

RA 22 Narrative Report Mingo MWR 1976



1976

### PERSONNEL

|                      |                    |                      |          |     |
|----------------------|--------------------|----------------------|----------|-----|
| 1. Gerald L. Clawson | Refuge Manager     | GS-12                | EOD 1971 | PFT |
| 2. Linda M. Hagen    | Ass't Manager      | GS-7                 | EOD 1974 | PFT |
| 3. Edward J. McCrea  | Public Use Spec.   | GS-9                 | EOD 1972 | PFT |
| 4. Howard G. Shelton | Refuge Clerk       | GS-6                 | EOD 1965 | PFT |
| 5. Audrey Walk       | Equipment Repairer | WL-8                 | EOD 1954 | PFT |
| 6. Howard D. Gaines  | Equipment Operator | WG-8                 | EOD 1967 | PFT |
|                      |                    | (Deceased 11/23-76)  |          |     |
| 7. Richard D. Sebree | Maintenanceman     | WG-7                 | EOD 1969 | PFT |
| 8. C. Avery Walk     | Tractor Operator   | WG-7                 | EOD 1962 | PS  |
|                      |                    | (Permanent Seasonal) |          |     |

### WORK STUDY

|                   |                  |
|-------------------|------------------|
| 1. Debbie Robbins | Clerical Aid     |
| 2. George Walters | Conservation Aid |
| 3. Pam Koppman    | Clerical Aid     |

### YCC

|                    |               |                     |              |
|--------------------|---------------|---------------------|--------------|
| 1. Bill Pogue      | Camp Director | 5. Ralph Corse      | Group Leader |
| 2. Harlan Lamb     | Group Leader  | 6. Deborah Mushbach | " "          |
| 3. Gayle Kingery   | " "           | 7. Tom Bell         | " "          |
| 4. Mary Ann Taylor | " "           | 8. Jim Krakker      | " "          |

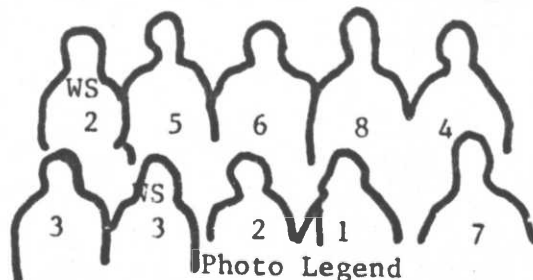


Photo Legend

### Review and Approvals

Gerald L. Clawson 1/31/77  
Submitted by Date

James W. Salyer 2/8/77  
Area Office Date

Refuge

Regional Office

Date

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## I. GENERAL

### A. Introduction

This 21,672 acre migratory bird refuge is located in southeast Missouri, 35 miles north of Arkansas. Also located 40 miles west of the Mississippi River, the dense hardwood swamp lies in the ancient channel of the river. The eastern fringe of the Missouri Ozarks forms the western boundary with the Missouri bootheel area and Crowleys Ridge borders the refuge on the east.

Mingo harbors the last large remnants of the once vast swamp-lands of this region, thus management emphasizes the natural productivity of the swampland ecosystem. This assistance is provided by water control structures such as dikes and ditches which help to manipulate water levels. This in turn helps to produce an annual crop of natural foods. Farm crops also provide additional food resources.

### B. Climatic and Habitat Conditions

#### Weather Conditions

##### Precipitation

| <u>Month</u>     |       | <u>Normal</u> | <u>Snowfall</u> | <u>Max.</u><br><u>Temp.</u> | <u>Min.</u><br><u>Temp.</u> |
|------------------|-------|---------------|-----------------|-----------------------------|-----------------------------|
| January          | 1.69  | 4.26          |                 | 66                          | 3                           |
| February         | 2.16  | 2.76          |                 | 75                          | 13                          |
| March            | 4.11  | 4.40          |                 | 81                          | 25                          |
| April            | 1.87  | 4.33          |                 | 89                          | 33                          |
| May              | 3.62  | 5.52          |                 | 87                          | 36                          |
| June             | 9.45  | 3.57          |                 | 92                          | 56                          |
| July             | 5.89  | 4.03          |                 | 100                         | 59                          |
| August           | 2.21  | 2.28          |                 | 95                          | 55                          |
| Sept.            | 1.13  | 4.21          |                 | 90                          | 46                          |
| Oct.             | 2.86  | 3.69          |                 | 88                          | 26                          |
| Nov.             | .65   | 3.46          | Trace           | 68                          | 9                           |
| Dec.             | 1.29  | 3.45          |                 | 65                          | -2                          |
| Annual<br>Totals | 36.93 | 45.96         | Extremes        | 100                         | -2                          |

The above data was obtained from the U.S. Corps of Engineers at Wappapello Dam which is located approximately 3/4 mile from the SE corner of the refuge.

February was one of the mildest on record with temperatures averaging in the 50's and 60's much of this time.

March through May was also quite mild with rainfall below average for this period. Many farmers were able to work their fields earlier than usual because of the "early spring".

A mild earthquake was experienced March 24 when two tremors were felt in the area. Southeast Missouri is located in the New Madrid Earthquake Zone which is characterized as one of the strongest zones in the country.

17.55 inches of rainfall were recorded at the official weather station in Puxico during the summer months of June, July and August. Normal precipitation for the period is 9.88 inches. Over 4½ inches of rain and the resultant flooding cancelled the towns July 4th bicentennial celebration. Monopoly vegetation was also flooded out at this time.

Below average amounts of rainfall fell during the fall months of September, October and November. Pasture conditions deteriorated under the drought-like conditions. The fire hazards were high during the period. Monopoly Marsh was completely dry.

The first light snowfall of the season fell on November 12. Warmer temperatures during the day soon melted the accumulations.

### C. Land Acquisition

#### 1. Fee Title

Nothing to report.

#### 2. Easements

Nothing to report.

#### 3. Other

The 23.34 acres in the Herman Dublin Tract, Stoddard County, R8E, T27W were acquired in exchange for the 20 acre refuge tract east of Highway 51. This Dublin Tract provides a buffer strip along the scenic Bluff Road.

#### D. System Status

##### 1. Objectives

###### NFIO

Public use would be curtailed at the NFIO level. Visitor Center activities would be reduced or eliminated along with the maintenance of the boardwalk, auto tour route, trash and toilet cleanup. Two permanent staff positions would also be lost as well as jobs which are done in cooperation with Job Corps. Waterfowl use days may decline since there would not be sufficient funds to maintain existing facilities or construct new ones.

##### 2. Funding

| <u>FY</u> | <u>Program</u>       | <u>Construction</u>   | <u>Rehab. Special Account</u> |
|-----------|----------------------|-----------------------|-------------------------------|
| 1972      | \$80,500             |                       | \$25,000 <sup>1</sup>         |
| 1973      | 97,900               |                       | 15,000 <sup>1</sup>           |
| 1974      | 128,300              | \$70,000 <sup>2</sup> |                               |
| 1975      | 129,075              |                       | 18,200 <sup>1</sup>           |
| 1976      | 151,550 <sup>4</sup> |                       |                               |
| TQ        | 37,960               |                       |                               |
| 1977      | 143,800 (Planned)    |                       |                               |

1. Pollution abatement money.
2. Includes \$20,000 for road gravel and \$50,000 for Visitor Center plumbing & heating systems and displays.
3. Emergency appropriation covered the cost of construction materials for a new residence.
4. Includes \$17,000 to cover losses resulting from the 5/25-75 manager's residence fire.

Permanent salaries constitute 79% of the station planning allowance in FY 77 with no allowance for pay act increases.

## II. CONSTRUCTION AND MAINTENANCE

### A. Construction

The 4,300 square foot Visitor Center, built by Mingo Job Corpsmen, was completed this fall after five years in the construction phase. We believe this \$300,000 structure will be an asset to the refuge program.

Upstairs rooms include a large exhibit room, theater and three offices. Unfinished rooms downstairs include a darkroom, kitchenette, display preparation room, audio visual storage and bathroom and two conference rooms. Two restrooms are located on the east side of the building.

The 5/25-75 fire which destroyed the refuge managers residence resulted in emergency funds totaling \$18,200 for a new residence. Job Corps began construction of the dwelling in July, 1975 and it was ready for occupancy by December, 1976.

The 1,300 square foot brick veneered dwelling has three bedrooms, one and one half baths, a full basement, fireplace, and attached garage.

Job Corps heavy equipment crew completed construction of the 23 acre May Place Pond in September. The pond is located at the Rabbit Ridge entrance on the northwest side of the refuge.

This site is especially important since it will provide additional fishing habitat along the north side of the refuge while other management areas such as Monopoly or Rockhouse are in draw-down status.

Over 2,000 lineal yards of existing earthen dikes were raised and widened by Job Corps heavy equipment crew on Moist Soil Unit #7. Two water control structures are to be constructed to permit water control.

Major YCC work projects included a 25' X 50' waterfowl walk-in trap. A semicircular native-stone overlook was also constructed below the visitor center. The overlook was roofed with hand-cut cypress shakes.

### B. Maintenance

Efforts were made to spruce up the refuge grounds before the Visitor Center dedication. This included painting the roof,



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doors and walls of the six stall shop, removing the rotted, split-rail fence around headquarters, restraining the entrance signs, and seeding and landscaping the grounds.

Most interpretive and directional signs and the ten pit toilets were restrained. The pump enclosure by ditch #2, guard rails on the wooden bridges, the spillway and the overflow structures were repainted with yellow traffic or aluminum paint.

The station courtyard was reshaped for better drainage and telephone lines were buried underground.

#### C. Wildfire

The fire danger was high throughout the fall. On November 20, approximately one acre of woodland burned near the Job Corps entrance. Job Corpsmen helped extinguish the fire.

### III. HABITAT MANAGEMENT

#### A. Cropland

The farming operations, which were accomplished by six local farmers, included a corn - soybean rotation with approximately equal acreages of both being planted with an option to substitute milo for corn if the planting is delayed. The government share of the crop and fertilizer is one-third. We normally end up with one-half the corn left standing in the field with the cooperator taking the remainder and all the soybeans to compensate for fertilizer and harvesting costs.

Crop yields were down this year because of flooding during July and a dry, late summer. Two farmers averaged ten to eleven bushels/acre on soybeans and one farmer averaged 42 bushels/acre on corn (37 bushels/acre on milo). Three farmers harvested no crop.

Crop acreages were as follows:

|                         | <u>Corn</u> | <u>Soybeans</u> | <u>Milo</u> |
|-------------------------|-------------|-----------------|-------------|
| Planned acreages        | 297         | 391             | 242         |
| Actual planted acreages | 232         | 237             | 27          |
| Acres of mature crop    | 162         | 157             | 27          |



Farm Unit 9 containing 35 acres was converted to grass (rescue/clover) during the fall period.

Stoddard and Wayne counties, which each contain portions of the refuge, received checks for \$8,795.60 and \$6,487.97 respectively. This was nearly double the payment of previous years since the payment was based on fifteen months rather than the normal twelve months and also since land values had been adjusted upward in 1975.

#### B. Grasslands

There were 313 acres hayed during the 1976 season. Average bid per ton was \$8.70 with an average yield of .86 tons per acre.

Haying is permitted to maintain openings. Canada geese graze these units.

The hayed units are as follows:

| <u>Unit No.</u> | <u>Cooperator</u> | <u>Acres</u> | <u>Bid/ton</u> | <u>Total tons</u> | <u>Total Costs</u> |
|-----------------|-------------------|--------------|----------------|-------------------|--------------------|
| 8-6             | Payne             | 15           | \$10.56        | 20.70             | \$218.59           |
| 12-2            | Taylor            | 34           | 10.00          | 19.10             | 191.10             |
| 14              | Walk              | 32           | 7.55           | 27.26             | 205.81             |
| 22              | Harmon            | 18           | 9.30           | 18.70             | 173.91             |
| 25-1            | Walk              | 11           | 6.10           | 15.30             | 14.00              |
| 25-3&4          | Robertson         | 27           | 2.00           | 7.00              | 93.33              |
| 21 & 22         | Bruce             | 50           | 6.00           | 40.07             | 240.42             |
| 19              | Moore             | 85           | 12.50          | 71.14             | 889.25             |
| 18              | Elledge           | 30           | 10.56          | 36.96             | 390.30             |
| 25-1            | Moore             | 11           | 12.50          | 12.90             | 161.25             |
| <b>Totals</b>   |                   | <b>313</b>   |                | <b>269.13</b>     | <b>\$2,577.96</b>  |

A controlled burn was carried out on the 7-acre plot of native grasses in GU-10 on 4/30. A good clean burn was accomplished in the Indian Grass and switch grass growth and these grasses did exceptionally well during the growing season.

Cattle grazed on 557 acres during the April 1 to October 15 grazing season.

There were seven pasture permittees which utilized 1,670.39 AUM's at a cost of \$2,740.34.

The grazing units are as follows:

| <u>Unit No.</u> | <u>Cooperator</u> | <u>Acres</u> | <u>AUM's</u> | <u>Receipts</u> |
|-----------------|-------------------|--------------|--------------|-----------------|
| GU-7            | Payne             | 38           | 120          | \$180.00        |
| GU-11           | Koppman           | 45           | 185          | 277.50          |
| GU-15 & 16      | Walk              | 123          | 385.13       | 577.70          |
| GU-17           | Bowling           | 57           | 143          | 214.50          |
| GU-18           | Elledge           | 117          | 461.38       | 692.07          |
| GU-19           | Moore             | 85           | 121.50       | 364.50          |
| GU-21 & 22      | Bruce             | 82           | 219.38       | 329.07          |
| GU-22           | Clawson           | -            | 17.50        | 52.50           |
| GU-22           | Shelton           | -            | 17.50        | 52.50           |
| Totals          |                   | 557          | 1,670.39     | \$2,740.34      |

Grazing is a management tool which keeps grasses and clover in the short, succulent condition attractive to geese as browse. Deer and turkey also find these areas attractive.

#### C. Wetlands

The 3,500 acre Monopoly area in its second year of drawdown dried up in late May this year - about a month earlier than in 1975. Heavy rains in late June and early July reflooded it and delayed final drawdown until mid-August. Moist soil plant production was almost non-existent. November rains placed 3-4 inches of water over 400-500 acres and geese used the area until freeze up.

#### D. Forestlands

There was an above normal mast crop. Dabbling ducks, especially mallards, fed extensively in the flooded timbered pools on Duck Creek. The dry fall did not permit waterfowl utilization of the mast crop on the refuge.

Large stands of timber are being killed because of high water impounded by beaver. This is occurring between ditches two, three and four and the upper reaches of the Wilderness area.

A Special Use permit was granted to Mr. Randy Farrar in December for the purpose of trapping beaver.

No commercial timber removal or sale occurred.

The following trees were planted in the Visitor Center area by Senior Girl Scouts of Poplar Bluff on March 13 and 21, 1976.

| <u>Type</u>        | <u>Approximately # of Trees</u> |
|--------------------|---------------------------------|
| Dogwood            | 100                             |
| Redbud             | 100                             |
| Hawthorn           | 20                              |
| Black Walnut       | 30                              |
| Pecan              | 30                              |
| Scotch Pine        | 200                             |
| Eastern White Pine | 200                             |
| Game Cover Bundle  | 1                               |
| Shortleaf Pine     | 100                             |
| Deciduous Holly    | 100                             |
| Autumn Olive       | 200                             |
| Shortleaf Pine     | 200                             |

These trees were furnished by the Missouri Department of Conservation.



Poplar Bluff Senior Girl Scouts Planting Trees. (5/76 (1) 3A

E. Other Habitat

Nothing to report.

F. Wilderness and Special Areas

This was the year of decision for Mingo Wilderness. Following the 1972 wilderness study and public hearing in which the Service proposed 1,700 acres, an effort was launched by environmentalists to solicit legislative support for a larger area. They were successful in getting Tenth District Congressman, Bill Burlison to introduce legislation enlarging the proposal to 8,000 acres. Senate hearings were held in March, 1976 and Congressional hearings in July. Despite Service opposition, an 8,000 acre area emerged in an omnibus bill which was signed by the President on October 19, 1976.

G. Easements for Waterfowl Management

Nothing to report.

#### IV. WILDLIFE

A. Endangered and/or Threatened Species

No endangered species were sighted at Mingo during the year.

The only threatened bird which may occur here is the American peregrine Falcon, Falco peregrinus. One peregrine was sighted on September 26, 1975 in Rockhouse/Monopoly marsh.

As to plant species, ~~the gray (Platanthera permoena)~~ - Purple fringless orchard, Habenaria peronoena occurs in scattered areas on Mingo. Arrow Arum, Peltandra virginica may also be another uncommon species. These plants are listed as rare or endangered species by the Missouri Department of Conservation.

B. Migratory Birds

1. Waterfowl

The wintering flock of Canada geese peaked at 23,600 birds during January and February. This was less than last years peak.

No White-fronted geese were seen. Five hundred snow geese were sighted on March 1st.

Peak Waterfowl populations during the past ten years are as follows:

| <u>Year</u> | <u>Canada Geese</u> | <u>Snow Geese</u> | <u>Ducks</u> |
|-------------|---------------------|-------------------|--------------|
| 1966        | 8,000               | 1,100             | 84,400       |
| 1967        | 13,000              | 4,000             | 40,000       |
| 1968        | 16,000              | 285               | 97,900       |
| 1969        | 12,000              | 300               | 50,000       |
| 1970        | 16,800              | 600               | 263,370      |
| 1971        | 18,000              | 1,000             | 123,100      |
| 1972        | 21,000              | 500               | 122,600      |
| 1973        | 22,500              | 800               | 133,000      |
| 1974        | 27,250              | -                 | 69,200       |
| 1975        | 26,000              | 500               | 108,000      |
| 1976        | 23,600              | 500               | 75,000       |

The mid-December goose count totaled 12,200 birds. The aerial census is jointly sponsored by the refuge and Duck Creek with the Missouri Department of Conservation furnishing the plane and pilot.

The winter banding program ended with a total of 470 mallards and six Canada geese being banded. The program goal had been set at 800 mallards and as many geese as possible. Cannon/nets were used at the Goose Pen site and Pumphouse # 2 site:

Ducks peaked at 75,000 in February. This was down from a previous year high of 108,000 and the 10 year peak average of 115,708 birds. The major spring migration had passed by mid-March.

Since wood ducks and hooded mergansers nest at Mingo, there is an extensive box program which is closely monitored each year.

The winter wood duck box inspection indicated a better hatch during last years nesting season then during 1974. The comparison between these two years is as follows:

#### Artificial Wood Duck Box Check

| <u>Year</u> | <u># Hatches</u> | <u># Nest Attempts</u> | <u># No Use</u> | <u>Total Boxes</u> |
|-------------|------------------|------------------------|-----------------|--------------------|
| 1974        | 35 (27%)         | 22 (17%)               | 72 (56%)        | 129                |
| 1975        | 42 (38%)         | 24 (23%)               | 41 (38%)        | 107                |

## 2. Marsh and Water Birds

Sightings of common egrets, great blue herons and little blues have decreased the past two years. A Louisiana heron, a bird not previously recorded for this area, was observed at adjacent Duck Creek Game Management Area.

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

Numerous shore birds (in the 100's), such as yellowlegs, semipalmated plovers, and pectoral sandpipers were sighted during the third week in April. Large numbers of these birds are not usually seen in this area. Fourteen Ring-billed gulls were observed on the Christmas bird count on December 30.

Although the Monopoly draw-down created 3,500 acres of mud flats, shore birds were relatively scarce during the summer and fall months.

## 4. Raptors

The peak population of twenty-seven bald eagles and two golden eagles were sighted during January. The number of eagles is related to the presence of waterfowl build-up since these eagles prey extensively on waterfowl. During freeze-up periods, these birds are frequently seen near the open water areas.

One osprey was sighted at Red Mill Pond during October.

The most commonly seen hawks included the marsh hawks, red-shouldered and red-tailed hawks while the barred owl represented the most commonly seen owl.

## 5. Other Migratory Birds

Five whistling swans were sighted on Monopoly marsh during February.

The mourning dove call-count survey for Stoddard/Butler County was run on May 20. Sixty-six doves were recorded. This compares with 63 doves for the previous year and 78 doves in 1974. Southeast Missouri has some very excellent dove hunting.

The Bachman's warbler is listed as extirpated on the Missouri bird list and is considered the rarest woodland warbler in

North America. Biologists at the University of Missouri believe there is a possibility it may occur on Mingo. A University project is underway to determine the birds status. We will monitor this project closely for management implications.

There were two complaints of blackbirds feeding on young corn sprouts. Zon guns were loaned to scare these birds from the new planting.

A sample of ten starlings each was collected in November from Butler and Bollinger Counties for pesticide monitoring.

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

#### 1. Game Mammals

The refuge white-tailed deer population appears stable at about 600. Few fawns were seen yet the dry year may have some affect on sightings since the animals were not concentrated as they might be during wet years.

Two depredation complaints were received about deer feeding on wheat during the spring months. Zon guns were loaned to these farmers but by the time these devices were installed, the animals had changed their feeding patterns.

This was a very good year for squirrels for there was a warm spring and a favorable mast crop with no reported disease outbreaks. The refuge population is estimated at 8,000 Grey and 2,000 fox squirrel. Squirrel sightings were numerous during the fall months.

#### 2. Other Mammals

Refuge personnel reported two sightings of four River Otter on Pool 6 in February. The otter is on Missouri's endangered species list, but it appears to be a permanent resident on Mingo. The animal is found in some southeast Missouri streams. We will continue to monitor its numbers and provide it maximum protection.

Mingo contains one of the last remaining habitats for swamp rabbits in southern Missouri. Although these rabbits are hunted in southeast Missouri, they are not hunted on the Mingo-Duck Creek areas. They are listed on the states Rare and Endangered Fauna list. Research indicates increasing the number of canopy openings would be beneficial yet the proper size and spacing of these openings is unclear at this time. This animal should be considered in future management plans.



It is difficult to say how the raccoon population has been on the refuge this year. Since prime pelts have sold for up to \$20.00, few if any road kills are seen, since these pelts are readily sold to furbuyers.

Beaver are the Number 1 nuisance animal on the refuge. Even though sightings of these animals and their works are popular with the refuge visitor, they have caused havoc with marshland water management, farming operations and the greentree reservoir areas. The beaver population is estimated at 600 animals but it may be much higher. This area has not always had beaver. The first reported sighting was in 1958.

Parts of Rockhouse marsh are densely covered with "rat houses". Our estimates of 6,000 animals may be conservative since there are up to fifteen houses per acre in some areas.

### 3. Resident Birds

The turkey population remains stable at about 400 birds. This is an increase from one hundred in 1969. Some archery hunters would like to see a special archery season.

A turkey hunt would probably not hurt the population since the best "turkey areas" are not located within the existing public hunting area.

Bobwhite quail have not done very well the past few years. These birds do best in abandoned or brushy farm fields yet the number of fields like this are decreasing in the area. The refuge population is estimated at five hundred birds.

### 4. Other Animal Life

We received 2,500 fingerling catfish and 12,500 fingerling bluegill from the Missouri Department of Conservation fish hatchery at Salem. They were stocked in the new May Place Pond on September 23.

Eighty one bird species were recorded by fifteen observers on the Annual Audubon Christmas Bird Count December 30. Thirty five bald eagles (12 Ad., 19 Imm. and 4 Unknown) were observed as well as over 12,000 common grackles.

Crows and blackbirds became more numerous during the late summer and fall months. There were no large blackbird roost problems in this area as there have been in previous years.

## V. INTERPRETATION AND RECREATION

### 1. On-Refuge

Total actual visits reflect the continued upward trend of public use at Mingo. Except for the sudden jump in 1975, the trend has been steadily upward as shown:

| <u>Year</u> | <u>Total Actual Visits</u> |
|-------------|----------------------------|
| 1972        | 129,974                    |
| 1973        | 140,307                    |
| 1974        | 138,810                    |
| 1975        | 187,479                    |
| 1976        | 153,294                    |

A total of 2,080 visits were made on the spring flower auto tour. This is down 160 visits from last years total. The redbud/dog-woods blossomed earlier than usual and the tour was not at the peak of the colorful season.

A total of 8,888 visits were made on the fall 25-mile self-guided auto tour. This was up from last years total of 3,387 visits and the 1974 fall total of 5,650 visits. The increase was probably due to the increased publicity received from the Visitor Center dedication and the warm, dry Sunday weather.

Over a thousand people participated in the Visitor Center dedication and tour of Mingo on Sunday, October 17. The celebration was held on a special platform situated on the Visitor Center's lawn. Nathaniel Reed, Assistant Secretary of the Interior, gave the dedicatory address. Remarks were made by Congressman Bill Burlison, Robert Bradford, President of the Mingo Corpsman Council, Richard McAviney, Regional Director of the U. S. Dept. of Labor. Jim Gritman, DRD, introduced the speakers and Tom Saunders A.M. was the Master of Ceremonies.

The ceremony emphasized two important FWS programs; the environmental education program and the Job Corps Civilian Conservation program

The Visitor Center housed informational exhibits, displays and slide presentations which show (interpret) the geology, history, wildlife and public use of the area.

An average of three hundred people toured the facility on weekends during October and November.

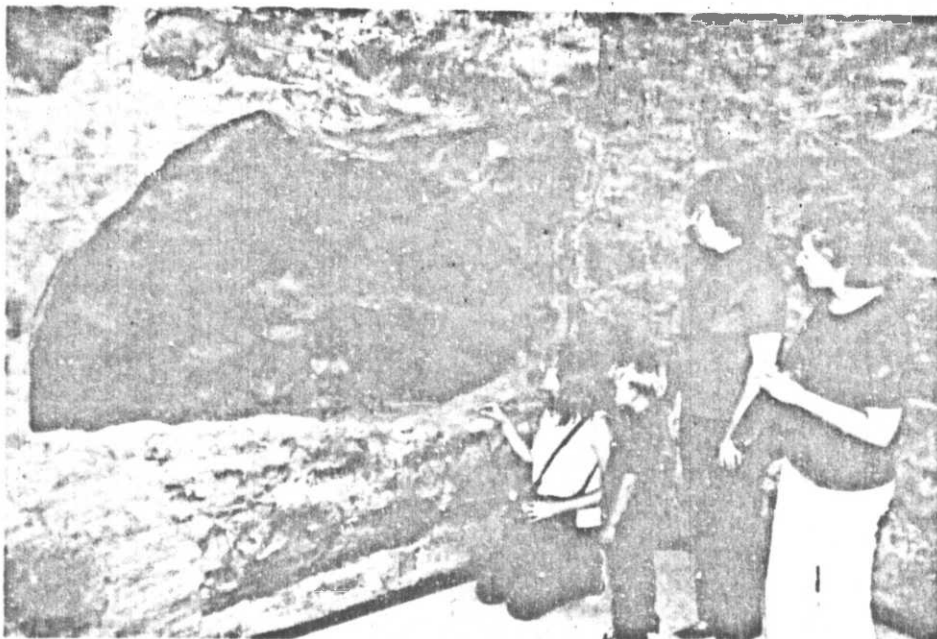
The refuge staff will move to this installation as soon as telephone service is installed.



New Visitor Center Dedicated 10/17-76 (3/75(3) 18)



Visitor Center Diorama (9/76(1) 13)



Visitor Center Indian Exhibit (9/76(1) 8)



Visitor Center Herptile Exhibit (9/76(1) 2)

## 2. Off Refuge

A new refuge leaflet replaced additions to this brochure on things to see and do while at the Visitor Center.

Four appearances were made in these shows included the Midland public use season, refuge and Visitor Center dedication.

National Wildlife Week was celebrated at the local post office.

## B. Recreation

### 1. Wildlife Oriented

The breakdown of squirrel hunters and bag by month is as follows:

| <u>Squirrel Hunting by Month</u> |                | <u>Type Squirrel Bagged</u> |             | <u>Total Bag</u> |
|----------------------------------|----------------|-----------------------------|-------------|------------------|
| <u>Month</u>                     | <u>Hunters</u> | <u>Fox</u>                  | <u>Grey</u> |                  |
| May                              | 100            | 16                          | 98          | 114              |
| June                             | 117            | 15                          | 56          | 71               |
| July                             | 60             | 10                          | 7           | 17               |
| Aug.                             | 124            | 18                          | 80          | 98               |
| Sept.                            | 294            | 85                          | 305         | 390              |
| Totals                           | 695            | 144                         | 546         | 690 *            |

\* Compared to 516 harvested in 1975.

Forty seven deer were taken during the fall archery season (compared to 48 in 1975 and 24 in 1974).

More deer were taken during the first part of the season than during the last.

## 2. Non-Wildlife Oriented

Local saddle clubs request special use permits to sponsor trail rides on the refuge. These riders usually come from a fifty mile radius of the refuge and spend the day riding the twelve to sixteen mile circuit. A lunch break complete with soda wagon is usually made halfway along the ride. The local "Mingo" Saddle Club sponsored both spring and fall trail rides which had over 145 riders.

There is no camping per se, but special group camping was permitted such as scout or university groups when they are associated with another refuge activity.

## C. Enforcement

Clemo Elledge, refuge grazing permittee, was apprehended by State Agents and charged with hunting deer on the refuge during the closed season. He was acquitted in Wayne County Court.

Two cases made by refuge personnel were successfully prosecuted in State Court - one for hunting on the refuge and the other for hunting w/o a license.

The refuge office was broken into during the early morning hours of March 27. Several office machines and a base radio station were stolen. The FBI, Highway Patrol and Sheriffs Office all investigated but were unable to turn up anything. The Job Corps Center experienced a breaking-in the same night. Other incidents, included the gasoline pump being broken into May 19 and two wheels w/rubber tires stolen from a disc at the Company Farm in November.

## VI. OTHER ITEMS

### A. Field Investigations

This marked the seventh and final year of the moist soil study. Graduate student Scott Taylor, under the supervision of Dr. Leigh Frederickson at the University of Missouri Gaylord Laboratory, has been the latest field investigator. His major objectives were 1) to determine the utilization of moist soil plant resources by Avian species and 2) to determine the productivity of moist soil foods. We are expecting a moist soil plant management manual from this program.

Jim Krakker, a PhD candidate in Archaeology from the University of Michigan, began work June 7 on researching the refuge cultural



resources of prehistoric and historic sites. He continued the work on the Bluff Road Indian Mound site initiated by Scott Grantham of Southeast Missouri State University. This site is now listed on the National Register. He also identified several additional archaeological sites and collected numerous artifacts. We hope to continue this study.

Dr. Leigh Frederickson continued his work on WMS-Mingo #5 Study, Ecology of the wood duck and hooded merganser. Ninety wood duck boxes were checked and of these there were thirty-six wood duck nests (11 hatched, 9 deserted, 9 incubated and 7 had eggs) and six hooded merganser nests (1 hatched, 3 nest desertion, 1 incubated and 1 had eggs). These boxes were also checked for dates of initiation, clutch size, the above stated hatching success and competition with other ducks or animals. No ducklings were web tagged this year.

Other Gaylord Laboratory studies included the Feeding Ecology of the Wood Duck by Ron Drobney and Nesting Ecology of the Wood Duck by Judy Scherplz. Both studies will be continued into next year.

A study of the Bachman's Warbler by Bill Eddleman is another University of Missouri study which utilizes the refuge as part of its study area. No Bachman Warblers have been found in this area as yet.

Paul Korte, a former University of Missouri graduate under contract with the FWS Stream Alteration team is monitoring river changes in southeast Missouri. Part of this study fringes on Mingo.

Scott Taylor, University of Missouri, Gaylord Laboratory student was issued a special use permit during December to live trap approximately 25 raccoons for experimental use. The animals will be used in experiments with the avicide "CAT". The work will be conducted at the Gaylord Wildlife Research facility. He will work under the direction of Leigh Frederickson and Nick Holler, Patuxant Wildlife Research Unit.

#### B. Cooperative Programs

Preliminary planning meetings were held with Missouri Department of Conservation personnel to discuss their proposal for a walk-in wade-and-shoot type of hunt between ditches one and three in the northeast portion of the refuge. This area adjoins Duck Creek State Game Management Area which has waterfowl hunting. No waterfowl hunting is allowed on Mingo at the present time.

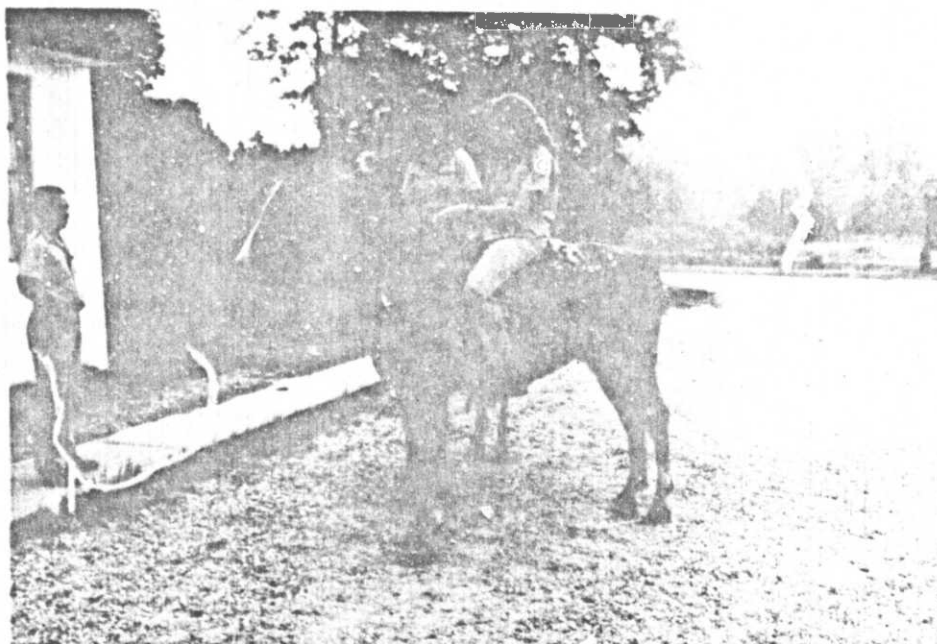


The Water Resources Division of the U. S. Geological Survey began measuring ground water levels in the southeast lowlands of Missouri. Four wells were measured at Mingo. These measurements will be used to construct a current water table map of the alluvial aquifer in the bootheel.

The on-site Mingo Civilian Conservation Center is one of two FWS Job Corps Centers. The other center is located at Wichita Mountains in Oklahoma. The 168 man camp provides vocational training through on-the-job experience in carpentry, masonry, painting, heavy equipment, automotive repair, welding and food service. We are fortunate in having their facility here since they have provided assistance with many refuge buildings and construction programs.

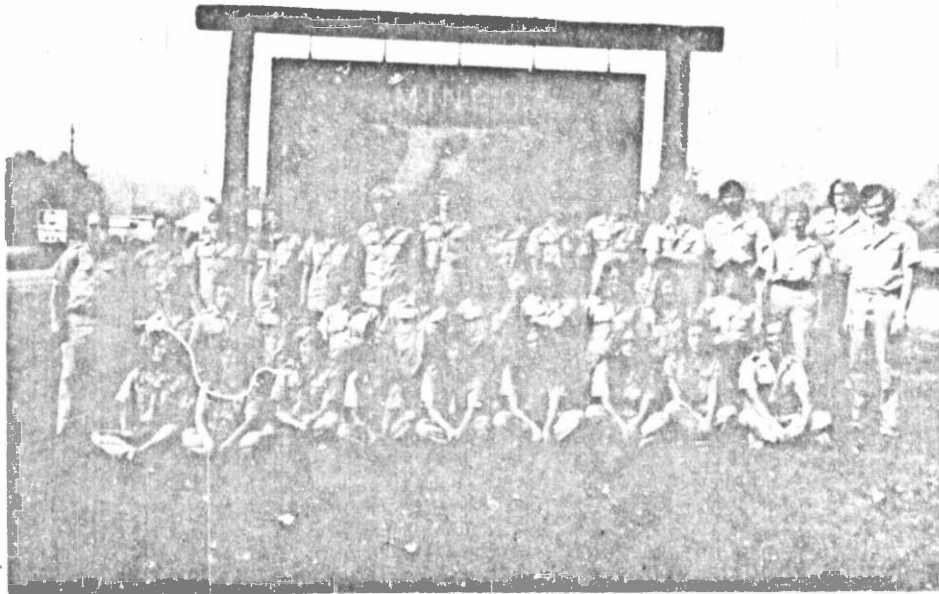
In 1976 their projects included the visitor center, residence, twenty three acre May Place Pond and moist soil levee work as described elsewhere in this report.

On site center projects included continued construction on the heavy equipment vocational training building, dorm rehabilitation and new picnic pavillion. An additional 2.7 acre lagoon was constructed next to the existing 1.3 acre structure and an eight foot high redwood fence was built around the vocational trade complex. They have also been involved with many community projects.



YCC'ers commuting to work utilizing one horse power engines.  
Camp Director Bill Pogue on left. 8/76 (6) 18A

For a third consecutive year, Mingo hosted a non-residential coeducational Youth Conservation Corps Camp. Camp size was increased from twenty to thirty. A staff of eight was on board.



1976 YCC'ers . 8/76 (6) 21

Various work projects included decorative split rail fencing around the Visitor Center complex, pole gate construction for non-public use access roads, landscaping of visitor center grounds and residence, boundary posting, banding trap construction, nuisance beaver dam removal, trail maintenance and improvement, erosion control, champion tree hunt, bench and overlook construction, litter pickup, building painting (shop and outdoor toilets), fish habitat improvement and nesting structures.

The YCC camp was extended to ten weeks to August 22 so additional work could be accomplished on the Visitor Center projects prior to its dedication.

The annual YCC Open House was held August first. Eighty five people visited YCC headquarters and 150 participated in the guided tour of YCC projects.

### C. Items of Interest

Manager Clawson attended a three day CSC seminar 4/21-23 and Assistant Manager Hagen attended a CSC seminar 3/13-15. Hagen and McCrea attended Gyroscope held in Salt Lake City April 19-23.

Clawson, Hagen, McCrea and Audrey Walk received the forty hour law enforcement training school May 9-14 hel at Big Lake State Park. The Defensive Driving Course was given June ninth by Jim Solomon (Job Corps) to all refuge and YCC employees.

Engineering equipment operator Howard Gaines, age 52, passed away November 23 of a massive stroke while in a St. Louis hospital. He had worked at Mingo the past nine years.



Howard Gaines splitting shakes for V. C. overlook roof.

Picture appeared in F & W news. Howard passed away 11/23.  
(8/76 (4) 17)

D. Safety

As of December 31, no lost time work accidents had occurred for 3,738 days or over ten years.

A 61 year old fisherman, Hershhal Vernon, from Fisk, drowned in the Mingo River on June 26. The Stoddard County rescue unit and sheriffs department located the body by dragging operations.

Mike Martinez, R.O. (SA) conducted an on-site safety inspection of YCC facilities and refuge operations on 7/13-14.

An official electrical inspection of refuge buildings was conducted by a certified state electrician on September 10. Minor defects have been corrected.