

SPORT FISHING PLAN

CHAUTAUQUA NATIONAL WILDLIFE REFUGE

Havana, Illinois

Submitted by: Glen R Miller Date: 5/31/90  
Refuge Manager

Concurrences: Tom W. Wright Date: 6/6/90  
Regional ORP (SS)

William H. Hutchinson Date: 7/10/90  
Assistant Wildlife Associate Manager (AWAM2)

1/5 James P. Mattsson Date: 6/21/90  
Wildlife Biologist (RWB)

Matthew C. Kerst Date: 7.17.90  
Wildlife Associate Manager (WAM2)

Approved by: John R. Eadie Date: 7/20/90  
Assistant Regional Director (ARW)

## I. INTRODUCTION

Chautauqua National Wildlife Refuge is located in Mason County in central Illinois along the Illinois River Valley. This region is an area of rolling terrain with the river valley being a great terraced trough several miles in width and about 150 feet lower than the surrounding upland. The eastern edge of the refuge is located along the east bluff of the valley. The western edge borders the Illinois River. The elevation of the refuge varies from 430 feet to 460 feet MSL. The refuge is 45 miles southwest of Peoria and 9 miles northeast of Havana, Illinois.

Chautauqua Refuge was authorized by Executive Order 7524 on December 23, 1936, as a refuge and breeding ground for migratory birds and other wildlife. Total acreage is 4,488 acres of which the primary feature is Lake Chautauqua containing 3,600 acres. There are an additional 800 acres of ditches and seasonally flooded forestlands. Habitat types are mixed bottomland softwoods and hardwoods, buttonbush, willow swamps and sedge marshes.

The climate for the refuge is typical of middle latitude, mid-continental areas, with a wide annual variation in temperature and rainfall. The average annual precipitation is 34.5 inches. Over half of the precipitation normally falls in the months of April through August. Annual snowfall normally accounts for less than 10% of the annual precipitation. Winter temperatures as low as -20° F. and summer temperatures as high as 100° F. have been recorded. Summer humidity varies from moderate to high.

The area now occupied by Lake Chautauqua was formerly a series of eight bottomland lakes connected with the Illinois River. The water levels of these lakes fluctuated with the river. These natural lakes supported an abundance of fish and wildlife resources. In 1916, the Lake Chautauqua Drainage and Levee District was formed and leveed off the area from the Illinois River. The lake beds were drained and leveled for conversion to agriculture. Flood waters in the fall of 1926 broke the levees surrounding the Chautauqua District and flooded the area. A fishery from the Illinois River became established in the newly formed lake. The area was not reclaimed for agriculture, leading to Federal acquisition in 1936. By 1940, the levee system was restored and water control structures installed to regulate Lake Chautauqua. Abundant aquatic vegetation and an excellent sport fishery had developed.

However, in the spring and early summer months of 1943 and 1944, record floods again damaged the levee system and deposited large amounts of silt and sediments into the lake. The basic ecology of the lake was changed and the aquatic vegetation never fully recovered. The levee system was never

fully restored to provide complete protection from floodwaters. Repeated inundation by the Illinois River has resulted in continuing habitat deterioration from siltation.

A cross dike was constructed across Lake Chautauqua in 1969 separating the lake into a north pool of approximately 1,200 acres and a south pool of approximately 2,400 acres. The two pools provided the refuge with increased management options and one pool was to be developed for fishery resources. However, wind and wave action created a 200 ft. breach in the cross dike in 1971 which was not repaired.

The fishery in Lake Chautauqua during this period varied from year to year depending on specific year class survival rates, flooding, lake levels and other variables. However, the overall trend since the late 1940's has been downward. Bass, crappie, bluegill and perch made up 98% of the sport fishing catch in 1942; now it is bullhead and catfish that makes up that figure.

Sport fishing has been permitted with very few restrictions since the establishment of the refuge. Until 1941, the fishermen concentrated in Haven's Slough and at Goofy Ridge. When the entire refuge was opened to fishing during 1942, only a few fishermen fished in other areas more than a half mile from the boatyards.

During 1950, the Illinois Natural History Survey initiated a fisheries research program on the refuge. The widespread publicity given this program attracted more fishermen to the refuge. Public use increased even more during 1951 when outboard motors could be used. During 1954, additional fishermen were attracted to the refuge when trotline fishing was permitted. The average number of visits for sport fishing in the last five years has been 20,000 annually.

## II. CONFORMANCE WITH STATUTORY AUTHORITIES

### A. Direct Compatibility Issues

Sport fishing is made compatible with the purposes for which the refuge was established by closing migratory use areas to the public during critical periods. Lake Chautauqua is closed to boating from October 16 through December 14 to provide refuge for migratory waterfowl. During the same period, only the land area from the headquarters to the cross dike and the Boatyard #3 area is open to the public. This provides refuge to bald eagles roosting in Melz Slough.

B. Indirect Compatibility Issues

Costs to administer this program comes mainly from salaries. Of the 936 staff days annually available at this station, an estimated 12 staff days are directed to the sport fishing program.

1. Salary costs (in staff days)
  - a. Administration
    - i. Annual program review - 1 SD
    - ii. Use data gathering and reporting - 3 SD
    - iii. Litter pickup - 2 SD
  - b. Enforcement - 4 SD
  - c. Maintenance of boat ramp and parking lots - 2 SD
2. Material costs (signs, markers, gravel, gasoline) - \$200 annualized costs

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### III. STATEMENT OF OBJECTIVES

<u>Goal Statement</u>	<u>Output</u>	<u>Objective Level</u>
<u>HIGHEST PRIORITY</u>		
Protect and enhance refuge habitat to maintain or increase use by endangered or threatened species.	Bald eagle and osprey use days	1,665 UD
Provide optimum conditions for mallards during the fall migration to achieve maximum production from birds returning to the breeding grounds.	Mallard maintenance	6,500,000 UD
Provide optimum conditions for migrating Canada geese consistent with distribution objectives established for MVP in the flyway management plan.	Goose maintenance	324,000 UD
Increase wood duck production.	# birds produced	500
<u>HIGH PRIORITY</u>		
Provide habitat and maintenance requirements for maximum number of species of migratory birds at optimum population levels.	Duck maintenance other than mallards	2,176,000 UD
	Marsh & water birds	1,329,175 UD
	Shorebirds	336,500 UD
	Raptorial birds	16,825 UD
Preserve bottomland hardwood ecosystem	# acres preserved	1,054
	# natural areas	1
	# archeological sites	2
Provide opportunities to view and appreciate refuge wildlife population.	Wildlife observation	57,500 AH
Expand visitor understanding & appreciation of wildlife & Man's role in environment.	Interpretive trail and exhibits	3,300 AH
<u>MODERATE PRIORITY</u>		
Provide hunting & fishing opportunities.	Waterfowl hunting	2,568 AH
	Fishing	74,100 AH
Provide environmental opportunities	Students	450 AH
	Teachers	50 AH

Sport fishing has little effect on other refuge objectives since management thrusts and regulations are directed toward meeting waterfowl objectives not vice versa.

#### IV. ASSESSMENT

Local demand is high for bass, crappie, bluegill and perch; however, the degradation of Lake Chautauqua due to siltation and the subsequent loss of aquatic vegetation has virtually eliminated these species from the lake. Because of this, carp, buffalo, bullhead and catfish make up the bulk of the edible fish in the lake. Catfish and bullhead are now the fish most sought after by the sport fishing public. The relatively low fishing demand as compared to the size of the lake and the frequent restocking from the Illinois River during flood stage keeps the catfish and bullhead population from being depleted by the fishing pressures.

The Fish and Wildlife Service owns all access points to the lake, thus fishing use can be effectively regulated.

The Fishery Management Plan is current having been approved in 1988.

#### V. DESCRIPTION OF FISHING PROGRAM

Quiver Creek, Lake Chautauqua and the ditches along the perimeter levee support the fishery resource.

From December 15 through October 15, all waters of the refuge are open for fishing from a boat, through the ice, and from the bank.

Outboard motors not to exceed 25 HP are permitted.

From October 16 through December 14, fishing is permitted:

From bank: Recreation Area to break in cross dike.  
Boatyard #3 to 100' west of radial gate structure.

From boat: Goofy Ridge Ditch.  
Waters within the Public Hunting Area.

Species allowed to be taken and the permitted methods of taking are the same as current state regulations allow.

Most enforcement activities are handled while observing fishing during other routine activities on the refuge. Occasional night patrols are made to keep night use on the refuge to a minimum.

See Section II for funding and staffing requirements.

VI. MEASURES TAKEN TO AVOID CONFLICTS WITH OTHER MANAGEMENT OBJECTIVES

A. Biological Conflicts

Biological conflicts are minimized by curtailing fishing activities in areas during the times conflicts would likely occur. Lake Chautauqua is closed to boating from October 16 through December 14 to provide refuge for migrating waterfowl. During that same periods, only the land area from the headquarters to the cross dike and the Boatyard #3 area is open to the public. In addition to providing additional protection for waterfowl, this provides refuge to bald eagles in their roost site in Melz Slough.

B. Public Use Conflicts

Commercial fishing activities are not allowed within 150 feet of the eastern shoreline from the refuge headquarters north, to and including the radial gate structure. This eliminates potential conflicts with pole and line fishing activities.

C. Administrative Conflicts

None.

VII. CONDUCT OF THE SPORT FISHING PROGRAM

Sport fishing is allowed within the parameters and consistent with state regulations. Dates and areas are site specific and are outlined in Section V.

Fires are not permitted on the refuge. Outboard motors not to exceed 25 horsepower are permitted.



# CHAUTAUQUA NATIONAL WILDLIFE REFUGE

## MASON COUNTY, ILLINOIS

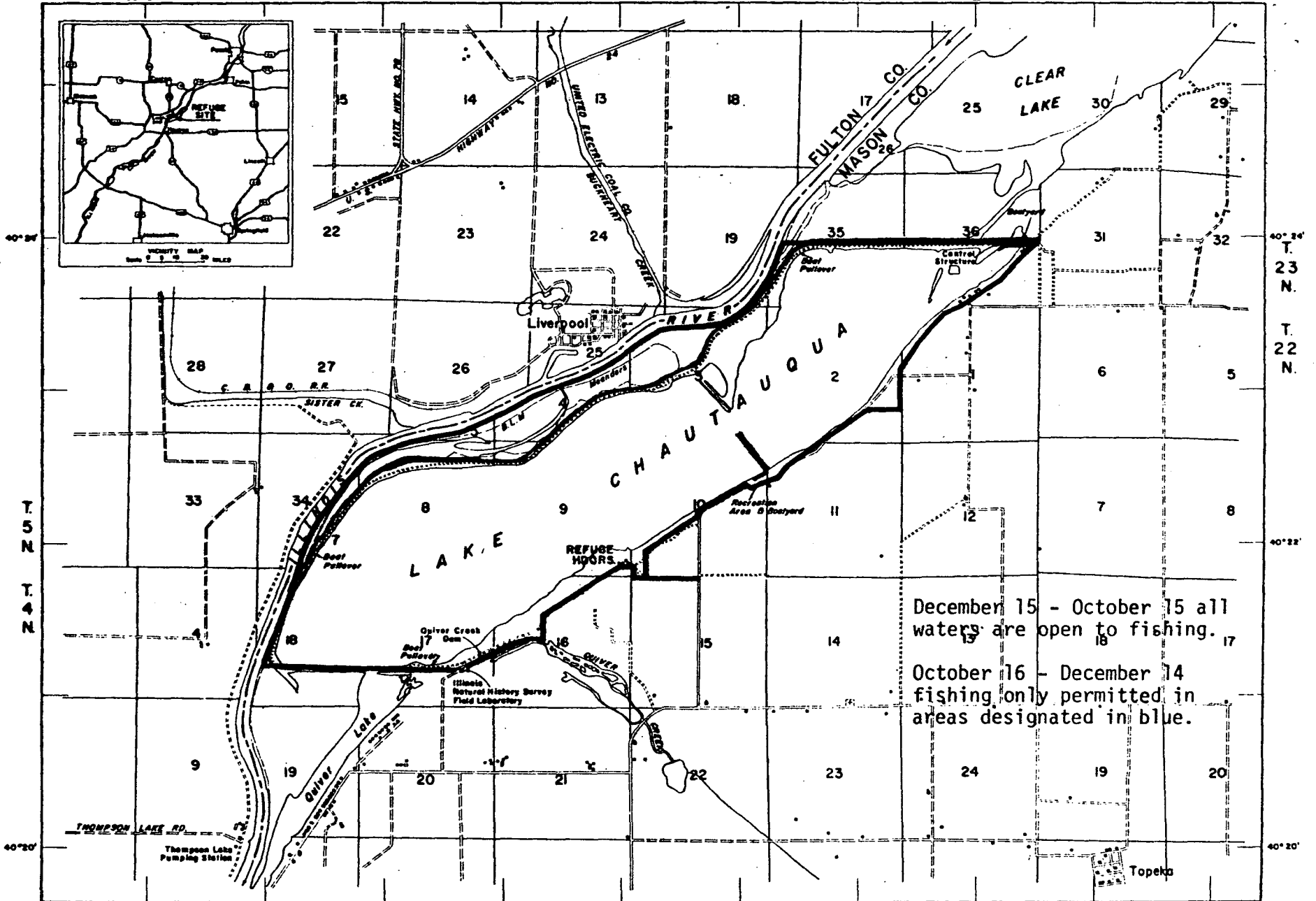
UNITED STATES  
DEPARTMENT OF THE INTERIOR  
90° 04'

R. 4 E. R. 5 E.

89° 56'

R. 5 E. R. 8 W. R. 7 W.

FISH AND WILDLIFE SERVICE  
BUREAU OF SPORT FISHERIES AND WILDLIFE



R. 4 E. R. 8 W.

90° 02'

THIRD PRINCIPAL MERIDIAN

89° 56'

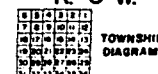
R. 8 W. R. 7 W.

COMPILED IN THE BRANCH OF ENGINEERS  
FROM AERIAL PHOTOGRAPHS AND SURVEYS  
BY THE U.S.F.W.S. & S.L.S.

MINNEAPOLIS, MINNESOTA

JULY, 1966

Scale 0 50 100 150 200 CHAINS  
0 1 2 MILES



TOWNSHIP  
DIAGRAM

MEAN  
DECLINATION  
1965

Tom

COMPATIBILITY STATEMENT

Station Name: Chautauqua NWR Date Established: 12/23/36

Establishing Authority: The refuge was established December 23, 1936, by Executive Order 7524.

Purpose for Which Established: Chautauqua Refuge was established to provide a preferred resting and feeding area for migratory waterfowl in the Mississippi Flyway and as a breeding area for wood ducks.

Description of Proposed Use: Sport fishing is open on all refuge waters from a boat or through the ice from December 15 through October 15. Bank fishing is permitted along the cross dike, at the Recreation Area, and at Boatyard No. 3 as posted. All other areas are closed to bank fishing. Outboard motors not to exceed 10 H.P. are permitted.

From October 16 through December 14, fishing is permitted on the cross dike to the break in the dike and Boatyard No. 3 as posted, at the Goofy Ridge Ditch and waters within the Public Hunting Area. Chautauqua Lake is closed to all fishing and boating. (Exhibit 1)

Fishing is permitted to allow the public to harvest a renewable natural resource while enjoying wildlife-oriented recreation.

Anticipated Impacts on Refuge Purposes: Direct impacts of refuge purposes would be possible disturbance of waterfowl in years of warm weather when migration may occur later and waterfowl are still present after the December 15 fishing opener date. There is also the potential for disturbance of courtship activities, nesting, and brood rearing of wood ducks utilizing the refuge in the spring. Soil compaction and the destruction of shoreline vegetation are possible in areas of heavy bank fishing.

Indirect impacts would be a possible decrease in aquatic vegetation used by waterfowl from the use of outboard motors stirring up sediments.

Possible cumulative impacts would be a decrease in wood duck populations, and a decrease in duck use days.

Justification: Sport fishing conducted as described will not affect the primary objective of, or the purposes for which this refuge was established. By closing the main bodies of water to fishing during the fall migration period, waterfowl use and bald eagle use of the refuge will not be affected.

Although there is always the possibility of disturbance to resident wood ducks during breeding season, impacts are minimal due to the size of the lake and ability of the wood duck to move away from anglers.

Determination: The proposed use is compatible with the purposes for which the refuge was established.

Determined by: *Eric Siper* Date: 12/14/87  
Refuge Manager

Reviewed by: *J. Thomas J. Larson* Date: 12/18/87  
Regional Supervisor

Concurred by: *Tom C. Worthington* Date: 12/21/87  
Regional ~~Director~~ Outdoor Recreation Planner

# REFUGE REGULATIONS

ALL ACTIVITIES ARE LIMITED TO DAY USE ONLY (SUNRISE TO SUNSET)

## FISHING

*From December 15 through October 15, all waters of the refuge are open for fishing from a boat or through the ice. Bank fishing is permitted along the cross dike, at the Recreation Area, and at Boatyard No. 3 as posted. All other areas of Chautauqua Refuge are closed to bank fishing. Outboard motors not to exceed 10 H.P. are permitted. Fires are not permitted on the refuge. Small boats are not permitted, due to safety requirements and Coast Guard regulations.*

Private boats used must be removed overnight or moored at Boatyard No. 3 or the Recreation Area.

*From October 16 through December 14, fishing is permitted:*

- Recreation Area cross dike to break in dike and Boatyard No. 3 as posted.
- Goofy Ridge Ditch
- Waters within the Public Hunting Area

## WILDLIFE OBSERVATION

*From December 15 through October 15, all of the refuge is open for wildlife observation*

*From October 16 through December 14, the land area from the observation tower up to and including all of the cross dike, and Boatyard No. 3 (north dike) is open for wildlife observation.*

## NUT, BERRY AND MUSHROOM PICKING

Is permitted in areas open to wildlife observation.

## HUNTING


Waterfowl hunting is permitted in Liverpool Lake section of refuge (located outside main dike). Regulations and map are on reverse side. Public boat launching sites located in Havana and Liverpool. State regulations apply. Access to area prior to sunrise.

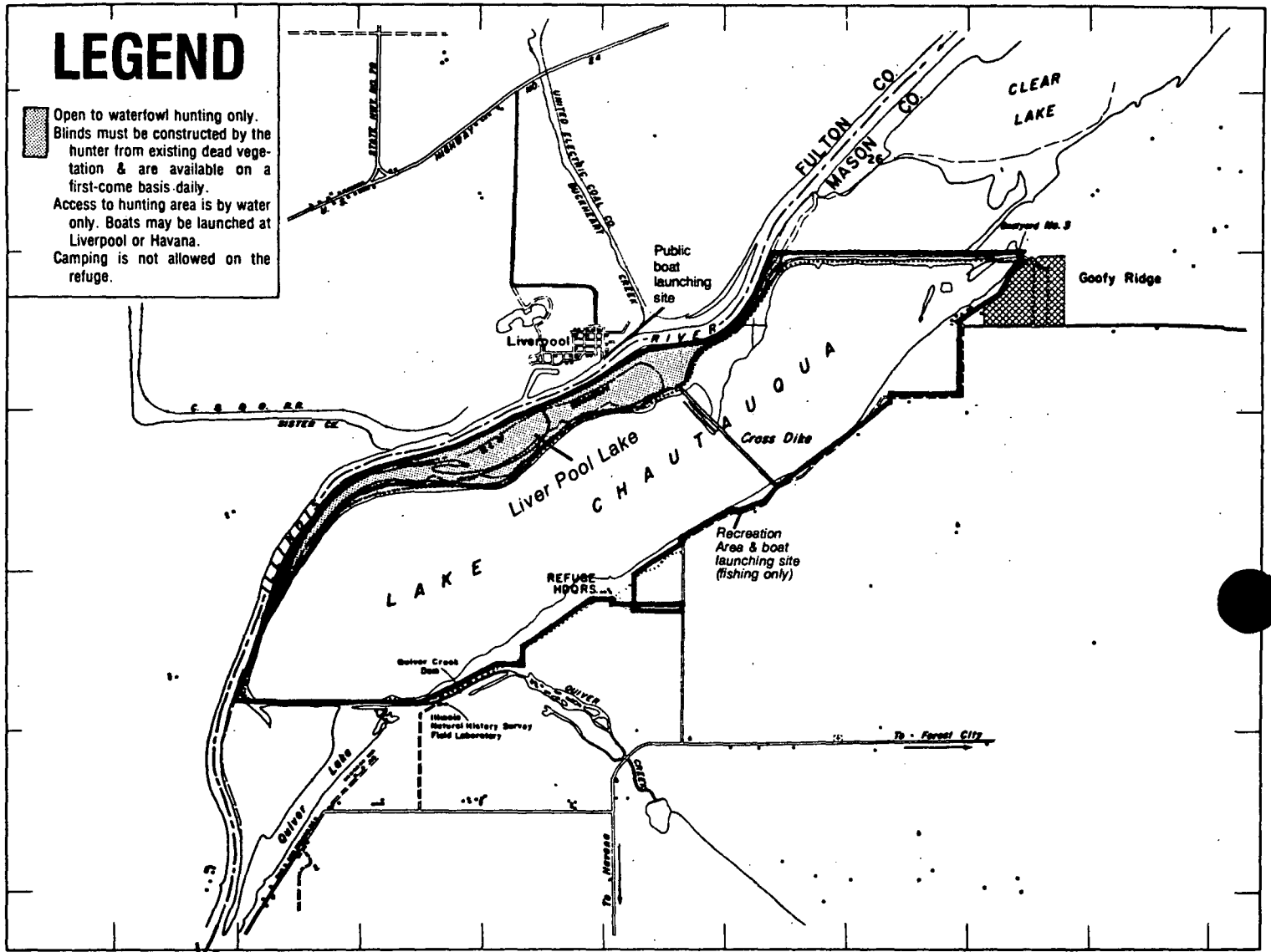


# REFUGE MAP

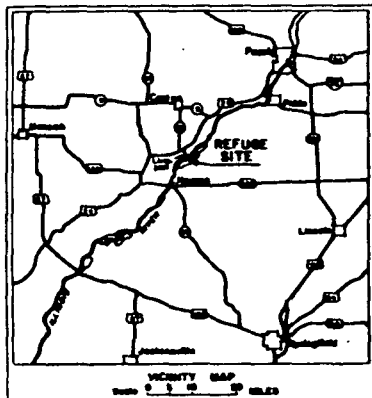
CHAUTAUQUA NATIONAL WILDLIFE REFUGE  
MASON COUNTY, ILLINOIS

## LEGEND

 Open to waterfowl hunting only.  
 Blinds must be constructed by the hunter from existing dead vegetation & are available on a first-come basis daily.  
 Access to hunting area is by water only. Boats may be launched at Liverpool or Havana.  
 Camping is not allowed on the refuge.



Havana  
4 miles



Additional information regarding the Chautauqua National Wildlife Refuge may be obtained at the Refuge Headquarters, which is located nine miles northeast of Havana, Illinois, or by writing to:

Refuge Manager  
 U. S. Fish and Wildlife Service  
 Chautauqua National Wildlife Refuge  
 Havana, Illinois 62644  
 Telephone: 309/535-2290

800.25 W. Hutchinson  
7/25/90

FWS/ARW-WAM2

JUL 25 1990

Memorandum

To: Refuge Manager, Chautauqua National Wildlife Refuge  
From: Wildlife Associate Manager (WAM2)  
Subject: Sport Fishing Plan

Your subject plan has been approved. We corrected a couple typos, but other than that, the plan was well written.

Thanks for the immediate response on this plan.

/s/ WILLIAM H. HUTCHINSON  
ACTING WILDLIFE ASSOCIATE MANAGER

Matthias A. Kerschbaum

WAM2:BILLHutchinson:mh:3702:7/25/90:C:\wp50\files\sptfish.ctq

CHECK LIST FOR PLANS/PROPOSALS

1. 6/4/90 Sport Fishing, Chautaugus WWR  
(Date Rec'd) Name of Plan/Proposal, and Refuge
2. 6/25/90  
Reviewer's Due Date
3. \_\_\_\_\_ SS items routed to Barb to log in.
4. 2 Copies made for reviewers.
5. ORP Plans/Proposals routed to:  
RWB/Div Dir 2  
AWAM 2
6. \_\_\_\_\_ Comments received from reviewers:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
7. \_\_\_\_\_ Memo of needed revisions.
8. \_\_\_\_\_ Sent back for revisions.
9. \_\_\_\_\_ Memo to transmit original, approved Plan/Proposal to refuge.
10. \_\_\_\_\_ Approval date entered on chart.
11. \_\_\_\_\_ Make copy of Plan and put in black book.
12. \_\_\_\_\_ Make copy of Proposal and put in file.

Fish-~~set~~CTQ