

# MISSISQUOI

NATIONAL WILDLIFE REFUGE  
FRANKLIN COUNTY, VERMONT



## WILDERNESS

## STUDY SUMMARY

Persons interested in the proposal are encouraged to inspect the Missisquoi National Wildlife Refuge. For assistance contact the refuge representative, Missisquoi National Wildlife Refuge, Swanton, Vermont 05488. Additional information may be obtained from the Regional Director, Bureau of Sport Fisheries and Wildlife, John W. McCormack Post Office and Courthouse, Boston, Massachusetts 02109.



As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources."

The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States—now and in the future.



UNITED STATES DEPARTMENT OF THE INTERIOR

BUREAU OF SPORT FISHERIES AND WILDLIFE

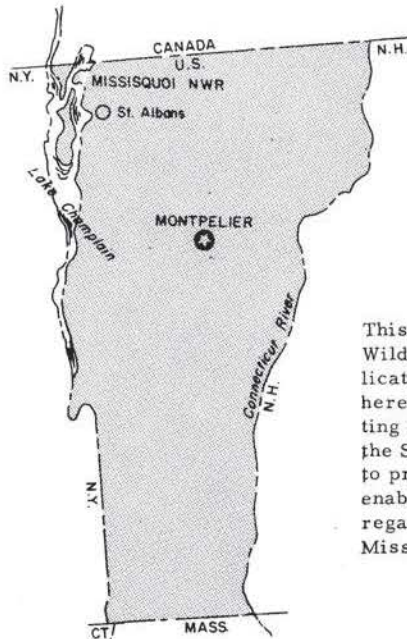
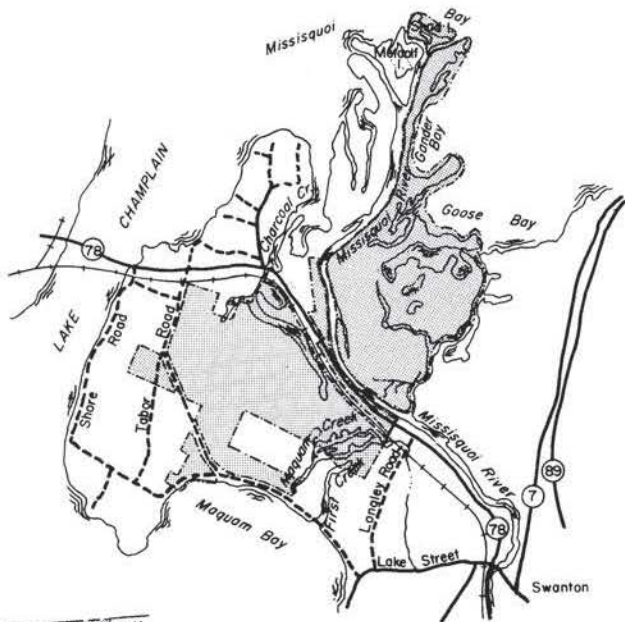
# Preface

The Wilderness Act of September 3, 1964 (Public Law 88-577) requires that the Secretary of the Interior review every roadless area of 5,000 contiguous acres or more and every roadless island, regardless of size, within the National Wildlife Refuge System within ten years after the effective date of the Act, and report to the President of the United States his recommendations as to the suitability or nonsuitability of each such area or island for preservation as wilderness. A recommendation of the President for designation as wilderness does not become effective unless provided by an Act of Congress.

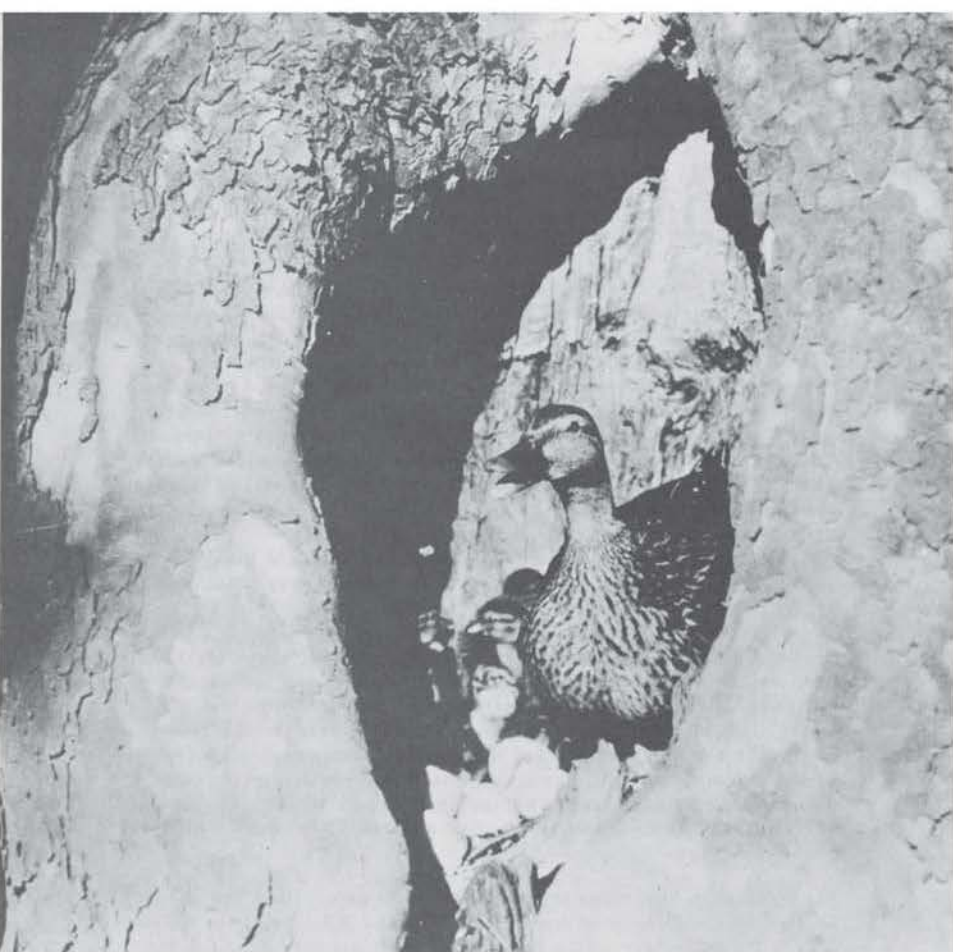
In defining wilderness, the Act also included areas of less than 5,000 acres that are of sufficient size to make preservation and use in an unimpaired condition practicable.

Sections 4(a) and (b) of the Wilderness Act provide that: (1) The Act is to be within and supplemental to the purposes for which National Wildlife Refuges are established; and (2) Wilderness areas shall be administered so as to preserve their wilderness character and shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation and historical use insofar as primary refuge objectives permit. Wilderness designation does not remove or alter an area's status as a National Wildlife Refuge.

This brochure describes a national wildlife refuge that has been studied by the Bureau of Sport Fisheries and Wildlife at the direction of the Secretary of the Interior to determine its potential for inclusion in the National Wilderness Preservation System.



This brochure was prepared pursuant to the Wilderness Act, Public Law 88-577. Publication of the findings and recommendations herein should not be construed as representing either the approval or disapproval of the Secretary of the Interior. Its purpose is to provide information in sufficient detail to enable the reader to form a valid opinion regarding the future wilderness status of the Missisquoi National Wildlife Refuge.



A Mallard Nesting in a Hollow Tree

## Introduction

The Missisquoi National Wildlife Refuge is located in Franklin County, Vermont, only one-quarter mile from the U.S.-Canadian International Boundary along Lake Champlain. The refuge was established February 4, 1943, pursuant to provisions of the Migratory Bird Conservation Act of 1929. The initial purchase of lands consisted of 1,582 acres. Subsequent acquisitions have enlarged the refuge to its present 4,794 acres. Shad Island, a roadless island at the northern tip of the refuge, provided the criteria to initiate this study.

A portion of the Missisquoi Refuge contains a landscape differing only slightly from the days of the Indians. Such areas should be preserved for future generations or managed to obtain the ultimate and best use of the land. The best use of Missisquoi Refuge is for waterfowl production.

Every day waterfowl habitat is being destroyed or altered for human uses. It is our goal to create waterfowl habitat at Missisquoi and demonstrate the value of properly managed "wild land."

## History

Missisquoi's history is intertwined with that of the Algonquin and Iroquois Indians as both nations used or inhabited the area until at least the mid-1700's. Gray Locke, a chieftain of the Waranokas in Massachusetts, is known to have settled here--probably on the present refuge--where he built a fort, referred to by historians as the "Indian Castle." It was from this encampment that he and his band of followers raided colonial towns in the Connecticut Valley and it was to Missisquoi that they returned with captives.

The area was alleged to have been first visited by a white man in the 1560's. A lead tube was unearthed in 1853 containing a message signed by a John Graye stating, in effect, that he had traveled overland from the coast, had arrived here in 1564 after 90 days' travel.

Samuel de Champlain discovered Lake Champlain in 1609. The lake became the dominant feature of the American Revolution, separating British and American territories and acting as the most important route of travel between New York and Canada. Following the hostilities of the Revolution the area became quiet and gradually yielded to advancing civilization.

## Physical Description

Missisquoi National Wildlife Refuge is located on the Missisquoi River delta near the northern end of Lake Champlain, two miles west of the village of Swanton.

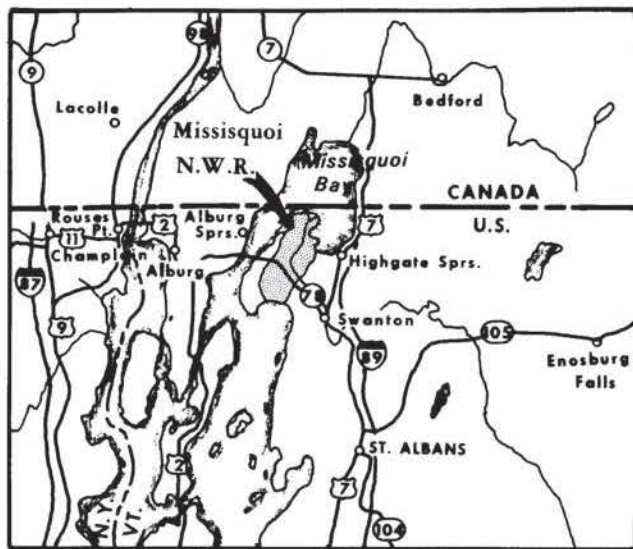
The refuge extends out from both banks of the river, one half forming an island between the river and Lake Champlain. Habitats throughout the refuge are about equally divided between brushland, timberland, and marsh. Elevations range from 95 feet above sea level, the mean elevation of Lake Champlain which surrounds the refuge, up to 130 feet.

Annual precipitation averages 33 inches and includes snowfalls of up to 145 inches. Summers are short with temperatures reaching 90°, and in winter they fall to -35°.

Soils range from sandy loam at the higher elevations to alluvial and muck along the lower floodplain.






When the snow melts, it spills beyond the river, and lingers there, refreshing the marshes and soaking the woods. It is the rush of spring dealing a final blow to a cold winter.



VICINITY MAP



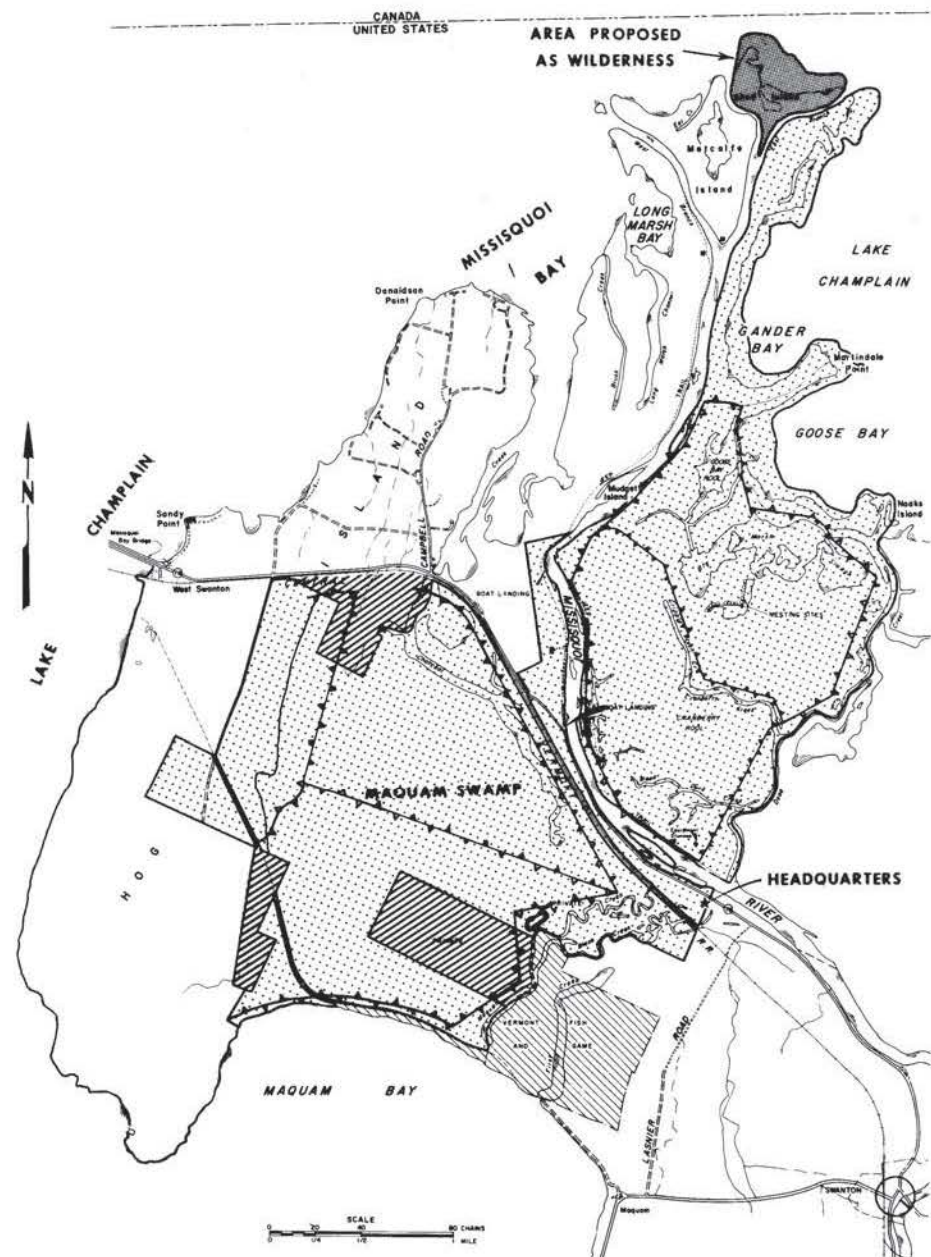
SCALE IN MILES

-  Additional Land Required
-  Existing Dikes
-  Proposed Dikes

# MISSISQUOI WILDERNESS PROPOSAL

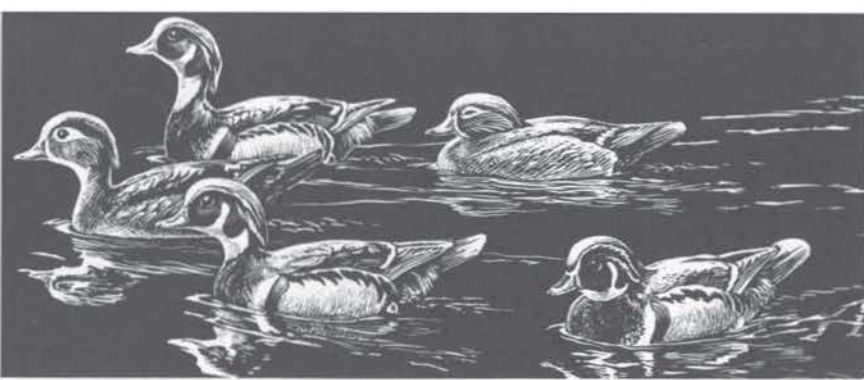
MISSISQUOI NATIONAL WILDLIFE REFUGE

VERMONT



SEPTEMBER 1973

PRELIMINARY SUBJECT TO CHANGE



# Management & Development

## Resources

Of the 4,794 total acreage in the refuge, 1,620 acres are timberland (soft maple and willow), 1,332 are brushland, and 1,190 are managed marsh. The remainder is agricultural land and water.

The name "Missisquoi" is the European version of an Abasaki Indian word meaning "land of much waterfowl and much grass." The refuge area is famous for its flights of black ducks, ring-necked ducks, and wood ducks. The flooded timber and marsh edges provide excellent nesting habitat. The osprey and an occasional bald eagle use the refuge during the summer.

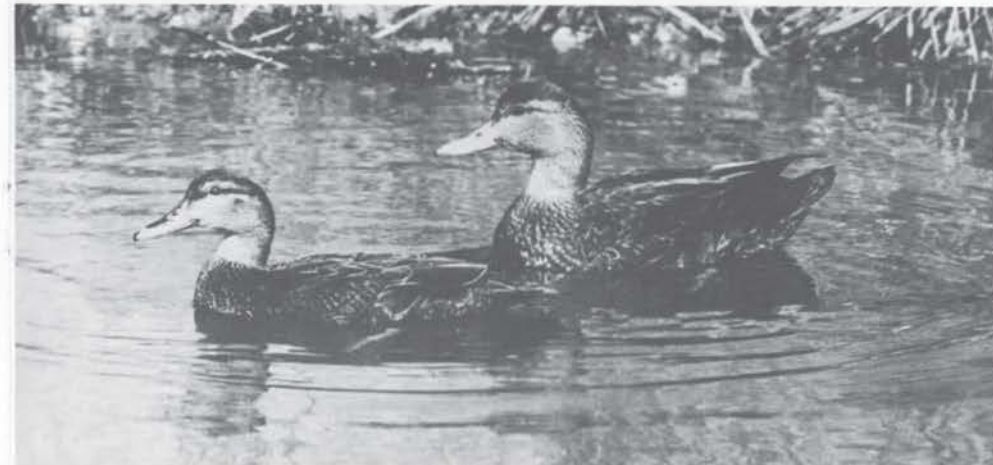
The refuge supports a population of about 100 whitetail deer, a species all but nonexistent 30 years ago. The marshes abound with muskrat, beaver, otter, mink, and weasel. Raccoon are found throughout the area.

Yellow perch, black crappie, pickerel, bass, and bowfin are found on the refuge and surrounding waters of Lake Champlain.

No commercially valuable mineral deposits are known to occur on the refuge.

To meet refuge objectives, a development program was initiated in 1957, and by late 1969 three managed pools, Big Marsh Slough, Goose Bay Pool and Cranberry Pool, encompassing 1,240 acres, had been completed. This amounts to 20 percent of the originally planned wildlife development. These areas now provide much of the high value waterfowl habitat on the refuge. Future plans call for additional development in the Maquam unit which lies south of Highway 78. This additional development is conditional on acquisition of a number of strategic, private inholdings. An additional 1,765 acres have been approved for purchase and will be completed at such time as the parcels are available and funding is provided.

Nesting structures to supplement natural nesting areas have been used extensively. One hundred fifty-five wood duck boxes, and 118 nesting baskets have been erected, most in the vicinity of the developed impoundments. An average of 1,000 waterfowl are produced annually, with nearly 65 percent hatched in nesting structures.



## Public Use

All but about 100 acres of the refuge is open to public hunting of deer and upland game. Waterfowl hunting is permitted on 40 percent of the area. Hunting and fishing are the greatest attractions for public visits. People driving through the refuge on state road 78 may stop to observe a feeding osprey, a flight of ducks, or perhaps even an eagle soaring over the delta. Total visits have approached 6,000, including these casual encounters.

The refuge has much to offer wildlife enthusiasts. Attention focused on the refuge as a result of a wilderness review will serve to enhance public interest and knowledge of the wildlife and nature study potential of the area.



Wildlife Photography is Increasing in Popularity.



## Social & Economic Consideration

Located in a rural setting, far removed from large U.S. urban centers, Missisquoi Refuge is relatively free from human pressures. The three northwestern counties bordering Lake Champlain contain only 135,000 people. Economic benefits are minimal--each year about 200 acres of hay is sold, grazing is permitted on a small tract outside the proposed wilderness, and a local beekeeper maintains about 50 hives on the refuge.

The worth of birdwatching, fishing, or hunting lies within the framework of experiences which affect our daily lives. The value of these activities is significant but definitely not the greatest benefit produced. The very fact that the refuge exists insures its place high on the value scale, even for those unable to visit the area.

## Conclusions



The results of this study indicate that nearly the entire refuge is, or will be, needed for intensive management and development to successfully meet the objectives of the area.

Shad Island, a 114-acre island at the north end of the refuge in Lake Champlain, represents an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation. Consistent with the objectives for management of this island, it is recommended as suitable for designation as a unit of the National Wilderness Preservation System so as to preserve it in an unimpaired condition.