

Pocasse National Wildlife Refuge
Pollock, South Dakota

INTRODUCTION

Pocasse National Wildlife Refuge is a satellite of Sand Lake Refuge. Pocasse is located in northcentral South Dakota near Pollock, South Dakota. The refuge is a subimpoundment of the Oahe Reservoir. The Missouri River forms the west boundary of the refuge. Spring Creek enters the refuge from the south (Figures 1 and 2).

The area's continental climate is one of cold winters and hot summers. The average annual precipitation is about 15 inches, about 70 percent of which falls during the growing season. On the average, there are 109 days per year with temperatures that exceed 32°F. The average for July is about 72 degrees and the average for January is about 9 degrees. Temperatures range from -41°F. to 110°F.

Pocasse has been under joint management of the Corps of Engineers (Corps) and U. S. Fish and Wildlife Service since October, 1962. The only fully-executed copy of the Cooperative Agreement is No. DACW45-3-67-5111, dated March 5, 1968.

Supplemental Agreement No. 1 to Cooperative Agreement No. DACW45-3-67-5111 dated July 3, 1986, includes an additional 44.5 acres for management. Under these agreements, the 2,585 acre Lake Pocasse unit was turned over to the Service for the conservation, maintenance, and management of wildlife habitat.



Figure 1. Aerial view of Pocasse NWR. Spring Creek drainage is in foreground followed by Pocasse NWR. The town of Pollock, S.D., relocated in 1962, is located south of the refuge. Photo views northwest. 88-SY

50-506-2499

A. Highlights

- High winds and low precipitation provides little moisture, proves disastrous for both grassland growth and planting of crops in the Pollock, South Dakota, area (Section B).
- Sub-adult whooping crane visits refuge for two weeks in October. Only confirmed South Dakota sighting in 1988 (Section G.2)
- Approximately 40 large round bales are placed in Pocasse to supplement waterfowl nesting habitat (Section G.3).

Record low water levels at Pocasse caused by drought and repair work on emergency spillway brings back "old town" Pollock (Section H.1).

B. Climatic Conditions

Precipitation for 1988 was 10.54 inches, approximately 5.84 inches below average. The winter of 1987-1988 was generally mild and dry. The Pollock area received a total of 27.9 inches of snow which represents nearly a 20 inch reduction from the previous winter. Maximum snow depth (11.4 inches) was recorded in December.

High winds in March through May with little moisture proved disastrous for both grassland growth and planting of crops in the Pollock area. **Table 1** provides climatological data for this reporting period.

**Table 1. Precipitation and Temperature data recorded
at Pollock, South Dakota.
(January - December, 1988)**

Month	F. degrees High (day)		F. degrees Low (day)		Inches (Snowfall) Precip.	Precip. Departure From Normal
January	42	(29)	-31	(6)	.33	(4.5) - .04
February	63	(27)	-41	(11)	.32	(4.0) - .11
March	72	(27)	- 7	(14)	.37	(3.0) - .39
April	85	(7 & 30)	13	(18)	.10	-1.67
May	92	(26-29)	31	(13)	1.74	- .93
June	106	(24)	48	(15)	3.45	+ .21
July	104	(14 & 27)	50	(21)	.59	-1.61
August	103	(15)	37	(29)	1.59	- .25
September	92	(10)	31	(23)	.62	- .70
October	84	(14)	13	(28 & 29)	.16	- .73
November	65	(2)	0	(19 & 28)	.64	(5.0) + .15
December	60	(5)	-12	(28 & 29)	.63	(1.4) + .23
Annual	106	(June 24)	-41	(Feb 11)	10.54	(27.9) - 5.84

D. Planning

2. Management Plan

Management programs on Pocasse are generally carried out as an extension of Sand Lake National Wildlife Refuge. Continuing projects on Pocasse include boundary posting, wildlife inventories, haying and law enforcement. No facilities exist on the refuge.

F. Habitat Management

1. General

Pocasse land classification is divided into open water and marsh, upland tame/native grassland and native woodland.

2. Wetlands

Pocasse NWR contains approximately 1,545 acres of open water and marsh. The southeast and northern reaches of the refuge contain shallow marsh habitat which is interspersed with stands of cattail and open water. The rest of the refuge is classified as open water habitat.

Full pool elevation is maintained at 1617.0' msl. This spring due to little inflow and emergency spillway rehab work completed in the fall of 1987 refilling of the pool did not occur. April 1988 pool elevation was approximately 1612' msl. End of year pool elevation was approximately 1609' msl.



SD-SDL-2500

Figure 3. Pocasse open water/cattail wetland complex. Photo views W/SW. 87-SY

5. Grassland

Cover on Pocasse NWR consists primarily of shortgrass prairie uplands, typical lowland vegetation, and a small amount of seeded nesting cover. Willow thickets (**Figure 4**) developing

along the shoreline provides additional cover for resident and migratory wildlife. The refuge contains approximately 1,040 acres of upland habitat.

Residual cover from the previous growing season proved beneficial for ground nesting birds. Drought conditions throughout the spring and summer months severely reduced grass growth on Pocasse during the 1988 season.



SD-SOL-2501

Figure 4. Willow thickets have responded along the shorelines in several areas as a result of more stable water conditions as compared to Oahe Reservoir. Beaver colonies located within Pocasse have established themselves adjacent to this willow shrub habitat and heavily utilized this habitat for food.
88-SY

G. Wildlife

2. Endangered and/or Threatened Species

The primary objective of Pocasse NWR is to provide a resting and nesting area for migrating birds, including endangered species that occasionally visit the area. Bald eagles, whooping cranes and peregrine falcons may use the area on an occasional basis during their migrations.

On October 4, one subadult whooping crane was observed using Pocasse. This whooping crane was observed with a small flock of sandhill cranes. The whooper apparently liked Pocasse staying on the refuge approximately 2 weeks. He was last seen on the refuge on October 18. This was the only confirmed whooping crane sighting in South Dakota in 1988.

3. Waterfowl

Several hundred waterfowl representing mallard, Northern pintail, gadwall, blue-winged and green-winged teal and woodduck were observed on the refuge this summer. Broods of mallard, pintail and blue-winged teal were observed when visiting the refuge during the summer months. No formal pair counts and/or brood surveys were completed in 1988.

In October, approximately 40 large round bales were placed in the marsh in an effort to improve nesting success for the 1989 breeding season.

4. Marsh and Waterbirds

Although rookeries are not known to exist on the refuge, numerous great blue herons, double crested cormorants and white pelicans utilize the refuge during the breeding season.

5. Shorebirds, Gulls, Terns and Allied Species

This year due to low water levels, greater than normal shoreline and exposed mudflat habitat was created on Pocasse NWR. Numerous shorebird activity was noted as a direct result. American avocets, godwits, killdeer, common snipe, lesser and greater yellowlegs, willet, among others were noted feeding and nesting on the many sandbars within the refuge.

6. Raptors

Great horned owls, red-tailed and swainson's hawks and turkey vultures were observed using the refuge during summer visits.

7. Other Migratory Birds

A formal species list of birds has not been developed for Pocasse. Common songbirds, sighted along the marsh bottoms and adjacent uplands, include yellow-headed and red-winged blackbirds, upland sandpiper, black-capped chickadee, house and marsh wrens, blue jay and numerous varieties of sparrows.

8. Game Mammals

The white-tail deer population was in excellent condition this spring due to the wide open winter of 1987/88. Open winters allow the deer to remain spread out, rather than concentrating around the available feed.

Deer depredations on adjacent private farmland was not a problem in 1988. The deer hunting seasons are discussed in Section H.8.

10. Other Resident Wildlife

Overwintering pheasant population did very well during the open winter of 1987/88. Many birds were seen on the refuge during late winter and early spring.

11. Fisheries Resources

In past years Pocasse NWR has been managed as a Northern pike sportsfishery. South Dakota Game, Fish and Parks (SDGF&P) and Service fishery staffs have stocked the lake with Northern pike fry on several occasions. Up to 1988, SDGF&P fishery personnel also used Pocasse as a primary site for Northern pike egg collection. Northern pike eggs are then hatched at state hatcheries and transported to several lakes in eastern South Dakota for restocking. Since the mid-1980's, the sportsfishery at Pocasse has steadily declined. In 1988, no netting activity was conducted by SDGF&P personnel because of low numbers of Northerns in the lake. Rough fish populations of carp and bullheads have since taken over the fishery.

Low water level conditions and subsequent severe winter of 1988/89 will probably winterkill what remaining fish are left in the lake. This natural phenomenon that occurs quite frequently in the Dakota's will benefit both the waterfowl and fishery resource at Pocasse NWR.

15. Animal Control

A special use permit was issued to take several beaver that had plugged up the water control structure located on the Highway 1804 reservoir impoundment causeway. Two beavers were taken by the trapper.

H. Public Use

1. General

Hunting and fishing activities are the principle public use activities occurring at Pocasse NWR.

In 1988, because of low water conditions many local residents walked onto the refuge to explore "Old Pollock". When the reservoir was created in 1962 the old town site was flooded out. Present day Pollock now is re-established south of the main lake area. This year's low water conditions exposed many of the old streets and building foundations left behind when the reservoir was filled to full pool levels.

8. Hunting

Pocasse NWR is open to deer hunting within the framework of state rules and regulations governing the taking of deer. Rifle hunting season ran from November 26 - December 4, 1988. The archery season ran from December 5-31, 1988. The seasons are set late in the year so not to interfere with the refuge's waterfowl migration objectives. Pocasse also has a late pheasant season which runs from November 19 - December 4, 1988.

Pheasant and deer hunting in the cattails is arduous, but many fine bucks and limits of pheasants are harvested by resident and non-resident hunters each year.

9. Fishing

Fishing on the western portion of Lake Pocasse has been permitted since its establishment in 1962. This portion of the lake at full pool is about 17 feet deep. All fishing has been done in accordance with State law. Principal species taken are black bullheads, Northern pike, black crappies and walleye.

The east half of the refuge is managed more intensively for waterfowl because of shallow water and emergent vegetation. This portion of the lake is closed to fishing except from the bank along Highway 10. One access boat ramp (built by the Corps) is located on the southwest shore near the town of Pollock.

Fishing recreation in 1988 was sharply curtailed because of extremely low water conditions.

In December 1988, the SDGF&P Department liberalized fishing on Pocasse. Liberalized fishing is the taking of game fish up to three times the daily and possession limits by hook and line (six lines maximum), snagging, spears, legal dip nets, legal lift nets, legal cast nets and legal minnow seines.

Liberalized fishing will be allowed from January 1 - February 28, 1989. It is suspected that the winter of 1988/89 will winterkill this lake.

17. Law Enforcement

Law enforcement activities are carried out jointly by SDGF&P Department, Corps and Service personnel. In 1988, one trespass grazing "warning letter" was issued to an adjacent landowner.

I. Equipment and Facilities

2. Rehabilitation

Two large wooden refuge entrance signs were repaired and repainted by refuge summer temporary staff.

Approximately 615 rods of barbed wire fence were repaired along the west side refuge boundary adjacent to the railroad ROW. Refuge boundary signs were replaced where needed along the south side of the refuge.

J. Other Items

1. Cooperative Programs

In 1988 as in past years, we have worked closely with SDGF&P Department fisheries and wildlife management personnel on fisheries and related wildlife programs. This year SDGF&P personnel spent extra time in the area in an effort to provide additional "protection" for the visiting whooping crane which used the refuge for nearly two weeks in October.

4. Credits

Steve Young wrote Sections A through J and took photographs. Marcia Haaland typed and assembled the narrative.

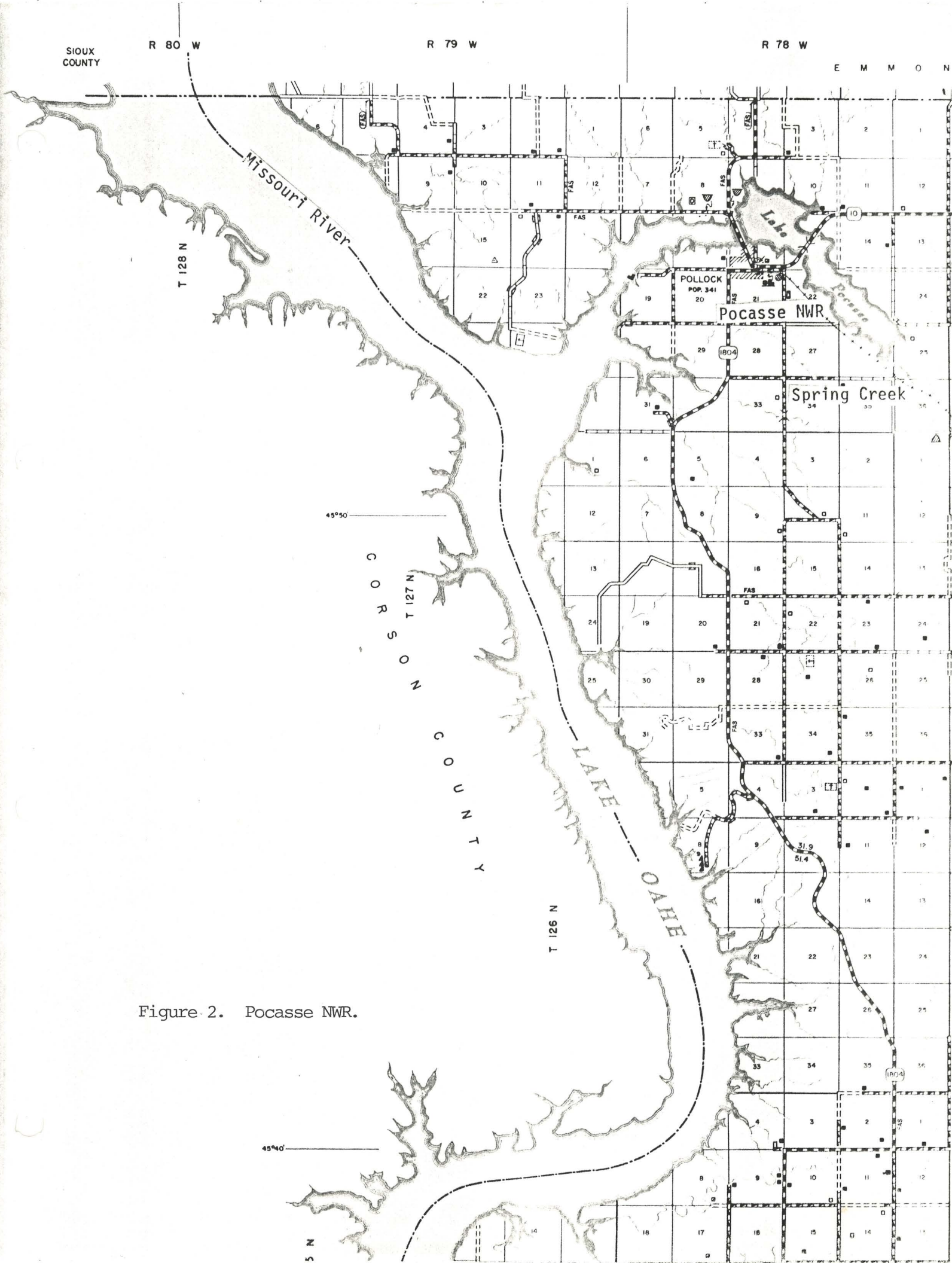


Figure 2. Pocasse NWR.