

ERIE NATIONAL WILDLIFE REFUGE
Guys Mills, Pennsylvania

ANNUAL NARRATIVE REPORT
Calendar Year 1976

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



Personnel

- | | | |
|-------------------------------------------|-----|---------------------------|
| 1. Tyrus Berry
Transferred 8/25/76 | PFT | Refuge Manager GS-9 |
| 2. Robin H. Fields
EOD 10/20/76 | PFT | Refuge Manager GS-9 |
| 3. Linda Lundgren
Resigned 9/13/76 | PFT | Asst. Refuge Manager GS-7 |
| 4. Janet Marvin | PFT | Clerk (Typing) GS-5 |
| 5. Robert Granda | PFT | Maintenance Worker WG-7 |
| 6. Richard Gilbert
Transferred 10/6/76 | PPT | Maintenance Helper WG-5 |

Temporary Appointments

- | | |
|-----------------------|-----------------------------|
| 7. Diane Laush | |
| 6/7/76 - 6/27/76 | Summer Aid (CETA) |
| 6/28/76 - 8/28/76 | YCC Group Leader (CETA) |
| 8. Joseph Frelick | |
| 6/28/76 - 9/3/76 | YCC Camp Director GS-7 |
| 9. Edwin L. Atts | |
| 6/28/76 - 8/28/76 | YCC Group Leader GS-5 |
| 10. Susan Jahnke | |
| 7/6/76 - 8/28/76 | YCC Group Leader GS-5 |
| 11. Glenn W. Platt | |
| Terminated 1/13/76 | Title X Laborer Leader WL-3 |
| 12. David J. Williams | |
| Terminated 1/29/76 | Title X Laborer WG-3 |
| 13. David J. Chizmar | |
| Terminated 1/13/76 | Title X Laborer WG-3 |
| 14. John S. Keeper | |
| Terminated 1/13/76 | Title X Laborer WG-3 |

Review and Approvals

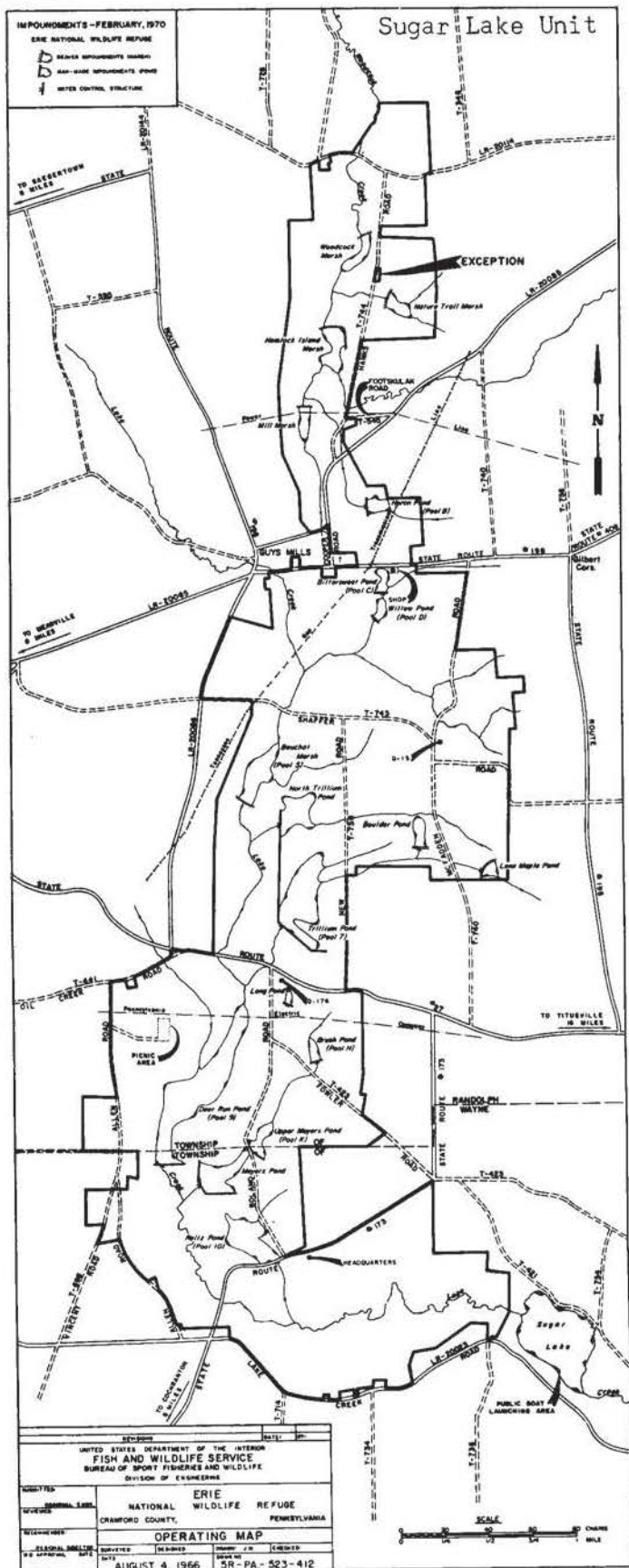
William C. McGary 10/20/78
Submitted by Date
for Robin H. Fields

Thomas L. Chapp 10/26/78
Area Office Date

Ernie W. R.
Refuge

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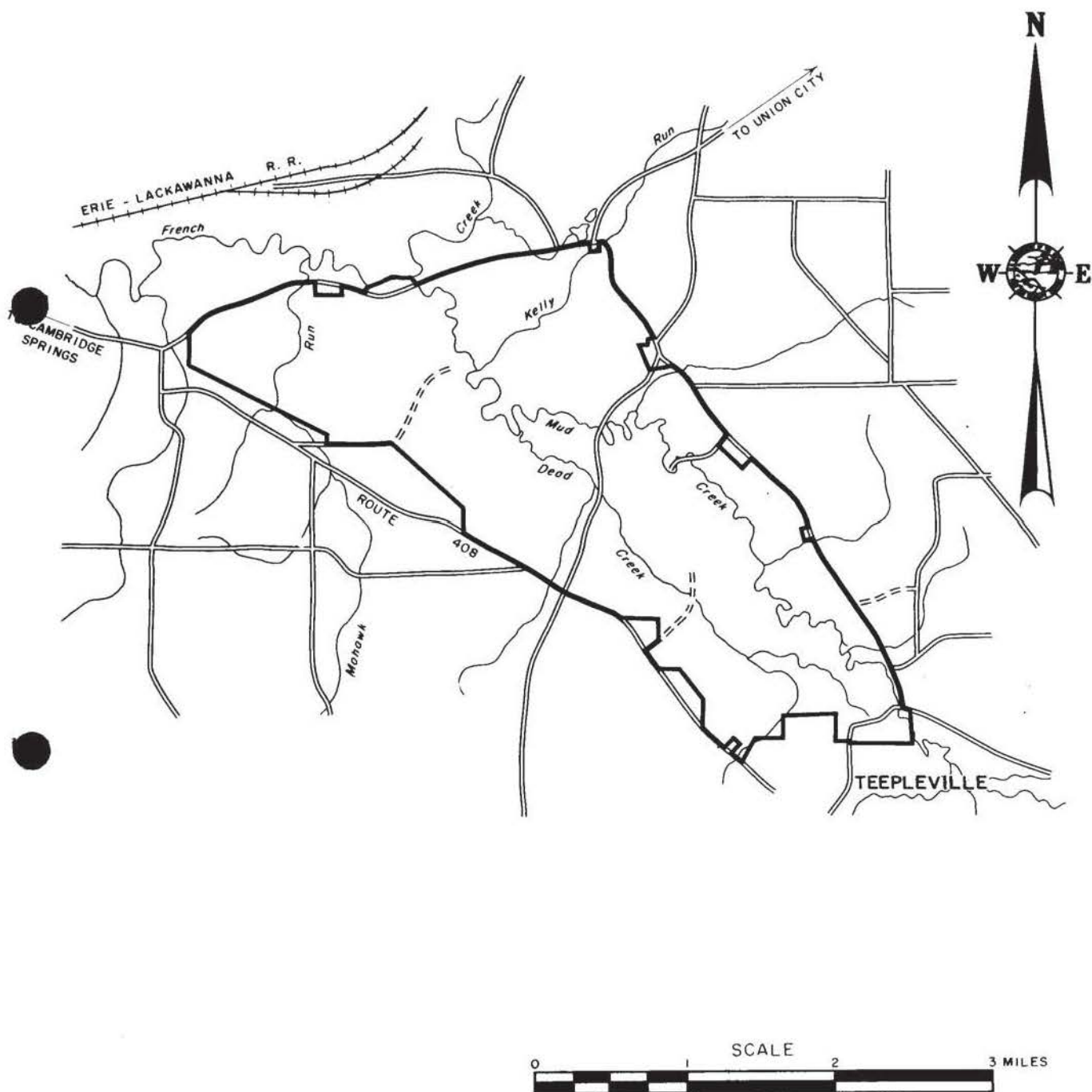
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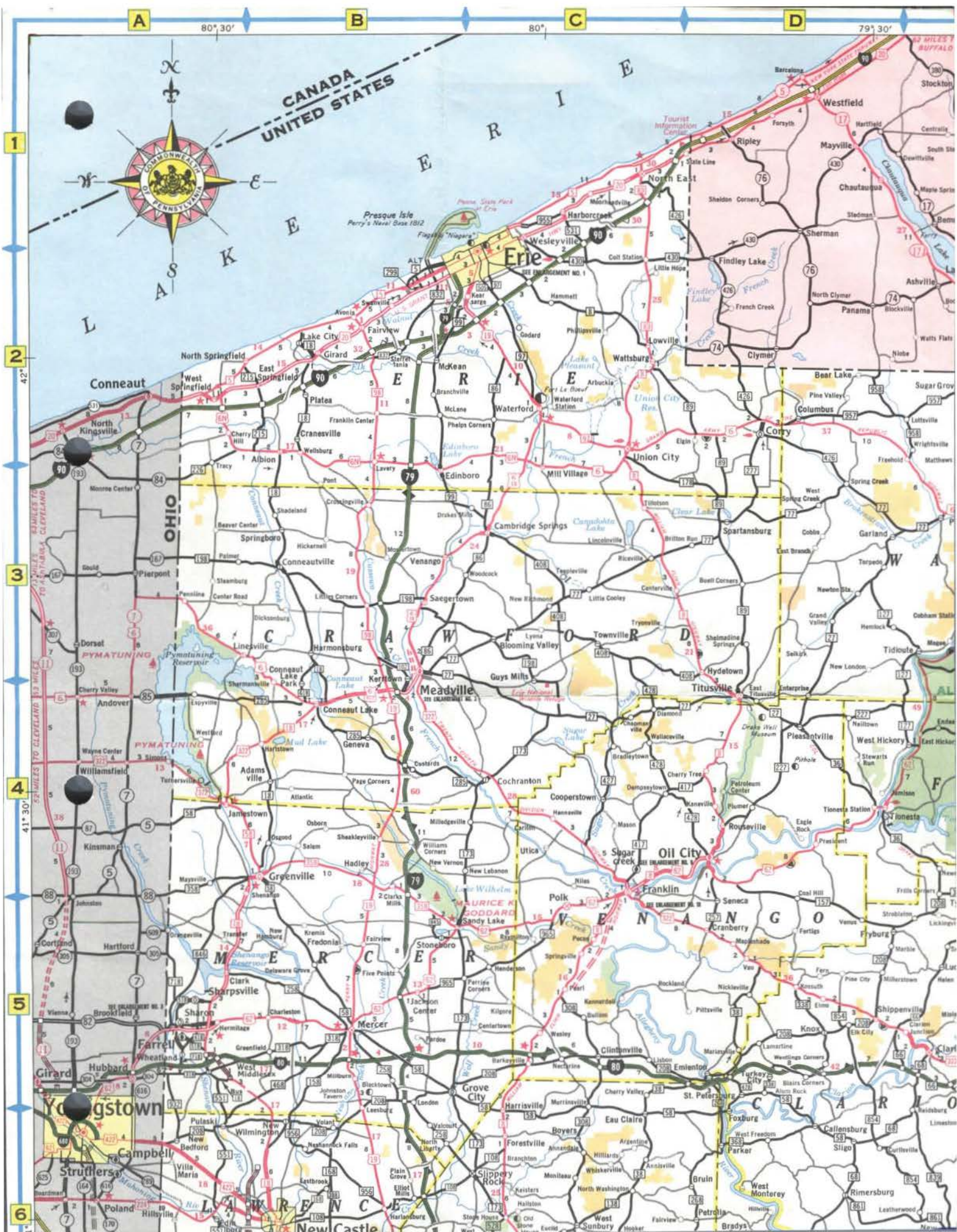


ERIE NATIONAL WILDLIFE REFUGE

SENECA DIVISION

CRAWFORD COUNTY, PENNSYLVANIA





I. GENERAL

A. Introduction

The Erie National Wildlife Refuge was established in 1959 with Migratory Bird Hunting Stamp Act funds. The 7,984-acre Erie Refuge is located in Crawford County, Pennsylvania. It consists of two units: the 4,967-acre Sugar Lake Unit which is presently the base of Refuge operations, and the 3,027-acre undeveloped Seneca Unit. The Refuge was created to provide nesting, resting, and feeding areas for migratory ducks and geese.

The Seneca Unit, located 10 miles north of the Sugar Lake Unit, is roughly 25 miles south of Lake Erie.

B. Climatic and Habitat Conditions

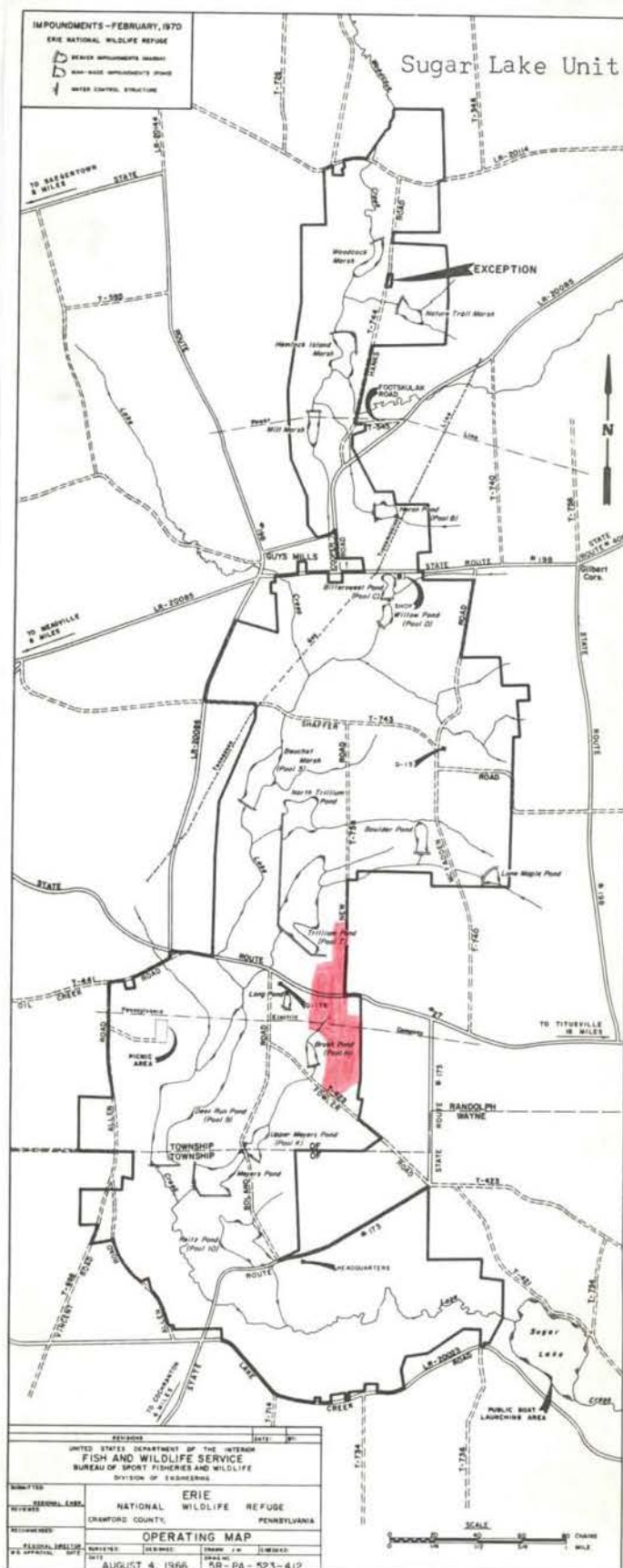
Weather data were recorded at Meadville, Pennsylvania. Total rainfall was 40.67 inches, 4.33 inches below average. Total snowfall was 148.5 inches. Temperature extremes were -9°F on January 19th and 90°F on June 23rd. The last freezing temperature in the spring occurred on May 13th and the first killing frost occurred on October 23rd. Woodcock Creek and Lake Creek were free of ice by mid February. Rain and melting snow caused flooding during the night of February 16th. State Rt. 27, through the Refuge, was under three feet of water at Lake Creek. The refuge impoundments were free of ice by early March. By December 1st, the creeks and impoundments were again frozen.

Habitat conditions were generally excellent. Permanent grasslands of reed canarygrass, birdsfoot trefoil, redtop, timothy, and clover, adjacent to impoundments, upland subimpoundments, and potholes provided good waterfowl nesting habitat. Food was abundant for waterfowl, upland species, and for white-tailed deer. Croplands in the Cooperative farming Program were too wet in the early fall (1976) to harvest corn. Early deep snowfalls further delayed the harvest. The end result was that about 150 acres of corn were still unharvested by December 31st and were heavily used by wildlife in general.

C. Land Acquisition

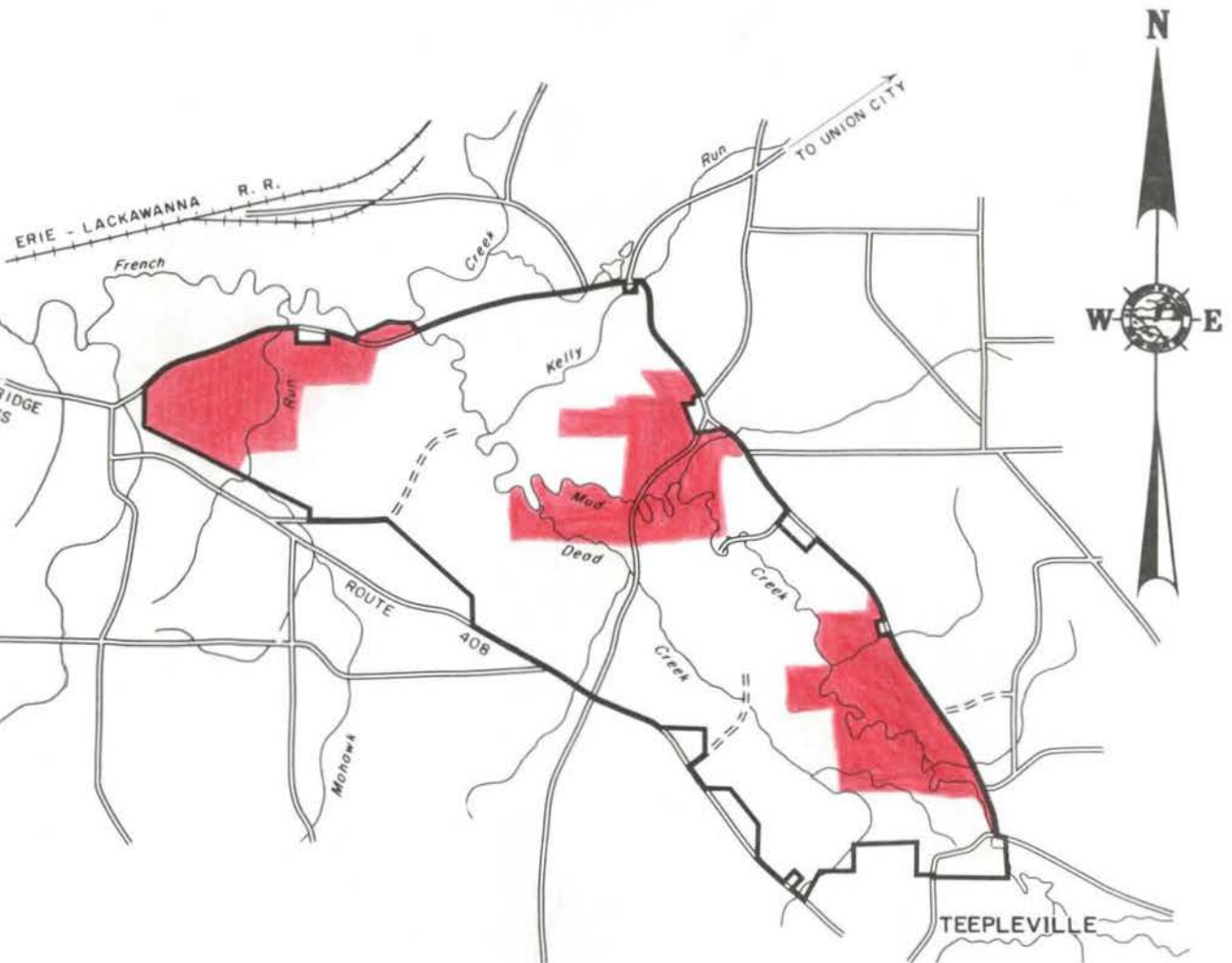
1. Fee Title

Land acquisition was at a stand still during the year. Within the approved boundaries, approximately 150 acres have yet to be acquired at the Sugar Lake Unit. At the Seneca Unit habitat development has yet to begin due to incomplete acquisition status. Within the approved boundaries at the Seneca Unit approximately 1,000 acres have yet to be acquired.

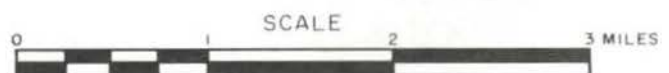


— Private Land Within Approved Refuge Boundary

ERIE NATIONAL WILDLIFE REFUGE
SENECA DIVISION
CRAWFORD COUNTY, PENNSYLVANIA



— PRIVATE LAND WITHIN APPROVED REFUGE BOUNDARY



2. Easements

Not Applicable.

3. Other

Not Applicable.

D. System Status

1. Objectives

The primary objectives of the Erie Refuge are protection and preservation of the migratory waterfowl resource. Thus management activities were focused on the development and maintenance of quality nesting cover, food, and resting sites.

At the No Funds Increase Objective (N.F.I.O.) FY83 level, Interpretation would be almost completely phased out due to the lack of funds. Consumptive Wildlife Recreation would be reduced, however, possibly by only 26% as compared to the current output level because of the nature of the Refuge hunting and fishing program. Assuming the present hunting and fishing policy were to remain the same at the Erie Refuge, there would be no permit system whatsoever. Hunters and fishermen might possibly still use the Refuge, complying with State game and fish laws. Resident game hunting and fishing would probably decrease due to the decline in the quality of upland habitat and water conditions resulting from lack of management.

At the N.F.I.O. level, Non-consumptive Wildlife Recreation might decline by at least 20% as compared to current output levels. While the human population in the surrounding area would be increasing, wildlife/wildlands observation would actually increase slightly but picnicking outputs would decline significantly due to the lack of facility maintenance at wildlife observation sites.

Wildlife Maintenance at the N.F.I.O. level might decline by approximately 13% as compared to present output levels because of the declining habitat quality resulting from lack of management. And, Waterfowl Production would probably decline by at least 33% as compared to present outputs due to the lack of management for nesting cover in grasslands.

Thus, the Erie NWR at the N.F.I.O. level would be in nothing more than a custodial state.

2. Funding

The funding pattern for the Erie Refuge for the past five fiscal years has been as follows:

	\$/Fiscal Year					
	'73	'74	'75	'76	TQ '76	'77
Migratory Birds						
O&M	\$65,000	57,000	53,500	67,000	2,000	61,000
Rehab.			24,000			5,000
Construction and						
Anad. Fish Supplemental						37,200
Mammals & Non-Migratory						
Birds						
O&M			5,000	6,000	12,000	5,000
Interpretation &						
Recreation						
O&M		10,000	19,000	7,000	9,000	13,000
Soil & Moisture						
Conservation	4,000					
Title X Funds (Job						
Opportunity Program)				33,400		
Youth Conservation						
Corps (YCC)				23,600		24,000
Totals						
O&M	65,000	67,000	77,500	80,000	23,000	84,000
Rehab.			24,000			
YCC				23,600		24,000
Other	4,000			33,400		37,200

The staffing pattern during the past five years has been as follows:

	Staff/Fiscal Year				
	'73	'74	'75	'76	'77
Refuge Manager PFT	1	1	1	1	1
Asst. Refuge Manager PFT	1	1	1	1	1
Biological Technician PFT		1			
Clerk PFT	1	1	1	1	1
Maintenance Worker PFT	1	1	1	1	1
Maintenance Helper PPT	1	1	1	1	
Laborer PPT					1
Summer Aid Temporary	3	2	2	1	1
Biological Technician Temp.	1				
Recreation Aid Temporary	1	1			
<u>Title X</u>					
Laborer Leader Temporary				1	
Laborer Temporary				6	
<u>YCC</u>					
Camp Director Temporary				1	1
Group Leader Temporary				3	3

II. CONSTRUCTION AND MAINTENANCE

A. Construction

No major new construction took place during the year. Two pieces of equipment were purchased. The first was a 1976 Chevrolet pick-up 4 x 4, heavy duty suspension, with a winch and a short bed. Needless-to-say it is a pain to operate on the pothole-dotted gravel roads throughout the Refuge! The second piece of equipment purchased was a new John Deere Model 609 bush hog.

Extensive refurnishing was done on the first floor of Q-15, the Refuge Manager's residence.

The general condition of Refuge equipment and facilities continued to deteriorate, and a lack of funds prohibited any major rehabilitation or replacement.



Concrete block addition to the maintenance shop;
completed by Title X laborers in 1975.

B. Maintenance

Minor maintenance included the installation of culverts at the Public Fishing Area parking lot at the north end of Sugar Lake Unit. The gravel lot was inaccessible at times due to poor drainage. Minor repairs were done at the picnic area on the tables and privies prior

to the opening of the area in the spring. Three new overhead light fixtures were installed at the shop. And, in June two miles of boundary at the Seneca Unit were posted.

As will be discussed under Wetlands, an attempt was made to remedy the leaking dike at Pool H, but the effort was unsuccessful.

A great deal of routine minor maintenance work was done by the YCC enrollees; it included painting, grading, pruning, sign maintenance, cleaning tools and vehicles, and the like.

III. HABITAT MANAGEMENT

A. Croplands

During 1976, 912 acres were included in the Cooperative Farming Program. Including both the Seneca and Sugar Lake Units, there were 17 Cooperators farming 66 different fields. In terms of Refuge administration, it could be said the tail was wagging the dog. Ideally, the primary objective of the Cooperative Farming Program is to provide waterfowl nesting cover and browse. The usual crop rotation is two years of corn, a year of a small grain (oats, for example) seeded with a grass/legume mixture which provides nesting cover for two more years. Hay crops are harvested no earlier than July 1st. If the hay quality is good, the Cooperator may hay a field for a third year or more under a Special Use Permit, for a fee.



A picturesque scene of oats harvested by an Amish cooperative farmer.

Soybeans were becoming more popular as crop in 1976; as a result, some Cooperators included soybeans into the usual rotation after two years of corn.

Four herbicides were approved and used in 1976. The following chart is a summary of the crops, the acres treated, the herbicides, the target pest plants and the total product expressed in pounds of active ingredient (AI):

<u>CROP</u>	<u>ACRES</u>	<u>HERBICIDE</u>	<u>TARGET PESTS</u>	<u>TOTAL PRODUCT AI</u>
Corn	312.5	Atrazine	Crabgrass Common Ragweed Giant Foxtail Cocklebur Quackgrass Redroot Pigweed Lambsquarters	625 lbs. AI
Soybeans	33	Lorox Lasso	Pigweed Carpetweed Smartgrass Lambsquarters Chickweed Mustard Wild Radish Barnyard Grass Fall Panicum Goosegrass Foxtail Crabgrass	33 lbs. AI 49.5 lbs. AI
Oats	167	MCPA	Yellow Rocket Common Ragweed	41.75 lbs. AI
Hay (grass/legume)	399.5	-----	-----	-----
Total	912 acres			

No farming was done by force account.

Because of a wet fall, and an early winter with deep snow, the corn harvest was significantly delayed. By December 31st, about 150 acres of corn were still not harvested, thus providing an abundance of wildlife food, particularly white-tailed deer.

Five fields, totalling 24 acres were planted in oats/reed canarygrass/birdsfoot trefoil by force account and were retired to a grassland cover status.

Crop shares are determined as follows, with the permittee supplying the lime:

<u>Lime Applied</u>	<u>Gov't Share of Crop for Year Applied</u>
As recommended by results of soil analysis	Token
Less than recommended (minimum application of 2T./Acre)	1/8
None recommended	1/4

Needless-to-say, this is not an ideal arrangement; changes in the method of share determination are planned.

B. Grasslands

Grasslands are managed to provide quality nesting cover and green browse for migratory waterfowl. Approximately 158 acres are considered to be grasslands. In addition, as stated under Croplands, 24 acres were retired from the Cooperative Farming Program and put into grassland. In an additional 80 acres of grasslands, YCC crews removed encroaching brush. While bush hogging of grasslands is usually initiated in July, no bush hog work was done in 1976 due to an early equipment breakdown and a lack of manpower.

Two Special Use Permits were issued for haying a total of 50 acres. Seventy-five tons were removed with a return to the Government of \$192.80.

C. Wetlands

Wetlands are managed to provide food and cover, including brood cover, for waterfowl during migration and during the nesting season. Approximately 2,435 acres are termed wetlands, 1,549 acres of that total being swamp. The marshes and open water are comprised of 16 impoundments and upland subimpoundments and about 30 potholes.

Pool 9, one of the Erie Refuge's most productive waterfowl areas, with a maximum management level of 135 acres, was dewatered during March. Japanese millet was planted along the southern pool perimeter and was heavily used by wood ducks, mallards and many passerine birds in September. The pool was reflooded in September.



Pool 9

The dike around Pool H, a productive 7-acre upland subimpoundment, washed out in November. In the early fall a leak around the whistle tube water control structure was noticed. Remedial action was taken in early November to reinforce the dike around the tube since the ground was about to freeze for the winter. A bulldozer pushed clay around the tube and compacted the earth, but this action simply accelerated the wash out process. The whistle tube had been installed in 1975. It is theorized that the dike and tube had been positioned close to a natural spring and that erosion slowly took its toll.

At Reitz Pond, a 75-acre (MML) impoundment, yellow water lilies became extremely dense. In 1975 2,4-D in the ester form was applied on a test area with little success. So in 1976, 600 pounds of granular 2,4-D were applied to a three-acre area. Once again little improvement was noticed. Reitz Pond has been an extremely productive wood duck area and it receives much ring-necked duck use for short periods during migrations.



Reitz Pond

D. Forestlands

The refuge includes about 2,264 acres of non-commercial forest. The forestland consists of several communities: aspen, white pine-hemlock, hemlock, hemlock-yellow birch, sugar maple-American beech-yellow birch, sugar maple-basswood, and black ash-American elm-red maple. In addition, there are planted stands of red pine, Scotch pine, Austrian pine, and Norway spruce. As stated under Wetlands, an additional 1,549 acres are swamp.

At present no timber management is done on the Erie Refuge. Using the Title X labor force, which was terminated in January, roughly 43 acres of aspen were cut to allow sprouting of new growth, thus improving the wildlife habitat. By the summer the new growth was already looking like excellent ruffed grouse habitat.

E. Other Habitat

Not Applicable.

F. Wilderness and Special Areas

The Erie NWR has five approved Natural Areas which are listed below.

<u>Name</u>	<u>Primary Theme</u>	<u>Approved Date</u>
1. Muddy Creek Research Natural Area (RNA) (1041 A.)	A-29, Swamps and Marshy Areas	8/29/72
2. Kelly Run Public Use Natural Area (PUNA) (455 A.)	Wetlands	3/27/73
3. Jacob Guy RNA (160 A.)	SAF25, hemlock, beech, sugar maple	6/22/67
4. Lake Creek RNA (700 A.)	A-29, swamps and marshy areas; SAF24, hemlock, yellow birch; SAF25, hemlock, beech, sugar maple	8/29/72
5. Lake Creek PUNA (160 A.)	Wetlands	3/27/73

In January the boundary descriptions were redefined to clarify them. None of the areas are posted.

G. Easements for Waterfowl Management

Not Applicable.

IV. WILDLIFE

The Wildlife census methods used at the Erie Refuge are mostly art, with a little science! The Seneca Unit is located 10 miles north of the base of operations, and it is undeveloped at present. These factors coupled with a small staff, an irregular boundary, dense woodlands adjacent to the winding creeks, and poor access make censusing difficult. Thus, only general observations are made and not regularly. Wildlife censusing on the Sugar Lake Unit is done by routine observation with vehicular access to almost all ponds and other bodies of water.

A. Endangered and/or Threatened Species

None present.

B. Migratory Birds

1. Waterfowl

Waterfowl populations in general were relatively stable as compared to the previous year. Spring migration began on February 14th, about three weeks earlier than usual. The early migration corresponded with unusually warm weather. The peak number of whistling swans occurred in March and April. Most of the birds were immature. The peak number of Canada geese also occurred in March and April. The Canada goose population had increased by about 100 birds as compared to the 1975 populations.

Two snow geese, unusual visitors, were observed at Pool K during the warm period in February.

In summary, peak waterfowl populations were as follows in 1976:

<u>Name</u>	<u>No. of Birds</u>	<u>Month</u>
Ducks	2,530	October
Geese	354	March
Swans	150	March, April
Coots	200	October, November

In increasing numbers Canada geese used the nesting islands and dikes. Approximately 125 Canadas reached flight stage.

A total of 109 wood duck nest boxes was checked in February. Seventy-five percent were used by wood ducks with a nest success rate of 67%. An additional 30 wood duck boxes were constructed and erected. Estimated production was 550 wood ducks.

During the summer of 1975, 14 potholes were constructed on the Refuge, using a bull dozer. In the spring of 1976, numerous breeding pairs of mallards were observed at the potholes. Approximately 350 mallards were produced. Other production figures were 100 hooded mergansers, 100 black ducks, and 100 blue-winged teal.

The Refuge's banding quota was a total of 125 wood ducks. The following birds were actually banded: 116 wood ducks, 17 mallards, and 7 Canada geese.

2. Marsh and Water Birds

Of significance among the marsh and water birds were great blue

herons at the Seneca Unit. In mid May there were 68 active nests in the heronry which is situated, in part, on land yet to be acquired within the approved refuge boundary. In general, peak populations occurred during April, May, and June. Thirteen different species of marsh and water birds were recorded.

3. Shorebirds, Gulls, Terns, and Allied Species

The shorebird population fluctuations corresponded with the water level manipulations in the Refuge pools and impoundments. Of the 19 different species observed, ring-billed gulls, American woodcock, spotted sandpipers, and killdeer accounted for the most use days. While the peak population of woodcock was only 75 birds in the fall, woodcock were present throughout the spring, summer, and fall. Common snipe were less abundant, with a peak population of 35 birds. Killdeer reached a peak of 100 birds in mid September.

4. Raptors

Sixteen different species of raptors were sighted throughout the year. Among the most exciting observations were those of bald eagles. From March through August, two adults and one immature were frequently observed at the north end of Sugar Lake Unit, along Woodcock Creek, and in the area of Pools K, 9, and Meyers. During a severe snow storm in November, an immature bird, estimated to be two years old, was observed for several days sitting out the storm on a snag at Pool K. As the pool gradually froze, the last remaining waterfowl, coots to be specific, were concentrated in the few remaining free-water "holes". The eagle was observed feeding on these concentrated birds for several days.

The only recent record of successful eagle nests in the area are from the Geneva Marsh, approximately seven miles from the Refuge. It is quite possible that the eagles observed at the Refuge came from the Geneva Marsh. It seems possible that eagles fledged there might someday begin to nest at the Erie Refuge since there are suitable trees, abundant food, and minimal disturbance.

Turkey vultures and red-tailed hawks were the most abundant raptors with peak populations of 25 and 20 respectively.

5. Other Migratory Birds

A peak population of 450 mourning doves was recorded in September. Limited nesting occurs on the Refuge.

C. Mammals and Non-Migratory Birds and Others

1. Game Mammals

White-tailed deer were abundant on the Refuge as in adjacent areas. The peak population was estimated to be 300. During the

fall of the year they were highly visible, presenting a traffic hazard at night along the Refuge roads. As evidenced by incidental examinations of rumen contents during the hunting season, the white-tailed deer fed predominantly on corn during the winter. The deer population was high, but agricultural crops were unusually abundant in the fields. The presence of agricultural crops is most likely a significant factor in the habitat's supporting such a high population without any signs of stress on the habitat or in the deer herd itself.

Other mammals present were opossums, eastern cottontails, beaver, woodchucks, gray squirrels, muskrats, red and gray fox, mink, weasels, and striped skunks.

Furbearer trapping was permitted to meet several objectives: 1) to maintain a low level of waterfowl nest destruction by mammalian predators. 2) to maintain the beaver population in balance with its food supply, in order to prolong the life of prime waterfowl habitat created by beaver dams. And, 3) to maintain the muskrat population at an optimum level for good marsh management.

To this end, beaver trapping was permitted during the February-March, 1976 state season, and other furbearer trapping was permitted during the November 1976-January 1977 season. An examination of muskrat and beaver habitat indicated that the muskrat population was alarmingly low. As a result muskrat trapping was not permitted. The survey also indicated that 14 beaver should be removed.

Twenty trappers' names were drawn for the general furbearer trapping season and seven names were drawn for the beaver season. Species trapped were as follows: 13 beaver, 10 red fox, 4 gray fox, 115 raccoon, 76 opossum, 1 skunk, 25 mink, and 5 muskrats (incidental). Despite the severity of the 1976-77 winter, there was no significant difference in the catch as compared to the catch of the previous year.

2. Other Mammals

Not Applicable.

3. Resident Birds

The ruffed grouse population appeared to be stable with a peak population of 175 birds in the fall. The eastern wild turkey is also present on the Refuge but, to date, there is no evidence that it does reproduce on the Refuge. The estimated peak population was 6 birds.

The ring-necked pheasant is in a category by itself. For all intents and purposes, it does not reproduce in the wild in this part of Pennsylvania. So the birds observed on the Refuge are

pen-reared birds released by the Pennsylvania Game Commission on lands adjacent to the Refuge. In November, on two separate occasions pheasants were actually released on the Refuge without prior notification by the Game Commission and without the approval of the Refuge Manager. The matter has since been rectified.

4. Other Animal Life

In March, Pool 9 was dewatered. Personnel from the USFWS Fisheries Services at Warren, PA assisted in the salvaging of fish. Nearly 500 largemouth bass were salvaged and transported to other Refuge impoundments.

V. INTERPRETATION AND RECREATION

During 1976, the total number of Refuge visits was 39,900, with a peak visitation of 7,500 visits occurring in August and the least number of visits, 300, occurring in February.

A. Information and Interpretation

1. On-Refuge

During the spring and fall, numerous school, scout, and youth groups visited the Refuge and were given guided tours and/or demonstrations. By October, after a significant reduction in the Refuge staff, visiting groups were encouraged to guide themselves and it worked successfully. Prior to a school group's visit, the teacher would be given a printed guide to the Beaver Run Nature Trail. The numbers on the guide corresponded to the numbered trail markers. Teachers were encouraged to review the guide prior to their visits. That system worked extremely well. Even those teachers reluctant to "venture into the wilds" managed quite well.

2. Off-Refuge

In March, April, and May, Refuge personnel conducted teachers' workshops titled "Hints in Teaching Environmental Education," at the Erie, Crawford, and Warren County In-service Days held at Girard High School. As many as 50 teachers participated in the workshops which were designed to assist classroom teachers in planning for an environmental study area on or near school property, whether it be field, marsh, woods, or simply a vacant lot.

Refuge personnel showed films, gave slide presentations, talks and demonstrations for numerous school, college, conservation, sportsmen's and civic groups throughout the year. Such groups and activities included a demonstration at the annual Conservation Field Day at the Cambridge Springs School; a talk on Refuge

activities and regulations for the Crawford County Sportsmen's Council; a presentation at the Meadville Public Library; a presentation on land use planning at a League of Women's Voters meeting; and slide talks at nearby schools.

Refuge personnel were active on numerous committees in the nearby communities, including the Significant Site Advisory Committee of the Crawford County Planning Commission, and the Study Advisory Committee of the Comprehensive Water Quality and Management Program sponsored by the Northwest Pennsylvania Regional Planning and Development Commission. In addition, numerous meetings were attended by Refuge personnel, including a meeting between the Seneca Indian Nation and the Army Corps of Engineers dealing with a waterfowl habitat improvement proposal for the Seneca Indian Reservation Land; a State Water Planning meeting dealing with various approaches to providing a public water supply; and the Public Hearing concerning the Meadville, PA, to Titusville, PA, Highway Corridor, one alternate of which might go through the Erie NWR.

B. Recreation

1. Wildlife Oriented

Big game, upland game and waterfowl hunting were permitted on the Erie Refuge. A copy of the Refuge hunting information sheet is on the following page. The Refuge regulations address only the Sugar Lake Unit. The Seneca Unit, still undeveloped, has been considered to be an "unmanageable unit" to date because of its incomplete acquisition status, partial boundary posting, but most especially because of the small Refuge staff. Hunting and fishing were permitted at the Seneca Unit; one simply had to be in compliance with the appropriate state and Federal laws; there were no special Refuge regulations. During the 1976-77 hunting seasons, only the Refuge Manager had law enforcement authority.

At the Sugar Lake Unit, since the prime waterfowl habitat was located between Routes 173 and 27, that area was closed to firearms until November 26. The reason for the restriction was to eliminate the disturbance of migratory waterfowl in that area. Waterfowl and migratory game bird hunting was permitted between routes 198 and 27, good habitat, but not easily accessible. Those hunters seeking a quality experience and willing to walk a little bit were highly rewarded for their efforts.

Big game hunting and upland game hunting were permitted on the entire Refuge, except that firearms were prohibited before November 26 between Rts. 27 and 173.

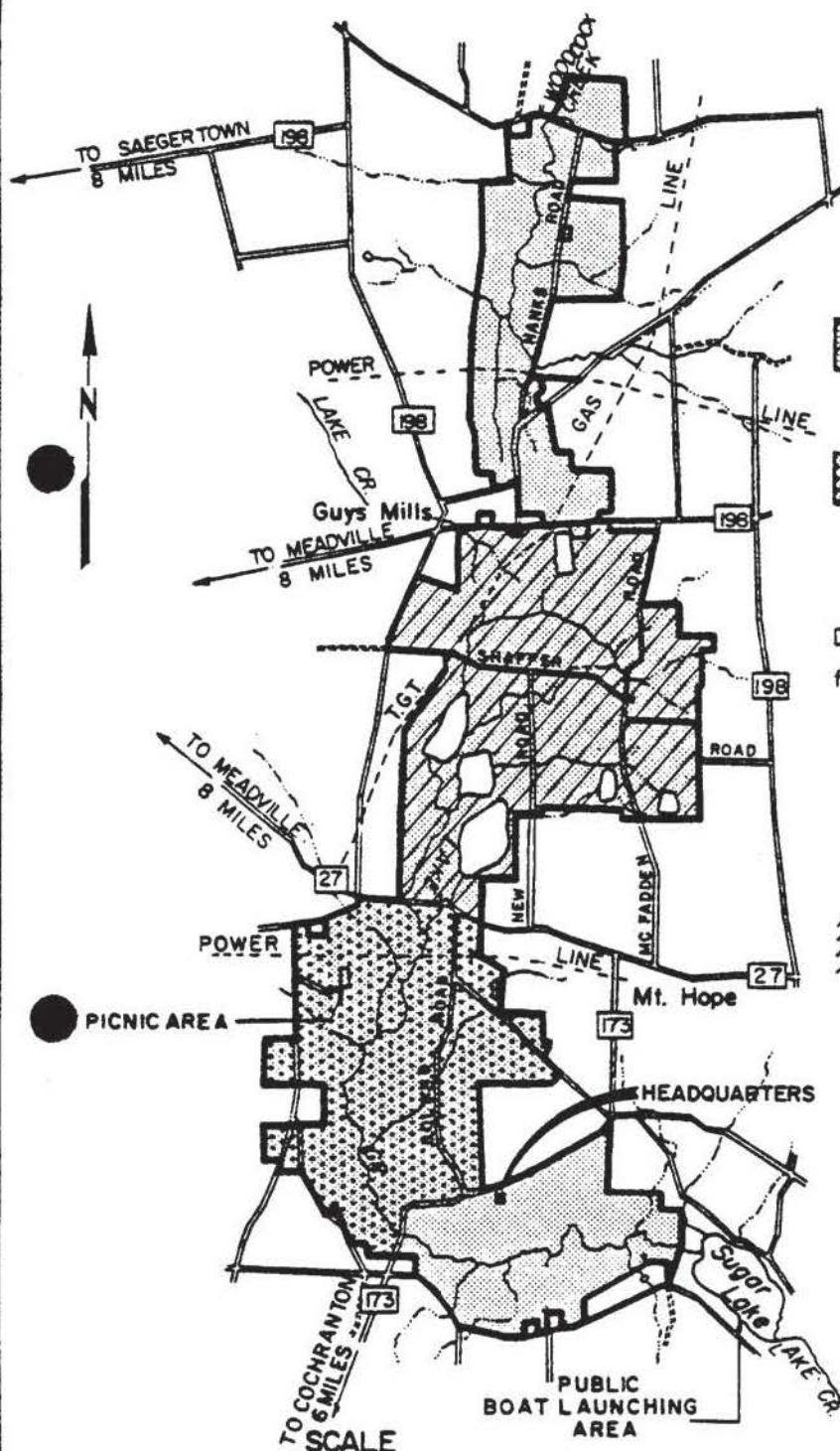
ERIE NATIONAL WILDLIFE REFUGE

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CRAWFORD COUNTY, PENNSYLVANIA

U.S. DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE



PUBLIC HUNTING AREAS



Hunting area for waterfowl and migratory game birds



Restricted Hunting Area—no hunting with firearms before November 26.

Deer, small game, furbearers, and foxes.

Hunting permitted on entire refuge except that no firearms may be used prior to November 26 in the Restricted Area above.



Water impoundments.

PICNIC AREA

PUBLIC
BOAT LAUNCHING
AREA

1/2 0 1/2 1 1 1/2 2 MILES

U. S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

ERIE NATIONAL WILDLIFE REFUGE
GUYS MILLS, PENNSYLVANIA

PUBLIC HUNTING

Hunting is permitted from September 1 through March 15, subject to State and Federal regulations.

MIGRATORY GAME BIRDS - Ducks, geese, mourning dove, woodcock, etc.

Hunting is permitted only between State Routes 198 and 27.

DEER

Hunting is permitted on the entire refuge during archery season and regular season. Firearms are prohibited in the Restricted Hunting Area before November 26. All deer hunters, except archery hunters, are required to wear a minimum of 400 total square inches of a safety fluorescence color material on the head, chest, and back.

SMALL GAME, FURBEARERS, AND FOXES

Hunting is permitted, except firearms are prohibited in the Restricted Hunting Area until November 26. On November 26 hunting with firearms is permitted on the entire refuge. Digging of animal dens is prohibited.

For additional information contact the Refuge Manager, Erie National Wildlife Refuge, R.D. #2, Box 191, Guys Mills, Pennsylvania 16327, or telephone (814) 789-3585.

KNOW YOUR TARGET

OBSERVE HUNTER SAFETY RULES

The following is a list of species which could be, but were not necessarily, hunted on the Erie Refuge:

Big Game: white-tailed deer, antlered and antlerless

Upland Game: eastern cottontail, woodchuck, raccoon, eastern gray squirrel, eastern fox squirrel, ruffed grouse, ring-necked pheasant (male and female), striped skunk, opossum, red fox, and gray fox

Migratory Waterfowl and Other Migratory Birds: ducks, mergansers, coots, Canada geese, American woodcock, common snipe, mourning doves, and, though the populations are small, soras, and Virginia rails

In summary, roughly 1,755 visits were for big game hunting, 225 for migratory birds and 640 for upland game. An estimated 390 of the upland game visits were for raccoon hunting, done at night, using dogs. While the Refuge has no hunting permit system, National Wildlife Refuge Permits were required for hunters to be on the Refuge at night for raccoon hunting. Nine such permits were issued.

Approximately 2,670 visits were made for warmwater fishing, specifically for largemouth bass, blue gills and yellow perch. Coldwater fishing visits amounted to 500, for brown trout mostly.

In April, prior to the opening of trout season, 300 brown trout were stocked at the Woodcock Creek Public Fishing Area by the Allegheny National Fish Hatchery. The Fishing map on the following page describes the public Fishing Areas on the Erie NWR.



Opening Day of Trout Season

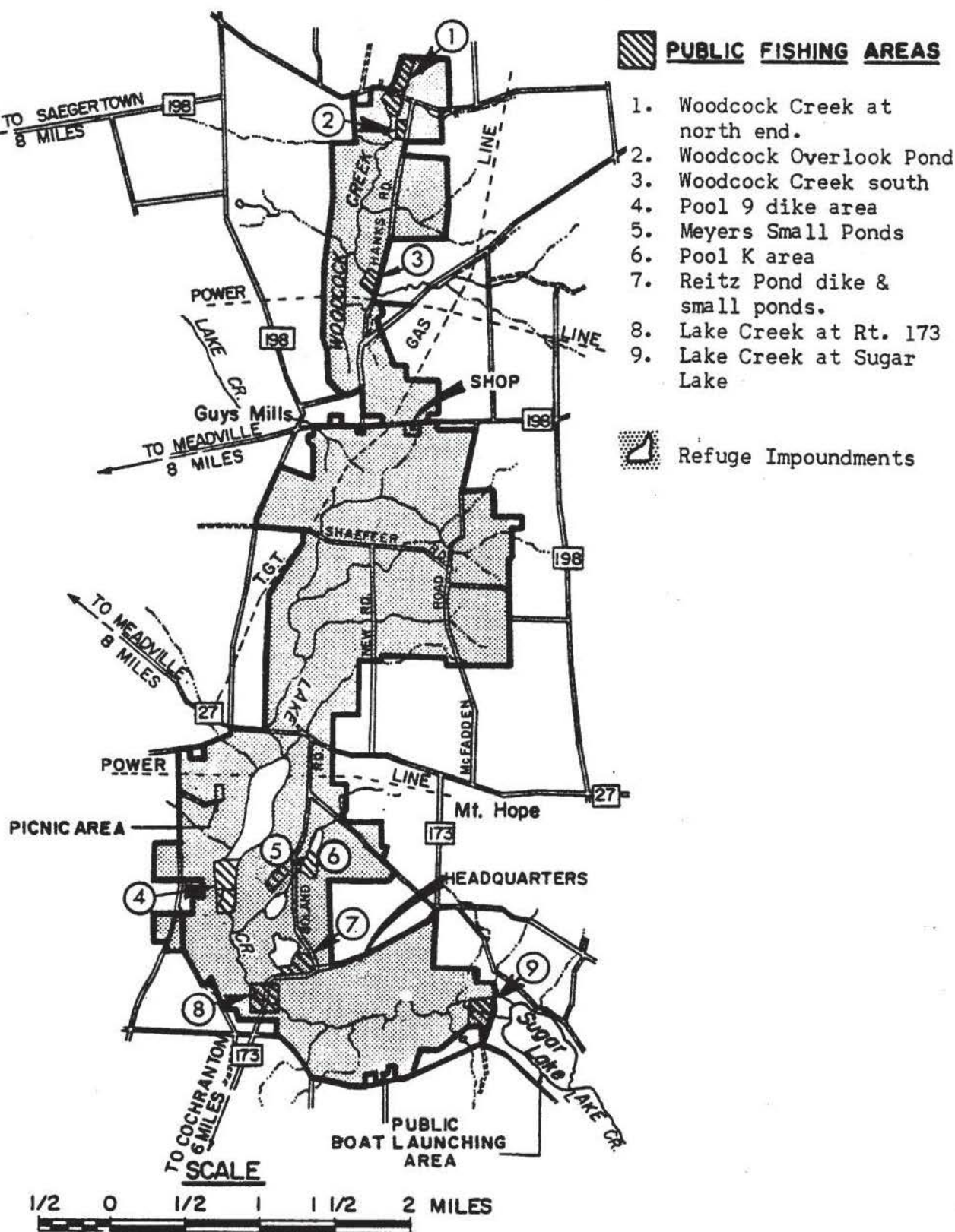
ERIE NATIONAL WILDLIFE REFUGE

CRAWFORD COUNTY, PENNSYLVANIA

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Department of the Interior

U.S. Fish and Wildlife Service



U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

ERIE NATIONAL WILDLIFE REFUGE
GUYS MILLS, PENNSYLVANIA

PUBLIC FISHING

Sport fishing is permitted on the Erie National Wildlife Refuge as shown on the map on the reverse, and as posted, subject to applicable State and Federal regulations plus the following special regulations:

1. Bank fishing is permitted on all public fishing areas.
2. Boats are allowed in Area 9, and boats without motors are permitted in Area 4 from the second Saturday in June to September 15 only.
3. Fishing in Areas 4 and 6 is permitted from the second Saturday in June to September 15 only. Areas 4 and 6 may be opened (conditions permitting) to ice fishing by daily permit only.
4. Refuge areas are open for fishing sunrise to sunset.

Refuge fishing areas are shown on the reverse and listed below:

1. Woodcock Creek at north end - From northern refuge boundary, upstream past LR-20114 about three-tenths of a mile.
2. Woodcock Overlook Pond - West side of Hanks Road.
3. Woodcock Creek south - Downstream from Hanks Road about 150 feet.
4. Pool 9 dike area - Bank fishing on the dike and below the dike along Lake Creek for about 400 feet. Boats without motors and ice fishing upstream from the dike about 900 feet.
5. Meyers Small Ponds - Between Meyers Pond and Pool 9 entrance road.
6. Pool K - Bank fishing on 300 feet of the southwestern shore.
7. Reitz Pond dike and Small Ponds - Bank fishing on about 1000 feet of south and southeastern shores and in small ponds east of Reitz.
8. Lake Creek at Route 173 - From Route 173 road embankment.
9. Lake Creek above Sugar Lake - about 300 feet of creek.

For additional information, contact the Refuge Manager, Erie National Wildlife Refuge, R.D. 2, Box 191, Guys Mills, Pennsylvania 16327; telephone (814) 789-3585.

Because of the network of township roads throughout the Refuge, wildlife/wildland observation by vehicle accounted for almost half of the Refuge visits.

2. Non-Wildlife Oriented

Roughly 4,900 visits were for non-wildlife oriented picnicking. Picnicking of this nature is being phased out.

C. Enforcement

Only two cases were taken to court. On November 4, 1976, two young men were apprehended by Refuge personnel for hunting waterfowl in a closed area. The cases were heard (on 3/3,10/77) by U.S. Magistrate Gabriel A. Bifulco, Erie, PA. One man was fined \$75.00 and the other was fined \$50.00.

Trespass by snowmobile is a constant problem, but one that is very hard to deal with. While the State prohibits the use of snowmobiles on roads, the remote township roads throughout the Refuge are never patrolled by State enforcement people. Thus, snowmobiles have a free rein on the roads. At the same time, they "spill" onto Refuge lands to take shortcuts or simply to frolick. To make the matter more complicated, trespass is done late at night.

VI. OTHER ITEMS

A. Field Investigations

The only Refuge Management Study in progress was the Breeding Bird Census, by Dr. Donald B. Snyder, Professor of Biology at Edinboro State College, Edinboro, PA. The study site was the Muddy Creek Research Natural Area at the Seneca Unit of the Erie NWR. The number of nesting pairs on 8.1 ha (20 acres) were as follows: 22 northern water-thrush, 5 black-capped chickadee, 4 brown creeper, 3 winter wren, 2 great crested flycatcher, 2 blue jay, 2 veery, 2 red-eyed vireo, 2 Blackburnian warbler, 2 Canada warbler, 1 hairy woodpecker, 1 tufted titmouse, 1 whitebreasted nuthatch, and 1 common grackle. Dr. Snyder intends to continue the study for comparative purposes.

B. Cooperative Programs

In cooperation with the Pennsylvania Department of Environmental Resources (DER), the Erie NWR operates a weather station. During the spring and fall fire seasons, the DER calls daily for weather data. The Erie Refuge also provided weather data on weekdays for the Army Corps of Engineers at the Nearby Woodcock Creek Dam.

Following the appropriation of additional FY76 funds for the Youth Conservation Corps (YCC), the Erie Refuge was notified in late June that it would have a YCC camp, to begin on July 6. Needless-to-say, there was a great deal of last minute "organizing." Camp began on July 6, with ultimately 18 non-residential enrollees and a staff consisting of a GS-7 Camp Director, and GS-5 Group Leader (Environmental Education Specialist), a GS-5 Group Leader, and another Group Leader paid through CETA. Though the summer was, at times, chaotic, a great deal of YCC work was accomplished. A partial list of their projects include clearing two miles of nature trails, constructing and installing 39 numbered guide posts along the Beaver Run Nature Trail, repairing and painting four privies, painting five redwood entrance/exit signs, clearing brush from 187 boundary signs, picking up litter along 45 miles of trails and roads; painting at office, residences, and shop; assisting in wood duck banding, clearing brush from 80 acres of grasslands, and cutting 10% of a 10-acre aspen stand to encourage new growth.

C. Items of Interest

Refuge Manager Tyrus W. Berry transferred to the Havasu National Wildlife Refuge on August 25, 1976.

Assistant Refuge Manager Linda Lundgren resigned September 13, 1976.

Refuge Manager Robin H. Fields transferred from the Back Bay NWR on October 20, 1976.

Maintenance Helper Richard Gilbert transferred to the Arrowwood NWR as an Assistant Refuge Manager on October 6, 1976.

This report was written by Refuge Manager Fields and typed by YACC Office Aide Debbie Hays.

Believe it or not, the Refuge Manager is at a loss for words to describe the tardiness of this report!

D. Safety

It was not a good year in terms of accidents. On 1/30/76, the Assistant Refuge Manager sustained a femoral hernia while lifting a load of galvanized pipe with three other refuge personnel. The load shifted causing an uneven distribution of weight.

On 1/5/76, the Title X Laborer Leader sustained a 1/2 inch laceration on his left index finger while using a table saw. He was pushing a board through with his hands rather than with another board; he looked up to talk to someone just as his finger reached the blade.

The two other accidents involved YCC enrollees. One enrollee had three teeth chipped and broken as he lifted the lid off a water cooler. The lid released quickly, striking the enrollee in the front teeth. The second enrollee sprained her ankle while playing with a frisbee. She jumped to catch the frisbee and sprained her ankle when she landed off balance.