

POCASSE

NARRATIVE REPORTS

JANUARY-DECEMBER 1963

NARRATIVE REPORT ROUTING SLIP

REFUGE POCASSE

PERIOD September - December 1963

OFFICE OF THE CHIEF: Mr. Gillett \_\_\_\_\_ Mr. Ackerknecht \_\_\_\_\_

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POCASSE NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

SEPTEMBER - DECEMBER 1963

REGULAR PERSONNEL

Ed Collins - Refuge Manager

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## I. GENERAL

### A. Weather Conditions.

	<u>Snowfall</u>	<u>Precipitation</u>		<u>Max.</u>	<u>Min.</u>
		<u>This Month</u>	<u>Normal</u>	<u>Temp.</u>	<u>Temp.</u>
September	_____	1.03	1.13	91	35
October	_____	1.44	.98	95	26
November	_____	.07	.42	65	10
December	_____	.14	.21	54	-22
Total	_____	2.68	2.74	Extremes 95	-22
Annual					
Total	_____	16.87	14.76		

Weather information is obtained from an official weather station operated at Pollock, S.D. adjacent to the refuge. This weather station has been operated for the past 36 years.

The period was characterized by above average temperatures and below normal precipitation. September was summer-like. "Indian summer" prevailed through October and November. December brought on an avalanche of windy, bitter cold weather that stayed through the month.

September temperatures averaged in the high 70's and 80's. Precipitation was recorded on 5 days, most of which came on the first 2 days on the month. September was marked by clear days and cool nights, almost a continuation of August weather.

October cooled only slightly from mild September. Daytime temperatures averaged in the 70's although evenings cooled to the 40's. The first frost of the season occurred on the 28th, about 1 month later than normal. Below freezing temperatures were recorded on 3 nights. Precipitation was recorded on the 8th, 20th and 21st.

November daytime temperatures averaged in the mid-50's while evening temperatures dropped well below the freezing mark. The weather was brisk but pleasant. A light shower on the 8th was the only precipitation for the month.

December lived up to its expectation of cold, frigid weather. The temperature dropped below the zero mark on 16 days. A low of -22 degrees was recorded on the 15th and a high of 54 degrees was recorded on the 5th. Except for the 2 week cold snap during the middle of the month, temperatures ranged in the high 30's. Precipitation was light and scattered, falling on the 8th, 16th, and 20th.

B. Habitat Conditions.

1. Water

Water is supplied to the refuge from Spring Creek, comprising 1530 square miles of watershed. An additional 75 square miles supplies water to the refuge from two intermittent streams which contribute during spring runoff. Excepting periods of extreme drought, Spring Creek should maintain the refuge at operating levels.

As the period began the impoundment was 10 inches below spillway crest. Summer-like conditions which extended into late fall dropped the pool another foot. The impoundment stayed at this elevation until freeze up in early December. This is 1 foot lower than last year when we went into the new year 12 inches below spillway crest. If we can expect normal run-offs during the coming spring, there will be no trouble filling the impoundment to maximum elevation.

The winter has been very open. The snow cover that was present in early December had melted by the end of the month. No appreciable rise in pool elevation was noted after the run-off.

2. Food and Cover.

The small acreage of cropland precludes any farming for wildlife on the refuge. Mallards gleaned corn and stubble fields east of the refuge. Ducks moving off the Missouri River used the area west of Mound City.

Migrant ducks had no trouble locating food. A bumper corn crop provided abundant wastes. Most corn was picked before migrant waterfowl arrived.

Good use was made of the Potamogeton beds located in the Center Unit. Both the North and Center Units have potential for growing large quantities of aquatic foods.

## II WILDLIFE

### A. Migratory Birds.

1. Geese. Use of the refuge by geese remains low. Although many geese migrate through this area, few of them stop for any length of time. The Missouri River provided some attractive waterfowl habitat this fall but the numerous sandbars will soon be inundated.

Several flocks of white-fronts totaling nearly 500 birds used the river just west of Pollock during late October. Small flocks of canada geese were scattered up and down the river most of the fall. Ice fishermen reported hearing a large flock of canada geese on the Missouri River December 25th.

Refuge geese peaked at 300, up slightly from last year's 157. Hunters were discouraged because the geese stayed for such a short period whereas last year small flocks remained all fall. Geese used both the North and Center, but generally preferred the latter.

2. Ducks. The fall migration was a reflection of near ideal conditions. A similar situation must have occurred north of here in Canada and North Dakota since the migration was unusually late. Migrants did not begin to appear until late October and then only slight increases were noted. Ideal fall weather permitted an early corn harvest and provided adequate wastes for field feeding species.

Mallards began building up on the Missouri River in early November. By the 25th of the month, over 100,000 were present on 10 miles of river bottom west of Mound City. Feeding flights off the river into picked corn fields blackened the evening sky. Depredation was not a problem this year since most corn had been harvested prior to the heavy waterfowl buildup. Hunters complained again this year that as soon as the duck hunting gets good, the season closes. However, considerable duck hunting took place after the season closed.

The refuge peak of 17,000 mallards occurred in November and is down 3,000 from last year. Not as much shifting was noted this year from <sup>the</sup> river to the refuge. A considerable increase in waterfowl use is expected on the refuge in the next few years as the rising Oahe Reservoir inundates the remaining Missouri River sandbars.

Ducks had made their exodus from the refuge by December 1, although large numbers were still present on the river.

Gadwalls, baldpate, pintail, GW teal, and BW teal were present on the refuge in low numbers. All but the gadwalls had departed by the end of September.

Divers were scarce again this year. The peak of 700 birds is twice last year's number. Lesser scaup are the predominate divers, although most species common to this area are usually seen.

No common mergansers were recorded on the refuge this year, although a heavy migration was noted on the river the last week of November.

#### Other Waterbirds.

Sandhill cranes were first noted in the Pollock area on September 19. Family groups and small flocks totaling 350 birds frequented the farm land west of the refuge. The population built up slowly but steadily until it reached 12,000 by the end of October.

Cranes frequented the corn fields west of Pollock, although some movements into North Dakota were noted. At dusk, all flight lanes converged as the cranes moved back to the river sandbars to roost.

Crane use of the refuge was light and limited to just a few days. Cranes used the North Unit exclusively, preferring the exposed shoreline as a loafing area. A peak of 9,000 was recorded on November 6.

White pelicans peaked at 45. The railroad grade that projects into the Center Unit was a favorite loafing area. The birds stayed through September while last year nearly all had migrated by the beginning of the period.

Double-crested cormorants peaked at 20 but all were gone by the end of September. E.C. night herons frequented the shallow water in the Center Unit where aquatic food is abundant. American bitterns were scarce this period. One was observed in early September.

Pied-bill grebes were fairly common last fall but none were observed this period. Four western grebes were seen in September.

#### Shorebirds, Gulls, and Terns.

Franklin's gull were common this period reaching a peak of 1000 birds on September 12. Ring-billed gulls peaked at 250 with some birds still present on November 20. Four Sora rails were observed on September 1 while lesser yellowlegs peaked at 40. Killdeer and dowitcher were abundant, some remaining until mid-October.

#### Doves.

No census was made this period but the population is thought to be comparable with last year. Doves frequent the trees near the two former building sites.



### B. Upland Game Birds.

A liberal 74 day pheasant season set by the State Game Commission extended from October 20 through December 31. The limit was 4 cock birds per day and 20 in possession. An estimated 1 million birds were killed opening day.

The refuge pheasant population fluctuated with the hunting pressure. Weekend hunting on the periphery of the refuge drove hundreds of wily ring-necks into the South Unit. As the pressure lessened, pheasants would disperse to adjacent crop fields. Hunters generally thought well of the refuge, although many would like to see it opened to late season pheasant hunting.

Sharp-tailed grouse had their best year since 1958, which was considered a good year. Grouse numbers were high in most western counties. A few east river counties support fair numbers of grouse, including Campbell county. Highest populations are west and south of Pollock.

No grouse have been observed on the refuge but it is likely that they do make use of this area during the winter months.

Hungarian partridge also had a good production year. Many coveys were reported by farmers and ranchers. No "huns" were seen on the refuge this period.

### C. Big-Game Animals.

White-tail deer are using the refuge on an intermittent basis. The population remains low because of limited habitat. Poachers killed several deer east of the refuge just prior to the hunting season. One was donated to the Pollock school lunch program and the other was discovered too late to be utilized.

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

Beaver are probably present in the South Unit. None have been seen this period.

Muskrats are becoming established in the Center and South Units. One house was seen in the Center Unit near the county road.

Mink are present in low numbers.

Weasels are numerous judging by the many reports heard from farmers, although none have been observed on the refuge.

Raccoons and skunks are present in low numbers. Raccoon sign is common in the Center and South Units.

Red fox are becoming more abundant. It appears that the fox is going to occupy the niche that the coyote held years ago. Five fox were seen on the refuge this period.

Coyotes have probably increased slightly over last year. Many sightings have been reported this period. Two were seen on the refuge this period.

Jackrabbits have increased over last year. Hunting "jacks" is a popular winter sport. Locally, carcasses are worth .40 cents in the round compared with .75 cents last year. Cottontails are abundant around farm sites and brushy cover. Hunting is permitted year-around.

#### E. Hawks, Eagles, Owls, Crows, Raven, and Magpies.

Marsh hawks were noticeably absent this fall. A swainson's hawk was seen in the South Unit in September. Two sparrow hawks were seen on the refuge for the first time this period.

Three bald eagles and one golden eagle stopped off on the Center Unit for several days in late November. The eagles were content to sit on the ice and occasionally make a harassing pass at the tightly rafted bunch of ducks.

Magpies are present year-around. The population is low in this area.

No buildup of crows was noted this period. Last fall a peak population of 10,000 was noted along the Missouri River.

#### F. Other Birds.

The warm fall must have been confusing to some birds. One farmer reported seeing a meadow lark in mid-December.

#### G. Fish.

Northern pike fishing continued in the North Unit until freeze up in November. Fishing has been good all summer with the largest fish topping 9 pounds. Fall fishing was somewhat slower than expected, although several good catches were reported.

The best fishing this winter has been on Spring Creek where the creek empties into the Oahe Reservoir. Daily limits of 12 are not uncommon. Fish are averaging 4 - 6 pounds with an 18 pounder heading the list. Fishing was still slightly short of tremendous as the period closed.

#### H. Reptiles.

Garter snakes are numerous. Rattlesnakes are common in the hills west and south of the refuge.

#### I. Disease.

No losses are known to have occurred on the refuge this period, although several dead ducks were found in the Spring Lake WPA in Walworth County.

### III REFUGE DEVELOPMENT AND MAINTENANCE

No refuge development will be undertaken until the acquisition plan is finalized. Refuge boundary signs were inspected prior to the hunting season and replaced where necessary.

*Plant Control ✓ (P)*

### IV RESOURCE MANAGEMENT

The refuge is operated under a General Plan and Cooperative Agreement between the Departments of the Army and Interior.

The Plan was signed by their respective heads of government this period. In effect, this means that the U.S. Fish and Wildlife Service will accept administrative and maintenance responsibility for the dam, water control structures and lands within the project boundary.

### V FIELD INVESTIGATION OR APPLIED RESEARCH

None.

### VI PUBLIC RELATIONS

#### A. Recreational Uses.

Unusually mild weather permitted summer activities to continue into September. Boaters were still using the North Unit in October. Fishing continued until late November when the refuge froze over. Ice fishermen forgot the refuge in favor of Spring Creek. Ice skaters had the refuge to themselves by December.

### B. Refuge Visitors.

9/5	Bill Daugherty	Fisheries Biol. Pierre	Courtesy
9/5	Lyle Schoonover	Sand Lake Refuge	Courtesy
9/11	Ed Smith	Br. Refuges, Minneapolis	Inspection
9/19	Verl Anderson	SCS, Herreid	Courtesy
9/19	Dean Badger	PRC Agent	Courtesy
10/29	Forest Carpenter	Br. Supervisor, Minneapolis	Pollock Irrigation
11/3	J.W. Johnson	Huron - <del>Chippewa</del>	Cranes
11/3	Mervin Nelson	Daily Plainsman Editor	Cranes
11/3	Jean Jonkel	Huron	Cranes
11/3	Blanch Battin	Huron	Cranes
11/3	A.D. Sheperski	Huron	Cranes
11/19	Ed Smith	Br. Refuges, Minneapolis	Inspection
11/19	Lowell Harrison	Br. Refuges, Minneapolis	Inspection
11/20	John Waters	USGMA, Minot	Courtesy
11/20	Vic Blazevic	USGMA, Devils Lake	Courtesy
11/24	Howard Lovrien	USGMA, Aberdeen	Enforcement
11/27	Dave Fisher	USGMA, Pierre	Enforcement
11/27	Howard Lovrien	USGMA, Aberdeen	Enforcement

### C. Refuge Participation.

Manager conducted a Firearm Safety Course in September for 20 Pollock students.

Manager assigned to the Horicon refuge to assist in a goose kill survey from Sept. 29 - Oct. 22.

Manager attended Pollock-Herreid Irrigation Board meeting October 29 with messrs. Carpenter, Crabb and Randall regarding refuge acquisition plans.

Manager attended Public Hearing in Mobridge, S.D. November 13 with messrs. Burwell, Carpenter, Crabb and Gubser regarding mitigation of wildlife lands along the Missouri River and particularly Pocasse Refuge.

Manager attended a joint meeting of the Soil Conservation Society and American Society of Range Management in Mobridge, S.D. November 22.

### D. Hunting.

No hunting is permitted on the refuge.

### E. Violations.

Gordon Atkinson 33, Pollock, S.D. Early shooting. District Court - \$10.00 fine and \$5.00 court costs.

## F. Safety.

The safety program at this one man station consists of reading safety bulletins and observing safe working conditions. The safety record now stands at 244 calendar days.

## VII OTHER ITEMS

### A. Items of Interest.

This refuge is being established to mitigate the loss of wildlife lands as a result of the Oahe Reservoir. The giant earthen dam located at Pierre, South Dakota will make a huge reservoir of the once mighty Missouri River and destroy thousands of acres of prime waterfowl habitat. The U.S. Army Corps of Engineers has finally agreed to purchase this strategically located refuge under their 5 step acquisition method.

A public hearing was held on November 13 in Mobridge, S.D. to determine public opinion regarding the Pocasse Refuge and 12 wildlife areas the State Game and Fish Dept. hopes to acquire under the mitigation plan. A large delegation of Pollock farmers attended the hearing and opposed the acquisition plan. Pollock merchants signed petitions opposing the refuge, although many felt they were forced to do it from the business angle. Many Pollock residents and neighboring farmers favor the establishment of a refuge but none had the courage to attend the hearing and express their feelings openly.

Sportsmen's groups, conservation organizations, and state and national ornithologist's societies read letters favoring the mitigation of wildlife lands along the Missouri River. If numbers of people involved in this plan are of any importance, those favoring the acquisition plan outnumber the opposition 50 to 1. However, the dissenting voices are the loudest and the most often heard.

The Corps of Engineers will now submit a request for funds to Congress for purchase of these wildlife areas. All or any part of the funds requested by the Corps could be provided for the 13 areas (12 State areas and 1 Federal area) selected for acquisition. If Congress should allocate funds for refuge acquisition, it will probably be several years before the lands are actually purchased.

The Pollock-Herreid Irrigation Study got under way as the period closed as five survey teams began a land classification study. Congress has allotted \$ 50,000 for a feasibility study. The Bureau of Reclamation hopes to use the refuge as a regulating reservoir.

### B. Photographs.

Several rolls of colored slides were added to the refuge file this period.



SIGNATURE PAGE

Submitted by:

Edward Collins  
(Signature)  
Edward Collins

Date: January 25, 1964

Refuge Manager  
Title

Approved, Regional Office:

Date: 2-10-64

Edward J. Smith  
(Signature)

Asst.  
Regional Refuge Supervisor



OCT • 62

R4 Exp. 13 - Aug. 1962 North Unit of the refuge  
looking southeast - approximately 600 acres.



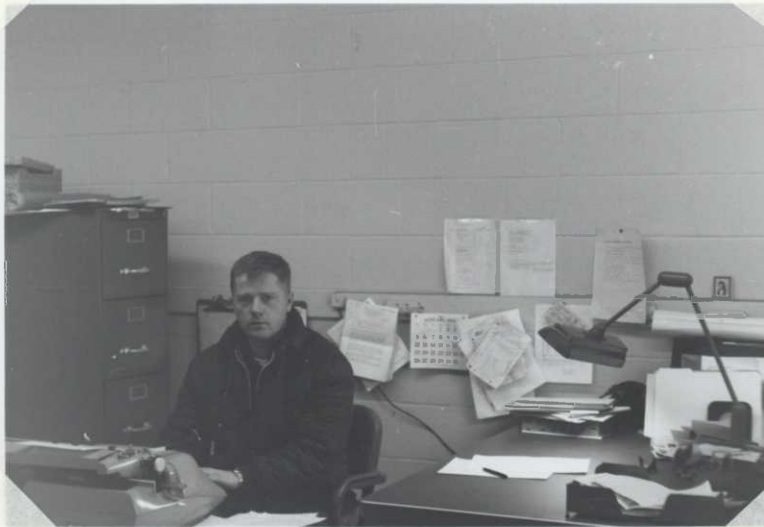
JAN • 64

R9 Exp. 2 - Nov. 1963 Center Unit frozen over  
except for small pockets kept open by rafted  
mallards. Approximately 3,000 ducks in this picture.



JAN • 64

R9 Exp. 12 - Dec. 1963 Refuge office is located in the theater building on the right in the town of Pollock.



JAN • 64

R9 Exp. 14 - Dec. 1963 Manager Collins banging out the narrative.

## WATERFOWL PRODUCTION AREAS

### I GENERAL

Six northcentral waterfowl production areas counties are administered by the Pocasse Refuge. They are: Campbell, Walworth, Potter, McPherson, Edmunds, and Faulk. Acreages of fee title and easements are tabulated below.

TABLE I - FEE TITLE

<u>County</u>	<u>No. of Tracts</u>	<u>Total Acreage</u>
Campbell	2	80.00
Walworth	1	335.51
Potter	0	
McPherson	7	450.39
Edmunds	7	758.55
Faulk	0	
TOTAL	17	1,624.45

TABLE II - WATERFOWL EASEMENTS

<u>County</u>	<u>No. of Easements</u>	<u>Acreage</u>
Campbell	0	
Walworth	0	
Potter	0	
McPherson	1	950.00
Edmunds	24	14,093.67
Faulk	17	12,956.10
TOTAL	42	27,999.77

### II WILDLIFE

Breeding pair counts and brood production surveys were carried out this summer on each management unit. As more waterfowl production areas are acquired, it will be necessary to devise a sample method for determining brood production.

### III DEVELOPMENT AND MAINTENANCE

One and one-quarter mile of new fence was constructed this period on the Schell tract (McPherson Co.). This was a 3 strand barbed wire fence, 6 foot t-post every rod with wood posts every 10 rods. Labor was contracted for .65 cents per rod with the contractor furnishing all tools and equipment except supplies.

Signs were checked on several production areas this period and replaced where necessary.

Four areas remain to be posted. Several areas remain to be fenced.





JAN . 64

R9 Exp. 5 - Nov. 1963 Aerial view of the Jutzy Waterfowl Production Area in Edmunds Co. This tract raised over 500 ducks.



JAN . 64

R9 Exp. 4 - Nov 1963 Schell tract (McPherson Co.) being fenced. Labor was contracted for .65 cents per rod. Mechanical post driver speeds the job up.

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

W A T E R F O W L

REFUGE POCASSE

MONTHS OF SEPTEMBER TO DECEMBER, 1963

(1) Species	(2) Weeks of reporting period									
	SEPTEMBER 1-7	8-14	15-21	22-28	29-5	6-12	13-19	20-26	27-2	3-9
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada										260
Cackling										
Brant										
White-fronted			12	40				5		
Snow										
Blue										
Other										
Ducks:										
Mallard	125	150	200	100				3,000	5,000	17,000
Black										
Gadwall	50	25	75	50				200		
Baldpate		10	20							
Pintail	60	50	25	20						
Green-winged teal	10	15	20	50						
Blue-winged teal	200	175	300	50						
Cinnamon teal										
Shoveler										
Wood										
Redhead								100	200	
Ring-necked										
Canvasback				2				15	25	
Scaup								200	400	300
Goldeneye										
Bufflehead									50	
Ruddy								100		
Other										
Coot:	250	300	400	500				200		



3 -1750a

Cont. NR-1

(Rev. March 1953)

WATERFOWL  
(Continuation Sheet)REFUGE POCASSEMONTHS OF SEPTEMBER TO DECEMBER, 19 63

(1) Species	(2) Weeks of reporting period							(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	10-16 11	17-23 12	24-30 13	31-7 14	8-14 15	15-21 16	22-28 17	29-31 18	
Swans:									
Whistling									
Trumpeter									
Geese:									
Canada	300	50						4,354	
Cackling									
Brant									
White-fronted								175	
Snow									
Blue									
Other									
Ducks:									
Mallard	8,000	3,000	3,000					277,025	
Black									
Gadwall								2,800	
Baldpate								210	
Pintail								1,085	
Green-winged teal								665	
Blue-winged teal								5,075	
Cinnamon teal									
Shoveler									
Wood									
Redhead								2,100	
Ring-necked									
Canvasback								294	
Scaup	100							6,300	
Goldeneye									
Bufflehead								350	
Ruddy								700	
Other									
Coot:								11,500	
				(over)					



	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans			
Geese	4,529	260	
Ducks	296,604	17,300	
Coots	11,500	500	

# SUMMARY

Principal feeding areas Aquatic beds in Center Unit.

Feeding flights moved 2-7 miles east of refuge.

Principal nesting areas \_\_\_\_\_

Reported by Ed Collins

## 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

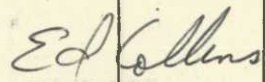
(Nov. 1945)

MIGRATORY BIRDS  
(other than waterfowl)Refuge POCASSEMonths of SEPT to DEC 19563

(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>										
White pelican	20	pre fr. last pd.	45	9/10						
D.C. cormorant	5	" "	20	9/10	2	9/21				
B.C. night heron	5	" "	15	9/25						
American bittern			1	9/10						
Western grebe	1.	9/10	4	9/15	2	9/20				
II. <u>Shorebirds, Gulls and Terns:</u>										
Franklin's gull	300	present last pd.	1000	9/12						
Ring-billed gull	30	" "	250	9/12	25	11/20				
L. yellowlegs	30	" "	40	9/4						
Sora rail	4	" "	4	9/1	1	9/20				
Killdeer	200	" "	400	9/15						
Dowitcher	40	9/5	300	9/25						
Some categories are blank because manager was away from station for extended periods.										

(over)



(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove 100 pres.fr. last period		150	9/20		
White-winged dove					
IV. <u>Predaceous Birds:</u>					
Golden eagle	1	11/24	1	11/24-27	1
Duck hawk					
Horned owl					
Magpie		4	9/20		
<del>XXXXXX</del> Crow		10	9/20		
<del>XXXXX</del> Crow					
Bald eagle	3	11/24	3	11/24-27	3
Marsh hawk	4 pres.fr. last period	7	9/30		
Swainson's hawk	1	9/10	1	9/10	1
Cooper's hawk	1	9/24	1	9/24	1
Sparrow hawk	1	9/7	2	9/24	1
<div style="text-align: right;">   Reported by Ed Collins </div>					

#### 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.

3-1750c  
Form NR-1C  
(Sept. 1960)

WATERFOWL HUNTER KILL SURVEY

Refuge POCASSE

Year 196  

(1) Weeks of Hunting	(2) No. Hunters Checked	(3) Hunter Hours	(4) Waterfowl Species and Nos. of Each Bagged	(5) Total Bagged	(6) Crippling Loss	(7) Total Kill	(8) Est. No. of Hunters	(9) Est. Total Kill
	NO HUNTING PERMITTED ON REFUGE							

(over)



## INSTRUCTIONS

- (1) The first week of hunting begins with opening day and ends at the close of hunting 6 days later. Successive weeks follow the same pattern.
- (2) The goal is to survey a minimum of 25 percent of refuge hunters each week and to record data only from those who have completed their day's hunting. This information should be collected during each day of the week and in each area hunted in relative proportion to the hunter effort expended. When the 25 percent goal cannot be achieved, particular care should be taken to collect representative data.
- (3) Record the total number of hours the hunters spent hunting on the refuge.
- (4) List waterfowl species in decreasing order of numbers bagged. Sample entry: Mallard (61), Pintail (36), Redhead (16), Gadwall (11), Widgeon (6), Coot (4), Canada Goose (3), Green-winged Teal (1).
- (5) Record total numbers of waterfowl bagged.
- (6) Record total numbers of waterfowl reported knocked down but not recovered.
- (7) Total of Columns 5 and 6.
- (8) Estimate the total number of hunters who hunted on the refuge during the week, including hunters checked (Column 2).
- (9) Kill sample projected to 100 percent.  $\text{Column 9} = \frac{\text{Column 8}}{\text{Column 2}} \times \text{Column 7}.$

3-1752  
Form NR-2  
(April 1946)

# UPLAND GAME BIRDS

Refuge POCASSE Months of SEPT to DEC, 19 63

(1) Species	(2) Density		(3) Young Produced		(4) Sex Ratio	(5) Removals			(6) Total	(7) Remarks
Common Name	Cover types, total acreage of habitat	Acres per Bird	Number broods obs'd.	Estimated Total	Percentage	Hunting	For Re- stocking	For Research	Estimated number using Refuge	Pertinent information not specifically requested. List introductions here.
Ring-necked pheasant	600 acres of short grass prairie, tame and wild hay	1½							400	



## 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 **POCASSE**Calendar Year **1963**

(1) Species	(2) Density	(3) Young Produced	(4) Removals				(5) Losses	(6) Introductions		(7) Estimated Total Refuge Population		(8) Sex Ratio	
Common Name	Cover types, total Acreage of Habitat	Number	Hunting	For Re- stocking	Sold	For Research	Predation	Disease	Winter Loss	Number	Source	At period of Greatest use	As of Dec. 31
White-tail deer	600 acres of short grass prairie, hay meadow and shelterbelt fringes	2										3	3

Remarks:

Reported by **Ed Collins**

# 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.



DISEASE

Refuge POCASSE

Year 1963

Botulism NONE

Lead Poisoning or other Disease

Period of outbreak \_\_\_\_\_

Period of heaviest losses \_\_\_\_\_

Losses:

	Actual Count	Estimated
(a) Waterfowl	_____	_____
(b) Shorebirds	_____	_____
(c) Other	_____	_____

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.) \_\_\_\_\_

Condition of vegetation and invertebrate life \_\_\_\_\_

Remarks \_\_\_\_\_

Kind of disease \_\_\_\_\_

Species affected \_\_\_\_\_

Number Affected Species	Actual Count	Estimated
_____	_____	_____
_____	_____	_____
_____	_____	_____

Number Recovered \_\_\_\_\_

Number lost \_\_\_\_\_

Source of infection \_\_\_\_\_

Water conditions \_\_\_\_\_

Food conditions \_\_\_\_\_

Remarks \_\_\_\_\_

## PUBLIC RELATIONS

(See Instructions on Reverse Side)

Refuge PocasseCalendar Year 1963

## 1. Visits

a. Hunting \_\_\_\_\_ b. Fishing 2,700 c. Miscellaneous 9,945 d. TOTAL VISITS 12,645

## 1a. Hunting (on refuge lands)

TYPE	HUNTERS	ACRES	MANAGED BY
Waterfowl			
Upland Game			
Big Game			
Other			

Number of permanent blinds \_\_\_\_\_

Man-days of bow hunting included above \_\_\_\_\_

Estimated man-days of hunting on lands adjacent to  
refuge \_\_\_\_\_

## 1b. Fishing (area open to fishing on refuge lands)

TYPE OF AREA	ACRES	MILES
Ponds or Lakes	<u>600</u>	
Streams and Shores		

## 1c. Miscellaneous Visits

Recreation 9,900 Official 25  
 Economic Use 20 Industrial \_\_\_\_\_

## 2. Refuge Participation (groups)

## ON REFUGE

## OFF REFUGE

TYPE OF ORGANIZATION	NO. OF GROUPS	NUMBER IN GROUPS	NO. OF GROUPS	NUMBER IN GROUPS
Sportsmen Clubs			<u>2</u>	<u>8</u>
Bird and Garden Clubs	<u>2</u>	<u>5</u>		
Schools				
Service Clubs				
Youth Groups				
Professional-Scientific			<u>1</u>	<u>2</u>
Religious Groups				
State or Federal Govt.	<u>15</u>	<u>25</u>		
Other				

## 3. Other Activities

TYPE	NUMBER	TYPE	NUMBER
Press Releases	<u>5</u>	Radio Presentations	<u>1</u>
Newspapers (P.R.'s sent to)	<u>9</u>	Exhibits	
TV Presentations		Est. Exhibit Viewers	



## INSTRUCTIONS

Item 1: Total of a, b, and c, equal d.

"Visit" - definition. Any person who is on refuge lands or waters during a day or part thereof for the purpose of: hunting, fishing, bird-watching, recreation, business or economic use, official visit, or similar interest. INCLUDE - those who stop within the refuge while traveling on a public highway because of an interest in the area. EXCLUDE - persons engaged in oil or other industry not directly related to the refuge, persons using refuge as most direct route or principal avenue of traffic, and those boating on navigable rivers or the Intercoastal Canal, unless they stop to observe wildlife on the refuge.

Computing visits. Where actual counts are impractical, "sampling" is used with midweek and weekend samples varied by season or weather. A conversion factor of 3.5 (of passengers per car) is used when accurate figures are not available. Each refuge will develop a conversion factor for boats based on range of usage. Count a camper once for each 24-hour period or fraction thereof.

Item 1a: Acres - of refuge open for each type of hunting.

Managed hunts require check in and out of hunters, issuance of permits, or assignment of blinds.

Other - INCLUDE crow, fox, and similar hunting.

Lands adjacent to refuge. Normally considered within 1 mile or less of boundary, unless established sampling procedures cover a wider area. For big game hunting, the distance may be greater.

Item 1b: Acres of streams open to fishing, if practical; otherwise just miles open. Information on "shores" is primarily for coastal fishing.

Item 1c: Recreation. INCLUDE photography, observing wildlife, picnicking, swimming, boating, camping, visitor center use, tours, etc. TOTAL Recreation, Official, and Economic Use visits under Item 1.

Industrial. INCLUDE persons engaged in industry, i.e., oil industry or factories. EXCLUDE these from Item 1.

Item 2: INCLUDE the "On Refuge" groups in Items 1c and 1. In "Off Refuge" column include only those group meetings in which refuge employees actually participate. EXCLUDE these from Items 1c and 1.

Item 3: Exhibits - INCLUDE displays, fairs, parades, and exhibits OFF the refuge; EXCLUDE those ON.



3-1757  
Form NR-7  
(Rev. June 1960)

(1)  
NONAGRICULTURAL COLLECTIONS, RECEIPTS, AND PLANTINGS

Refuge POCASSE Year 19 63

Collections and Receipts (Seeds, rootstocks, trees, shrubs)							Plantings (Marsh - Aquatic - Upland)						
Species	Amount (Lbs., bus., etc.)	(2) C or R	Date	Method or Source	Cost	(3) Total Amount on Hand	Location of Area Planted	Rate of Seeding or Planting	Amount Planted (Acres or Yards of Shoreline)	Amount and Nature of Propagules	Date	Survival	Cause of Loss
	NOT APPLICABLE												

- (1) Report agronomic farm crops on Form NR-8  
(2) C = Collections and R = Receipts  
(3) Use "S" to denote surplus

Total acreage planted:

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

Remarks: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3-1758  
Form NR-8  
(Rev. Jan. 1956)

Fish and Wildlife Service Branch of Wildlife Refuges

CULTIVATED CROPS - HAYING - GRAZING

Refuge POCASSE County CAMDELL State SOUTH DAKOTA

Cultivated Crops Grown	Permittee's Share Harvested		Government's Share or Return				Total Acreage Planted	Green Manure, Cover and Water- fowl Browsing Crops Type and Kind	Total Acreage
	Acres	Bu./Tons	Harvested		Unharvested				
			Acres	Bu./Tons	Acres	Bu./Tons			
Farming permits were administered by the Corps of Engineers on a cash basis during 1963									
								Fallow Ag. Land	

No. of Permittees: Agricultural Operations \_\_\_\_\_ Haying Operations \_\_\_\_\_ Grazing Operations \_\_\_\_\_

Hay - Improved (Specify Kind)	Tons Harvested	Acres	Cash Revenue	GRAZING	Number Animals	AUM'S	Cash Revenue	ACREAGE
Hay permits were administered by the Corps of Engineers on a cash basis during 1963				1. Cattle				
				2. Other				
				1. Total Refuge Acreage Under Cultivation				
Hay - Wild				2. Acreage Cultivated as Service Operation				



DIRECTIONS FOR PREPARING FORM NR-8  
CULTIVATED CROPS - HAYING - GRAZING

Report Form NR-8 should be prepared on a calendar-year basis for all crops which were planted during the calendar year and for haying and grazing operations carried on during the same period.

Separate reports shall be furnished for Refuge lands in each county when a refuge is located in more than one county or State.

Cultivated Crops Grown - List all crops planted, grown and harvested on the refuge during the reporting period regardless of purpose. Crops in kind which have been planted by more than one permittee or this Service shall be combined for reporting purposes.

Permittee's Share - Only the number of acres 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. Report all crops harvested in bushels or fractions thereof except such crops as silage, watermelons, cotton, tobacco, and hay, which should be reported in tons or fractions thereof.

Government's Share or Return - Harvested - Show the acreage and number of bushels harvested for the Government of crops produced by permittees or refuge personnel. Unharvested - Show the exact acreage and the estimated number of bushels of grain available for wildlife. If grazing is made available to waterfowl through the planting of grain, cover, green manure, grazing or hay crops, estimate the tonnage of green food produced or utilized and report under Bushels Unharvested column.

Total Acreage Planted - Report all acreage planted, including crop failures.

Green Manure, Cover and Waterfowl Grazing Crops - Specify the acreage, kind and purpose of the crop. These crops and the acreage may be duplicated under cultivated crops if planted during the year, or a duplication may occur under hay if the crop results from a perennial planting.

Hay - Improved - List separately the kinds of improved hay grown. Annual plantings should also be reported under Cultivated Crops, and perennial hay should be listed in the same manner at time of planting.

Total Refuge Acreage Under Cultivation - Report total land area devoted to agricultural purposes during the year.

## REFUGE GRAIN REPORT

Refuge POCASSE

Months of SEPT through DEC, 19563

(1) VARIETY*	(2) ON HAND BEGINNING OF PERIOD	(3) RECEIVED DURING PERIOD	(4) TOTAL	(5) GRAIN DISPOSED OF				(6) ON HAND END OF PERIOD	(7) PROPOSED OR SUITABLE USE*		
				Transferred	Seeded	Fed	Total		Seed	Feed	Surplus
<b>All economic use permits in 1963 were administered by the Corps of Engineers on a cash basis.</b>											

(8) Indicate shipping or collection points \_\_\_\_\_

(9) Grain is stored at \_\_\_\_\_

(10) Remarks \_\_\_\_\_

\*See instructions on back.



## REFUGE GRAIN REPORT

This report should cover all grain on hand, received, or disposed of, during the period covered by this narrative report.

**Report all grain in bushels.** For the purpose of this report the following approximate weights of grain shall be considered equivalent to a bushel: Corn (shelled)—55 lb., corn (ear)—70 lb., wheat—60 lb., barley—50 lb., rye—55 lb., oats—30 lb., soy beans—60 lb., millet—50 lb., cowpeas—60 lb., and mixed—50 lb. In computing volume of granaries, multiply the cubic contents (cu. ft.) by 0.8 bushels.

- (1) List each type of grain separately and specifically, as flint corn, yellow dent corn, square deal hybrid corn, garnet wheat, red May wheat, durum wheat, spring wheat, proso millet, combine milo, new era cowpeas, mikado soy beans, etc. Mere listing as corn, wheat, and soybeans will not suffice, as specific details are necessary in considering transfer of seed supplies to other refuges. Include only domestic grains; aquatic and other seeds will be listed on NR-9.
- (3) Report all grain received during period from all sources, such as transfer, share cropping, or harvest from food patches.
- (4) A total of columns 2 and 3.
- (6) Column 4 less column 5.
- (7) This is a proposed break-down by varieties of grain listed in column 6. Indicate if grain is suitable for seeding new crops.
- (8) Nearest railroad station for shipping and receiving.
- (9) Where stored on refuge: "Headquarters granary," etc.
- (10) Indicate here the source of grain shipped in, destination of grain transferred, data on condition of grain, unusual uses proposed.



3-1759  
Form NR-9  
(April 1946)

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

Refuge POCASSE

Year 19563

Species	Collections				Receipts		Total Amounts on Hand	Amount Surplus
	Amount	Date or Period of Collection	Method	Unit Cost	Amount	Source		
NONE								

Interior Duplicating Section,  
Washington 25, D.C. 84267

TIMBER REMOVAL

Refuge.....POCASSE..... Year 195-63.

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
NONE								

Total acreage cut over..... Total income.....

No. of units removed B. F. .... Method of slash disposal.....  
Cords.....  
Ties.....

## ANNUAL REPORT OF PERSTICIDE APPLICATION

## Pocasse

Proposal Number	
-----------------	--

Reporting Year
----------------

INSTRUCTIONS: Wildlife Refuges Manual, secs. 3252d, 3394b and 3395.

Date(s) of Application	List of Target Pest(s)	Location of Area Treated	Total Acres Treated	Chemical(s) Used	Total Amount of Chemical Applied	Application Rate	Carrier and Rate	Method of Application
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
No herbicides, insecticides, or fish toxicants were used during calendar year 1963								

10. Summary of results (continue on reverse side, if necessary)