

## WATERLOO RECREATION AREA

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(Information submitted to the Soil Conservation Service office to show benefits and use that may result from developing the Portage Marsh in Jackson County under the provision of P.L. 566)

INTRODUCTION

The Waterloo Recreation Area is located in the highly populated southeastern part of Michigan in Jackson and Washtenaw counties. Historical background for the Waterloo Recreation Area is discussed because Portage Marsh is within the area and is a functional part of the development of it.

The first settlement took place about 1830 with the last recorded visit of the Sauk Indians in 1837. The early settlers were from New England of Irish, German, English, and French-Canadian stock. The names of these early settlers now designate lakes and roads. The settlement flourished in the early days and there is considerable evidence of the pride and expression of community spirit. The old churches, school buildings, cemeteries, and landscaping remain as testimony to their efforts.

The land, comprising the presently designated recreation area, is classified for the most part as submarginal for agriculture and general farming did not produce sufficient profits to continue. By 1933 farm failures had increased sufficiently to justify the Federal Resettlement Administration to purchase these lands for conversion to recreational use. During this program approximately 14,000 acres were acquired. These lands were administered and developed by the National Park Service until 1943, and then were deeded to the state. The Michigan Department of Conservation continued acquisition in this area mainly with monies from hunters through the sale of licenses and other taxes. The state now has 15,718 acres within the state recreation area.

DESCRIPTION AND FACILITIES

These lands include a belt of rough hills and numerous lakes varying in size up to 350 acres. A long stretch of Portage River, extensive marshes, and fast flowing streams are found here. This area is abundant in natural beauty and possesses habitat for waterfowl, marsh and shore birds, as well as deer and small game. There are heavy woods, tangled growths of shrubs, wild meadows, swales, potholes, and open spaces intermingled with cultivated fields of the remaining farms. There are enjoyable winding roads for touring, hiking, horseback riding, and nature study. Numbers of people participate in fishing, hunting, boating, swimming, and winter sports so the area is used throughout the year. The Waterloo area includes two developed outdoor centers, frontier cabins for organized camping groups, outpost camping sites, and numerous picnic sites as well as camping areas. Scenic high points are marked and trails have been etched by those interested in seeing nature's unspoiled beauty as well as the scars left by man's ill use, which are being obliterated by nature's healing methods and helped by skillfully applied land treatment practices.

## USE

Public land ownership is now in scattered units, however, reliable information on public recreational use is available. Resident personnel records estimated visitors using the facilities for each day. The estimate for 1962 was 793,500 people. Registration of visitors is required for camping and groups which provides specific information on this type of use. There are 268 developed camp sites located at Big Portage, Sugarloaf, and Green Lakes. During the 1962 season, 6,983 camp permits were issued. These facilities were insufficient to take care of the demands as 1,872 camp units or over 7,000 people were turned away. The average camp remained in the area 3.5 days and the average camp contained five people; thus, the 268 developed camp sites provided facilities for 118,590 camper days in 1962.

"Outdoor centers" and "day camp" use for group activities, mainly for young people belonging to organizations such as Boy Scouts, school groups, Conservation and 4-H clubs, can be measured because of registration and fee requirements. Two outdoor centers are located on Cedar Lake and Mill Lake. Our records show summer use of 14,819 camper days and 22,720 camper days during the fall, winter, and spring. The summary of "day camp" activities shows 24 groups visited the Waterloo area during 1961 to make up 9,239 camper days. Interesting Conservation projects may be observed by these groups and certain projects are furthered by group participation in work programs including reforestation, cover improvement plantings for wildlife, the control and prevention of erosion, as well as studies in fish culture. Besides the ordinary fishing, hunting, and hiking activities there are berries, nuts, fruits, and mushrooms that may be gathered in season. These figures on camping and group activities demonstrate an intensive use of portions of the Waterloo Recreation Area but account for only a part of the total estimated 793,500 visitors.

## UNUSUAL WILDLIFE ASPECTS

The buzzard roosts and the sandhill crane nesting grounds have been of interest since they were first observed by the early settlers. A colony of nesting Canada geese has been re-established in this area. The woodland variety of game such as grouse and deer, as well as the resident small game species and the aquatic mammals associated with marsh habitat, are present in sufficient numbers to provide interesting observations and studies for the numerous visitors.

## WILDLIFE HABITAT IMPROVEMENTS

The Portage Marsh, now being considered for improvement by construction of a water retention structure, has been viewed as an important wildlife restoration project for many years. This site has been rated as having the best potential of any marsh restoration project in southern Michigan. The development would be a valuable addition to the recreational programs now being carried on as it would greatly enhance the values that already exist. The enlarged improvements would contribute greatly toward the enjoyment of thousands of people.

Portage Marsh once served as an important waterfowl nesting area and as a concentration site during migration periods. Concentrations of Canada geese were observed here in the past and there are prospects of re-establishing this site as a goose area under proper development and management. In addition it would be used by other species of waterfowl. Even though the marsh area has diminished, numbers of hunters and trappers still frequent this site to harvest waterfowl and muskrats. Checks of hunters, during the first day of the waterfowl season and the first weekend, show as many as 400 to 500 hunters frequenting the general area.

### BENEFITS

An appraisal of the benefits resulting from the restoration and an analysis of the features which could result follows. Restoration of near ideal waterfowl and muskrat habitat over approximately 1,600 acres of now half-dry and unproductive marsh would represent a major benefit from construction of water control structures. The improved habitat would function as effective duck, goose, and muskrat habitat and would enhance the recreational values of the entire area. The physical means are available and the potential is obvious.

Applying hunter use information obtained from similar developed and managed waterfowl area, operated by the state in southern Michigan, provides the basis for arriving at monetary values. These values can then be compared to construction costs. The three comparative waterfowl management areas have a portion closed to hunting with a bordering zone open to hunting. Permits are required for each day so the number of hunters, using these areas, are available. These management areas are the Pointe Mouillee State Game Area in Monroe County, the Swan Creek Area, and the Fennville State Game Area, both located in Allegan County. The following are 10 years of records from these managed hunting areas:

<u>Area</u>	<u>Acreage</u>	<u>Percent Refuge</u>	<u>Hunter Permits 1950-60</u>	<u>Hunters Average Annual Use</u>
Pointe Mouillee	2,608	15	53,687	6,369
Swan Creek	1,320	50	104,645	10,465
Fennville	<u>3,450</u> 7,378	40	<u>134,009</u> 302,341	<u>13,400</u> 30,234

Hunter use during the 10-year period was restricted to the hunting season which varies from 30 to 70 days. Even though the hunter use is seriously limited as to the number of days hunting is permitted, these records show an average use of 4.1 hunters per acre annually. Applying a value of \$4.50 per day of hunting gives an annual average use value of \$18.45 for each acre of habitat. The \$4.50 value is the upper monetary value assigned to a day of waterfowl hunting by "Interagency Committee on Water Resources Subcommittee on Evaluation Standards" for recreational aspects of fish and wildlife. Because of the availability of these areas to large population centers and because present facilities in the southern part of the state providing this type of recreation are pressed beyond their capacities to provide reasonable quality hunting, the applied value for day of hunting is acceptable but certainly on the minimum side. The sporting value of bagging a goose has an exceptional high rating by sportsmen. This would indicate this figure could logically be increased.

#### OTHER BENEFITS

A record of recreational activities at Pointe Mouillee State Game Area for the past five years shows that these waterfowl management developments are visited by many people for many activities other than hunting. Hunter use at the Pointe Mouillee Marsh actually accounted for less than 10 percent of its average annual 130,000 visitors.

It is important to note that the area serves as a field laboratory for school groups ranging from grade school biology classes through advance courses in wildlife management at universities. Audubon groups conduct field trips to observe bird concentrations and wildlife photography is popular. These activities may be included in the sightseeing classification. With the Portage Marsh development, being a part of the Waterloo Recreation Area, there is every reason to believe this form of recreation will be a major use. It is most difficult to place a monetary value on this particular type of activity or attempt to judge the enjoyment and inspirational values these particular people may obtain but the intangible values assessed here would be significant.

The harvest of muskrat and other fur bearers from a developed marsh is a special use which is enjoyed by fewer people but none the less the monetary value is high in terms of financial returns. Trapping activities are also considered a recreational activity by many outdoor enthusiasts. The Portage Marsh is presently a known muskrat trapping area. Increasing its size and maintaining favorable water levels would greatly increase its fur yield. An example of what might be expected has been demonstrated at the Maple River State Game Area, Gratiot County, in southern Michigan. A 200 acre marsh, recently restored as a wildlife flooding project under a plan similar to that under consideration for the Portage Marsh, yielded 2,800 muskrats during the 1961 trapping season. This is an average of 14 muskrats to the acre. Using the present low price of \$1.00 for a pelt and 35 cents as the going market value for the carcass, the return is \$18.90 per acre. This fur harvest is only a part of the multiple-use management of the marsh as waterfowl actually rates top priority.

This impoundment produced an estimated 100 broods of waterfowl in 1961 according to field studies. Like several other wildlife floodings, the Maple River Marsh also serves as a wildlife spectacle. A main highway borders it and traffic problems have resulted from numerous cars stopping to view the wildlife found there.

#### TANGIBLE AND INTANGIBLE VALUES

Judging from these comparisons, the annual average tangible values are in excess of \$37.00 per acre. The intangible values would be significant because the Portage Marsh is located near large population centers, easily accessible through a network of super highways and would function as a unit within the larger Waterloo Recreation Area. These intangible values would greatly exceed those values which have been expressed in monetary terms. In attempting to arrive at an understanding of these intangible benefits, the best clue is number of people visiting these areas.

From evidence obtained, visitors not tallied in the hunting or trapping group would range from 50 to 80 percent of the total number of people visiting similar restoration projects. Adding these people (50 - 80 percent), who are obtaining intangible benefits to those receiving tangible benefits, it is reasonable to assume a minimum value for the total recreational benefits as an additional 75 percent of the values expressed here in monetary terms.

Another value to be considered is the contribution this project makes in furthering the specific needs of waterfowl in compliance with international treaties; namely, the Migratory Bird Treaty Acts. The Portage Marsh would be a habitat restoration project, and in all probability, a major portion would be maintained as a wildlife refuge. The alarming decrease of wetland habitat and the preservation of our migratory waterfowl resource is presently a national challenge. The Portage Marsh development should be viewed as a valuable contribution equal in value to similar areas developed by state and other federal agencies.

#### OPERATION

The proposed operation of the area would consist of maintaining a waterfowl refuge with adjacent public hunting. The acreage, which will be closed to hunting or controlled by regulatory measures, will depend on requirements of waterfowl and management practices will be designed to assure maximum recreational opportunities consistent with conservation of the resource.

There are 6,810 acres of state owned lands in the watershed which consists of approximately 17,360 acres. Attached is a report on the acquisition outlook. The land acquisition costs of the maximum area to be acquired (1,172 acres) is estimated to be \$163.40 per acre.