. A very heavy seed crop developed over the entire area. This growth was so dense that boat paths had to be cut through before it was possible to get around in the hunting areas.

Reduced stream flow in late summer caused the Corps to close the gates at the dam, flooding the very dense smartweed growth with from a few inches to a few feet of water, and created ideal conditions for waterfowl. This was one of those things one had to see to appreciate, for it would be impossible to visualize what conditions were like unless it was seen first hand. Smartweed growth in the refuge was so heavy that it was impossible to flush all the ducks from it, and made estimating difficult.

The extremely favorable conditions at Batchtown were contributing factors in the decline in ducks at Calhoun, for birds concentrated in this heavy feed and cover more than at any time in the past. Sufficient food was produced at Batchtown to provide even for the million birds which concentrated there, and certainly was a contributing factor in the enormous duck days use made of the refuge.

## 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. There has been no high water for two years and we have hopes that upland game birds will get started on the refuges.



C. Big Game Animals:

No big game animals are present on either area.

D. Fur Bearers:

(a) Muskrat:

The muskrat population looks a little better this year due to the low water the past two years. The trapping pressure is not too bad this year. Very few trappers were observed after muskrats this year. The poor price is probably the reason for lack of trapping pressure.

(b) Mink:

Trapping pressure was also light on mink.

(c) Skunk:

No skunk signs have been noted on either area this fall.

(d) Beaver:

Beavers are increasing in the refuges and almost all islands have beaver signs on them. Several new houses have been observed this year. Illinois is to have a beaver season in February which will probably cut them down some.

(e) Otter:

No otter signs have been seen on either area.

(f) Raccoon:

Raccoon are plentiful in all the bottom lands. This species is increasing in the closed areas and all the open areas. Trapping pressure on this species is low, and very few trappers or hunters go out for them because the price is so low.

(g) Foxes:

Foxes are plentiful throughout the bottoms and farmers report there are plenty of foxes on the upland. The County is paying a bounty but this does not seem to hold them down. Foxes are increasing in the closed areas.

### E. Predaceous Birds:

Eagles are numerous in the Batchtown and the Calhoun Refuges. It is estimated that there are 100 eagles in the two areas, compared to 50 birds last year.

Hawks are common in all the areas. Red-tailed hawks and marsh hawks are in the majority. Several were observed killed by hunters the past duck season.

Owls are common in all the timber areas, and appear to be on the increase.

### F. Fish:

Game fish are plentiful in almost all lakes in the Batchtown and the Calhoun Refuges, but commercial fishermen report that rough fish are down due to lakes silting in on Calhoun Refuge.

## III. REFUGE DEVELOPMENT AND MAINTENANCE

### B. Plantings:

#### 4. Cultivated Crops:

Ten share-cropping permits were issued, and the results are shown in the table below.

	Permit No.	Acres	Crop	Ave. Per Ac.	Shares Farmer-Govt.	Surplus Sold by Govt.
W. F. Duncan	361	26	corn	51	900 450	
Harry C. Bimslager	362	30	corn	29	656 218½	\$284.05
Henry Weigel	363	20	corn	14	210 70	91.00
John Held	364	8	corn	16	90 43	
Joe Navarre	365	6	corn	24	111 37	48.10
Robert LaMarsh	366	6	corn	40	160 80	
Howard Winshell	367	10	corn	76	570 190	247.00
Duff Fry	368	10	corn	40	267 133	
Earnest Dabbs	369	10	none - drouth		ruined crop	
August Toppmeyer	370	10	beans	19	144 48	119.52
TOTAL REVENUE TO GOVERNMENT					706	& \$789.67

## VI. PUBLIC RELATIONS

### A. Recreational Uses:

Boating and picnicking were extensively done throughout the fall on both the Illinois and Mississippi Rivers. A considerable number of people were looking for pecans this fall and this caused some trespass on the refuge areas as there was a fair crop of nuts.



### B. Refuge Visitors:

Mr. Frank Bellrose from the Illinois Natural History Survey was here November 9, 25, and December 18.

Dr. W. E. Green, biologist for the Upper Mississippi Refuge, spent November 11 to 16 helping to secure bag check data.

Mr. Kubichek from the Washington office spent November 18 to 22 taking pictures in the Batchtown Refuge.

Mr. George Winslow from the Winona office spent from December 1 to 10 helping check hunters and watching refuge areas.

### C. Refuge Participation:

The Refuge Manager attended an evening meeting at Grafton, Illinois with duck hunters on October 30th, and attended conference with War Department officials at St. Louis on November 2nd in company with Superintendent Steele and Regional Supervisor Gillett. This meeting was to be between the Service, the Corps of Engineers, the Illinois Conservation Department, and local duck hunters to discuss proposed management of hunting. However, representative from the State of Illinois failed to appear for the meeting.

### D. Hunting:

Heavy hunting pressure was found in the Batchtown Area this fall, and data were obtained from three different areas; the Massey Club, the State Public Shooting Area; and the Batchtown Sportsmen's Area.

A total of 3,930 hunters in the Pool reported taking 6,061 ducks, for a daily average of 1.56 ducks per hunter day. Checks were obtained as follows:

AREA	HUNTERS	DUCKS	AVERAGE
Massey Club	584	663	1.13
State Managed Area	1904	1801	.94
Sportsmen's Area	1442	3597	2.49
TOTAL	3930	6061	1.56

It will be noted that by far the best hunting was obtained by the Batchtown Sportsmen's Club, with their average of 2.49 ducks per day. This was almost as good as last year, when the average was 2.54 ducks per day.

The Massey Club averaged 1.17 ducks per day a year ago, which was slightly higher than the 1.13 average this year.

On the State Managed Area, however, the success rate was up this year, with .94 ducks per day compared to .72 ducks per day in 1952.

Mallards comprised 82.63% of all ducks killed in the pool, while pintails were a poor second with 8.6%; and blue-winged teal were third with 2.74%.

Duck hunters in Pool 26 did not have as good shooting as those in Pool 25. Ducks did not work as well for the hunters as in past years. High shooting was the most talked about feature of the season.

The Diamond Island Club did not operate this fall because of low water which left their hunting area high and dry.

For the first time, the State of Illinois put managed hunting into effect this fall in Pool 26. All blinds were staked out by the State, and were at least 150 yards apart. Ridge running and stump jumping was eliminated. No fees were charged for hunting in Pool 26, although hunters had to register for blinds, and report through a checking station to report their kills.

Data were obtained on this voluntary basis from 6,185 hunters who reported killing 3,652 ducks for a daily average of .59 ducks per day. The pool average last fall, when Diamond Island was operating, was 1.02 ducks per day for the pool. Combined Stump Lake-Calhoun Point data in 1952 showed an average of .93 ducks per day, which was higher than the .59 average this year.

River hunting was not too good this fall as the weather was too warm most of the season.

On the Bob Meyers farm, hunters reported killing 125 geese and 200 ducks, but no data are available on daily success rates.

As pointed out previously, crippling loss was quite high in Pool 25, with an estimated 31.44% loss; while in Pool 26, the crippling loss is estimated at 14.08%.

Data on period kill, show that in Pool 25, there was even a smaller percentage of hunters taking ducks the last hour than in Pool 26. Percentage of ducks taken, and the time of day the ducks were killed, is shown in the following table:

P e r c e n t a g e   o f   K i l l

Pool	AM	PM less last hour	All day less last hour	Last Hour
25	25.56	24.34	49.06	1.04
26	43.70	6.10	48.27	1.92

Thus it appears that the additional hour did not materially



contribute to increased kill. It should be pointed out that this data is based on a total of 6,056 ducks checked in Pool 25, and 3,652 ducks checked in Pool 26; so the sample is relatively large.

The following tables show hunter success and other data for the 1953 hunting seasons in Pools 25 and 26.

E. Fishing:

Pole and line fishing was pretty good this year, but fishermen say that it was not as good as last year. Several good catches were observed during the period; mostly crappies. A good number of bluegill and bass were taken during the early part of the period.

Commercial fishing was down some according to reports of operators in that business. The catfish run was better this fall than last year. Commercial fishermen report good catches of cat.

F. Violations:

Two cases were settled in state courts for hunting from a motor boat in the Batchtown closed area. They were fined \$100 and costs of \$4 each. The sanctuaries were respected in both areas this fall.

Bartlett W. Foster

BARTLETT W. FOSTER  
CLERK, ACTING IN CHARGE

January 29, 1954

DA Jansen

# DUCK KILL SUMMARY - Pool 25

	Massey Club	Batchtown State Area	Batchtown Sportsmen	POOL 25 TOTAL
No. hunters checked	584	1904	1442	3930
No. ducks checked	663	1801	3597	6061
Average ducks per day	1.13	.94	2.49	1.56

Species	No.	%	No.	%	No.	%	No.	%
Mallard	563	84.91	1538	85.39	2907	80.82	5008	82.63
Black	8	1.20	2	.12	1	.03	11	.18
Gadwall	-	-	2	.12	-	-	2	.03
Baldpate	5	.76	8	.44	93	2.58	106	1.75
Pintail	56	8.45	100	5.55	365	10.12	521	8.60
Green-winged teal	12	1.81	20	1.11	34	.95	66	1.09
Blue-winged teal	18	2.72	17	.94	131	3.64	166	2.74
Shoveller	-	-	22	1.22	-	-	22	.36
Wood duck	1	.15	29	1.61	18	.50	48	.79
Redhead	-	-	5	.27	2	.06	7	.12
Ring-neck	-	-	3	.17	18	.50	21	.35
Canvas-back	-	-	1	.06	5	.15	6	.09
Scaup	-	-	54	3.00	23	.65	77	1.27

Hunters took ducks as follows:

4 (limit)	57	9.76	111	5.83	532	36.89	700	17.81
3	52	8.90	142	7.45	231	16.02	425	10.81
2	91	15.59	239	12.55	247	17.14	577	14.68
1	97	16.61	453	23.79	282	19.55	832	21.17
0	287	49.14	959	50.38	150	10.40	1396	35.53



# DUCK KILL SUMMARY - Pool 26

	Stump Lake	Calhoun Point	POOL 26 TOTAL
No. hunters checked	4219	1966	6185
No. ducks checked	2224	1428	3652
Average ducks per day	.52	.71	.59

Species	No.	%	No.	%	No.	%
Mallard	1654	74.38	1321	92.51	2975	81.47
Black	22	.98	11	.77	33	.90
Gadwall	29	1.30	5	.35	34	.94
Baldpate	68	3.05	4	.28	72	1.97
Pintail	89	4.00	8	.56	97	2.66
Green-winged teal	145	6.52	8	.56	153	4.19
Blue-winged teal	55	2.48	14	.98	69	1.89
Shoveller	26	1.17	5	.35	31	.85
Wood duck	124	5.58	43	3.01	167	4.57
Redhead	2	.09	-	-	2	.05
Ring-neck	2	.09	-	-	2	.05
Scaup	8	.36	9	.63	17	.46

Hunters took ducks as follows:

4 (limit)	78	1.85	88	4.47	166	2.68
3	100	2.37	99	5.04	199	3.22
2	307	7.28	167	8.49	474	7.66
1	998	23.65	445	22.64	1443	23.33
0	2736	64.85	1167	59.36	3903	63.11

WATERFOWL

REFUGE Batehstown

MONTHS OF September TO December, 1953

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<u>Swans:</u>										
Whistling										
Trumpeter										
<u>Geese:</u>										
Canada										
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
<u>Ducks:</u>										
Mallard	150	150	300	500	1,000	2,000	3,000	3,000	5,000	20,000
Black								300	200	300
Gadwall								100	300	200
Baldpate						200	500	1,500	3,000	500
Pintail			1,000	5,000	10,000	40,000	45,000	25,000	50,000	15,000
Green-winged teal						100	100	100	500	1,000
Blue-winged teal	1,000	1,200	1,500	1,600	5,000	8,000	8,000	3,000	1,000	
Cinnamon teal										
Shoveler								200	300	300
Wood	400	500	500	800	800	1,000	1,000	1,000	500	800
Redhead									100	100
Ring-necked										100
Canvasback										
Scaup						100	100	200	200	200
Goldeneye										
Bufflehead										
Ruddy										
Other										
<u>Coot:</u>					300	3,000	4,000	2,000	5,000	10,000



WATERFOWL  
(Continuation Sheet)

REFUGE Batahtown

MONTHS OF September TO December, 19 55

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production : Broods: Estimated : seen : total	
	11	12	13	14	15	16	17	18			
<b>Swans:</b>											
Whistling											
Trumpeter											
<b>Geese:</b>											
Canada	10	10			35				385		
Cackling											
Brant											
White-fronted											
Snow											
Blue											
Other											
<b>Ducks:</b>											
Mallard	250,000	700,000	600,000	700,000	750,000	150,000	150,000	150,000	24,395,700		
Black	500	200	200	200	300	100	100	100	17,500		
Gadwall	200	100		100	100				7,700		
Baldpate	500	100		200					45,500		
Pintail	50,000	300,000	50,000	50,000	50,000	5,000	5,000	2,000	4,921,000		
Green-winged teal	1,000	200	200	200	100				24,500		
Blue-winged teal									212,100		
Cinnamon teal											
Shoveler	200	100	100	200	300				11,900		
Wood	500	200	200	100	100				58,800		
Redhead	100	100	200	200	300	300	200	200	12,600		
Ring-necked			300	200	500	500	500	500	18,200		
Canvasback			200	100	300	400	300	300	11,200		
Scaup	200	500	1,000	2,000	5,000	5,000	5,000	2,000	150,500		
Goldeneye	100	100	100	100	200	100	100	100	6,300		
Bufflehead											
Ruddy			100	100	100				2,100		
Other Merganser		200	300	400	500	100	100	100	11,900		
<b>Coot:</b>	5,000	800	3,000	5,000	4,000	1,000	200		303,100		

(over)



	(5)	(6)	(7)	SUMMARY
	Total Days Use	Peak Number	Total Production	
Swans				Principal feeding areas
Geese	385	35		
Ducks	29,907,500	1,001,800		Principal nesting areas
Coots	303,100	10,000		
				Reported by <u>Ray C. Steele</u>

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).



W A T E R F O W L

REFUGE Calhoun

MONTHS OF September TO December, 19 53

(1) Species	(2) Weeks of reporting period									
	1	2	3	4	5	6	7	8	9	10
<b>Swans:</b>										
Whistling										
Trumpeter										
<b>Geese:</b>										
Canada	60			60	300	200	300	400	500	600
Cackling										
Brant										
White-fronted										
Snow						200	300	600	800	1,000
Blue						200	400	1,000	2,000	1,000
Other										
<b>Ducks:</b>										
Mallard	100	100	200	800	1,500	2,000	3,000	3,000	8,000	21,000
Black								400	400	300
Gadwall								200	500	100
Baldpate						200	1,000	3,000	4,000	2,000
Pintail			2,000	4,000	1,000	500	500	2,000	3,000	3,000
Green-winged teal				5		100	100	200	1,000	1,000
Blue-winged teal	1,500	1,800	2,000	2,500	3,800	6,000	7,000	5,000	500	
Cinnamon teal										
Shoveler								300	300	400
Wood	300	400	1,000	1,200	1,200	800	800	800	400	500
Redhead									100	100
Ring-necked										1,000
Canvasback										
Scaup							100	300	300	1,000
Goldeneye										
Bufflehead										
Ruddy										100
Other <del>Mergansers</del>										100
<b>Coot:</b>					200	1,000	1,500	2,000	5,000	8,000

WATERFOWL  
(Continuation Sheet)

REFUGE Calhoun

MONTHS OF September TO December, 1953

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total	
	11	12	13	14	15	16	17	18			
<b>Swans:</b>											
Whistling											
Trumpeter											
<b>Geese:</b>											
Canada	600	600	700	500	600	500	500	500	48,440		
Cackling											
Brant											
White-fronted											
Snow	1,000	1,000	1,100	1,000	1,000	1,000	1,000	1,000	75,600		
Blue	1,200	1,000	1,400	1,200	1,200	1,200	1,200	1,200	99,400		
Other											
<b>Ducks:</b>											
Mallard	40,100	165,000	95,000	50,000	60,000	300,000	200,000	200,000	8,048,600		
Black	600	200	100	100	100	200	200	200	19,600		
Gadwall	100	100	100	100	100				9,100		
Baldpate	1,000	200	100	200	100				82,600		
Pintail	1,000	3,000	3,000	1,000	1,000				175,000		
Green-winged teal	1,000	300	100	100	100				28,035		
Blue-winged teal									240,100		
Cinnamon teal											
Shoveler	500	100	100	200	200	200			16,100		
Wood	400	200	100	100	100				58,100		
Redhead	100	200	200	100	100	100	100	100	8,400		
Ring-necked	1,000	1,000	200		200	200	200	200	28,000		
Canvasback					100	100			1,400		
Scaup	1,000	5,000	500	200	1,000	1,000	500	500	79,800		
Goldeneye		100	100		100	100	100	100	4,200		
Bufflehead			50						350		
Ruddy	100	200	50	100	100				4,550		
Other <del>Mergansers</del>	100	200	100	200	300	100	100	100	9,100		
<b>Coot:</b>	2,000	500	200	200	200				145,600		

(over)



	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans	:	:	:
Geese	225,440	3,200	:
Ducks	8,813,055	302,000	:
Coots	145,600	8,000	:

SUMMARY	
Principal feeding areas	
Principal nesting areas	
Reported by	Ray C. Steele

# 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).

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

MIGRATORY BIRDS  
(other than waterfowl)

Refuge Calhoun

Months of September to December 194 53

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Great blue heron	50	9-5-53	250	10-9-53	20	12-12-53				400
American egret	250	9-2-53	2500	9-15-53	10	10-24-53				4000
Double-crested cormorant	100	9-2-53	3000	10-20-53	10	12-12-53				5000
</										

(over)



(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove					
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle					
Duck hawk					
Horned owl					
Magpie					
Raven					
Crow					
	Resident all year.	Abundant.			
Reported by.....					

#### INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)  
 II. Shorebirds, Gulls and Terns (Charadriiformes)  
 III. Doves and Pigeons (Columbiformes)  
 IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

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

MIGRATORY BIRDS  
(other than waterfowl)

Refuge Batchtown

Months of Sept. to December 19453

(1) Species	(2) First Seen		(3) Peak Numbers		(4) Last Seen		(5) Production			(6) Total
Common Name	Number	Date	Number	Date	Number	Date	Number Colonies	Total # Nests	Total Young	Estimated Number
I. <u>Water and Marsh Birds:</u>										
Great blue heron	50	9-5-53	200	10-9-53	25	12-12-53				300
American egret	100	9-2-53	1000	9-15-53	5	10-24-53				1500
Double-crested cormorant	200	9-2-53	2000	10-20-53	3	12-12-53				6000

(over)



[illegible]

## INSTRUCTIONS

- (1) Species: Use the correct names as found in the A.O.U. Checklist, 1931 Edition, and list group in A.O.U. order. Avoid general terms as "seagull", "tern", etc. In addition to the birds listed on form, other species occurring on refuge during the reporting period should be added in appropriate spaces. Special attention should be given to those species of local and National significance. Groups: I. Water and Marsh Birds (Gaviiformes to Ciconiiformes and Gruiformes)  
II. Shorebirds, Gulls and Terns (Charadriiformes)  
III. Doves and Pigeons (Columbiformes)  
IV. Predaceous Birds (Falconiformes, Strigiformes and predaceous Passeriformes)
- (2) First Seen: The first refuge record for the species for the season concerned.
- (3) Peak Numbers: The greatest number of the species present in a limited interval of time.
- (4) Last Seen: The last refuge record for the species during the season concerned.
- (5) Production: Estimated number of young produced based on observations and actual counts.
- (6) Total: Estimated total number of the species using the refuge during the period concerned.

Refuge                      Calhoun & Batches town

Months of Sept. to December, 194 53[illegible]



## INSTRUCTIONS

Form NR-2 - UPLAND GAME BIRDS.\*

- (1) SPECIES: Use correct common name.
- (2) DENSITY: Applies particularly to those species considered in removal programs (public hunts, etc.). Detailed data may be omitted for species occurring in limited numbers. Density to be expressed in acres per animal by cover types. This information is to be prefaced by a statement from the refuge manager as to the number of acres in each cover type found on the refuge; once submitted, this information need not be repeated except as significant changes occur in the area of cover types. Cover types should be detailed enough to furnish the desired information but not so much as to obscure the general picture. Examples: spruce swamp, upland hardwoods, reverting agriculture land, bottomland hardwoods, short grass prairie, etc. Standard type symbols listed in Wildlife Management Series No. 7 should be used where possible. Figures submitted should be based on actual observations and counts on representative sample areas. Survey method used and size of sample area or areas should be indicated under Remarks.
- (3) YOUNG PRODUCED: Estimated number of young produced, based upon observations and actual counts in representative breeding habitat.
- (4) SEX RATIO: This column applies primarily to wild turkey, pheasants, etc. Include data on other species if available.
- (5) REMOVALS: Indicate total number in each category removed during the report period.
- (6) TOTAL: Estimated total number using the refuge during the report period. This may include resident birds plus those migrating into the refuge during certain seasons.
- (7) REMARKS: Indicate method used to determine population and area covered in survey. Also include other pertinent information not specifically requested.

\* Only columns applicable to the period covered should be used.

3-1753  
Form NR-3  
(June 1945)

BIG GAME

Refuge Calhoun & Batohtown Calendar Year 1953

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses			(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio
			Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31	
None														

Remarks:

Reported by \_\_\_\_\_



## INSTRUCTIONS

### Form NR-3 - BIG GAME

- (1) SPECIES: Use correct common name; i.e., Mule deer, black-tailed deer, white-tailed deer. It is unnecessary to indicate sub-species such as northern or Louisiana white-tailed deer.
- (2) DENSITY: 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 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 at period of its greatest abundance and also as of Dec. 31.
- (8) SEX RATIO: Indicate the percentage of males and females of each species as determined from field observations or through removals.



3-1755  
Form NR-5  
(April 1946)

DISEASE

Refuge Calhoun & Batehtown Refuges Year 19453

Botulism None

Lead Poisoning or other Disease None

Period of outbreak.....			Kind of disease.....		
Period of heaviest losses.....			Species affected.....		
Losses:			Number Affected		
	Actual Count	Estimated	Species	Actual Count	Estimated
(a) Waterfowl	.....	.....	.....	.....	.....
(b) Shorebirds	.....	.....	.....	.....	.....
(c) Other	.....	.....	.....	.....	.....
Number Hospitalized			Number Recovered.....		
	No. Recovered	% Recovered			
(a) Waterfowl	.....	.....	Number lost.....		
(b) Shorebirds	.....	.....			
(c) Other	.....	.....	Source of infection.....		
Areas affected (location and approximate acreage).....			Water conditions.....		
Water conditions (average depth of water in sickness areas, reflooding of exposed flats, etc.)			Food conditions.....		
Conditions of vegetation and invertebrate life.....			Remarks.....		
Remarks.....					



3-1756  
Form NR-6  
(April 1946)

FISH

Refuge Calhoun & Batehtown Refuges Year 19453

Species	Relative Abundance	Sport Fishing		Commercial Fishing		Restocking		Number re- moved for Restocking
		Man days Fishing	Number Taken	No. of Permits	Pounds Taken	Number Stocked	Area Stocked	
			Nothing to report.					

REMARKS:

3-1757  
Form NR-7  
(April 1946)

PLANTINGS  
(Marsh - Aquatic - Upland)

Refuge..... Calhoun and Batehtown ..... Year 194 53

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

TOTAL ACREAGE PLANTED:

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







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.

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

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

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

Crops Grown - 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. Unharvested - 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 Bushels 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 indicate the total cash revenue received by the Service.



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

Year 194.....

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period or Collection	Method	Unit Cost	Amount	Source		
			Nothing to report.					

HAYING AND GRAZING

Refuge Cathoun & Batehtown Year 19453

Permittee	Permit No.	Unit or Location	Actual Acreage Utilized	Animal Use Months	Tons of Hay Harvested	Period of Use From - To	Rate	Total Income	Remarks
			Nothing to report.						

Totals:

Acreage grazed..... Animal use months..... Total income Grazing.....  
 Acreage cut for hay..... Tons of hay cut..... Total income Haying.....



Refuge Calhoun & Bateh town Year 194<sup>53</sup>

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 report.				

Total acreage cut over.....

Total income.....

No. of units removed B. F. ....

Method of slash disposal.....

Cords.....

Ties.....

.....