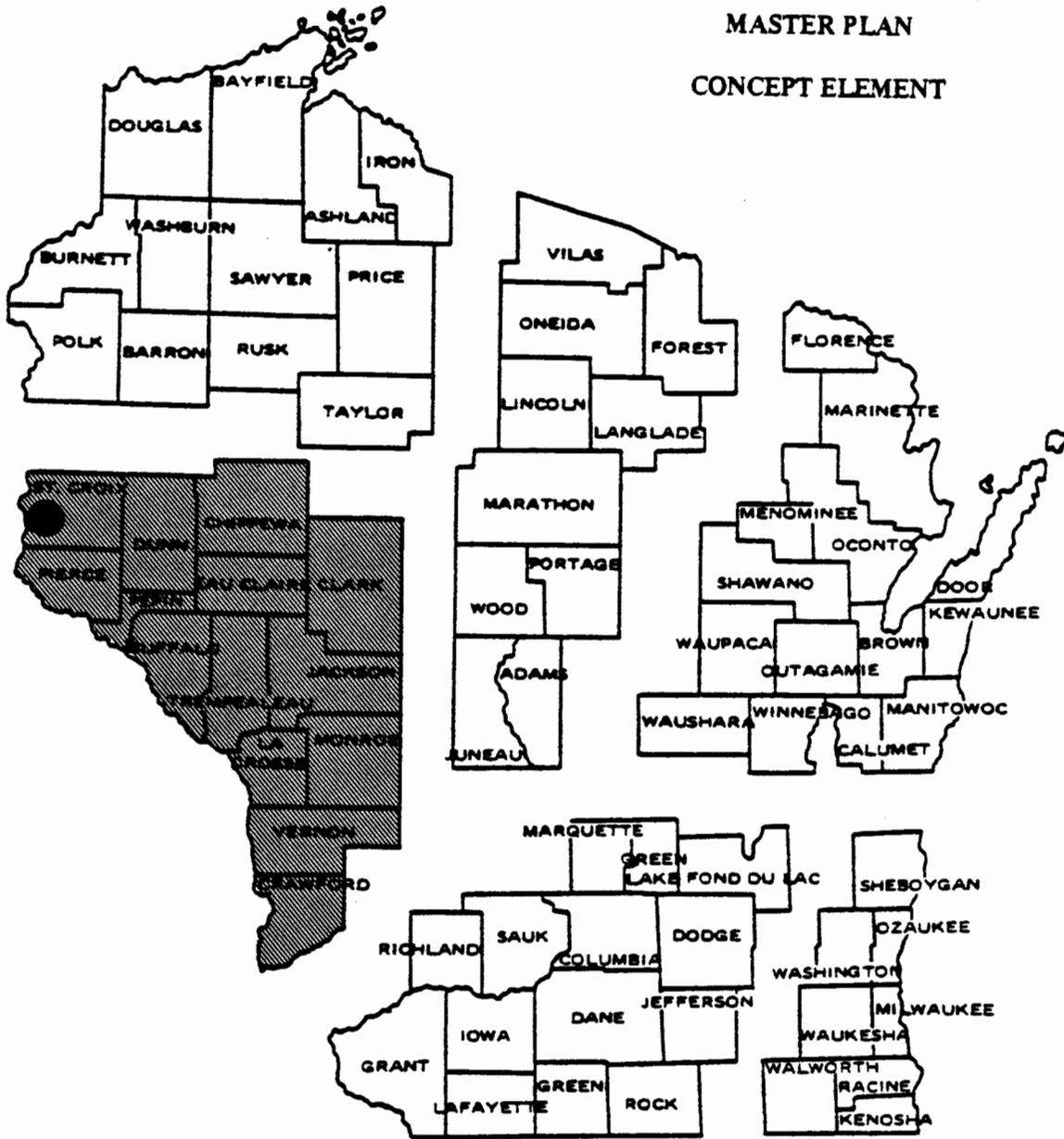


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WILLOW RIVER STATE PARK
MASTER PLAN
CONCEPT ELEMENT



Property Task Force

- Leader:** - Michael Ries - Park Planner
- John Nesvold - Park Supt.
- Eugene Ruetz - Forester
- Bruce Moss - Wildlife Manager
- Bert Apelgren - Fish Manager
- Gary Olson - Land Agent

Approved By: Natural Resources Board

Date: December 12, 1984

Revised 4/85

WILLOW RIVER STATE PARK

CONCEPTUAL MASTER PLAN

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SECTION I - ACTIONS

A. GOAL, OBJECTIVES, AND ADDITIONAL BENEFITS

Goal

To provide a state park which will serve the recreational, educational, and nature experience needs of 270,000 property visitors annually, while preserving and protecting the resource for present and future generations.

Annual Objectives

1. To provide recreational facilities to accommodate 270,000 visits for such activities such as camping, group camping, picnicking, swimming, boating, fishing, hiking, cross-country skiing, nature study, horseback riding, and special events.
2. To manage and enhance the property's scenic and natural qualities by restoring and maintaining a diversity of vegetative cover types for the lifetime of the property.
3. To manage and provide for 5,900 angling trips and maintain the Race Branch of the Willow River to produce 1,800 catch-and-release trout.
4. To maintain the deer herd in balance with the carrying capacity of the range through the use of a special gun hunting season.
5. To accommodate individuals who are handicapped or disadvantaged through the proper design, construction, and management of the property and its facilities.

Additional Benefits

Provide for other recreational uses including: bird watching, wildlife observation, gathering of nuts, berries, mushrooms, and photography.

B. RECOMMENDED MANAGEMENT AND DEVELOPMENT PROGRAM

It is recommended that the property remain classified as a state park. This would provide for a full complement of recreational facilities, as well as provide for the protection and preservation of the natural environment. It is anticipated that use will increase approximately 25% during the next ten-year period following the approval of the master plan and subsequential addition of new facilities.

Recreational facilities to be provided include: approximately 80 additional family campsites, primitive walk-in campsites, and group camp redevelopment. Additional day-use facilities are also proposed. Items

contained in this category are: expanded picnic areas, additional shelters, more cross-country ski trails, upgrading existing trails and trail-head development, pedestrian bridges crossing the river, trails north of the river, additional playground equipment, a volleyball court, and horseshoe court areas.

Nature interpretation and education will be stressed on the property and therefore, facilities such as a nature center, amphitheater, and self-guided nature trails will be constructed. Vegetative management will include prairie restoration, landscape planting in the intensive-use areas, and extensive area planting. Miscellaneous actions will include erosion control and use of agricultural lands within the property. In addition, minor renovation of existing day-use areas will be implemented.

Use of off-road vehicles will not be allowed in the park due to the potential problems they create and the other overall damaging effects they have on the fragile natural resources of the property. The snowmobile trail which serves as a connector to an established trail outside of the park will be continued until an alternate route can be established.

Some horseback riding will be allowed on the state-owned abandoned railroad right-of-way near Mound Pond and south of the Village of Burkhardt. Riding will also be allowed on the south park boundary east of C.T.H. "A". Volunteers will do the necessary clearing and brushing.

1. Development (Figure 3)

Development needs of the park over the next ten years have been identified and placed into three development phases.

Phase I

This phase will include construction of an additional 80 campsites in the family campground. Each site will have a picnic table and fire ring. About one-half of the sites will have electrical outlets. A flush toilet/shower building will be constructed as part of the expansion project. Dumpsters will be utilized for waste disposal and a public telephone will be installed for camper use.

The group camping area on Mound Pond will be renovated. Three sites will be constructed which will accommodate a minimum of 50 individuals each. A central area for large group activities will also be provided. Pit toilets and drinking water will be available.

A temporary 14' by 70' trailer is currently located on a site between the beach day-use area and the boat launch. This building is used by the naturalist and houses various interpretive displays covering the park's natural features and other items of environmental education interest. Adjacent to the temporary structure, a 100-person capacity amphitheater is proposed. Support facilities such as parking and electrical hookup are located nearby. Self-guided nature trails will be constructed in association with the above interpretive facilities. A modest nature center is requested in Phase III.

Modification of the existing park entrance visitor station (PEVS) is proposed which will increase operational efficiency and revenue collection, as well as to better accommodate the property visitor.

A storage structure is needed to secure firewood and to provide a place where wood can be conveniently and economically sold to the park visitor.

A portable wall is needed at the bathhouse/concession building in the main day-use area to create an enclosed shelter for cross-country skiers in the winter.

The boat launch on Mill Pond must be renovated to furnish better lake access and parking. This will consist of regrading and graveling the parking area, and installing a concrete plank ramp.

Shoreline fishing and swimming beach access for the handicapped visitor will be provided. Willow River receives frequent use by individuals and groups that have a variety of physical and/or mental impairments.

The existing trail system will be upgraded to protect the resource and to maximize user enjoyment. Shelters with electrical outlets and lights will be located within the existing day-use area and near the angler's parking lot.

Additional phase I development includes extensive area planting, landscape planting at the park entrance, beach, shop, and other intensive-use areas, construction of erosion control devices, and placement of playground equipment in the various use areas and the campground.

Phase II

Phase II development includes the development of approximately 12 miles of additional hiking trail and up to 20 backpack campsites on the north side of Willow Flowage and the construction of two pedestrian bridges (one below Little Falls and one below Mound Pond Dam). An outbound traffic lane to eliminate the existing compound curve and resulting short line-of-sight distance, must be constructed on the entrance road near the service building. Extensive area and intensive area planting will occur during this phase. Playground equipment and shelters are needed. Paving the overflow parking lot at the beach area, adding pit toilets, picnic tables, and fire rings, providing for canoe portages, and upgrading the boat launching ramp on the north side of Mound Pond will be included.

Phase III

A modest nature center building and amphitheater will be constructed under Phase III to enhance the educational value of the area. The facility will be of sufficient size to accommodate exhibits and group

gatherings. The facility will be located so that its parking and toilet facilities can be used in conjunction with other trail uses such as hiking, etc. Phase III will also include the continuation of extensive and intensive area planting and the renovation and/or replacement of various recreational facilities.

Total estimated development cost based on 1984 cost figures is \$875,000. All proposed development will be dependent upon available funds and statewide priorities. Additional and/or up-to-date justification will also be required.

All areas proposed for development will be examined for the presence of endangered or threatened wild animals and wild plants. If list species are found, development will be suspended until the District Endangered and Nongame Species Coordinator is consulted, the site evaluated, and appropriate protective measures taken. Prior to any ground-disturbing activities within the park, the Department will consult with the State Historical Society to determine whether archaeological or historical testing is warranted.

2. Management

a. Facility

Presently, the park is the responsibility of the Willow River Work Unit manager. Additional staff needed to operate the property beyond the existing three permanent, one six-month seasonal, and 10-14 limited term employees would include an eight-month seasonal naturalist. Equipment and repair facilities at Willow River are used in conjunction with operations in the rest of the work unit.

As a unit of the Wisconsin state park system, Willow River has been developed and managed under Chapter 27, Laws of Wisconsin; specifically, Section 27.01, which governs state parks. The property is also managed under the provisions of Wisconsin Administrative Code 45, which contains rules of the Wisconsin Department of Natural Resources pertaining to the conduct of visitors at state parks, state forests, and other properties under the jurisdiction of the Department.

b. Vegetative Management (Figure 5)

The goal of vegetative management will be to maintain the health, vigor, and diversity of the vegetation in the park's intensive use areas. This will be accomplished by removing individuals, clumps, or stands of trees; pruning and planting. Under most circumstances, natural succession will continue to meet the objective of providing a diversity of tree species and age classes for multiple public resource values.

The following is a description of the vegetative types which are to be managed in areas other than the intensive use areas.

Pine plantations will be managed in order to maintain them in a healthy condition. Thinning will be scheduled when each stand approaches 20 years of age. Each stand will be considered individually because of the age differential among the trees.

Some of the poor oak and aspen stands north of the Willow River and its flowages, shown on the map as (O)A 5"-11", will be maintained for wildlife. Silvicultural practices will be used on several small plots about five acres in size each year until the entire area (150 acres) has been treated. These small areas could be sold as fuel wood sales.

Plantings in the intensive use areas will be of species native to the area. Soil tests will be undertaken to determine species best suited for that soil type and also to determine if fertilization and the additional of organic materials should be undertaken to provide a better planting bed. This is of particular importance in the beach area where past planting success has been poor.

Underplanting with native coniferous tree species will be initiated in the park to provide screening of residential development adjacent to the south property line. Many of these residences are visible from the developed recreation areas in the park.

An 80-90 acre parcel of old field grass will be tilled and planted with native prairie grass and forbs. The resulting cover will provide a pleasant visual approach to the park entrance, as well as habitat for a variety of birds and small animal species.

Since a complete biological inventory of the property does not exist, it is recommended that a scientific investigation be conducted as funds or voluntary efforts permit.

c. Wildlife Management

Tree and shrub planting will take place in the campground, beach, and picnic areas for shade, screening, and space definition, with concern also given to choosing species which attract songbirds. In addition, deadwood harvest of trees adjacent to, but outside of, the intensive area will not occur due to the variety of wildlife, particularly songbirds and amphibians, that depend on dead and rotting trees for their habitat.

In general, grassy areas must be maintained for their contribution to wildlife. Brushy areas, particularly along fence lines, should be preserved, and pine plantations should be kept, but in small acreages. The water areas do not need special management except for the possible inclusion of wood duck boxes.

d. Fish Management

A trout habitat improvement project is planned for 1982-85 on 1-1/2 miles of the Lower Willow River and Race Branch. The project will cost an estimated \$47,000 and includes the installation of half logs, bank covers, rock revetments, and single-wing deflectors. Debris will be removed from the stream channel and dead elm trees will be eliminated from adjacent stream banks.

Maintenance measures will be needed to prevent trout habitat from deteriorating in the next decade. Such measures will include the continued support of trout habitat structures to be placed in the water this year and the periodic removal of harmful log jams and dead trees from stream banks. Also, newly created side channels, as a result of flooding, may need rock revetment work to stabilize the normal flow of the main trout stream.

Trout stocking will be continued on the property waters in the future. Stocking will consist almost entirely of fingerling brown trout with possible occasional plants of brook and rainbow trout, as new strains become available. No general stocking of warmwater fish such as largemouth bass, walleye, or northern pike is anticipated except for maintenance purposes where flowages may have experienced severe drawdown and/or flooding.

If rough fish should become overabundant, contracts may be issued to commercial fishermen to remove the species from the three flowages.

Some warm-water fish habitat improvement measures may be initiated on Little Falls Flowage and Mound Pond, depending on the availability of volunteer help and non-DNR government work programs. The measures would involve the placement of fish shelters in the above-mentioned waters. It is anticipated the end result would be greater numbers of fish.

Anglers are allowed liberal access to all waters on the property. No changes in fishing access appear to be needed in the future. If conflicts between trout anglers and canoeists develop, appropriate regulations may be enacted to mitigate these difficulties. No endangered or threatened species of fish, amphibians, or mollusks are known to be present on the property.

3. Land Acquisition (Figure 2)

As of December 31, 1984, state ownership at Willow River State Park was 2,754 acres. It is recommended that the current park boundary be modified to exclude one 80-acre private parcel because it contains mostly agricultural land and to add an 80-acre state-owned parcel of more natural area approved for purchase by the Board in 1982.

With the exclusion of an 87-acre subdivision designated as a no acquisition zone, approximately 288 acres of privately owned lands remain to be purchased within the proposed boundary. The recommended acreage goal is 3,043 acres.

DOT proposes to realign C.T.H. "A" between the park entrance and Burkhardt. The Department is currently working with the Highway Department to resolve any conflicts and address 6F concerns.

4. Operations Cost and Revenue Potential

The 1984-85 operations budget for Willow River is \$145,000. With 1984 revenue estimated at \$104,000, the percent of revenue to operations cost is about 72 percent.

Revenue generated by the additional 80 family campsites proposed in the master plan could increase the revenue to operations percentage to about 100 percent if occupancy is the same as the current rate.

5. Roads, Entrances, and Private Inholdings

The primary park entrance off County Trunk Highway "A" provides access to the picnic areas, campground, and swimming beach. A park entrance visitor station provides service to the visiting public in the form of efficient collection of the vehicle admission sticker fees, enforcement of the sticker regulation, registration of campers, and dispensing of useful park information to the visitor. Several other park use areas are accessible off county highways that are within the park boundaries. This creates some operational problems such as enforcing the sticker regulation.

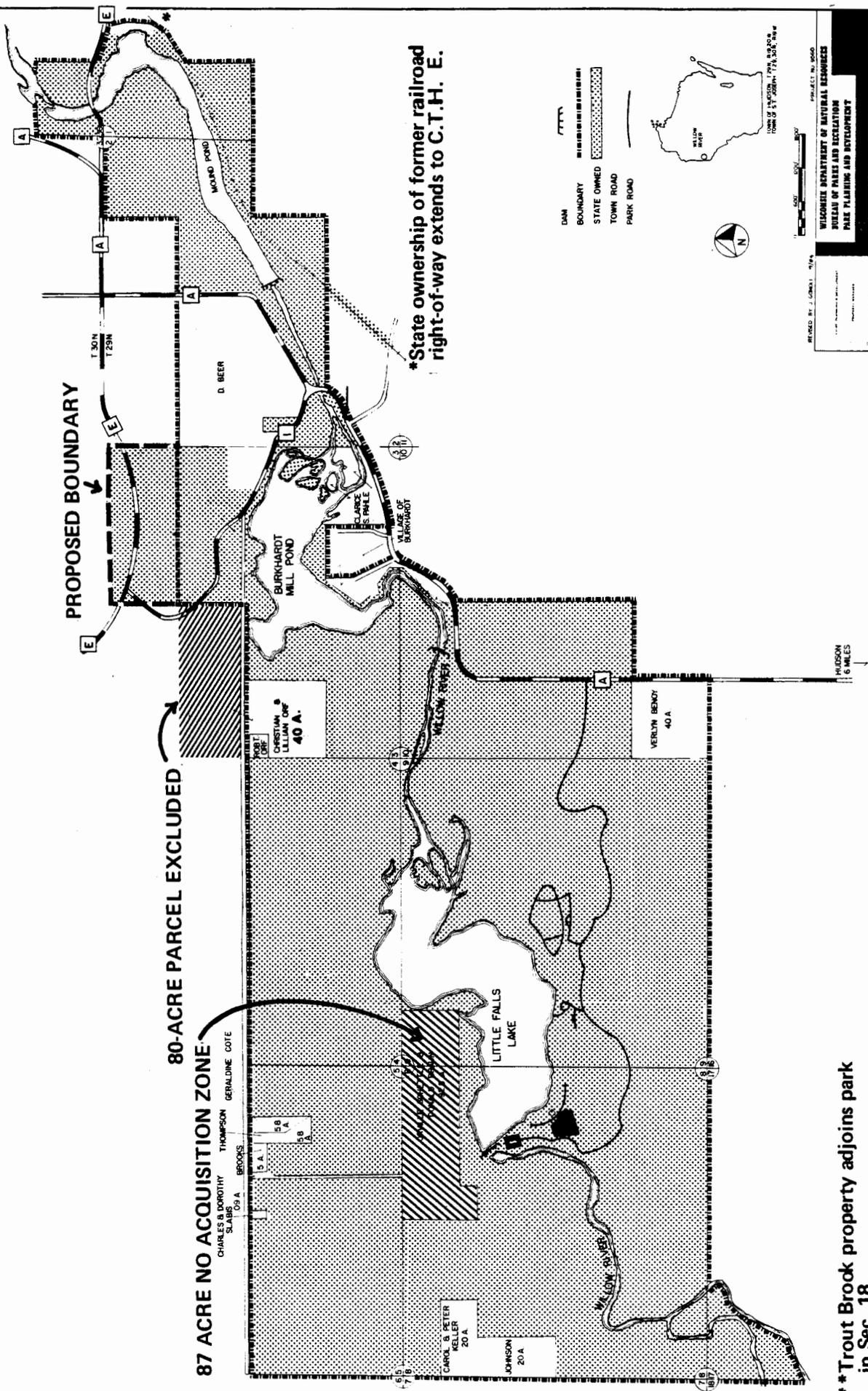
There are about a dozen private inholdings within the park boundary.

6. Public Involvement in the Master Planning Process

A 17-member citizens advisory group appointed by the Department participated in the preparation of the master plan for Willow River. A summary of their recommendations are in the appendix.

As part of the standard 45-day review process, the master plan was sent to 13 members of the public or organizations for comment. Copies were also sent to the St. Croix Library System in Hammond to be made available to persons who wished to review the plan.

The master plan was presented at two public informational meetings. The first was held May 20, 1982, in the St. Croix County Courthouse in Hudson with 20 citizens in attendance. The second meeting was held October 13, 1983, at the same location. Seventeen citizens attended this meeting.



PROPOSED BOUNDARY

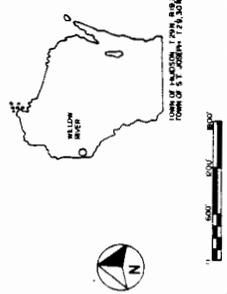
80-ACRE PARCEL EXCLUDED

87 ACRE NO ACQUISITION ZONE

***State ownership of former railroad right-of-way extends to C.T.H. E.**

**** Trout Brook property adjoins park in Sec. 18.**

- DAM
- BOUNDARY
- STATE OWNED
- TOWN ROAD
- PARK ROAD

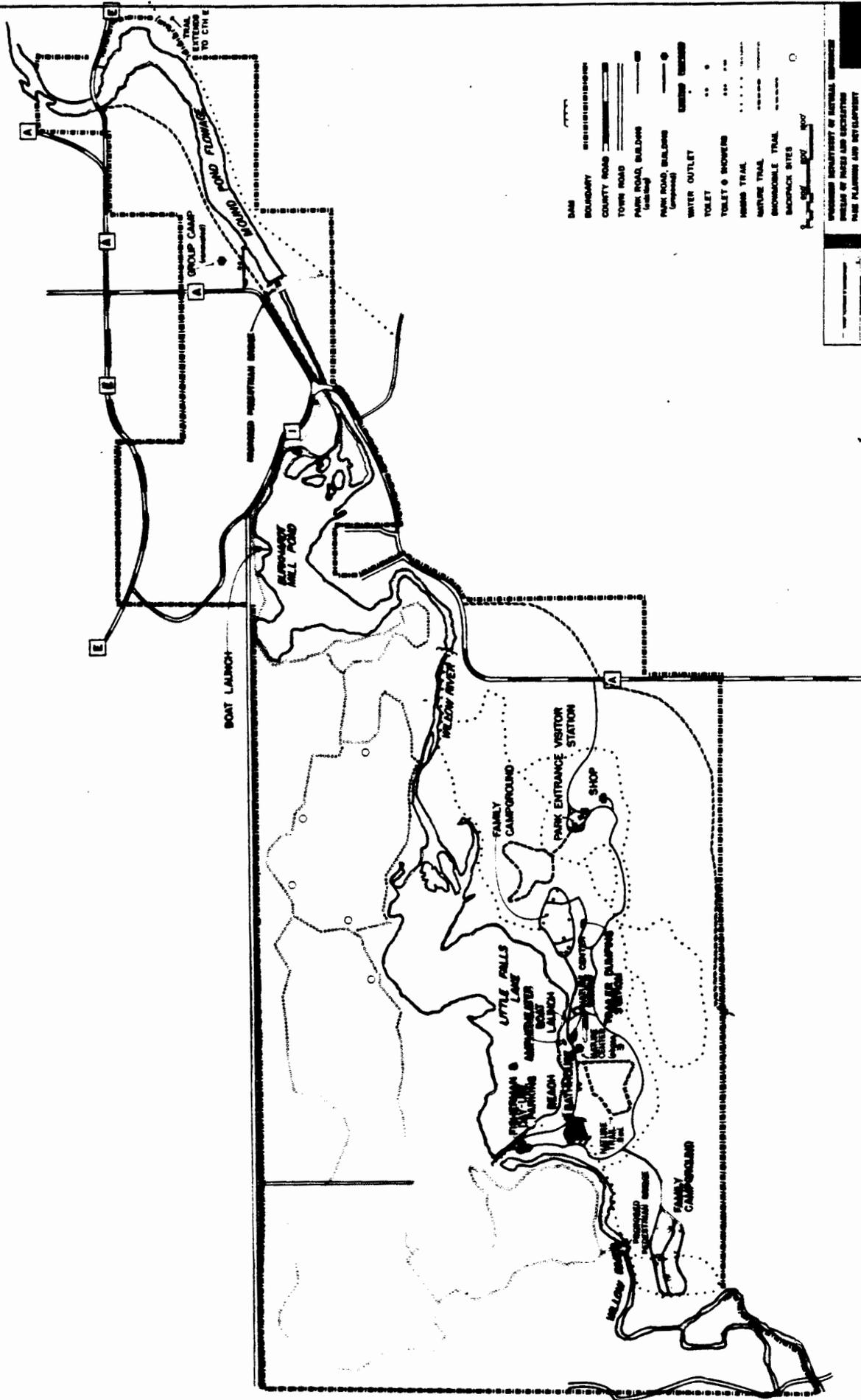


PROJECT NO. 5000
 WISCONSIN DEPARTMENT OF NATURAL RESOURCES
 BUREAU OF PARKS AND RECREATION
 PARK PLANNING AND DEVELOPMENT

DESIGNED BY: J. GOMOLL, 1974
 DRAWN BY: J. GOMOLL, 1974
 CHECKED BY: J. GOMOLL, 1974
 SCALE: AS SHOWN

WILLOW RIVER STATE PARK
 ST. CROIX COUNTY
 ACQUISITION OWNERSHIP MAP
 DRAWN BY: J. GOMOLL
 DATE: 5-78

ACQUISITION MAP FIGURE 2



DEVELOPMENT MAP—PRESENT & PROPOSED FIGURE 3

MAP SYMBOLS

VEGETATION TYPES

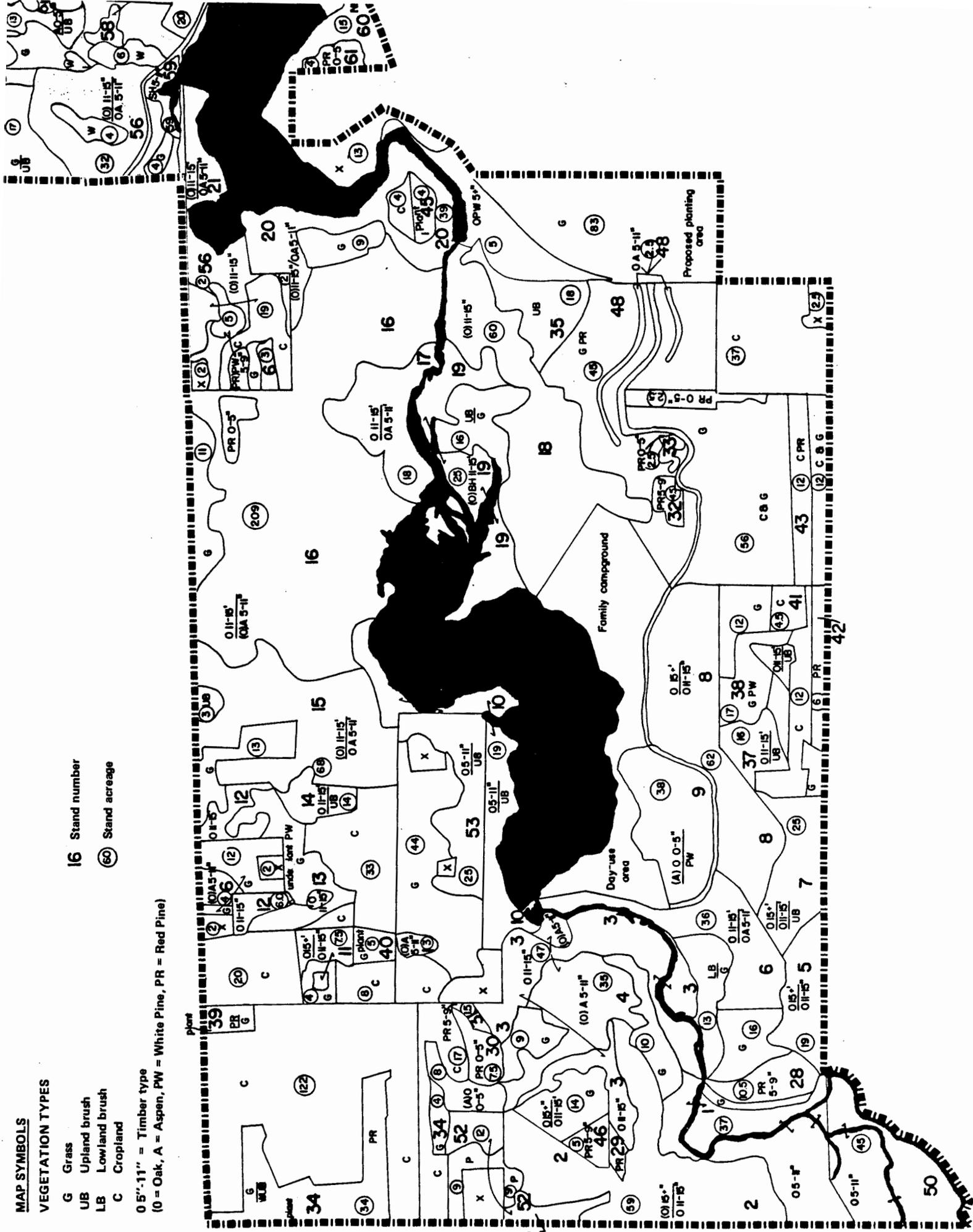
- G Grass
- UB Upland brush
- LB Lowland brush
- C Cropland

05"-11" = Timber type

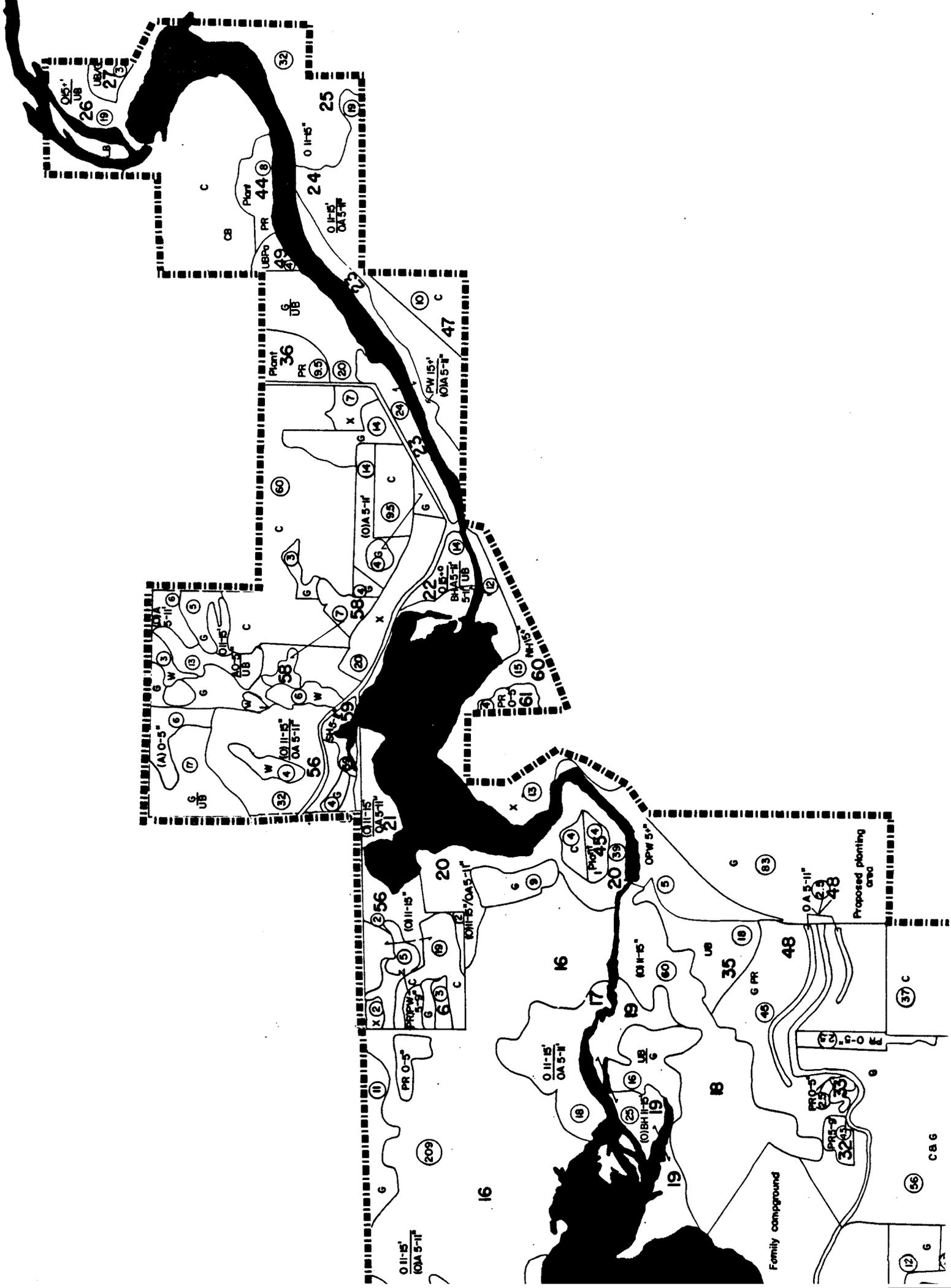
(0 = Oak, A = Aspen, PW = White Pine, PR = Red Pine)

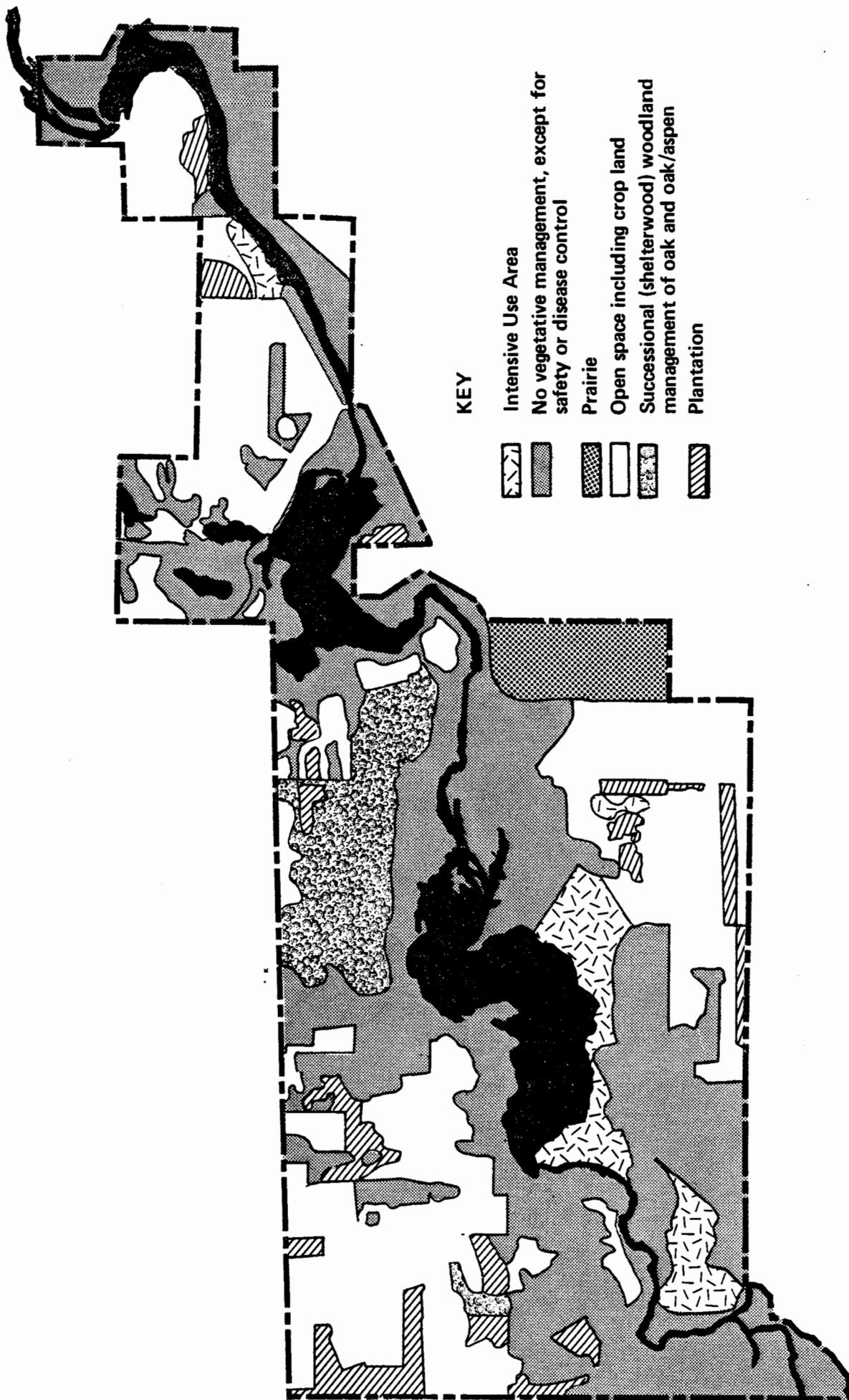
16 Stand number

(60) Stand acreage



Vegetative Cover Map Figure 4





Vegetative Management Map Figure 5

SECTION II - SUPPORT DATA

A. BACKGROUND INFORMATION

1. Location (Figure 1)

Willow River State Park is located within the Towns of Hudson and St. Joseph in St. Croix County. It is about 25 miles from the metropolitan Minneapolis/St. Paul area and about four miles from the City of Hudson. Major access to the park is provided by Interstate 94, located approximately 4 miles south of the property, and Highways 12 and CTH A, which connect the property to Interstate 94.

2. History of the Area

From the early settlement of the area until 1882, logs were driven down the Willow River to St. Croix Lake during periods of high water and with the aid of dams. During the mid- to late-1800's, people from Hudson would take small rowboats up to Willow Falls to fish and to have an enjoyable outing. Between 1885 and 1892, the State stocked thousands of trout in the Willow River for the enjoyment of all area people.

William Scott settled in the park area above the Willow Falls dam site in the 1850's. He lived there with his family and he, his wife, and three other unknown individuals are buried in the Scott cemetery near the old homestead.

Lumbering, farming, and milling were the major activities that took place on the river around Burkhardt and the state park property. In addition to this commercial enterprise, individuals would graze cattle, fish, trap, hunt, swim, and boat on the Willow River. It was known for its recreational attributes from the time the first settlers came across the river from Stillwater, Minnesota.

3. Chronology of Property's Establishment and Development

The state accepted the three dams (Little Falls, Willow Falls, and Mound Pond) from the Northern States Power Company in 1966. In addition, the State paid \$45,000 to the Power Company for 1,180.5 acres of land adjacent to the flowages in 1967. All other lands within the property boundary were acquired from private landowners. The park was established in 1967 under the ORAP program. Initial development was completed in 1972.

4. Past and Present Management Activities

Since its inception, the property has been managed for camping, picnicking, hiking, fishing, and nature education, as well as a variety of other activities. Presently, Willow River has 135 acres developed for intensive recreation. It has 17 acres of picnic area,

a 400-foot beach which covers about 3 acres, 452 parking stalls, 3/4 mile of nature trail, 7-1/2 miles of hiking and cross-country ski trails, a 72-unit campground, a 150-person capacity outdoor group camp, a concession, two boat launches, and 3 miles of road. Visitation in 1983 was almost 204,000 with 30,000 camper days.

B. RESOURCE CAPABILITIES AND INVENTORY

1. Geology

Most of the landscape of St Croix County consists of glacial drift underlain by dolomite limestone. The limestone bedrock crops out in a few areas throughout the County, mainly on the buttes and narrow ridges north of River Falls, along stream banks, and along the eastern and southeastern border of the County. In particular, the area of greatest geological interest is found immediately to the west of the middle dam (Willow Falls) where cliffs of lower magnesium limestone arise about 185 feet above the stream surface. This is one of the outstanding examples of this type of information. The area, in historical journals, is referred to as the Willow River Falls and according to reference sketches, was a very picturesque cascade through the limestone bluffs. The land north of the area is a moraine which is also geologically significant and would have great interest in future interpretation programs of the area.

Glacial outwash is stratified sand and gravel that was deposited by glacial meltwaters. Extensive areas of this material are found along the Willow River and are of nearly level to gently rolling slopes. Some of the areas of this outwash plain are pitted and hills and depressions are common. This uneven topography was caused by large blocks of stagnant melting ice that were buried in the outwash deposits.

2. Soils

There are four general soil types found within the Willow River property. The first is the Burkhardt-Chetek-Sattre association. The soils are well-drained and somewhat excessively drained, nearly level to steep, medium-textured and moderately coarse-textured soils on outwash plains and stream terraces. The second series is the Sattre-Pillot-Antigo association. These soils are also well-drained, nearly level to sloping with medium-textured soils on outwash plains and stream terraces. The third soil association is Amery-Cromwell. These soils are well-drained and somewhat excessively drained. They are gently sloping to steep, of medium texture, and moderately coarse-textured soils on glacial drift plains. The fourth soil series is located below Little Falls Dam and is composed of the Plainfield-Boone association. These soils are excessively drained, gently sloping to moderately steep, coarse-textured soils on outwash plains and stream terraces, and soils underlined by sandstone at a relatively shallow depth on uplands. All of these soils have moderate to very rapid permeability.

3. Climate

St. Croix County has a continental climate. Winters are long, cold, and snowy; summers are warm and occasionally humid; spring and fall are often short. Changes in weather can be expected every few days in fall and spring. The movement of the high and low pressure system from west to east brings a variety of weather throughout the year. Northwest winds prevail from November through April, and southeast winds prevail for the remaining months. Sun shines on the average of 65% of daylight hours from June through September, and about 40% for November and December, and between 50% and 60% for the remaining months. The average date of the last freeze in spring is May 14 and the first in fall is September 26. Approximately 65% of the annual precipitation falls during the five-month period of May through September. The amount of snowfall in a year has ranged from 80 inches in 1951 to 15 inches in 1931 and 1958. The average date that one inch or more of snow falls is November 15.

4. Water Resources

There are three flowages and several short sectors of the Willow River on the property which are managed for warmwater fish. The flowages include Little Falls Lake, 171.60 acres; Mill Pond, 99.8 acres; and Mound Pond, 56.9 acres. Nearly all of the Willow River (including the Race Branch) on the property is classified as trout water. The Willow River (below Little Falls Dam) is Class II trout water for 1.6 miles. The Willow River (Race Branch) is also Class II trout water for .7 mile. The Willow (below Willow Falls and Mound Pond Dam) is Class III trout water and includes .7 mile. Internal combustion engines are prohibited on Little Falls Pond; however, electric motors are allowed.

A significant annual harvest of several fish species is planned, including an estimated 1,224 trout, 534 largemouth bass, and 21,000 panfish. The primary aquatic life forms planned for management include several species of fish (brown trout, largemouth bass, smallmouth bass, bluegill, black crappie, and yellow perch). There are no endangered or threatened species of fish, amphibians, or mollusks known to be present on the property. Unidentified species of invertebrates such as mayflies, caddis flies, stoneflies, fresh water shrimp, clams, and crayfish inhabit the property waters. A relatively large number of fish species inhabit the flowages and streams on the property.

A list of fish species include brown trout, brook trout, rainbow trout, northern pike, walleye, smallmouth bass, largemouth bass, bluegill, black crappie, yellow perch, rock bass, green sunfish, pumpkinseed, black bullhead, brown bullhead, yellow bullhead, carp, greater redhorse, white sucker, golden shiner, common shiner, stone roller, bluntnose minnow, fathead minnow, central mudminnow, johnny darter, rainbow darter, mottled sculpin, blacknose dace, longnose dace, creek chub, hornyhead chub, and brook stickleback.

Most of St. Croix County is in the St. Croix River Basin which includes all or significant parts of eight counties in West Central and Northwestern Wisconsin. Groundwater moves constantly from areas of discharge, usually in the southwesterly direction towards the Mississippi River. Chief sources of groundwater in St. Croix County are sand and gravel deposits, the Prairie du Chien dolomite formation, and the upper part of the Cambrian age sandstone formation. The most extensive areas of sand and gravel are in the western half of the County, mainly along the Apple, St. Croix, and Willow Rivers. These are highly permeable superficial deposits that generally yield large quantities of water.

Generally, the water quality is good, but the water is easily polluted and the iron content is somewhat high. The depths of wells in the area range from 40 to 170 feet.

5. Vegetative Cover (Figure 4)

Before settlement, much of the area was apparently prairie. The steeper riverbanks on the lower areas along the river appear to have contained some fine white pine stands mixed in with hardwoods such as white and green ash and elm. The successional process resulted in rather extensive areas of black oak mixed with white and bur oak.

The predominant timber type now found in Willow River State Park is oak with intermingled stands of aspen. The major species are black oak, with lesser amounts of white and bur oak. Basswood is also present in some of the stands. The bottomland hardwoods consist primarily of black ash, silver maple, an occasional hackberry, and a few elm that have not yet succumbed to dutch elm disease. This type is relatively small in size. Oak wilt is a serious problem in oak types, but in many instances, this results in propagation and increase of basswood.

There is no remnant prairie remaining on the property, however, about 90 acres east of County Trunk A will be converted to prairie as part of Phase III development.

An endangered plant species, dotted blazing star (Liatris punctata) was identified in the park (NW1/4 SE1/4 of Section 9, T29N, R19W). As time and funds permit, a total inventory should be undertaken.

6. Wildlife

No wildlife species survey has been undertaken within Willow River State Park. Major species known to be present include white-tailed deer, cottontail rabbit, grey squirrel, various small mammals, songbirds, pheasants, mallards, and Canada geese. In addition, as funds and/or volunteer labor become available, an in-depth survey of mammals and birds of the property should be undertaken.

7. Site Inventory

There is about 1,270 acres of timberland within the park boundary. In addition, there are approximately 690 acres of idle and active agricultural fields. The upland and lowland brush areas amount to 107 acres. The intensively developed recreational facilities encompass 135 acres. Willow River Gorge, a natural area of less than state significance, is located in Section 3 and 10 of T29N, R19W. The remaining acreage is covered by the flowages and the river. This accounts only for the presently state-owned land.

8. Land Use Inventory (Figure 6)

Lands within the park are classified as intensive recreation development (IRD) and extensive recreation area (ERA). The intensive recreation development will encompass an estimated 250 acres upon completion of the proposed family campground, group camp, 12 miles of trail, and expanded day-use facilities. Currently, 135 acres are identified as intensive recreation development. The remaining lands will be classified as extensive recreation area. The Scientific Area Council has been contacted and they have not identified any sites for inclusion within the scientific area classification.

9. Historical and Archaeological Features

According to the State Historical Society, there are no known historical or archaeological sites in the park. However, this may simply reflect the fact that the park has not been surveyed for such resources. It was indicated that, based on their experiences elsewhere in St. Croix County, the park mostly likely does contain a number of prehistoric, archaeological sites. In addition, the remains of the mill and its water power system on the Willow River, as well as the William Scott residence, may be of some historical interest.

In view of the archaeological potential, the Historical Society recommends that prior to any ground disturbing activities within the park, the Department consult with their office to determine whether archaeological testing is warranted. It is recommended that a historical and archaeological survey of the park be undertaken, as such a survey would best provide information for future management of the park's historical and cultural resources.

C. MANAGEMENT PROBLEMS

1. Private Development Encroachment

The last five to ten years has seen a remarkable increase in rural residential development in the area surrounding the park. In particular, that area adjacent to the south property line is being developed into a large residential community. Some of the homes in this area are located within 50-100' of the park boundary. Many of

these homes are presently visible from the developed recreation areas, especially during the late fall, winter, and early spring months when the trees are devoid of foliage. In addition, it is anticipated that this home construction will increase along the south border of the property and have an impact on any major type developments such as campgrounds in the southern portion of the park. In anticipation of additional residential development, the Department, a few years ago, authorized expansion on the park boundary on the southeast side. This action did provide additional buffer for the contact station, shop, and various trails located in that area.

2. Hydroelectric Generation

The feasibility of producing electricity through restoration of hydroelectric generators on the Little Falls, Willow Falls, and Mound Pond Dams is being evaluated. Major concerns centering on water quality, trout habitat, water fluctuations, resulting impact on the beach, and scenic quality of the property, especially the Middle Falls area, will have to be evaluated and satisfactorily answered to mitigate any negative impact on the recreational or natural resource of the property.

3. Goose Impact on Picnic/Beach Area and Swimmer's Itch

Natural features combined with the refuge status of the park cause geese and mallards to use the areas as a resting place during migration. Canada geese and mallards are both reluctant to leave this area as it offers open water and nearby cornfields. This may be aesthetically pleasing to the spring and fall users of the park; however, larger concentrations of waterfowl frequently result in goose droppings on sandy beaches and on adjacent grass areas and can cause swimmer's itch. Geese also use the beach for grit and the grass for food.

One way to minimize these problems would be to remove the birds through hazing or other scare tactics. However, public resistance to the use of such tactics in the park may be anticipated. If such actions on the property's flowages are to be used as a management

tool, then methods will have to be worked out between the park manager, wildlife manager, and with the general public to minimize potential conflicts.

Substantial populations of furbearers currently exist within the property. At times, some of these have proven to be a nuisance. Beaver have damaged trees, raccoons have destroyed neighbors crops, muskrats have undermined banks, and skunks have bothered campers. To ease some of these problems and to stabilize populations, such animals will be controlled in accordance with provisions outlined in Manual Code 2371.2.

D. RECREATIONAL NEEDS AND JUSTIFICATIONS

1. Current and Projected Needs Analyzed from State Plan

The 1981 State Outdoor Recreation Plan for Region IV which includes Clark, Eau Claire, Chippewa, Dunn, Barron, Polk, and St. Croix Counties notes that there is a need for primitive campsites, hiking and biking trails, pleasure walking trails, cross-country ski trails, and public swimming beach frontage. By 1984, there will be a need for 740 additional primitive campsites, 184 miles of hiking trail, 81 miles of pleasure walking trail, and 370 miles of cross-country ski trail.

2. Current and Projected Needs as Defined in Local Plan

Participation data compiled by the West Central Wisconsin Regional Planning Commission for the 1976-80 St. Croix County Recreation Plan indicate that hiking, nature walking, and snow-skiing trails should be increased. Primitive campsites should be developed on the major river systems in the county.

Other recommendations noted in the Recreation Plan indicate that the number of campsites at Willow River State Park should be doubled, shelters should be constructed, hiking and cross-country ski trail mileage should be increased, especially on the north side of the park, development of a group tent camping area on Mound Pond Dam area should be considered, snowmobiling should be eliminated in the park and the property continue its fine maintenance improvement and general development.

The need for additional family campsites and group camp enlargement is further justified by the park camper occupancy rates and turnaway figures. From the Memorial Day weekend through Labor Day, the 72-unit family campground is 100 percent full on weekends, often filled by midweek, and about 60 percent full Monday and Tuesday. On the average, there are 50-60 turn-a-ways by phone per weekend during the summer season.

E. ANALYSIS OF ALTERNATIVES

1. No Additional Acquisition and No Additional Development

This alternative would provide no further acquisition or development. The Department would merely retain and manage the existing resource and recreational facilities. This alternative is not desirable since the property was acquired for recreational purposes in order to meet the needs as identified on a local, regional, and statewide basis. Since the property is at or near maximum user density as it applies to campgrounds, trails, and other day-use facilities, the lack of additional acquisition and development could lead to safety problems, undesirable user experience, and degradation of the resource.

2. Limited Additional Acquisition and Development

Through limited additional development of recreational facilities, such activities as hiking, primitive camping, group camping, and family camping, the property will be better able to meet the recreational and educational needs as identified in state, regional, and local outdoor recreation plans.

Proposed limited acquisition will protect fragile natural features, prevent encroachment, and provide access to present inaccessible Department lands.

3. Intensive Development on all Land Within Existing Boundary

This alternative would entail the development of additional day-use areas, campgrounds, and related facilities on the north side of the river. Two to three miles of two-way road, bridges, parking lots, toilets, wells, and other related facilities would be constructed. Although this option could be implemented in the future, the existing supply and demand data as found in the recreation plans and the lack of funds do not justify such development at this time.

4. Acquire Trout Brook Property (Figure 2)

A number of individuals and clubs such as Wild Heritage have recommended the acquisition of a property known as Trout Brook Hatchery. The area encompasses approximately 350 acres of land located along the Willow River from the existing west park boundary westward to Lake Mallalieu. The parcel is located entirely within Section 18, Hudson Township, T25N, R20-19W. The area has been zoned as recreational and lies within the flood zone. It was felt that acquisition of the property would ensure the future of the river as a recreational asset to the community and park system. The area is quite scenic and offers a variety of natural features which could be interpreted and added to the educational mission of the park. Additional evaluation of the property is being undertaken by the Scientific Area Preservation Council.

Summary of Recommendations
By the Citizens Participation Committee
For Willow River State Park Master Plan

Development

The committee was unanimous in its recommendation that the park be divided into two areas: (1) Those to be considered for development and (2) natural areas to be set aside and preserved. Those areas that have been recommended for natural areas are (see attached sketch):

- A - That area bounded north of the river at Little Falls Lake, down stream to Trout Brook Road, north on Trout Brook Road to River Road, east on River Road to the Mill Pond.
- B - Buffer zone on south side of Willow River from Little Falls Dam to Trout Brook Road.
- C - That area below Mound Dam to the bridge on Co. Tk. A.

It is also recommended that in the areas that are left for development, that it be done in a manner that will not detract from the natural aspect of the park.

The committee encourages: (1) Extensive soil and water management to bring under control those areas that now have soil erosion problems, (2) prairie restoration work in those areas that are now grasslands, (3) wildlife management that will provide for habitat and food sources to guarantee the future of wildlife within the park, (4) sound cold and warm water fish management that will provide for an increasing demand on this form of recreation, (5) forestry management should be practiced in those areas that are now wooded. Encourage planting for wildlife and decorative shelter belts. The committee does not recommend large tracks of plantings that would change the present aesthetics of the area. (6) Land that is now being used for agriculture should be continued. However, lease agreements should be worked out so that sound land management programs can be practiced.

Recreational Development

CAMPING

The committee recommends expansion of family long-term camping adjacent to that area that is presently developed. We did not set specific numbers, but will reserve that recommendation until such numbers are discussed with the DNR Master Plan Committee.

A problem now exists with camp ground garbage collection. The present system detracts from the area because of unsightly dumpsters and smell within the camping area. It is recommended that either a central site separate from the camping area be constructed or return to the practice of individual site garbage can collection.

Expansion of group camping at Mound area - Group camping areas should be of sufficient size to handle a Scout Jamboree. The committee feels that improvements such as a well and toilet facilities would encourage increased use of this area.

It is not recommended that the islands located at Little Falls Lake be used for remote camping - Because of the small area of these islands and the possible damage through long term use, this is not recommended.

It is the recommendation of the committee that a limited amount of outpost, no impact type camping be developed in the natural area north of the river. This access would be provided by a primitive trail system with a foot bridge crossing the river below Little Falls Dam.

A walk-in outpost group camping area be developed on the east side of the Mound Pond. This access could be provided by a trail from existing group camping area with a foot bridge crossing the river below the Mound Dam at the existing transmission line crossing.

Concern was expressed as to the possibility of increased fire risk with camping in the natural area.

TRAILS

It is recommended that improvements be made on existing trails to provide for more attractive cross country skiing. Widening of the trail to a two track system would provide for use by additional skiers. Rerouting of trails where hazards exist would encourage additional use by inexperienced skiers. This should also be taken into consideration when future trails are constructed within those areas designated for development.

The committee recommends expansion of trails in the following areas:

(1) Development of trail system in the gorge area of the high dam.

A - On the south side, a well developed trail that would provide safe access to the bottom of the gorge coupled with a scenic overlook. Construction of this trail should take into consideration access for the physical requirements of all age groups.

B - On the north side, a primitive trail with possible access from either a foot bridge or access from the Mill Pond Dam that would take in all the natural areas on the north side of the gorge.

(2) Development of a connection trail between the Little Falls area and the Mound area. This trail could also be used with the group walk-in camping recommended for the south side of the Mound Lake. We also recommend the acquisition of the CNW railway right of way for use as a trail.

Planning of bicycle trails so as to be consistent with those of Township and County.

Because of the nature of the soils and possible erosion problems, the committee does not recommend the development of horse trails in the park.

Environmental Education Center

The committee highly recommends that facilities be constructed to enhance environmental education in this area. This facility should provide for year round use and be of sufficient size to accommodate exhibits and group gatherings. Also, staffing with appropriate personnel to provide for an environmental education program to appeal to all age groups. Construction of this facility should be located so that parking and toilet facilities can be used in conjunction with other trail use such as skiing, hiking, etc.

To provide for the educational value of the excellent natural qualities of the park, we recommend the construction of a self-guided nature trail in the natural areas below the Little Falls Dam. Pamphlets and markers should be provided so that these qualities can be recognized.

Provisions For Handicapped

The committee strongly urges that provisions for handicapped go beyond those required by law and that in all areas, special construction be considered to enable them to participate in the recreational use of the park. Also, that the information provided by Mr. Weitkamp be studied and implemented wherever practical.

Development and Expansion of Other Activities

PICNIC AREAS

Construction of a group picnic area where access can be controlled and included in the reservation system. Also, that a covered structure be constructed of appropriate size to encourage use. Also, the inclusion of a well and electric facilities at this site.

The committee supports expansion of other recreational activities such as ball playing areas, volley-ball courts, horseshoe courts, playground areas, and construction of an archery range.

Fixed Facility Improvements

The committee has made recommendation for these improvements related to development of the park. The reconstruction of the compound curve is supported. All other construction should be consistent with the plan of recommended development.

Park Boundaries

Proposed changes (see attached sketches)

- A - Exclude that area north of the River Road east to the boundary of Orf and Durning property.

- B - Because of the value of the natural wet lands and it's relationship with adjoining park land, to complete that area known as Durning Slough. The area bounded by Co. Rd. I on west side north to Co. Rd. E, Co. Rd. E east to Durning-Beer property line, then south to existing park boundary. This area to be managed as a natural wet land area.
- C - Include the area downstream from Trout Brook Road to the head of Mallalieu Lake. Specifically that property now owned by Marie Rude and that area known as the Trout Brook Hatchery. This area has been zoned as recreational and lies within a flood zone and is consistent with the original idea of the park to preserve the valley as a natural area. Because of the fragile nature of the trout hatchery area it should be considered as a scientific area. Acquisitions of the properties in the flood zone would insure the future of the river as a recreational asset to the community and park system.
- D - Forty acre tract on the south edge of Burkhardt Mound. This would provide additional area for the group walk-in camping on the east side of Mound Pond.

Classification

The committee recommends the concept of a State Recreation Area. But, design, development and management should be done as to guarantee the integrity of the park as a natural area.

BIRDS OF WILLOW RIVER STATE PARK

Key:

M - Migrant T - Threatened
 R - Resident E - Endangered
 N - Nests here W - Winters here

Loons

Common Loon - M

Pelican

White - M

Cormorant

Double-Crested - MT

Gulls

Herring - M
 Ring-billed - M
 Franklins - M
 Bonapartes - M

Swan

Whistling - M

Geese

Canada - N
 Snow - M

Grouse

Ruffed - RN

Cuckoos

Yellow-Billed - N
 Black-Billed - N

Owls

Screech - R
 Great Horned - R
 Snowy* - M
 Barred - R
 Long-Eared - R
 Short-Eared - R
 Saw-whet - R

Swallow

Tree - N
 Bank - N

Plovers

Killdeer - N

Mergansers

Hooded - M
 Common - M
 Red-breasted - M

Vulture

Turkey - R

Hérons

Great Blue - N
 Green - N
 Cattle Egret - M
 Black Crowned Night - N
 Least Bittern - N
 American Bittern - N

Terns

Forster's - ME
 Common - ME
 Caspian* - M
 Black

Doves

Rock - R
 Mourning - N

Bobwhite - R

Pheasant

Ring-necked - R

Rails

Virginia - N
 Sora - N

Coot

American - N

Grebes

Pied-billed - N
 *Horned
 *Red-Necked

Sandpipers

American Woodcock - N
 Common Snipe - N
 Upland - N
 Spotted - N
 Gr. Yellowlegs - M
 Les. Yellowlegs - M

Hawks

Goshawk - R
 Sharp-Shinned - R
 Cooper's - RT
 Red-Tailed - R
 Red-Shouldered - NT
 Broad-Winged - M
 Bald Eagle - ME
 Marsh Harrier - R
 Osprey - ME
 American Kestrel - RN

Ducks

Mallard - N
 Black - N
 Gadwall - M
 Pintail - N
 Green-Wing Teal - M
 Blue-Wing Teal - N
 American Wigeon - M
 Shoveler - N
 Wood Duck - N
 Redhead - M
 Ring-necked - N
 Canvasback - M
 Greater Scaup - M
 Lesser Scaup - M
 Common Goldeneye - M

* = Published Record

	Coot - continued	Ducks - continued
Rough-Winged - N	Whippoorwill - N	Bufflehead - M
Barn - N		Ruddy - M
Cliff - N	Thrushes	Nighthawk
Purple Martin - N	American Robin - N	Common - N
	Wood - N	
Jays	Hermit - M	Swift
Blue - R	Swainson's - M	Chimney - N
	Gray-Cheeked - M	
Raven	Veery - N	Hummingbird
Common - R	Eastern Bluebird - N	Ruby-throated - N
Kinglets	Gnatcatcher	Kingfisher
Golden-Crowned - N	Blue-gray - N	Belted - N
Ruby-Crowned - M		
	Woodpeckers	Crow
Titmouse	Common Flicker - R	Common - R
Tufted - R	Pileated - R	
	Red-Bellied - R	Chickadees
Waxwings	Red-Headed - R	Black-Capped - R
Cedar - R	Yellow-Bellied Sapsucker - N	
	Hairy - R	Nuthatches
Wrens	Downy - R	White-Breasted - R
House - N		Red-Breasted - R
Winter - M	Shrikes	
Long-Billed Marsh - N	Northern - M	Flycatchers
Short-Billed Marsh - N	Loggerhead - MT	Eastern Kingbird - N
		Western Kingbird* - N
Catbird	Starling - R	Great Crested - N
Gray - N		Eastern Phoebe - N
	Vireos	Yellow-Bellied - M
Thrasher	Bells* - M	Alder - M
Brown - N	Yellow-Throated - M	Least - N
	Solitary - M	Eastern Wood Pewee - N
Warblers	Red-Eyed - N	Olivesided - M
Black & White - N	Philadelphia - M	
Prothonotary - N	Warbling - N	Lark
Worm-Eating* - M		Horned - N
Golden-Winged - N	Sparrows	
Blue-Winged - N	House - R	Blackbirds
Tennessee - M	Savannah - N	Bobolink - N
Orange-Crowned - M	Grashopper - N	E. Meadowlark - N
Nashville - M	Henslow's - N	W. Meadowlark - N
Northern Parula - M	Vesper - N	Yellow-Headed - N
Yellow - N	Dark-Eyed Junco - W	Red-Winged - N
Magnolia - M	Tree - W	North-Oriole - N
Cape May - M	Chipping - N	Rusty - W
Black-Throated Blue* - M	Clay-Colored - N	Brewer's - N
Yellow-Rumped - N	Field - N	Common Grackle - R
Black-Throated Green - M	White-Crowned - M	Brown-h. Cowbird - N
Cerulean - N	White-Throated - N	
Blackburnian - M	Fox - W	Tanager
Chestnut-Sided - N	Swamp - N	Scarlet - N
Bay-Breasted - M	Song - N	
Blackpoll - M		Longspur

Warblers - continued

Pine - M
Palm - M
Ovenbird - N
No. Water Thrush - M
Connecticut - M
Mourning - M
Common Yellowthroat - N
Yellow-Breasted Chat* - N
Hooded* - M
Wilson's - M
Canada* - M
American Reostart - N

Finches, etc.
Cardinal - R
R-br. Grosbeak - N
Indigo Bunting - N
Evening Grosbeak* - M
Purple Finch - W
Common Redpoll - W
Pine Siskin - W
Americal Goldfinch - R
Red Crossbill - M
White-w. Crossbill - M
Rufous-S. Towhee - N

Lapland - W
Bunting
Snow - W

REPTILES & AMPHIBIANS
OF
WILLOW RIVER STATE PARK

Snakes

DeKay's Storeria dekayi
Red-Bellied Storeria occipitomaculata
Garter
 Eastern Thamnophis ordinatus
 Plains Thamnophis radix
Blue racer Coluber constrictor constrictor
Hog-nosed Heterodon platyrhinos
Milk Lampropeltis triangulum triangulum
Fox Elaphe vulpina
Bull Pituophis melanoleucus sayi
Northern Banded Watersnake Natrix sipedon sipedon
Green (smooth) Opheodrys aestivus
Northern Ring-Necked
Prairie Ring-Necked

Turtles

Common Snapper Chelydria serpentina
Spiny soft shelled Amyda ferox
Painted terrapin Chysemys picta
False map Graptemys pseudogeographica
Map turtle Graptemys geographica
Blanding's Turtle Emydoidea blandingi T
Wood Turtle Clemmys insculpta E

Lizards

Five-Lined Skink
Prairie Skink
Fence Lizard
Six-Lined racerunner

Amphibians

Mudpuppy
American Toad
Common Tree Frog
Gray's Tree Frog
Spring Peeper
Cricket Frog
Chorus Frog
Leopard Frog
Green Frog
Bull Frog
Wood Frog
Pickerel Frog
Tiger salamander
Spotted salamander
Red-Backed salamander
Blue-Spotted

FISH OF WILLOW RIVER STATE PARK

Petromyzontidae - Lamprey Family

- Lethenteron lamottei - Brook lamprey
- Ichthyomyzon unicuspis - Silver lamprey
- Ichthyomyzon fossor - No. Brook lamprey
- Ichthyomyzon castaneus - Chestnut lamprey

Amiidae - Bowfin Family

- Amia calva - Dogfish

Lepisosteidae - Gar Family

- Lepisosteus osseus - Longnose gar

Clupeidae - Herring Family

- Dorsoma cepedianum - Gizzard shad

Salmonidae - Salmon Family

- Salmo trutta fario - Brown trout
- Salmo gairdneri - Rainbow trout
- Salvelinus fontinalis - E. Brook trout

Umbridae - Mud Minnow Family

- Umbra limi - Central mudminnow

Esocidae - Pike Family

- Esox lucius - Northern pike

Catostomidae - Sucker Family

- Lctiobus cyprinellus - Largemouth buffalo fish
- Catostomus catostomus - E. longnose sucker

Cyprinidae - Minnow Family

- Cyprinus carpio - Carp
- Campostoma anomalum - Stoneroller
- Rhinichthys cataractae - Longnose dace
- Semotilus atromaculatus - Creek chub
- Chrosomus eos - No. redbelly dace
- Clinostomus elongatus - Redside dace
- Hybognathus hankinsoni - Brassy minnow
- Hybosis biquittata - Hornyhead chub
- Notropis cornutus - Common shiner
- Notropis spiloterus - Spotfin shiner
- Notropis atherinodes - Emerald shiner
- Notropis heterolepis - Blacknose shiner
- Notropis stramineus - Sand shiner
- Notropis hudsonius - Spottail shiner

Ictaluridae - Catfish Family

- Ictalurus natalis - Yellow bullhead
- Ictalurus nebulosus - Brown bullhead
- Ictalurus melas - Black bullhead

Gasterosteidae - Stickleback Family

- Culea inconstans - Brook stickleback

Percopsidae - Trout Perch Family

Percopis omiscomaycus - Trout perch

Atherinidae - Silversides Family

Labidesthes sicculus - Brook silversides

Centrarchidae - Sunfish Family

Micropterus salmoides - Largemouth bass

Micropterus dolomieu - Smallmouth bass

Pomoxis nigromaculatus - Black crappie

Ambloplites rupestris - -Rockbass

Lepomis cyanellus - Green sunfish

Lepomis macrochirus - Bluegill

Lepomis gibbosus - Pumpkinseed

Percidae - Perch Family

Perca flavescens - Yellow perch

Stizostedion vitreum vitreum - Walleye

Percina caprodes - Log perch

Etheostoma caeruleum - Rainbow Darter

Etheostoma exile - Iowa darter

Cottidae - Sculpin Family

Cottus bairdi - Northern sculpin

Cottus cognatus - Slimy sculpin

MAMMALS OF
WILLOW RIVER STATE PARK

Opossum
Northern Water Shrew
Pigmy Shrew
Shorttail Shrew
Starnose Mole
Eastern Mole
Little Brown Bat
Silver Haired Bat
Eastern Pipistrel
Red Bat
Big Brown Bat
Hoary Bat
Raccoon
Least Weasel
Shorttail Weasel
Longtail Weasel
Mink
River Otter
Badger
Striped Skunk
Red Fox
Gray Fox
Woodchuck
Thirteen-Lined Ground Squirrel
Eastern Chipmunk
Eastern Gray Squirrel
Eastern Fox Squirrel
Red Squirrel
Southern Flying Squirrel
Northern Flying Squirrel
Plains Pocket Gopher
Beaver
White-Footed Mouse
Deer Mouse
Meadow Vole
Prairie Vole
Muskrat
Norway Rat
Meadow Jumping Mouse
Woodland Jumping Mouse
Snowshoe Hare
Whitetail Jackrabbit
Eastern Cottontail
Whitetail Deer

MRT027

CORRESPONDENCE / MEMORANDUM

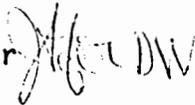
STATE OF WISCONSIN

DATE: November 7, 1984

In Reply Refer To: 2510

TO: Richard Lindberg - FOR/4

FROM: David Weizenicker



SUBJECT: WRAC Comments on Willow River State Park Master Plan

This is in response to the Council's comments on the Willow River Master Plan.

Comment #1 - The Council did not, however, agree with the picnic area recommendations made by the Citizen's Participation Committee; considering them to be largely out of character with the plan's emphasis on protection and enhancement of the park's natural features.

Department Response: Some of the Citizen's Participation Committee's recommendations were accepted by the Department, some were not. The Department also felt that most of the picnic area recommendations were inappropriate for Willow River. (The Participation Committee recommended ball playing areas, volleyball courts, horseshoe courts, playground areas, and an archery range.)

Comment #2 - A single Council recommendation calls for an archaeological investigation into the area focusing on Indian history and whatever remnants of their civilizations that might remain. A description of Indian history could be an exciting addition to the proposed program.

Department Response: Although there is no record of historical or archaeological sites in the park, the State Historical Society believes, based on their experiences elsewhere in St. Croix County, that such sites probably exist in the park.

In view of the archaeological potential, the master plan does recommend that a historical and archaeological survey of the park be undertaken.

We thank the Council for its review of the Willow River Master Plan.

DJK:sjh:3352L

cc: J. Treichel - P&R/4
→ D. Kulhanek - P&R/4
J. Lissack - Eau Claire

CORRESPONDENCE / MEMORANDUM

STATE OF WISCONSIN

DATE: November 6, 1984

In Reply Refer To: 2510

TO: Cliff Germain - ER/4

FROM: David Weizenicker

D. Weizenicker

SUBJECT: SAPC Comments on Willow River State Park Master Plan

This is response to the Council's comments on the Willow River Master Plan.

As recommended by the Council, the Willow River Gorge Natural Area was mentioned in the Site Inventory Section of the master plan on page 12.

In response to the main concern of the Council, the Vegetative Management Section was re-written, minimizing the vegetative management proposals in areas other than the intensively developed recreation areas of the park. A large portion of the park is now designated as no vegetative management except for safety or disease control. Areas recommended for some type of management include the pine plantations, about 150 acres of oak and aspen to be maintained for wildlife, a proposed prairie restoration area, and open areas, some of which will be sharecropped. Tree and shrub plantings are also recommended.

The above proposals are more in line with the new vegetative management policy for parks soon to be finalized.

We thank the Council for reviewing the Willow River Master Plan.

DJK:sjh:3348L

cc: J. Treichel - P&R/4

→ J. Kulhanek - P&R/4

J. Lissack - Eau Claire



The State of Wisconsin

NOV 7 1983

SCIENTIFIC AREAS PRESERVATION COUNCIL

Box 7921
Madison, Wisconsin 53707

November 4, 1983

IN REPLY REFER TO: 1750

Mr. David Weizenicker
Bureau of Parks & Recreation
Department of Natural Resources
Madison, WI 53707

Dear Dave:

We have reviewed the Willow River State Park Concept Master Plan and wish to offer several comments.

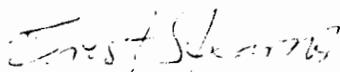
We are aware of one natural area of less than state significance (Willow River Gorge) located in Section 3 and 10 of T29N R19W. This should be mentioned in the plan.

Our main concern is with the recommended forest management proposed especially in the extensive recreation area zone. We understand the need to use limited forest management techniques in intensive recreation zones. However, the third paragraph on page 5 of the plan recommends, "an intensive forest management program to insure healthy timber stands for present and future generations to enjoy while at the same time to produce income for the state". This recommendation and the more detailed stand recommendations in Appendix D appear to be a significant departure from state park management procedures.

It is our understanding that state parks are managed to provide opportunities for enjoyment of natural features, which exist generally without intensive management. The natural succession and perturbations which occur in forest communities without direct management intervention in our opinion provide diverse and interesting natural landscapes. We believe the general public also expects that natural processes will rule in our state parks as in national parks.

Since the current management guidelines for extensive recreation zones in parks seems to be subject to various interpretations, we urge that the Department obtain both internal and external review to clarify policy for Department property managers.

Cordially,


Forest Stearns
Chairman

CG:dj

Date: November 4, 1983

File Ref: 1430

To: Dave Weizenicker - P&R/4

From: R. Lindberg *RL*

Subject: WRAC Review of Willow River State Park Master Plan

The Council was very pleased with this plan even though the property is without wild resources potentials. The Council did not, however, agree with the picnic area recommendations made by the Citizen's Participation Committee; considering them to be largely out of character with the plan's emphasis on protection, ^{and} recognition and enhancement of the park's natural features.

A single Council recommendation calls for an archaeological investigation into the area focusing on Indian history and whatever remnants of their civilizations that might remain. A description of Indian history could be an exciting addition to the proposed program.

RL:jn

District or Bureau: WCD
Docket Number:
Type List Designation: NR 150.03(2)(E)4

ENVIRONMENTAL ASSESSMENT

Applicant: State of Wisconsin Department of Natural Resources

Title of Proposal: Willow River State Park Master
Plan/Conceptual Element

Location: St. Croix County
Township 29 & 30 N, Range 19W
Sections 1, 2, 3, 4, 5, and 36, St. Joseph
Township, and portions of Sections 8, 9,
10, and 17, Hudson Township
Political Town: St. Joseph & Hudson

PROJECT SUMMARY

1. General Description (brief overview)

This environmental assessment is based on the provisions of the 1983 conceptual master plan prepared for Willow River State Park. Basically, the plan identifies Willow River as a state recreation park and it shall remain thus. The management and development alternatives selected for the property allow for moderate increased use and development. It is anticipated that the use will increase approximately 25% during the next 10-year period following the approval of the master plan and subsequent addition of new facilities. A wide range of traditional activities is offered including: camping, swimming, boating, fishing, picnicking, hiking, nature study, and related day-use activities.

The master plan identifies the proposed development, management, and land control (land acquisition) scheduled for the park.

Development

Over the next ten years, minimal new development and a number of major building maintenance items are proposed for Willow River State Park. This would provide for a full complement of recreational facilities, as well as provide for the protection and preservation of the natural environment. Recreational facilities to be expanded include: new family campground (80-100 sites), primitive

walk-in campsites, and group camp redevelopment. Additional day-use facilities are also proposed. Items included in this category are: expanded picnic area, additional shelters, more cross-country ski trails, upgrading existing trails and trail-head development, pedestrian bridges crossing the river, trails north of the river, additional playground equipment, volleyball court, horseshoe court, and other related day-use playground apparatus.

Nature interpretation and education will be stressed on the property and therefore facilities such as the nature center, amphitheater, and self-guided nature trails will be constructed. Vegetative management will include prairie restoration, landscape planting in the intensive use areas and extensive area planting and cutting. Miscellaneous actions will include erosion control and use of agricultural lands within the property. In addition, minor renovation of existing day-use areas will be implemented. Horseback riding, use of off-road vehicles and snowmobiles will not be allowed in the park due to the potential erosion they create and the other overall damaging effects that they have on the fragile natural resources of the property. However, the existing snowmobile trail, which serves as a connector to an established trail outside the park, will be continued until such time as an alternate out-of-park route can be developed.

Management

The park is the responsibility of the Willow River Work Unit Manager. Present personnel needs include three permanent positions and 16 LTE's (including one naturalist). Equipment and repair facilities needed for Willow River are used in conjunction with operations in the rest of the work unit.

As a unit of the Wisconsin state park system, Willow River has been developed and managed under Chapter 27, Laws of Wisconsin, specifically, Section 27.01, which governs state parks. The property is also managed under the provision of Wisconsin Administrative Code 45, which contains the rules of the Wisconsin Department of Natural Resources pertaining to the conduct of visitors at state parks, state forests, and other properties under the jurisdiction of the Department.

Lands within the park are classified as intensive recreational development (IRD) and extensive recreation area (ERA). The intensive recreation development will encompass an estimated 250 acres upon completion of the proposed family campground, group camp, 12 miles of new trail, and expanded day-use facilities. Currently, 135 acres are identified as intensive recreation development land. The remaining property is classified as extensive recreation area. The Scientific Area Council has been contacted and they have not identified any sites for inclusion within the scientific area classification.

Land Control

As of March 21, 1983, state ownership at Willow River State Park was 2,740.06 acres. It is recommended that the current park boundary be revised to exclude one 80-acre parcel. This leaves 389.63 acres of privately owned land to be purchased within the new revised property boundary. The new acreage goal for Willow River will be 3,130 acres.

The Department of Transportation (DOT) proposes to realign CTH "A" between the park entrance and the Village of Burkhardt. The Department is currently working with the Highway Department to resolve any conflicts and address 6F concerns.

2. Purpose and Need (include history and background as appropriate).

Willow River was established as a state recreational park in 1967 under the Outdoor Recreation Action Program (ORAP). The state accepted three dams (Little Falls, Willow Falls, and Mound Pond) from the Northern States Power Company (NSP) in 1966. In conjunction with this, the state acquired 1,180.5 acres of land around the three Willow River flowages from the power company for a price of \$45,000.00. Additional land was acquired from private landowners to complement this initial acquisition and to provide space to develop needed recreational facilities. Initial development was completed in 1972.

The master plan narrative is being prepared in accord with Natural Resources Board and Department policy. The primary purpose of this conceptual master plan is to guide the development, operations, and maintenance of the property for the next 10 years and provide recreational facilities

to accommodate approximately 275,000 annual visitations for day use and 60,000 camper days. Activities offered at the property include: camping, picnicking, hiking, swimming, fishing, general nature study and education and a variety of other day use activities.

The 1981 State Outdoor Recreation Plan (SCORP) for Region IV which includes: Clark, Eau Claire, Chippewa, Dunn, Barron, Polk, and St. Croix Counties, notes that there is a need for primitive campsites, hiking, biking, pleasure walking, and cross-country ski trails, and public swimming beach frontage. By 1984, there will be a need for 740 additional campsites, 184 miles of hiking trail, 81 miles of pleasure walking trail, and 370 miles of cross-country ski trail.

Participation data compiled by the West Central Regional Planning Commission for the 1976-80 St. Croix Recreation Plan indicates that hiking, nature walking, and snow skiing trails should be increased. Primitive campsites should be developed on the major river systems in the County. Other recommendations noted in the outdoor recreation plan indicate that the number of campsites at Willow River should be doubled, shelter should be constructed, hiking and cross-country ski trail mileage should be increased (especially on the north side of the park), development of a group tent camping area on Mound pond area should be considered, snowmobiling should be eliminated in the park, and the property should continue its fine maintenance, improvements, and general development. Also, the need for additional family campsites and group camp enlargement is further justified by the park camper occupancy rates and turnaway figures.

3. Authorities and Approvals (list statutory authority and other relevant local, state and federal permits or approvals required)

Statutory authority to initiate - Section 27.01 of Wis. State Stats.

Permits or approvals required: Natural Resources Board and Governor.

All development as identified in the master plan will comply with applicable state and local zoning requirements. Bridges, erosion control structures, etc. will be constructed according to provisions in NR 1.95, 30.10, 31.23, and 320. The boat launch ramp will be placed and approved in accord with Section 30.12 of the Wisconsin State Statutes, the support dock will be constructed in

accord with Section 30.13 which allows riparian landowners to construct such docks and, finally, construction of rest room facilities (in the proposed family and group camp area) will be in accord with H63 and all other township or St. Croix County zoning ordinances will be complied with.

4. Estimated Cost and Funding Source

The total estimated development cost, based on 1983 figures, is \$875,000. ORAP, LAWCON, and other funds will be used as they become available.

PROPOSED PHYSICAL CHANGES

5. Manipulation of Terrestrial Resources (include relevant quantities - sq. ft., cu. yds., etc.)

The proposed family campground (80-100 units) will be constructed on a site which encompasses approximately 27 acres. The area is approximately 50% old field grassland and 50% forestland, including oak, oak aspen, and red pine stands. The campground road system will entail the construction of approximately 900-foot of two-way road (24 feet wide) and 5200 feet of one-way road (12 feet wide). As the proposed site is relatively flat, only minor grading will be needed to construct this road system. In addition, an estimated 8 acres of trees will have to be cut to accommodate the road system and camp spur development (spurs 12 x 50'). The plan also calls for the construction of two toilet buildings (one with shower). Each structure will encompass approximately 800 square feet. These facilities will also have multi-thousand gallon capacity septic tanks and fields to accommodate the effluent generated by the campground users. Excavation for the foundations, septic tank and drain field should be in the neighborhood of several hundred cubic yards. This material will be spread on-site and graded and landscaped to improve surface drainage and eliminating the hauling of surplus soil. Minor excavation will be needed to lay waterlines and electric lines to provide water fountains and electrical service to approximately half of the campsites.

Similar to the family campground, development of the group camp will entail limited cutting of brush and young trees and minor grading at the individual sites and central activity area. The over all development will cover approximately five acres. The site will have to be excavated to accommodate an 8-unit combination vault toilet, well, and shelter building construction.

Approximately 100 cubic yards of material will be excavated and worked into the site and landscaped. Swails and existing drainage patterns will not be interrupted. This site and the family campground will be reseeded with turf grass and planted with a variety of deciduous native shrub and tree species. The 20 primitive campsites will be located north of the river. The sites will be located in a cluster approximately 100 feet apart and be serviced by a centrally located pit toilet. Each site will be cleared of brush and graded as needed to accommodate a pup tent or similar camping structure.

The remaining development items include: limited tree and shrub removal and/or pruning, limited grading, and revegetation. These activities will take place around the proposed temporary trailer-nature center and amphitheater, on existing trails (to upgrade the facilities), in areas adjacent to existing picnic and day use facilities, at the boat launch areas adjacent to Mill Pond and Mound Pond in order to enlarge those sites, at the primitive outpost walk-in campsites, in and adjacent to erosion control structures, in and adjacent to shelter sites, and at the future permanent nature center and amphitheater site.

Some tree removal and planting will take place as needed for the health, safety, and welfare of the park visitor, and to provide shade and screening at various campground and day-use areas. In addition, some vegetative clearing and pruning will occur to create vistas along trails and at various overlooks located throughout the property. Extensive area vegetative management will be in accord with forest management recommendations. That proposal can be found in its entirety in the Appendix of the conceptual master plan. Basically, the plan calls for selective harvest, removal of dead, dying, and diseased trees, limited clear-cutting, firewood sales, planting and harvest of pine plantations, pruning and thinning, and under-planting various hardwood stands with white pine and white ash. In addition, a site of approximately 80 acres east of the existing County Trunk "A" will be worked up and converted to prairie. Prescribed burns will be used to manage the vegetation in the area. As with the other developments and actions proposed for this park, aesthetics and visual considerations will be kept in mind to reduce the impact of any action, either singularly or in combination with other actions.

Marginal agricultural lands presently under cultivation (149 acres) will continue to be cropped on a per-year rental basis. However, the long-term proposal is to eliminate these farming practices as the thin, sandy soils are highly susceptible to erosion and are of minimal fertility and productivity. These lands will then either be allowed to return to grasslands with successional stages leading to woody vegetation or they will be planted according to recommendations made in the forest management proposal.

6. Manipulation of Aquatic Resources (include relevant quantities - cfs., acre feet, MGD, etc.)

It is proposed that a boat ramp be located on the north end of Mill Pond at the site of the existing boat launch area and parking lot. The Department's Fish Management Section is presently undertaking a trout habitat improvement project on one and one-half miles of the Lower Willow River and Race Branch. The project includes the installation of half logs, bank covers, rock revetments, and single-wing deflectors. Debris is being removed from the stream channel and dead elm trees are being cut down and removed from adjacent stream banks. The project also calls for long-term maintenance measures to be included to protect the trout stream.

Trout stocking will be continued on the property waters in the foreseeable future. Rough fish contracts may be issued to commercial fishermen to remove the rough fish from the three flowages if these fish become overabundant. Some warm-water fish habitat improvement measures may be initiated on Little Falls Flowage and Mound Pond. The measures would involve the placement of fish shelters, the result being increased numbers of fish. Any water flow manipulation or in-stream structures built by Fish and Wildlife Management will consider park interests and concerns. The proposed fishing pier will entail the construction of a wooded deck and railing located on the bank of Little Falls Lake near the existing day-use area. This structure will provide shoreline fishing access for people with limited mobility, such as those confined to wheelchairs, as well as all other park visitors.

7. Buildings, Treatment Units, Roads and Other Structures

The proposed family campground calls for the construction of 80-100 campsites. Development items include asphalt roadway including 900 feet of 24-foot wide two-way road and approximately one mile of 12-foot wide one-way road. The campsites will include a 12' X 50' long gravel-surfaced spur and 35-foot diameter grass-surface pad for setting up tents and other camping units. Two flush toilet buildings approximately 800 square feet each will be constructed. One of these toilet buildings will also include shower stalls and laundry facilities. Wells and water system will be needed for the projected six water fountains to be located throughout the campground. In addition, electrical conduit will be needed to service approximately half of the campsites. One off-season 8-unit combination sealed-vault pit toilet will also be constructed in a central location in that campground for off-season use. Its size is approximately 20' X 20'. The toilet structures call for a multi-thousand square foot septic field and appropriate size septic tank.

Group camp facilities entail the construction of one, eight-unit combination vault toilet, one well and hand pump, and a 20' X 40' shelter. The temporary nature center is located in a 14' X 70' trailer which has been located on a site between the beach day use area and boat launch. A stage and wood seats will be constructed for the amphitheater which is to be located adjacent to this nature center. Long-range plans call for the construction of a permanent nature center and amphitheater facility. Self-guided nature trails will be constructed in association with these interpretive facilities.

Modifications to the contact station are proposed to increase operational efficiency and revenue collection. Work will include remodeling one exterior wall, installing glider windows for better visibility, installing a drive-up-type window, and reconstructing the interior counter. Also, the firewood storage building, 12' X 14', is to be constructed in a place where wood can conveniently and economically be sold to park visitors.

The addition of a portable wall is needed at the bath house/concession building in the main day use area to provide an enclosed shelter for cross-country skiers in the winter. In addition, the boat launch on Mill Pond will be renovated to provide better lake access and parking. This will consist of regrading and graveling the parking area, and installing concrete or asphalt ramp.

Upgrading the existing trail system will entail minor surfacing with gravel or other material, placement of water diversion structures, and the correction of any eroded areas.

Shelters are to be located within the existing day-use area and near the fishermen's parking lot. The shelters will be approximately 20' X 40' in size and should have electrical outlets, lights, and possibly fireplace and wall on three sides to accommodate winter use.

Other items to be completed during phase 1 development include construction of erosion control structures near the existing campgrounds, trails, day-use areas, and within any extensive areas as needed. Corrective measures may entail the placement of riprap rock, log walls, or larger, more complex structures as specified by engineering or Soil Conservation Service personnel. Other items include the placement of playground equipment in the existing day-use area and proposed campground, expand existing boat launch parking lot by 20 stalls for nature center and amphitheater parking, providing additional picnic tables and grills, and constructing miscellaneous facilities such as signs, bulletin boards, fencing, bike racks, etc.

Phase 2 development will include the construction of 12 additional miles of trail located on the north side of the Willow River Flowage, construction of two pedestrian bridges crossing the Willow River (one below Little Falls Dam; one below Mound Pond Dam), surfacing the 100 vehicle capacity overflow parking lot in the existing day-use area, redeveloping approximately 200' of entrance road southwest of the shop, developing 20 primitive walk-in outpost camps north of the Willow River Flowage, constructing additional erosion control structures as needed, placement of playground equipment, placement of miscellaneous support facilities such as picnic tables, grills, etc.

A permanent nature center building and amphitheater is proposed during phase 3 to enhance the educational value of the area. The facility will provide for year-round use and be of sufficient size to accommodate exhibits and group gatherings. The facility will be located so that the parking and toilet facilities can be used in conjunction with other trail uses such as skiing, hiking, etc. Phase 3 will also see the continuation of intensive area planting and renovation and/or replacement of various recreational facilities.

8. Emissions and Discharges

Proposed additional development and subsequent use of the property is not expected to significantly affect Wisconsin's air quality. However, some local noise and pollution might be expected during construction due to the use of heavy equipment and disruption of surface conditions. Vehicular traffic is expected to increase about 7% into and through the area within the next 10 years and this will add to the noise and potential air pollution. These emissions, however, are not expected to significantly affect the ambient air quality. Fossil fuels and lubricants consumed by construction equipment and those used for labor activities and fabrication of materials will be consumed and will result in some CO₂ emissions. Secondary emissions and discharges will be created through fuel and electricity used to operate the facility. In addition, some emissions of particulates and gasses can be expected during the control burn of the proposed prairie area. This management tool which will be used every two to three years, will be done in accord with Department policies and procedures.

9. Other Changes

Lands within the park will be classified as intensive recreation development (IRD) and extensive recreation area (ERA). Intensive recreation development will encompass an estimated 250 acres upon completion of the proposed family campground, group camp, 12 miles of additional trail, and expanded day-use facilities. The remaining 2,880 acres will be classified as extensive recreation area and be managed according to guidelines found under that classification.

The Department of Transportation (DOT) proposes to realign County Trunk "A" between the park entrance and the Village of Burkhardt. This action will necessitate a land trade between the DOT and the Department of Natural Resources. The exchange will include parcels of land of equal size and value and will also call for the obliteration of the existing County Trunk "A" roadbed.

Renovation and repair of the dams was the subject of a separate Environmental Assessment. It is reasonable to expect that, with this work completed, under ordinary conditions little other than routine maintenance will be required during the 10-year period of this work plan.

Certain private interests are still evaluating the feasibility of generating power at the three dams located within Willow River State Park. These interests have been apprised of Department concerns and minimum standards and conditions which must be met if the dams are to be used for power generation. We are awaiting the outcome of the feasibility report and any subsequent proposals.

10. Attach Maps, Plans and Other Descriptive Material as Appropriate (list)

1. Locator Map
2. Development Map
3. Ownership Map

AFFECTED ENVIRONMENT

Information Based On (check all that apply):

- Literature/correspondence
 Personal Contacts (list in item 31)
 Field Analysis By: Author, Other (list in item 31)
 Past Experience With Site By: Author,
 Other (list in item 31)

11. Physical (topography - soils - water - air - wetland amounts and types)

The topography of the park ranges from nearly level to gently sloping to very steep. The area of the park north and east of Hudson is described as end moraine with pitted outwash areas having complex topography consisting of narrow ridges, hills, and depressions. Most of the landscape of St. Croix County consists of glacial drift underlined by dolomitic limestone. The glacial outwash is stratified sand and gravel that was deposited by glacial meltwaters. Extensive areas of this material are found along the Willow River and are of nearly level to gently rolling slopes. Some of the areas of this outwash plain are pitted and hills and depressions are common.

Soils within Willow River State Park are of four general types. The first is the Burkhardt-Chetek-Sattre association. These are well drained and somewhat excessively drained, nearly level to steep, medium-textured, and moderately coarse-textured soils on outwash plains and stream terraces. The second soil series is the Sattre-Pillot-Antigo association. These soils are also

well-drained, nearly level to sloping with medium-textured soils on outwash plains and stream terraces. The third soil association is the Amery-Cromwell. These soils are well-drained and somewhat excessively drained. They are gently sloping to steep of medium to moderately coarse textured soils on natural drift plains. The fourth soil series is located below Little Falls Dam and is composed of the Plainfield-Boone association. These soils are excessively drained, gently sloping to moderately steep, coarse-textured soils on outwash plains and stream terraces and are underlined by sandstone at a relatively shallow depth on uplands. All of these soils have moderate to very rapid permeability.

There are three flowages and several short sectors of the Willow River on the property which are managed for warm-water fish. The flowages include Little Falls Lake (171.60 acres), Mill Pond (99.8 acres), and Mound Pond (56.9 acres). Nearly all of the Willow River (including the Race Branch) on the property is classified as trout water. The Willow River (below Little Falls Dam) is Class II trout water for 1.6 miles. The Willow River (Race Branch) is also Class II trout water for .7 miles. The Willow (below Little Falls and Mound Pond) is Class III trout water and includes .7 miles.

According to the St. Croix County Soil Survey, the groundwater quality is generally good within the County; however, it is easily polluted and the iron content is somewhat high. The depth of wells within the park area range from 40-170 feet. Air around the park and Hudson area meets the primary and secondary ambient air quality standards, based on data obtained at the monitoring station located in Hudson.

Due to the nature of the impoundments and moderate to rapid permeability of the soils, very little wetland occurs on the property. The few scattered wet spots and areas adjacent to some of the flowages may be classified as marsh (approximately 40 acres).

12. Biological

a) Flora

Before settlement, much of the area was covered with prairie. The steeper riverbanks and adjacent lowlands appear to have contained some fine white pine stands mixed

in with hardwoods such as white and green ash and elm. The successional process resulted in rather extensive areas of black oak mixed with white and bur oak.

The predominant timber type now found in Willow River State Park is oak with intermingled stands of aspen. The major species are black oak, with lesser amounts of white and bur oak. Basswood is also present in some of the stands. Oak wilt is a serious problem in the oak types but, in many instances, this results in the propagation and increase of basswood. The bottomland hardwoods consists primarily of black ash, silver maple, and occasional hackberry. A limited amount of elm is also present but it is dying off due to Dutch Elm disease.

There is no remnant prairie remaining on the property; however, the 80 or so acres east of County Trunk "A" should be converted to prairie through manipulation and management. There are no known rare, unique, or endangered plant communities within the property boundaries. However, as time and funds permit, a total inventory should be undertaken.

b) Fauna

Common wildlife species and furbearers include: whitetail deer, cottontail rabbit, gray squirrel, red fox, raccoon, muskrat, beaver, and various small mammals. A large variety of songbirds, pheasants, mallards, and Canadian Geese are present. In addition, as funds and/or volunteer labor become available, an in-depth survey of mammals and birds of the property should be undertaken.

13. Social/Economic (include ethnic and cultural groups, and zoning if applicable)

The property is located in a rural setting where adjacent land use is changing from agricultural to rural residential. This is occurring due to the relatively close proximity of the area to the Minneapolis St. Paul metropolitan region. Remaining agricultural lands are used for crops, pasture, and woodlot. Areas directly adjacent to the property on its south and west boundary are developed with rural homesites. Primary access to the park is provided by Interstate 94, Highway 12, and County Trunk Highway "A."

All revenues collected from the sales of admission stickers and campground registration fees are remitted to a segregated fund from which operation and maintenance are partially subsidized. Willow River is one of the state parks that takes in more revenue than it expends on operations and maintenance.

According to the 1980 Wisconsin Camper Survey conducted by the University of Wisconsin Recreation Resources Center Extension, camper spending had a very substantial economic impact on the local economy. The report stated that "hypothetically, a 100-site campground with 45% occupancy over 100-day season would generate \$216,000 of direct community spending and an additional \$168,000 in indirect spending. This is assuming a multiplier of 1.7. Furthermore, almost 10 full- or part-time jobs could be supported by such spending in a community in 1980."

14. Other Special Resources (e.g., archaeological, historical, endangered/ threatened species, scientific areas, natural areas)

According to State Historical Society personnel, there are no known historical or archaeological sites in the park. However, this may simply reflect that the park has not been surveyed for such resources. It was indicated that, based on past experience elsewhere in St. Croix County, the park may contain a number of prehistoric or archaeological sites. In addition, the remains of the mill and its water power system on the Willow River may be of some historical interest. In view of the archaeological potential, the Historical Society recommends that prior to any ground disturbing activities within the park, the Department consult with their office to determine whether archaeological testing is warranted. They also suggest that the Department may want to consider undertaking a historical/archaeological survey of the park as such a survey would best provide information for future management of the park's historical and cultural resources.

ENVIRONMENTAL CONSEQUENCES (probable adverse and beneficial impacts including indirect and secondary impacts)

15. Physical (include visual if applicable)

Proposed new development and major building maintenance recreational will have limited impact on the property. Use is expected to increase approximately 25% over the next 10-

year period; however, based on the existing and proposed facilities. This increase should not overtax the man-made or natural resource. Maintenance of the area, its man-made features, and vegetative cover should maximize user enjoyment and perceptions, as well as provide some diversity of habitat.

Development of the proposed campground, trails, and other support facilities will cause some minor disruption to the soil, mainly through exposure and compaction during the construction phase. Farther away from these specific developments, soils would be affected by such things as compaction caused by maintenance equipment and foot traffic. Maintenance practices will be utilized to guard against destruction of ground cover which may result in erosion or other detrimental effect to the resource.

Development plans call for additional planting of trees and shrubs for shade, screening, and space definition in areas such as the campground, group camp, and day-use areas. Refer to item #16, page 16, for other vegetative management proposals.

In the extensive areas of the property, all tree harvesting activities will be done with aesthetics in mind. Visual impact will be reduced in highly visible areas through the designation of aesthetic zones in such areas as along roadways or along the river. Buffer strips, irregular cut boundary lines, and other techniques will be utilized to reduce the visual impact of cutting and development activities.

Development and use of the property is not expected to significantly affect Wisconsin's air quality. However, some local noise and air pollution might be expected during construction due to the use of heavy equipment and disruption of surface conditions. Some increase of vehicular traffic into and through the area will add to noise and potential air pollution. These emissions, however, are not expected to significantly affect the ambient air quality.

Interstate 94, Highway 12, and County Trunk Highway A provide immediate access to the property. The highways should easily accommodate the expected 7% increase in traffic volume over the next 10 years.

16. Biological

The number and type of plant species at Willow River State Park will change somewhat due to natural succession, interruption of succession, cutting and planting of various plant stock. Removal of dead and dying trees will occur to ensure a healthy timber stand and ensure visitor safety. Some vegetative clearing and brushing will occur to create vistas in use areas and along trails and overlook sites. This would entail some tree removal, limb cutting, and occasional mowing to keep down woody growth. Timber harvest will occur on the small pine plantations located throughout the property and on the hardwood stands as outlined in the Forest Management Report. As the dominant vegetative cover is removed from cut areas, accelerated growth of the remaining vegetation is expected. In addition, revegetation will be fostered through underplanting and new planting such as called for in the few proposed pine plantation stands. Disrupted land near construction sites will be reseeded and planted with native tree and shrub species, as well as a variety of ground covers to guard against erosion and provide the user with shade and other amenities associated with vegetative cover.

Hiking trails and primitive campsites on the north side of the river will increase the disturbance of those species that are timid and not well adapted to humans. Species that would be affected are such things as coyotes and fox. However, most species present in the Willow River Park are already well adapted to human disturbance. They should not be noticeably affected. Some species such as deer will use the trails as travel lanes and, if seeded to grass and legumes, as feeding areas.

Development of more camping facilities south of the river will increase use of the already heavily used part of the park. This will slightly reduce deer use, some songbirds, and small mammals. A few others that learn to beg a meal from campers (chipmunks) may increase. Once again, however, the type of disturbance will be nothing new to the resident wildlife, and most species should adapt fairly well.

The trout habitat improvement and maintenance projects proposed by Fish Management for the Lower Willow River and Race Branch will maximize fish numbers, health, size, and result in a better fisheries. In addition, rough fish will be removed from the flowages as needed and fish habitat

improvement measures will be initiated on Little Falls Flowage and Mound Pond as available to ensure the health and vigor of the fisheries and provide sport fishing. No stocking of warm-water fish such as largemouth bass, walleye, or northern pike is anticipated except for maintenance purposes where flowages may have experienced severe drawdown and/or flooding.

17. Social/Economic (include ethnic and cultural groups and zoning if applicable)

Expansion and improvement of parks facilities will result in better service to the public. Providing the additional family campground and group camp area will serve to meet some of the need as identified in local, regional, and state outdoor recreation plans. The facilities will also increase campsites utilization and length of stay and, therefore, will increase camping revenue. This should also mean more dollars for the local economy based on information presented within the 1980 Wisconsin Camper Survey. Providing a nature center, amphitheater, and additional nature and hiking trails will increase the educational mission of the property and provide the user with more information about their natural environment and Department programs being undertaken to safeguard those and other resources.

Enlarging, remodeling and, in some instances, replacement of obsolete facilities should also increase park user satisfaction and lead to increased use and duration of stay. This, in turn, will provide economic benefits through increased park admission sticker and campsite rental sales. It is expected that the park will continue to generate local commercial sales for such things as gasoline, picnic and camping supplies, and related items. If the proposed development projects are implemented, at least \$850,000 will be put into the regional economy. Proposed land acquisition will cause a shift from private open space (much of which is being developed for rural residential homes) to public open space with the resulting availability of land for public recreation and enjoyment. Tax loss will be negligible as the state makes payments in lieu of property tax on lands it owns. These payments do decline over 10 years to a minimum of 50¢ per acre.

On the land remaining to be purchased, there are 3 farms, 24 homes, and approximately 12 subdivided lots. It is the State's policy to acquire any land within the boundary from willing sellers. If the landowner desires to sell his residence, relocation assistance is available.

There are five management problems worthy of discussion:

1. Private Development Encroachment

The last five to ten years has seen a remarkable increase in rural residential development in the area surrounding the park. Many of these are highly visible from the present developed recreation areas, especially during the late fall, winter, and early spring months when the trees are devoid of leaves. Very little, other than planting evergreens, can be done to screen these structures after they are erected. Therefore, high priority will be set on acquiring lands within the park boundary which may be used for future development of rural residential homes.

2. Private Inholdings

There are perhaps 24 private inholdings within the property. Of major concern are those located just north of Little Falls Lake. At present, there are a number of homes built on lakeside lots and these homes are highly visible in the day-use area and campground. Storage of private boats and other recreation equipment has occurred on the shores of Little Falls. Due to these and other conflicts originating from the location of these homes, it is proposed that all remaining lots within the subdivision purchased by the state to guard against additional conflicts.

3. Hydroelectric Generation

The feasibility of producing electricity through restoration of hydroelectric generators on the Little Falls, Willow Falls, and Mound Pond Dams is being evaluated. Major concerns center on what effect electricity generation would have on water quality, trout habitat, water fluctuations, resulting impact on the beach, and scenic quality of the property, especially the Little Falls Area. These concerns must be evaluated and satisfactory solution must be provided to mitigate any negative impact on the recreational or natural resource of the property.

4. Goose Impact on Picnic/Beach Area and Swimmers Itch

Natural features combined with the refuge status of the park cause geese and ducks to use the area as a resting place during migration. Large concentration of these waterfowl frequently result in droppings in the lake, on the sandy beach, and on adjacent grass areas and can cause swimmers itch. A management technique will have to be instituted to eliminate this problem. One means of eliminating this condition would be to remove the birds from the area through hazing and/or scare devices. However, public resistance to use of such tactics in the park may be anticipated. If such actions on the property flowages are to be used as a management tool, the methods will have to be worked out between the park manager, wildlife manager, and with the general public to minimize potential conflicts and misunderstandings. Another means of reducing the swimmers itch is to chemically treat the beach area to eliminate the snails which act as an intermediate host of the organism that causes swimmers itch.

5. North Side Access - User Fee Collection

Presently, the park provides a boat launch and fishing access parking lot on the north side of Mill Pond. No fees are charged at this facility, yet fees are collected for parking at the lot located on Mound Pond near the group camp. The Department should institute a uniform policy requiring a vehicular sticker for all of these areas.

18. Other Special Resources (e.g., archaeological, historical, endangered/ threatened species, scientific areas, natural areas)

The State Historical Society will be informed of all development proposals and the sites will be surveyed and evaluated prior to initiating any construction in those areas.

Protection will be provided for endangered and threatened species that may be found to inhabit or migrate through the park. Guidelines of Manual Code 2328.1 will be followed.

19. Probable Adverse Impacts That Cannot be Avoided

Increased presence of man within the park may mean some interference with wildlife habitat and plant damage. The construction stage will expose some soil to water and wind erosion. Some dirt and noise will also be created during construction. Air pollution emissions to the atmosphere will increase slightly due to increased auto traffic into and out of the area. Some minor grading will take place around construction sites; however, this will only minimally alter existing topography and drainage patterns. Some soil erosion could occur at construction sites; however, this will be minimized through the use of appropriate erosion control techniques. Increased use will possibly increase the need for public services such as police and fire protection, as well as medical attention. Gasoline and other fuels will be consumed by people coming to the park and by maintenance vehicles used in the park. Traffic will increase on the County Trunk Highway leading to the property; however, this increase is minimal and therefore is not expected to have a great effect on traffic volume.

ALTERNATIVES (no action - enlarge - reduce - modify - other locations and/or methods)

20. Identify, describe and discuss feasible alternatives to the proposed action and their impacts. Give particular attention to alternatives which might avoid some or all adverse environmental effects.

No Additional Acquisition and No Additional Development

This alternative would provide for no further acquisition or development. The Department would merely retain and manage the existing resource and recreational facilities. This alternative is not desirable since the property was acquired for recreational purposes in order to meet the needs as identified on a local, regional, and statewide basis. Since the property is near maximum user density as it applies to campgrounds, trails, and other day-use facilities, the lack of additional acquisition and development could lead to safety problems, undesirable user experience and degradation of the resource.

Limited Additional Acquisition and Development

Through limited additional development of recreational facilities, such activities as hiking, primitive camping, group camping, and family camping, the property will be better able to meet the recreational and educational needs

as identified in state, regional, and local outdoor recreation plans. In addition, the development of a second family campground will increase the revenue generating capabilities of the property.

Proposed limited acquisition will protect fragile natural features, prevent encroachment, and provide access to present inaccessible Department lands.

Intensive Development on all Land Within Existing Boundary

This alternative would entail the development of additional day-use areas, campgrounds, and related facilities on the north side of the river. Two-three miles of two-way road, bridges, parking lots, toilets, wells, and other related facilities would be constructed. Although this option could be implemented in the future, the existing supply and demand data as found in the recreation plans and lack of funds do not justify development at this time.

Acquire Trout Brook Property

A number of individuals and clubs such as Wild Heritage have recommended the acquisition of a property known as the Trout Brook Hatchery. The area encompasses approximately 350 acres of land located along the Willow River from the existing west park boundary westward to Lake Mallalieu. The parcel is located entirely within Section 18, Hudson Township, T25N, R20-19W. The area has been zoned as recreational and lies within the flood zone. It is felt that the acquisition of the property would ensure the future of the river as a recreational asset to the community and park system. The area is quite scenic and offers a variety of natural features which could be interpreted and add to the educational mission of the park. However, due to the present Board policy and budget restrictions, it does not appear feasible to acquire the property at this time. Additional evaluation of the property is being undertaken by the Scientific Area Preservation Council.

Alternative Sites for Proposed Family Campground

There are two main categories of criteria or factors to consider when designating an area for campground development. These are the physical aspects of the land itself and the camper preferences in choosing a particular site. The proposed 80-100 unit family campground will be located south of the Willow River for the additional operational efficiency and greater security associated with

registering at the existing office before entering the park's developed use area. The high cost of constructing a bridge and roadway connecting to the area north of the Willow River Flowage and the existing park road prohibits any additional facilities presently being placed in this area.

By limiting the potential developable land to that area south of the Willow River Flowage, site characteristics such as steep topography, erodable soils, vegetative cover, and small wetland areas place limits on where a +25 acre campground can be located. In addition, such items as: operations efficiency associated with layout, length and cost of access road, impact on wildlife, proximity to existing facilities, need for driving a vehicle from the campground to the beach and day-use area vs. walking, and visibility of the facility must be taken into consideration.

The 1980 Wisconsin Camper Survey compiled by the University of Wisconsin, Extension Resources Center identified DNR camper preferences in choosing a campground. "When asked what was the most important consideration when choosing a campground, the aspects mentioned were sites, bathrooms, cleanliness, recreation activities, and facilities. Level, shady, well-drained, spacious, and private were used to describe the most important characteristics when choosing a campsite. Large, well-spaced sites, excellent scenery, clean facilities, nature trails/interpretive programs, and helpful, cheerful attendants were characteristic of items most desired in state parks." Taking all of these conditions into consideration, there are only two potential sites which best meet user desires and provides sufficient space and site characteristics to allow efficient construction and operations.

The first is the site south and west of the existing beach day-use area as identified on the development plan. The second site is located to the north and east of the existing campground. Both sites are relatively flat and consist of Hubbard loamy sand on 0-5% slopes, Plainfield loamy sand on 2-6% slopes, and small amounts of Fluvaquents which consist of nearly level, somewhat poorly drained soil. The sediment ranges from sandy loam to silty clay loam but in most places it is stratified silt and fine sand underlain by loose sand at a depth of 3-5 feet. The Hubbard and Plainfield sands have slight limitations for septic tank absorption fields, dwellings with basements, and local roads and streets. They are well suited for road

fill. The Fluvaquents, on the other hand, have severe limitations for septic tank absorption fields, dwellings with basements, and local roads and streets. Therefore, these areas will be avoided and site-specific soil samples will be taken to determine where facilities can be located.

Both sites also consist of approximately 50% old field grassland and 50% oak, oak aspen, and limited pine plantation. The site southwest of the beach can be reached easily and provides few obstacles to construction. The site northeast of the existing campground entails routing the entrance roads over very steep topography which will result in much cut and fill, removal of vegetative cover and possible fill on the periphery of a wetland. Besides the impact on the natural resource, such construction would be much more expensive than that associated with developing a campsite southwest of the day-use area.

Other concerns regarding impact on wildlife, the river, flowages, their shoreline, and fishery are also taken into consideration. The blue-winged warbler has been observed in the area northeast of the existing campground and there is some concern about destruction of its habitat. There is also some concern about user impact on the Willow River below Little Falls Dam which may be contributed to by human activity if the campground is located southwest of the existing day-use area.

Placing the campground northeast of the existing family campground may in fact displace the blue-winged warbler; however, there is similar habitat north of the Willow River across from this site and therefore the true impact is unknown. Potential impact created by campers on the Willow River and its fishery below Little Falls, if the campground is located southwest of the existing day-use area, could be mitigated by providing a minimum of 500-foot buffer strip between the campsites and the river. In addition, there is a natural buffer created by a small wet area which would be located between the north boundary and the shoreline of the Willow River.

Due to its natural features and amenities it offers potential campers, the site southwest of the existing day-use area, is proposed for development of the new family campground.

Other sites besides these two were also inspected and analyzed for their potential as a family campground site. However, due to their natural features such as steep slopes and resulting lack of developable land, high potential soil

erodability, lack of tree cover, and small size, which would lead to small, inefficient campground units, these sites were not found feasible for development. Additionally, the alternative sites had the following negative characteristics: close to residential development, need for long entrance road, lengthy interior road to serve limited number of sites, and poor potential traffic pattern. Thus, these sites were not considered practical for development.

EVALUATION (discuss each category. Attach additional sheets and other pertinent information if necessary.)

21. Secondary Effects: As a result of this action, is it likely that other events or actions will happen that may significantly affect the environment? If so, list here and reference their discussion in items 15-18 as appropriate.

Providing a new family campground and group camp area will increase the use of the park to the point where park revenues will be increased and secondary economic benefits will be realized by the local economy. Upgrading and enlargement of the day-use facilities will also increase use and have secondary economic benefits. This additional use will generate traffic into the area and increase use of local roads.

22. New Environmental Effect: Does the action alter the environment so a new physical, biological or socio-economic environment would exist? If so, list here and reference their discussion in items 5-10 or 15-18 as appropriate.

The proposed development action will not result in a significant change to the social, physical, or biological environment of the property because similar facilities and recreational activities have been provided on the property since 1972.

23. Geographically Scarce: Are the existing environmental features that would be affected by the proposed action scarce, either locally or statewide? If so, list here and reference their discussion in items 15-18 as appropriate.

Willow River State Park is one of three state parks located along the St. Croix River in western Wisconsin and therefore would probably not be considered scarce on a regional or statewide basis. However, the park is heavily used by Minnesota and Wisconsin residents and therefore removal from the Wisconsin state park system would have a detrimental impact on users.

24. Precedent: Does the action and its effect(s) require a decision which would result in influencing future decisions? Describe.

The action is not precedent setting as similar management practices and programs discussed throughout the master plan are being carried out on a statewide basis. There are over 50 other state parks in the state being managed similarly to Willow River State Park.

25. Controversy: Discuss and describe concerns which indicate a serious controversy or unresolved conflicts concerning alternative uses of available resources.

Reduction or elimination of the goose and duck population from the Little Falls Flowage is somewhat controversial. Management practices will have to be formulated between the park manager, wildlife specialist, and the general public to guard against conflicts and controversy.

Locating the proposed family campground is somewhat controversial in that there are many resource and user considerations which must be addressed. Efforts will be made to accommodate and provide for user desires, guard against environmental degradation and mitigate to the extent possible known and anticipated negative impacts.

26. Consistency With Plans: Does the action conflict with local or agency zoning or with official agency plans or policy of local, state or federal government (e.g., NR 1.95)? If so, how? Refer to applicable comments in item 31.

No conflicts are known or became evident during the initial planning and review process. This project is in accord with local, county, and state outdoor recreation plans.

27. Cumulative Impacts: While the action by itself may be limited in scope, would repeated actions of this type result in major or significant impacts to the environment?

Additional actions of this type would generally upgrade existing state park properties. Due to the location of the proposed development and modification of existing buildings, there should be little significant impact on the natural environment.

28. Foreclose Future Options: Is the action irreversible? Will it commit a resource (e.g., energy, habitat, historical features) for the foreseeable future?

Some fuel, wear and tear on the machinery, and depletion of resource materials is nonrecoverable as is the manpower utilized in the planning, construction, and operation of the park. Fuel and other energy sources used to power vehicles to and from the park would be irretrievable. Similarly, energy used to maintain the property would be permanently committed. Funds used to develop the area will be irretrievably committed as well. For all practical purposes, roads, parking lots, and buildings will be permanently committed and the materials will be basically unsalvageable. However, land covered by these facilities could be retrievable as roads are often obliterated, regraded and revegetated. Abandoned building foundations are also often removed and the resulting site is often regraded and revegetated.

29. Socio-cultural Impacts: Will action result in direct or indirect impacts on ethnic or cultural groups or alter social patterns?

No, the park is open all ethnic and cultural groups.
 Yes, refer to item 17.

- 30) Other:

None

LIST OF AGENCIES, GROUPS AND INDIVIDUALS CONTACTED REGARDING THE PROJECT (Include DNR personnel and title)

31. Date	Contact	Comments
10/28/81	Mike Ries, Park Planner	Meetings, correspondence and Hydropower generation on Willow River reservoirs.
02/17/82	John Nesvold, Park Supt.	
10/81	Ken Johnson, WRZ	
10/81	Cliff Germain, Research	Scientific Area input into Willow River State Park master plan. Finding: no suitable area for scienti-

		fic, natural, or wild area designation due to limited land base and resource.
04/26/82 08/25/82	Eugene Ruetz, Forestry Bruce Moss, Wildlife Mgr. Bert Apelgren, Fish Mgr. Gary Olson, Real Est.	planning as it pertained to resource topics, work assignments, drafting goal and objectives statements, and formulation of general conceptual master plan document.
03/09/82 04/16/82 05/06/82	17-Member Citizen Participation Master planning advisory group	Mike Ries & various task force members met with and solicited recommendations from the advisory group. Various recommendations incorporated in master plan document.
03/20/82	General public/master plan meeting	Reviewed, discussed, and accepted comments regarding acquisition, development, and management of Willow River State Park.
05/20/82	Mark Bergland, Assistant Professor of Biology, UW-River Falls	Comments on Blue-winged Warbler
01/13/82	Mark Kubler, Asst. Supt.	Information regarding historical and/or cultural resources within Willow River State Park, what's present and inspection needs.

10/20/82	Bureau of Parks	Submittal of initial conceptual master plan draft.
03/83	Bureau of Parks	Conceptual master plan revisions generated by Board's new policy on hunting and trapping within state parks.
03/30/83	Gary Lepak, WRZ	Discussed statutes covering placement of structures in bed of navigable waterway, Section 30.12, and others.
03/31/83	Tom Woletz, Dist. Air Eng.	Provided air quality data for park and environs.

Project Name: Willow River State Park County: St. Croix

RECOMMENDATION

EIS Not Required X

Analysis of the expected impacts of this proposal is of sufficient scope and detail to conclude that this is not a major action which would significantly affect the quality of the human environment. In my opinion therefore, an environmental impact statement is not required prior to final action by the Department on this project.

Refer to Office of the Secretary _____

Major and Significant Action: Prepare EIS _____

Request EIR _____

Additional factors, if any, affecting the evaluator's recommendation:

Mike Pires _____ 6-6-83 _____
Signature of Evaluator Date

William D. Bell _____ 6/2/83 _____
Noted: Area Director or Bureau Director Date

#1393

St. Croix

Number of responses to public notice 0

Public response log attached?..... —

CERTIFIED TO BE IN COMPLIANCE WITH WEPA

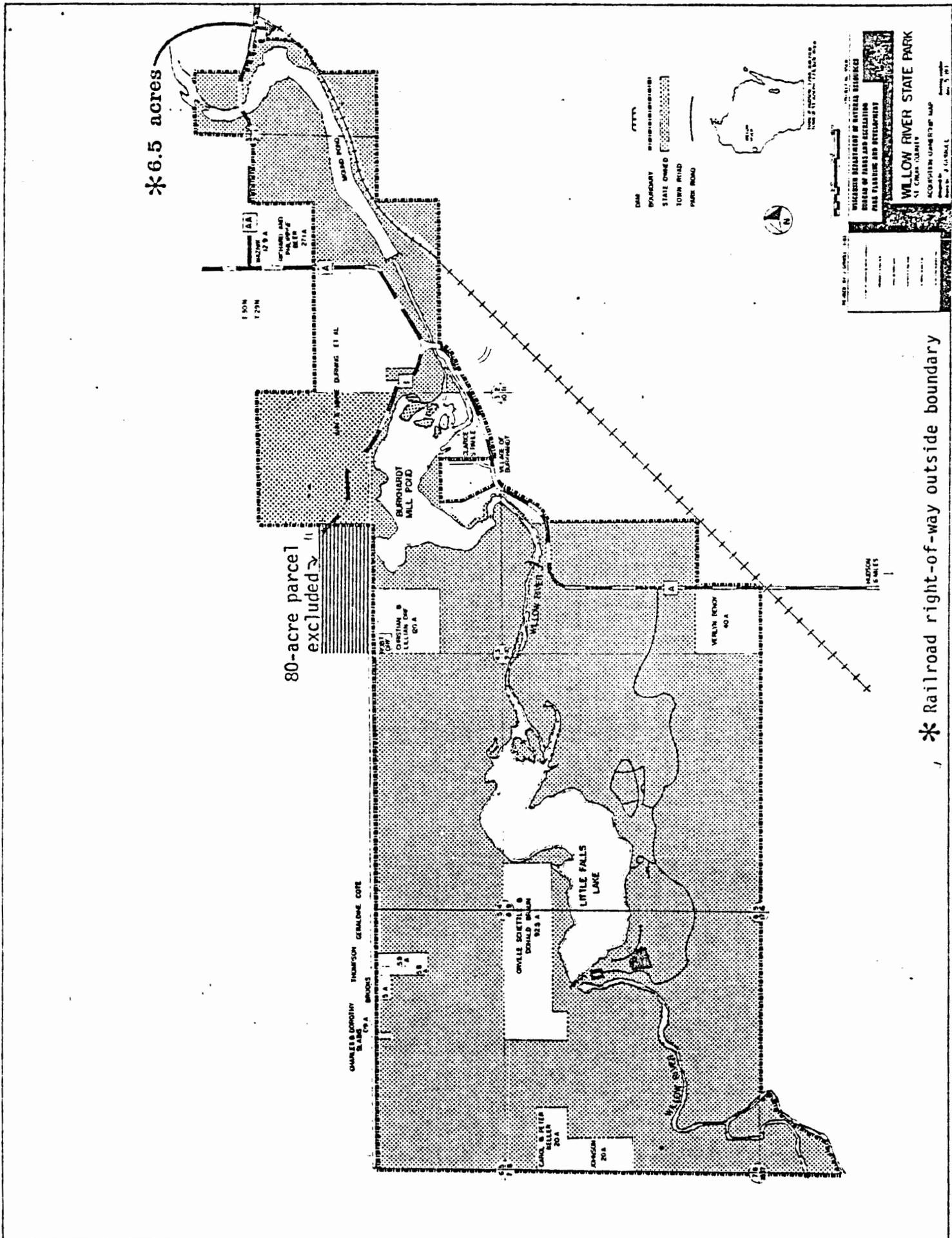
District Director or Director of BEI (or Designee) Date

James P. DeHaveny 10/26/83

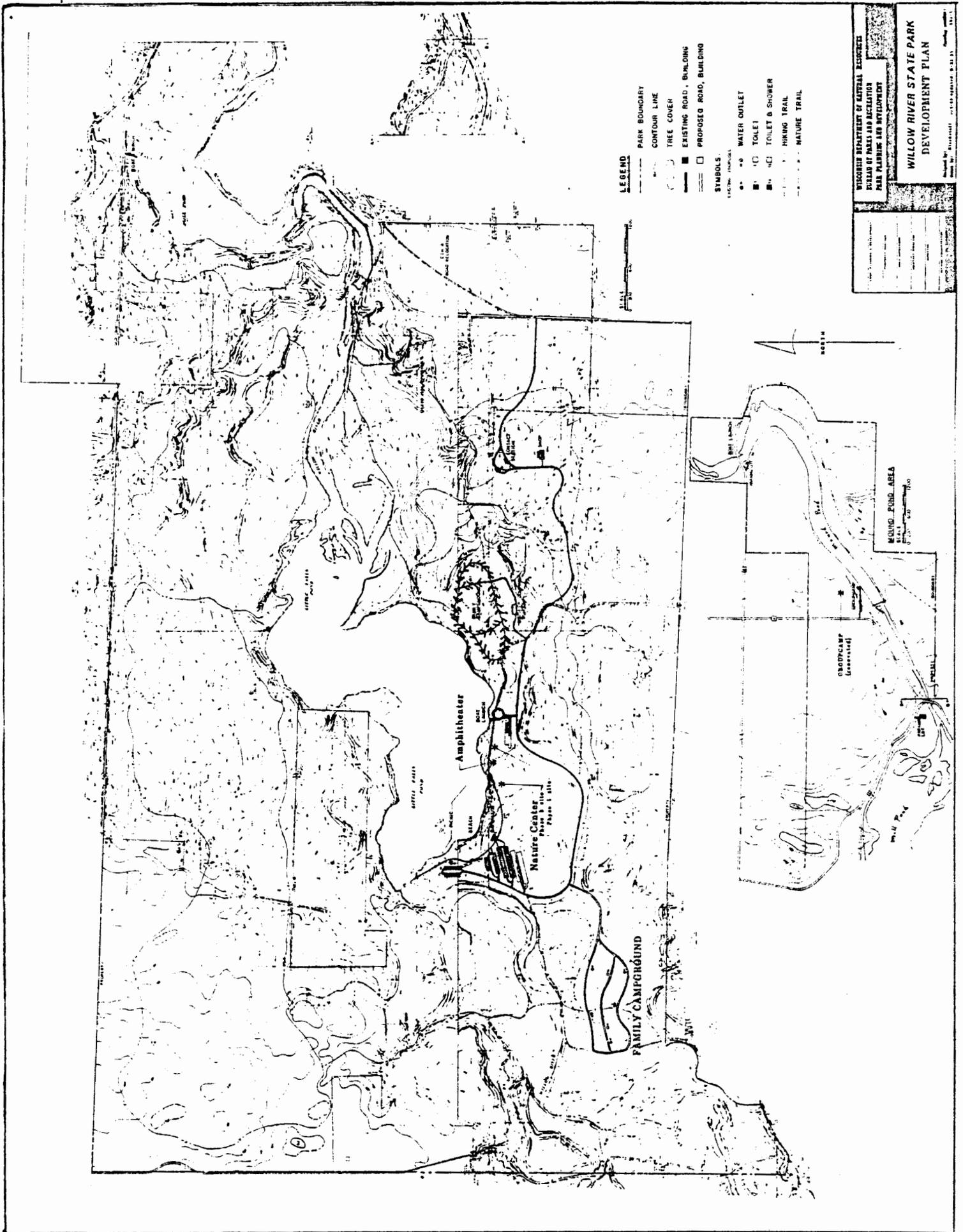
This decision is not final until certified by the appropriate District Director or the Director of BEI. If you believe you have a right to challenge this decision, you should know that Wisconsin Statutes and Administrative Codes establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to ss. 227.15 and 227.16, Stats., you have 30 days after service of the decision to file your petition for review. The respondent in an action for judicial review is the Department of Natural Resources. You may wish to seek legal counsel to determine your specific legal rights to challenge a decision. This notice is provided pursuant to s. 227.11(2), Stats.

MRT059

Handwritten notes:
Marty Kasper
R...
S...
K...
K...



Acquisition Map Figure 2



Park Development Plan Figure 3

CORRESPONDENCE / MEMORANDUM

STATE OF WISCONSIN

DATE: April 19, 1985

In Reply Refer To: 1650-1

TO: R. Fritz - EA/6

FROM: D. Weizenicker

DW

SUBJECT: Amendment to EA No. 1373-Willow State Park Master Plan

The Willow River Master Plan presented to the Board in December, 1984, proposed purchase of 375 acres of privately-owned lands within the proposed boundary. An 87-acre private parcel, known as the Schettle and Braun subdivision, contains 6 unimproved lots recommended for state purchase. In their review of the master plan, the Board requested a review of the proposal to acquire these unimproved lots.

The Department's recommendations approved at the Board's March 1985 meeting were: 1) The Schettle and Braun subdivision be designated as an 87-acre no-acquisition zone; 2) The Willow River acreage goal be reduced by 87 acres and a new goal of 3,043 acres established; and 3) The master plan be amended accordingly.

The "Land Control" section on page 3 of environmental assessment No. 1373 is to be amended to reflect the above recommendations.

On page 17, the first sentence of the last paragraph should be revised to read "sixteen private tracts remain to be purchased within the park boundary. Fourteen of those tracts have improvements."

Under item 2 "Private in-holdings" on page 18, the first sentence should be revised to "there are 16 private in-holdings within the property." The last sentence of the paragraph is to be omitted.

With this amendment, we believe the impacts of the Willow River State Park Master Plan proposals have been adequately addressed.

DK:cw/3936K

cc: D. Kulhanek - PR/4

M. Ries - Eau Claire

