

PEA ISLAND NATIONAL WILDLIFE REFUGE

Narrative Report

Fiscal Year 1974
(July 1973 to June 1974)

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I. GENERAL

A. Weather

Rainfall for FY 74 totalled 54.27 inches or 2.97 inches above normal. The dryest month was October with .94 inches of precipitation and the wettest being June with 8.73 inches. Rainfall each month was sufficient to keep the ponds relatively high.

One bad storm occurred during the year when the refuge felt the tail effects of hurricane Gilda on October 26. This storm produced 38 knot winds and 25 foot waves. Damage incurred from this storm was restricted to overwash of the dunes in three areas. Little rain accompanied this storm.

B. Habitat Conditions - Food and Cover

A total of approximately 100 acres of annual ryegrass were planted on the refuge during September. Plantings occurred in two areas; New Field, 55 acres and Rye Field, 45 acres. These fields were used moderately due to the abundance of natural foods in the marsh and the shallow Sound areas.

Production of natural foods on the refuge this year were excellent. This was pointed out as we ran our annual plant transect lines. They showed an increase of good waterfowl foods to just under 25%, fair foods staying at 56% and non-food plants dropping to a six year low of 19.1%.

II. WILDLIFE

A. Migratory Birds

1. Waterfowl

Total use days for all waterfowl species except geese decreased in FY 74. Use days data were as follows.

Species	Use Days			
	1971	1972	1973	1974
Swans	24,759	29,820	34,356	28,260
Geese	1,176,835	1,026,311	954,737	997,980
Ducks	1,798,554	1,690,805	1,797,593	1,601,370
Coots	449,966	249,529	247,247	216,150
Total	3,450,114	2,996,465	3,033,933	2,843,760

Total use days in FY 74 were 190,173 less than in FY 73 and only 152,705 less than FY 72. Swan use days decreased for the first time in four years. However, goose use days were up by 43,243. This could be attributed to the reproduction success of the greater snow goose during FY 74. In FY 73, the snow goose aging survey showed young of the year represented only 1.3% of the snow geese seen on the refuge. In FY 74 young of the year represented 33.9% of the snow geese seen on the refuge.

Waterfowl breeding population for FY 74 was estimated at 300 individuals while in FY 73 it was only 170. However, the production of waterfowl was not in tune with this. In FY 73, 53 blacks and 286 gadwalls were produced, a total of 339 ducks. In FY 74, 120 blacks and 250 gadwalls were produced, a total of 370 ducks. Thus with 130 more ducks in the breeding population of FY 74 than in FY 73, only 31 additional ducks were produced. The reason for this is not know.

2. Wading Birds, Gulls, Terns and Shore Birds

The wading bird rookery consisted on one small island and part of one larger island in North Pond. Estimated production for this fiscal year was 30 black-crowned night herons, 5 green herons, 40 cattle egrets, 20 little blue herons, 50 Louisiana herons, 60 snowy egrets, 10 great egrets and 75 glossy ibises.

Nesting willets were numerous with a few oystercatchers and black-necked stilts nests also found.

Great black-backs, herring, ring-billed and laughing gulls were abundant at times.

Marbled godwits and American avocets were commonly seen in North Pond and Salt Flats areas during the fall and winter.

Least terns attempted to nest on the refuge again this year. One colony of approximately 60 pairs nested at mile post 9. Other colonies also occurred on the refuge. It's believed that as many as 150 least terns were produced this year.

B. Upland Game Birds

Ring-necked pheasants and mourning doves remain the refuges only upland game. No dove nests were found this year and the peak population of doves was estimated at only 30 individuals.

A pheasant census was run by State and refuge personnel on September 12, 1973. On the areas censused, .1948 birds per acre were found. Total estimated population on the refuge was 500-600 birds.

C. Big Game Animals

None occur on refuge.

D. Fur Animals, Predators, Rodants and Other Mammals

Nutria and muskrats were numerous on the refuge this year. They continue to do some damage to our dikes and bulkheads.

Otter were seen on several occasions this year in both South and North Ponds.

Feral cat numbers are high and have become a threat to some wildlife, especially young pheasants. Numbers of cats are reduced at every opportunity.

E. Hawks, Eagles, Owls and Crows

This year the American kestrel replaced the marsh hawk as being most abundant raptor on the refuge. Peregrine falcon numbers were up compared to last years figures. Other hawks seen were sharp-shinned, pigeon, rough-legged and red-tailed hawks.

Osprey sightings were down this year, but several were seen fishing in North Pond.

Barn owls were seen frequently during the fall and winter. Several short-eared owls and one long-eared owl were also seen this year.

Large numbers of fish crows were seen on the refuge. These birds are frequently getting into garbage.

F. Other Birds

The Christmas Bird Count of December 31, 1973 showed some 192 species of birds on the refuge. Several additional species were known to be present on the refuge at the time of the count.

Several species listed under accidentals on our bird list were seen during FY 74. These included a scissor-tailed flycatcher, 5 snowy plovers, 1 curlew sandpiper and 1 swallow-tailed kite.

G. Fish

Fishing was fair this year, with a few good catches of bluefish and rock being caught by commercial fishermen along the beach.

H. Reptiles

Snapping turtles, yellow-bellied sliders and diamondback terrapins

were commonly seen in our fresh water impoundments. Diamondback terrapins were also abundant in the Sound and tidal creeks of the refuge.

Water snakes, glass lizards and black racers were seen regularly this year.

Twelve Atlantic loggerhead sea turtle crawls were found on the refuge's beaches this year. Of these, only 5 were true crawls, a decline of some 50% over last years high of 10. Four of these nests were dug up and placed in a protective enclosure to protect them from beach vehicle traffic and high water. The nests contained a total of 488 eggs, the largest containing 137 eggs and the smallest 101 eggs. Approximately 59 days were required for the eggs to hatch and the young turtles to start to emerge. Of the 488 eggs; 352 turtles were released, 64 eggs were infertile and 63 were dead.

I. Diseases

Very few sick or dead birds were noted on the refuge this year.

III. REFUGE DEVELOPMENT AND MAINTENANCE

A. Physical Development

Replaced boundary signs as needed and posted new regulatory signs.

Minor maintenance and repairs to vehicles, pumps, outboard motors, and farm equipment as needed.

The office, storage buildings, comfort station and residence were painted this year.

A new observation platform located on top of the dike at the north end of North Pond was completed in FY 74.

Large entrance signs were cleaned, repaired and repainted during FY 74.

Refuge's jeep was scraped and repainted this year.

Replaced both North and South Ponds water control structure culverts.

B. Plantings

1. Aquatics

None.

2. Trees and Shrubs

None.

3. Upland Herbaceous Plants

None.

4. Cultivated Crops

Approximately 100 acres of common ryegrass was planted for green browse this year. This consisted of 55 acres in New Field and 45 acres in an area known as Rye Field. Distribution was approximately 50 pounds of ryegrass seed and 400 pounds of 10-20-20 fertilizer per acre.

C. Collections and Receipts

One hundred and seventy-five bushels of shelled corn were received from Pungo NWR again this year. This corn was used in our banding program.

D. Control of Vegetation

Dike roads were mowed several times during the summer. This allowed visitors to walk around North Pond and prevented encroachment of undesirable shrubs such as waxmyrtle, bayberry and grouselbush.

In mid-August approximately 40 acres of waxmyrtle, bayberry and other undesirable plants were plowed down in New Field. This was accomplished with the aid of Mattamuskeet's White and D-7 tractors. This area is now producing a large amount of desirable food plants.

In addition to this, $4\frac{1}{2}$ acres of cattail and phragmites were sprayed with a solution of downon. The kill was excellent.

E. Planned Burning

Controlled burning on the refuge began on December 19 when approximately 150 acres of New Field were burned.

Then in February, 250 acres north of North Pond and 40 acres just south of the office were burned. A total of some 440 acres were burned this year.

Areas burned had a dense growth of needle rush, waxmyrtle, bayberry, Spartina species and others. Most of the area burned good. Immediately following the burn, we received a good growth of grasses. These areas were then used heavily by snow and Canada geese.

F. Fires

Only one fire on the refuge this year. It occurred at the public use area on the north end of Pea Island and was caused by accumulation of salt on electrical lines causing shorting out and burning the cross arm into.

IV. RESOURCES MANAGEMENT

A. Grazing

None on refuge.

B. Haying

None on refuge.

C. Fur Harvest

None on refuge.

D. Timber Removal

None on refuge.

E. Commercial Fishing

All fishing is in State controlled Sound water or along the beach. A permit is required for commercial beach fishing from National Park Service.

F. Other Uses

None.

V. FIELD INVESTIGATION OR APPLIED RESEARCH

This year the North Carolina Wildlife Resources Commission personnel were again given approval to remove 40 ring-necked pheasants from Pea Island Refuge. Subsequently, this project conducted by Mr. Dan Connelly yielded 26 hens and 14 roosters which were released on the Scuppernon Game Lands of North Carolina.

Pea Island received 12 Atlantic loggerhead sea turtle nests from Cape Romain NWR this year in connection with a project to extend their breeding range north. These 12 nests contained a total of 1,452 eggs and were placed in a protected enclosure and surrounded individually in a wire cage. These nests were checked twice daily and all emerged turtles were released into the ocean. Of the 1,452 eggs; 982 young turtles were released, 418 died, and 52 were infertile.

Dr. William Campbell and Mr. Nolan H. Newton of North Carolina State University were issued permit #4-73-19. This allowed them to study insects affecting salt marsh grasses on the refuge.

Two studies entitled, "Gadwall Brood Area Turtle Population Survey and Stomach Analysis" and "Gadwall Brood Area Invertebrate Survey and Stomach Analysis", that were begun in FY 73 were completed in FY 74. These studies were conducted by Conservation Aid, Carl Linden.

Two additional studies entitled, "Least Tern Nesting Colonies" and "Gadwall Brood Study", were begun at the end of FY 74 by Conservation Aid, Craig Leggere and completed early in FY 75.

Waterfowl banding on Pea Island was primarily for Canada geese and black and gadwall ducks. However, we did band any other species that happened to be trapped while after these species.

This years banding accomplishments were:

Post-season	
Mallard	8
Black Duck	74
Canada Goose	163
Blue Goose	1
Snow Goose	1
Pre-season	
Mallard	1
Black Duck	2
Gadwall	55

Pre-season banding is done in August and is primarily to supply information on locally nesting gadwalls.

VI. PUBLIC RELATIONS

A. Recreational Uses

Visitation to the refuge was down in FY 74 from FY 73. Total visitor was 1,047,638 and 1,168,994 respectively.

Heaviest use was during the months of June, July and August with 121,924; 223,800; and 266,200 visits being recorded respectively. Saltwater fishing and wildlands appreciation auto accounted for much of the public use during these months.

B. Refuge Participation

Several interested groups were given tours and talks by refuge personnel.

C. Hunting

No hunting is allowed on the refuge.

D. Violations

A total of 20 cases were made during FY 74. Driving off designated roadways accounted for 7 of these cases and illegal camping for 6. One animal trespass case was also made. All of these were disposed of with forfeiture of \$25.00 collateral. One case of illegal possession of firearms on a refuge was disposed of with a \$25.00 fine. One minor was put on probation for hunting on a National Wildlife Refuge. Four cases are still pending.

E. Safety

Monthly safety meetings were held at refuge headquarters. Regional safety materials were discussed and safety films shown. Some of the topics discussed were defensive driving, fire prevention, proper use of hand tools, and other safety related topics.

The last lost time accident was January 21, 1958. As of June 28, 1974 there has been 5,967 calendar days since the last lost time accident with approximately 94,615 man hours worked.

Future plans are to continue with our monthly safety meetings and to correct any hazardous conditions that might occur before an accident happens.

Protective clothing and equipment will be acquired as needed.

VII. OTHER ITEMS

A. Items of Interest

Assistant Manager Wilkins transferred to White River NWR on April 4, 1973. Jack Hagan, Mr. Wilkins' replacement, reported for duty on June 11.

On October 2-5, 1973 Jack Hagan visited Chincoteague National Wildlife Refuge, for a study on how to capture and band peregrine falcons.

Refuge Manager Williamson attended the public hearing held at Swanquarter April 2, on the proposed wilderness areas of Pea Island, Mattamuskeet, Swanquarter and Cedar Island Refuges.

B. Credit

This entire report was prepared by Jack Hagan, Assistant Refuge Manager.

Date:

March 6, 1975

Submitted by:

J. F. Williamson Jr.

Approval: _____

Assistant Regional Refuge _____

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