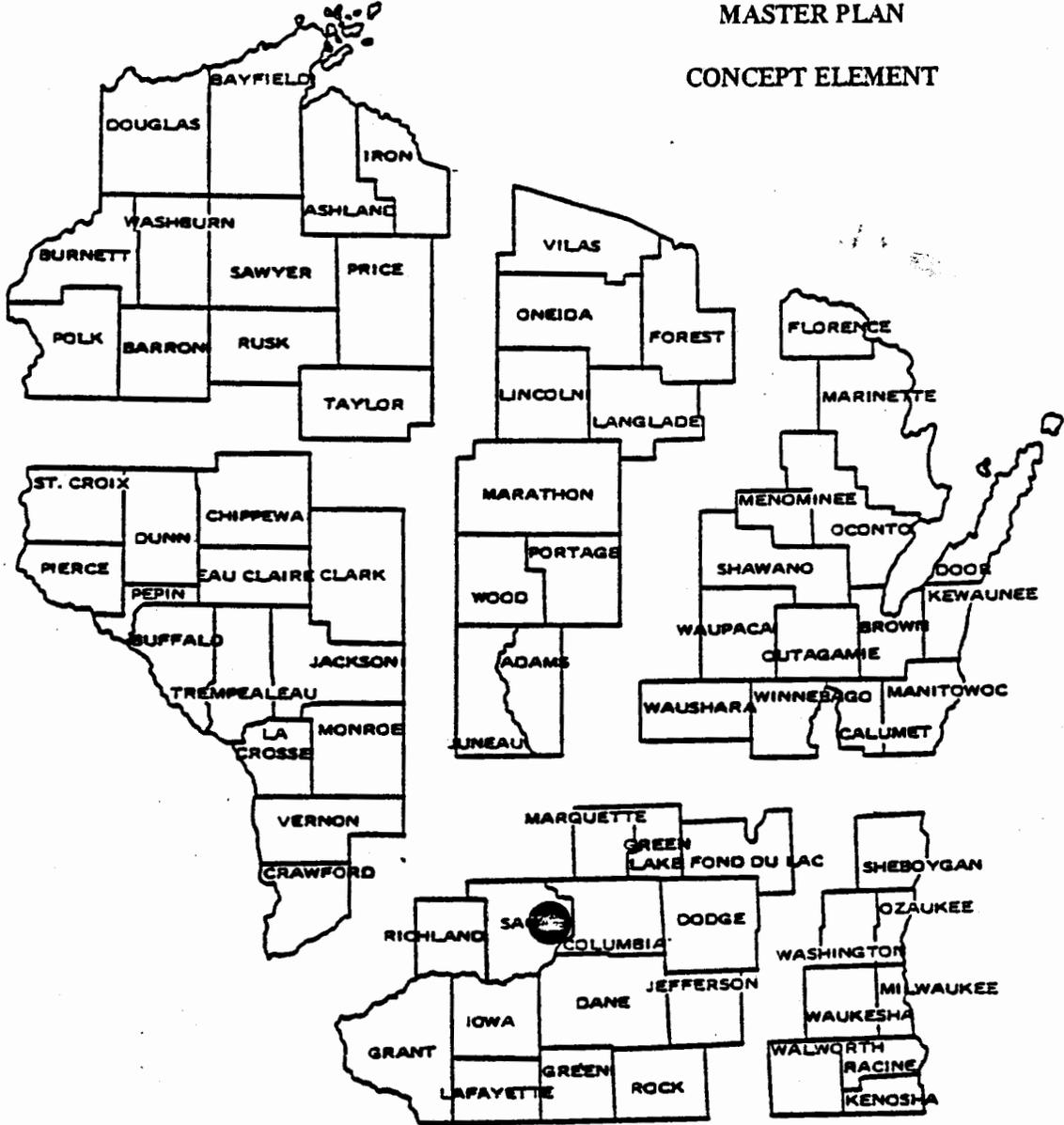


DEVIL'S LAKE STATE PARK

MASTER PLAN

CONCEPT ELEMENT



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Date: Feb 25, 1982

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1. INTRODUCTION

Devil's Lake State Park is located in Sauk County in the Baraboo Range, 3 miles south of Baraboo.

Devil's Lake became a state park in 1911, and is Wisconsin's most heavily used state park. In 1971 it became one of nine Ice Age National Scientific Reserve Units. The Ice Age Master Plan recommended that the park boundary include 9,810 acres. The Natural Resources Board approved that acreage goal in May, 1974.

The Ice Age Master Plan also recommended certain development changes at the park. These recommendations were aired publicly at several meetings, and came under some objections by the local community. In June 1977, the Secretary appointed a 13 member ad hoc citizens committee to work with the Department to develop plans for Devil's Lake. The committee made its recommendations to the Secretary in May, 1978. Most of the committee's recommendations were incorporated into this plan. All were seriously evaluated and considered in the planning process.

The development outlined in this plan is premised on improving the visitors' enjoyment, recreational, and educational experience, and protecting the unique resources of Devil's Lake State Park. In accordance with Department master planning procedure, this plan assumes a period of approximately ten years.

SECTION I - ACTIONS

A. GOAL AND OBJECTIVES

1. Goal:

To develop and manage Devil's Lake State Park to provide park visitors with quality recreational and interpretive experiences, and to preserve and protect the unique geologic and other natural features of the park as a unit of the National Ice Age Scientific Reserve.

2. Objectives:

Resource Management

-To develop and maintain recreational and interpretive facilities consistent with the protection and preservation of the park, and to develop them within a design capacity consistent with that objective.

-To classify much of the park as resource protection areas, and wherever feasible to return the flora and fauna of the park to presettlement conditions.

Visitor Use

-To design the park for a capacity of about 8,000 people at any one time, and about 1.2-1.4 million visitations annually. This design capacity will accommodate expected off-season use.

-To encourage and provide for non-consumptive forms of recreation and education.

-To provide for orderly automobile access to the major use areas of the park and to discourage automobile access to other areas of the park.

Interpretation

-To provide creative interpretation for about 250,000 participants annually, with particular emphasis on Ice Age interpretation.

Park Operations

-To acquire all lands within the park boundary.

-To provide controlled access to the major use areas.

B. RECOMMENDED MANAGEMENT AND DEVELOPMENT PROGRAM

1. Property Development

a. General

Consistent with the overall goal and objectives, the proposed Devil's Lake development is aimed at providing for the recreational and interpretive needs for about 1.4 million annual visitors while imposing the least possible impact on the intrinsic values of the park.

The basic uses of the park will not be changed. Two intensive use areas - North Shore and South Shore will remain. Family camping will remain at about its present level. However, all family camping will be located at the north end of the park and the South Shore will be converted to a day-use only area. The wide variety of extensive recreational opportunities such as hiking and cross-country skiing will continue to be served.

Interpretive facilities will be expanded with the institution of Ice Age programs.

b. Park Entrances and Roads

There are three entrances to the interior of the park and the lake environs: South Shore Road from 113, Ski-Hi Road from U.S. 12, and South Shore Road from 123 (the north entrance). There is a one-way exit onto DL on the North Shore. The existing entrances and exits will be retained. The existing traffic patterns of the roads within the park will remain unchanged, with two possible exceptions: Ultimately, a separate entrance into the South Shore use area from a relocated South Shore Road would be provided, and the North Shore entrance may be moved to permit visitors contact prior to the lake environs. Road relocations would require the consent of the Town Board.

The ad hoc committee recommended that the North Shore park entrance and office/interpretive center be located in the northwest part of the park. (Specifically, they recommended the Pettengill site). The Department explored that recommendation, along with others, and agrees that the entrance and the headquarters should be located in the northwest part of the park.

Within that broad guideline, many alternative sites were considered. At the time the draft of this plan was published the choices were narrowed to five alternate sites. They were shown in the draft plan as: 1) Ski-Hi Area, 2) The "Pettengill" site (preferred by the ad hoc committee), 3) the site south of the Lakewood subdivision area (recommended site in the draft plan), 4) the site above the amphitheater, and 5) a site on the North Shore.

This plan narrows the alternatives to site 3 (referred to in this plan as alternate one), the area south of the Lakewood subdivision, and site 4 (alternate 2) the area above the amphitheater. The Ski-Hi site was rejected because the ad hoc committee and the local community were totally opposed to it because of its potential for allowing the Department to work toward a one entrance park. The "Pettengill" site was rejected because a great deal of roadwork would be necessary to incorporate the site into the total park plan. The North Shore site was rejected because there was insufficient space and there would have been too many conflicts among activities.

Of the two remaining sites, the preferred site is alternate one, the area south of the Lakewood subdivision (Fig. 12). However, the Visitor Center/Headquarters complex would be constructed there only if and when the necessary land acquisition in the area is completed and the necessary town roads are abandoned. Since funding for this project will not likely be available for some time, a delay is not critical. Should funding become available before there appears to be any reasonable chance of gaining control of the necessary parcels and the town roads, the facility could then be constructed at alternate two, the area above the amphitheater (Fig. 12a).

If the facility should be built at alternate two, it would still be crucial to gain control of the North Shore Entrance Road. If it remains as a town road the design options will be very limited, and it could be difficult if not impossible to provide an efficient facility.

Alternate one is the preferred site because it would allow visitors to be contacted before they enter the lake environs. This would help to relieve the congested traffic conditions that sometimes occur. Also, South Shore users could visit the facility without entering the North Shore area. Table 1 attempts to compare the benefits of each of the two prime alternatives.

Table I
Comparison of Visitor Center Sites

	Alternate One South of Lakewood	Alternate Two Above the amphitheater
1) Encountered before entering lake environs	5	0
2) Sewer and water available	3	4
3) Road construction possible	3	3
4) Ample space	4	2
5) Aesthetics - view from site	3	5
6) State-owned land	1	5
7) Close to possible shuttle/parking	3	1
8) Public acceptance	3	5
9) Operational efficiency	4	3
10) Proximity to service area	1	3
11) Convenient to south shore users	3	1
	TOTALS	
	<u>33</u>	<u>32</u>

Rated from 0-5, with 5 being the most desirable

c. Intensive Use Areas

The intensive use areas will provide facilities and services for densely populated recreational activities such as picnicking, swimming, and camping.

(1) South Shore Day-Use Area

Figure 7 shows the proposed redevelopment of the South Shore. The entire South Shore use area will be converted to a day-use only area. The existing campground there will be obliterated.

As a part of the redevelopment of the South Shore, the town road (South Shore Road) that now bisects the area will be relocated further south along the base of the South Bluff. This will accomplish two things:

1. It will remove a busy road which presently passes through the middle of a heavily used public use area.
2. By relocating the road farther south along the base of the bluff, much more of the useable space can be opened up for recreational use.

When the road is relocated, a separate single entrance road into the use area will be built. A contact station will be included. The single entrance road can be gated off at night and the use of the area can be closely controlled.

The South Shore swimming area beach will be expanded. The existing beach is about 300 lineal feet. Another 300-foot beach will be established on the South Shore. A definite demarcation will be made between the sandy beaches and the turf behind them.

The entire South Shore area will be regraded and new turf established where necessary. A master planting plan for the South Shore will be prepared and implemented. All the overhead utility wires will be buried.

Wherever possible, the toilet buildings in the existing campground will be utilized for day-use purposes.

Approximately 550-750 parking stalls will be provided. This will accommodate all but the busiest weekends. Earlier plans for the South Shore area envisioned about 300 parking stalls and a reliance upon a shuttle system to accommodate an overflow. This plan recognizes the long-range desirability of a shuttle system. However, because of costs, for the near future the park will not utilize a shuttle system. Nothing in this plan forecloses that future option.

Parking stalls will be reduced from 200 square feet and a 30-foot backing-up space to 162 square feet and a 25-foot backing-up space. This will be entirely adequate for today's smaller cars, and will permit parking for about 550 cars to be constructed on the same space that had been previously designed for 330 cars.

A pedestrian walkway will be established along the South Shore Road adjacent to the lakeshore. The walkway could be a boardwalk over the rocks. This is needed to accommodate the large number of visitors who walk along the lake on the narrow South Shore Road.

South Shore Buildings

Contact Station

An engineering study will determine if the contact station should be moved and renovated, or replaced altogether.

Shelter/Concession Building

No change is recommended other than the installation of a small, permanent interpretive exhibit in the shelter.

Boathouse

No change recommended.

South Shore Campground Toilet Buildings

Detailed site planning and engineering studies will determine which of these buildings will be retained and used for day use.

Youth Camp

The existing youth camp (old CCC barracks) will be renovated to continue to accommodate 40 campers.

A new combination building including showers and laundry will be added. This facility will enable the YCC program to operate a permanent base or side camp at Devil's Lake. Part of the development funding will be provided by the YCC program. This building should be so constructed to allow moving if the youth camp should ever need to be relocated.

The outdoor group camping area that now surrounds the youth camp will be removed and relocated elsewhere if a suitable site can be located.

Boat Launching and Parking Area

South Shore Road will be relocated several hundred feet to the west, and a new boat launching area will be constructed between the new road and the lake. It should provide for about six boat trailer parking stalls and 35 automobile parking stalls. This area will also serve for trail head parking for the Tumbled Rocks Trail and the Koshawago Spring and Moraine Trails. A concrete plank launching ramp and a portable pier will be provided. A set of sealed vault pit toilets will be provided near the boat launch area.

The site plan for this area should provide for a vegetative and/or earth and rock screening. The boat launch area is one of the first things a visitor sees upon entering the lake environs from the west. Figure 7A is a schematic plan for the development of the boat launch area.

(2) North Shore Day-Use Area

Figure 8 shows the proposals for the North Shore. The North Shore day-use area will not be changed substantially. The area will be renovated and controlled access and improved parking areas will be provided. The beach will include about 600 lineal feet.

The present 416 stall parking capacity can be expanded by about 20% by reducing the size of the parking stalls. The road system will be modified to permit the gating off of the day-use areas after 11:00 p.m., while still permitting through traffic and campground areas.

The amphitheater will be replaced with a new one closer to the campgrounds. Amphitheater users are almost entirely campers.

A boat mooring area will be provided along the northeast shore.

North Shore Buildings

Chateau

The chateau will continue to operate. The building has historical interest, and is unique to Wisconsin's state park system. The scope of operations presently offered at the chateau will be expanded. The concessionaire will be encouraged to expand services. The building will be used for various recreational/educational/interpretive programs. A small, permanent interpretive exhibit relating to the lake will be installed. The building may also be used to temporarily house Ice Age exhibits and programs.

The day-to-day interpretive mission of the park will be carried out in the existing nature center for as long as is practical. When the building has outlived its usefulness, that aspect of the park's interpretive mission will be moved to the chateau.

Bathhouse

No change is recommended.

Office

The office will eventually be replaced by a new office/interpretive center. If the chateau is ever removed, the existing office building can be considered for the concession. For the short term, the office and trailer will continue to serve as the North Shore contact point.

(3) Family Camping

All family camping will be at the north end of the park. Eventually all campers would be registered from the office-headquarters in the northwest part of the park. Presently the park has about 451 campsites. Approximately that number of sites will be retained.

The existing South Shore campground will be replaced with a new 200 (approximate) unit campground north of CTH DL and north of the existing east campground. The two could eventually be linked by an underpass under CTH DL. (See Figures 4a & 5)

New North Campground

Figure 9 shows the new north campground which will be designed to accommodate a variety of camping units. All the camping spurs will be universal, as prescribed in MC 2542.1. Toilet facilities will be sealed vault pit toilets. Shower buildings will be provided. There will be no electrical hookups. The campground may be used for winter camping.

A shuttle pickup area, children's play area, and an open shelter building for camper's use will be provided in the center of the campground.

The north campground will be implemented in two phases. The first phase will consist of about 150-160 drive-in sites. This phase is designated for land now state owned. The second phase will be implemented when the necessary land is acquired and will consist of about 50 units.

The campground will be designed in a series of small loops, each accommodating about 25 campsites. This arrangement will give the manager flexibility to close off portions of the campground for rehabilitation or to accommodate large groups.

In conjunction with the north campground, as a future option, 10-15 walk-in campsites could be located along the old ski hill area. They could be clustered in small groupings with a small set of pit toilets serving each grouping. There would be no wells at the walk-in sites. Parking would be in the campground.

West Campground

The existing west campground consists of 99 sites. If future board policy allows, it will be designated as primarily a trailer and RV campground. The campground is currently equipped with flush toilet buildings which will remain. The campground has 53 electrified sites, which will remain.

When the North Shore contact is moved out of the basin to the northeast corner of the park, the entrance to the west campground can then be changed to the nature center road only. The entrance on CTH DL will be changed to an exit only (except in the winter). This will ensure that entrance into the campground is only through a controlled entrance point. A children's play area and a shuttle pickup area will be incorporated into the campground.

East Campground

The existing east campground has 120 sites, 77 of which are electrified. It has flush toilet buildings and a shelter house. It accommodates a variety of camping units, and will remain for the most part unchanged.

Because the east campground is close to the ski trails and has a shelter house, it will be the primary winter campground. A set of pit toilets will be installed. Because of the relatively high cost of installing a winterized water source, campers will get their water at the office or service area. A small children's play area and a shuttle pickup will also be incorporated into the campground.

d. Extensive Use Areas

The extensive use areas shown on Figure 10 will encompass 3,170 acres and will include all lands not included in the intensive, specialized, or administrative areas.

Outdoor Group Camping

One of the original planning objectives was to find a new location for the outdoor group campground. The present campground is small, it is adjacent to the indoor group camp and it is on the edge of the Red Oak Scientific Area. However, the planning process failed to reveal a better site for the facility. All large open areas suitable for an outdoor group camping facility are several miles from the lake or have other undesirable characteristics. The area west of South Shore Road and south of Ski-Hi Road was considered. It is close to the lake. However, it was rejected for aesthetic reasons. That particular area is very scenic and being so close to two major access roads, a campground there would be unsightly and intrusive. Consequently, it is recognized that no one park can fulfill all recreational needs. For now, Devil's Lake will continue to have a modest outdoor group camp.

Trailside Shelters

As the Ice Age Trail through the park nears completion and begins to get more use, the establishment of trailside shelters will be considered. Like the Kettle Moraine Forests, the shelters would be rustic and would be reservable.

Hiking and Cross Country Ski Trails

Figure 11 shows all the existing and proposed trails in the park. The following existing hiking and ski trails will be unchanged:

West Bluff Trail - Follows the rim of the bluff west of Devil's Lake. It offers spectacular views of the lake, the Baraboo Valley to the north, and the Wisconsin River to the southeast. This trail has been designated for a major interpretive role in the Ice Age Master Plan.

Tumbled Rocks Trail - Runs along the bottom of the West Bluff, through and past large talus boulders along the edge of the lake. It has been acclaimed as the most used hiking trail in Wisconsin. An Ice Age exhibit to interpret the quartzite rock will be located along this trail.

East Bluff Trail - Offers varied topography and many fine views of Baraboo to the north and the lake below.

East Bluff Woods Trail - Roughly paralleling the East Bluff Trail, this trail offers a trek through the woods in back of the bluff.

Devil's Doorway Trail - Runs along the rim of the East Bluff where it turns to an east-west direction. This trail runs past an interesting rock formation, Devil's Doorway, and a number of potholes.

Balanced Rock Trail - Climbs the talus slope at the bend in the East Bluff.

Potholes Trail - Climbs the talus slope east of the Balanced Rock Trail, and exhibits some fine potholes in the rock walls just below the rim. This trail will also serve major interpretive purposes as designated in the Ice Age Master Plan.

CCC Trail - Climbs the East Bluff above a former Civilian Conservation Corps camp and turns west along the rim to join the Devil's Doorway Trail.

Grottos Trail - Runs along the bottom of the East Bluff just north of the South Shore Road. Offers a cool walk through the woods below the tower bluff. "Grottos" is in reference to large basins and pits along the base of the bluff in this area.

Steinke Basin Trail - 2.5 mi. (4.0 km) - A glacial lake basin is looped by this trail offering opportunities for interpreting this feature of the Ice Age. The trail roughly follows the edge of the woods surrounding the basin and offers hiking, and skiing for the ski tourer looking for an "easy" rated trail.

The following proposed hiking and ski trails will be added to the trail system: (see figure 11)

Ice Age Trail (primary route) - 5.5 mi. (8.8 km.) - This route will be a part of the 1,000 mile Ice Age trail connecting most of the Ice Age units throughout the State. For approximately two miles this route will run along the end moraine east of Devil's Lake and coincide with the proposed Moraine Trail. The route will serve both hikers and cross-country skiers.

Moraine Trail - 14.3 mi. (22.9 km.) - A long distance interpretive trail offering a wide variety of glacial features, it will follow the end moraine of the Green Bay lobe over the Baraboo hills east of Devil's Lake. This trail was designated for its interpretive potential in the Ice Age Master Plan. The end moraine offers a natural corridor on top of which the trail will traverse. Occasionally the trail will drop off to roughly parallel the moraine, and interpret related glacial evidences such as recessional moraines, nob and swale topography, and proglacial drainage systems. The Moraine Trail will be accessible in different sections with approximately 2/3 of the total length being designated as an interpretive hiking and ski trail, with the remainder primarily being used for interpretive hiking. Extreme care must be taken in laying out and constructing this portion which climbs onto the South Bluff. Minimum trail dimensions should be maintained and construction and maintenance should all be by hand.

Koshawago Spring Trail - 1 mi. (1.6 km) - Looping up from the southwest end of Devil's Lake, this trail will follow along a small creek which flows from Koshawago Spring and joins with Burma Road.

Stage Coach Trail - 2.5 mi. (4.0 km) - Located in an unglaciated area of the park, this trail would roughly parallel an old stage-coach route which ran from Baraboo to Sauk City. Providing visitor circulation and connecting other trails with the park entrance and interpretive center, this trail would be designated for hiking purposes.

Other Trails - 5.4 mi. (8.6 km.) - Based on the concept of providing loop-type trails and offering ski touring experiences of a variety of difficulties, the remaining proposed trails represent either vital trail link-ups or additional ski touring opportunities. Loop-type trails are especially desirable for skiing, since one-way travel (the best type of ski trail) necessitates loop configuration.

All back-country trails will be developed to minimum standards. They will be constructed and maintained by hand labor, without the use of motor vehicles. There will be trailhead parking at Steinke Basin (about 30 spaces) and at the Boat Launch Area, about 35-40 stalls to be shared with boaters and fishers.

Bicycle Trails

Bicycle trails will be established in the following locations:

- 1) Along the north entrance road by striping and signing the entrance road.
- 2) Along South Shore Drive from the eastern park boundary to the South Shore use area, by constructing a separate parallel gravel path. (Similar to Peninsula State Park).
- 3) If the railroad grade is abandoned, it will be used as a combination shuttle/bicycle trail.

A separate paved bicycle path now parallels STH 123, linking the park with Baraboo.

Off-Road Vehicle Trails

A north-south pass-through snowmobile trail will be provided. No loop trails inside the park will be provided. The Sauk County Snowmobile Trail is now routed from the south boundary to Burma Road as a temporary pass through route. This route will be designated as the permanent route. No other off-road vehicles will be accommodated in the park.

No bridle trails will be provided. The shallow soils of Devil's Lake would not be ideal for this activity. In addition, the relatively close-by Governor Dodge and Wildcat Mountain State Parks already provide bridle trails.

e. Administrative Areas

1. Park Headquarters and Ice Age Interpretive Center

A major Ice Age interpretive center, combined with the park headquarters will be located in the northwestern part of the park, following the general guideline suggested by the ad hoc committee (see Figure 12). The specific site recommended is alternate one, the area south of the Lakewood subdivision (see Figure 12).

The office components will be similar to those at Southern Kettle Moraine. The park management, clerical, law enforcement, and interpretive staff will be headquartered there.

The Ice Age interpretive components of the building will be of the same magnitude as the Kettle Moraine Ice Age Center. It will include a 99-seat lecture room and an exhibit room. Permanent displays will be furnished by the National Park Service. The emphasis of the displays will be on continental glaciation and the ways in which it shaped the landscape--especially the park area.

All contact for the North Shore and all camper registration will be handled in the office/visitor center. Adjacent to the center will be a 50-100 car paved parking area. This arrangement will not alter major established traffic patterns. South Shore Road and County Highway DL will remain unaffected. The existing North Shore entrance will be closed at the top, and entrance will be via the new entrance road which will join the existing entrance road about 100 yards down from the present entrance.

A one-mile nature trail loop will be constructed near the office/interpretive center.

2. Service Area

A new service area complex will be constructed just north of its present location, near the existing storage building. A new large metal building similar to the one at Southern Kettle Moraine will be installed. A paved, fenced service yard will be constructed as well. A vehicle storage building will be included. While the existing site is not centrally located, its location is close to the North Shore day-use area, and the campgrounds which have a heavy service demand. The present shop and carpenter shop will be retained and incorporated into the service complex.

f. Interpretive Facilities

Devil's Lake has two interpretive missions to carry out. It must provide for the interpretation of the Ice Age story and it must provide for the interpretation of the day-to-day events of the park. These two missions must be integrated.

Ice Age Interpretive Center

An Ice Age Interpretive Center will be combined with the parks administrative office and headquarters. The scope and purpose the interpretive center will be similar to the Ice Age Interpretive Center at Northern Kettle Moraine. The center will include a 1200 square foot exhibit room. Interpretive displays pertaining to the Ice Age story and how glaciation shaped the landscape of the Devil's Lake area will be shown there. A 99-seat lecture room will be provided where the Ice Age film and other audio-visual programs can be presented. The park's interpretive staff will be headquartered at the visitor center. Parking for about 50-100 cars will be provided.

Nature Center

When the Ice Age visitor center is completed, some of the functions of the existing nature center will be replaced. The Ice Age center will focus on the overall Ice Age story and the interpretation of macro-scale phenomena. The existing nature center will in turn focus on micro-scale interpretation. It will be retained as a summer only facility, serving the family campers, and will concentrate on interpreting the day-to-day natural events of the park and park history.

This aspect of the park's interpretive mission will be carried out in the existing nature center for the remaining life of the building. When the building is in need of major repairs or when maintenance costs get too high, the program will be moved to the chateau.

The Chateau

Prior to the eventual construction of the Ice Age visitor center, several Ice Age exhibits could be located in the chateau. It is possible that funding for the interior Ice Age exhibits may become available before a visitor center is completed. Consequently, the option of having the exhibits constructed (at least some of them) and installed in the chateau should

be explored. Also, the possibility of temporarily showing the Ice Age film and other audio-visual programs in the chateau should be seriously considered. Both actions would require some remodeling of the chateau.

The Living History Farm

The possibilities of establishing a "living history farm" should be explored further. Some of the objectives of such a farm would be to:

- 1) Show some historic methods of farming.
- 2) Show some alternative methods of farming that could be employed today.
- 3) Show the utilization of solar and wind power.
- 4) Show wildlife conservation practices.
- 5) Focus on the human history of Devil's Lake and Baraboo region.

A recommended site is the former Archie Johnson Farm, just across DL from Steinke Basin. This is a project that should be undertaken only if funding and staffing is available from outside sources, such as the Historical Society.

Outdoor Ice Age Wayside Exhibits

As a part of the overall Ice Age interpretive mission of the park, outdoor wayside exhibits will be located at key locations within the park. Each of the wayside exhibits will tell a particular story relating to the glacial shaping of the landscape. The waysides will consist of a graphic panel, designed and produced by the National Park Service. Panels will be mounted in a concrete/masonry base that the Department will construct. Each of the exhibits will require varying landscape treatments. Typically, the interpretive panels will be about 2 feet X 3 feet, mounted at waist level so visitors can see over them.

Initially four sites have been selected for the outdoor exhibits:

- 1) West Bluff - Prospect Point. This is a key spot with dramatic views of the lake, bluffs, moraines, and the pre-glacial valley. It is on a heavily used trail.
- 2) South Shore day-use area.
- 3) North Shore day-use area.
- 4) Along the Tumbled Rocks Trail.

2. Property Management

a. Use Limits

The total use of the major use areas of the park at any one point in time will be controlled by the number of parking stalls and camping spaces provided. Table 2 shows the proposed design capacity and visitor use for the park. The table does not show a grand total because many uses overlap. Many people come to the park just to hike for instance, but many others hike in addition to other activities such as camping and picnicking. The expected annual use of the park will be about the same as now (about 1 million). The estimated maximum level of use at the two picnicking/beach areas is now at about 5,325 people at any point in time. Because of design standards, the designed capacity of this plan is 4,350 people at any point in time for the two day-use areas. This means a point in time reduction of about 1,000 people. Allowing for a turn-over rate of 2 visits per day, 2,000 people will be turned away on each of 10 busy days each year, or about 20,000 people fewer will use the North and South Shores each year. The Ice Age visitor center is expected to host 90,000 visitors each year. If one-third of them, or 30,000 come only to use the visitor center, the net gain in the current park attendance would be about 10,000 visitors per year.

Table 2
Visitor Use

	Existing Designed Capacity at a Point In Time	Estimated Maximum Existing Level Of Use at a Point In Time	Designed* ¹ Capacity of This Plan at a Point In Time	Turn Over Rate	Daily Capacity	Maximum Use During The 100-Day Season Where Applicable	Expected Annual Use Estimates
Day Use							
							*2
South Shore	1,278	3,750	2,450	2	4,900	490,000	591,200
North Shore	1,575	1,575	1,900	2	3,800	380,000	470,000
TOTALS	<u>2,853</u>	<u>5,325</u>	<u>4,350</u>		<u>8,700</u>	<u>870,000</u>	1,061,200* ³
Camping							
South	928	928	- -	1			
East	480	480	480	1	480	48,000	53,200
West	396	396	396	1	396	39,600	44,000
North (new)	- -	- -	800	1	800	80,000	88,000
TOTALS	<u>1,804</u>	<u>1,804</u>	<u>1,676</u>		<u>1,676</u>	<u>167,600</u>	<u>186,000</u>
Hiking							700,000
Cross-Country Skiing							9,000
Snowmobiling							300
Boating						2,680	3,175
Scuba Diving						5,320	5,420
Fishing						3,410	7,385
Rock Climbing						- -	11,190
Ice Age Visitor Center Visits						60,000	90,000
Nature Center Visits						16,000	20,000

*¹Based on NPS and California Standards

*²2,000 people = 200 people/100 ft. of beach, including non-guarded segments. This is a typical state park design capacity. 3000 people = 300 people/100 ft. of beach.

*³The expected annual use for the two shores was arrived at in the following manner:

- 1) During the 100 day-use season:
 - a) 30 weekend days x $\frac{8,700 \text{ people}}{\text{day}}$ (designed daily capacity) = 261,000 people
 - b) 70 week days x $\frac{4,350 \text{ people}}{\text{day}}$ (1/2 weekend use) = 304,500 people
 - 2) During the remaining 265 days, by visitation records: $\frac{495,700 \text{ people}}{\text{day}}$
- Total expected use: 1,061,200 people

b. Vegetation

One of the stated objectives for Devil's Lake is to "wherever possible, return the flora and fauna of the park to presettlement conditions." It is not an objective for Devil's Lake State Park to maximize timber production. Consistent with the Wild Resources Policy, timber harvest and habitat manipulation will not be carried out in areas designated as "natural" areas, or scientific areas.

The predominant vegetative cover in most of the park is oak which is a subclimax type. Without management, those portions of this type which are on better sites such as coves or northern and eastern exposures, will eventually succeed to more shade tolerant species such as sugar maple, basswood, red maple, red oak, slippery elm, white ash, hickory, etc. Because of site limitations, those portions of the oak type which are found on poorer sites such as ridge tops or southern and western exposures, will likely remain as they now are as long as current climatic conditions exist. See Appendix 0 for a description of the Uniform Land Use Classification system and the corresponding management guidelines.

The areas designated as "Extensive Recreation Area, open areas management zone 1, 2 or 3" on Figure 10 will be kept "open" as they are now. This will allow for better viewing of glacial features, and will promote diversity within the park. Where possible, management to achieve this purpose should still allow public access and should not disturb the soil. Row cropping is not a preferred method. Fire, periodic mowing, and grazing will all be considered. Aspen stands occurring in the Extensive Recreation Areas will be managed to continue aspen regeneration. This will provide winter and spring food sources for many species of wildlife and scenic diversity within the park.

The wetlands in the northeast segment of the park will be maintained as wetlands. This may require blocking of drain tiles and leveling ditches.

c. Wildlife

Wildlife production and harvest is not one of the objectives for Devil's Lake State Park. Consequently, the park will not be managed to maximize wildlife habitat or wildlife populations.

Where consistent with the overall objectives for the park, some measures will be taken to promote wildlife habitat. Those measures will be viewed as an added benefit rather than as a prime objective. They will include maintaining the open areas shown in Figure 10. The edges of the openings will be kept in brush. Individual open spaces will not be kept in a uniform state of mowing or clearing. Diversity within each area will be promoted. Also selected aspen stands will be managed as such in perpetuity. Some of the open areas on the periphery of the park could be made available to the local game manager to develop demonstration projects under the supervision of the park manager.

Presently deer hunting is allowed during the firearms and late bow season in some areas of the park. The Sauk County deer herd in the Town of Sumpter (which includes the South Bluff of the park) consistently has the fifth largest harvest for the county. One of the reasons the herd is in such good condition is because the park offers excellent cover for deer. Deer hunting will continue as long as it is practical for game management reasons and does not present a hazard to other park users. Small game hunting in state parks is not authorized by Statute.

d. Water and Fish

Devil's Lake is the only water body within the park that supports a fishery. It is a soft water lake, supporting a warm water fishery of panfish, bass, and northern pike. Walleye and rainbow trout are stocked annually. Management currently emphasizes the perpetuation of the warm water fishery. Currently about 10,000 rainbow trout and 5,000 walleye are stocked annually. The stocking program at Devil's Lake, which is on a put and take basis, has become an established tradition. Stocking provides recreational opportunities that the fishing public now expects and demands. As the Department's overall philosophy on stocking shifts from put-and-take to put-grow-and-take, the fish management of Devil's Lake should also reflect that change.

e. Fire Control

Devil's Lake and the immediate area is on the border of the Poynette and Spring Green fire control areas. It is also some distance south of the Wisconsin Devils sub-area in the North Central District. Appendix N shows the regular complement at these stations.

3. Land Acquisition

In May 1974, the Natural Resources Board approved an acquisition goal of 9,810 acres for Devil's Lake. To date, the Department has acquired 7,395.86 acres, and 2,414.08 acres remain to be acquired.

	Existing	Proposed
Acreage within the Boundary	9,810 acres	9,930 acres
Fee Acquisition Goal	9,810 acres	9,810 acres
Scenic Easement Acquisition Goal	0	40 acres
Acreage controlled within the Boundary in Fee	7,395.86 acres	9,810 acres
Acreage controlled within the Boundary in Scenic Easement	0	40 acres
Remaining to be Acquired in Fee	2,414.08 acres	2,414.08 acres
Remaining to be Acquired in Scenic Easement	0	40 acres

The acquisition cost of the remaining acres is estimated at about \$2-3 million dollars. Figure 13 shows the park ownership and the proposed boundary changes.

Two boundary changes are recommended as a part of this plan. They are:

- 1) The addition of an 80-acre parcel adjoining the east boundary of the park in section 22. The addition is recommended for several reasons:
 - a. The property offers outstanding scenic qualities. The land provides a spectacular vista to the south overlooking Lake Wisconsin and the Wisconsin River Valley. This is particularly significant, since the planned scenic overlook in the Ice Age development may never come into state ownership. This property could serve the same purpose very well.

- b. Geological significance. The terminal moraine parallels the north boundary immediately to the north. From the property one has an opportunity for good observation of the diverted Wisconsin River, unglaciated terrain to the southwest, the moraine, and the Baraboo Valley. Access to these observation points may be better than the planned overlook site.
 - c. This subject parcel connects Devil's Lake State Park and Parfrey's Glen Scientific Area. This is significant for purposes of the Ice Age Trail to have a permanent site.
 - d. Preservation. The subject property already has a radio tower easement on it. The property immediately to the north is a huge gravel quarry. Lands to the northeast are rapidly being subdivided for rural houses. Devil's Head Resort Complex is 3/4 mile to the east.
- 2) The addition of a 40-acre scenic easement north of the north campground to protect the view from the campground.

These additions will increase the total boundary to 9,930 acres, but the acquisition goal will remain at 9,810.

4. General Development Schedule (costs shown are preliminary January 1980)

Phase I

N. Campground and Amphitheater (Part A)	\$ 905,000
Ice Age Wayside Exhibits (Part A)	15,000
Winterize East Campground	8,300
New Toilets for Indoor Group Camp	50,000
Pedestrian Walkway along South Shore Road	142,200
	<u>1,120,500</u>

Phase II

South Shore Redevelopment	1,100,500
Boat Launch	60,900
	<u>1,161,400</u>

Phase III

Office/Ice Age Visitor Center (Part A)	930,300
North Shore Redevelopment	202,800
	<u>1,133,100</u>

Phase IV

Service Area Development	551,000
North Campground (Part B)	592,000
	<u>1,143,000</u>

Phase V

Complete Trail Development	26,400
Ice Age Wayside Exhibits (Part B) (25% funded by NPS)	100,000
Trailside Shelters	45,000
	<u>171,400</u>

Future

Possible long-term future development items:

- a. Shuttle System
- b. West Campground (remove existing road to CTH D.L. or install pressure activated exit gate.
- c. Sewer Improvements (if found necessary for the system's increased load during winter seasons)
- d. Employee Housing
- e. Living History Farm

5. Development Costs

A. PART A OF NEW CAMPGROUND DEVELOPMENT

Development Costs
(Calculated Jan. 1980)

1. Contract Costs	
a. Building Costs	175,400
b. Utility Extension Costs	127,400
c. Site Development Costs	
1) Roads and Parking	311,500
2) Campsite Development (160 sites)	128,500
SUBTOTAL CONTRACT CONSTRUCTION COSTS	<u>742,800</u>
d. Design and Supervision Costs (x 6.8%)	50,500
e. Contingency Costs (x 7%)	52,000
f. Movable Equipment Costs (6% of Bldg.)	10,500
2. Force Account and Purchase Order Costs	
a) Amphitheater	10,100
b) Miscellaneous	39,400
TOTAL PRELIMINARY ESTIMATE PHASE I	<u>905,000</u>

B. PHASE I - ICE AGE WAYSIDE EXHIBITS

Force Account

Wayside Exhibit Development (The panels will be funded by N.P.S.) 15,000

C. WINTERIZE EAST CAMPGROUND

1. Contract Costs	
a. Building Costs	
2-unit pit toilet building	7,000
(Built near shelter building)	
(Note: campers will use water available at office)	
TOTAL CONTRACT COSTS	7,000
b. Design and Supervision Costs (x 6.8%)	400
c. Contingency Costs (x 7%)	500
d. Movable Equipment Costs (x 6% Buildings)	400
TOTAL PRELIMINARY ESTIMATE	<u>8,400</u>

D. SOUTH SHORE REDEVELOPMENT

1. Contract Costs	
a. Building Costs	259,900
b. Utility Extension Costs	40,600
c. Site Development Costs	
1) Roads, parking, and miscellaneous	478,200
2) Recreational Development	108,400
3) Landscaping	60,000
SUBTOTAL CONTRACT CONSTRUCTION COSTS	<u>947,200</u>
d. Design and Supervision Costs (x 6.8%)	64,300
e. Contingency Costs (x 7%)	66,200
f. Movable equipment costs (x 6% buildings)	15,600
g. Special Equipment	0
2. Force account & Purchase Order Costs	7,100
TOTAL PRELIMINARY ESTIMATE SOUTH SHORE	<u>\$1,100,500</u>

E. BOAT LAUNCH

1. Contract Costs	
a. Site Development Costs (Roads, parking, trailhead, & landscaping)	53,500
b. Pit Toilets	7,000
c. Design and Supervision Costs (x 6.8%)	4,000
d. Contingency (x 7%)	4,000
2. Force Account and Purchase Order Costs	600
TOTAL PRELIMINARY ESTIMATE	<u>\$69,100</u>

F.	INDOOR GROUP CAMP	
1.	New Toilets	50,000
G.	Pedestrian Walkway along South Shore Road	
1.	Contract Costs	
a.	Site Development Costs	125,000
b.	Design and Supervision Costs (X 6.8%)	8,500
c.	Contingency Costs (X 7%)	8,700
	TOTAL PRELIMINARY ESTIMATE	<u>\$142,250</u>
H.	OFFICE INTERPRETIVE CENTER AND CONTACT	
1.	Contract Costs	
a.	Building costs (7800 gsf)	487,100
b.	Utility Extension Costs	
1)	Electric	35,000
2)	Water	70,000
3)	Sewer	25,000
c.	Site Development Costs	
1)	Roads	
	Two-way 3000' @ 24	72,000
	One-way 3300' @ 17	56,100
2)	Parking 60 car	24,000
3)	Landscaping	20,000
	SUBTOTAL CONTRACT CONSTRUCTION COSTS	<u>789,200</u>
d.	Design and Supervision Costs (x 6.8%)	53,600
e.	Contingency Costs (7%)	55,200
f.	Movable Equipment Costs (6% of Building)	29,200
g.	Special Equipment Costs	0
2.	Force Account and Purchase Order Costs	
1)	Miscellaneous	1,000
2)	Nature Trail (1 mile)	2,000
	TOTAL PRELIMINARY ESTIMATE PART A	<u>\$930,300</u>
I.	NORTH SHORE REDEVELOPMENT	
1.	Contract Costs	
a.	Utility Redevelopment	25,000
b.	Site Development	
1)	Roads	36,000
2)	Parking	74,800
3)	Bituminous curbing	18,900
4)	Landscaping	20,000
	SUBTOTAL CONTRACT CONSTRUCTION COSTS	<u>174,700</u>
c.	Design and Supervision Costs (x 6.8%)	11,900
d.	Contingency Costs (x 7%)	12,200
2.	Force Account and Purchase Order Costs-Miscellaneous	
		4,000
	TOTAL PRELIMINARY ESTIMATE	<u>\$202,810</u>
J.	SERVICE AREA	
1.	Contract Costs	
a.	Building Costs	373,500
b.	Utility Extension Costs	19,300
c.	Site Development Costs	69,700
	SUBTOTAL CONTRACT CONSTRUCTION COSTS	<u>462,500</u>
d.	Design and Supervision Costs (x 6.8%)	31,400
e.	Contingency Costs (x 7%)	32,400
f.	Movable Equipment Costs (x 6% Buildings)	22,300
g.	Special Equipment	2,000
2.	Force Account and Purchase Order Costs	400
	TOTAL PRELIMINARY ESTIMATE	<u>\$551,000</u>
K.	NEW CAMPGROUND DEVELOPMENT - PART B	
1.	Contract Costs	
a.	Building Costs	13,000
b.	Utility Extension Costs	21,100
c.	Site Development Costs	
1)	Roads and Parking	59,300
2)	Underpass System	339,400
3)	Campsite Development (52 sites)	76,000
	SUBTOTAL CONTRACT CONSTRUCTION SITES COSTS	<u>508,800</u>
d.	Design and Supervision Costs (x 6.8%)	34,600
e.	Contingency Costs (x 7%)	35,600
f.	Movable Equipment Costs (x 6% Buildings)	800
g.	Special Equipment	0

2. Force Account and Purchase Order-Miscellaneous	12,300
TOTAL PRELIMINARY ESTIMATE 2ND PHASE	<u>\$592,100</u>

L. TRAIL DEVELOPMENT

1. Force Account	
a. 22 Miles Hiking Trails @1200/mile	26,400
b. 3 Trailside Shelters	45,000
TOTAL PRELIMINARY ESTIMATE	<u>\$71,400</u>

M. ICE AGE WAYSIDE EXHIBITS PART B

1. Force Account	
a. Wayside Exhibit Development (25% is funded by N.P.S.)	100,000
TOTAL PRELIMINARY ESTIMATE	<u>\$100,000</u>

6. Other Considerations

a. Ice Age Status

Devil's Lake is one of nine units of the Ice Age National Scientific Reserve. As such it enjoys both state and national park designations. By agreement between the State of Wisconsin and the National Park Service, all Ice Age related development will be partially funded by the National Park Service. So far, this funding arrangement, which is specified at 1/4 of the development cost, has been in the form of the interpretive displays and exhibits. Operations cost for the park are also cost-shared by the National Park Service. Also by agreement, the National Park Service must review and approve any development plans for the park. (See appendices J and L, the Ice Age Legislation and Cooperative Agreement).

b. The Ice Age Trail

In August of 1979, the Natural Resources Board voted to assume some on-going responsibilities for the Ice Age Trail, a 1,000 mile hiking trail in Wisconsin. The trail generally follows the terminal moraine across the state, and links together most of the Ice Age units. Part of that trail is a loop segment in Devil's Lake State Park. By agreement between the Department, the Ice Age Park and Trail Foundation, and the Ice Age Council, the Department will take the lead in signing and maintaining this segment. In addition, the Park Superintendent will serve as a Department liaison to the local Ice Age Council chapter, and will lend them some assistance in their local endeavors. (See Appendix L).

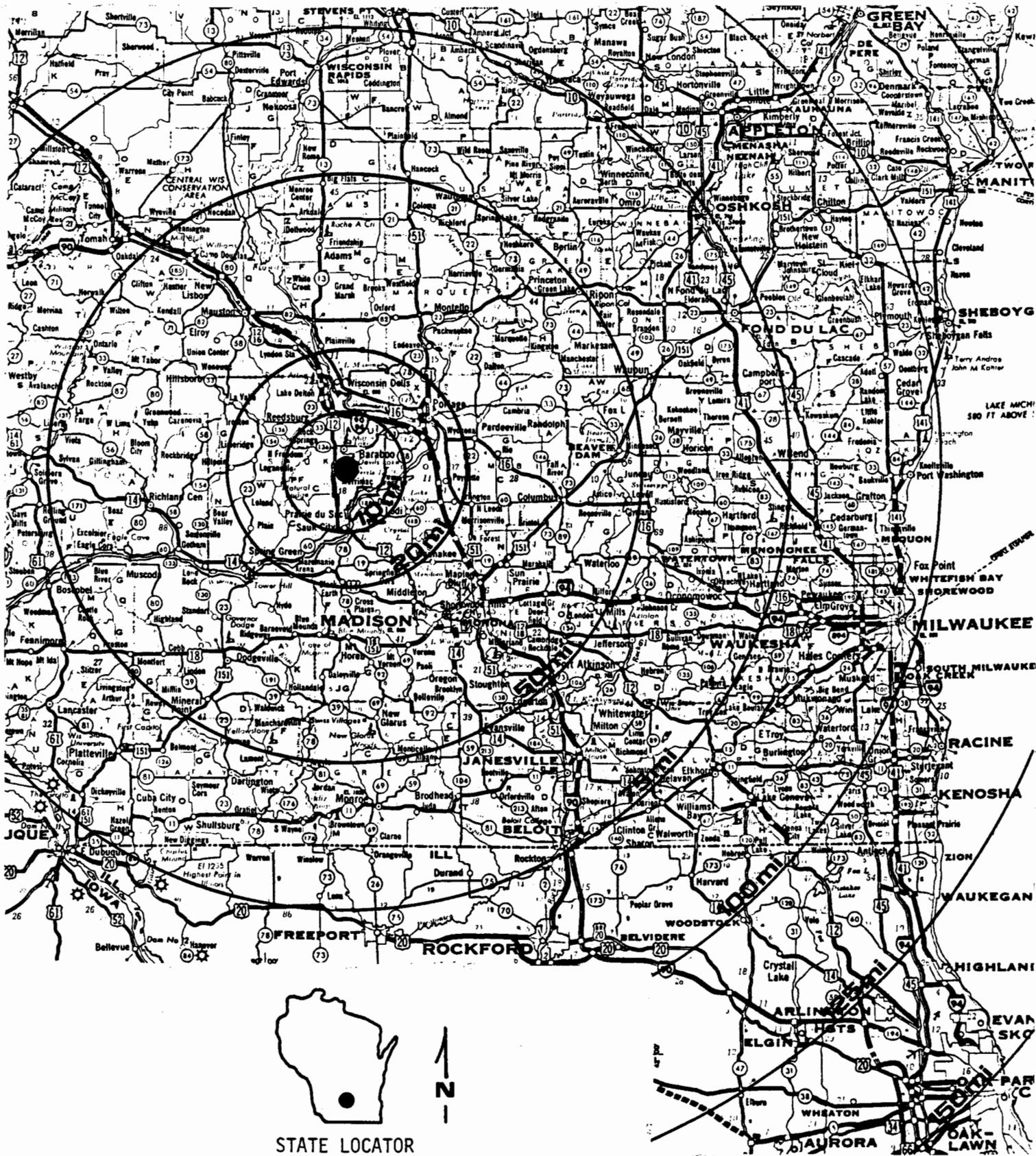
c. Zoning

Sauk County has enacted a county-wide zoning ordinance. An 80-acre block straddling DL between the campgrounds and Steinke Basin is zoned "recreational." The entire remainder of the park is zoned "agricultural." Park developments are compatible uses.

d. Endangered and Threatened Species

All areas proposed for development will be examined for the presence of endangered and threatened wild animals and wild plants. If listed 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.

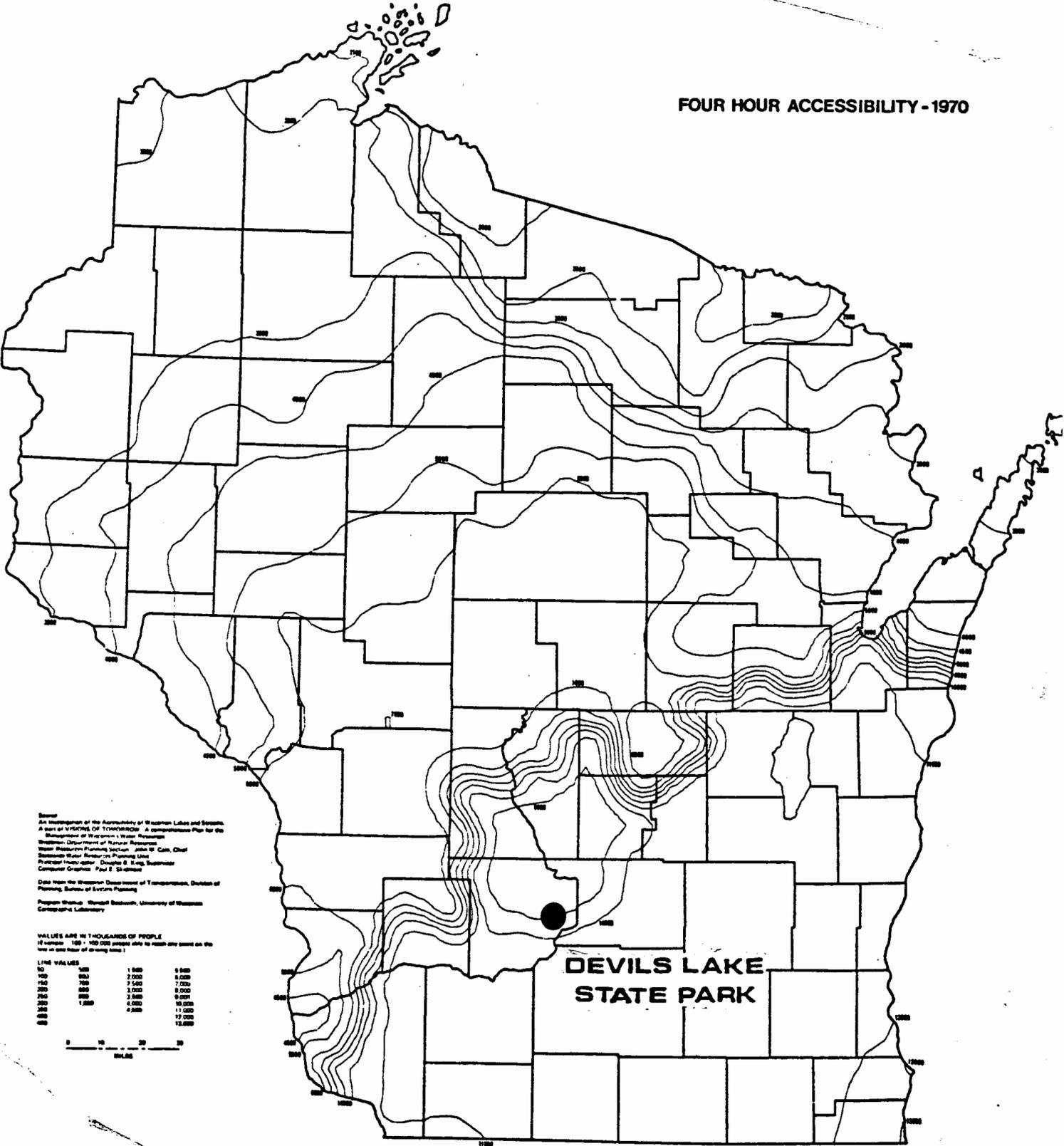
C. FIGURES



DEVILS LAKE STATE PARK – LOCATOR MAP

Fig 1

FOUR HOUR ACCESSIBILITY - 1970



Source:
 An Investigation of the Accessibility of Western Lakes and Streams,
 A Study of VISITING OF TRAVELERS. A Comprehensive Plan for the
 Management of Washington's Water Resources
 Washington Department of Natural Resources
 Water Resources Planning Section, John W. Cain, Chief
 Statistical Water Resources Planning Unit
 Principal Investigator: Douglas E. King, Supervisor
 Computer Graphics: Paul E. Shuman

Data from the Washington Department of Transportation, Division of
 Planning, Bureau of System Planning
 Program Manager: Harold Steinhilber, University of Washington
 Cartographic Laboratory

VALUES ARE IN THOUSANDS OF PEOPLE
 (A radius of 100 miles is shown only to match size printed on the
 map in case later of changing scale.)

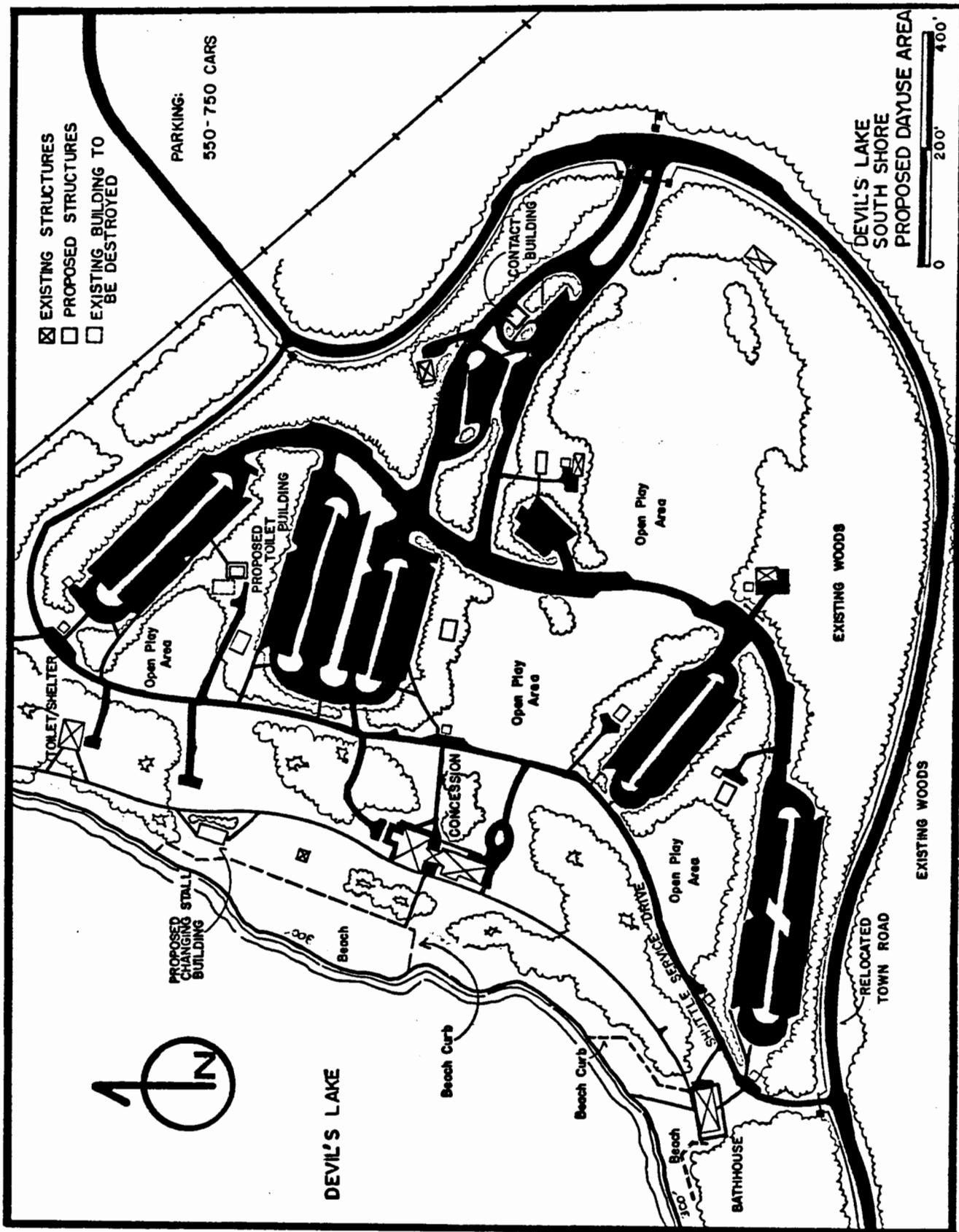
LINE VALUES			
50	500	1,000	5,000
100	600	2,000	8,000
150	700	3,500	7,000
200	800	5,000	8,000
250	900	7,000	9,000
300	1,000	9,000	10,000
350		11,000	11,000
400		12,000	12,000



DEVILS LAKE
 STATE PARK

ACCESSIBILITY MAP

FIG. 2



PROPOSED SOUTH SHORE DAY-USE AREA

FIG. 7

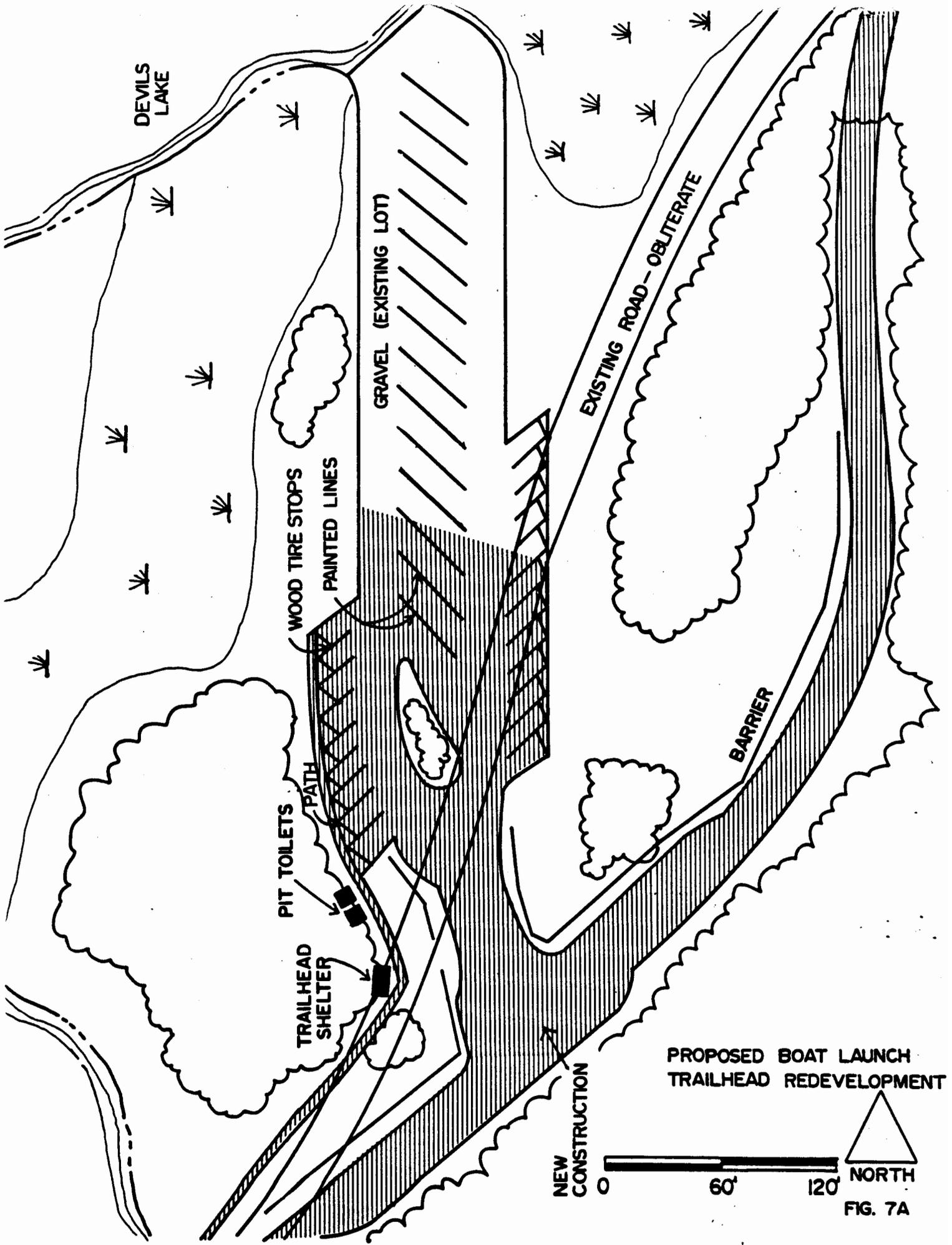
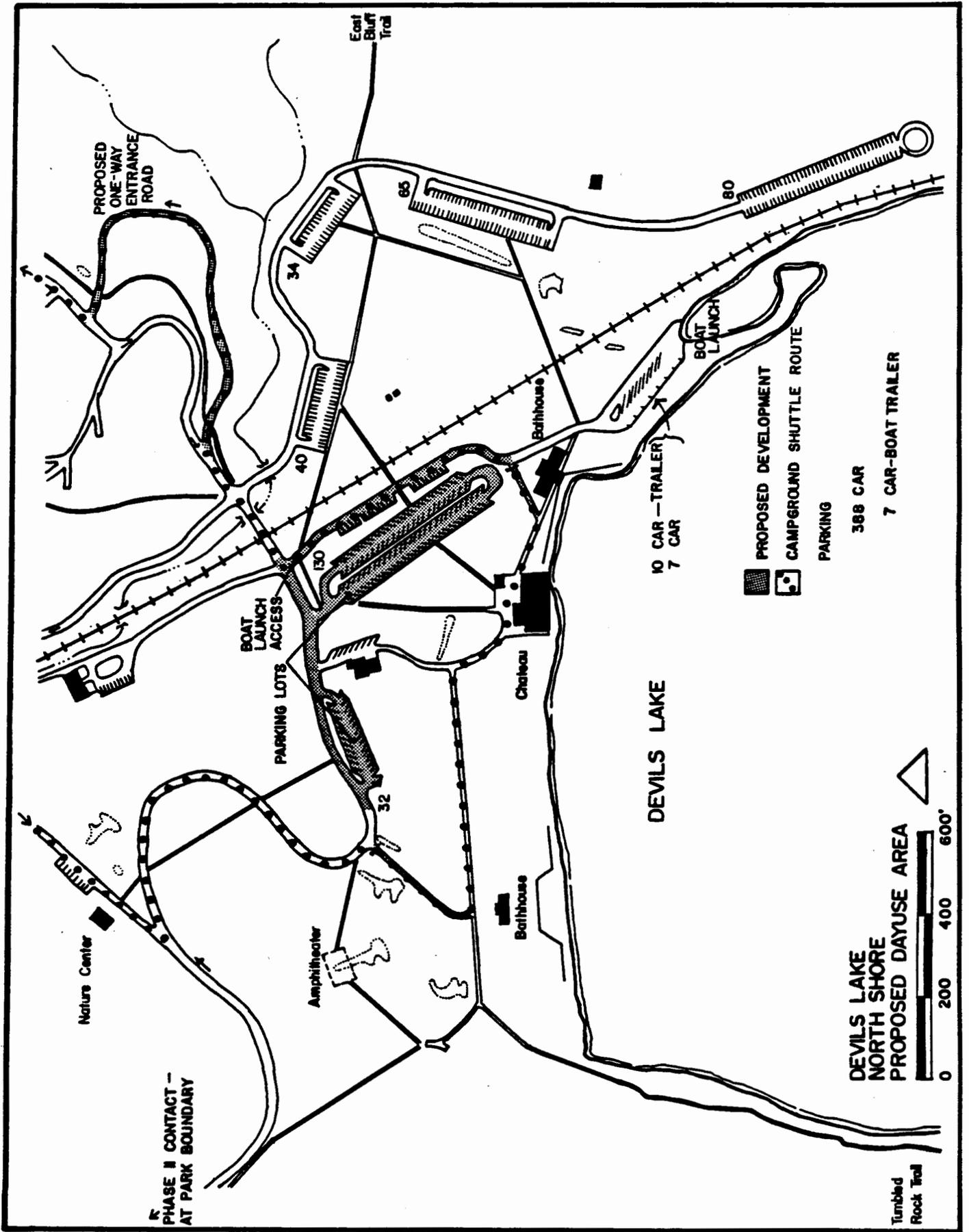
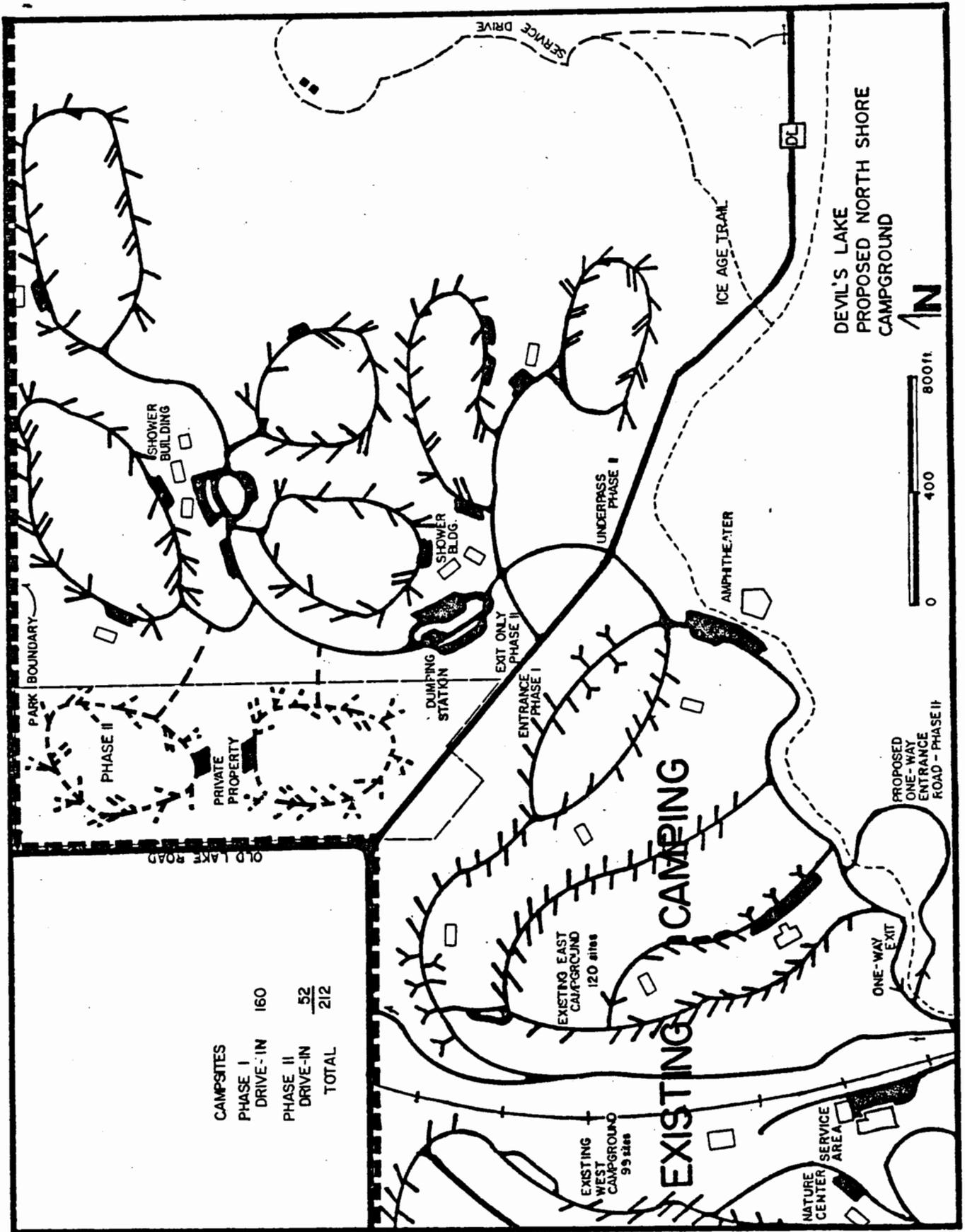


FIG. 7A



PROPOSED NORTH SHORE DAY-USE AREA

FIG. 8



CAMPSITES	
PHASE I DRIVE-IN	160
PHASE II DRIVE-IN	52
TOTAL	212

PROPOSED NORTH SHORE CAMPGROUND

FIG. 9

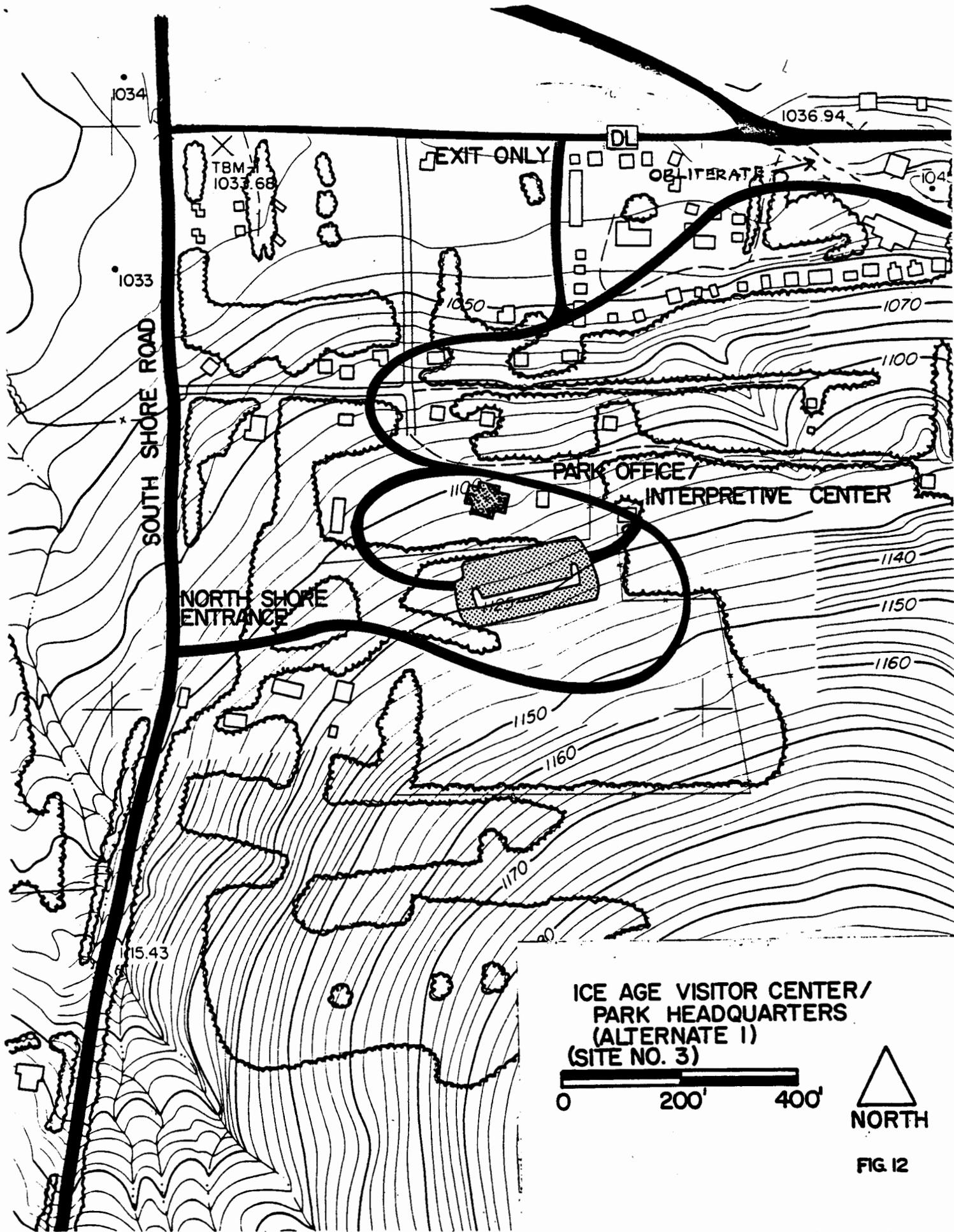


FIG 12

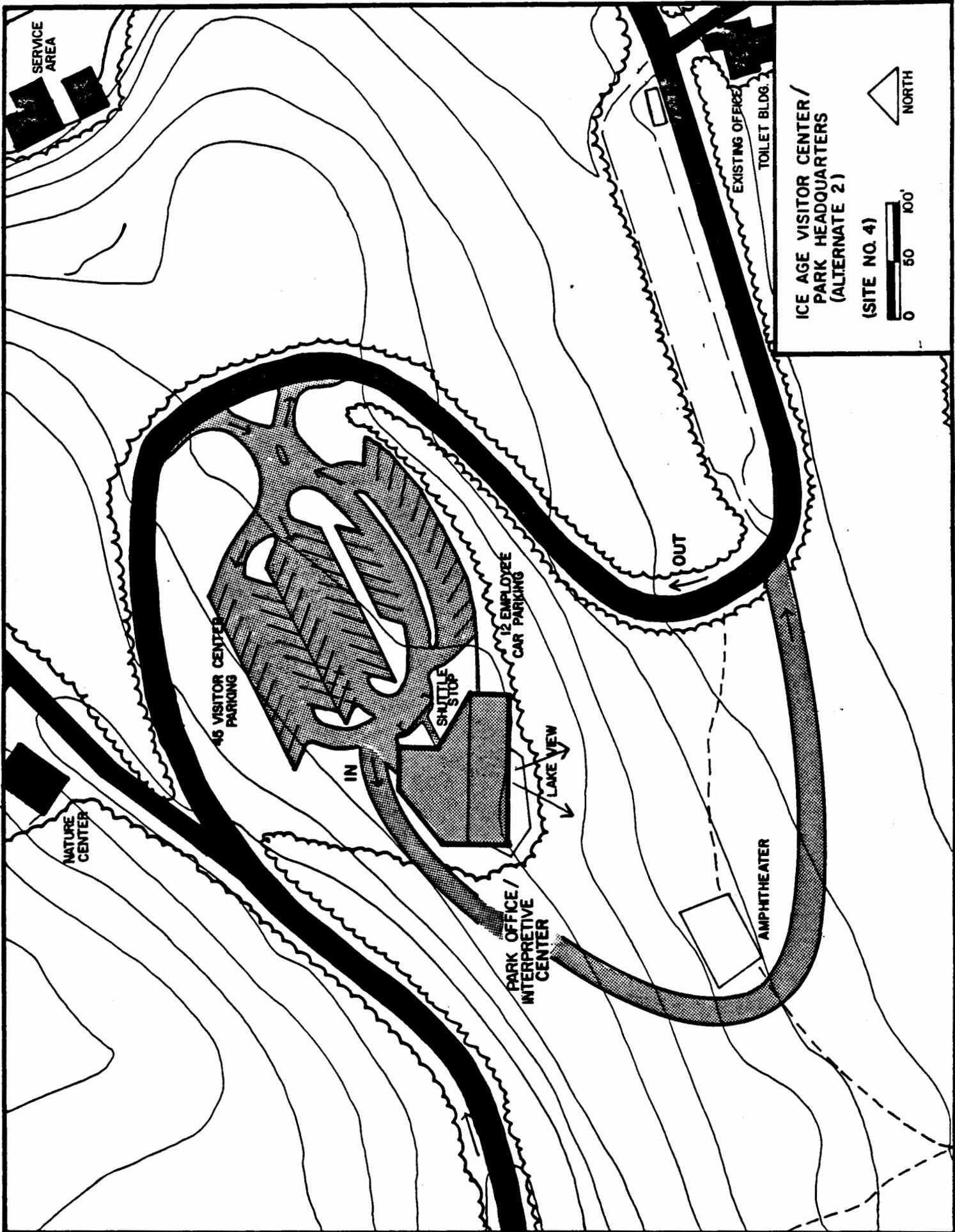
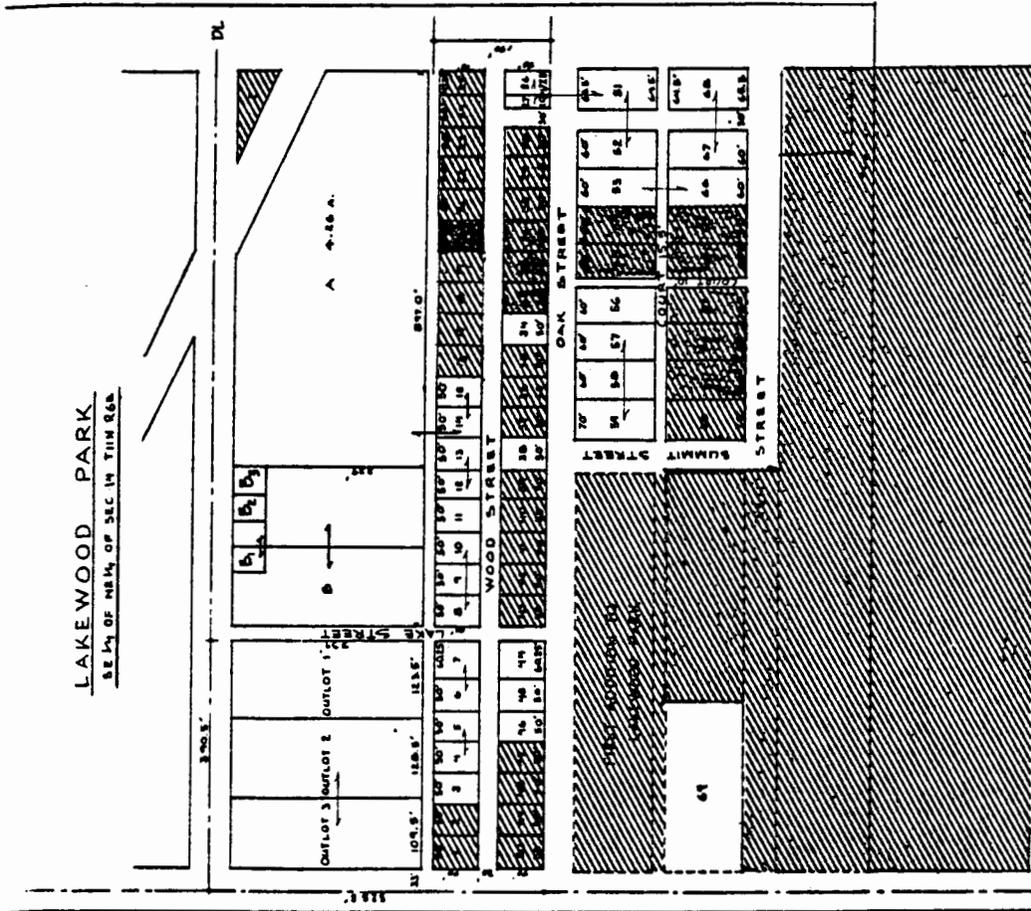
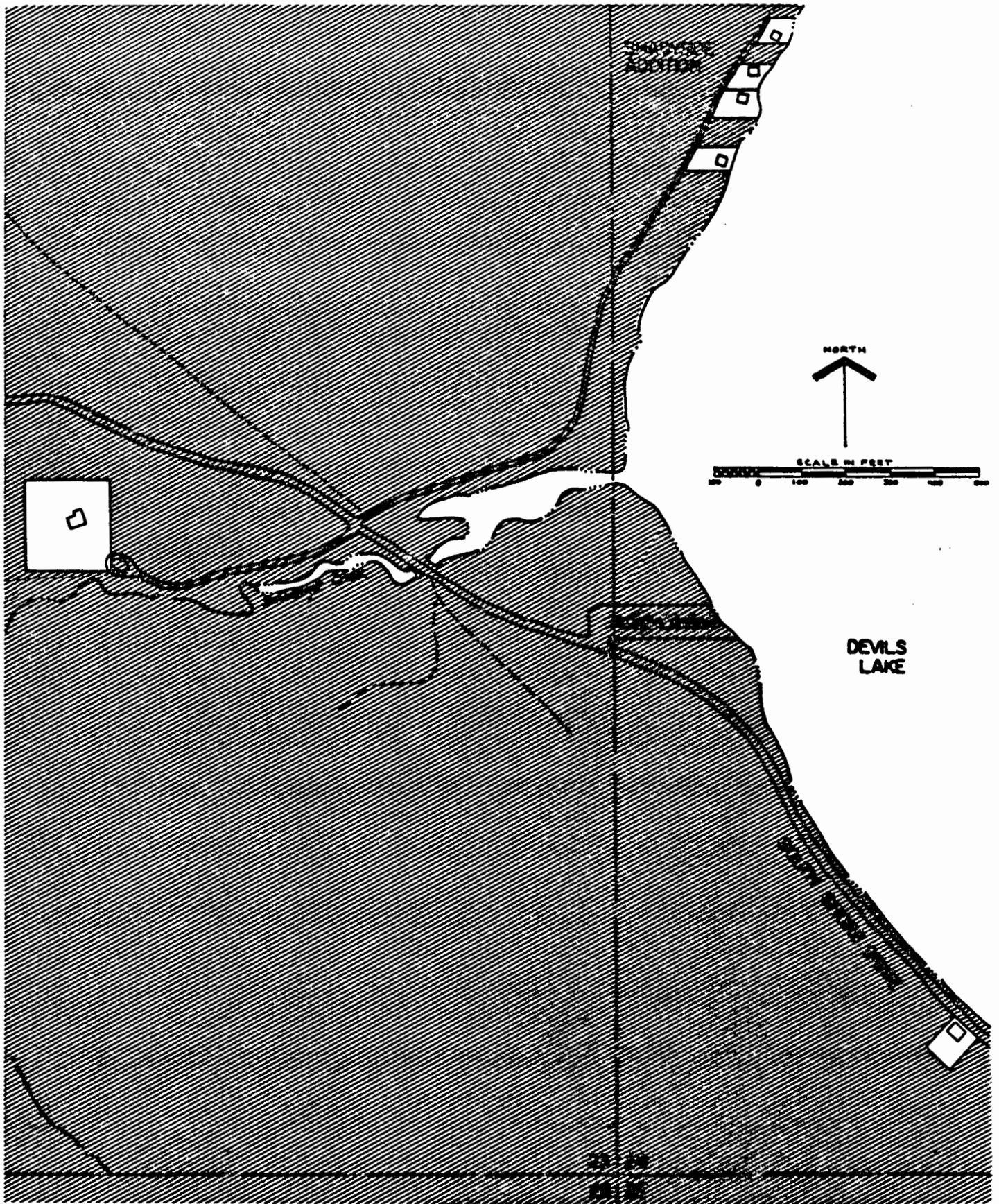


FIG. 12 A



LAKWOOD PARK

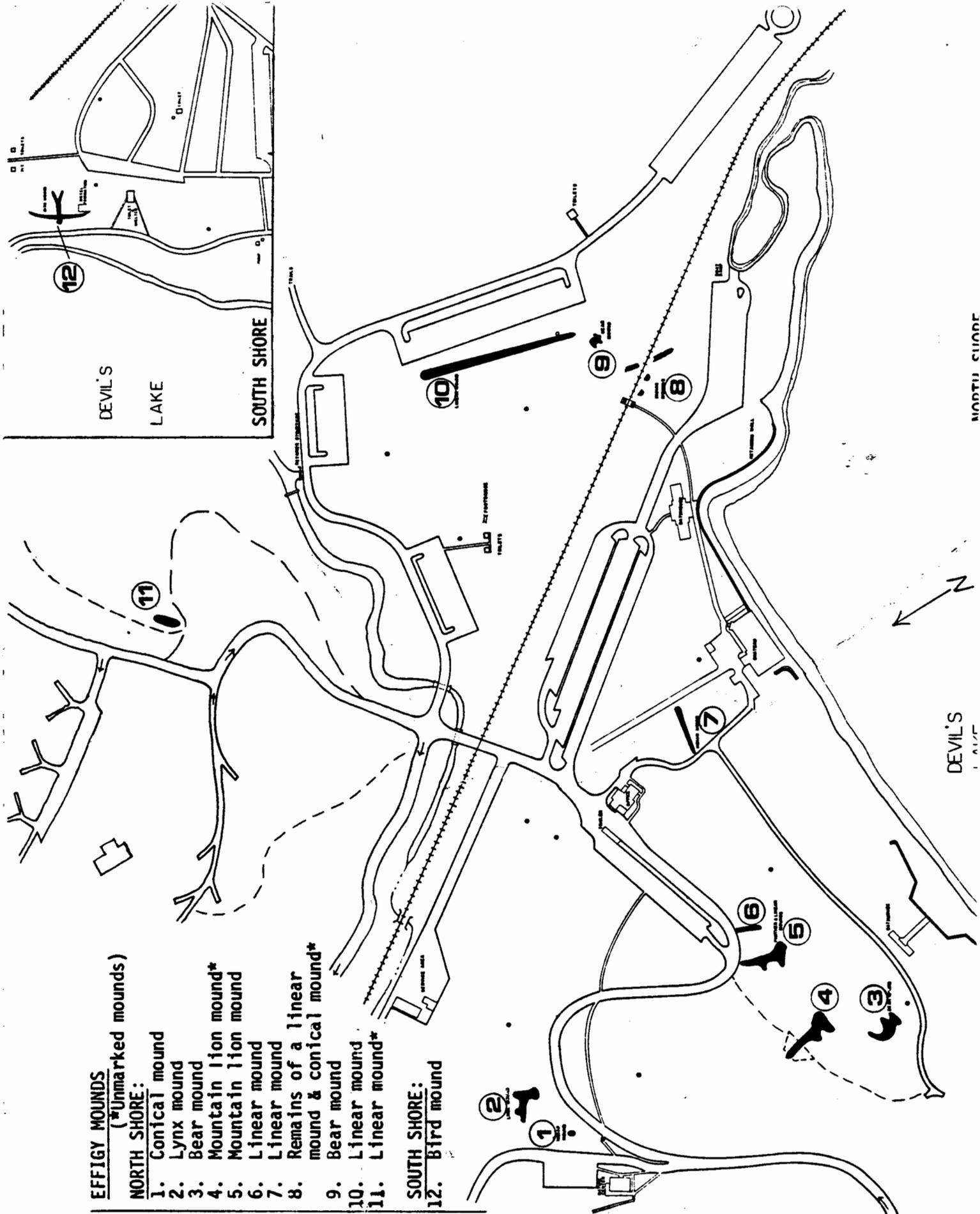
FIG 13A



 STATE OWNED PROPERTY

SOUTHWEST SHORE MAP

FIG. 13 B



EFFIGY MOUNDS
 (*Unmarked mounds)

NORTH SHORE:

- 1. Conical mound
- 2. Lynx mound
- 3. Bear mound
- 4. Mountain lion mound*
- 5. Mountain lion mound
- 6. Linear mound
- 7. Linear mound
- 8. Remains of a linear mound & conical mound*
- 9. Bear mound
- 10. Linear mound
- 11. Linear mound*

SOUTH SHORE:

- 12. Bird mound

ARCHAEOLOGICAL FEATURES

FIG. 18A

SECTION II - SUPPORT DATA

A. BACKGROUND INFORMATION

1. History of Property Creation

The Devil's Lake region has been a popular tourist area since the mid-1800's. By 1871, the Chicago and Northwestern Railroad Company had completed a railroad which extended through the present day park and made the park relatively easy to reach. It was estimated that 20,000 tourists visited the area in the 1872 season. At one time, much of the northeastern and southern shore of Devil's Lake was dotted with seasonal cottages. Many remained along the lake well into the 1970's, however, today only a few remain.

Wisconsin's first State Park Board of 1907 was directed by the Governor to "make recommendations regarding the acquisition of any new parks." At that time Interstate was Wisconsin's only state park. The Board commissioned John Nolen, a Boston landscape architect to make recommendations in that regard. In his report to the Board, Nolen identified four major areas that he recommended for state park acquisition. They included: the Dells of the Wisconsin River, Peninsula State Park, Wyalusing State Park, and Devil's Lake State Park. Nolen described Devil's Lake as follows:

"Devil's Lake in Sauk County is, as everyone knows, a most accessible and popular resort with a great wild forest around it, and fully sufficient in size for State Park purposes. The climate in summer is healthful, if not invigorating. In beauty--barring the ravages of the railroad, the quarries, and the scars of commonplace summer cottages--Devil's Lake meets all the requirements of a State Park. The lake itself, half a mile wide and more than a mile in length, is a gem, a characteristic example of Wisconsin's natural possessions. The bluffs rise impressively from the shores of the lake and afford broad and beautiful views of the Baraboo valley, the refreshing and soul-renewing value of which cannot easily be over-estimated. The romantic glens, the rock-walled and wooded hollows, the secluded creeks in little valleys, all make their contribution to the pleasure of the visitor. Devil's Lake possesses, too, scientific interest--geological, archeological, botanical--that can scarcely be duplicated in Wisconsin. Indeed, no long description of Devil's Lake is necessary for it is well known how eminently fitted it is to and most of the bluffs, with their outcropping rock, can be secured at reasonable rates and with little difficulty."

The total area mapped out by the first State Park Commission as representing the property desirable for the State to acquire; "was 5,500 acres, which it has been roughly estimated could not be secured for less than \$250,000. Of this area, 5,000 acres could be had for about \$100,000 and the other 500 acres would cost approximately \$150,000. Some of this it would be necessary to acquire, but a large portion is not dispensable. The present situation of Devil's Lake, as at the Dells, cannot fail to impress the members of the State Legislature with the necessity for early action in the acquisition of lands for State Parks."

The Board concurred and all but the Dells became state parks. Devil's Lake became a state park in 1911.

In October, 1964 the Ice Age Act (P.L. 88-655) designated portions of Devil's Lake State Park for inclusion within the Ice Age National Scientific Reserve. As published in the Federal Register, May 29, 1971, the Devil's Lake State Park Ice Age Unit boundary contained 8,840 acres. In subsequent months, work was initiated by NPS and DNR on a preliminary master plan for the IANSR which was eventually published in July 1973. In 1971, the boundary of Devil's Lake State Park was increased from 4,800.13 acres to 8,840 acres by the Wisconsin Natural Resources Board. Further study indicated that the boundary of the Devil's Lake Ice Age Unit should be expanded by 970 acres to include more geologic features as is now described in the proposed master plan, and in May 1974 the Natural Resources Board approved the present 9,810 acre goal. As a result, the existing state park boundary totally encompasses the Ice Age boundary.

2. Administrative Actions

a. Motor Boat Ban

In 1972, the Natural Resources Board authorized the Department to prohibit motor boats from operating on Devil's Lake. Small electric motors, canoes, rowboats, and sailboats are still allowed.

b. Ice Age Cooperative Agreement

Because the park is a unit of the Ice Age National Scientific Reserve, it shares joint National Park and State Park status. Up to one-half of the annual operations costs for the park are paid by the National Park Service. The Federal Golden Eagle and Golden Age Passports are honored at Devil's Lake.

3. Current Use and Management

Devil's Lake is in many respects Wisconsin's premier state park. It is the largest, (9,810 acres in the boundary) the most heavily used (1.1 million visitors in 1980) and in the opinion of many, the most beautiful. The park has always been managed to preserve the beauty of the area, and to accommodate a large number of visitors.

Devil's Lake State Park is currently authorized thirteen permanent positions. The park utilizes 5 seasonal employees and about 35 LTE employees during the summer. All aspects of the park's operations and management are under the direction of the park manager.

a. Current recreational uses of the park include but are not limited to:

- Family Camping
- Outdoor Group Camping
- Indoor Group Camping
- Picnicking
- Outdoor Games
- Swimming
- Sunbathing
- Nature Study
- Canoeing
- Boating
- Sail Boating
- Scuba Diving
- Fishing
- Rock Climbing
- Hiking
- Cross-country Skiing
- Snowmobiling
- Deer Hunting

b. Uses of lands within the park boundary but not acquired include:

- Farming
- Permanent Housing
- Seasonal Housing
- Resort
- Gravel Quarrying
- Timber Production
- Church
- Hunting

B. RESOURCE CAPABILITIES AND INVENTORY

1. Geology

Devil's Lake State Park is situated in the range of hills known as the Baraboo Hills or the Baraboo Range, which are composed of Precambrian quartzite, more than one billion years old. The Baraboo Hills form a canoe-shaped bowl around the Baraboo Valley, through which the Baraboo River flows. Maximum elevation of the hills ranges from 700 to 800 feet above the level of the Wisconsin River Valley. Cambrian and Ordovician sedimentary rocks overlie the quartzite in places (Black, 1974).

Sand that formed the quartzite of the Baraboo Hills was deposited by rivers as they flowed into shallow seas that had inundated this area more than a billion years ago. As the sand accumulated, the increasing pressure resulted in the formation of sandstone, and later quartzite. After the seas withdrew, the quartzite was folded upwards to form the North Range and the South Range of the Baraboo Hills, creating a valley between them. Quartzite is located below the valley, but only in the two ranges is the quartzite located above the ground today (Black, 1974).

Beginning 500 million years ago and lasting for perhaps 100 million years, the area was subjected to various advances and retreats of ancient seas. The result of these remittent submergences was the accumulation of sandy and limey materials on the sea basins (on top of the quartzite). Vast layers of sandstone and limestone buried the quartzite hills. After the final retreat of the ancient seas, the area was exposed to forces of erosion. The Wisconsin River and its tributaries are believed to have removed most of the sedimentary rock from the Baraboo Hills, resulting in the exposure of the more resistant quartzite. At that time, the Wisconsin River flowed through the gorge where present day Devil's Lake is located (Black, 1974).

When the Wisconsin glacier advanced into the area 10 to 15 thousand years ago, it deposited debris at the north and south ends of the present day lake basin, damming the ends and diverting the Wisconsin River eastward (around the end of the Baraboo Range, rather than through it as before). Devil's Lake is thus located between two glacial "plugs" in an abandoned river valley. A end moraine of Cary - Late Woodfordian Age, is located within the park, and marks where the edge of the ice sheet occurred and can be traced from one end of the park to the other. The moraine in the park is regarded as unusual because of its uniformity on flat surfaces (15-50 feet high and 100-200 feet wide) and its asymmetry on hillsides. Short and broken recessional moraines in the form of small elongate hills are located in the park but are not conspicuous features (Black, 1974).

Sediments remaining from proglacial lakes (lakes located in front of the glacier) are found in several areas within the park. The remains of these lakes have been designated as Peck Lake located in the southern portion of Section 18, Steinke Lake located in Section 17, and Ott Lake located in Section 16. At one time, these lakes were probably joined, and drained into glacial Devil's Lake. Another unnamed proglacial lake was formed in Section 30, high on the south bluff (see figure 14) (Black, 1974).

In Sections 9 and 16 (see figure 17), the low swampy area, known as Hanson's Marsh is the remnant of a proglacial lake that was formed as the glacier receded. It is an important site in that a lake survived there for many centuries and consequently laid down lacustrine sediments. Samples of the varves (one year's sediment) have been counted to at least 600 years of time. Pollen samples taken from the varve layers revealed the post-glacial climatic changes as reflected in the transition of the local vegetation from boreal to deciduous forest (Black, 1974).

The topography today in Devil's Lake State Park is mostly a rolling upland at an elevation of nearly 1,400 feet which is cut by a steep-walled L-shaped gorge whose summit is generally 500 feet above lake level. The north trending section of the gorge is occupied by Devil's Lake. Three groupings of bluffs surround the east, south, and west edge of the lake (Black, 1974).

2. Soils

The soils of the Devil's Lake region are primarily of glacial origin, and are mostly silty loams. Seven soil series are found along stream channels, terraces, or floodplains: the moderate to well-drained Bertrand, Worthen, and Jackson silt loams; the poorly-drained Curran and Ettrick silt loams and Shiffer sandy loam, and Alluvial land. The Shiffer series also occurs on outwash plains. Occurring on calcareous tills are the well-drained Pecos and St. Charles silt loams, the Wycena sandy loam, Westville loam, and Oshtema silt. Formed over quartzite bedrock are the well-drained Baraboo silt loam and unglaciated somewhat poorly drained Skillet silt loam. Well-drained New Glarus silt loam is underlain by silty sediment over dolomitic clays. Elburn soils are underlain by acidic gravelly sand and Pella soils by glacial till; both are poorly drained silt loams. Two deep silt loams in the park are the somewhat poorly-drained Stronghurst series of lowlands and the well-drained Fayette soil of uplands. The only organic soil is the Houghton Peat and Muck series. Figure 15 is a soils map of Devil's Lake Park.

3. Fish and Wildlife

a. Fish

The only permanent body of water in the park supporting a fishery is Devil's Lake. Game fish in Devil's Lake include walleye, northern pike, burbot, largemouth bass, smallmouth bass, brown trout, rainbow trout, yellow perch, black crappie, bluegills, pumpkinseed sunfish and white sucker. Fathead minnow, Johnny darter, spot-tail shiner, and bluntnose minnow are also present.

b. Wildlife

The diversity of vegetation in Devil's Lake State Park has enabled a variety of wildlife habitats and components to develop. Over one-third of the about 70 species of mammals occurring in the state have their ranges overlapping the Devil's Lake area. Good potential wildlife habitat exists in many of the undeveloped areas of the park including both wetland and upland regions. Relatively few remaining aspen clones provide a winter and spring food source for many species. The upland forested portions of the park offer prime habitat for gray squirrels and are also utilized heavily by the large populations of white-tailed deer. Other mammal populations include mink and muskrat common to wetland areas and several species of small rodents.

An estimated 80 species of birds nest in the park while numerous other species migrate through the park. Several species are year-round residents. Common year-round residents include red-tailed hawks, several species of owls and woodpeckers, bluejays, cardinals, and white-breasted nuthatches. An uncommon resident to Wisconsin in the park is the tufted titmouse. Bald eagles have been sighted soaring over the park during winter months. The ruffed grouse is the only game bird species which occurs in any number in the park. Several species of waterfowl including wood duck and blue winged teal, nest in the wetland areas.

Several species of turtles, frogs, salamanders, and snakes are located in various portions of the park. Populations of the timber rattlesnake are located in the rocky areas near the bluffs, however, they are not abundant in the park.

Except for the pickerel frog there are no records of nesting or resident threatened or endangered animal species within the park. Several endangered birds, including bald eagle and osprey, occasionally migrate through the park.

Appendix A lists the wildlife of the park in more detail.

4. Vegetation

Due to the varied topography and soils, Devil's Lake State Park contains many diversified plant communities. Approximately one-third of the species of the vascular plants found in Wisconsin are represented in the Devil's Lake State Park. The vegetation of the park has been classified into groups corresponding to the vegetation map shown in Figure 16.

White Birch (175 acres)

Found in scattered small stands throughout the park, white birch stands are typically located on disturbed sites or cool northerly facing slopes. The overstory is often nearly pure white birch and the groundstory is typically composed of bracken fern, clubmoss species, Pennsylvania sedge, Canada mayflower, and white snakeroot.

Aspen (155 acres)

The aspen cover type is not a major community within the park. It is found primarily on disturbed or dry, limey sites. Its composition is similar to the white birch communities, but quaking aspen and bigtoothed aspen predominate.

Bottomland Hardwood (120 acres)

Found in low, poorly-drained areas, the bottomland hardwood community is dominated by American elm, cottonwood, black willow, river birch, button bush, and winterberry. Ground cover includes several sedge species, obedient plant, wood nettle, and cut-leaf coneflower.

Conifer Plantations (90 acres)

Conifer plantations within the park are mostly white pine, but some red pine and Scotch pine and Norway spruce have also been introduced. More mature plantations (plantations located near the existing nature center) have a variety of native understory species, whereas the less mature plantations have relatively few understory plants. An exception to this is the orchid, Liparis liliifolia, which is abundant in younger plantations.

Lowland Brush (50 acres)

Found in low, poorly-drained areas, the lowland brush community is typified by tag alder, several species of willow, red osier dogwood, meadow sweet, steeple bush, narrow swamp fern, mermaid weed, and rough leaved goldenrod. This is an uncommon community within the park.

Northern Hardwoods (270 acres)

This hardwoods cover type, with northern elements, is dominated by such plant species as sugar maple, basswood, slippery elm, bitternut hickory, and red oak. Most of the vegetation in the park has been disturbed. Northern hardwoods are found in scattered remnants only, where the soils and slopes afford more mesic and cooler conditions. Other characteristic woody species in the cover type include yellow birch, beaked hazelnut, mountain maple, red elder, and bladdernut. Ground cover is typically composed of spinulose wood fern, nodding trillium, wild leek, Adam and Eve orchid, white and red baneberry, toothwort, blue cohosh, yellow violet, Short's aster, and zig-zag goldenrod.

Oak (Southern Dry Hardwoods) (5,510 acres)

Oak or southern dry hardwoods cover type, the most common community in the park, is found on drier sites than where the northern hardwoods are located. Major species include several species of oak, shagbark hickory, red maple, ironwood, white ash, common hazel, and gray dogwood. Ground cover typically includes lady fern, rattlesnake fern, wind flower, hog peanut, poke milkweed, wild sarsaparilla, enchanter's nightshade, squaw-root, tick trefoils, asters, and elm-leaved goldenrod.

The popularity of Devil's Lake as a recreational area began with the coming of the railroads in 1871. Twenty thousand people visited the lake in 1872. A large hotel the Minni-Wauken (later Cliff House) house, was built on the north end of the lake in 1873. The owner also operated a steamboat on the lake. Numerous cottages and several hotels were built on the South Shore; however, at this time, there are no buildings, sites, or engineering works within the park that are included in the National Register of Historic Places.

An archaeological survey was conducted in the area of the north campground. There were no significant findings. Further archaeological surveys will be undertaken before any new development is undertaken.

7. Land Use Potential

Devil's Lake State Park contains about 5,892 acres that are proposed for natural area designation. The South Bluff area to the south boundary, the West Bluff area, the East Bluff area to 113 and some of the area in the eastern part of the park are designated as natural area. There are no areas proposed for wilderness or wild classifications, mainly because there are no such areas of sufficient size.

About 3,237 acres are designated for Extensive Recreational Area status. Within that classification, about 1,269 acres are designated as open areas that will be maintained as open areas.

Approximately 372 acres are designated as Intensive Recreation Area. These areas include the North and South Shore use areas.

Scientific areas include 309 acres, consisting of the three existing scientific areas and a 27-acre expansion to the Koshawago Springs Scientific Area, needed for watershed protection and boundary simplification.

See Figure 10 for the land use classes.

C. MANAGEMENT PROBLEMS

1. People (law enforcement) Problems

a. Noise in the campground at night

This is by far the cause of the greatest number of complaints. Causes include design problems which permit non-registered campers to enter the campground at all hours of the night, the close proximity of the sites to one another, and the lack of vegetation between the sites. In addition, insufficient enforcement personnel to patrol the campgrounds on foot.

b. Vehicle Traffic

There is a large volume of vehicles entering and in a confined area. Time must be spent directing cars, unplugging jams, and turning cars away several weekends each summer. Associated problems of pedestrian-vehicle conflicts - made worse with increased numbers of bicycles, mopeds, etc., and associated problems of illegal parking. When the day-use area parking lots are filled, cars begin to park in every spot large enough to accommodate their vehicle. There is noise, dust, fumes, and hussie associated with the large number of vehicles in a small area, all in a hurry. There are an increasing number of traffic accidents.

c. Pets

Pets are prohibited in picnic areas and on the beach, but any given day will find dozens of dogs in these areas. It is an enforcement problem because of the numbers, because it is an emotional topic, and because it is not seen as sufficiently serious to entail a citation by many.

An associated problem is what to do with the pets that have been brought in. Generally, they are locked in hot cars or tied to a tree or where they can lunge at unsuspecting passersby. Pets in the campground result in noise complaints and lunging problems, and leave messes for the next group.

d. Authority

Park officers have authority to enforce laws and Department rules on state land only. Unfortunately, the park includes navigable waters, public roads, railroad tracks, and private lands all of which cause problems that spill over onto state land.

e. User Conflicts

Consistent with the park's goals and objectives, an effort is made to accommodate as wide a variety of recreational users as possible without conflicting with one another. Over time as activities vary in popularity and new types emerge we experience various conflicts between users emerge. At present the following use conflicts are appearing:

1. Scuba diver vs. fishermen. Both groups seek to use the same water resources at the same time.
2. Rock climbers vs. hikers. Climbers block the trails and throw their ropes down on hikers. Hikers roll rocks down on climbers, get in the way, and leave litter which the climbers feel reflects negatively on them.
3. Day users vs. campers. Different objectives, different values, sharing the same areas and disturbing one another.
4. Family campers vs. individual group campers. Different values being imposed on one another.
5. Deer hunters vs. hikers.
6. Cross country skiers vs. hikers, snowshoers, and dogs.
7. Rock climbers vs. indoor group camp users. Sharing the same parking.
8. Environmentalists, naturalists, preservationists vs. urban users who use the park as a pretty place to socialize.

A problem underlying all the above is a lack of data base upon which to base decision-making.

f. Miscellaneous

In addition to the above topics, following are rule violations frequently encountered which require enforcement action: no park admission sticker (or sticker improperly attached), possession of controlled substances, campers in undesignated areas, various motor vehicle violations such as one-way roads, numerous types of vandalism, various fish and game and boating violations on and around the lake.

2. Resource Management Problems

a. Lake Water Quality

The Millifoll growth increases each year. It is invading the swimming areas, causes problems for boats, and creates an expensive cleanup operation after washed to shore.

Swimmers Itch. Although not a water quality problem, it crops up each June and creates public relations problems, negatively affects attendance, and the treatment is costly and questionable from an environmental standpoint.

Recent years have witnessed algae blooms. Some say this is new.

b. Fluctuating Water Levels.

In low years this is negative for swimming, scuba diving, boat launching, boat mooring. High years cause erosion problems, boat launching and mooring problems, less sand for sunbathers, and at the extreme, water over the South Shore Road.

Other associated problems include loss of sand from shore either washed deeper or blown into grass.

c. Fire

The vast majority of the fires at Devil's Lake occur on the bluffs and are visitor caused. Due to the topography the fires are costly, difficult, and dangerous to suppress. A second major cause of fire is the railroad. They either spread to the east bluff or endanger the South Shore campground.

d. Cropland

The acquisition program has included several farms. Opinions vary as to the best use to make of this cropland. Most of it is marginal from a production standpoint. There are groups opposed to each of the options which include allowing it to go fallow, mowing, or burning to keep down brush invasion, rental of land, and sharecropping.

e. Hunting and Fishing

By Statute, the park is a wildlife refuge. It is open to deer hunting for the rifle and late bow seasons. At public meetings and at sportsmens groups meetings there has been some pressure to open extensive areas of the park to small game hunting. There have been overpopulations of squirrels and raccoons. Hunting does occur illegally primarily due to the difficulty to keep acquisition boundaries posted. Fishing has been put and take for trout. Fishing at stocking sites sometimes occurs. Some illegal spearfishing by scuba divers does take place.

Open Field (1,195 acres)

The open field cover type includes former pastures, grassy areas and farmlands, the open fields which are characterized by many species of grasses, old field cinquefoil, common St. John's wort and evening primrose. This community is often under varying stages of shrub invasion around its perimeters, and if continued disturbances were ended, it soon would evolve into one of the shrub communities.

White Pine

White pine plant communities are uncommon in this part of the state, and within the park are found only in the bluff areas and deep cool gorges. Pine hollow for example, (Section 35 is dominated by white pines and is very boreal in character, with many northern plants because of the cool air drainage that flows into the narrow gorge. The area along the bluffs at the southwest corner of the lake, is also dominated by large white pines. Components of the pine stands are mainly white pine, with a few red pines. White birch, basswood and some oaks are also associated with the pines. Ground cover, includes such northern-type plants as lichens, mosses, rock fern, marginal fern, and Canada mayflower.

Upland Brush (450 acres)

Typically, the upland brush community occurs where an open field community has evolved to the point where shrub species dominate. There are many small scattered pockets of upland brush in the park. Plants included in the cover type are gray dogwood, staghorn and smooth sumac, several species of bramble (Rubus), prickly ash, red cedar, and chokecherry.

Rock Outcroppings

The rock outcropping communities are found only along the steep slopes of the quartzite bluffs. They are typified by widely scattered white pines, white birches, red cedar, and Virginia creeper. Non-woody species include lichens, mosses, rusty woodsia, rock fern, leather leaf fern, wild columbine, pale corydalis, and Dutchman's breeches.

Scrub Oak (185 acres)

Found mainly along the talus slopes, the scrub oak communities are similar to rock outcroppings, but include several species of oaks as well.

Dry Prairie

The dry prairie on top of the south end of the east bluff is the site of a prairie restoration project where trees were cut and the stumps treated to prevent sprouting. It is an area of about five acres bordering the edge of the bluff. Plants present include big and little bluestem grass, lead plant, bushclover, creamy false indigo, several goldenrods, smooth aster, aromatic aster, blazing star, tickseed, shooting star, round-stemmed false foxglove (Gerardia gattingeri), violet wood sorrel, upland potentilla, birdfoot violet, and prairie buttercup. Another dry prairie, located on Devil's Nose at the east end of the south bluff, is the only place in the park where prickly pear cactus grows.

Wet Prairie

A wet prairie in the NE 1/4 of Section 19 includes several acres with such plants as gayfeather, white false indigo, scarlet cup, golden alexander, cowbane, water hemlock, and Michigan lily. Nearby low grassy meadows, also a rare type of plant community in the park, are the location of the bed of an extinct proglacial lake. See also Figure 17 for location of wetlands.

"Pygmy Forest"

The "pygmy forest" on top of the south end of the east bluff is an extremely impoverished "forest" of stunted trees, mainly shagbark hickories and white ashes. A series of cross sections revealed that the stand originated around 1904 (more verification is needed on this, but it appears that this is a uniform stand). Ground cover is mainly Pennsylvania sedge and pussy-toes with prairie species scattered throughout the area.

Fern Gardens & Boreal Thickets

Fern gardens and boreal thickets located on the cool, moist north face of the south bluff consist of rock and marginal ferns and thickets of mountain maple and red (northern) elder.

Marsh

The marsh close to the southwestern corner of the lake where the creek discharges is the only marshy habitat remaining by the lake and even this area was altered in the past. The small area consists of a thicket of sandbar willows, elms, and cottonwoods, a sedge meadow, small marshy openings, and (with receding water) mudflats.

Old Growth Forest

The South Shore old growth forest is the only area of undisturbed shoreline and is the place where large "virgin" trees are located. Large white pines, red and white oaks, and basswoods make this a unique area.

Aquatic Vegetation

The limited littoral zone of Devil's Lake has resulted in a scarcity of rooted aquatics. Four pockets of submerged rooted aquatics exist. The major one is located at the mouth of the creek in the southwest corner of the lake along the alluvial plain created by the stream entering there. Two pockets are located in the southeast corner and one pocket is found in the northwest corner of the lake. An exotic "weed" known as Asiatic milfoil has been introduced into Devil's Lake. Also found in the lake are two quillworts, *Isaetes macrospora* and *I. muricata*. Quillwort is a fairly common bottom-rooted aquatic plant of northern lakes, but in the southern half of Wisconsin Devil's Lake is the only lake with these species.

Cold water springs found in Messenger Creek valley, at the southwest corner of the lake harbor such plants as water moss and golden saxifrage.

Endangered and Threatened Plants

There are no endangered plants known within Devil's Lake State Park. One threatened species, prairie parsley (*Polytaenia nuttallii*) was found within the park in 1946, but it is probably extirpated. No individuals have been found in recent years. Another threatened species, northern monkshood (*Aconitum noveboracense*) is found at nearby Parfrey's Glen.

5. Water Resources

Devil's Lake is a natural lake encompassing 357 acres and lies in the preglacial valley of the Baraboo Range. The lake is 1.25 miles long, with 3.3 miles of shoreline, and a maximum depth of 51 feet. Water quality data indicates that Devil's Lake is a clear, deep oligotrophic lake with exceptionally soft water that is low in productivity. Seepage is the primary water source for the lake. Bottom material of the lake consists of quartzite boulders to a depth of 10 feet along the east and west shores and the central portion of the southern end of the lake. The north end and the remainder of the south end have a sand bottom. In areas where the water depth exceeds ten feet, the sand bottom is covered with a layer of muck. Messenger Creek flows into the southwestern corner of the lake. Water quality data for the lake is found in Appendix C.

Located in Sections 23 and 26, T11N, R6E, Messenger Creek is a small infertile creek originating from a spring in the talus slopes between the southern and western bluffs in the Devil's Lake State Park. The creek, approximately one-half mile long and has an average flow of .391 cfs and flows into the southwestern corner of Devil's Lake.

There are very few remaining wetlands in Devil's Lake State Park. The following wetlands (and several others) and watersheds have been located and typed on Figure 17. They correspond to the U.S. Fish and Wildlife Service classifications as shown in Appendix M.

- Southwestern part of Devil's Lake near the boat landing
 - 0.25 acre Type 3, Inland Fresh Marsh
 - 2.00 acre Type 7, Wooded Swamp Marsh
- Southeastern segment of the park
 - 8.00 acre Type 1, Seasonally flooded basins or flats
 - 2.00 acre Type 2, Inland Fresh Meadow
 - 8.00 acre Type 6, Shrub swamps
- Northeast segment of the park
 - 15.00 acre Type 1, Seasonally flooded basins or flats
 - 20.00 acre Type 2, Inland fresh meadow
 - 5.00 acre Type 3, Inland shallow fresh marsh

6. Historical and Archaeological Features

At nearby Natural Bridge State Park, in a rock-shelter, is the oldest authenticated site for man in the upper midwest. It is believed that people were living at this site from 10 to 12 thousand years ago, or near to the time when the Wisconsin glacier retreated from the area. In historic times, the Winnebago was the most important tribe of the area, but also represented were the Sauk and Fox, the Kickapoo and probably several other tribes. Another group of people known as the "Effigy Mound Builders" were active in this region about a thousand years ago. They left behind mounds, or ridges of earth in geometric shapes or in the shapes of animals, including some which were burial mounds. Three mounds have been located in Devil's Lake State Park. One which resembles a lynx is near the existing nature center, another resembling a bear is near the north end of the lake, and the third mound, resembling a bird, is located at the southeastern corner of the lake. (See Figure 18).

f. Potentially hazardous tree removal - disposal.

Removal of dead and dying trees in the use areas of the park has always been a costly operation, yet necessary.

g. Damage to Trees

Campers often chop trees as sources of firewood. This is especially severe during those times of the year when the firewood vendor is not in operation. The Red Oak Scientific Area is immediately adjacent to the outdoor group camp and this area gets hit hard. Other similar problems include nails in trees for hanging clothes lines, lantern burns, carving of initials and blazes in bark, and removal of branches for weiner sticks. The oaks in the park have suffered from drought and the two-lined chestnut borer - especially in the south bluff.

h. Erosion

There are various causes, including pedestrian volunteer paths, 4-wheel drive vehicles, trails on slopes, and cropland practices.

i. Vehicles Off The Roads

In spring when the ground is soft and wet, considerable damage occurs from vehicles operating off-the-road and from camper's vehicles in the campground.

j. South Bluff

Very little use is made of the south bluff at present. This is a block of some 2000 acres of relatively primitive land. There is disagreement as to whether trails should be developed on the south bluff. Reasons for trail construction include spreading use, proximity to glacial formations, and scenery potential. Reasons against include the cost and difficulty of construction, increased fire hazards, increased illegal camping, rock climbing spreading to new areas, and no demonstrated need for more trails.

3. Design/Facility Problems

- a. Working around and living with the many private facilities within the park boundary causes problems. These include town and country highways, railroad, private land, and homes. (See Figure 20).
- b. Old facilities. Much of the present development occurred in the thirties by the CCC's. This includes roads, buildings, trails, culverts, etc. Although well constructed, they are reaching an age such that considerable repair is needed, it is a costly type of repair (much masonry), and the design is no longer adequate for modern needs. The question arises "should they be repaired or replaced with more functional new ones"?
- c. South Shore. The quality of the South Shore campground - including the sites themselves the roads, and some of the buildings - lends itself to improper uses and a poor recreational experience.
- d. Water access. Boat launching facilities are inadequate to adjust to the fluctuating water levels. No good access points for scuba divers. No boat mooring facilities.
- e. Many of the parking areas, as well as the west campground, are located prior to the contact stations. This makes it difficult to collect the revenues due and provide adequate directions and information.
- f. Facilities for winter use are not well organized. There are toilets and water only at the headquarters and in the west campground. Parking for skiers is located at Steinke Basin on CTH "DL." There is a shelter in the east campground.
- g. The sewage treatment system is not usable in the off-season. Water must be turned off in mid-October and not turned on again until mid-April. This conflicts with increased off-season park use as well as demands of the users for more modern facilities.
- h. Due to the topography and shallow soils, trails at Devil's Lake are extremely difficult and costly to construct and maintain.
- i. Employee housing. Each year it is more difficult to recruit good employees who want park work experience due to their inability to find and afford housing. Most national parks provide housing for their summer employees to overcome this problem. Park management would like to do likewise.

- j. Campsites are designed to be universal - that is able to accommodate almost any type of camping unit. Most campers are on one extreme or the other - small tents or large recreation vehicles and trailers. As a result, campsites do not always satisfy the needs of either group.
- k. There is inadequate day-use parking. As a result, most fair weather weekends the parking stalls are all taken by noon and visitors must be turned away.
- l. There is no pedestrian walkway along the South Shore Road next to the lake. Since this is the only means of circling the lake or connecting the east and west bluff trails there is considerable traffic.

D. RECREATIONAL NEEDS OF THE REGION

The 1977 Wisconsin Outdoor Recreation Plan (SCORP), referring to region 3, consisting of Grant, Green, Iowa, Lafayette, Richland, and Sauk Counties with 14 state parks, 9 county parks, and 26 public hunting and fishing acres indicate the following recreational needs:

- 1. Expansion of the swimming resources through careful location of swimming pools and maintaining existing resources through correction of water quality problems will improve the scarce supply of natural lakes in the region.
- 2. Improvement of surface water activities through an increase in public boating access sites.
- 3. Development of additional canoe access sites and shoreline protection of the region's rivers.
- 4. Improvement of fishing resources through improving water quality and fishery management techniques with agency preservation of lake and river frontage.
- 5. Development of campsites in which present demand exceeds supply by 40% for developed sites and is over twice the supply for primitive types.
- 6. Expansion of picnicking resources (tables and areas) in which the region's residents rated picnicking the most popular activity; some of the deficiencies in supply will be satisfied through proposed community parks.
- 7. Protection of nonrenewable resources of scenic, historical, and natural area sites. Development of a scenic roadways system is needed in region 3 with the Department of Transportation's Rustic Roads Program being one potential alternative.
- 8. Hunting resources require protection of wildlife habitat and control over the number of hunters in relation to the game resource. Landowner-resource agency-sportsman cooperative programs may be the key to enhancing hunting opportunities in region 3. (See Appendix E).

E. ANALYSIS OF ALTERNATIVES

- 1. No Action

This alternative would have Devil's Lake remain as it is today. This alternative does not satisfy the park objectives. It does not develop and maintain recreational and interpretive facilities consistent with the protection and preservation of the park, and it does not match use to design capacity. It does not control the automobile access to the major use areas of the park. Also, the Ice Age Interpretive mission could not be adequately served without the careful implementation of an Ice Age visitor center.

- 2. Alternative Locations for the Office/Ice Age Interpretive Center

In planning for the Office/Ice Age Interpretive Center, several premises were assumed:

- a. Camper registration would best be located at the north end of the park, near the campground.
- b. The Office/Ice Age Interpretive Center (and possibly a major contact facility) should be combined into one building for energy and staffing efficiency.
- c. A contact station could be located prior to the office for use during busy summer weekends. The office could be designed to handle contact needs at all other times.
- d. The South Shore will have its own entrance.

- e. A future expanded shuttle system may be desirable within the park, but it would be unrealistic to ban automobiles. Also, peripheral parking lots would not necessarily need to be located right at the visitor center.

Many sites were considered, including the Ski-Hi area, the Pettingill site, the North Shore, the area near the Lakewood subdivision, and the area below the existing nature center. The alternatives have been narrowed to the last two, with a preference for the area near Lakewood.

3. Shuttle System

To discourage unnecessary automobile traffic, a shuttle system was considered for the park. It was not deemed to be possible to institute the system in the near future - for the life span of this plan. Nonetheless, it is still a long-term goal for the parks, and should not be lost sight of.

The system envisioned would not replace all automobile traffic within the park. It would have four main purposes:

- a. To transport visitors from a peripheral parking lot in the old quarry area to the south shore day-use area. At both the North Shore and South Shore day use areas, the parking that will be provided will not be sufficient to completely handle the demand. But rather than devote valuable space to parking, the parking could be provided elsewhere and people could be shuttled to the use areas. This system would be a supplementary system and would not replace parking in the use areas.
- b. As a long-range objective, to transport visitors between the North and South Shores using the railroad grade if and when it is abandoned.
- c. To move family campers from their respective campgrounds to the north shore day use area. This would reduce the number of campers who drive to the beach, take up valuable parking space, and make unneeded drives. Campers could be transported to evening programs, trailheads, and the existing nature center.
- d. To serve as an interpretive tool. Interpretive tours will originate from the interpretive center, and/or campgrounds and day-use areas. Utilizing existing roads, the tours would provide a method to interpret the scattered geologic features of the park and its environs to large numbers of visitors.

The shuttle system would operate during high use periods as the park's rapid transit system. There would be a transportation hierarchy in the park giving preference to the shuttle systems. To accomplish this the following actions should be taken:

- 1) Shuttle stops would be made right at both beaches. The shuttle could get people closer to the lake than their automobiles can.
- 2) Three separate routes would operate within the park during peak-use periods. (1) A campground shuttle would circulate between all three campgrounds and the North Shore day-use area, (2) the North Shore/South Shore shuttle would circulate via the abandoned (removed) railroad track, if it becomes available. Park users would have access to either shore without driving. (3) A shuttle would run between the quarry and the South Shore. Day users could park in the peripheral lot and be transported to the South Shore. This route could also serve the indoor group camp area and would operate only when day-use parking lots are filled.
- 3) At each of the major shuttle stops, a covered shelter would be provided for waiting users.
- 4) The shuttle vehicles would be designed to accommodate bulky items such as picnic supplies and recreational equipment.

The shuttle vehicles would operate mainly on existing roads. (However, if the Chicago and Northwestern Railroad line or part of the line through the park is ever abandoned the Department will make an attempt to acquire the right-of-way and convert it to a shuttle path).

APPENDICES

APPENDIX A

WILDLIFE OF DEVIL'S LAKE STATE PARK

Mammals Common In Devil's Lake State Park

Opposum
Short-tailed shrew
Pipistrelle
Woodchuck
Chipmunk
Fox squirrel
Southern flying squirrel
Meadow mouse (Microtus pennsylvanicus)
Meadow jumping mouse
Gray fox
Long-tailed weasel
Striped skunk

Masked shrew
Little brown bat
Cottontail rabbit
Thirteen-lined ground squirrel
Gray squirrel
Red squirrel
White-footed mouse (Peromyscus leucopus)
Muskrat
Red fox
Raccoon
Mink
White-tailed deer

Reptiles

Painted turtle
Eastern garter snake
Red-bellied snake
Hognosed snake
Fox snake
Timber rattlesnake

Spiny softshell
Northern water snake
Brown (DeKay's) snake
Milk snake
Black rat (pilot) snake

Amphibians

Common toad
Pickerel frog (threatened)
Green frog
Gray tree frog
Tiger salamander

Leopard frog
Wood frog
Spring peeper
Chorus frog

Birds (not a complete list)

Residents

Red-tailed hawk
Horned owl
Screech owl
Red-bellied woodpecker
Hairy woodpecker
Blue jay
Black-capped chickadee
White-breasted nuthatch
Cardinal

Ruffed grouse
Barred owl
Pileated woodpecker
Red-headed woodpecker (when good acorn crop)
Downy woodpecker
Crow
Tufted titmouse (rare)
House sparrow

Nesting species (in addition to the residents)

Green heron
Wood duck
Broad-winged hawk
Mourning dove
Flicker
Phoebe
Least flycatcher
Rough-winged swallow
Winter wren
Brown thrasher
Wood thrush
Bluebird
Yellow-throated vireo
Warbling vireo
Blue-winged warbler
Cerulean warbler
Louisiana water-thrush

Blue-winged teal
Turkey vulture (suspected)
Woodcock
Cuckoos (two species)
Crested flycatcher
Acadian flycatcher
Wood pewee
House wren
Catbird
Robin
Veery
Cedar waxwing
Red-eyed vireo
Black and white warbler
Golden-winged warbler
Ovenbird
Canada warbler

Nesting Species (continued)

Redstart
Red-wing
Grackle
Scarlet tanager
Indigo bunting
Towhee
Field sparrow

Meadowlark
Baltimore oriole
Cowbird
Rose-breasted grosbeak
Goldfinch
Chipping sparrow
Song sparrow

Migrants

Common loon
Pied-billed grebe
Common and red-breasted mergansers
Osprey (endangered)
Solitary sandpiper
Red-brown nuthatch
Hermit thrush
Gray-cheeked thrush
Ruby-crowned kinglet
Number of species of warblers
Fox sparrow

Horned grebe
Number of species of diving ducks
Sharp-shinned hawk
Spotted sandpiper
Herring gull
Brown creeper
Swainson's (olive-backed) thrush
Golden-crowned kinglet
Solitary (blue-headed) vireo
White-throated sparrow

Winter Visitors

Bald eagle (endangered)
Purple finch
Pine siskin
Slate-colored junco

Evening grosbeak
Redpoll
Red crossbill

NOTE: Eagles soar over in winter, juncos are regular and common visitors, and the others are irregular.

APPENDIX B
RARE AND UNCOMMON PLANTS
OF DEVIL'S LAKE STATE PARK

Endangered

None

Threatened

Northern Monkshood (Aconitum noveboracense)*
Prairie Parsley (Polytaenia nuttallii)

Uncommon

Water Starwort (Callitriche heterophylla)
A Sedge (Carex arifecta)
A Sedge (Carex prasina)
Slender Bush Clover (Lespedeza virginica)
Cancer-root (Orobancha uniflora)

*Also Federally threatened; found in Parfrey's Glen.

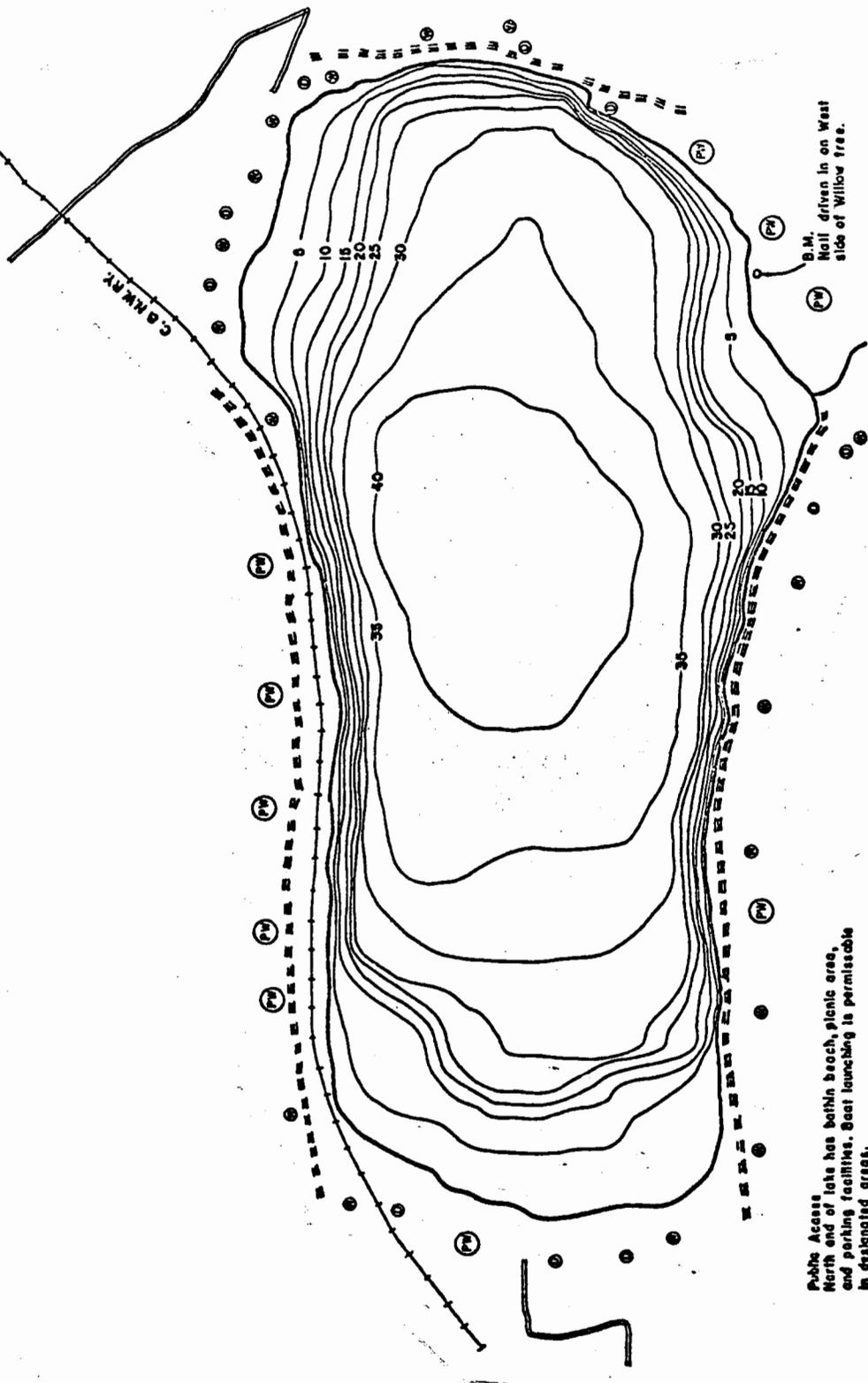
APPENDIX C
DEVIL'S LAKE ICE AGE UNIT
SELECTED WATER QUALITY DATA

Parameter	2/8/74	4/8/74	7/31/74	11/13/74
Water Volume (surface acres)	357.2	-	-	-
Max. depth (ft.)	51	-	-	-
Mean depth (ft.)	29	-	-	-
Shore length (miles)	3.44	-	-	-
pH	7.3	7.4	7.2	7.3
Total organic N (mg/l)	.33	.20	.58	.32
NO ₃ + NO ₂ - N (mg/l)	.09	.05	.05	.14
NH ₃ - N (mg/l)	.07	.03	.03	.45
Total PO ₄ (mg/l)	.09	.01	.01	.04
Total Alkalinity (mg/l)	20	20	20	21
Conductivity (umho/cm)	84	77	90	81
Secchi Disk (ft)	19	10	29	17
Dissolved oxygen (mg/l)	14.6	11.8	14.1	10.2
(20 feet)	13.5	11.8	14.4	10.0
(30 feet)	-	11.8	11.5	10.0
Temp °F (surface)	33	41	76	47
Chloride (mg/l)	2	3	2	3
Ca (mg/l)	9	17	2.0	7
Mg (mg/l)	7	8	8	7
Na (mg/l)	2	8	2	3
K (mg/l)	4	1.5	1.3	2.3

LAKE DEVILS
SECTION 13-24-25
TOWNSHIP 11-N
RANGE 6-E
TOWN BARABOO
COUNTY SAUK

LAKE SURVEY MAP

WISCONSIN CONSERVATION DEPARTMENT



Public Access
North end of lake has both a beach, picnic area,
and parking facilities. Boat launching is permissible
in designated areas.
South end of lake not so well developed, but has
plenty of room for camping.

B.M.
Nail driven in on West
side of Willow tree.

AREA 373.4 ACRES
TOTAL SHORELINE 3.34 MILES
MAX. DEPTH 40 FEET
SCALE: 1" = 500'

DATE 8/12/55
SOURCE OF INFORMATION W.C.D.
SOUNDINGS Echo Soundings

DEVILS LAKE - LAKE SURVEY

APPENDIX D
SCIENTIFIC AREAS

1. Red Oak
2. Pine Glen
3. Koshawago Springs

SCIENTIFIC AND NATURAL AREA REPORT
Wisconsin Scientific Areas Preservation Council

NAME OF AREA Devil's Lake Red Oak Forest LATEST INSPECTION DATE 1 October 1976
6 E 24
 QUARTER SW COUNTY Sauk TWSP. 11 N RANGE 7 E SECTIONS 19, 30
 BOUNDARIES AND ACREAGE of Approximately 122 acres within SE 1/4 section 24, SW 1/4 19,
 proposed or established area and buffer: and NW 1/4 30. See the map on the reverse side for legal
description.

ACCESS TO AREA: The scientific area is within Devil's Lake State Park located about 3 miles
south of Baraboo, and lies east of the large south shore campground. The
South Shore Road bisects the scientific area.

DESCRIPTION OF AREA: Outstanding features, primary and secondary biotic communities, dominants, understory and rare species, topography, soils geology and archeology.

The scientific area is part of a deep, scenic gorge incised in the Baraboo Hills by an ancestral Wisconsin River, and later abandoned and partially filled with glacial debris. The wooded portion south of the talus slope is dominated by an even aged stand of nearly pure red oak (164.9 Importance Value) which originated between 1856 and 1872 according to tree core data. Red maple (89.7 IV) and white oak (25.6 IV) are the two other common tree associates. White oaks are substantially older and larger than the other canopy trees and are open grown; in contrast, the red maples are small trees and dominate the sapling layer. James Larsen documented the forest invasion by red maple in "A study of an invasion by red maple of an oak woods in southern Wisconsin" Am. Mid. Nat. 49: 908-914 (1953). Forest soils are Baraboo and Skillet silt loams; many quartzite and some igneous boulders are visible on the forest floor. The forest is situated on top of the terminal moraine of Late Woodfordian (Cary) age which blocked the ancient river channel. The northern portion of the scientific area includes a portion of the talus slope of angular blocks of jointed quartzite below vertical cliffs. Only scattered trees of red oak, hickory, white pine, white birch, red cedar and basswood occur on the talus slope which rises some 400 feet. The nearly level upland summit above the talus slope is wooded with a xeric forest of young oaks and hickory.

HISTORY OF LAND USE AND LIMITING FACTORS: In recent years some of the red oaks have been de-
foliated by canker worms. This stress, along with the drought of 1976 and root competition
with the red maples, may have sufficiently reduced the vigor of some red oaks to permit infes-
tation by the two-lined chestnut borer. An estimated 200+ trees are infected. Heavy deer
browsing pressure noted on herbaceous plants, autumn 1976.

ADMINISTRATIVE INFORMATION: Landowner and administrator, existing and proposed management, degree of scientific, educational and recreational use of area, adjacent lands and compatibility.

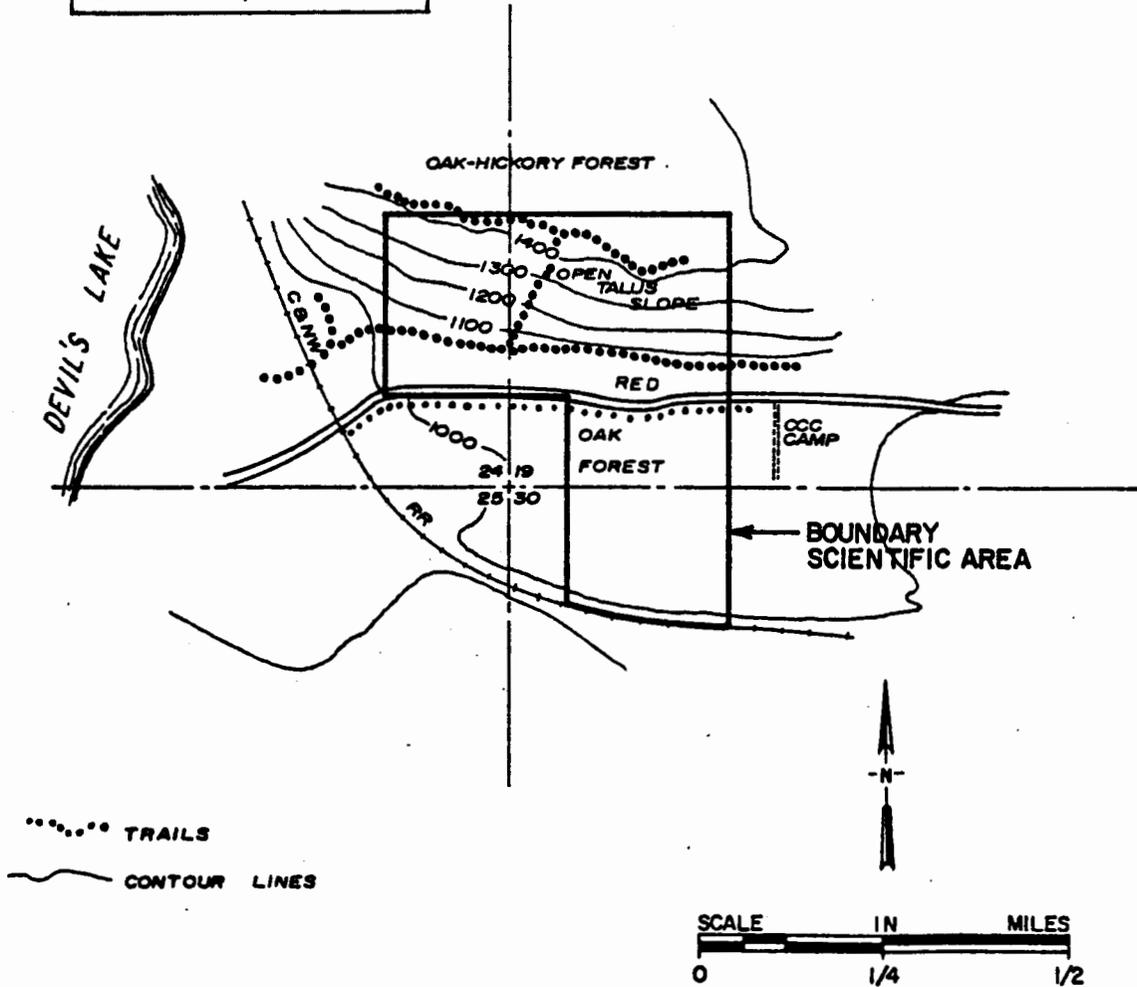
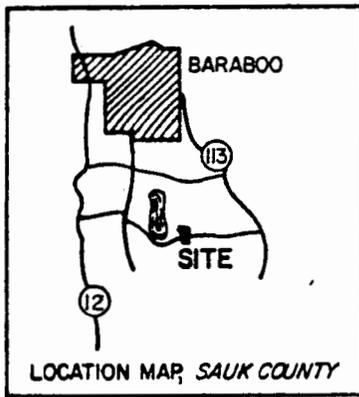
Managed by the Department of Natural Resources, Bureau Parks and Recreation; Superintendent,
Devil's Lake State Park, Rt. 4 Box 36, Baraboo, 53913.
Primary use is by thousands of park visitors who use the trails which scale the bluff,
parallel the bluff at its summit and base, and paralleled the South Shore Road between the
group camp and camping area. Rock climbing on the vertical cliffs has greatly increased in
the last years. University of Wisconsin classes and guided nature hikes are main educational
uses.

REFERENCE INFORMATION: Person recommending area, references, quadrangle and other publications and date of action taken toward designation of area.

Recommended by J.T. Curtis and established as the 27th scientific area in November 1953. In
1967 the east boundary was modified due to development of the group camp on the old CCC site,
and in March 1972 the proposed expansion north of South Shore Road was approved. See State
Park maps, Baraboo 15' Quadrangle, SAPC quantitative data sheet on the red oak portion, plant
species list, and other references to geology, history, insect pests, etc. in SAPC files.

REPORT BY: revised by William Tans DATE: October 1976

DEVIL'S LAKE RED OAK FOREST SCIENTIFIC AREA



LEGAL DESCRIPTION: T. 11 N. R. 7 E. -

Begin at the SW corner of Section 19, town and range aforesaid, thence East 440' m.o.l. to the place of beginning; thence South to the R.R. r.o.w., thence easterly along the R.R. r.o.w. to a point 3410' West of the east line of Section 19 and 30, town and range aforesaid, thence North parallel to the east line of Section 30 and 19, 3150' m.o.l. to a point 150' North of the North line of S $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ of Section 19, thence West parallel to said North line of S $\frac{1}{2}$ N $\frac{1}{2}$ SW $\frac{1}{4}$ 2375' m.o.l. to a point, thence southerly 1470' m.o.l. to the South Shore Road to a point, thence easterly 1430' along South Shore Road to a point, thence South 640' m.o.l. to the place of beginning.

DEVIL'S LAKE RED OAK FOREST SCIENTIFIC AREA
QUANTITATIVE DATA SHEET

Location: Sauk County, Wisconsin, T11N R7E, Section 30, 19
Date and Source: June 24, 1976 Gary Birch
Method: Point Quarter Method, 35 points

Scientific Areas Preservation Council
Box 7921
Madison, Wisconsin 53707

Tree Species	No. Points of Occurrence	No. of Trees	Total Basal Area Square Inches	Relative Frequency (F)	Relative Density (D)	Relative Dominance (Do)	Importance Value (F+D+Do)
Quercus rubra	29	62	12,308	40%	44.3%	80.6%	164.9
Acer rubrum	27	59	1,613	37%	42.1%	10.6%	89.7
Quercus alba	9	11	864	12%	7.9%	5.7%	25.6
Acer saccharum	2	2	124	2.7%	1.4%	0.8%	4.9
Juglans cinerea	1	1	79	1.4%	0.7%	0.5%	2.6
Carya ovata	1	1	13	1.4%	0.7%	0.1%	2.2
Prunus serotina	1	1	95	1.4%	0.7%	0.6%	2.7
Populus grandidentata	1	1	113	1.4%	0.7%	0.7%	2.8
Ostrya virginiana	1	1	16	1.4%	0.7%	0.1%	2.2
Tilia americana	1	1	38	1.4%	0.7%	0.2%	2.3
Totals	73	140	15,263	100.1%	99.9%	99.9%	299.9

Sapling Relative Density

Acer rubrum	90%
Fraxinus americana	6.7%
Tilia americana	1.7%
Prunus serotina	1.7%

Seedling Relative Density

Fraxinus americana	60%
Prunus serotina	20%
Vitis	20%

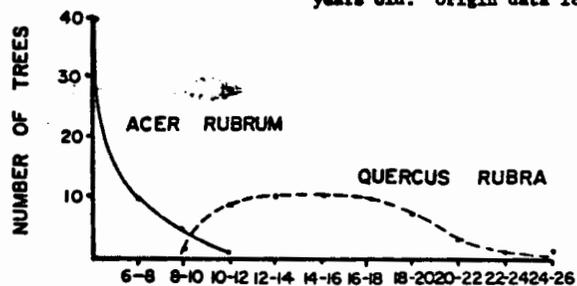
Continuum Index = 1760.5
Trees per acre = 176
Saplings per acre = 219
Average basal area per tree = 109 sq. in. (.76 sq. ft.)

Basal area per acre: 133 sq. ft.
Average distance: 15.74 feet
Cora data: four Quercus rubra bored; 104-120 years old. Origin data 1856-1872

Herbaceous and Shrub Relative Frequency

Geranium maculatum	65%
Parthenocissus inserta	55%
Amphicarpa bracteata	55%
Circaea quadrisulcata	50%
Desmodium glutinosum	50%
Viburnum acerifolium	40%
Rubus alleghaniensis	20%
Smilacina racemosa	15%
Osmorhiza longistylis	15%
Aster macrophyllus	15%
Podophyllum peltatum	15%
Viola sp.	10%
Cornus racemosa	10%
Athyrium filix-femina	10%

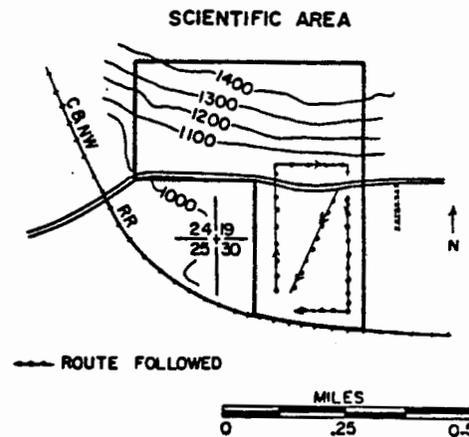
(additional data available)



TREE DIAMETER - INCHES

General Methods: Points were located two chains apart (132 feet) by pacing along predetermined compass lines. At each of the 35 points, four trees and four saplings were utilized for measuring according to the point quarter method. For specific instructions see: Cottam, G. and J. T. Curtis, 1956. The use of distance measures in phytosociological sampling. Ecology 37:451-60. At every other point, a circular plot of .002 acres (radius of 2.63 feet) was utilized to gather seedling, herbaceous and shrub data. Trees are larger than 4" DBH; saplings between 1" and 4" DBH; seedlings less than 1" DBH.

NOTES: Because of the uniformity of the sapling stratum, data were gathered at 15 points (60 saplings) only. Cyripedium calceolus var. pubescens and Panax quinquefolius were observed outside of the herbaceous plots.



Wisconsin Scientific Areas Preservation Council
Scientific or Natural Area Report

Name of Area Pine Glen Inspection Date January 9, 1967

Quarter SW County Sauk Twp. 11N Range 6E Sections 35

Boundaries and acreage of Scientific area of approximately 120 acres described as follows proposed or established section 35: E $\frac{1}{2}$ NW $\frac{1}{2}$, N 3/4 W $\frac{1}{2}$ SW $\frac{1}{2}$ NE $\frac{1}{2}$, W $\frac{1}{2}$ NW $\frac{1}{2}$ NE $\frac{1}{2}$ and that part of NE $\frac{1}{2}$ SW $\frac{1}{2}$ north of the Badger Ordinance fence. Buffer Zone of approximately 40 acres lies west of old highway 12 and Badger

Ordinance fence. From Devil's Lake State Park on South Shore Road, south 1 3/4 miles on old Access to area Highway 12, then west by foot into glen.

Description of area: Outstanding features, primary and secondary biotic communities, dominants, understory and rare species, topography, soils, geology and archeology.

Pine Glen is a deep spectacular cut in the south fork of the South Baraboo Range termed by geologists as a narrow gorge incised in a broad hanging valley. Unlike some of the other glens and gorges, in the Baraboo Hills, it has no younger sediments. An intermittent stream flows through the glen, which contains many large white pines and white pine reproduction. On a south facing slope there is a small red cedar glade. Some typical ground layer species are trailing abbutus (*Epigaea repens*) shinleaf (*Pyrola elliptica*) and wintergreen (*Gaultheria procumbens*). Tree species: basswood, sugar maple, yellow birch, red oak and a blue beech. Near the lower end of Pine Glen is a cold-air drainage which provides habitat for northern plants such as oak fern, shining club-moss, blue-bead lily, twisted stalk, small Solomon's seal, Canada may flower, star-flower and northern enchanter's nightshade. (Plant list by Ken Lange).

History of land use and limiting factors: _____

Administrative information: Land owner and administrator, existing and proposed management, degree of scientific, educational and recreational use of area, adjacent lands and compatibility. Department of Natural Resources, Bureau Parks and Recreation within Devil's Lake State Park.

Area is removed from the state park's high use areas, and is utilized to a limited degree for nature hiking and bird watching. Surrounding lands, except for Badger Ordinance to the south, are timbered.

Reference information: person recommending area, references, quadrangle and other publications and date of action taken toward designation of area.

Area recommended by Ken Lange. See Baraboo and North Freedom Quadrangles and State Park folders.

Established as the 97th scientific area March 23, 1972.

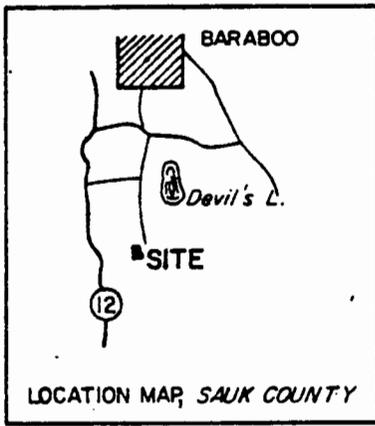
Black, Robert F. "Geomorphology of Devil's Lake Area". Trans. Wis. Acad. Sci. Arts & Letters, Vo. 56, p. 117.

Rev. 3/71

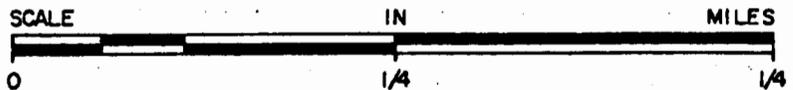
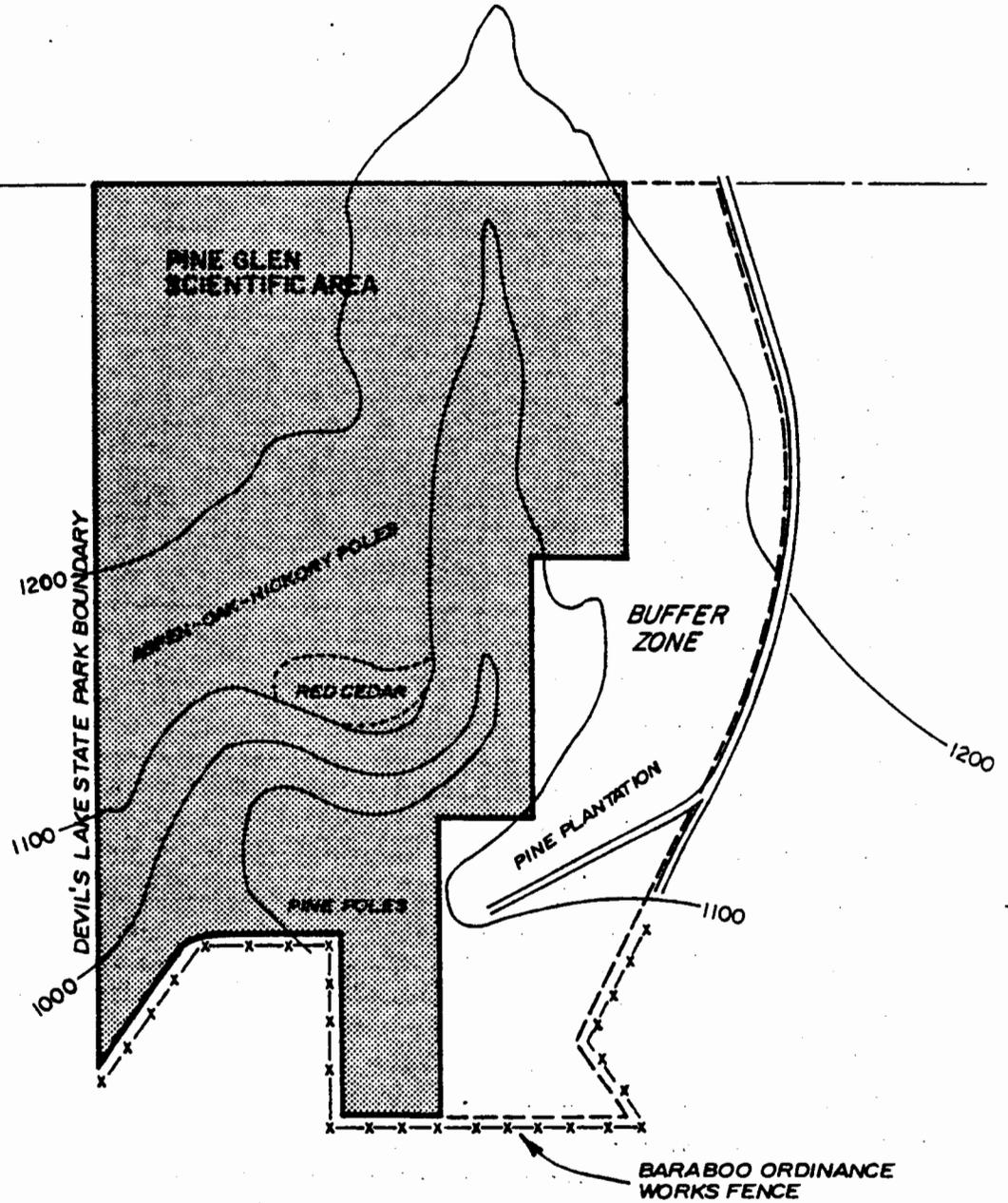
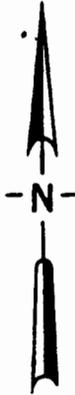
Report by: Clifford E. Germain

Date: January 27, 1972

PINE GLEN SCIENTIFIC AREA



27 28
34 35



FORM 2800-8
REV. 3-77

Scientific Area No. 98

SCIENTIFIC AND NATURAL AREA REPORT
Wisconsin Scientific Areas Preservation Council

NAME OF AREA Koshawago Springs Latest INSPECTION DATE 21 April 1977
 QUARTER SW COUNTY Sauk TWP. 11N RANGE 6E SECTIONS 23
 BOUNDARIES AND ACREAGE of 40 acres described as: E-SW-SE $\frac{1}{4}$ and W-SE-SE $\frac{1}{4}$ 23
 proposed or established area and buffer: _____

ACCESS TO AREA: The area is located near the southwest corner of Devil's Lake, about 4 miles south of Baraboo. Follow Highway 123 and then South Shore Drive into Devil's Lake State Park to Messenger Creek, then follow a dead-end driveway westward several hundred feet. Walk along Messenger Creek into area.

DESCRIPTION OF AREA: Outstanding features, primary and secondary biotic communities, dominants, understory and rare species, topography, soils geology and archeology. Koshawago Springs scientific area is centered on Messenger Creek between $\frac{1}{4}$ and $\frac{1}{2}$ mile from its outlet at Devil's Lake. In its upper reaches within the scientific area, the stream is small and fluctuates according to the amount of local rainfall, for the watershed is only 1.5 square miles of forested slope. Koshawago, Ryan, and numerous other spring sources flow through and over the rocky valley floor and collect in Messenger Creek.

The creek occupies an ancient valley cut into the Precambrian Baraboo quartzite which was later filled in with Upper Cambrian sandstone and subsequently partly eroded. Quartzite outcrops on the eastern valley wall, while sandstone remains on the western slope.

Red oak and basswood with butternut dominate the moist western valley slope, while the dry eastern slope contains white oaks, hickory, large-toothed aspen, and scattered white pine. Along the stream and spring sources are sugar maple basswood, yellow birch, and blue beech. A well developed shrub layer includes red elder, mountain maple, Viburnum, dogwood and hazelnut.

One of the primary features of the area is the presence of several uncommon to rare species of plants. Water moss, Fontinalis, and the fresh water red alga, Batrachospermum,

(over)

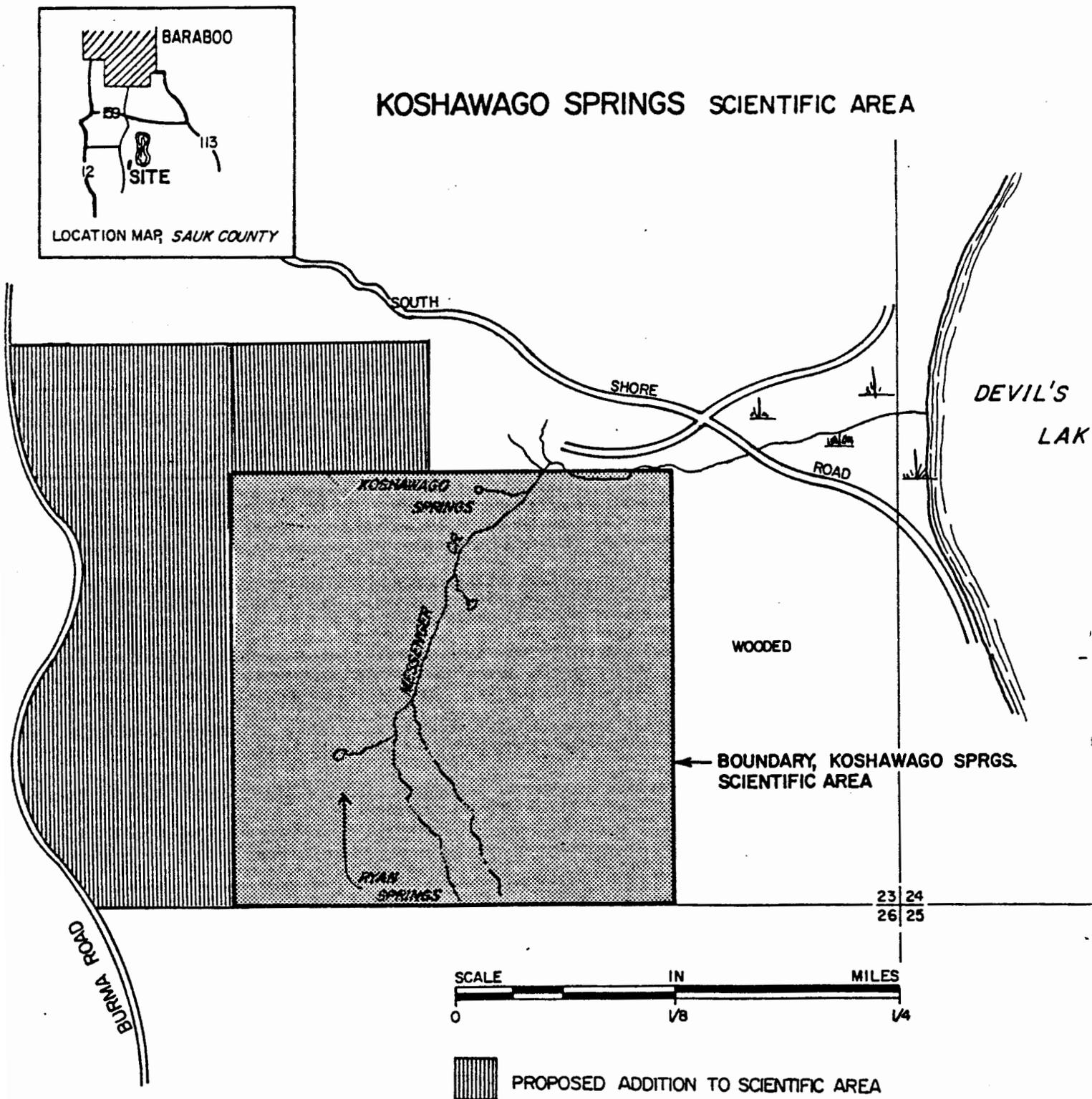
HISTORY OF LAND USE AND LIMITING FACTORS: White pine stumps on eastern valley slope and young to medium size of most of the dominant tree species, as well as forest grown aspect of all trees, indicate former logging in most of the scientific area, possibly during the early 1900's.

ADMINISTRATIVE INFORMATION: Landowner and administrator, existing and proposed management, degree of scientific, educational and recreational use of area, adjacent lands and compatibility. Managed as part of Devil's Lake State Park. Contact Park Superintendent, Route 4, Box 36, Baraboo 53913. Management consists of protection from all manipulations. Surrounding lands nearly entirely under state ownership. A trail through the area permitted hiking from what was formerly the Chicago Mountaineer's Club to South Shore Road, but now trail use is low and the trail itself is indistinct in portions as it receives only light to moderate use.

REFERENCE INFORMATION: Person recommending area references, quadrangle and other publications and date of action taken toward designation of area. Recommended by Devil's Lake State Park Naturalist Kenneth Lange and established as scientific area 98 in March 1972. See Baraboo 15' Quadrangle; Baraboo NW 7.5' Orthophotoquad; Dalziel, I.W.D., and R. H. Dott, Jr. 1970. Geology of the Baraboo District, Wisconsin. Wis. Geol. & Nat. Hist. Survey, Madison, 164 pp. and foldout maps.

REPORT BY: C. E. Germain; revised by William Tans DATE: April 1977

KOSHAWAGO SPRINGS SCIENTIFIC AREA



occur in Messenger Creek. The ferns *Botrychium obliquum*, *B. dissectum* and *Thelypteris hexagonoptera* occur in the rocky valley floor, while *Carex prasina* grows in cold, wet soil of the creek bed—here its only known station in the state.

At least three species of orchids are known from the area: yellow lady's-slipper, purple-fringed orchid, and Hooker's orchid.

Breeding birds include the Acadian flycatcher, Cerulean warbler, Louisiana water-thrush and broad-winged hawk.

APPENDIX E

WISCONSIN OUTDOOR RECREATION PLAN

Recreational travel in Wisconsin is predominantly by personal car. In a 1970 state line survey, 49.9 percent of summer weekend trips were for recreational driving, in contrast to only 38.2 percent on average weekdays. Summer weekend day volumes are 65.4 percent larger than weekday traffic volumes. In a 1974 analysis, about 66 percent of the automobile traffic during the months of June to September is recreation-oriented.

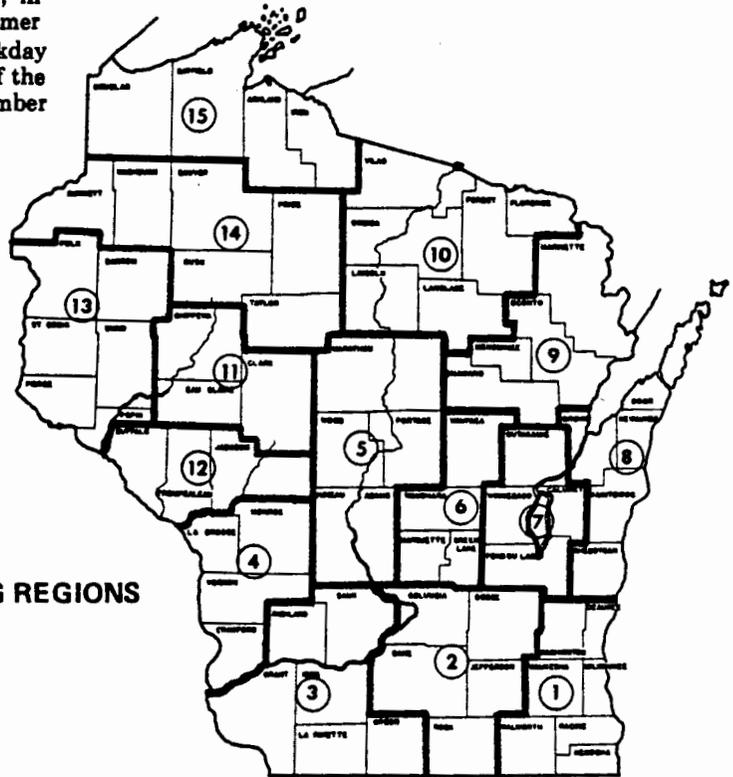


FIGURE 6
OUTDOOR RECREATION PLANNING REGIONS

REGION 3

DESCRIPTION OF REGION

Planning Region 3, located in southwestern Wisconsin, includes Grant, Green, Iowa, Lafayette, Richland, and Sauk Counties.

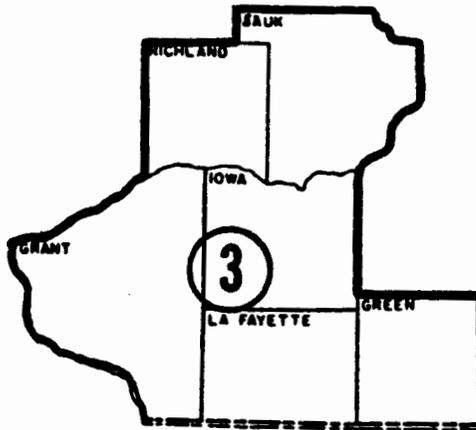
The 1974 population of the planning region was 174,214, or 3.8 percent of the state's population (Table 108). The region is predominantly rural with 70 percent of the population living in rural areas. Major cities include: Platteville (9,599), Monroe (8,654), Baraboo (7,931), Richland Center (5,086), and Reedsburg (4,585).

The 1974 population density is 14.7 people per square kilometer (38.2 persons per square mile) (Table 108).

Per capita adjusted gross income of \$3,420 is 83 percent of the state average (Table 108).

Region 3 is relatively rich in recreation resources. There are 14 state parks and nine county parks in the region. There are 26 public Hunting and Fishing Areas in the region, mostly along the Wisconsin River. The largest, the Blue River Wildlife Area with 1,700 hectares (4,200 acres), is located in Grant County. The Mississippi and Wisconsin Rivers, two outstanding resources, form the border for part of the region. Portions of the Upper Mississippi Wild Life and Fish Refuge are found along the Mississippi River in Grant County.

'Advance Report on Census of Population in Wisconsin.



SWIMMING

Supply. Natural lakes are scarce in Region 3. The majority of those present are concentrated in Sauk and Grant Counties. The rivers and streams of the region provide the major surface water resource. The Wisconsin and Mississippi Rivers are particularly important in this respect.

Containing 3.5% of the state's total surface water area, Region 3 supplies approximately 4% of the state's swimming beach area and 6% of its swimming pool area. Over 50% of the region's beach area is owned by the state; about 41% by county and municipal governments and only 9% by private enterprise (Table 109). Eighty-three percent of the swimming pool area is owned by municipalities; 17% by private enterprise (Table 109).

Inadequately treated sewage, agricultural runoff and harmful land use practices have led to pollution of many of the region's waters. Both water quality and swimming opportunities are thereby reduced. Efforts have been made to improve sewage treatment. Significant programs for investigation and management of agricultural runoff and land use practices have yet to be established.

Demand. Five percent of the total state swimming participation occurs within the region (Table 110). On an average weekend day nonresident participation outnumbers resident participation. Resident participation levels are, however, near average.

Need. No need for additional swimming facilities is forecast for Region 3 through the year 1995 (Table 111). This forecast is based on the total available resource and does not take into account the quality of the resource or its relative availability to participants. Localized deficiencies in the swimming resource resulting from the general absence of natural lakes, the uneven distribution of available surface waters and the reduced quality of many of the region's waters may therefore be masked. Management to improve or prevent such situations would best be aimed at a) expanding the resource by careful location of swimming pools and b) maintaining and improving the existing resource through correction of water quality problems.

BOATING

Supply. Much of Region 3 lies in the driftless area and is almost devoid of natural lakes. The Mississippi and Wisconsin Rivers provide the bulk of the region's surface water area (Table 112).

Public access to water in Region 3 is reasonably good; that is the number of access sites relative to the region's water area and population is near the state average (Table 113). In addition, a greater-than-average percent of the region's inland lakes are accessible to the public.

Demand. Boating participation in Region 3 is below the state average for residents and nonresidents alike, together amounting to only half the average regional share (Table 114). This low level of demand can be attributed to limited surface water supply and to the concentration of that supply in two major rivers. Water quality problems exist, but are not generally seen as deterrents to boating.

Needs. According to design standards, 20 access sites could be added without threatening to overcrowd the region's surface waters (Table 115). Demand pressure suggests a need for 35 additional sites, indicating that a program to provide access facilities up to the optimum design number would be justified.

CANOEING

Supply. Region 3 has 415 kilometers (258 miles) of recognized canoe streams that include the Pecatonica, Kickapoo and Baraboo Rivers. In addition, other canoeing opportunities exist. The backwaters of the Mississippi and Wisconsin Rivers are examples of such areas.

Most of the canoeable waters in Region 3 traverse diverse scenery. The Baraboo River, in particular, flows through some areas of remarkable scenery, most notably the Rock Springs Area. Navigation of these streams generally does not require a high level of canoeing expertise. Public access in Region 3 is reasonably good. About 14% of the state's total public developed and undeveloped canoe access sites are found on designated streams in Region 3 (see Table 21).

Demand. Region 3 generates 4,000 canoeing occasions per average seasonal weekend day or 6% of the state's canoeing participation (Table 116). Residents account for 52% of the region's canoeing participation; nonresidents account for the remainder. Residents do not participate heavily in canoeing since most of the canoeable bodies of water can also be traversed with conventional small boats which eliminates the stimulus for canoeing.

Need. Development of nine additional public developed and undeveloped canoe access sites is required to provide maximum access on designated canoe streams in Region 3 (Table 117). Shoreline protection along the Kickapoo River, in particular, and better access on the Mississippi and Wisconsin Rivers are needed if their potential for canoeing is to be realized.

FISHING

Supply. The surface waters of Region 3 are well suited to both recreational and commercial fishing. The Wisconsin and Mississippi Rivers provide the majority of fishing opportunities (Table 118). Both rivers provide fishing experiences unavailable in other areas of the Midwest. Large areas of state and federal land bordering these waterways contribute to the uniqueness of the experience.

The region's rivers suffer from various types and degrees of pollution, which are almost always detrimental to fish populations. New sewage treatment facilities have helped to improve the quality of many of the region's rivers. Use of rivers as recreation resources could be further increased if programs to improve land use practices in the region were initiated and carried through.

Demand. Regional resident fishing participation is above the state average and a large percentage of this activity takes place outside of the region (Table 119). Out-of-state residents fishing in the region equal the number of local participants.

Need. The problem of accommodating increased fishing participation can be alleviated by improving and increasing public access to the fishery (e.g., boat launching sites, improved transportation systems), by improving water quality and by improving fishery management techniques. To minimize the disparity between the supply of and the demand for quality surface water resources in this region, governmental agencies must be committed to preserving lake and river frontage wherever it is available.

CAMPING

In the following analysis, camping facilities have been divided into two categories: developed and primitive. By definition, developed campgrounds are accessible by automobile and include improvements such as drinking water, picnic tables and toilets. Analysis of present and future

recreation demand and need assumed 50 camping occasions per hectare (20 per acre) with four campers per campsite at the maximum which could comfortably be accommodated.

In contrast, primitive campsites are accessible by canoe, boat or foot; but not by motor vehicle. Improvements are generally limited to a cleared tent site and a fire ring. In more intensively used areas, pit toilets and drinking water may also be provided. In analysis of present and future recreation demand and need a general guideline of 2 campsites per hectare was assumed in order to maintain the desired quality of remoteness associated with primitive camping.

Unlike previous recreation plans, sites not directly accessible by automobile, but located near developed campgrounds were counted as developed sites, rather than primitive.

Developed Camping

Supply. The Mississippi River, the Wisconsin River and its Dells area and the Southern Coulee Region attract many recreators to Planning Region 3. Nine of the region's 13 state parks provide camping opportunities. Devil's Lake, Governor Dodge and Yellowstone Lake State Parks are among the more popular. Private campgrounds offer additional quality camping opportunities. Located near state parks, many of these campgrounds offer ready access to the parks' variety of recreational opportunities.

The region provides 3,698, or about 8%, of the state's developed campsites (Table 120). Private enterprise supplies 58% of this resource. State parks provide about 32%. County, municipal and federal properties supply the remaining percentage. The quality of campgrounds varies, but is generally good.

Demand. Region 3 supports about 12% of the state's developed camping. The most recent estimates indicate that demand is 40% greater than the available supply (Table 121). This excess demand serves both to aggravate problems of localized congestion in more popular campgrounds, e.g. Devil's Lake, and to limit the individual's options for different types of camping experience. On a seasonal weekend nonresident camping participation is more than two times greater than resident participation.

Need. Management plans for the region should investigate various strategies for expansion of the resource (Table 122). The region's large tracts of state parks offer some potential for expansion. In any plan, however, care should be taken not to jeopardize the natural resource base. The greatest contribution public agencies can make is through guidance and technical assistance focusing on quality campground maintenance, development and location.

Primitive Camping

Supply. Region 3 contains 68 primitive campsites, approximately 14% of the state total (Table 123). Twelve of these are located in New Glarus Woods State Park; the remainder, on county-owned lands.

Demand. The region's demand for primitive camping is more than two times the available supply (Table 124). As a whole, the region supplies 5% of the state inventoried primitive camping experiences. The nonresident participation level is almost 3 times that of residents.

Need. The demand for primitive camping already exceeds the supply of primitive campsites (Table 125). Uncontrolled primitive camping has been noted in nondesignated areas — e.g., along major rivers, in public hunting grounds and at highway waysides. Camping in these areas is generally discouraged.

The management policies of individuals or agencies controlling tracts of undeveloped land will have important effects on the availability of resources for primitive camping. Site development should be investigated and might be considered a priority area for public government involvement since the private sector has little financial incentive for providing primitive camping facilities. In this regard, the region's federally-owned land provide potential for site development which should be explored.

PICNICKING

Supply. Some of Wisconsin's more popular state parks, like Wyalusing (Grant), Governor Dodge (Iowa) and Devil's Lake (Sauk), are located in Region 3. These parks and others like White Mound County Park (Sauk), Blackhawk Lake County Park (Iowa) and Ochsner City Park (Sauk) contribute significantly to the provision of quality picnicking opportunities. The "Driftless Area" in Region 3 offers an environment of scenic and natural beauty that enhances the picnicking experience. In addition, the shores of the Mississippi and Wisconsin Rivers sustain picnicking and other related recreational activities. Region 3 provides 9% of the state's supply of picnic tables and 7% of the state's supply of picnic area. The state and the municipal units of government are the major providers of picnic tables in the region as presented in Table 126. The county and the state are the major providers of picnic area as presented in Table 126.

Demand. Over 32,200 picnicking occasions per average weekend day, or 8% of the state's total picnicking participation, take place in Region 3. The levels of picnicking participation for residents and nonresidents alike are above average (Table 127). In fact, picnicking is ranked the most popular activity by residents in Region 3. Residents account for 75% of the picnicking occasions generated in the region; the remainder are generated by nonresidents. Both residents and nonresidents will continue to be attracted to the region because of the quality picnicking facilities and related recreational opportunities that are offered.

Need. Additional picnic tables and area are needed to satisfy the growing demand in Region 3. Deficiencies in picnicking supply are indicated in Table 128. Some of these deficiencies are expected to be satisfied by proposals for a number of new and expanded community parks located throughout the region. The federally owned Upper Mississippi Wild Life and Fish Refuge, comprising about 6,880 hectares (17,000 acres) in provides significant potential for picnicking. High level maintenance of picnicking sites and support facilities are needed to prevent site deterioration.

SCENIC AND HISTORIC RESOURCES

Some of the more significant scenic recreational resources in Region 3 include the Wisconsin Dells, the Coulee Region, and the Mississippi, Wisconsin, Pecatonica, and Sugar Rivers.

Two of the ten scenic roadways identified in the State Scenic and Historic Resources section are included in Region 3. They are the Great River Road along the Mississippi River and the Wisconsin River route.

A number of the region's historic sites are listed in the National Register of Historic Places. These are presented by county in Table 129. Other sites in Region 3 considered to have architectural, historical and/or archeological significance are listed in the Wisconsin Historic Preservation Plan, Volume II (1973). Two of the region's natural areas, Abraham's Woods (Green)* and Wyalusing Hardwood

Forest (Grant), are listed in the National Register of Natural Landmarks.

The region's scenic and historic resources require protection by all units of government, private individuals and associations to maintain their intrinsic value and attraction for residents and nonresidents alike. The resource base, for historic and natural area sites in particular, is essentially nonrenewable; these resources if lost or destroyed cannot be replaced. It is essential, therefore, that these resources be protected.

Protection in the form of preserving a resource and protection from changes in land use which would destroy a scenic view or historic site are required. A scenic roadways system is also needed in Region 3. An access control program such as that provided by Wisconsin Statutes 84.25 and 83.027 should be combined with scenic easements to protect valuable travel corridors. The Department of Transportation's Rustic Roads program provides another potential alternative for counties of the region desiring to develop a scenic roadways system.

For a more extensive discussion of programs and actions that seek to protect and preserve scenic and historic resources in Wisconsin, see the Scenic and Historic section of the state summary.

*Determined to be eligible for inclusion in the National Register of Natural Landmarks.

HUNTING

Supply. A very small percentage (less than 1%) of the lands open for public hunting in the state is located in Region 3 (Tables 130 and 131). As in most regions of the state, private property owners accommodate a major portion of hunting demand. Loss of private lands for public hunting, intensive agriculture and shifts in population all encroach on resource-oriented activities such as hunting. Hunting opportunities will decrease in the future unless habitat is preserved and improved and more private lands become available to hunters.

Demand. Per capita hunting participation by Region 3 residents is above the state average (Table 132). Wildlife and habitat resources supply adequate opportunities, thus, levels of participation are high.

Need. Intensification of land use and loss of wildlife habitat have greatly affected the quality of the hunting experience. Preserving hunting as a recreation experience requires the protection of the remaining vestiges of wildlife habitat, the authority to control the number of hunters in relation to productivity of the game resource and the development of hunting customs and a code of ethics. Landowner-resource agency-sportsmen cooperative programs may be the key to enhancing hunting opportunities in Region 3.

REGIONAL RECOMMENDATIONS AND ACTION PROGRAMS

Increased public participation in the 1977 SCORP planning process was provided by Wisconsin's nine regional planning agencies. Each agency was requested to list those recreation-oriented acquisition, development, or policy related recommendations of relevance to the counties they serve, without consideration for priority. County recreation plans, selected regional studies, and each commission's first hand knowledge of recreation deficiencies within its boundaries formed the basis for the recommendations provided. This section lists State approved policies, projects and recommendations from a summary of regional planning commission contributions.

With the exception of Sauk County, which has never been a member of a regional planning commission, both the Southwestern Wisconsin Regional Planning Commission (SWWRPC) and SCORP Planning Region 3 serve Grant, Green, Iowa, Lafayette and Richland Counties (Figures 6 and 16).

In general, emphasis should be focused on the primary environmental corridors: the Mississippi and Wisconsin Rivers. SWWRPC's recommendations focused on the need to protect the scenic amenities of the Mississippi River, to utilize the river's recreation potential, and to develop fully the Great River Road by zoning, scenic easements, acquisition and relocation. It was further proposed that Grant County, in cooperation with the Department of Natural Resources, establish a linear park along the bluffs of the Mississippi River. The main feature of such a park would be a hiking and nature study trail. The advantage of such a proposal lies in its ability to protect the bluffs from undesirable and unsightly developments.

A federally initiated proposal to establish an Upper Mississippi National Recreation Area has received considerable study. The project would have considerable impact on outdoor recreation in the region if approved as initially conceived. The proposal calls for land control, by fee purchase or easement, of nearly all of the Mississippi River shoreline and designates federal, state and local governmental responsibilities for control. The proposal is generally valid; it would provide for nearly total protection of the shoreline of the Mississippi River and its major tributaries and a wealth of recreational opportunities. Unfortunately, it does not make clear proposals for meeting the very high costs of implementation. This is a crucial consideration, particularly at the county and local levels.

The Lower Wisconsin River is the focal point of another federal-state sponsored study. This joint Bureau of Outdoor Recreation-Wisconsin Department of Natural Resources study will survey the feasibility of classifying the Lower Wisconsin as a scenic or a recreational river. The main purpose of such designation, of course, will be to aid in the preservation of the scenic and recreation aspects of the Lower Wisconsin. Any recommendation at this time by the SWWRPC or the DNR concerning the Lower Wisconsin would preempt the federal-state study.

An interagency-private approach to the development of a management plan for the Upper Mississippi River has been underway since late 1974 when the U.S. Congress authorized funding for a Mississippi River Study. Numerous Federal and State agencies, private organizations and individuals are working together as a unit called Great River Environmental Action Team (GREAT) to resolve some of the short-term and long-term management problems, in particular the disposal of dredge spoil, on the river. A special work group on recreation has been formed to improve the quality of and opportunity for outdoor recreation on the river, particularly as it relates to commercial navigation and the dredging needed to maintain the navigation channel.

The final management plan will undoubtedly affect existing Wisconsin programs, particularly recreation programs. State agencies, such as, the Geological and Natural History Survey, State Planning Office, Business Development, Transportation, UW-Extension, Regional Planning Commissions and the Department of Natural Resources must all provide input in order to increase the potential that the final product will contribute to the betterment of outdoor recreation on the Mississippi River.

TABLE 108

Summary of Data on Land and Water Resources,
Population and General Economy in Region 3

Parameter	Data
Land and Water Resources	
Land	
No. hectares (acres)	1,181,265 (2,919,009)
Percent of region	
Water¹	
No. hectares (acres)	15,536 (38,391)
Percent of region	
Total²	
No. hectares (acres)	1,196,801 (2,957,400)
Percent of state	8.2
Population	
Density per square kilometer (per square mile)	14.7 (38.2)
Total 1970³	
No.	168,010
Percent of state	3.8
Total 1974⁴	
No.	174,214
Percent of state	3.8
Total 1980⁵	
No.	179,755
Percent of state	3.7
Economy	
Per capita adjusted gross income ⁶	\$3,420
Percent of state average	83%

NOTE: See footnotes 1-6 in Summary of Data on Wisconsin's Land and Water Resources, Population and General Economy on page 30.

TABLE 109

Swimming Facilities in Region 3, 1975

Ownership	Facility Type					
	Beaches			Pools		
	No.	Sq. Meters	Sq. Feet	No.	Sq. Meters	Sq. Feet
Public						
Federal	-	-	-	-	-	-
State	5	63,938	688,248	1	358	3,854
County	5	14,920	160,600	-	-	-
Municipal	11	34,221	368,361*	17	8,787	94,588
Subtotal	21	113,079	1,217,209	18	9,145	98,442
Private	12	5,990	64,476	8	1,855	19,972**
Total	33	119,069	1,281,685	26	11,000	118,414

*Includes an estimate for Grant County facilities based on average size of municipal beaches reported in 1970.

**Includes an estimate for Richland County facilities based on average size of private pools reported in 1975.

TABLE 110

Swimming Participation in Region 3 in 1975 and
Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	15,200	15,800	16,500	17,700
Nonresidents	19,000	19,900	20,900	23,000
Total	34,200	35,700	37,400	40,700

TABLE 112

Boating Resources in Region 3, 1974

	Hectares	Acres
Named Inland Lakes		
Number	60	
Number with Public Access	36	
Percent with Public Access	60	
Surface Water Area Suitable for Boating		
Inland Lakes	1,245	3,077
Mississippi River	8,970	22,166
Wisconsin River	3,823	9,446
Total	14,038	34,689

TABLE 111

Swimming Supply, Demand & Need in Region 3*

	Number of Recreation Occasions			
	1975	1980	1985	1995
Supply				
Beach	39,690	39,690	39,690	39,690
Pool	10,642	10,642	10,642	10,642
Total	50,332	50,332	50,332	50,332
Demand	34,200	35,700	37,400	40,700
Need	-	-	-	-

*Expressed in terms of recreation occasions

TABLE 113
Boat Access Sites in Region 3

Ownership/Facility Type	Number
Public	
Developed	68
Undeveloped	144
Type not ascertained	2
Total	214
Private	
Developed	4
Total	218

TABLE 115
Public Boat Access Site Needs, Region 3, 1975

	No. Developed Access Sites
Optimum Design*	94
Supply	74
Design Need**	20
Expressed Need***	35

*That number of access sites which will provide maximum access opportunities without sacrificing the quality of the boating environment, derived from surface water and launching facility capacities.

**Optimum design less supply.

***That number of additional access sites with parking spaces required to satisfy total 1975 recreational boating participation (pleasure boating, fishing and water skiing) in the region.

TABLE 117
Public Canoe Access Site Needs in Region 3, 1975

No. of Developed and Undeveloped Access Sites	
Optimum Design*	22
Existing Supply	13
Design Need**	9

*That number of access sites which will provide maximum access opportunities without sacrificing the quality of the canoeing environment.

**Optimum design less supply

TABLE 119
Fishing Participation in Region 3 in 1975 and Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	5,900	6,100	6,400	6,800
Nonresidents	5,900	6,200	6,500	7,200
Total	11,800	12,300	12,900	14,000

TABLE 114
Motor Boating Participation in Region 3 in 1975 and Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	2,300	2,400	2,500	2,600
Nonresidents	4,800	5,100	5,400	5,900
Total	7,100	7,500	7,900	8,500

TABLE 116
Canoeing Participation in Region 3 in 1975 and Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	2,100	2,200	2,300	2,400
Nonresidents	1,900	2,000	2,100	2,300
Total	4,000	4,200	4,400	4,700

TABLE 118
Streams and Lakes Suitable for Fishing in Region 3, 1975

Water Type	Kilometers (Miles)	Hectares (Acres)
Trout Streams	932 (579)	-
Class I	8 (5)	-
Class II	631 (392)	-
Class III	293 (182)	-
Trout Lakes	-	294 (727)
Warmwater Streams	3,841 (2,387)	-
Warmwater Lakes	-	3,542 (8,753)

TABLE 120
Developed Camping Facilities in Region 3, 1975

Ownership	Sites	Hectares	Acres
Public			
Federal	13	1.2	3
State	1,183	166.7	412
County	251	26.4*	59*
Municipal	114	8.0*	18*
Subtotal	1,561	202.3	492
Private	2,137	286.5	708
Total	3,698	488.8	1,200

*Estimated for Richland Co.

TABLE 121

Developed Camping Participation in Region 3 in 1975 and Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	6,700	6,900	7,300	7,800
Nonresidents	14,100	14,700	15,400	16,900
Total	20,800	21,600	22,700	24,700

TABLE 123

Primitive Camping Facilities in Region 3, 1975

Ownership	Sites	Hectares	Acres
Federal	-	-	-
State	12	9.3	23*
County	56	3.6	9
Municipal	-	-	-
Total	68	12.9	32

*Estimated from average acres/site reported for state owned properties

TABLE 125

Primitive Campsite Supply, Demand & Needs by Year, Region 3

	1975	1980	1985	1995
Supply	68	68	68	68
Demand	155	122	173	188
Needs	87	95	105	120

TABLE 127

Picnicking Participation in Region 3 in 1975 and Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	24,100	25,000	26,100	28,000
Nonresidents	8,100	8,500	8,900	9,800
Total	32,200	33,500	35,000	37,800

TABLE 122

Developed Campsite Supply, Demand & Needs by Year, Region 3

	1975	1980	1985	1995
Supply*	3,698	3,698	3,698	3,698
Demand	5,200	5,400	5,675	6,175
Needs	1,502	1,702	1,977	2,477

*Assumed constant at 1975 level

TABLE 124

Primitive Camping Participation in Region 3 in 1975 and Projected Participation in 1980, 1985 and 1995.

Participants	No. of Recreation Occasions Per Average Weekend Day			
	1975	1980	1985	1995
Residents	160	170	180	190
Nonresidents	460	480	510	560
Total	620	650	690	750

TABLE 126

Picnicking Facilities in Region 3, 1975

Ownership	Picnic Grounds		Number of Picnic Tables
	Number	Area	
	Hectares	Acres	
Public			
Federal	2	6	34
State	43	102	1,706
County	19	139	345*
Municipal	73	56	138**
Subtotal	137	303	4,102
Private	20	38	209
Total	157	341	4,311

*Adjusted for Grant, Green, and Richland Counties

**Adjusted for Richland Co.

TABLE 128

Picnicking Supply, Demand, Needs in Region 3 1975, 1980, 1985, 1995

Size & Facilities	1975	1980	1985	1995
No. of Hectares (acres)				
Supply	341 (844)	341 (844)	341 (844)	341 (844)
Demand	1,073 (2,652)	1,117 (2,760)	1,167 (2,884)	1,260 (3,114)
Needs	732 (1,808)	776 (1,916)	826 (2,040)	919 (2,270)
No. of Tables				
Supply	4,311	4,311	4,311	4,311
Demand	5,367	5,583	5,833	6,300
Needs	1,056	1,272	1,522	1,989

TABLE 129
National Register of Historic Places in Region 3, January, 1976

Community	County/Site	Other Designations*
	<u>Grant</u>	
Cassville	Old Denniston House	
Cassville vicinity	Stonefield	
Platteville	Mitchell-Rountree House	HABS
Platteville	Rountree Hall	
	<u>Green</u>	
Monroe	Bingham, Judge John, House	
Monroe	First Methodist Church	
Monroe	Jennings, Janet, House	
Monroe	West, Gen. Francis, Octagon House	
	<u>Iowa</u>	
Dodgeville	Iowa County Courthouse	HABS
Mineral Point	Mineral Point Hill	
Mineral Point	Mineral Point Historic District	HABS
Mineral Point	Pendarvis	
Spring Green vicinity	Shot Tower	
Spring Green vicinity	Taliesin	NHL
Spring Green vicinity	Unity Chapel	
	<u>Lafayette</u>	
Belmont vicinity	First Capitol	
New Diggings	St. Augustine Church	HABS
	<u>Richland</u>	
Richland Center	German, A. D., Warehouse	
	<u>Sauk</u>	
Baraboo	Ringling Bros. Circus Headquarters	NHL

- * HABS - Historic American Buildings Survey
NHL - National Historic Landmarks

TABLE 130
Area Open to Hunting
in Region 3, 1975

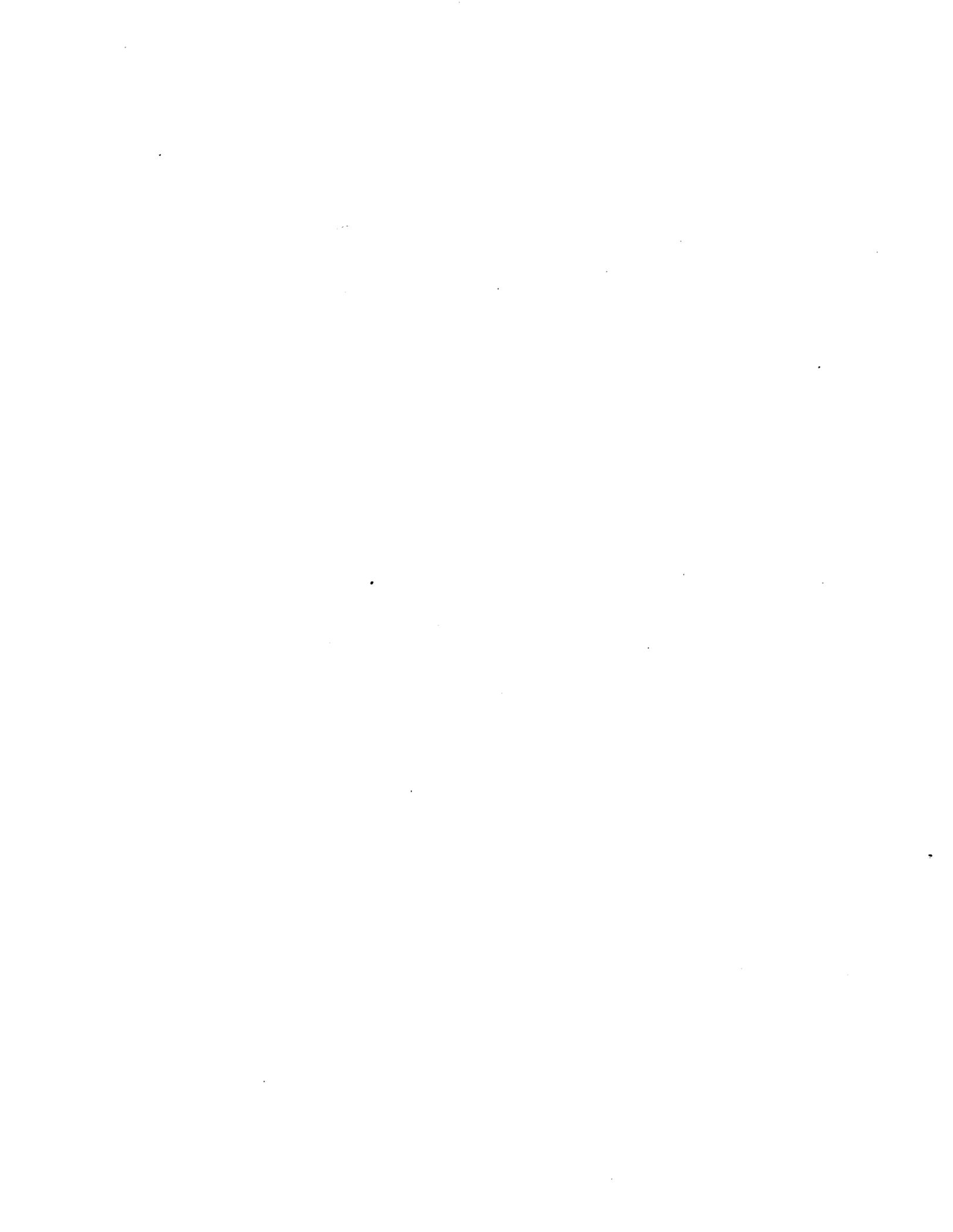
Ownership	Hectares	Acres
Public		
Federal	6,758	16,700
State	10,822	26,743
County	-	-
Municipal	4	10
Total	17,584	43,453
Private	2,760	6,819
Total	20,344	50,272

TABLE 131
Hunting Supply – Area By Ownership Type (Hectares) Region 3

County	Federal	State Forest	State Public Hunting Grds	County Forest Law	Forest Crop Law	Private Hunting	Private Shooting Pres	Municipal	Total
Grant	6,758	–	2,505	–	423	3	–	–	9,689
Green	–	–	1,362	–	16	–	–	–	1,378
Iowa	–	–	2,064	–	345	283	55	–	2,747
Lafayette	–	–	743	–	37	–	–	4	784
Richland	–	–	2,148	–	530	125	–	–	2,803
Sauk	–	–	2,000	–	508	130	305	–	2,943
Total	6,758	–	10,822	–	1,859	541	360	4	20,344

TABLE 132
Hunting Participation in Region 3 in 1975 and
Projected Participation in 1980, 1985 and 1995.

Participants	No. of Annual Recreation Occasions			
	1975	1980	1985	1995
Residents	412,100	427,900	447,000	479,100



APPENDIX F

EXCERPTS FROM THE
REPORT TO THE SECRETARY
OF THE DEPARTMENT OF NATURAL RESOURCES

From

THE CITIZEN'S AD HOC COMMITTEE
FOR DEVIL'S LAKE STATE PARK

June, 1978

SUMMARY OF THE COMMITTEE'S RECOMMENDATIONS

The Committee recommends that the design capacity of Devil's Lake State Park be limited to 8,000 visitors at any one time, that the boundary remain as is, that the South Shore area be devoted to day use and that the current number of family camping sites be retained. The Committee also recognizes that the existing park road system and internal transportation is inadequate and that some improvements can be made.



BACKGROUND

Devil's Lake State Park is located in the Baraboo Hills of Sauk County, four miles south of the City of Baraboo and fifteen miles north of Sauk City-Prairie du Sac.

Wisconsin's first State Park Board of 1907 was directed by the Governor to "make recommendations regarding the acquisition of any new parks." At that time Interstate was Wisconsin's only state park. The Board commissioned John Nolen, a Boston landscape architect to make recommendations in that regard. In his report to the Board, Nolen identified four major areas that he recommended for state park acquisition. They included: the Dells of the Wisconsin River, Peninsula State Park, Wyalusing State Park and Devil's Lake State Park. The Board concurred and all but the Dells became state parks. Devil's Lake became a state park in 1911.

Today Devil's Lake is one of the most popular recreation areas in the midwest. Over 1.4 million people visited the park in 1977 making it by far Wisconsin's most heavily used state park.

In May 1971 Devil's Lake State Park became a unit of the Ice Age National Scientific Reserve when the boundaries for the Reserve were published in the Federal Register. A preliminary master plan for the Reserve was approved by the Natural Resources Board in May 1974. At that time, the Board also approved the current park boundary as recommended in the preliminary Ice Age master plan.

Contained within Devil's Lake State Park is one of the most varied assortments of geological-glacial features to be found in Wisconsin. The quartzite bluffs of the Baraboo range are among the oldest rocks in the world. Ancient shallow seas covering the area over a billion years ago laid down deposits of sand that eventually became the hard quartzite that has survived many subsequent inundations and erosion cycles. When the Wisconsin glacier advanced into the area 10 to 15 thousand years ago it deposited debris at the north and south ends of the present day lake basin in what was then the Wisconsin River channel, thereby damming and diverting the river into its present channel and creating Devil's Lake. Numerous other glacially derived features are found within the park, including a section of terminal moraine that geologists have called one of the best examples in the world.

Most of the park is wild in character and undeveloped. The south bluff area contains about 3000 acres of forested bluff lands and is one of the most remote areas in southern Wisconsin.

Existing recreational facilities include 471 campsites in 3 family campgrounds, a group campground, group camping facilities, 3 picnic areas, 3 swimming beaches, trails, nature center and a concession.

The present design capacity of the park is 4,814 people at any one time. This number is greatly exceeded on any average summer weekend.

Devil's Lake State Park now has status as both a state park and as an element of the National Park System. It is administered to meet the objectives of both.

MISSION STATEMENTS

DEVIL'S LAKE STATE PARK

Section 27.01 of the Wisconsin Statutes outlines in broad terms the mission or purpose of the state park system. Its language relates quite directly to the older and larger scenic parks. Since Devil's Lake Park is specifically named in the section its language can be applied directly to a park mission statement.

Section 27.01...."The purpose (mission) of the state parks (Devil's Lake) is to provide areas for public recreation and for public education in conservation and nature study."

In addition to directing the Department to acquire lands and waters for state park purposes, Section 27.01 directs the Department to "classify state parks as to their most logical employment and greatest usefulness as, for example, scenic, recreational or historical, and establish boundaries for each state park."

NR 1.30, Wisconsin Administrative Code, classifies the state parks as follows:

- (1) Scenic parks
- (2) Historical memorial parks
- (3) Roadside parks
- (4) Recreation parks
- (5) Park trails parks

Scenic parks, as Devil's Lake is classed, are defined as follows in NR 1.30(a): "Scenic Parks. Parks having unusual scenic charm and beauty, distinctive landscapes, and particular appeal to nature lovers, and of sufficient size to enable use by large numbers of people without destruction of the qualities essential to their purpose."

ICE AGE NATIONAL SCIENTIFIC RESERVE

Public Law 88-165 (Ice Age National Scientific Reserve) states that it is the purpose of the act "to assure protection, preservation, and interpretation of the nationally significant values of Wisconsin's continental glaciation, including moraines, eskers, kames, kettleholes, drumlins, swamps, lakes and other reminders of the ice age."

The mission statement for the park consists of the above underlined sections of federal and state law and administrative code.

PLANNING GUIDELINES

The language of Chapter 27, Wisconsin Statutes, NR 1.30 and NR 45 of the Wisconsin Administrative Code and the Ice Age National Scientific Reserve Act make it very clear that the Department is required to develop and manage Devil's Lake State Park to both accommodate large numbers of people for recreational purposes and to provide interpretive facilities and to do it in such a manner that the preservation of the geologic and other natural features of the area is not compromised.

The present level of use of the park, the inadequacy of the present road system and the concentration of both day use and camping close to the lake shore make it apparent that long-range carefully planned changes designed to make it possible to limit the numbers of people using the park are necessary if the Department is to meet its statutory obligations.

It is, therefore, recommended that the following guidelines be used in the development of the master plan for Devil's Lake State Park:

A. Design Capacity

The committee recommends that Devil's Lake State Park be developed at a design capacity of about 8,000 people at any one time, and provide for usage of about 1.2 - 1.4 million visitations during the period from May 15 to September 15. This design capacity will accommodate expected off-season use.

B. Land Acquisition

The committee recommends that:

As a long range principle, the committee recommends that Devil's Lake State Park should contain all of the scientifically, educationally, recreationally and scenically significant land in the vicinity of Devil's Lake.

For the near future, except for minor modifications, the present boundary for Devil's Lake State Park should remain in effect.

All land within the park boundaries should ultimately be owned in its entirety. Because complete ownership is not immediately possible, use should be made of options, land purchases subject to a life or lives in being, the right to meet other bona fide purchase offers, the right of first refusal, purchases and lease backs, easements, zoning, and such other legal tools as will protect the land of eventual incorporation into the park.

Condemnation should be used only as a last resort to prevent the use of land within the boundaries of the park in a manner incompatible with its ultimate incorporation into the park.

Negotiations with landowners for the purchase of their land should be carried out in a good faith and open manner. They should be offered the full fair market value for their land - no less and no more.

C. Land Use

A substantial portion of the park should be designated as preservation area of various types under the Natural Resources Board Wild Resources Policy (Manual Code 1031).

Steinke Basin is very valuable for its glacial features and solitude. It should not be used for a campground or any development other than trails.

There should be no development on the west bluff except for unobtrusive interpretive signs.

D. Hunting

Hunting should be allowed in some areas of the park, at times when it would not be incompatible with other uses of the park.

E. Accessibility

The centers of attraction in the park should, so far as is reasonably possible, be made accessible to the aged and infirm.

F. Day Use

The present south shore day use and campground area should be redesigned for day use only.

The department should explore redesign of the north shore day use area to provide for closure of the day use area during normal park closed hours.

In developing the south shore, the natural environment shall be disturbed as little as possible, in particular the woods and beach south and west of the present bathhouse should have no developments.

G. Camping

The plan should provide for approximately the same number of family campsites as are provided at this time (471 at present).

Camping should be eliminated from the south shore.

The plan should provide for continuance of the present indoor group camp and should also provide an area for tent camping for large organized groups, i.e., boy and girl scouts.

Provisions should be made for pack-in primitive campsites.

H. Trails

Hiking trails, nature and interpretive trails, cross-country ski trails and bicycle trails, which are now provided, should be expanded. Also, snowshoe trails should be provided if demand justifies. Provisions should be made for horse trails, however, special consideration should be given to topography and soil conditions.

Provisions should also be made for a pass through snowmobile trail.

I. Interpretation

The park should have a major Ice Age interpretive center well away from the park's scenic amenities, and integrated with the park administrative facilities.

The existing park nature center should be retained at least for the next several years to augment and complement the Ice Age interpretive center.

J. Road System and Internal Transportation

Considering present and projected use of the park, the present road system both inside and immediately adjacent to the park does not provide for safe and efficient movement of large volumes of traffic.

It is recognized that financial (and jurisdictional) limitations preclude immediate major road system redevelopment, however, it is necessary that long-range road system guidelines be established which will address safety and efficient management requirements.

It is also recognized that short-range improvements can be made which will substantially reduce traffic problems relating to safety, public convenience and efficient management.

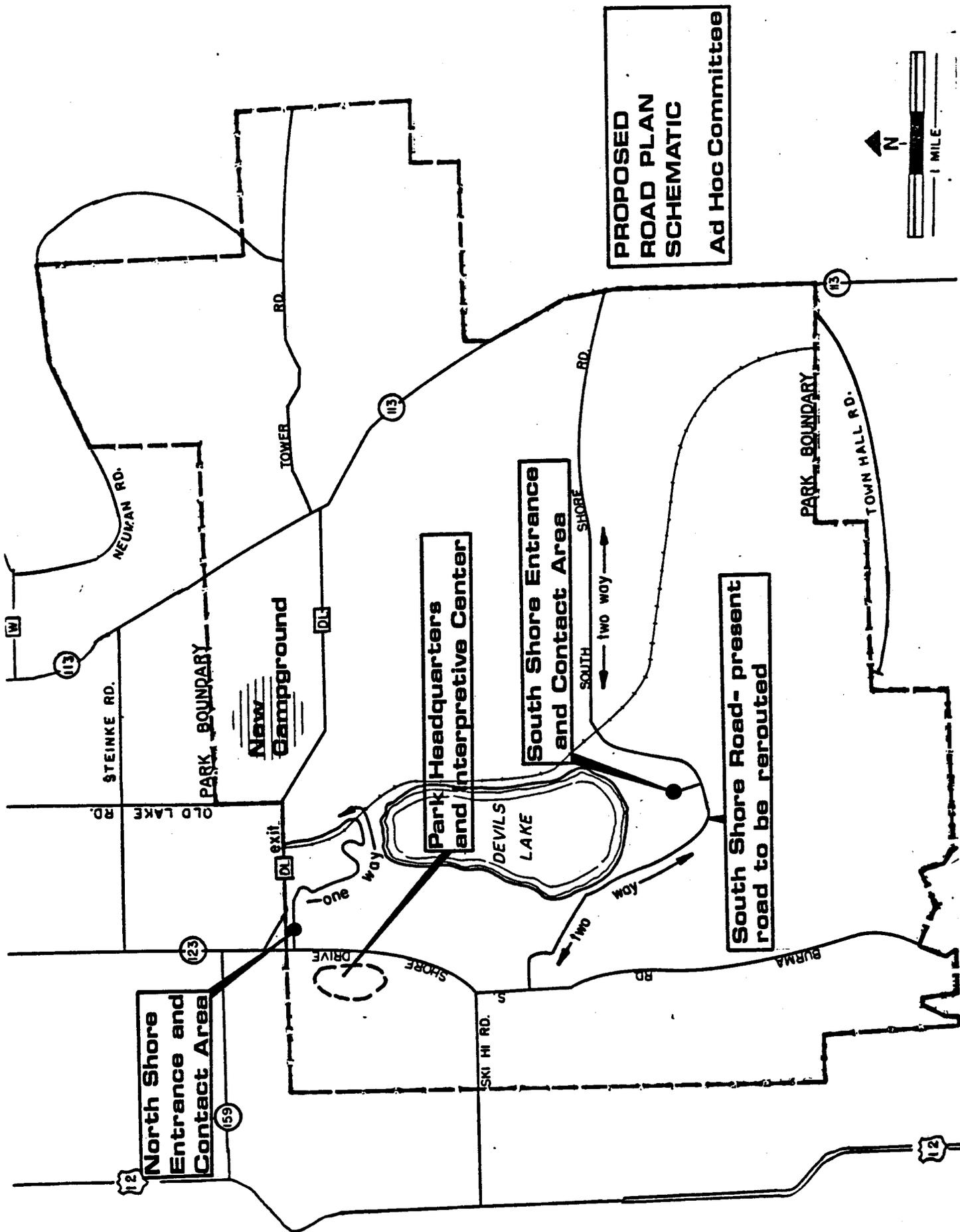
In view of the preservation mission of the park and requirements of the Environmental Protection Acts (state and federal), there should be as few roads inside the park as possible. All roads within the park should be rustic in character and practical use of one-way roads should be made.

Ideally there should be as few through roads in the park as possible.

There should be sufficient parking within walking distance of the day-use facilities to accommodate normal weekday use. Additional parking should be provided elsewhere in the park and the feasibility of alternate internal park transportation should be studied.

The Ice Age Interpretive Center/Park Headquarters should be located near the north end of South Shore Road.

The attached schematic plan is recommended by the committee.



**PROPOSED
ROAD PLAN
SCHEMATIC**
Ad Hoc Committee



-DEVILS LAKE STATE PARK-

DEVIL'S LAKE STATE PARK CAMPER SURVEY RESULTS

In October, 1977, 6000 survey forms were sent to parties who had camped at Devil's Lake State Park between May and September, 1977. 2,464 completed surveys were returned. The names were randomly sampled from the park's registration records.

A cover letter explained the reason for the survey and asked them to describe only their most recent visit if they camped at Devil's Lake more than once during the year.

The information was coded and computerized. Selected results are as follows:
All percentages were rounded to the nearest whole number.

QUESTION

1. To begin, when was your most recent visit to Devil's Lake?

May	9%
June	19%
July	31%
August	28%
Sept.	12%

2. How many people were there in your camping party?

2	29%
3	12%
4	23%
5	13%

How would you classify your camping party?

Family	63%
Non-Family	21%
Mixed	16%

QUESTION

3. How did you get to Devil's Lake State Park?

Car - 90%

Camper - 7%

4. Did you have any problem getting into the park from the highway?

No - 95%

5. Was this your first visit ever to the park?

Yes - 29%

No - 71%

If not the first, about how many times have you ever been to Devil's Lake?

2 - 11%

3 - 9%

10 - 6%

How many times have you been to Devil's Lake this year?

1 - 63%

2 - 19%

3 - 7%

6. What kind of camping equipment did you use?

Tent 60%

Tent/trailer - 20%

Travel trailer - 9%

Pickup camper - 3%

Van - 3%

Motor Home - 6%

7. What route did you take to get to the Park?

Primary route - Hwy 33 from the East 41%

Hwy 12 from the South 24%

Hwy 12 from the North 15%

Hwy 113 from the South 20%

QUESTION

11. Was this the main destination of your trip?

Yes - 31%
No - 19%

12. Would you please estimate your party's expenditures in the communities outside the park. These communities include Baraboo, Wisconsin Dells, Lake Delton, Merrimac, Sauk City, and Prairie du Sac. (This may be difficult to answer. Your best estimate will do, however.)

The following categories were listed: lodging, restaurants and taverns, souvenirs and gifts, food stores, auto and related expenses, sporting goods, amusement admission fees.

In each category, the greatest percentage of the people indicated they spent only \$0-5.

13. Did you visit other attractions in the Devil's Lake area?

Yes - 55%
No - 45%

The two most frequently mentioned attractions were Wisconsin Dells in general (32% of those who visited other attractions) and the Circus World Museum (28%).

14. Would you please give some information about yourself?

Current residence:	Cook Co., IL	22%
	Milwaukee Co.	8%
	Dane Co.	8%
	DuPage Co., IL	6%
	Sauk Co.	1%

Age:	0-17	2%
	18-24	28%
	25-44	54%
	45-64	15%
	65 & over	2%

Your family size:	Single	30%
	2 (H & W)	18%
	3	10%
	4	10%
	5	13%
	6	6%

15. If there were fewer camping sites available at the Park so that your chance of getting a site was less than it is now, would you come anyway?

Yes 47%
No 35%
Yes - would make reservation - 13%
Yes - Would go to private campground - 1%

QUESTION

16. If, in the future, you were unable to get a campsite in the Park, would you stay in a private campground in the area and just use the park for the lake, beach, etc.?

Yes - 39

No - 57

17. As you know, prices and costs of everything are going up rapidly. What, in today's prices, is the maximum you think you would pay to stay per night at Devil's Lake State Park.

\$4 - 5.00 - - 42%

3 - 4.00 - - 27%

5 - 6.00 - - 9%

9 -10.00 - - 4%

18. What did you like most about the Park?

Natural environment - 59%

Hiking trails 8%

Camping facilities - 7%

19. What do you think could be improved in the Park?

Quality of campsites . . .25%

More showers13

Visitor services13

Beaches. 6

Road conditions. 6

Traffic control. 4

Reservation system 5

20. What would you like to see offered in the area surrounding the park that would make your stay more pleasant and meaningful?

Nothing. 22%

Less commercialism . . . 12%

Nighttime entertainment 11%

More restaurants,
taverns, stores. . . . 11%

21. It is reasonable to limit the number of people within the Park by turning away cars at the entrance when the Park is full.

Strongly Disagree. . . . 5%

Disagree10%

No opinion 4%

Agree. 49%

Strongly Agree32%

QUESTION

22. Most of the circulation within the Park should be by foot, bicycle, or shuttle bus.

Strongly Disagree. 8%
Disagree 18%
No opinion 7%
Agree. 40%
Strongly Agree 27%

23. Campsites should be located within sight of one another.

Strongly disagree. 14%
Disagree 28%
No opinion 14%
Agree. 37%
Strongly agree 6

24. Campsites should be provided for large groups.

Strongly disagree. 8%
Disagree 13%
No opinion 14%
Agree. 48%
Strongly agree 16%

25. Hiking trails in the Park should be as primitive as possible.

Strongly disagree. 2%
Disagree 17%
No opinion 7%
Agree. 44%
Strongly agree 30%

26. Sanitation facilities should be provided along hiking trails.

Strongly disagree. 12%
Disagree 26%
No opinion 15%
Agree. 37%
Strongly agree 9%

27. Concession stands should include more products.

Strongly disagree. 9%
Disagree 27%
No opinion 38%
Agree. 20%
Strongly agree 6%

28. More interpretive programs should be offered.

Strongly disagree. 1%
Disagree 10%
No opinion 44%
Agree. 36%
Strongly agree 9%

-6-

29. From the descriptions A through E below, which one best describes the outdoor recreation experience you most prefer (check one):
- A. I enjoy visiting areas where I can engage in activities with other individuals and groups. 6 %
 - B. I enjoy areas where few outdoor skills are required. . . . 7
 - C. I enjoy areas that allow me to be close to nature.53
 - D. I enjoy the adventure and challenge of going into areas without motorized access..20
 - E. I enjoy exploring areas that are difficult to reach and require physical effort & skill16
30. 1,107 people made additional comments. Positive comments (liked the following):

Cleanliness of toilets. 5% (of 1,107)
 Visitor services. 4%
 Natural resources 3%
 Camping facilities. 2%

Negative comments (did not like the following - or suggestions for improvement):

Should develop more primitive campsites. . . .10%
 Visitor services 7%
 Need more campsites. 7%
 Reduce stereo noise. 6%
 Too many out-of-state users. 6%

The answers to 19 of the questions were cross-tabulated with answers from all or some of the other questions. Following are my interpretations of some of the highlights.

1. The most common (highest percentage of total) length of stay was 2 nights for all months, May through September. In May and September the second most common length of stay was 1 night. In June, July, and August. The second most common was 3.
2. The major attraction of the park varies little by the month other than the fact that May and September campers are less concerned with safety and clean facilities.
3. No doubt because of the school year, there is a variation in the age and type of party between summer (June, July, August) - the higher percentage of families and 25-44 age group category highest percentage - and May & September.
4. The unmarried camper is more likely to go to the south shore than to the north shore.
5. The larger the group size, the more significant other (than camping) recreational activities become as far as being major attractions of the park. Camping is also not the primary activity for singles (23% versus 42% overall)

7. Of the campers that checked "Other Recreation Activity Opportunities" (35%) as a major attraction, only 26% of those over age 65 checked it and 57% of those under age 18 checked it.

8. Safety and cleanliness of facilities increases with importance with age as a major attraction.

48% overall
30% under age 18
64% over age 65.

9. Young campers are less likely to visit other area attractions.

55% overall; 22% under age 18

10. Should campsites be within sight of one another?

Under age 18 - - 17% agree
Age 25-44 - - - 39% agree
Over 65+ - - - 60% agree

11. Should hiking trails be as primitive as possible?

Under age 18 + - 37% agree
Over age 65+ + - 60% agree

However, under age 18 - 41% strongly agree, and over 65 - 19% strongly agree.

12. Should more interpretive programs be offered?

Under age 18 - 64% had no opinion
Over age 65 - 24% had no opinion.

13. Concerning the type of outdoor recreational experience sought, most (53%) wanted a middle of the road experience. Of those seeking a rugged experience, the percentage decreased with age. Similarly, of those seeking a controlled, safe, more social experience, the percentage increased with age.

14. A surprising number (49%) of the campers agreed with the statement "It is reasonable to limit the number of people within the park by turning away cars at the entrance when the park is full." Those seeking a controlled experience were more likely to agree (55%) than those seeking a rugged experience (44%).

15. Seemingly contradictory is the fact that those desiring the rugged experience are more likely (43%) to strongly agree with limiting internal park circulation to foot, bike or shuttle than those seeking a controlled experience (13%).

-8-

16. Other recreation activity opportunities are a major attraction of the park more for those who have camped here before (38%) than for first time visitors (28%).

The same is also true for the major attractions of natural environment, location, and cleanliness of the facilities.

17. Camping was the primary activity for 42% of the first time visitors and 42% of the repeaters.

Sightseeing was the primary activity of first visitors more than repeaters 10% vs. 4%, but the repeaters indicated relaxing (17% vs 12%), swimming (9% vs. 6%), and hiking (15% vs. 11%) were their primary activity more so than first timers.

18. Single campers like it here. 25% of the first time visitors were single while 33% of those who had been here before were single.

19. Of those who camped here just once, 41% came via Hwy. 33 East and 24% from Hwy. 12 South. However, of those who camped 5-10 times, 24% came on Hwy 33, and 36% on Hwy. 12.

20. 12% of those that camped here only once sought a rugged recreational experience compared to 25% of those that camped 5-10 times.

21. People camped in pickup campers were more likely to list sightseeing and less likely to check swimming as a major attraction, as compared to campers with other types of units.

22. Those with pickup campers and motor homes were more likely to stay just one night. Devil's Lake was less frequently their ultimate destination. Those with tent trailers stayed the greatest number of nights.

23. Tents were the most popular type of camping unit for those under 18 (93%) and the least popular for those over 65 (10%).

Tent trailers are most popular for those 45-64 years of age.

Motor homes are primarily owned by those over 65.

24. Those most likely to agree with the statement "campsites should be located within site of one another" are most likely to own a tent trailer (49%).

25. Large groups were most likely to feel a need for improvement in visitor services.

26. Families (as opposed to non-families) were less likely to want to see better private campgrounds, nighttime entertainment, and less commercialism in the area around the park.

OFFICE OF

COUNTY PLANNING AND ZONING,
CONSERVATION AND RECREATION

SAUK COUNTY COURTHOUSE
BARABOO WI. 53913
Telephone (608) 356-5581
Extension 286

SEP 18 1979

September 14, 1979

Mr. Bill Moorman
Mr. Stephen Hanson
Department of Natural Resources
P. O. Box 7921
Madison, Wisconsin 53701

Dear Sirs:

On Thursday, August 9, Dorothy Berlin and I from Sauk County Planning and Zoning, along with D.N.R. personnel inspected pits for a septic system for the proposed Devil's Lake Nature Interpretation Center.

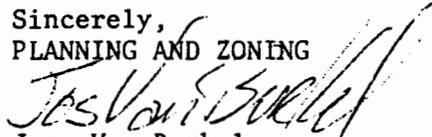
The soil type in the area investigated was a Baraboo stony. All pits dug in this area showed some limiting factor to the installation of a conventional septic system, either bedrock or mottling was evidenced at a depth of less than 3 feet.

A mound system would be the only suitable system for this site providing variance from the proper authorities can be obtained.

Soils were then investigated for the possibility of a mound installation. The proposed area for this mound was east of the proposed building site and downslope from it. The most northwest pit showed mottling at 35". The second pit was located 300' south of pit #1 and showed mottling at 24". The third pit is 120' northeast of pit #2 and mottling was visible at 26". Pit #4 is 165' north of pit #3 and mottling was evident in this pit at 23". The slope in the area was 5% to the east.

A mound system would seem feasible in this area and would be the recommended system for this site.

Sincerely,
PLANNING AND ZONING


Jos. Van Berkel
Soils Analyst

JVB/mw

CORRESPONDENCE/MEMORANDUM

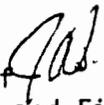
Date: August 24, 1979

File Ref:

RECEIVED

To: J. D. Slack
Department of Natural Resources

AUG 28 1979

From: James Sargent, Chief 
Section of Plumbing and Fire Protection Systems

School of Engineering

Subject: Devil's Lake State Park Development - Sauk County

Mound systems cannot be approved for new construction of public buildings at this time. As a result of a law suit brought by an environmental group against the Department of Health and Social Services, the judge restricted the number of mounds for new residences and prohibited mound systems for new commercial buildings. An Environmental Impact Statement regarding the use of mound systems has been written. After it is released and public hearings are held, a decision will be made. A mound cannot be approved for the Devil's Lake Facility at this time.

JS:JP:1s

APPENDIX J

Legislative Acts



Public Law 88-655
88th Congress, H. R. 1096
October 13, 1964

An Act

76 STAT. 1007.

To authorize the Secretary of the Interior to cooperate with the State of Wisconsin in the designation and administration of the Ice Age National Scientific Reserve in the State of Wisconsin, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That it is the purpose of this Act to assure protection, preservation, and interpretation of the nationally significant values of Wisconsin continental glaciation, including moraines, eskers, kames, kettleholes, drumlins, swamps, lakes, and other reminders of the ice age.

SEC. 2. (a) To implement the purpose of this Act, the Secretary of the Interior (hereinafter called the "Secretary"), in cooperation with State and local governmental authorities of Wisconsin, may formulate within two years after this Act takes effect a comprehensive plan for the protection, preservation, and interpretation of outstanding examples of continental glaciation in Wisconsin; but he shall not spend more than \$50,000 of Federal funds thereon.

(b) When the comprehensive plan is completed and the Secretary is satisfied that State legislation exists for the preservation of the nationally significant features of the reserve, open to the people of the entire Nation, he shall transmit copies thereof to the President of the Senate and the Speaker of the House of Representatives and may, ninety days thereafter and after consulting with the Governor of the State of Wisconsin, publish notice in the Federal Register of the establishment of the Ice Age National Scientific Reserve and of the boundaries thereof, which boundaries shall comprise lands owned or to be acquired by the State and local governments of Wisconsin in the following areas:

- (1) Eastern area (portions of the northern unit of the Kettle Moraine State Forest and Campbellsport drumlin area);
- (2) Central area (portions of Devil's Lake State Park);
- (3) Northwestern area (portions of Chippewa County);
- (4) Related areas (other areas in the State of Wisconsin which the Secretary and the Governor of Wisconsin agree upon as significant examples of continental glaciation).

(c) Any area outside of the national forests that the Secretary and the Governor of Wisconsin agree has significant examples of continental glaciation but is not described in the original notice may be included in the reserve by the Secretary after notice to the President of the Senate and the Speaker of the House of Representatives and publication in the Federal Register, as hereinbefore provided, and any area that they consider to be no longer desirable as a part of the reserve may be excluded from it by the Secretary in the same manner.

SEC. 3. The Secretary may grant financial assistance to the State of Wisconsin for its acquisition of lands and interests in lands lying within the area designated as the reserve. Any grant made under this section shall be only for lands or interests in land acquired by the State after establishment of the reserve, as provided in section 2, subsection (b), of this Act, and the total of all grants under this section shall not exceed \$750,000 or 50 per centum of the fair market value of the lands or interests in land so acquired, including incidental acquisition costs, whichever is less, and shall be subject to terms and conditions prescribed by the Secretary.

SEC. 4. The comprehensive plan presented by the Secretary to the President of the Senate and the Speaker of the House of Representatives may include such recommendations, if any, as he and the Governor of the State of Wisconsin may wish to make with respect to

Ice Age National Scientific Reserve.

Plan.

Copies to President and Congress. Publication in Federal Register.

Inclusion of other areas. Publication in Federal Register.

Financial assistance to Wisconsin.

Public facilities and services.

Pub. Law 88-655
78 STAT. 1088.

- 2 -

October 13, 1964

Federal and State participation in the financing of appropriate interpretive and other public facilities and services within the reserve, including facilities and services to be furnished by such private organizations as the Ice Age Park and Trail Foundation, a nonprofit corporation, but no commitment with respect thereto shall be made by the Secretary and no Federal appropriations shall be available for this purpose.

Termination of
contributions.

Sec. 5. (a) Whenever the Secretary determines that appropriate management and protection set down in the comprehensive plan are not being afforded the nationally significant values within the reserve or that funds are not being provided on the prescribed matching basis by the State of Wisconsin or other non-Federal sources, he may terminate contributions under this Act.

(b) Any payment made by the Secretary under the provisions of subsection (2) of section 3 of this Act shall be made subject to the understanding and agreement by the State of Wisconsin that the conversion, use, or disposal, for purposes contrary to the purposes of this Act, as determined by the Secretary, of any land acquired by said State with funds supplied in part by the United States pursuant to said subsection, shall result in a right of the United States to compensation therefor from said State in the amount of one-half of the fair market value of the land, exclusive of any improvements thereon, as determined at the time of such conversion, use, or disposal.

Appropriation.

Sec. 6. There are hereby authorized to be appropriated not to exceed \$800,000 to carry out the provisions of this Act.

Approved October 13, 1964.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 941 (Comm. on Interior & Insular Affairs).
SENATE REPORT No. 1606 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD, Vol. 110 (1964):
Feb. 17, Aug. 3, Sept. 23: Considered and passed House.
Oct. 1: Considered and passed Senate.



Public Law 91-483
91st Congress, H. R. 4172
October 21, 1970

In Act

84 STAT. 1083

To authorize the Secretary of the Interior to provide financial assistance for development and operation costs of the Ice Age National Scientific Reserve in the State of Wisconsin, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act of October 13, 1964 (78 Stat. 1087) is amended as follows:

- (1) Section 3 is repealed.
- (2) Section 4 is amended by deleting everything after the word "nonprofit" and inserting the word "corporation."
- (3) Section 5 is amended to read as follows:
"Sec. 5. (a) The Secretary is authorized to provide technical assistance to the State of Wisconsin for planning and development of the reserve in accordance with the comprehensive plan.
(b) In addition to grants made pursuant to the Land and Water Conservation Fund Act of 1965 (78 Stat. 897; 16 U.S.C. 4601-8), the Secretary is authorized to make grants of not to exceed 25 per centum of the actual cost of each development project within the reserve in accordance with the comprehensive plan: *Provided*, That the maximum amount of such grants for all projects shall not exceed \$125,000.
(c) The Secretary, pursuant to an agreement with the State of Wisconsin, may pay up to 50 per centum of the annual costs of management, protection, maintenance, and rehabilitation of the reserve.
(d) Whenever the Secretary determines that appropriate management and protection set down in the comprehensive plan are not being afforded the nationally significant values within the reserve or that funds are not being provided on the prescribed matching basis by the State of Wisconsin or other non-Federal sources, he may terminate contributions under this Act."
(4) Section 6 is repealed.

Ice Age National
Scientific Re-
serve.
Financial assist-
ance.
16 USC 469d-
4691.
Repeal.

16 USC 4601-4
note.

Termination
of contributions.

Repeal.

Approved October 21, 1970.

LEGISLATIVE HISTORY:

HOUSE REPORT No. 91-903 (Comm. on Interior and Insular Affairs).
SENATE REPORT No. 91-1266 (Comm. on Interior and Insular Affairs).
CONGRESSIONAL RECORD, Vol. 116 (1970):
Apr. 20, considered and passed House.
Oct. 7, considered and passed Senate.

Management Agreement

AGREEMENT BETWEEN THE SECRETARY OF THE INTERIOR AND THE STATE OF WISCONSIN FOR THE DEVELOPMENT, MANAGEMENT, PROTECTION, MAINTENANCE AND REHABILITATION OF ICE AGE NATIONAL SCIENTIFIC RESERVE

This Agreement, made and entered into this 25th day of September, 1972, by and between the Secretary of the Interior, hereinafter referred to as Secretary, and the State of Wisconsin, hereinafter referred to as State.

WITNESSETH

WHEREAS, Public Law 88-655 (78 Stat. 1087) authorizes the Secretary of the Interior to cooperate with the State of Wisconsin in the designation and administration of the Ice Age National Scientific Reserve in the State of Wisconsin; and

WHEREAS, Public Law 91-483 (84 Stat. 1083) authorizes the Secretary of the Interior to provide financial assistance for development of the Ice Age National Scientific Reserve; and

WHEREAS, the above legislation provides that the Secretary of the Interior, pursuant to an agreement with the State of Wisconsin, may pay up to 50 per centum of the annual cost of management, protection, maintenance and rehabilitation of the Reserve; and

WHEREAS, the Secretary of the Interior and the State of Wisconsin are desirous of cooperating to assure the protection, preservation and interpretation of the nationally significant values of Wisconsin continental glaciation, including moraines, eskers, kames, kettle-holes, drumlins, swamps, lakes, and other natural phenomena of the ice age; and

WHEREAS, the Secretary and the State through the National Park Service (NPS) and the Wisconsin Department of Natural Resources (DNR), their respective representatives, have formulated a Comprehensive Plan for the Ice Age National Scientific Reserve and further desire to cooperate in the management, protection and development of the Ice Age National Scientific Reserve;

NOW, THEREFORE, the Secretary and the State mutually agree as follows:

1. Objects of Agreement: This agreement is intended to provide for the acquisition, development, operation and financing of the Ice Age National Scientific Reserve, and for orderly and harmonious cooperation between the National Park Service of the United States Department of the Interior, and the Wisconsin Department of Natural Resources, in implementing the provisions of Public Laws 88-655 and 91-483 and the Comprehensive Plan for the Ice Age National Scientific Reserve.

2. General Planning Procedure: Although planning in general is the joint responsibility of the NPS and the DNR, specific responsibility for certain phases of planning shall be the prime responsibility of one or the other agency as set forth herein. Each agency shall finance its own planning work and shall consult with and secure review and approval of the plans for each other.

3. Master Plan: A detailed Master Plan and an Interpretive Prospectus shall be prepared by NPS for the Reserve. The Master Plan and Interpretive Prospectus shall be programmed for completion during Fiscal Year 1973.

4. Detailed Site Plans: Detailed site planning to implement the schematic development plans of the Master Plan shall be prepared by DNR as shall all construction drawings.

5. Land Acquisition: The DNR shall have sole responsibility for all land acquisition, including appraisals, negotiations, obtaining of options, recordation of deeds, and initiation of applications for Federal grants-in-aid under the Land and Water Conservation Fund. Title to all real property acquired shall be taken in the name of the State of Wisconsin.

6. Land Acquisition Financing: All acquisitions of real property by DNR for inclusion in the Reserve shall be financed through applications for acquisition project grants-in-aid under the Land and Water Conservation Fund. Such grants-in-aid shall be based upon the regular Land and Water Conservation Fund procedure under which 50% of the acquisition cost is borne by the applicant and the remaining 50% is derived from the state's apportionment of the Land and Water Conservation Fund.

7. Development Financing: The cost of outdoor recreation development projects within the Reserve shall be financed in the following manner: 25% of the project cost shall be borne by the State, 25% of the project cost shall be borne by the NPS out of appropriated construction funds, and the remaining 50% of the

project cost shall be derived from the state's apportioned share of the Federal Land and Water Conservation Fund: Provided, that the maximum amount of such development project costs to be paid directly by NPS for all such projects shall not exceed \$425,000. As each development project is programmed, the DNR will advise the NPS by September 1 of each year of the engineering estimates for allocation of funds by the Service in the following fiscal year. The transfer of funds for expenditures incurred by DNR shall be by quarterly billing to the NPS Finance Office of the Northeast Region, National Park Service.

8. Costs of Operation and Maintenance: The annual cost of management, protection, maintenance and rehabilitation of the Reserve shall be shared equally by DNR and NPS with the NPS 50% share being derived from funds appropriated specifically for this purpose. The DNR will advise NPS by August 15 of each year of budgeted funds required for the following federal fiscal year. The following chart specifies the procedure.

<u>Funding required for Federal FY</u>	<u>Cost Figures to be Provided by:</u>	<u>To assure that funds will be available on:</u>
1974	August 15, 1972	July 1, 1973
1975	August 15, 1973	July 1, 1974
1976	August 15, 1974	July 1, 1975

etc., etc., etc.

The DNR request for funding assistance shall be transmitted to the Director, Northeast Region, via memorandum in the following format:

Requirements by the State of Wisconsin for the National Park Service share of management, protection, maintenance and rehabilitation for the _____ Federal Fiscal Year (July 1, ____ thru June 30, ____) are as follows:

Management & Protection	
Personal Services	\$ _____
Other related expenses	\$ _____
Buildings & Utilities Maintenance	
Personal Services	\$ _____
Other related expenses	\$ _____

Roads & Trail Maintenance	
Personal Services	\$ _____
Other related expenses	\$ _____
Grand Total	\$ _____

The above figures are based on 50% of the direct costs incurred by the State of Wisconsin in conducting the Management and Operation of the Ice Age National Scientific Reserve in accordance with the legislation contained in Public Law 88-655, October 13, 1964, as amended by Public Law 91-483, October 21, 1970.

The DNR will bill NPS quarterly for its share of the annual costs as prescribed above by a method to be agreed upon between the finance offices of DNR and NPS (Northeast Region).

9. Ice Age Trail: The NPS and DNR shall jointly assist the Ice Age Park and Trail Foundation in a study of the proposed Ice Age Trail in Wisconsin.

10. NPS Review of Land and Water Conservation Fund Projects: The DNR shall submit all Land and Water Conservation Fund project proposals for acquisition within the Reserve to the NPS for review and concurrence at the time the project proposals are sent to the Bureau of Outdoor Recreation, Department of the Interior.

11. Development of Facilities: The DNR shall have overall responsibility for development of facilities in the Reserve. It shall determine development priority based upon land control and needs, and shall be responsible for preparation and administration of construction contracts in accordance with Land and Water Conservation Fund grant requirements. Construction drawings and development proposals shall be prepared by the DNR and submitted to the NPS for review and approval prior to submission to the Bureau of Outdoor Recreation for Land and Water Conservation Fund Grants. The DNR shall notify the NPS when BOR grant approval is received. The NPS shall budget for and construct interpretive exhibits and audio visual aids with construction to be financed from appropriated funds. The NPS shall notify the DNR of annual expenditures for this purpose.

12. Interpretive Programs: Interpretive programs are a key element in the Comprehensive Plan for the Reserve and shall play a major role in the operation of the Reserve. The NPS will provide the expertise and information necessary to carry on interpretive programs. The DNR shall place particular stress and emphasis upon Ice Age interpretation, correlating such interpretation to the Ice Age where possible. Informational and interpretive brochures shall be prepared by the NPS in order to insure that the entire program for the Reserve is based upon the most up-to-date scientific knowledge and current research.

13. Operation and Maintenance: Overall administration and management of the Reserve shall be the responsibility of the DNR and the actual operation and maintenance shall be carried out by employees of DNR. The NPS shall conduct biennial reviews of the administration and management of the Reserve.

14. Recreational Activities: Outdoor recreational activities shall be permitted throughout the Reserve: Provided, however, that such activities shall be compatible with preservation of the Ice Age resources.

15. Jurisdiction Over the Reserve: The individual units of the Ice Age National Scientific Reserve are state areas subject to the normal requirements of Wisconsin law with respect to such matters as use fees, state or local taxes, licensing and wildlife management, provided, however, that such areas shall remain subject to applicable Federal regulations regarding migratory birds.

16. Golden Eagle Passport: In recognition of the substantial Federal investment in the financing of the acquisition, development and operation of the Reserve, and the national significance of the Reserve, the Golden Eagle Passport or equivalent annual passport or sticker shall be honored throughout the Reserve so as to permit entrance into the Reserve without the necessity of paying any entrance fee that might be otherwise required by the State. Holders of a Golden Eagle Passport will be required, however, to pay any other fees imposed by the DNR for use of facilities within the Reserve, it being intended that the Golden Eagle Passport shall be accepted in lieu of an entrance fee only.

17. Exchange of Personnel or Equipment: To the extent permissible, NPS and DNR may cooperate in the assignment of personnel or equipment in order to carry out the responsibilities of the respective parties under the terms of this agreement.

18. Exchange of Information: The DNR and the NPS shall make available to each other any additional information relating to the Reserve that is not otherwise specifically provided for in this agreement.

19. Nondiscrimination: The State of Wisconsin shall not discriminate against any person on the basis of race, color, or national origin in the use of any property or facility acquired, developed or operated pursuant to this agreement, and the State further agrees to comply with the terms and intent of Title VI of the Civil Rights Act of 1964, (78 Stat. 241), and with the regulations promulgated pursuant to such Act by the Secretary of the Interior and contained in 43 CFR 17.

20. Equal Opportunity: In all construction contracts entered into by the State relating to the Reserve which are either directly or indirectly Federally assisted, there shall be incorporated therein the Equal Opportunity clause provided for in 41 CFR 1-12.803.

21. Officials Not be Benefit: No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

22. Periodic Review: This agreement shall become effective when signed by the parties hereto and shall continue in force until terminated by mutual agreement or at the option of either party upon one year's notice given in writing upon any anniversary date hereof. The agreement shall be reviewed by the NPS and the DNR biennially and at such other times as may be requested by either party on 60 days' written notice.

23. Liaison and Coordination Responsibility: To provide for a primary point of contact between DNR and the NPS, the Director of the Bureau of Parks and Recreation of DNR and the Assistant to the Director in charge of the Chicago Field Office of the NPS are assigned.

24. Availability of Funds: Nothing herein contained shall be construed as binding the Secretary of the Interior to expend in any one fiscal year any sum in excess of appropriations made by Congress for that fiscal year, or to involve the United States in any contract or other obligation for the future expenditure of money in excess of such appropriations. Funds for cost sharing shall be requested by the parties hereto.

IN WITNESS WHEREOF, the parties hereto cause this agreement to be executed on the date hereinabove first set forth.

/s/ Rogers C. B. Morton
SECRETARY OF THE INTERIOR

/s/ Patrick J. Lucey
GOVERNOR, STATE OF WISCONSIN

APPENDIX L

ICE AGE TRAIL MEMORANDUM OF AGREEMENT

The purpose of this memorandum of agreement is to outline the responsibilities of the Wisconsin Department of Natural Resources, the Ice Age Park and Trail Foundation and the Ice Age Council regarding the Ice Age Trail.

The Ice Age National Scientific Reserve was authorized by PL-88-655 in October, 1964. PL-91-483 which provides the basis of financing the Reserve was signed in October, 1970. A subsequent cooperative agreement between the State of Wisconsin and the National Park Service in September, 1972 stated that both agencies should jointly assist the Ice Age Park and Trail Foundation in a study of the proposed Ice Age Trail in Wisconsin.

The 1,000 mile Ice Age Trail serves as a link between most of the nine units of the Reserve and other glacially significant areas as it follows the terminal moraines through Wisconsin. The Ice Age Trail is now partially operational under the auspices of the Ice Age Trail Council and the Foundation. The Ice Age Trail crosses federal, state, county, town, and other governmental lands, as well as private lands.

The Foundation is a private, non-profit corporation that originally sponsored the Ice Age Trail. The Foundation raises money and provides guidance for the Trail project. The Council is currently comprised of eleven chapters, each responsible for the location, maintenance, and care of specific Trail segments. Council members work with landowners to secure permission to locate the Trail and arrange volunteer labor for maintenance of the Trail.

The Wisconsin Department of Natural Resources, the Ice Age Park and Trail Foundation of Wisconsin, Inc., and the Ice Age Trail Council agree as follows:

1. The Department, the Foundation, and the Council will cooperate in the completion and maintenance of the Ice Age Trail, as defined in this agreement.
2. The Department shall have responsibility for laying out, designing, constructing, and maintaining the Trail over Department lands. For the purposes of this agreement, county forest lands shall not be considered "Department lands."
3. The Council shall have responsibility for constructing and maintaining the Trail over private lands.
4. The Department and the Council shall have joint responsibility to advise and provide guidance to other governmental units in laying out, designing, constructing, and maintaining the Trail over other public lands. For the purposes of this agreement, county forest lands shall be considered "other public lands."

5. As an additional part of its obligations under this agreement, the Department will:
 - a. Provide leadership and coordination for the Ice Age Trail.
 - b. Appoint various Department personnel along the route of the Ice Age Trail to work with the Council and its chapters on specified segments of the Trail.
 - c. Advise the Council and Foundation on Trail layout, design, construction, and maintenance for those parts of the Trail they are responsible for.
 - d. Provide Trail easement and other right-of-way acquisition expertise.
 - e. Provide Trail mapping expertise.
 - f. Provide Trail publications expertise.
 - g. Provide Trail publicity and public relations expertise.
 - h. Make application to secure National Recreational Trail designation for the Ice Age Trail in Wisconsin.
6. Except as is authorized by the Legislature, the Natural Resources Board and the Department have no obligation to:
 - a. Acquire any lands for the Trail outside other authorized Department projects.
 - b. Construct or maintain any portion of the Trail over non-Department lands.
7. As an additional part of its obligations under this agreement, the Council and its various local chapters will work with the advice of the Department in:
 - a. Laying out, designing, constructing, and maintaining the Trail.
 - b. Securing Trail easements and other rights-of-way.
 - c. Mapping the Trail.
 - d. Publishing Trail maps and other Trail information.
 - e. Providing Trail publicity and public relations.
8. As an additional part of its obligations under this agreement, the Foundation will use its best efforts to provide such non-public funds as may be needed to carry out this agreement.

9. The parties agree to meet annually on a date to be mutually agreed upon to discuss the workability of this agreement. "Either party may cancel this agreement upon three months written notice to the other party."
10. In connection with the performance of work under this agreement, the Council agrees not to discriminate against any employe, applicant for employment member, volunteer or trail user because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01(5), Stats., or national origin. This provision shall include, but not be limited to, the following: employment, up-grading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship. The Council further agrees to take affirmative action to ensure equal employment opportunities. The Council agrees to post in a conspicuous place available for employes and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of the nondiscrimination clause.
11. Should the Council at any time have paid employes working on the Ice Age Trail on Department lands, they shall furnish proof of Worker's Compensation coverage in the form of a Certificate of Insurance indicating such for these individuals. The insurance policy shall contain a provision by which the insurer agrees to notify the Department upon any lapse or change in coverage.

Failure to satisfy the provisions of this paragraph will result in the voiding of the agreement.

APPROVED:

Norman C. Huth

Norman C. Huth, President
Ice Age Park and Trail
Foundation of Wisconsin, Inc.

7-26-80

Date

Julius J. Werner

Julius J. Werner, President
Ice Age Trail Council

7-13-80

Date

Anthony S. Earl

Anthony S. Earl, Secretary
Department of Natural Resources

7/28/80

Date

APPENDIX M
WETLANDS CLASSIFICATION

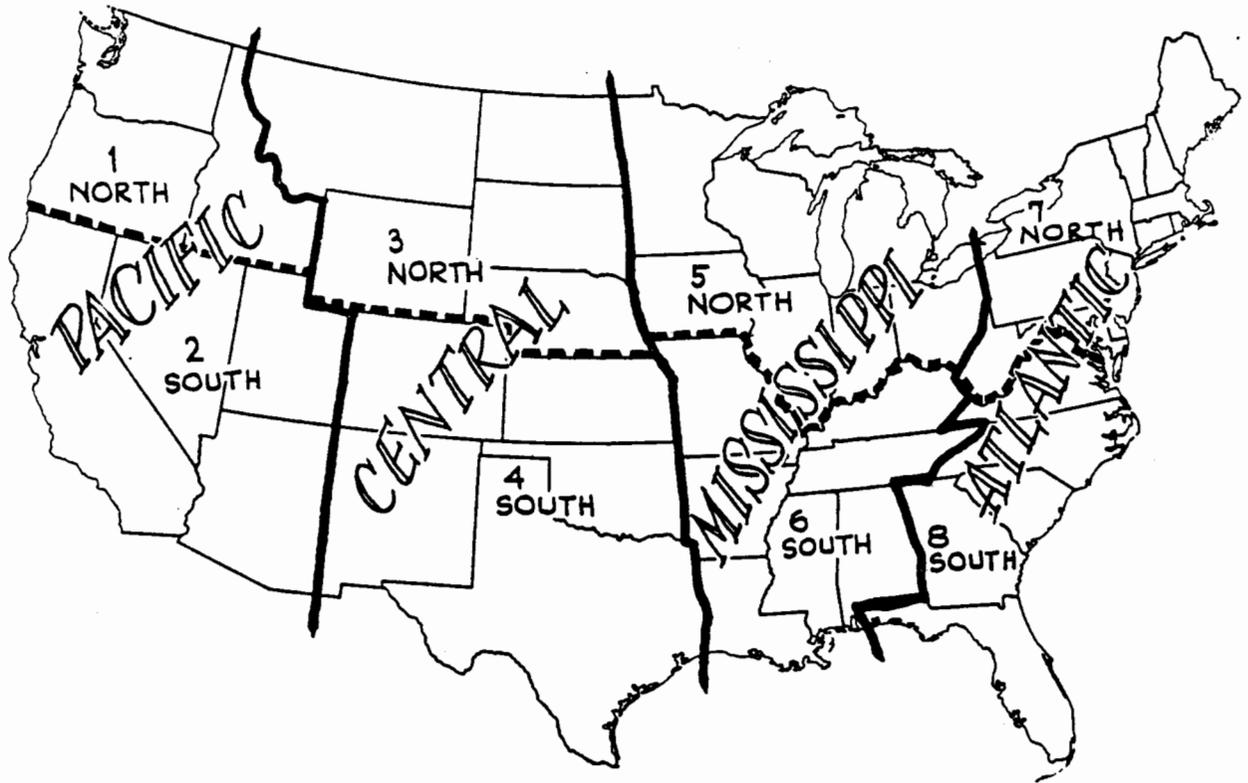


Figure 3.—Flyway areas used in analyzing the relative importance of wetland types to waterfowl.

The symbols used to show relative waterfowl values by flyway areas are standardized for all the type maps. These symbols show what proportion of the habitat of a particular type in a particular flyway area is judged to be of primary importance to waterfowl, as follows:



INLAND FRESH AREAS

Type 1.—Seasonally flooded basins or flats (pl. 1). The soil is covered with water, or is waterlogged, during variable seasonal periods but usually is well drained during much of the growing season. This type is found both in upland depressions and in overflow bottom lands. Along river courses, flooding occurs in late fall, winter, or spring. In the uplands, basins or flats may be filled with water during periods of heavy rain or melting snow.

Vegetation varies greatly according to the season and the duration of flooding. It includes bottom-land hardwoods as well as some herbaceous growths. Where the water has receded early in the growing season, smartweeds, wild millet, fall panicum, tealgrass, chufa, redroot cyperus, and weeds (such as marsh elder, ragweed, and cocklebur) are likely to occur. Shallow basins that are submerged only very temporarily usually develop little or no wetland vegetation.

Upland depressions included in the inventory are confined largely to the three Lake States, the two Dakotas, Montana, and the Panhandle of Texas. In the northern States the presence of this temporary water stimulates high waterfowl production, by providing greater area for the establishment of territories by breeding pairs. When water occurs abundantly in the Panhandle, the temporarily flooded basins (playas) are used extensively by migrating and wintering waterfowl.

The overflow bottom lands in the southern part of the Mississippi Flyway provide a major wintering area for ducks as well as good shooting sites for hunters. Particularly in good mast years,

feeding ducks use bottom lands when they are flooded. Although there remain more than 10 million acres of overflow lands in Missouri, Kentucky, Tennessee, Arkansas, Mississippi, and Louisiana, most of the wintering waterfowl in this flyway concentrate in certain key areas.

Flyway area:	Acres
1. Pacific north.....	102, 600
2. Pacific south.....	143, 400
3. Central north.....	357, 700
4. Central south.....	2, 856, 400
5. Mississippi north.....	1, 134, 000
6. Mississippi south.....	11, 945, 400
7. Atlantic north.....	1, 200
8. Atlantic south.....	6, 551, 400

Type 2—Inland fresh meadows. (pl. 2). The soil usually is without standing water during most of the growing season but is waterlogged within at least a few inches of its surface. Vegetation includes grasses, sedges, rushes, and various broad-leaved plants. In the North, representative plants are carex, rushes, reedtop, reedgrasses, mannagrasses, prairie cordgrass, and mints. In Florida, cordgrasses and various species of paspalums and beakrushes are common. Meadows may fill shallow lake basins, sloughs, or farmland sags, or these meadows may border shallow marshes on the landward side. Wild hay oftentimes is cut from such areas.

Fresh meadows are used somewhat in the North by nesting waterfowl, but in most of the country their value is mainly as supplemental feeding areas. If shallow water can be impounded on them, their value can be increased considerably.

Flyway area:	Acres
1. Pacific north.....	43, 200
2. Pacific south.....	239, 500
3. Central north.....	578, 800
4. Central south.....	40, 700
5. Mississippi north.....	2, 383, 300
6. Mississippi south.....	68, 700
7. Atlantic north.....	30, 700
8. Atlantic south.....	4, 083, 700

Type 3—Inland shallow fresh marshes (pl. 3.) The soil is usually waterlogged during the growing season; often it is covered with as much as 6 inches or more of water. Vegetation includes grasses, bulrushes, spikerushes, and various other marsh plants such as cattails, arrowheads, pickerelweed, and smartweeds. Common representatives in the North are reed, whitetop, rice cutgrass, carex, and giant burreed. In the Southeast, maidencane, sawgrass, arrowhead, and pickerelweed are characteristic. These marshes may nearly fill shallow lake basins or sloughs, or they may border deep marshes on the landward side. They are also common as seep areas on irrigated lands.

Marshes of this type are used extensively as nesting and feeding habitat in the pothole country

of the North Central States and elsewhere. In combination with deep fresh marshes (Type 4), they constitute the principal production areas for waterfowl. Florida and Georgia are the only States where the majority of the shallow fresh marshes are considered to be of lesser importance to waterfowl. Florida alone contains more than 2 million acres of this type.

Flyway area:	Acres
1. Pacific north.....	33, 700
2. Pacific south.....	64, 100
3. Central north.....	817, 600
4. Central south.....	84, 600
5. Mississippi north.....	758, 500
6. Mississippi south.....	15, 300
7. Atlantic north.....	35, 900
8. Atlantic south.....	2, 159, 900

Type 4—Inland deep fresh marshes (pl. 4). The soil is covered with 6 inches to 3 feet or more of water during the growing season. Vegetation includes cattails, reeds, bulrushes, spikerushes, and wildrice. In open areas, pondweeds, naiads, coontail, watermilfoils, waterweeds, duckweeds, waterlilies, or spatterdocks may occur. Water-hyacinth and waterprimroses form surface mats in some localities in the Southeast. These deep marshes may almost completely fill shallow lake basins, potholes, limestone sinks, and sloughs, or they may border open water in such depressions.

Deep fresh marshes constitute the best breeding habitat in the country, and they are also important feeding places. In the Western States they are heavily used by migrating birds, especially diving ducks. Florida and Texas are the only States in which the vast majority of these marshes are not rated as being of primary importance to waterfowl.

Flyway area:	Acres
1. Pacific north.....	92, 500
2. Pacific south.....	62, 500
3. Central north.....	686, 500
4. Central south.....	46, 800
5. Mississippi north.....	427, 700
6. Mississippi south.....	21, 500
7. Atlantic north.....	25, 700
8. Atlantic south.....	984, 100

Type 5—Inland open fresh water (pl. 5). Shallow ponds and reservoirs are included in this type. Water is usually less than 10 feet deep and is fringed by a border of emergent vegetation. Vegetation (mainly at water depths of less than 6 feet) includes pondweeds, naiads, wildcelery, coontail, watermilfoils, muskgrasses, waterlilies, spatterdocks, and (in the South) water-hyacinth.

In the pothole country of the North Central States, Type 5 areas are used extensively as brood

areas when, in midsummer and late summer, the less permanent marshes begin to dry out. The borders of such areas are used for nesting throughout the Northern States. Where vegetation is plentiful, they are used in all sections of the country as feeding and resting areas by ducks, geese, and coots, especially during the migration period.

Flyway area:	Acres
1. Pacific north.....	40, 500
2. Pacific south.....	51, 900
3. Central north.....	676, 800
4. Central south.....	87, 100
5. Mississippi north.....	1, 000, 200
6. Mississippi south.....	186, 500
7. Atlantic north.....	12, 000
8. Atlantic south.....	541, 500

Type 6—Shrub swamps (pl. 6). The soil is usually waterlogged during the growing season, and is often covered with as much as 6 inches of water. Vegetation includes alders, willows, buttonbush, dogwoods, and swamp-privet. Shrub swamps occur mostly along sluggish streams and occasionally on flood plains. They are used to a limited extent for nesting and feeding in the North and for roosting and feeding in some of the Mississippi Alluvial Valley States. Elsewhere, shrub swamps are little used except in a few special situations.

Flyway area:	Acres
1. Pacific north.....	11, 900
2. Pacific south.....	800
3. Central north.....	700
4. Central south.....	23, 500
5. Mississippi north.....	2, 912, 400
6. Mississippi south.....	164, 300
7. Atlantic north.....	77, 800
8. Atlantic south.....	622, 100

Type 7—Wooded swamps (pl. 7). The soil is waterlogged at least to within a few inches of its surface during the growing season, and is often covered with as much as 1 foot of water. Wooded swamps occur mostly along sluggish streams, on flood plains, on flat uplands, and in very shallow lake basins. In the North, trees include tamarack, arborvitae, black spruce, balsam, red maple, and black ash. In the South, water oak, overcup oak, tupelo gum, swamp black gum, and cypress are dominant. In the Northwest, western hemlock, red alder, and willows are common. Northern evergreen swamps usually have a thick ground covering of mosses. Deciduous swamps frequently support beds of duckweeds, smartweeds, and other herbs.

Wooded swamps often occur in association with shrub swamps, and waterfowl often use the

two types interchangeably. In the Southeast, Type 7 swamps become particularly important in years when lack of sufficient fall and early winter rains leave overflow areas dry. At such times, wooded swamps represent the only shallow water available over wide areas. This type is particularly useful to the wood duck throughout the range of this species.

Flyway area:	Acres
1. Pacific north.....	18, 200
2. Pacific south.....	2, 100
3. Central north.....
4. Central south.....	39, 000
5. Mississippi north.....	2, 906, 700
6. Mississippi south.....	2, 813, 800
7. Atlantic north.....	556, 000
8. Atlantic south.....	10, 473, 200

Type 8—Bogs (pl. 8). These are often called pocosins, bays, and savannahs in the South. The soil is usually waterlogged and supports a spongy covering of mosses. Bogs occur mostly in shallow lake basins, on flat uplands, and along sluggish streams. Vegetation is woody or herbaceous, or both. Typical plants are heath shrubs, sphagnum moss, and sedges. In the North, leather-leaf, Labrador-tea, cranberries, carex, and cottongrass are often present. In the South, cyrilla, persea, gordonia, sweetbay, pond pine, Virginia chainfern, and pitcher-plants are common. Scattered, often stunted, black spruce and tamarack may occur in northern bogs.

Bogs have the lowest waterfowl rating, country-wide, of all the 20 types. In northern New England, however, they assume considerable significance. In Maine alone, 25,500 acres are classed as being of primary importance to waterfowl.

Flyway area:	Acres
1. Pacific north.....	1, 400
2. Pacific south.....	1, 500
3. Central north.....	100
4. Central south.....	300
5. Mississippi north.....	477, 300
6. Mississippi south.....	46, 100
7. Atlantic north.....	87, 600
8. Atlantic south.....	2, 733, 500

INLAND SALINE AREAS

Type 9—Inland Saline flats (pl. 9). The soil is without standing water except after periods of heavy precipitation, but it is waterlogged to within at least a few inches of the surface during the growing season. Vegetation (often sparse or patchy) consists of salt-tolerant plants such as seablite, saltgrass, Nevada bulrush, saltbush, and burro-weed. Type 9 wetlands occur in undrained sumps in many parts of the arid West. Sometimes they cover extensive areas.

APPENDIX N
DEVIL'S LAKE FIRE CONTROL

Man Power - Fire Control

Poynette:

One Forest Ranger
One F.F.C.A. II

Spring Green:

One Forest Ranger
One F.F.C.A. I
One Park N.R.A. I

Wisconsin Dells:

One Forest Ranger
Two 11-month F.F.C.A.'s

Equipment - Fire Control

Poynette:

1 3/4 t. 4X4 w/equipment for 5 men
1 2 t. with crawler, plow, and dozer
Hand tools for 5 line crews of 5 men each

Spring Green:

1 T-34 airplane
2 3/4 t. 4X4 w/equipment for 5 men
1 5 t. with crawler, plow, and dozer
Fire fighting hand tools for 10 line crews of 5 men each

Wisconsin Dells:

1 3/4 t. 4X4 w/equipment
1 5 t. with crawler, plow, and dozer

The following DNR complement is located at Devil's Lake State Park and should provide an excellent first attack force in the area.

Equipment

2 sedans with radios

Frequency

Sheriff's Dept. 2
Parks all
Fire Control 2

6 Park frequency portable radios. 2 with red net

Park Unit:

1 Ford van w/radio (park)
1 2X4 1/2 t. pickups w/park frequency radios
1 bulldozer DNR-TD124 w/4-way blade. Equiv. to JD 350

Hand Tools:

13 axes
33 shovels
21 fire rakes
8 back cans

1 pumper OCD Portable on skids

Personnel

Permanent:

2 Supt.
2 LE
2 Clerical
4 Maintenance

Seasonal

2 LE
3 Maintenance

LTE

15 that could be used on fire

The following fire departments provide fire protection in addition to DNR to the proposed area. Each fire department has 20 to 30 members and the following equipment:

Merrimac

Area covered: Town of Merrimac

Equipment

800 gallon pumper
1,000 gallon pumper
1,300 gallon tanker
200 gallon grass fire unit

Sauk City

Area covered: Town of Sumpter

Equipment

300 gallon pumper
500 gallon pumper
1,200 gallon tanker
1,500 gallon tanker
1,800 gallon tanker
50 gallon 4X4 grass unit
1 panel truck

Baraboo

Area covered: Towns of Baraboo, Greenfield, and that part of Sumpter which encompasses Devil's Lake Park

Equipment

600 gallon pumper
500 gallon pumper
4,000 gallon semi tanker
100 gallon Scout grass fire unit
Equipment truck
Chief's car

APPENDIX O

Uniform Land Use Classification System for
Existing and Proposed Department Properties

Purpose

A uniform land use classification system for Department properties will have a number of uses:

1. Facilitate a uniform and statewide resource management program. Classes with definite criteria and management principles will guide the whole Department in working toward common environmental management objectives.
2. Facilitate a truly Departmentwide land acquisition program by assisting in the formulation of acquisition priorities.
3. Provide a consistent relationship between land acquisition and subsequent development.
4. Provide for many (multiple) uses of Department properties. It will facilitate the attainment of the many environmental objectives of the Department of Natural Resources and insure maximum public benefits consistent with sound resource management principles.

Characteristics of Land Use Classification

A uniform land use classification system recognizes that there may be primary use designations of some Department properties. This results from various statutory definitions and from the sources of funds used to acquire the land. However, a classification system will discourage such designation of whole properties and open the way for more comprehensive resource management. Under a classification system, a property may contain several land use classes. When a land use class is applied to a particular part of a property, that use will be considered the primary use of that part or area. However, collectively the property is managed for all designated uses, or for multiple management.

The large number of specific land use classes can be grouped into broad categories. The broad land use categories are: 1) resource protection, 2) resource development, 3) intensive recreation development, and 4) administrative. Each of these are further divided into subcategories or land use areas:

<u>I. Resource Protection</u>	<u>Land Use Code</u>
A. Wilderness Areas	W ₁
B. Wild Areas	W ₂
C. Public Use Natural Areas	N
D. Scientific Areas	S
E. Federal Wild, Scenic and Recreational Rivers	FR ₁ , FR ₂ , FR ₃
F. Wisconsin Wild Rivers	WR
G. Wilderness Lakes	A ₁
H. Wild Lakes	A ₂
I. Habitat Preservation Areas	HP
J. Historical and Archaeological Areas	HA
K. Scenic Areas	Sc

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II. Resource Development

- | | |
|--|-----------------|
| A. Demonstration and/or Experimental Management Area | RD ₁ |
| B. Fisheries and Wildlife Management Area | RD ₂ |
| C. Forest Production Area | RD ₃ |
| D. Mineral Extractions Area* | RD ₄ |
| E. Propagation and Nursery Area | RD ₅ |

III. Intensive Recreation Development

IRD

(This category is not broken down further but will contain intensive recreation developments.)

IV. Extensive Recreation Development

ERD

(This category is not broken down further but will contain extensive recreation developments.)

V. Administrative

- | | |
|--|-----------------|
| A. Headquarters' Sites (property, area, district, station) | AD ₁ |
| B. Communication Tower Site | AD ₂ |
| C. Fire Control Tower Site | AD ₃ |
| D. Fire Control Station Site | AD ₄ |
| E. Rough Fish Station | AD ₅ |
| F. Tourist Information Center | AD ₆ |
| G. Boat House | AD ₇ |
| H. Miscellaneous | AD ₈ |

For the sake of clarity and understanding, it should be emphasized that the names or titles now given Department properties still should be used. However, the title given a property should closely portray the dominant land use class on that property. Current property titles are:

1. State Parks

- a. Scenic Parks
- b. Historical Parks
- c. Recreational Parks
- d. Roadside Parks
- e. Park Trails

2. Recreational Areas

3. Recreational Forests

4. Northern Forests

5. Wild Rivers

6. Wildlife Areas

- a. Fish Habitat Area (cold water, warm water, spring pond, lake habitat)
- b. Fish Remnant Area
- c. Lake and Major River Access
- d. Waterfowl Management Area
- e. Scattered Wetland Area
- f. Extensive Habitat Area

7. Scientific Areas

8. Natural Areas

*Mineral extraction category will not be used for acquisition; it will be used only for designation purposes on existing lands, where appropriate.

C. Public Use Natural Areas

Tracts of land or water where native biotic communities or other natural features, including significant geological or archeological sites, persist. They are relatively undisturbed ecosystems or sub-ecosystems that can be enjoyed by the public for general nature study, education, and aesthetic appreciation, under certain restrictions, without threat of destruction.

1. Criteria

- a. Areas with biotic communities or other natural features of at least county or multi-county significance.
- b. Areas of any size, but sufficient to insure maintenance of the integrity of the biotic community or natural feature. Areas may be small (less than 25 acres) if well buffered or, could approach or even exceed the minimum recommended size of wilderness areas (3,000 acres).

2. Management guidelines

- a. Insofar as possible, maintain natural conditions. Allow natural physical and biological processes to operate with minimum human intervention.
- b. Interpretive signs, walking trails, and other improvements designed to enhance nature study and nature appreciation are permitted; however, development and management shall be limited to the extent required to facilitate use and prevent degradation and encroachment by non-compatible uses (snowmobiling, off-road vehicular driving, camping, etc.).
- c. Timber harvest is generally prohibited, but salvage following extensive natural disaster may be permitted.
- e. Management designed to simulate natural forces which shaped the natural community is permitted (e.g. fire).
- f. Non-commercial and non-mass specimen collecting may be permitted if not otherwise prohibited by law or administrative rule.

D. Scientific Areas

Tracts of land or water containing the best remaining examples of native biotic communities or other natural features including significant geological or archeological features. They are natural areas of at least statewide significance especially suited to research and designation as state scientific areas.

1. Criteria

- a. Best remaining natural areas recommended as scientific areas by the Scientific Areas Preservation Council.
- b. Of any size ranging from remnant prairies or caves of several acres in extent to large tracts of several thousand acres in extent. Sufficient to insure maintenance of the biotic community or natural feature.
- c. Representative examples of all presettlement terrestrial and aquatic communities, threatened or endangered plant and animal species preserves, or significant geological and archeological features. Representation is needed in each region of the state where the community or feature occurred naturally in presettlement era.

2. Management guidelines

- a. *Insofar as possible maintain natural conditions. Allow natural physical and biological processes to operate with a minimum of human intervention.*
- b. *Development limited to the extent required to facilitate primary uses-research and education-and prevent degradation and encroachment by noncompatible uses (snowmobiling, off-road vehicle driving, berry picking, camping, etc.).*
- c. *To protect sensitive communities and fragile features, the location of scientific areas should generally not be publicized, and public recreation use should be directed to suitable alternate areas.*
- d. *Specimen collections shall be by permit only.*
- e. *Management designed to simulate natural forces which shaped the community is permitted. An example is the use of fire for prairie, barrens and savanna types.*
- f. *Scientific areas will be managed according to specific management plans for each site prepared by Scientific Areas staff, jointly approved by the Scientific Areas Preservation Council, Bureau and District, and implemented by the District and Bureaus.*

III. Intensive Recreation Development Areas

Defined as those quality areas adaptable to heavy recreational use and in a location where active and intensive recreation developments are needed. They are that part of a Department project where recreation facility developments will occur or are located now.

A. Criteria

1. Should be of sufficient size to include existing or proposed recreation facility development and limited buffer zones. Should not contain more than 10 percent of a state park or recreation area, nor more than 5 percent of a recreational forest or other Department management areas. Water access sites are exempted from this rule.
2. Resource base should have a carrying capacity to support active type recreation activities and their associated developments.
3. Recreation areas should contain natural resource values that provide a high quality recreational experience.

B. Management Guidelines

1. Intensive outdoor recreation shall be recognized as the dominant or primary management objective.
2. Primary emphasis shall be placed on active participation in outdoor recreation in a pleasing environment.
3. Physical developments shall be consistent with the management and use guidelines (1 and 2 above).
4. The scope and type of development, as well as their design, materials and construction shall enhance and promote the use and enjoyment of the recreational resources of the area.
5. Forest fire control and pest control will be carried out as necessary.
6. Utilities may be provided consistent with high aesthetic standards.
7. Mineral extraction shall not be permitted.
8. Hunting will not be allowed within the recreation development area class because of the potential safety hazard. All other recreational activities may be allowed.
9. Adequate public access will be provided.

IV. Extensive Recreation Area

Defined as the area within the boundary of a state property where good examples of native flora and fauna exist, where aesthetics perpetuation or conversion of forest stand management can be carried out and educational programs can be implemented, where vegetative management to control insects and disease and provide for public safety may take place.

The areas may have some scenic attributes but may not necessarily be unique. Extensive Recreation Areas may serve as buffer between Intensive Recreation Development Areas and Natural or Scientific Areas. Types of public uses on Extensive Recreation Areas will include trails, overlooks, natural interpretation, etc.

A. Criteria

1. *These lands are outside the Intensive Recreation Areas and help preserve the scene. They are, in most cases, the scenic attributes of the property. They contribute toward giving the user a quality outdoor experience.*
2. *These areas include most of the land within a property boundary in most parks. The exception to this is very small parks which are developed to a high percentage in intensive type facilities.*
3. *Normally these areas have high resource value, but would be open and available to certain forms of recreation and the outdoor experience.*

B. Management Guidelines

1. *Aesthetic management may be carried out.*
2. *Education programs may utilize these sites.*

3. *Trails, including snowmobile trails, may be permitted.*
4. *Vegetative management programs can be carried out for safety, aesthetics, purposes or perpetuation or conversion of forest stand.*
5. *Structures such as roads and toilets and trail development can be accommodated but should enhance and facilitate the use of the area.*
6. *The style, design or materials used in facilities shall be in keeping with high aesthetic standards.*
7. *Passive type recreation is the dominant use.*
8. *Mineral extraction shall not be permitted.*
9. *Hunting may be allowed depending upon the laws affecting the property.*
10. *Habitat manipulations may be permitted.*

Date: December 14, 1981

File Ref: 2510

To: Richard Lindberg - PLN/6

From: D. L. Weizenicker *DLW*

Subject: WRAC Comments on Devil's Lake State Park Master Plan

Our Bureau's response to the Wild Resources Advisory Council comments and recommendations on the Devil's Lake State Park Master Plan are as follows:

1. Introduction Last Paragraph

WRAC recommends the words and educational be inserted between recreational and experience.

Department Response:

"and educational" was inserted as recommended by the Council.

2. Goals and Objectives Page 1

The goal is excellently stated. WRAC recommends that the sentence of the second paragraph under Visitor Use end with and education.

Department Response:

"and education" was added per the Council's recommendation.

3. Page 2. Item b Park Entrance and Roads

WRAC wishes to add its support to the recommendation made by the Task Force for the panoramic site for reasons outlined in the section.

Department Response:

We thank the Council for their support.

4. Page 3c. Shuttle System

WRAC considers this an excellent layout and supports the program. The Council feels that the shuttle system applied to park use reduces wear and tear on the environment, saves energy, and is more humane to the visitors.

Department Response:

We also feel that the shuttle concept has some very positive aspects especially when considering the physical layout of the park. We will

have to watch operating costs before putting it into operation in the future. Thank you for the comments.

5. Pages 6, 7 and 8. Extensive Use Areas

Devil's Lake State Park is rich in existing and proposed trails. There is more diversity here than any place else in the state. WRAC applauds the managers in keeping bridal and ORV trails out of the park.

Department Response:

So noted.

6. Page 25. Historical and Archeological Features

Second line first paragraph. Typographical error. Please correct 102, somebody might believe you.

Department Response:

The typographical error has been corrected.

7. Page 27. Item j. South Bluff

WRAC recommendations - Put this proposal on the back burner until demonstrated need becomes a roar.

Department Response:

We accept the Council's recommendation.

8. Appendices

a. Appendix A -

The wildlife listings are super, WRAC compliments. Lists such as these reinforce the educational component of the park goal.

Department Response:

We thank WRAC for the compliment.

b. Appendix B -

Very commendable for threatened, endangered, and uncommon plants. RAC is justifiably concerned that a listing of common plants is not included in the appendix or in the text except for the listings in the Scientific Areas. Educationally interested visitors, regular and Ice Age, have a right to know what common plants can be admired, photographed, or generally observed in the park.

Department Response:

Self-guided nature trails, the nature center, guided hikes, and evening naturalist programs provide opportunities for the

interested visitor to learn more about the park's plant life. The park's "Visitor" newspaper also provides some general information on plant life.

c. Appendix D -

The Scientific Areas of Red Oak Forest, Pine Glen, and Koshawago Springs and other such areas in the Baraboo Hills adds to the prestige of the park and the region. Their major challenge is, and should remain as a domain for the serious student of nature. Over exposure would result in decimation of the natural values for which these areas were designated. WRAC is pleased with cautious exposure given to the Scientific Areas in the Devil's Lake State Park by the Task Force in the Concept Element.

Department Response:

So noted.

Thank you for the Council's thorough review and helpful comments on the Devil's Lake Master Plan.

cc: J. L. Treichel - P&R/4
→ D. J. Kulhanek - P&R/4
D. Morrissette - Nevin

100

Date: December 15, 1981

File Ref: 2510

To: K. Klepinger - RES/4

From: D. L. Weizenicker *J.T. for D.W.*

Subject: SAPC Comments on Devil's Lake State Park Master Plan

Our Bureau's response to the Scientific Areas Preservation Council comments and recommendations on the Devil's Lake State Park Master Plan are as follows:

1. First Paragraph

The concept plan describes facilities and uses proposed, but provides little detail on certain aspects such as the type of educational programs to be offered. Since the pre-Cambrian geology of the park is so important we hope that the Ice Age National Scientific Reserve Interpretive Center program does not ignore the textbook pre-Cambrian features of the park.

Department Response:

The Devil's Lake interpretative program is currently a well-established program that reached nearly 29,000 park visitors in 1980 with the aid of one full-time and several seasonal naturalists. The Ice Age interpretive proposals in the master plan (page 8) will compliment and expand upon what is already offered. Details of a specific program are normally not included in a conceptual master plan, but pre-Cambrian geology is included in the program.

2. Second Paragraph

The reference on page 24 and list of Threatened, Endangered and Uncommon Plants in Appendix B might be retitled Rare, Uncommon, and Plants of Special Interest, since these plants are not at this time on the official state or federal lists of threatened and endangered plants.

Department Response:

The Council's comment concerning threatened, endangered and uncommon plants is so noted. The reference on page 24 and the plant listing title in Appendix B will be revised according to the recommendations of the Office of Endangered Species.

3. Third Paragraph

This land use classification of 309 acres as scientific areas and 5,900 acres as natural areas is appropriate and necessary in view of the park's high visitation rate.

Department Response:

So noted.

4. Fourth Paragraph

The problem of damage to trees by park users (p. 27, g.) should be given more attention. Park users should not be allowed to cut or remove any firewood, whether live, dead, or down.

Department Response:

Regulations under Chapter NR 45 prohibiting the damage of any natural growth in a state park or forest are enforced. Public information and education is also a means to reduce this problem. Chapter NR 45 does not prohibit the gathering of firewood.

5. Fifth Paragraph

The relocation of South Shore Drive and removal of camping at the south end of Devil's Lake is appreciated; however, we hope the relocation will not infringe on the talus slope. Talus is not uncommon at Devil's Lake, but it is one of only two good examples in the state and should be protected from further disturbance.

Department Response:

We can assure the Council that the proposed development on the south shore will not infringe upon the talus slope.

6. Sixth Paragraph

The alternative of boundary expansion (p. 31, 3.) which would add 80 acres and connect Devil's Lake State Park with Parfrey's Glen Scientific Area is logical and will aid in protecting the scientific area.

Department Response:

So noted.

We thank the Council for taking the time to review and comment on the Devil's Lake Master Plan.

cc: J. L. Treichel - P&R/4
 → D. J. Kulhanek - P&R/4
 D. Morrisette - Nevin

