

NARRATIVE REPORT ROUTING SLIP

REFUGE POCASSE PERIOD May - August 1962

CHIEF'S OFFICE: Mr. Gillett \_\_\_\_\_ ~~Mr. Ackerknecht~~ *va* \_\_\_\_\_

Mr. Fermanich \_\_\_\_\_ Mr. Goldman \_\_\_\_\_

WILD LIFE MANAGEMENT: Mr. Banko \_\_\_\_\_ Mr. Stiles \_\_\_\_\_

RESOURCE MANAGEMENT: Dr. Morley \_\_\_\_\_ Mr. Stollberg \_\_\_\_\_ Mr. Lamb \_\_\_\_\_

OPERATIONS: Mr. Hickok \_\_\_\_\_ Mr. Regan \_\_\_\_\_

PUBLIC USE: Mr. DuMont \_\_\_\_\_ Mr. Monson \_\_\_\_\_

ADMINISTRATIVE SERVICES: Miss Baum \_\_\_\_\_

This is the first narrative from Pocasse (Pō cass / see). Although not officially a national wildlife refuge, (the cooperative agreement between the Fish and Wildlife Service and Corps of Engineers has not been signed) a manager was assigned on June 20, 1962 to protect the Service's interest in the project.

This refuge is similar, in many respects, to the Snake Creek Refuge in North Dakota. Both refuges are superimposed on Corp of Engineer projects as a result of the Missouri River Reservoir Project. One major difference, however, is that Pocasse's water supply comes from run-off on the 200 plus miles of watershed while Snake Creek is dependent upon water from the Garrison Reservoir. However, the water control structures at Pocasse are designed to take water from the Oahe Reservoir as well as pass water into the Reservoir.

The present refuge boundary incorporates nearly 2400 acres of water, meadow, and upland. An additional 3500 acres of farmland is proposed for acquisition under an amended Oahe Reservoir Master Plan. The land was to be purchased by the Corps of Engineers and turned over to the Fish and Wildlife Service to mitigate wildlife lands lost with the flooding of the Missouri River. The Corps is now balking on the acquisition of more land and insist that they do not have the authority to purchase lands to replace wildlife losses. It is imperative that more land be purchased to make this refuge a management unit.

The Missouri River has for years provided rest and protection for migratory waterfowl. The irreplaceable habitat will be lost when the reservoir reaches operating levels in the spring of 1963.

Located on an arm of the Oahe Reservoir near the town of Pollock, South Dakota, the refuge will serve as an important link in the chain of refuges along the Missouri River. Concentrations numbering  $\frac{1}{4}$  million ducks and 40,000 geese can be expected during spring and fall migrations. Large numbers of sandhill cranes regularly stop and feed in the Pollock area as well as the rare whooping crane which is seen each year during its migration along the Missouri River.

POCASSE NATIONAL WILDLIFE REFUGE

NARRATIVE REPORT

MAY - AUGUST 1962

REGULAR PERSONNEL

Ed Collins - Refuge Manager

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POCASSE NATIONAL WILDLIFE REFUGE  
NARRATIVE REPORT  
MAY, JUNE, JULY, AND AUGUST 1962

I. GENERAL

A. Weather Conditions.

	<u>Precipitation</u>		<u>Max.</u> <u>Temp.</u>	<u>Min.</u> <u>Temp.</u>
	<u>This Month</u>	<u>Normal</u>		
May	<u>5.79</u>	<u>      </u>	<u>87</u>	<u>32</u>
June	<u>3.35</u>	<u>      </u>	<u>88</u>	<u>40</u>
July	<u>4.43</u>	<u>      </u>	<u>92</u>	<u>45</u>
August	<u>1.38</u>	<u>      </u>	<u>97</u>	<u>42</u>
Total	<u>14.95</u>	<u>      </u>	Extremes <u>97</u>	<u>32</u>

The drought of northcentral South Dakota was broken this period with a record precipitation of 14.95 inches. This compares with a yearly normal of 14.61 inches.

Potholes and sloughs filled from run-off during May and June. Some of the lower croplands were also flooded. The rather heavy rains during the first half of the period helped to recharge depleted ground-water levels. Rather severe water erosion took place in ditches and hilly croplands.

May was wet and mild. Temperatures averaged in the 60's and 70's. A high of 87 degrees occurred on the 4th. The last frost was on the 1st. Precipitation was recorded on 13 days with nearly an inch each falling on the 19th, 21th, 22nd, and 29th. Precipitation totaled 5.79 inches.

June temperatures averaged in the 70's and 80's. Below 70 degrees was recorded on 7 days. The temperature dipped to 40 degrees on the 1st; the high for the month was 88 degrees on the 27th. Precipitation occurred on 13 days and totaled 3.35 inches. The warm scattered rains were welcomed by the farmers.

July was relatively cool with temperatures averaging in the low

80's. Evening temperatures dropped to the 50's and 60's making the air brisk and refreshing. Over 2 inches of rain fell during the first two days of the month. Precipitation was well spaced making this one of the best growing seasons in many years. Traces were recorded on the 27th and 28th. Precipitation totaled 4.43 inches which is well above the average for July.

August was slightly warmer than July. A high for the season occurred on the 21st when the temperature reached 97 degrees. This was probably one of the coolest Augusts for many years. The mercury passed the 90 degree mark on only 7 days this month, and on only 10 days for the entire period. Precipitation was light and scattered and totaled a moderate 1.38 inches. This is probably somewhere near average for the month. Some hail was reported in the area but damage was generally light.

B. Habitat Conditions.

1. Water

The 1800 acre refuge impoundment entered the period approximately three feet below spillway crest. There was hope that late snows in March and April would be sufficient to fill the pool. Snow was light and scattered during the last period and it was evident that little snow run-off could be expected this year.

The first two weeks of May were warm and dry, giving all indications that the 5 year drought was going to continue for at least another summer. However, the county was blessed with heavy rains in late May and June and this brought the pool to within one foot of spillway crest. Torrent rains on the upper portion of the watershed during the first week of July filled the pool to crest level. More rain along the 200 plus miles of watershed reached the refuge by July 3 when approximately one foot of water was being passed over the spillway. By July 13 most of the surplus water had been passed but considerable damage to the spillway had occurred.

Since the administration of the refuge had not officially been turned over to the Fish and Wildlife Service, all repair work to the damaged emergency spillway was undertaken by the Corps of Engineers.

Periodic rains throughout the summer helped to keep the refuge pool near capacity. By late August the pool had receded only 4 inches. A normal water loss from evaporation can be expected each summer but losses in excess of  $1\frac{1}{2}$  feet will not seriously hamper the operation of the refuge.

## 2. Food and Cover.

Lands within the Corps of Engineers "take line" comprise nearly 21,000 acres of marsh and upland. Approximately 1800 acres are composed of open water or marsh while the remaining 600 acres are lowland meadow capable of flooding, tame hay, and upland prairie.

More than adequate rains this period provided good growth to native grasses. The south unit, which received light periodic flooding, produced a bumper crop of hay. Three or four cuttings of alfalfa were taken on the north and west sides and also attest to the excellent growing season.

The south unit and the lower end of the center unit will provide good broken marsh habitat in future years. The upper end of the north unit has excellent potential for a nesting area with its shallow shoreline and good grass cover. Extensive bands of smartweed invaded the middle unit the first year of flooding and on several occasions the writer noted it serving as escape cover for young ducks. It will be interesting to observe the plant succession on this recently impounded, highly fertile lake.

Besides polygonum spp., no other emergents were noted growing in the shallow marsh areas. It will probably be several years before any of the bulrushes or cattails are present. No sago pondweeds were present this year but a profuse growth of coontail was noted in the center and south units.

## II WILDLIFE

### A. Migratory Birds.

Canada geese stop in this vicinity during the spring and fall migration. This flock of large canadas numbers approximately 40,000 birds. Some small canadas are taken each fall during the hunting season but the number of birds using the area area unknown. At least a portion of these two flocks winter at the Lake Andes National Wildlife Refuge, Lake Andes, South Dakota.

Banding records are incomplete and do not give a good picture of the Missouri River goose flock. Populations fluctuate between 25,000 and 42,000 birds. All banding has taken place either along the Missouri River between the North Dakota border and Pierre, South Dakota or on the wintering grounds at Lake Andes. No banding attempt has been made on the breeding ground.

The Missouri River has historically served as a famous migration route for migratory waterfowl. The numerous sandbars that dot the river are utilized as resting and loafing areas for ducks, geese, and cranes. Mallard feeding flights off the river are reported to blacken the sky. Depredation complaints of both the mallard and sandhill crane always run high.

Breeding pair counts were conducted by Sand Lake Refuge personnel this year because a permanent refuge manager was not assigned to Pocasse until June 20. The count was made both by automobile and shoreline walking. Personnel conducting the count indicated that a portion of the blue-winged teal pairs were missed because they could not be seen in the weeds and tall grass. No observability correction factor was used. One crippled small Canada goose was seen during the count. Two nests were found; a mallard with 7 eggs and a pintail with 9 eggs.

Following is a tabulation of the first breeding pair count on Pocasse refuge.

TABLE 1

Observer - Lyle J. Schoonover  
Time - 9:30 to 2:30  
Date - May 17, 1962

<u>Species</u>	<u>Pairs</u>
Shoveller	64
Blue-winged Teal	60
Pintail	32
Mallard	17
Baldpate	18
Gadwall	38
Ruddy	17
Green-winged Teal	10
Redheads	35
Canvasback	4
Total	<u>296</u>
Scaup	150
Coots	551 (total)

Brood counts were conducted from July 31 to August 4. The entire shoreline was walked or driven with an automobile except for parts of the creek channel in the south unit. This unit was later checked by use of an airplane.

Brood observability was high and averaged around 80% for all units. Wet weather accounted for an extremely late duck



hatch. It's quite certain that some broods were flying by brood count time and that some broods were brought off after the first week of August.

Brood production the first year the refuge was established is estimated at 500 birds. This includes an estimate of early and late duck broods. Blue-wing teal represent 65% of the production; mallards are next at around 11%. Other nesting species are shovelers, pintails, gadwalls, and green-wing teal.

The table listed below shows duck production by units.

TABLE II

	North Unit	Center Unit	South Unit
Mallard		42	
Gadwall	21	21	
Pintail	6		
G.W.teal	6	6	
B.W.teal	45	162	54
Shoveler	15		15
Unidentified		30	
TOTAL- SUB	66	261	72

TOTAL- GRAND 399 plus 100 for early and late broods = 499

Above figures represent numbers of ducks, not broods.

#### Other Waterbirds.

Pelicans were observed on the refuge during the second week of July. These are probably the same birds using the Rice Lake area in North Dakota about 8 miles northeast of here. This flock of 50 birds must have found fishing fairly easy on the refuge for they later abandoned Rice Lake completely. A flock (migrant) of approximately 500 pelicans stopped at the refuge for a week during mid-August. About 4 birds remained by the end of the period.

Double-crested cormorants were observed on several occasions roosting on fence posts in the North unit. Nearly 20 were present during mid-July but all had departed by the end of the period.

Two great-blue herons were noted on the refuge throughout the summer. Approximately 6 black-crowned night herons made the refuge their home. Some migrants began showing up by August. Several pairs of western grebes were seen regularly throughout

the summer. Migrant pied-billed grebes were noted as the period ended.

#### Shorebirds, Gulls, and Terns.

Killdeer are abundant in the vicinity of the refuge. About 200 make this area their summer residence. Avocets and Wilson's phalarope were observed on many occasions in the shallow water areas near the south unit. Several sora rails were seen during brood counts in July. Upland plovers were scarce. Willets and lesser yellowlegs are probably regular summer residents.

Several hundred franklin and ring-bill gulls were present during the first two months of the period. An influx of migrants occurred during mid-August when up to 4000 franklin's and 1500 ring-bill gulls moved into the area. The gulls divided into small bunches and soared the grain fields in search of grasshoppers. Farmers, of course, welcomed the sight since some damage to the flax crop had already taken place.

#### Doves.

Morning doves were abundant near the two farm building sites. No reliable estimate of the population was established.

#### B. Upland Game Birds.

The State estimates this years pheasant population at  $9\frac{1}{2}$  million birds. The 61 day season extends from Oct. 20 to December 19. The daily limit is 4 cock birds with 20 in possession. Last year approximately  $3\frac{1}{2}$  million pheasants were killed during the state-wide season and somewhere near that many are expected again this year.

Fall hunting conditions will be quite unlike that experienced last year. Abnormal precipitation is responsible for a late corn crop and dense cover. Hunters will have to get out and beat the brush for their limit of pheasants.

Pheasant clutches were extremely late this summer and some will not reach their full color until late November. Several clutches of three week old pheasants were noted in late August.

Sharp-tailed grouse are abundant along the river breaks and the population appears to be up over last year. The 3 bird bag limit and 12 day season will do little to reduce the population in this area.

No grouse were observed on the refuge but it is probable that some were present from time to time during the period.

Both the north and south ends of the refuge are good grouse areas. Once this refuge comes under full management, extensive grouse use could be expected.

Hungarian partridge are present in huntable populations. The season opens concurrent with the pheasants and grouse and, consequently, few hunters take the effort to go after these elusive targets.

Prairie chickens are reported to be along the Missouri River breaks but none were observed this period. Ranchers see them on occasion along the river while checking cattle.

#### C. Big-Game Animals.

A large population of whitetail deer are present on the Missouri "river bottom". This area consists of thousands of acres of deciduous forests along the flood plain of the Missouri River. These wooded areas are gradually being flooded by the rising Oahe Reservoir and only a token population of "whitetails" are expected to remain. The famous white-tail deer habitat of central South Dakota will be lost by the spring of 1963 when the reservoir is brought up to operating levels. The only other extensive "whitetail" habitat in the State is located in the "Black Hills".

Mule deer are present in the hills and coulees along the river. A huntable population has been present for years but most sportsmen in this area would rather pursue his cousin, the whitetail. With the flooding of the reservoir, the mule deer will eventually dominate the hunting scene.

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

Beaver are probably the most numerous fur bearers in the area. They have just recently been put on the predator list by the South Dakota Game Department. Beaver hunting by boat along the Missouri River is a new sport for many South Dakota residents. The writer knows of 2 men who killed 52 beaver this past spring by patrolling the rising river in an old scull and shooting the beaver in the water or on shore as they sought cover. No beaver were observed on the refuge this period but no doubt this area will become attractive to these nuisance animals.

Muskrats are not present on the refuge although it is certain that they will become established naturally in a few years. No mink or weasels were observed this period.

Raccoons and skunks are present but their population at this time remains quite low. These two "critters" along with feral house cats are shot on sight.

Coyotes were not sighted on the refuge this period although it's possible that part of the refuge is used during their hunting forays. A high population of coyotes exists to the north and west of the refuge. Hearing and/or seeing coyotes along the Missouri River is common. The writer, much to his dismay, called a coyote to within 100 feet of him the first time he attempted predator calling. He truly believed that he had reached par excellence in the art of predator calling until he tried the 2nd, 3rd, 4th, 5th, .....nth time.... and all to no avail.

Red fox are numerous and an active poisoning program is carried on in the county by PRC. Grey fox are present but rarely seen.

Cottontail rabbits are abundant. Hunting is open the year around but few sportsmen take the time to pursue these over abundant pests. Jackrabbits are hunted during the fall and winter both for sport and fur. Carcasses bring an average of 70 cents during the winter months.

E. Hawks, Eagles, Owls, Crows, Ravens, and Magpies.

Marsh hawks are summer residents and a peak of 7 were noted this period. A small colony of burrowing owls are located along the east side of the south unit. The population is estimated at 30 and it's possible that some young were raised this year

Several magpies were noted near the abandoned farm buildings in the south unit. Crows are scarce this period.

F. Other Birds.

A colony of bank swallows are located east of the swimming area along the cut of the old Spring Creek channel. Young of the year were flying by August and the total population is estimated at 400-500.

G. Fish.

Three fish transplants have taken place on this newly flooded impoundment. All stock was provided by the Gavins Point National Fish Hatchery, Yankton, South Dakota. A summary of the data follows:

<u>Specie</u>	<u>Number</u>	<u>Date Planted</u>
Northern pike	3,500,000 fry	April
Large mouth bass	89,250 fingerlings	June 28
Large mouth bass	10,000 fingerlings	August 9
Blue gill	360,000 fry & fingerlings	August 9

Fisheries biologist, Del Robinson, Spearfish, South Dakota, conducted test seinings both in the north and center units to determine the extent of foreign introduced fish species. The results indicate a high population of bullheads and a current low population of carp. Both species were present in the watershed before the lake was impounded.

Water samples taken in July by Fisheries Regional Supervisor, R. Sharp, indicate an extremely fertile lake, considerably softer and less alkaline than most waters in this area.

H. Reptiles.

Rattlesnakes are common to this area but none were observed on the refuge this period. Garter snakes are abundant and are seen nearly everywhere.

I. Disease.

None known.

III REFUGE DEVELOPMENT AND MAINTENANCE

No development or maintenance at this station.

IV RESOURCE MANAGEMENT

All economic-use leases are administered by the Corps of Engineers. Officially, the Fish and Wildlife Service has not accepted administrative responsibility for the area and, therefore, has no jurisdiction over land-use practice. The Service is expected to accept management of the lands and water control structure in the near future.

V FIELD INVESTIGATION OR APPLIED RESEARCH

None.

VI PUBLIC RELATIONS

A. Recreational Uses.

The newly impounded lake created quite an attraction for the people of Pollock and surrounding area. It was difficult for them to envision the flooding of the old town site and many were awed when the lake turned out to be much larger than they had expected.

The south shore of the north unit has been set aside as a recreational area by the Corps of Engineers. Administration and actual management of the public-use area will have to be worked out with the Corps of Engineers.

Picnicing, swimming, and water skiing were the favorite summer past-times. As many as 25 boats could be seen on the lake at one time pulling water skiers. The swimming beach was used nearly every day during the summer with particularly heavy use on weekends. Organized swimming would attract from 100 to 150 students each day from July 8 to August 15.

A Water Carnival Show, climaxed with evening fireworks, played to a crowd of 3000 people during the July 4th celebration. The show, sponsored by the Pollock Boat Club, was well publicized and drew people from as far away as Bismarck and Aberdeen. There was some talk of having speed boat races next year.

B. Refuge Visitors.

Date			
6/20	Lyle Schoonover	Mgr. Sand Lake Refuge	Deliver vehicle
6/20	Clair Rollings	Refuges, R.O.	"
6/20	Ronald Backhaus	Pollock	Job seeking
6/28	Dale Lambertson	Gavins Point Fish Hatchery	Fish transplant
7/8	Arnold Kruse	Jamestown AAO	Courtesy
7/9	Mr. Sibert	CE, Pierre Area Eng.	Spillway damage
	Dick Maleen	CE, Pierre	"
7/10	Messrs. Williams	Ce, Ass't area Eng. Pierre	"
	Horiman	CE, Chief construct.Eng.Omaha	"
	Fabian	CE, Chief design Eng. Omaha	"
	Waleen	CE, Inspector, Mobridge,S.D.	"
7/10	Robert Sharp	Fish Mgt. Supervisor, R.O.	Fish management
7/10	Del Robinson	Fish biologist, Spearfish	"
7/24	Ken Vail	AAO Aberdeen, Realty	Courtesy
8/2	Art Hughlett & family	Lacreek Refuge	Courtesy
8/9	Dale Lambertson	Gavins Point Hatchery	Fish transplant
	Wes Orr	"	"
8/22	Messrs. Crabb, Randall & Rettinger	MRBS, Billings, Montana	Courtesy
8/29	Emmett Foster	So. Dak. Dept. Forestry	Tree planting
	Numerous Lewis Smith	SO.Dak. Warden	

C. Refuge Participation.

Manager conducted brood counts for the Lacreek National Wildlife Refuge at Martin, South Dakota from July 16 to 21.

Manager accompanied an inspection party of National Park, Bureau of Reclamation and Fish and Wildlife Service personnel on an appraisal of recreational development of the Belle Fourche Reservoir from July 25 to 27.

Manager attended South Dakota Wildlife Federation 17th annual meeting at Mobridge, So. Dak. on August 25.

Manager spoke with many Pollock residents, farmers and ranchers regarding plans for development of Pocasse Refuge.

D. Hunting.

None.

E. Violations.

None.

F. Safety.

The safety program at this station consists of reading safety bulletines and observing safe working practices.

## VII OTHER ITEMS

A. Items of Interest.

None.

B. Photographs.

Several photographs taken with the manager's personal camera and government film are appended. A 35mm camera was recently purchased by the regional office for use at this station.

Two rolls of black and white and color slides showing the spillway damage, water control structures, and general condition of the lake are submitted as the first pictures for the refuge photo file.

SIGNATURE PAGE

Submitted by:

Ed Collins  
(Signature) Ed Collins

Date: Nov. 10, 1962

Refuge Manager  
(Title)

Approved, Regional Office:

Date: 11-16-62

H. K. Nelson  
(Signature)

ACTING

Regional Refuge Supervisor





R1 The spillway is designed to take water both ways. This is the Oahe Reservoir side. Rip-rap will protect the dam from washing.



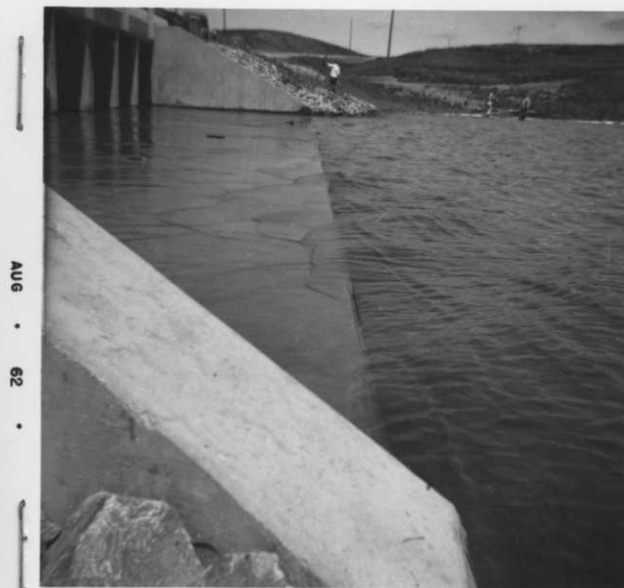
R1 Causeway separates the Oahe Reservoir from the refuge. Refuge on left; reservoir on right. New town of Pollock in background.



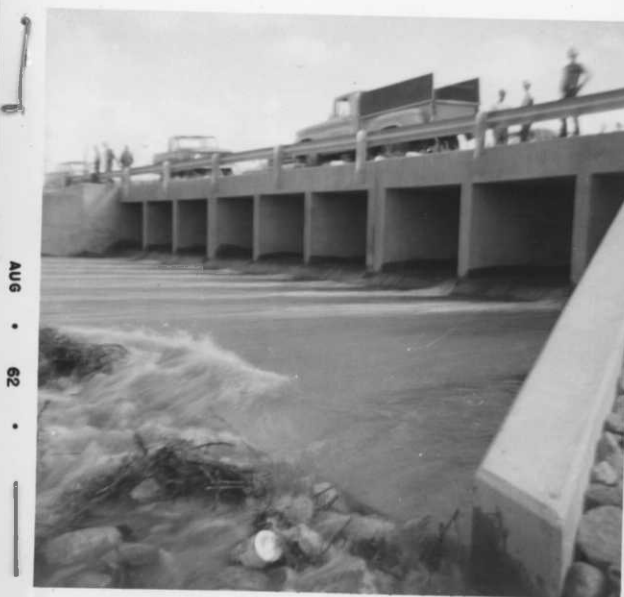
R1 A view of the 9 culvert emergency spillway from the Oake Reservoir side.



R1 A close-up of the spillway showing the concrete apron and rock rip-rap along the downstream face of dam.



R1 First water ever to pass through the spillway on July 3 after heavy rains upstream on the watershed.



R1 More rain on the watershed during the first week of July filled the refuge to capacity. The above photo shows 12" of water being passed from the refuge. The cutting action of this water, because of poor design of the spillway, removed tens of rip-rap on the downstream face of the apron.



R1 Looking through the spillway in <sup>to</sup> the  
 refuge. Spillway elevation 1607' - Corps  
 purchased to 1620'. Culverts are 6'X6'.



R1 Volunteer help cleaning up some of the  
 debris that floated to shore. The old town  
 is covered with 3 feet of water and some of  
 the trash is now coming loose from the bottom  
 and cluttering up the water.



R1 Fish planting by Gavins Point National Fish Hatchery personnel in the North Unit. Shallow shoreline will be inviting to emergents in future years. Old town site indicated by X mark.



R2 A portion of the crowd that came to see the refuge and the July 4th Water Carnival Show sponsored by the local boat club. An estimated 3000 people attended and nearly all were impressed with the new lake.



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

WATERFOWL

REFUGE Pacasse

MONTHS OF May TO August, 19 62

(1) Species	(2) Weeks of reporting period										6/24-30	7/1-7 10
	1	2	3	4	5	6	7	8				
Swans:												
Whistling												
Trumpeter												
Geese:												
Canada												
Cackling												
Brant												
White-fronted												
Snow												
Blue												
Other												
Ducks:												
Mallard												
Black												
Gadwall												
Baldpate												
Pintail												
Green-winged teal											75	75
Blue-winged teal											20	20
Cinnamon teal											400	400
Shoveler												
Wood											50	50
Redhead												
Ring-necked												
Canvasback												
Scaup												
Goldeneye												
Bufflehead												
Ruddy												
Other												
Coot:											300	300

DATA NOT AVAILABLE - REFUGE ACTIVATED ON JUNE 2/2

3 -1750a  
 Cont. NR-1  
 (Rev. March 1953)

WATERFOWL  
 (Continuation Sheet)

REFUGE Pecasse

MONTHS OF May TO August, 19 62

(1) Species	(2) Weeks of reporting period								(3) Estimated waterfowl days use	(4) Production Broods: Estimated seen : total
	7/8-14 11	7/15-21 12	7/22-28 13	7/29-8/4 14	8/5-11 15	8/12-18 16	8/19-25 17	8/26-31 18		
Swans:										
Whistling										
Trumpeter										
Geese:										
Canada	1	1	1	1	1				35	
Cackling										
Brant										
White-fronted										
Snow										
Blue										
Other										
Ducks:										
Mallard	250	250	250	250	250	250	400	600	20,056	
Black										
Gadwall										
Baldpate										
Pintail	75	75	75	75	75	100		400	6,775	
Green-winged teal	20	20	20	15	15	15	500	20	4,635	
Blue-winged teal	400	400	400	400	400	400		700	26,600	
Cinnamon teal										
Shoveler	50	50	50	40	40	40	60	90	3,550	
Wood										
Redhead				20					140	
Ring-necked										
Canvasback				10	10				140	
Scaup				15	15				210	
Goldeneye										
Bufflehead										
Ruddy										
Other										
Coot:	300	300	300	450	450	425	400	320	5,145	
				(over)						



	(5) Total Days Use	(6) Peak Number	(7) Total Production
Swans			
Geese	35	1	0
Ducks	62,105	1810	500-600
Coots	5,145	450	0

# SUMMARY

Principal feeding areas

Principal nesting areas North shore of the north unit

East and west sides of the center unit.

Reported by

*Ed Collins*  
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 May to August 195 62

(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	50	7/1	500	8/15	4 still	present			-	
D.C. cormorant	10	present in June	20	7/15	2	8/5			-	
G.B. Heron	"	"	2	7/20	2 still	present			-	
B.C. night heron	6	present in June	20	8/1	20	"			-	
American bittern	1	7/15	6	8/1	6	"			-	
Pied-billed grebe	2	present in June	25	8/30	25	"			-	
Western grebe	2	6/1	6	7/15	2	"			-	
II. <u>Shorebirds, Gulls and Terns:</u>										
Franklin's gull	Some present in June		4000	8/15	500 still	present			-	
Ring-billed gull	" " " "		1500	8/10	200	"			-	
Black tern	" " " "		300	7/20	2	8/1			-	
Avocet	20 present in "		20	7/31	1	8/15			-	
Willet	Some present in June		15	7/31	5 still	present			-	
Phararope (Wilson's)	" " " "		200	7/15	5	8/1			-	
O. yellowlegs	" " " "		50	7/15	20 still	present			-	
L. yellowlegs	" " " "		50	7/30	30	"			-	
Sora rail	2	7/31	5	8/15	1	8/30			-	
Upland plover	Some present in June		5	7/30	2 still	present			-	
Killdeer	" " " "		200	8/1	100	"			50	

(over)



(1)	(2)	(3)	(4)	(5)	(6)
III. <u>Doves and Pigeons:</u>					
Mourning dove	Some present in June	75	8/1	75 still present	-
White-winged dove					-
IV. <u>Predaceous Birds:</u>					
Golden eagle					-
Duck hawk					-
Horned owl					-
Magpie	Some present in June	4	7/15	2 still present	-
Raven					-
Crow	" " " "	7	7/15	5 still present	-
Marsh hawk	" " " "	30	8/1	20 still present	-
Burrowing owl	" " " "				-
Data incomplete for first two months of period because refuge was not activated until June 20th.					
				Reported by	Ed Collins

#### 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.



3-1750b  
Form NR-1B  
(Rev. Nov. 1957)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE

WATERFOWL UTILIZATION OF REFUGE HABITAT

Refuge Pecosse From June 20 to August 31  
For 12-month period ending August 31, 1962

Reported by Ed Collins Title Refuge Manager

(1) Area or Unit Designation	(2) Habitat		(3) Use-days	(4) Breeding Population	(5) Production
	Type	Acreage			
Entire refuge	Crops		Ducks	62,105	296 pairs
	Upland	600	Geese	35	0
	Marsh		Swans		
	Water	1800	Coots	5,145	0
	Total		Total		
-----					
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
-----					
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
-----					
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
-----					
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
-----					
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		
-----					
	Crops		Ducks		
	Upland		Geese		
	Marsh		Swans		
	Water		Coots		
	Total		Total		

(over)



## INSTRUCTIONS

All tabulated information should be based on the best available techniques for obtaining these data. Estimates having no foundation in fact must be omitted. Refuge grand totals for all categories should be provided in the spaces below the last unit tabulation. Additional forms should be used if the number of units reported upon exceeds the capacity of one page. This report embraces the preceding 12-month period, NOT the fiscal or calendar year, and is submitted annually with the May-August Narrative Report.

- (1) **Area or Unit:** A geographical unit which, because of size, terrain characteristics, habitat type and current or anticipated management practices, may be considered an entity apart from other areas in the refuge census pattern. The combined estimated acreages of all units should equal the total refuge area. A detailed map and accompanying verbal description of the habitat types of each unit should be forwarded with the initial report for each refuge, and thereafter used only be submitted to report changes in unit boundaries or their descriptions.
- (2) **Habitat:** Crops include all cultivated croplands such as cereals and green forage, planted feed patches and agricultural row crops; upland is all uncultivated terrain lying above the plant communities requiring seasonal submergence or a completely saturated soil condition a part of each year, and includes lands whose temporary flooding facilitates use of non-aquatic type feeds; marsh extends from the upland community to, but not including, the water type and consists of the relatively stable marginal or shallow-growing emergent vegetation type, including wet meadow and deep marsh; and in the water category are all other water areas inundated most or all of the growing season and extending from the deeper edge of the marsh zone to strictly open-water, embracing such habitat as shallow playa lakes, deep lakes and reservoirs, true shrub and tree swamps, open flowing water and maritime bays, sounds and estuaries. Acreage estimates for all four types should be computed and kept as accurate as possible through reference to available maps supplemented by periodic field observations. The sum of these estimates should equal the area of the entire unit.
- (3) **Use-days:** Use-days is computed by multiplying weekly waterfowl population figures by seven, and should agree with information reported on Form BR-1.
- (4) **Breeding Population:** An estimate of the total breeding population of each category of birds for each area or unit.
- (5) **Production:** Estimated total number of young raised to flight age.



3-1752  
Form NR-2  
(April 1946)

# UPLAND GAME BIRDS

Refuge Pecasse Months of May to August, 19 62

(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 upland prairie, and tame and wild hay.	10		90 young					60	

## 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.