

MASON NECK NATIONAL WILDLIFE REFUGE  
Lorton, Virginia

ANNUAL NARRATIVE REPORT  
Calendar Year 1980

NATIONAL WILDLIFE REFUGE SYSTEM  
Fish and Wildlife Service  
U.S. DEPARTMENT OF THE INTERIOR

APR 13 1981

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### Personnel

- |  |           |
|--|-----------|
| 1. Domenick R. Ciccone-Refuge Manager GS-11  | PFT       |
| 2. Marian M. Johnson-Outdoor Recreation Planner GS-9<br>(Transferred to National Park Service 9/7/80,<br>returned to Fish and Wildlife Service 12/28/80) | PFT       |
| 3. Barbara M. Mitchell-Secretary GS-5 (EOD 12/14/80)   | Career    |
| 4. Electa Lee Pollitt-Biological Aid GS-4  | Seasonal  |
| 5. Kathryn S. Rudasill-Clerk-Typist GS-4<br>(Resigned 9/27/80)   | Temporary |
| 6. Patrick J. Shanahan-Work Study Student from<br>George Mason University (5/80 thru 8/80)   | Career    |
|  | Seasonal  |

### Review and Approvals

Domenick R. Ciccone 3/27/81  
Submitted by Date

Paula D. Daly 3/31/81  
Area Office Date

Mason Neck  
Refuge

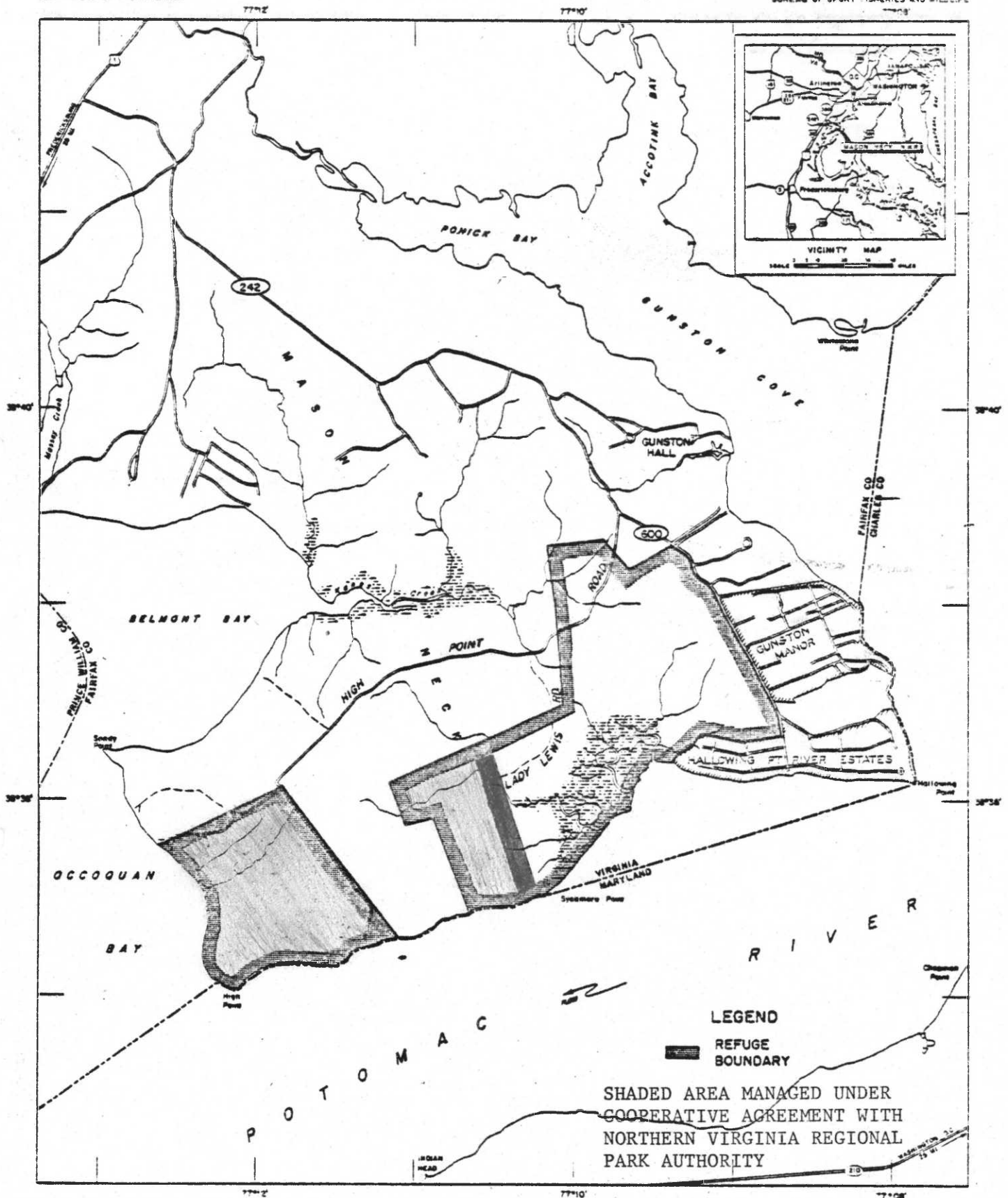
Edward L. Moses 4-8-81  
Regional Office Date

# MASON NECK NATIONAL WILDLIFE REFUGE

FAIRFAX COUNTY, VIRGINIA

UNITED STATES  
DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE



COMPILED IN THE DIVISION OF REALTY FROM  
SURVEYS BY U.S.G.S. AND PRIVATE SURVEYS

ATLANTA, GEORGIA MARCH, 1967

Scale 0 1000 2000 4000 6000 8000 FEET  
0 1 2 3 4 5 MILES

MEAN  
DECLINATION  
1960

4R-VA-803-404

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## I. GENERAL

### A. Introduction

Mason Neck National Wildlife Refuge was established in 1969 as part of a joint effort by Federal, state and county agencies, as well as local citizens to save valuable bald eagle nesting, roosting and feeding habitat from imminent destruction.

Located along the Potomac River 18 miles south of Washington, D.C., the refuge consists of 1,131 acres of land owned in fee title and another 789 acres managed under a cooperative agreement with the Northern Virginia Regional Park Authority. The 285 acre Great Marsh is the largest freshwater marsh in Fairfax County and accounts for nearly one-third of the County's remaining wetlands. Upland areas consist primarily of mixed hardwood/pine forest on gently rolling terrain which culminates in steep (up to 50 feet) bluffs along the Potomac.

### B. Climatic and Habitat Conditions

The most significant weather conditions of 1980 can best be summarized in two words, hot and dry. Above average temperatures were experienced during all months except February, while precipitation ranged from slightly below to well below normal during February and from May through the end of the year.

As was the case in most parts of the country, the summer months were brutally hot and dry. Average temperatures during July through September were the highest ever recorded, with August winning the dubious distinction of the hottest month in history. The highest maximum temperature, 104 degrees, was recorded on July 20.

Severe drought conditions prevailed during August and September, requiring local jurisdictions to impose mandatory water conservation measures. Water was a bit more plentiful during the fall, raising the level of the Raccoon Creek beaver pond, the refuge's only impounded water, close to normal. However, total precipitation for December was less than 1 inch, creating the threat of further water use restrictions.

### C. Land Acquisition

#### 1. Fee Title

No additional land was acquired during 1980.

#### 2. Other

The acquisition of 789 acres of Northern Virginia Regional Park Authority land by long-term lease (60 years), which had seemed on the verge of completion at this time last year, suffered some setbacks in 1980. The desired land contains the only active bald eagle nest on the peninsula, a great blue heron rookery and some good wood duck habitat.



The existing cooperative agreement with the Northern Virginia Regional Park Authority does give us the authority to protect and manage the land, but this is a rather tentative arrangement since it can be voided with only a years notice.

The original lease proposal drafted in 1979 was acceptable to both the Fish and Wildlife Service and the Park Authority, but ran into problems when it was reviewed by the Heritage Conservation and Recreation Service and Virginia's Commission of Outdoor Recreation. Both of these agencies had contributed funds toward the purchase of this land for recreational purposes and were concerned that acquisition by the refuge would eliminate such use.

A number of discussions between the parties involved and some changes in the text resulted in a lease acceptable to all. Under the new lease, the refuge would be obligated to provide recreational and educational uses of the acquired land, while still retaining the right to ensure such activities were not incompatible with the nesting eagles. This would allow us to restrict access into critical areas and limit public use during the nesting season.

In November, a copy of the lease was delivered to Assistant Secretary Herbst by the Regional Directors of both the Fish and Wildlife Service and Heritage Conservation and Recreation Service. Once again, approval seemed inevitable. However, a crucial sentence accidentally omitted from the agreement required that it be returned to the Regional Office for retyping. The corrected lease was not resubmitted to Washington until the end of December, and as of this writing, no action has been taken.

The final and most serious setback to be encountered in the effort to acquire this land is the new Administration's policies on Federal land ownership and acquisition. As part of the lease agreement with the Park Authority, the Fish and Wildlife Service must purchase 355 acres of private inholdings within the property to be leased. Until the inholdings are acquired, the Park Authority would be able to revoke the lease at will. In addition, failure to acquire these lands would inevitably result in residential development severely jeopardizing the nearby eagle nest. By the end of the year, the Division of Realty had begun preparing an environmental assessment of the proposed acquisition.

The tracts proposed for acquisition by lease and purchase, and their relation to existing refuge-owned lands, are shown on the following map.

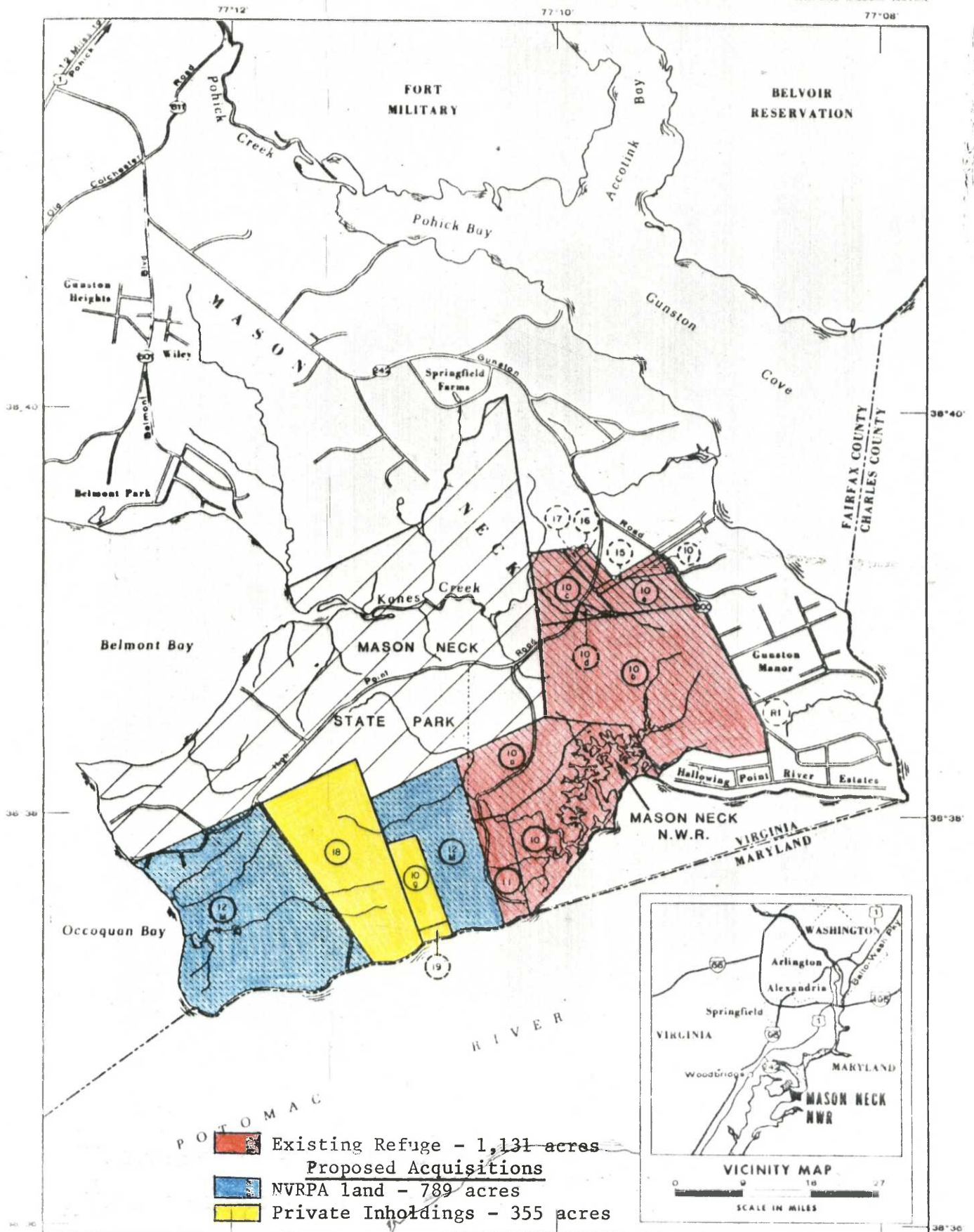
# MASON NECK NATIONAL WILDLIFE REFUGE

## FAIRFAX COUNTY, VIRGINIA

3

UNITED STATES  
DEPARTMENT OF THE INTERIOR

UNITED STATES  
FISH AND WILDLIFE SERVICE



COMPILED IN THE DIVISION OF ENGINEERING  
FROM SURVEYS BY G.S. AND B.S.F. & W.

BOSTON, MASSACHUSETTS  
POSTED 12/78

JULY 1974

EXHIBIT A



## D. Systems Status

### 1. Objectives

From the beginning, Mason Neck's primary objective has been the protection and management of the bald eagle. All other activities were planned and conducted so as not to conflict with this objective. This continues to be the case, although increasing emphasis has been placed on providing opportunities for compatible public use. The shift toward encouraging more public use is the result of increased funding and manpower which allows for better planning and control of such activities, and mandates to further develop Mason Neck's potential as an environmental education center.

The FY 81 Annual Work Plan Advice designated the refuge as a priority field station for developing and conducting outdoor classroom activities. Mason Neck is well suited for such use due to its close proximity to a large population center and its diversity of environmental study sites. However, no large scale environmental education program is possible with our existing facilities, funding and manpower. BLHP project proposals prepared in December for FY 83 and beyond would provide the necessary facilities and funding if approved.

### 2. Funding

The following table depicts the status of refuge funding and manpower for the last five fiscal years.

<u>Fiscal Year</u>	<u>Total Appropriation</u>	<u>Source</u>	<u>Staff</u>
1977	\$40,000:		2 PFT
	12,000	1210 (MB)	1 PPT
	16,000	1240 (I&R)	1 TPT
	12,000	1400 (SE)	
1978	\$77,000:		2 PFT
	18,000	1210 (MB)	1 PPT
	37,500	1240 (I&R)	1 TPT
	9,300	1400 (SE)	
	9,800	BLHP	
	2,500	Engineering Job Order	
1979	\$116,480:		2 PFT
	22,000	1210 (MB)	1 PPT
	43,000	1240 (I&R)	1 TPT
	3,000	1400 (SE)	
	48,480	BLHP	

<u>Fiscal Year</u>	<u>Total Appropriation</u>	<u>Source</u>	<u>Staff</u>
1980	\$70,851:		2 PFT
	24,000	1210 (MB)	1 Career Seasonal
	42,000	1240 (I&R)	1 TPT
	4,000	1400 (SE)	2 College Work-Study Students
	851	1911*	
1981	\$71,000:		2 PFT
	22,000	1210 (MB)	1 Career Seasonal
	1,000	1220 (MNB)	1 TPT
	44,000	1240 (I&R)	
	4,000	1400 (SE)	

\*Anticipated Reimbursement for oil spill work.

## II. CONSTRUCTION AND MAINTENANCE

### A. Construction

Funds outstanding from a 1979 BLHP project were used to purchase approximately 500 tons of gravel for use on the refuge's access road, High Point Road. Some sections of the road were graded using our small Kubota tractor and its newly acquired rear blade, but this proved very time consuming and inefficient so a contractor was hired to spread the remaining gravel.

Two portable chemical toilets were purchased and installed along Woodmarsh Trail to replace the two rented toilets that were previously destroyed by vandals. In an attempt to avoid a similar fate, the new structures were placed in a more protected location, securely anchored and a barrier constructed to prevent ramming by vehicles.

A new 40HP Mercury outboard motor was purchased to replace the old 20HP engine on our 16 foot boat. The old engine was very unreliable and extremely difficult to start. The new engine will enable us to quickly reach the Marumsco and Featherstone substations from Mason Neck, avoiding towing the boat and trailer through town.

An electric outboard motor (Mercury) was purchased for the refuge canoe to save on fuel and allow quieter boat access into the marsh.

A 40 watt General Electric power amplifier was installed in the Chevrolet pickup as a component of that vehicle's Personal Radio/Vehicular Charger System which is set on the Fairfax County Police frequency. The previous amplifier was stolen in January, and a replacement was necessary for effective operation of the radio.

As part of our ongoing effort to conserve energy, a new type of tailgate was installed on our Chevrolet pickup. The Air-Thru Tailgate, manufactured by the Hercules Company of Pelham, Georgia, is reputed to improve mileage up to 15 percent by reducing wind resistance. The mesh screen tailgate, purchased locally for \$90, provides the added benefit of improved rear visibility. It is easily installed and can be quickly replaced by the standard tailgate for hauling sand or gravel.

Our records indicate an increase of slightly more than 14 percent in the vehicles mileage with the new tailgate, or a fuel savings of 10 gallons. Over a 1 year period we would expect to save at least 85 gallons.

#### B. Maintenance

The biggest hindrance to effective management and operation at Mason Neck has always been the lack of maintenance personnel. The refuge staff pitches in to do the most necessary maintenance tasks, but this hurts other refuge functions. It was hoped that we would be assigned YACC enrollees to assist with maintenance, but uncertainty over the future of that program precluded that aid.

One thing that did go a long way toward improving our maintenance situation was the hiring of a College Work-Study student during the summer months. In accordance with our Work-Study Agreement with George Mason University, we contributed only 20 percent of the student's total salary, or \$550 for 564 hours. The student, Patrick Shanahan, performed routine maintenance and assisted Biological Aid Pollitt with other projects that would otherwise not have been done. Such projects included filling and surfacing badly eroded sections of Woodmarsh Trail, painting the refuge boat and canoe, and reposting the refuge shoreline.

The previously white Chevrolet pickup had some minor body repairs made and was painted the standard Service vehicle colors. The new Fish and Wildlife Service emblem was placed on this vehicle as well as on the sedan, boat and canoe.

Routine maintenance was performed by the refuge staff or under contract on both vehicles, the Kubota tractor and other equipment.





New chemical toilets.

(Ciccone)



Refuge pickup with Air-Thru tailgate.

(Ciccone)

### III. HABITAT MANAGEMENT

#### A. Croplands

No farming is done on Mason Neck Refuge.

#### B. Grasslands

Five acres of grassland were mowed during the year to prevent encroachment by brushy vegetation.

#### C. Wetlands

All the freshwater wetlands on Mason Neck, except the Raccoon Creek beaver pond, are subject to the rise and fall of the Potomac River tides. There are no manmade impoundments on the refuge, so we are grateful for what the beaver provide.

#### D. Forestlands

No woodland management was practiced during 1980.

#### E. Other Habitat Management

Nothing to report.

#### F. Wilderness and Special Areas

Nothing to report.

#### G. Easements for Waterfowl Management

Nothing to report.

### IV. WILDLIFE

#### A. Endangered and/or Threatened Species

Bald eagle use of the refuge was up slightly from the previous year with 1,517 use days recorded for 1980. The peak population of three adults and three immatures was observed during June.

One pair of eagles returned to the nesting site on the adjacent Northern Virginia Regional Park land to discover their nest, where one young was produced in 1979, had blown down. Fortunately, the eagles built a new nest in an oak tree across a creek from the old nest. During an aerial survey in March, Jackson Abbott of the Chesapeake Bay Bald Eagle Recovery Team observed an adult bird on the nest in an incubating posture. However, this encouraging news was followed in May by a report that the nest had been abandoned. In June the nest was inspected by personnel from the National Wildlife Federation's Bald Eagle Banding Team. They reported that the nest was sturdy and well constructed and that they were unable

to find any egg shell fragments or even the beginnings of an egg cup. The reason for the abandonment was undetermined and there were no obvious signs of human disturbance.

Despite the ill fate of the Mason Neck nest, bald eagle production in Virginia was the greatest since 1936 with 35 young hatched.

Total production in the Chesapeake Bay survey area was 72, surpassing the 1936 total by 1.

The 1980 mid-winter eagle inventory of the Mason Neck area was conducted on January 12 by refuge personnel, two National Wildlife Federation staff members and a New York Times reporter. Only one eagle, an immature bald, was seen and this bird was located on Powell's Creek about 5 river miles south of the refuge.

The proposed Phase I development of the adjacent Mason Neck State Park required Section 7 consultation due to the involvement of the Heritage Conservation and Recreation Service. A meeting was held in the Mason Neck office on March 25 with personnel from the refuge, Area Office, Heritage Conservation and Recreation Service, the Virginia Division of Parks and Commission of Outdoor Recreation in attendance. Various aspects of the development proposal were discussed and recommendations made to minimize the impact on eagles. The following month, Andy Moser of the Area Office and members of the Chesapeake Bay Bald Eagle Recovery Team were taken on a boat tour of the Mason Neck peninsula by Manager Ciccone and the potential impact of the park development was discussed. The Team suggested a study of Mason Neck's eagles be initiated to assess the effects of the development and subsequent public use. By the end of the year, a research proposal had been prepared by a George Mason University graduate student and submitted for approval. In addition to assessing the impact of the state park, such a study will provide us with more accurate data on refuge eagle use.

## B. Migratory Birds

### 1. Waterfowl

Waterfowl use days recorded during 1980 totalled 181,800. The largest proportion of this figure was attributed to ruddy ducks (74,790 use days) which spend the winter months offshore in the Potomac and rarely cross the refuge boundary. Rafts of canvasbacks, scaup and common and hooded mergansers were also frequently observed on the river.

Mallards, wood ducks and black ducks made up the majority of ducks feeding and resting in the refuge marshes, with 42,570; 13,890; and 16,320 use days respectively. Mason Neck gets very little Canada goose use, but 200 birds were observed on the refuge in March.



Waterfowl brood counts were conducted during June and July. Forty young were produced, 75 percent of which were wood ducks. None of the refuges eight wood duck nest boxes were utilized. One brood each of mallards and black ducks were counted.

## 2. Marsh and Water Birds

Aerial surveys conducted in April and June revealed that the great blue heron rookery located on the Northern Virginia Regional Park tract was active and had in fact doubled in size. Sixty nesting pairs were counted compared to the 30 pairs observed in 1979, the first season of use.

The nesting area covers approximately 5 acres of hardwood forest, and most of the nests observed were in chestnut oaks.

A ground census of the area on July 2 confirmed 51 nests and 29 young. Actual production is assumed to be greater since we did not enter the central portion of the rookery to prevent undue disturbance and many of the young were difficult to distinguish from adults.



Great blue heron rookery.

(Shanahan)

### 3. Shorebirds, Gulls, Terns and Allied Species

The most obvious shorebirds in Great Marsh were spotted and solitary sandpipers, lesser and greater yellowlegs, killdeer and common snipe. Laughing, herring, greater black-back and ring-billed gulls were abundant almost year round. All birds were noted during routine waterfowl inventories.

### 4. Raptors

In April, two osprey were observed feeding in Great Marsh. Actual use is believed to be greater since at least 20 osprey were seen along the Mason Neck shoreline during a boat survey done that month.

### 5. Other Migratory Birds

A pair of bluebirds nested in one of eight bluebird boxes which were put up in 1979. Their first brood of four were banded in July by Biological Aid Pollitt. The banded birds were seen fairly regularly during the rest of the summer.

The pair utilized the box again later in the summer to produce a second brood. The number of young in the second brood is not known, but one nestling was found dead in the box.

## C. Mammals and Non-Migratory Birds and Others

### 1. Game Mammals

Ecology classes from George Mason University continued the refuge deer population survey which has been ongoing since 1977. The pellet group count method is used, with students examining 40 of the 60 randomly selected 90 square foot plots. The additional 20 plots are surveyed by the refuge staff. Based on the survey results, the year's deer population was estimated to be 180 animals.

We realize that the validity of the results from such a survey may be questionable, but it does provide us some data on which to base our population estimates. More importantly, it provides a learning experience for a large number of college students.

Beaver activity increased this year, with many fresh cuttings discovered near the Woodmarsh Trail lodge. Evidence was also found of another colony located along High Point Creek.

### 2. Other Mammals

Nothing to report.

### 3. Resident Birds

Nothing to report.

### 4. Other Animal Life

On July 14, large numbers of dead fish were noticed washing up along the refuge's Potomac River shoreline. Since Maryland's jurisdiction over the river extends to the low water line on the Virginia side, that State's Department of Natural Resources was notified. One of their personnel inspected the refuge shoreline on July 17 and collected water samples. The cause of the fish kill was determined to be an algal bloom and one million fish, primarily menhaden, were estimated to have died.

## V. INTERPRETATION AND RECREATION

### A. Information and Interpretation

Visitation figures for the year would appear to dispute our claim that greatly increased emphasis has been placed on Mason Neck's Interpretation and Recreation programs. This year's total number of refuge visitors was 5,263, down from the 8,067 reported in 1979. However, the 1980 figure was derived through the use of a trail traffic counter while 1979 public use figures were based strictly on estimates. We therefore feel that the more recent figure reflects more accurate data collection rather than a drop in use.

There are also other indications that total public use has not actually dropped and may, in fact, have increased. On-refuge conducted programs more than doubled in 1980, with a similar increase in off-refuge programs. This reflects our concentration on high quality educational and interpretive programs.

A great deal of time was expended on planning and conducting environmental education activities, resulting in nearly 1,000 student activity hours. Environmental education programs are conducted along Woodmarsh Trail, which provides access to woodlands, marsh, and a beaver pond, and at the following study sites: Potomac River shoreline, successional field, and abandoned turn-of-the century dairy farm.



ON REFUGE PROGRAMS

<u>Staff/Leader</u>	<u>Group/Location</u>	<u>No. of Participants</u>	<u>Activity</u>	<u>Date</u>
Johnson	Hallowing Point Cub Scouts	10 scouts	Attention; Basic compass	3/10
Johnson	On refuge	6 children & 3 adults	Interpretive walk-Opening Day	4/1
Johnson	Burgundy Farm	22 - 2nd & 3rd graders	Habitat study-Field/forest	4/4
Johnson	Reston Homeowners Assn. Nature Center	8 volunteer naturalists	Interpretive walk	4/9
Ernst- Instructor	George Mason University	12	EE: Vertebrate Zoology	4/10
Johnson	On refuge	8 adults	Earth Day-Study of house and dairy farm site; tide studies & erosion study	4/22
Ernst- Instructor	George Mason University	12	EE: Herpetology	4/23
Johnson	Bush Hill Elem.	26 - 5th graders	Orienteering and walk to Beaver Dam	4/29
Johnson	Hayfield Inter.	28 - 7th graders (Learning Disabilities)	Interpretive walk, Soil investigations	5/2
Johnson	Bush Hill Elem.	26 - 5th graders	Orienteering and walk to Beaver Dam	5/7

<u>Staff/Leader</u>	<u>Group/Location</u>	<u>No. of Participants</u>	<u>Activity</u>	<u>Date</u>
Johnson	Stratford Landing School	40 gifted 6th graders	Orienteering, soil invest., discovery walk, scavenger hunt, habitat study, succession	5/13
Sue Davis	6 year olds	10	Supplied activities--Stalking prey, attention, isopods, information on beavers and eagles	Summer 1980
Johnson	Reston Day Camp	42 campers	Non-flowering plant study; soil invest., shoreline tests, trail hike	6/27
Johnson	On refuge	25	Night Hike to Beaver area	7/3
Johnson	Oakton Summer School	15 gifted children 7th & 8th grade	Beaver Dam area-water invest.-aquatic plant and animal study; fern study	7/10
Johnson	Herndon YCC	11 YCC	Marsh study; Fern study	7/16
Johnson	On refuge	3	Interpretive walk	7/30
Johnson	Ft. Belvoir YCC	24 YCC & 5 leaders	Water studies/tests at Beaver Dam; Marsh study; Fern study	8/6
Ciccone	On refuge	3	Interpretive walk	8/13
Johnson	On refuge	10	Night Hike to Beaver area	8/27
Ciccone	Northern Virginia Community College	20	Refuge tour	9/19
Ciccone	Occoquan Elem.	50 - 2nd graders	Interpretive walk-Beaver Dam and Eagle Point	9/24
Ernst - Instructor	George Mason University	12	EE: Plant Ecology	9/27

<u>Staff/Leader</u>	<u>Group/Location</u>	<u>No. of Participants</u>	<u>Activity</u>	<u>Date</u>
Ciccone	Gunston Hall School, Springfield	15 students 4-7 graders	Activities at Beaver Lodge Sampled pond life	10/15 a.m.
Ciccone	Gunston Hall School, Springfield	K thru 3rd graders	Activities at Beaver Lodge Sampled pond life	10/15 p.m.
Pollitt	National Bluebird Society	50	Tour of refuge and blue bird program	11/8
Ciccone	Springfield Mental Health Clinic	6	Beaver Pond Ecology	12



OFF REFUGE PROGRAMS

<u>Staff/Leader</u>	<u>Group/Location</u>	<u>No. of Participants</u>	<u>Activity</u>	<u>Date</u>
Johnson	Belmont School	51 gifted children	Endangered Species SS*	1/14-18
Johnson	Gunston School	All students - 3 sessions	Endangered Species SS System 70 and handouts	1/29
Johnson & Ciccone	Woodbridge HS	100 students	Career Night	3/20
Johnson	Hayfield Intermed.	28 - 7th graders (Learning Disabilities)	Bald Eagle film; Woodpile Ecology	3/27
Johnson	Gunston School	14 teachers	Teacher EE workshop	4/7
Johnson	Ft. Belvoir	25-mostly adults	Interpretive walk along Beaver Pond trail. Opening of new refuge	4/22
Johnson	Gunston Community Center	4	SS Deciduous Trees	4/25
Johnson	Burgundy Farm	22 - 2nd & 3rd graders	Roots and Shoots; Discovery Walk left follow up activities	5/9
Johnson	Nokesville Elem. at Prince William Forest Park	80 elem. students	Wildlife activities; food webs and chains, non-flowering plants, wildlife search at lake, soil invest., critter hunt, sun prints, deer pop., animal communications, etc.	5/22 all day

\*SS: Slide Show

<u>Staff/Leader</u>	<u>Group/Location</u>	<u>No. of Participants</u>	<u>Activity</u>	<u>Date</u>
Johnson	Lorton Reformatory	12 juveniles	SS on Insects and Birds	6/4
Johnson	Gunston Community Center	7	Wading Birds SS	6/5
Johnson	Pohick Park	25	We Can Save the Eagle film	6/14
Johnson	Gunston Community Center	4	Insects and collecting, SS	6/17
Johnson	Gunston Community Center	7	Wildflowers and ID walk SS	6/24
Johnson	Ft. Belvoir YCC	24 YCC & 5 leaders	Compared 3 habitats	6/25
Johnson	Cranford Memorial Church	6 adults (incl. 3 refuge staff)	Standard First Aid Multi-Media course	6/30-7/1
Johnson	Juvenile Detention Home	14 juveniles	We Can Save the Eagle--film SS on Mason Neck	7/9
Johnson	Prince William Co. Public Schools	11 teachers	Mini EE workshop	8/80
Ciccone	Pohick Park	40	Endangered Species SS	8/9
Johnson	Juvenile Detention Home	15 juveniles	Insect SS and view collection Bald Eagle discussion	8/18
Ciccone	Occoquan Elem.	Teacher 2nd grade and principal	EE program offerings	9/11
Ciccone	Occoquan Elem.	50 - 2nd graders	Endangered Species SS	9/18

<u>Staff/Leader</u>	<u>Group/Location</u>	<u>No. of Participants</u>	<u>Activity</u>	<u>Date</u>
Ciccone	Marumsco Hill Elem.	4 classes of 25 each (100) 1st grade	SS on animal groups/adaptations (invent a bird) animal objects	10/7-8
Ciccone	Occoquan Elem.	2nd & 5th graders	Eagle film	10/14
Ciccone	Juvenile Detention Home	15 juveniles	Endangered Species SS	10/17
Ciccone	Gunston Hall School, Springfield	Grades 4-7 Grades 2-7	Pond Ecology SS Study of plant specimens from refuge	10/20
Ciccone	Boy Scouts Fairfax County	10	Future of Wildlife film	11/80
Ciccone	Juvenile Detention Home	15 juveniles	Future of Wildlife film	11/18
Ciccone	Juvenile Detention Home	15 juveniles	We Can Save the Eagle	12/16



Students study beaver pond ecology.

(Johnson)



Group takes lunch break during a conducted walk along Woodmarsh Trail.

(Johnson)



The FY 81 Annual Work Plan Advice designated Mason Neck as a priority field station for conducting outdoor classrooms due to its location within a large metropolitan area. A goal of 5,000 activity hours of outdoor classrooms was set for the fiscal year, but the lack of an Outdoor Recreation Planner for the entire first quarter has made realizing that goal unlikely.

An interpretive trail brochure was prepared for the 3 mile round trip Woodmarsh Trail and submitted for approval and printing. New directional and regulatory signs were ordered to aid in the conversion from a hiking to interpretive trail and to upgrade its appearance. It is hoped that both the signs and leaflets will arrive in time for the 1981 season.

Our System 70 National Wildlife Refuge System display was put to good use again this year, being exhibited in 12 area schools for up to 2 weeks at a time. The display was viewed by most, if not all, of the students and generated a great deal of teacher interest in refuge programs.



System 70 on display in a school library.

(Johnson)

Outdoor Recreation Planner Johnson and Manager Ciccone met with representatives of the Hallowing Point Citizens Association in early January in an attempt to reestablish friendly relations. Relations between the refuge and the citizens of Hallowing Point, a neighboring residential area, became strained due to the demand for preferential treatment by some of the residents and overzealous law enforcement on our part. The problems were worked out to the satisfaction of both parties, and we are once again allowed use of Hallowing Point's private boat launching ramp for quick access to the Great Marsh.

## B. Recreation

### 1. Wildlife Oriented

All permitted recreation is wildlife oriented and non-consumptive. Use of Woodmarsh Trail for wildlife observation and photography accounted for about 80 percent of total refuge visits. The Trail is closed to the public from December 1 through March 31 to limit human disturbance during the most crucial periods of the eagle nesting season. Even when the Trail is open to the public, visitors never get closer than a mile from the nest.

## C. Enforcement

The refuge staff dwindled to one permanent employee during poaching season, making preventive law enforcement difficult and often non-existent for long periods. However, individuals living adjacent to the refuge have heard very few gunshots this year and reported very few possible poaching incidents.

For the second year in a row vandals rammed the two rented chemical toilets in the Woodmarsh Trail parking lot with a vehicle. This year they managed to completely demolish the two structures, causing the rental company to demand \$700 to purchase replacements. Needless to say, the Refuge Manager learned a valuable lesson about not signing rental agreements. Measures taken to prevent such an occurrence in the future are discussed in Section II. A.

On January 24 we discovered a power booster for the police radio in the refuge pickup had been stolen. At the time we were unsure where or when the theft had occurred. During a property inventory on February 7, 1980, we realized we were also missing a chain saw. Both the chain saw and pickup were stored in our rental garage at the American Storage Corporation. We now believe that someone gained entrance to the garage and removed the items. The thefts were reported to local police, FBI and GSA's Federal Protective Service. A Federal Protective Service detective visited the scene and interviewed possible witnesses, but the items were not recovered.

The traffic counter along Woodmarsh Trail was vandalized in February, but was repaired by some simple soldering.

On the afternoon of July 14 a man was found shot to death along Gunston Road, across the street from the refuge boundary. Early newspaper reports said the police had no suspects or known motives, but it was later discovered to have been a contract murder. The murderer has not been apprehended.

Manager Ciccone traveled to Chesapeake, Virginia, on July 22 for firearms qualification. The practice was sorely needed and, in light of the incident described above, greatly appreciated.

Manager Ciccone also traveled to Great Swamp Refuge in December to aid in the monitoring and control of the annual anti-hunting demonstration.

#### IV. OTHER ITEMS

##### A. Field Investigations

Andy Miller, a graduate student from Johns Hopkins University continued his shoreline erosion study begun at the end of 1979. The research is being conducted in cooperation with the U. S. Geological Survey and should be completed in 1981.

The refuge deer population study conducted by students from George Mason University continued during 1980. This study is further described in Section IV. C.

##### B. Cooperative Programs

Patrick Shanahan, a student at George Mason University, participated in the College Work-Study Program and worked on the refuge from May through August. A further description of Shanahan's accomplishments and the cost to the refuge is included in Section II. B.

Manager Ciccone and ORP Johnson met in Annapolis with Area Manager Green, Staff Assistant Rudolph and Dr. Averett Tombes, Chairman of the George Mason University Biology Department, regarding research opportunities on Mason Neck. A cooperative agreement between the refuge and university was drafted and submitted to the Regional Office for approval. We have not yet learned of the status of that proposal.

##### C. Items of Interest

Walt Pfeifer from the Regional Office Realty Division visited Mason Neck during the period of January 14 through 18 to prepare a feasibility report on the acquisition of 355 acres of private inholdings.

Manager Ciccone spent 10 days in March participating in the clean up and damage assessment of the pipeline break which spilled 300,000 gallons of kerosene into Bull Run. Prompt action prevented the contamination of the downstream reservoir and allowed for the recovery



of the bulk of the floating oil. Impact on waterfowl was minimal, but aquatic furbearers and fish were severely affected. An attempt was made to capture and rehabilitate the large number of beaver affected by the spill but all those beaver collected eventually died. Autopsies performed at the National Zoo revealed that the highly toxic kerosene was absorbed through the skin damaging the kidneys and liver.



Kerosene was collected at booms and skimmed from the surface of Bull Run. (Cicccone)





Virginia Game Warden and Prince William  
County Animal Warden with tranquilized  
beaver. (Ciccone)

Manager Ciccone served as a judge in the Senior Biological Division of the Prince William County Science Fair held on April 12 in Manassas.

Betty Gillas and Paul Daly of the Delmarva Area Office visited the refuge on April 10 for an administrative review. Paul returned on April 17 to meet with Virginia Highway Department and State Park personnel for an on-site inspection of the proposed construction of the Mason Neck State Park access road. No major impact on the refuge was anticipated, but an adjustment to the State's right of way over one-half miles of refuge road is required. Betty returned later in May to complete her review of the refuge records and Imprest.

Marian Johnson addressed the Virginia Council on the Environment on June 11 regarding problems affecting wildlife.

Manager Ciccone and ORP Johnson assisted Bill Sontag of the Washington office with staging some photographs on the refuge and a nearby park for use in a slide-tape program on preventive law enforcement. The program is being produced by two local companies and will be used for training Service personnel.

ORP Marian Johnson left the Fish and Wildlife Service in September to accept a position with the National Park Service at nearby Prince William Forest Park. However, Marian's disillusionment with our sister agency and our inability to find someone qualified to take her place resulted in her returning to her old position by the end of December.

Clerk-Typist Kathryn Rudasill also left Mason Neck in September due to pregnancy. Kathy gave birth to her first child, a boy, on November 24.



Former Clerk Kathy Rudasill with son Hunter.

(Johnson)

Barbara Mitchell joined the staff as Secretary on December 14, leaving her job with the Department of Agriculture in Washington, D.C.



Paul Saulnier of the Regional engineering office and Joe Williams of the BLHP staff visited Mason Neck on December 3-5 to assist in the preparation of FY 83 Project Description Worksheets. Paul Daly of the Area Office joined the group on December 4 for an inspection of proposed project sites.

Manager Ciccone attended a meeting of a Fairfax County Citizens Advisory Committee on December 3. The Committee was studying proposed County wetland regulations and requested information on the management of refuge wetlands.

Refuge personnel completed the following training during 1980:

Manager Ciccone attended the Area Administrative Workshop in Virginia Beach from April 21-24, and the Performance Standards Training and Wildlife Programmatic Meeting in Beltsville, Maryland, from May 12-14.

ORP Johnson completed a graduate course in environmental studies at the University of Virginia, a herpetology course at George Mason University and a fern identification course offered by the U.S. Department of Agriculture. She also attended a workshop on mammal skull cleaning and identification at the Long Branch Nature Center.

Both ORP Johnson and Biological Aid Pollitt attended the 2-day National Wildlife Federation Raptor Identification Course given at the Area Office during January.

Biological Aid Pollitt prepared Section IV of this report and ORP Johnson wrote Sections V and VI. Sections I, II, and III were prepared by Manager Ciccone who also edited the report. Secretary Mitchell was responsible for the typing, copying and collating.

#### D. Safety

Manager Ciccone and ORP Johnson completed a 9-hour CPR course presented by the Fairfax County Red Cross in April.

ORP Johnson served as instructor for a Red Cross First Aid course on June 30 and July 1. Mason Neck staff members Ciccone, Rudasill and Pollitt attended the training, as did three area residents.



Practicing litter carry during First Aid Course (Johnson)

Staff members Johnson and Pollitt completed a Defensive Driving Course held June 6 at the Delmarva Area Office.

Two GSA employees conducted a fire inspection of the refuge's leased shop area on July 9. We have not received a report of their findings.

The Lorton Fire Department conducted a surprise fire inspection of the Mason Neck office on October 22 and cited three minor violations of the Fairfax County Fire Safety Code. These three violations were easily corrected prior to reinspection by the Fire Department on November 4.

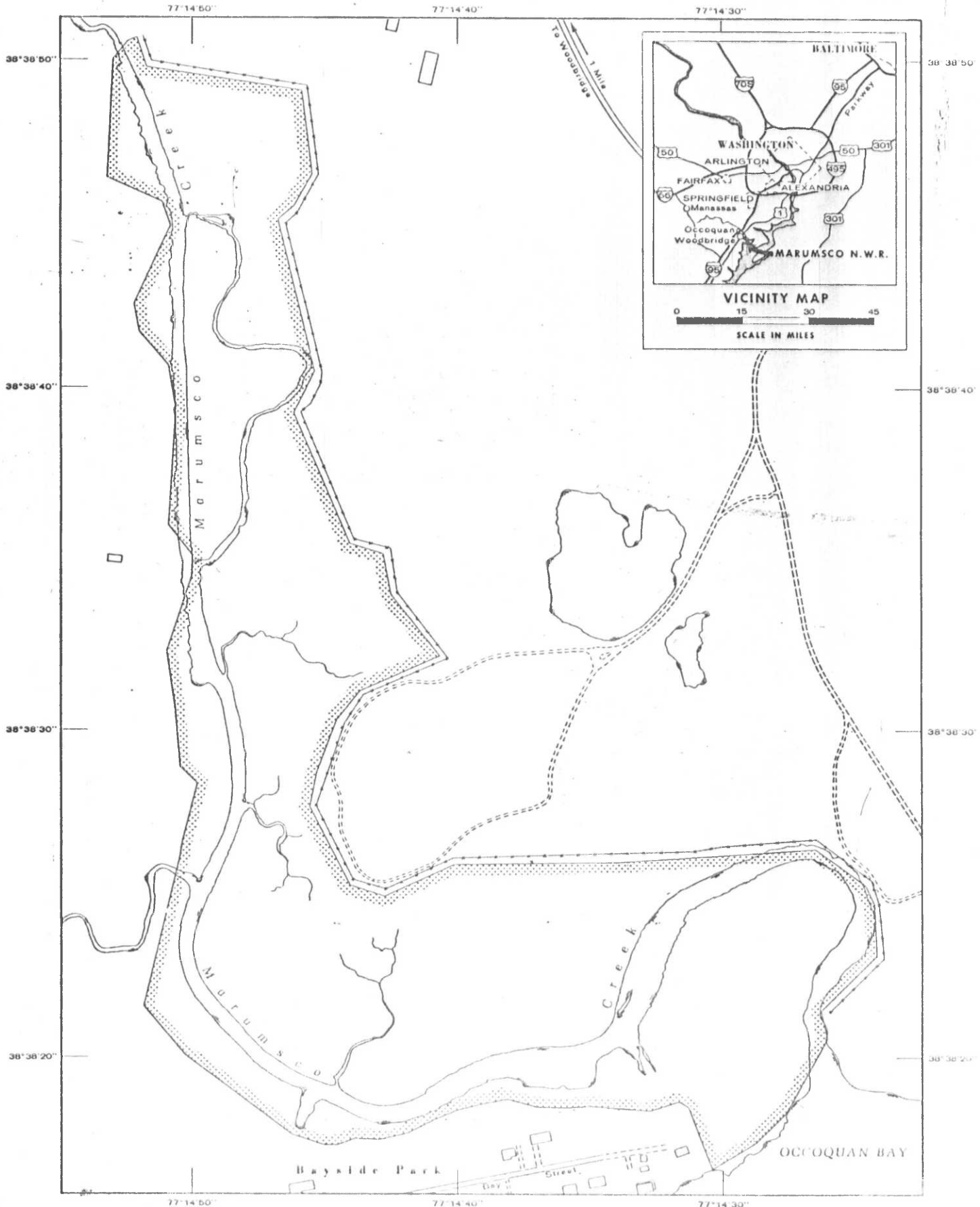


# MARUMSCO NATIONAL WILDLIFE REFUGE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

PRINCE WILLIAM COUNTY, VIRGINIA

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE



COMPILED IN THE DIVISION OF ENGINEERING  
FROM SURVEYS BY U.S. AND B.S.F. & W.



BOSTON, MASSACHUSETTS FEBRUARY 1974

MEAN  
DECLINATION  
(1971)

# MARUMSCO NATIONAL WILDLIFE REFUGE

## Annual Narrative Report Calendar Year 1980

### I. GENERAL

#### A. Introduction

MarumSCO Refuge is a 63-acre, freshwater tidal marsh located on MarumSCO Creek where it empties into Occoquan Bay just downstream from Mason Neck on the Potomac. It lies just across the county line in Prince William County, Virginia, and is administered by Mason Neck Refuge. The refuge was established on lands declared excess by the U.S. Army, and was more or less carved from the Harry Diamond Labs facility. The refuge provides habitat for wintering waterfowl, mostly mallards and black ducks.

#### B. Climatic and Habitat Conditions

Weather data for Mason Neck Refuge will adequately reflect conditions on MarumSCO Refuge since it is less than 5 air-miles from the center of Mason Neck. Habitat conditions are essentially the same too, except for the presence of a sewage treatment plant. Warm effluent from the plant helps maintain open water throughout most of the winter. Consequently, the ducks remain longer and even concentrate on this tiny refuge as winter intensifies.

#### C. Land Acquisition

MarumSCO Refuge is a complete refuge and no further acquisitions are planned.

#### D. System Status

MarumSCO Refuge does not receive separate funding and has no staff.

### II. CONSTRUCTION AND MAINTENANCE

No construction or maintenance was done by refuge personnel on MarumSCO this year.

### III. HABITAT MANAGEMENT

No management of any kind was carried out this year. Patrols of the area were made from time to time.

#### IV. WILDLIFE

##### A. Endangered and Threatened Species

Eagles are known to fly over the refuge area. While the refuge is in a fairly built-up area of Woodbridge, it is entirely likely that eagles do drop in occasionally to harrass the waterfowl concentrations.

##### B. Migratory Birds

Warm effluent from the nearby sewage treatment plant kept a section of Marumsco Creek open for much of the winter. A peak population of 400 mallards and 300 black ducks was observed in December.

No waterfowl production is known to occur on the refuge.

##### C. Mammals and Non-Migratory Birds and Others

Muskrat populations appear to be thriving in the marsh, as evidenced by the number of houses. Deer, which are abundant to over populated on Harry Diamond Lab, rarely appear on the refuge because of the lack of suitable habitat. Beaver activity was observed for the first time on the refuge.

#### V. INTERPRETATION AND RECREATION

Marumsco Refuge is bordered on the west by Prince William County's Veterans Memorial Park. This park attracts large numbers of visitors each year and therefore provides the potential for utilizing the refuge wetlands in a quality environmental education program.

Outdoor Recreation Planner Marian Johnson met with Prince William County Park Authority personnel a number of times during the year regarding a joint refuge/park environmental education program. She also provided assistance in the planning and interpreting of a trail that overlooks the refuge. The trail was completed during the summer by the County's Youth Conservation Corps camp.

#### VI. OTHER ITEMS

No field investigations or cooperative programs were carried out this year.

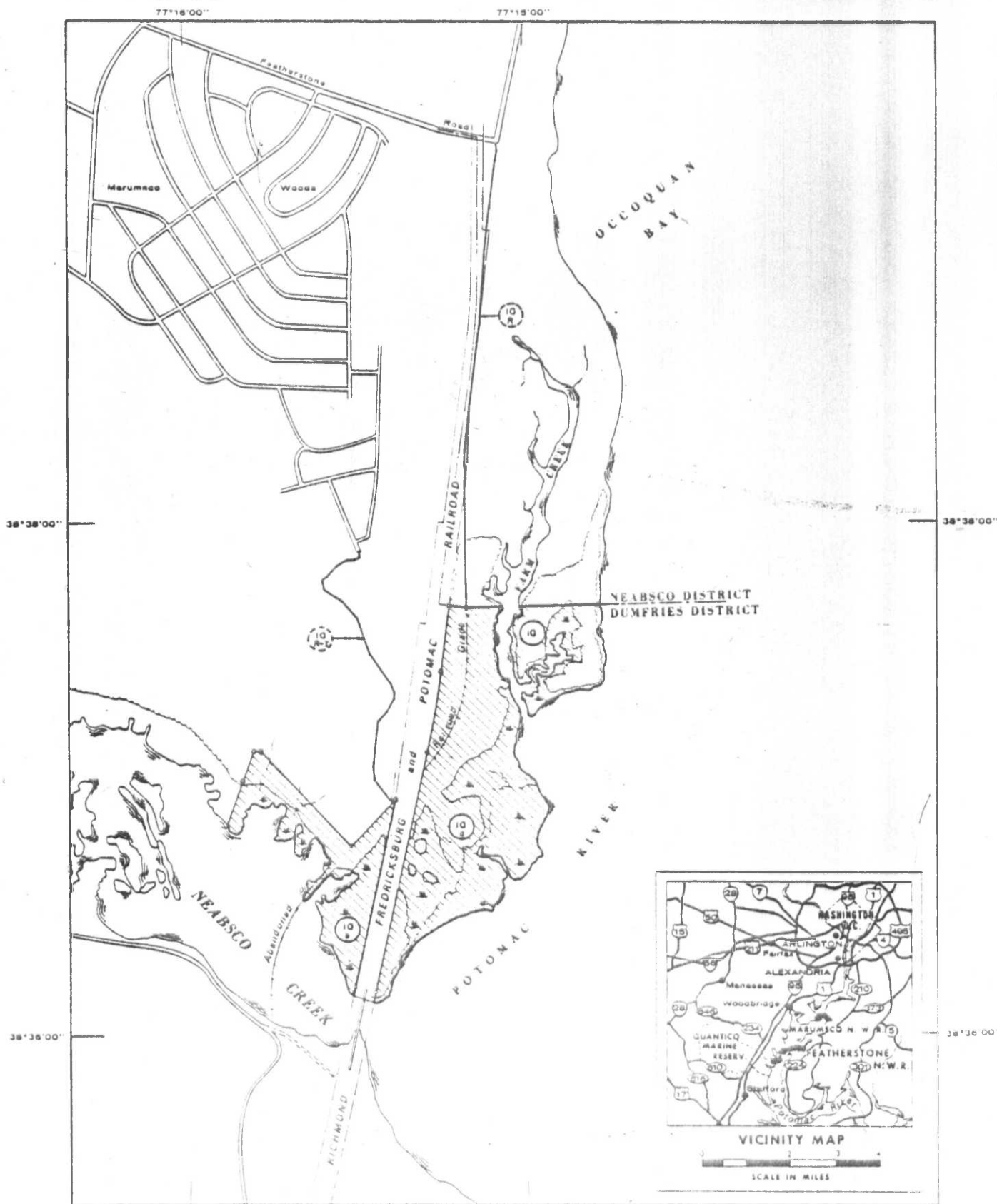
Safety is covered under Mason Neck.

# FEATHERSTONE NATIONAL WILDLIFE REFUGE

UNITED STATES  
DEPARTMENT OF THE INTERIOR

PRINCE WILLIAM COUNTY, VIRGINIA

UNITED STATES  
FISH AND WILDLIFE SERVICE



VICINITY MAP

SCALE IN MILES

COMPILED IN THE DIVISION OF REALTY  
FROM SURVEYS BY U.S.G.S. AND U.S.F. & W.S.

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0 5 1 KILOMETER

BOSTON, MASSACHUSETTS AUGUST 1976  
POSTED

MN 9  
7.2 GN  
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DECLINATION  
1971



# FEATHERSTONE NATIONAL WILDLIFE REFUGE

## Annual Narrative Report Calendar Year 1980

### I. GENERAL

#### A. Introduction

Featherstone National Wildlife Refuge is located in Woodbridge, Virginia, approximately 7 miles south of the Mason Neck headquarters. The 163.9 acre refuge was transferred to the Fish and Wildlife Service from the District of Columbia. The refuge consists of woodland and freshwater tidal marsh along Occoquan Bay and Neabsco Creek in Virginia.

#### B. Climatic and Habitat Conditions

Weather data for Featherstone will be similar to Mason Neck and is covered in that report.

#### C. Land Acquisition

No additional acquisition is planned.

#### D. Systems Status

Featherstone is administered by the Mason Neck staff and has no funding, personnel or facilities of its own.

### II. CONSTRUCTION AND MAINTENANCE

No construction or maintenance took place on Featherstone this year.

### III. HABITAT MANAGEMENT

No management of any kind was carried out this year.

### IV. WILDLIFE

#### A. Endangered Species

Bald eagles are sometimes seen in the refuge area and most likely use the wetlands for feeding.

#### B. Migratory Birds

Wildlife surveys of this refuge are unfortunately infrequent and no accurate population estimates exist. For the most part, species described in the Mason Neck report would also be present at Featherstone.

## V. INTERPRETATION AND RECREATION

No Interpretation and Recreation programs are carried out at Featherstone, and the lack of suitable access to the refuge will preclude activities in the near future.

Illegal hunting and the dumping of trash are the major problems on the refuge. The distance from the headquarters, shortage of manpower and problems with access have prevented effective law enforcement.

In June we were contacted by the Service's Washington office regarding a complaint of "hippies" living in a log cabin on the refuge. The complaint, from an area resident, followed the rather circuitous route of Prince William County Police to District of Columbia Police to our Washington office and finally to us.

Upon investigation we discovered two rather impressive log buildings which had been constructed by local youths. The buildings consisted of a two story log "fort" and a smaller cabin equipped with furniture and a wood stove. This little "frontier town" appeared to be a popular hangout for drinking and drug use, as well as illegal hunting and trapping. Some of the furniture and hand tools found at the site were reported to have been stolen from a nearby home. The owner was contacted and recovered some of his property. The two buildings were demolished but those responsible for their construction were not identified.

## VI. OTHER ITEMS

No field investigations or cooperative programs were carried out at Featherstone.

Safety is covered under Mason Neck.



Work-Study employee Shanahan on  
observation deck of fort.

Ciccone



Smaller cabin with attached woodshed.

Cicccone