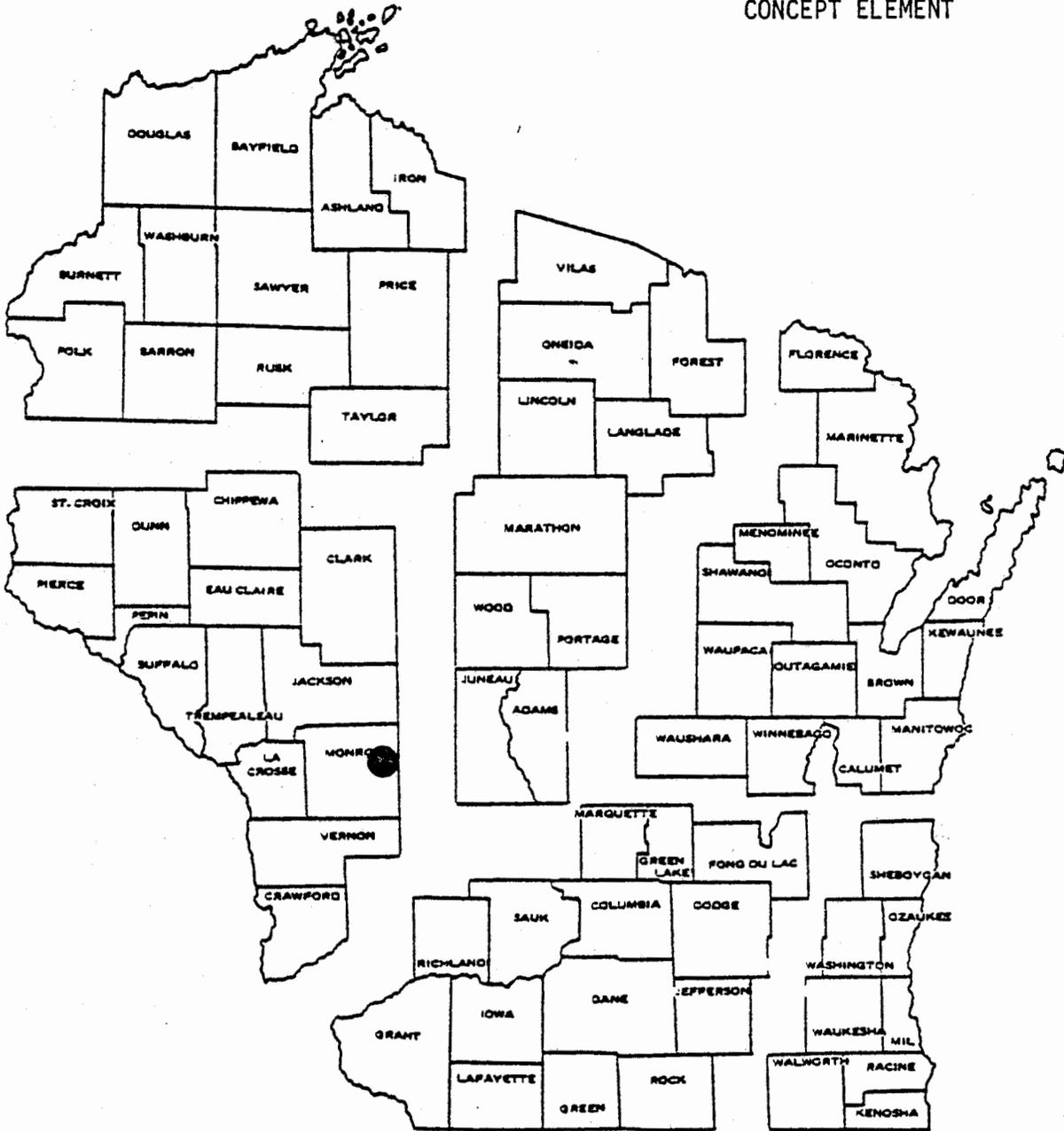


MILL BLUFF STATE PARK  
 MASTER PLAN  
 CONCEPT ELEMENT



Property Task Force

Approved by Natural Resources Board:

- Leader - Michael Ries - Planner
- John Halbrehder - Forester
- Ron Nelson - Park Superintendent
- Kenneth Wright - Area Fish Manager
- Raymond Kyro - Area Wildlife Manager

October 24, 1979  
 \_\_\_\_\_  
 Date

Submitted: March 12, 1979

Wisconsin Department of Natural Resources  
 Madison, Wisconsin



CORRESPONDENCE/MEMORANDUM

State of Wisconsin

RECEIVED

JUN 24 1994 FILE REF:

DATE: June 21, 1994  
TO: Dave Weizenicker - PR/1  
FROM: Chuck Pils - ER/4  
SUBJECT: *Chuck Pils*  
Karner blue on State Park land

BUREAU OF PARKS

On June 14, 1994 Cathy Bleser surveyed Mill Bluff State Park with Carol Richter, the park naturalist, for presence/absence of the Karner blue butterfly, which as you know is federally endangered.

A Karner blue larva was discovered at this park on that date by C. Bleser. The larva was in a lupine barrens area near a site known as the "old Duncan House". Lupine is quite common here.

Additional habitat for the Karner blue exists at this park, and C. Bleser plans to resurvey the area during July. Carol Richter will notify her when the adults are flying. Peak flight in June was missed due to the advanced phenology this year.

No immediate management is deemed necessary at this property at this time. However, your staff should be aware that any impacts to these lupine areas that may result in a "take" of the Karner blue are prohibited without a federal permit.

We are currently undertaking the process of developing a statewide Habitat Conservation Plan, which is required for any incidental take of the Karner blue. Our staff will coordinate with all affected DNR properties throughout this process. A second vehicle for "take" permits is the scientific take permit process; this covers only taking that specifically promotes recovery of the Karner blue (e.g., clearing woody encroachment, prescribed burning to promote lupine barrens, etc.). The department applies for a single scientific take permit to cover all affected DNR properties every year. C. Bleser coordinates this, and will work with your staff should they find the time to conduct appropriate management in the future

We will send you the results of second-flight surveys sometime in July or August.

Please feel free to contact Cathy Bleser at 266-8736 if you have any questions.

cc: Ron Nelson - DNR, Wildcat Mt. State Park, Hwy 33E, P.O. Box 99,  
Ontario, WI 54651  
Tom Lovejoy - WD  
Craig Thompson - WD  
Terry Valen - WD  
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MILL BLUFF STATE PARK  
MASTER PLAN

	<u>Page</u>
I. Background	1
II. Resource Capabilities	4
III. Management Problems	5
IV. Recreational Supply and Needs	6
V. Management and Development Alternatives	7
VI. Recommended Alternative	8
VII. Goal and Objectives	8
VIII. Proposed Action	8



APPENDIX

- A. Prior Board and Administrative Action
- B. List of Flora and Forest Management Report
- C. List of Wildlife and Game Management Report
- D. Acquisition Map
- E. Development Map
- F. Advisory Council Comments



## MILL BLUFF STATE PARK MASTER PLAN

### I. Background

#### A. Location and general description of the area

Mill Bluff State Park, a unit of the Ice Age National Scientific Reserve straddles the north-south boundary line between Monroe and Juneau counties (T17N and R1 and 2E) and occupies land in Sections 12 and 13, Oakdale township, Monroe County and Sections 7 and 18, Orange township, Juneau County. (See figure 1).

The contrasting topographic features of Mill Bluff State Park are its primary aesthetic aspects. Buttes and mesas that rise abruptly from a nearly flat surface are unique landscape features in this area. Contrasting colors of yellow sandstone and green vegetation add to the aesthetic value of these striking topographic features. The rock configurations themselves have been eroded by wind and water forming unusual shapes.

#### B. Regional context: population and transportation

Located approximately two miles southeast of the park is the Village of Camp Douglas, about nine miles west in the City of Tomah and about 50 miles west is the City of La Crosse. As of 1977, the property was located within a one-hour drive of 200,000 people, a four-hour drive of 9-10 million and a seven-hour drive of 13 million people. Interstate Highway 90-94 transects Mill Bluff State Park and the Ice Age Unit (See figure 2).

The property can be reached via U.S. Highway 12-16. The park's access, County Highway W, can be reached from U.S. Highway 12-16. Interstate Highway 90-94 runs parallel to U.S. Highway 12-16 in this portion of the state. Exit ramps from the Interstate System to U.S. Highway 12-16 are located 5 miles southeast of and 2 miles northwest of the park. The Interstate System is considered a major thoroughfare for vehicular traffic in the state. County Trunk Highway "W" runs north and south through the park.

The Chicago and North Western and Milwaukee Road provide freight rail service to Juneau County. Two railroad right-of-ways, the Chicago, Milwaukee and St. Paul Railroad and the Chicago, Milwaukee, St. Paul and Pacific Railroad pass through the park.

Wisconsin Rapids is the closest city having scheduled flight services. Additionally, local airports without scheduled flights include Tomah and Mauston. The Chicago, Milwaukee, St. Paul and Pacific Railroad provides passenger service to Tomah, La Crosse, and Portage. Connecting intercity buses from Tomah could also provide service to this area.

#### C. Record of property creation

Mill Bluff began as a state roadside park in 1936 when the State of Wisconsin leased 55.53 acres from the Federal Resettlement Administration. On the 12th of July, 1955, this land was sold through the Federal Secretary of Agriculture to the State of Wisconsin. Subsequent acquisition in 1963 raised the park acreage to 74.09.

Congress on October 13, 1964, authorized the establishment of the Ice Age National Scientific Reserve. Subsequent joint planning between the U. S. Department of the Interior and the State of Wisconsin produced in 1968, a tentative plan which established the boundary of this reserve. The plan was accepted by the Secretary of the Interior and the Governor of Wisconsin and publication in the Federal Register in May, 1971, officially established the Ice Age National Scientific Reserve and Mill Bluff State Park as a unit of it. (See appendix A for prior Board and administrative actions.)

#### D. History of the area

Petroglyphics (rock carvings) have been discovered on some of the bluff faces within Mill Bluff State Park. They are similar to petroglyphs found on bluffs in Roche A Cri State Park, located about 25 miles east of Mill Bluff. The carvings are believed to date back to when the Upper Mississippi Indian culture existed at least 400 years ago. During the period from 1100 AD to 1600 AD, the Upper Mississippi Indian culture thrived in the area. The carvings are shaped like bird tracks and are about 6 to 12 inches in length.

# STATE LOCATOR MAP

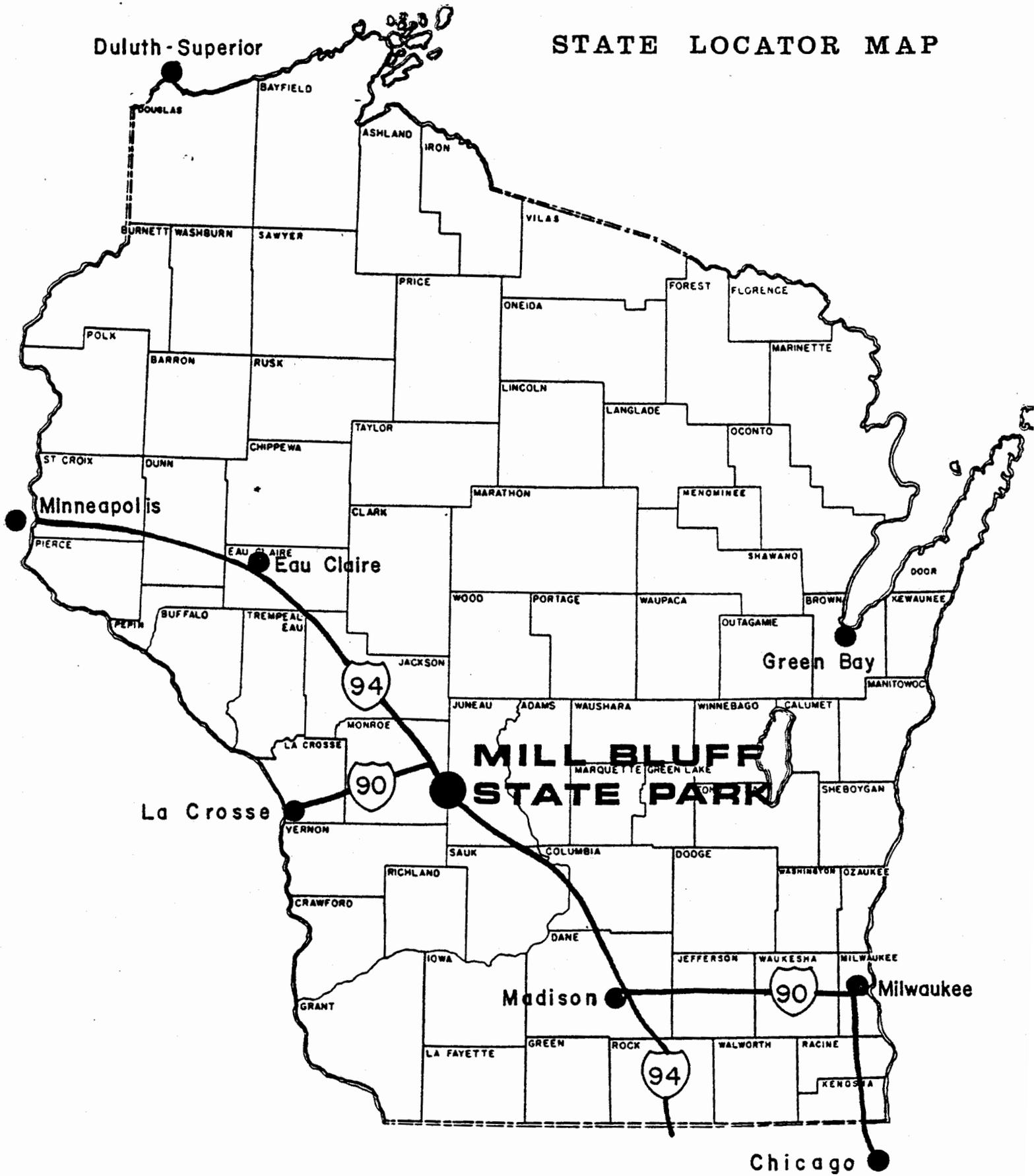
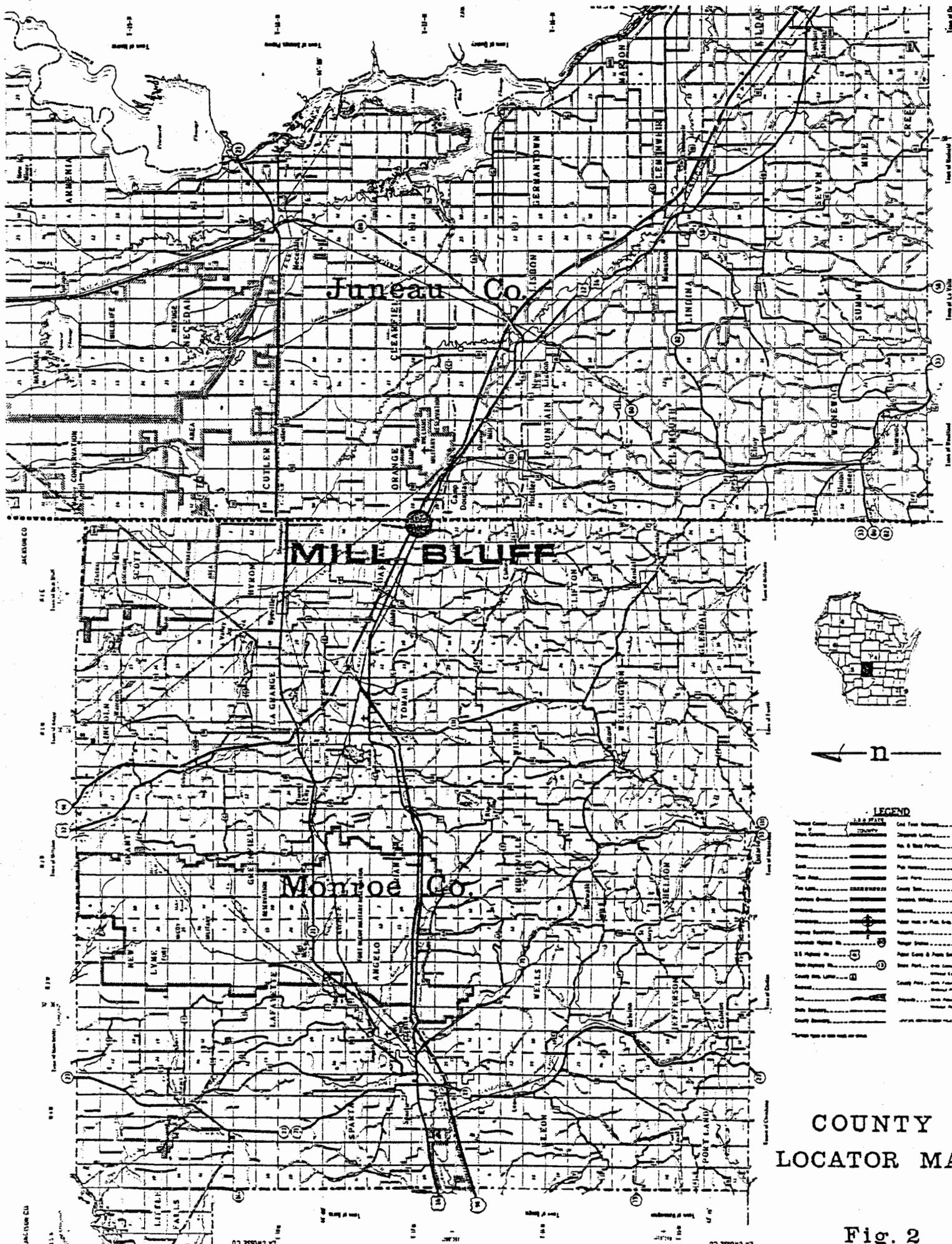


Fig. 1



COUNTY LOCATOR MAP

Fig. 2

Geological features in Mill Bluff State Park were a landmark for many of the settlers traveling west through Wisconsin and were often mentioned in their journals and diaries. The park received its name from a saw mill which once existed in close vicinity to the bluff. In November 1936, the Federal government purchased approximately 60 acres from a private owner under the Federal Resettlement Administration program. The program's purpose was aimed towards moving settlers from submarginal agricultural land in the central Wisconsin plain. During that same year, about 55 acres of the original 60 acres was leased to the Wisconsin Conservation Department (presently DNR) and was designated as a State Roadside Park.

E. Present use and management

Mill Bluff State Park attracted 80,000 visitors in 1977. Facilities offered within the park include two picnic areas (day-use areas) each with a shelter and a total of 28 picnic tables and 10 grills. A public beach is located adjacent to a man-made pond and includes 250 feet of water frontage. There are three parking lots in the park with a total of 50 parking stalls. One hiking trail has been developed which leads to the top of Mill Bluff and includes a total distance of three-tenths of a mile. Twenty-one camping units are available, all without electrical hookups. About one-half a mile of two-way roads are located within the park.

Mill Bluff is and has been from its inception, designated a State Roadside Park and managed as such. No plans of resource management other than to maintain it as a safe, usable, and pleasant park have been carried out. Management as a park included removal of hazardous trees or limbs, control of erosion and maintenance of grass in use areas. In 1966, the artificial pond which is used for swimming was deepened by a dragline operation. Water quality has always been excellent. The pond is fed by clear, hard ground water seepage.

F. Description of the area

1. Geology

Although Mill Bluff State Park is located in the driftless area of Wisconsin, many of its geologic features are a result of the Wisconsin Age of Glaciation. Outlier forms are unique geologic features prominent upon the park landscape. Some are flat-topped, some are rounded crests and not all possess cliff-sided rock structures.

The masas and buttes were formed partly because they are capped by a stratum of somewhat more resistant sandstone, and weathering tends to break the rock down into vertical fragments. They are remnants of the Dresbach Group, Upper Cambrian sandstones that are now found in the escarpment southwest of the site. Heights of the masas and buttes range from 100 to 300 feet above the sandstone plain where they originate (Martin, 1932). The masas and buttes are outliers of the limestone cap escarpment south of the park.

Although the Wisconsin glacier did not reach the Mill Bluff area, previous glaciers did and had laid down vast quantities of glacial outwash over the flat plain of central Wisconsin. During the Wisconsin advance, it plugged up the Wisconsin River at the Baraboo hills and backed up the river to form Glacial Lake Wisconsin, which inundated a considerable area of present day Adams, Juneau and adjacent counties, including the Mill Bluff area. During the inundation, the masas and buttes of the area stood as islands in the glacial lake. Erosion of the sides of the rock forms was hastened by the wave action against the buttes and masas (Black, 1974).

Some erratics (rocks or boulders out of place with surrounding features) have been found on the flanks of some of the buttes and masas at an elevation above the present day ground level. These erratics have been attributed to ice rafting boulders imbedded in icebergs which floated and lodged against the masas and buttes, and when the ice melted, the boulders remained lodged in the sides of the rock formations (Black, 1974).

2. Topography

Topography of Mill Bluff is largely an extremely flat plain having little relief with the exception of bluffs that rise abruptly from the plain. The large rounded or irregular bluffs such as Mill Bluff are considered masas, the smaller, more abrupt bluffs, such as Bee Bluff, are called buttes, and the very slender, abrupt bluffs, such as Devil's Needle, are pinnacles. Typical unglaciated topography consisting of rolling hills with a relief of about 200 feet is found south and west of the unit.

### 3. Soils

Soil data from the U.S. Soil Conservation Service is incomplete for land included within the Mill Bluff boundary. Data presently available includes descriptions of eight soil series. Excessively to well-drained soils underlain by sandstone are Boone sand and loamy sand, and Eleva silt. Sand is the substrate under poorly drained loamy sand of the Dillion and Newton soils and excessively drained Plainfield soil, the latter two soils sometimes occur on outwash plains. Very poorly drained organic soils are represented by Adrian Muck. Outcrops of dolomite or sandstone, called Steep, as well as, stony and rocky land, also occur.

### 4. Climate

The closest weather reporting station to Mill Bluff State Park is located in Sparta, Wisconsin, which is approximately 25 miles west of the site. The mean temperature for January, the coldest month, is 16.8°F. July, the hottest month, has a mean temperature of 72.4°F. Average annual snowfall amounts are about 40 inches. Prevailing winds are from the northwest in winter and from southerly directions the remainder of the year (Department of Commerce, undated).

Although the site is located in a relatively rural area with low population density, the close proximity of Interstate Highway 90-94, a major Wisconsin highway artery, which transects the park, affects the area's air quality. Nonpoint source pollution resulting from transportation emissions, including carbon monoxide, hydrocarbons, nitrogen oxides and particulates, are expected to be higher near Interstate 90-94.

### 5. Vegetation

Mill Bluff State Park is located south of the tension zone and is composed of tree species characteristic of Wisconsin's southern forests. The largest percentage of overstory vegetation consists of oaks, aspens and jack pine. Vegetative cover in Mill Bluff reflects both extremes in moisture conditions, ranging from almost arid to wet.

Areas designated as aspen, oak, jack pine, aspen-oak and aspen-oak-pine include the largest percentage of land in the park and have similar tree species components. Common trees include white oak, red oak, pin oak, bur oak, jack pine, trembling aspen and large-tooth aspen. Diameters of trees in the stands range from 5 to 11 inches for the aspen and jack pine and from 5 to 15 (plus) inches for the oak. The understory consists of a combination of saplings with a composition similar to that of the overstory and shrubs such as gray dogwood, hazel and sumac.

The conifer plantations consist of vigorous growing red and white pine that have average diameters ranging from 5 to 9 inches.

A swamp hardwoods area, consisting primarily of cottonwood, American elm, and red maple, is located in the far southwest corner of the property. Diameter of overstory trees is generally 11 to 15 inches with much of the understory consisting of similar tree species with diameters generally between 5 and 11 inches.

Upland brush areas are dominated by gray dogwood and hazel brush. The lowland brush areas consist primarily of willow and alder with some white birch and tamarack reproduction beginning in several areas.

Abandoned and active agricultural fields include cover types designated as open fields and cranberry bogs. The abandoned cranberry bogs are being invaded by various species of marsh grasses and are expected to remain wet, marsh type areas. Open fields include both active and abandoned agricultural fields. No figures are available for the percentage of land presently being cropped and the type of crops planted have not been identified.

The only uncommon plant species observed in the park was Labrador tea located in several of the bog/wet areas. No uncommon plant communities have been identified within the park (see appendix B for detailed species list).

## 6. Animal life

Inclusion of wetlands, open brush and forested areas within the property has resulted in a variety of animal populations. Most animals common in Wisconsin can be found in their appropriate habitat in the park. In addition to the common upland animals such as white-tail deer, cottontail rabbit and red and gray squirrel, the park provides wetlands habitat for muskrat, beaver, otter, mink, raccoon and others.

Game bird populations are dominated by ruffed grouse, although populations of woodcock, quail and pheasant have been observed. Waterfowl are generally observed during migrations and includes many species of ducks, some geese and whistling swans. Besides a large variety of resident songbirds within the area, several species of hawks and owls, and great blue heron are known to be residents in and near Mill Bluff. Several species of amphibians and reptiles inhabit the park. The known inhabitants include leopard frog, green frog, hognose snake, fox snake, painted turtle and snapping turtle.

No rare or endangered animal species are known to permanently inhabit the area, although some may occasionally pass through the area (See appendix C for detailed species list).

## 7. Water resources and fish

Three small ground water ponds and several drainage ditches are located within Mill Bluff State Park. A man-made 2.8 acre pond is located in T17N, R1E, section 13, town of Oakdale. The primary use of the pond is swimming and related activities. Water quality data for the pond indicated that the water is medium hard, basic and clear and has a maximum depth of 4.5 feet. The pond is subject to winterkill. Two smaller ponds, each having one acre of surface area and a maximum water depth of 9.0 feet are located just southwest of the larger pond. Water quality is similar to the larger pond and dissolved oxygen samples taken in February, 1974, and January, 1975, indicate a dissolved oxygen level ranging from 5.5 to 12 ppm. No data is available for water in the drainage ditches.

The ground water level is high in several areas of the park resulting in wetlands in the lowland areas.

## II. Resource Capabilities

### A. Soils potential

Most of the soils in the area are well drained, some to the point of being considered excessively drained. This could cause problems including severe limitations for septic tank filter fields. Crop productivity is limited due to the low available water capacity. The degree of soil limitations for recreation uses range from moderate to severe because of poor soil stability. Severe land use limitations exist for the sandstone buttes due to a combination of the extremely shallow soil and steep topography. Several areas within the park generally closely associated with the wetland vegetation have poorly drained organic soils. Land use limitations are generally severe if the area is frequently flooded.

### B. Vegetation potential

The condition of the timber is generally good with 69% of the stands healthy. The other 31% is considered in poor condition, due to unproductive low sites, disease, and insect infestations, which is a condition of stunted and overmature timber.

Any dead, dying or high-risk trees should be removed from potential development areas and existing use areas. Any cutting operations in the park will be restricted to removal for safety and aesthetics of cutting for insect and disease control. The overall management program for the park should be directed toward preserving the natural appearance without sacrificing the safety of the public.

### C. Wildlife potential

Minor wildlife management activities associated with routine forestry practices could maintain or increase populations over the next ten years. Conversely, a no cut policy could result in a lower carrying capacity for the forest wildlife species using the area.

Primary wildlife use within the park is for bird watching and other wildlife observation. This activity is expected to increase in the future. Presently hunting is not permitted within the park. This is not expected to change unless wildlife species increase in population to a level which is damaging to the flora. In such a case, it may be necessary to reduce numbers by hunting under special regulations.

D. Fisheries potential

Fish populations in the man-made pond are limited because of winterkill. No fish survey has been conducted on the pond. The DNR West Central District is currently managing one of the smaller ponds as a minnow rearing facility.

E. Recreation potential

Only those activities which would ensure preservation and protection of the Ice Age features could be permitted within the park. Intensive use zones affording opportunities for sightseeing, picnicking, hiking, and related pursuits could be permitted in areas where such activities would be compatible with the protection and preservation of the Scientific Reserve. Activities which promote a greater understanding of the Ice Age story would be encouraged.

Operation of the park and reserve could be on a year-round basis with extended hours during the period from Memorial Day to Labor Day. Visitation would be primarily day.

F. Land use potential

Lands within the park are classified as; Extensive Recreation Area (ERA), Intensive Recreational Development (IRD) and Scientific (S). The location of these areas is illustrated on the development map included in the appendix.

Intensive Recreational Development (IRD) accounts for approximately 20 acres. Ten acres are presently developed for picnic, campground, beach and trail use. The remaining 10 acres could be devoted to the construction of day-use facilities in conjunction with the Ice Age Center and 6.5 miles of trail. The Ice Age Center, contact station and shop building are located within the IRD zone although recognized as administrative land use types.

Ragged rock, located in the north section of the park, has been identified as potential scientific area by the Scientific Areas Preservation Council. Specific acreage and boundary goals have not yet been determined.

Extensive Recreation Area (ERA) encompasses approximately 1,377 acres of the total 1,406.42 acres within the park boundary. It will be managed as indicated to insure preservation of the resource and facilitate safe and enjoyable use.

III. Management Problems

A. Roads and railroads transecting property

Three highways and two railroads break the land continuity and therefore the usable size of potential development and natural areas within the park. Of particular concern is the effect C.T.H. "W" and the Interstate have on the proposed development and use of the property. The largest number of buttes and mesas are located north of the Interstate road system and therefore this area is the most logical location for construction of new park facilities. Yet, Mill Bluff, with its overlook, and the beach area are south of I 90-94 and separated by C.T.H. W. These three use areas are very important and should be retained. However, retaining these areas will create sticker sale and enforcement problems.

The potential for pedestrian-vehicular conflicts, both rail and automotive, exists because of the dissecting effect these corridors have on the property.

B. Bluff erosion

Shallow soils and steep topography make trail construction difficult on the buttes and mesas. In addition, the sandstone cliff bases and the many upper, vertical sandstone cliff faces are soft enough to invite initial carving by hikers. Minimal initial carving is currently a fact, but with heavy visitation it can be expected to increase. This could deface and defile some of the beautiful rock faces and small wind-eroded features as well as the few Indian petroglyphs located on the buttes.

C. Inholdings

Non-state owned property within the park boundary which has subdivision potential is presently being developed for rural residential and seasonal homes. This development detracts from the visual interest offered by the buttes and mesas.

The presence of the many inholdings makes identification of land ownership very difficult. Therefore, encroachment, hunting, snowmobiling and other activities which are not in keeping with the parks goal are occurring.

D. Waste disposal

Although sandy soils within the park offer excellent percolation for sewage disposal systems, the water table may present a problem.

IV. Recreational Supply and Needs

The park is in conformance with Wisconsin's 1977 Outdoor Recreation Plan. Additional need for picnicking, hiking and nature study opportunities are specifically called for in the plan, all of which will be partially accommodated by the property. The plan also identifies the need for preservation of natural areas in the state. Listed as one of the first priority action items in the plan is the acquisition and development of National Park Service lands (Wisconsin Outdoor Recreation Plan, Wisconsin DNR, 1972).

In accordance with the Policy Guidelines of the National Park Service which directs the Park Service to "protect and exhibit the best examples of our great national landscapes, riverscapes and shores and undersea environments; the processes which formed them; the life communities that grow and dwell therein; and the important landmarks of our history...", the National Park Service published a Park System Plan in 1972. The goal of the NPS plan is that the significant natural scenic and scientific heritage of the United States be represented ultimately in a completed National Park System. The NPS has established themes or categories of natural phenomenon which are used to describe the significant features within different regions of the United States. Under this plan in the Central Lowlands Region, the "works of glaciers" are identified as a significant theme, and the plan states that the "Ice Age National Scientific Reserve in Wisconsin preserves an excellent cross section of the glacial features of that state." Mill Bluff State Park is one unit of this reserve.

Approximately 142,000 acres of developed and undeveloped recreational lands exist within Monroe and Juneau Counties. A large percentage of this land is included within the Central Wisconsin Conservation Area, Necedah National Wildlife Refuge and the Peterwell-Castle Rock Flowage area. The following table provides a listing of the ownership and facilities for recreational lands in Monroe and Juneau Counties.

OUTDOOR RECREATION LAND AND FACILITIES  
IN THE VICINITY OF MILL BLUFF STATE PARK AND ICE AGE UNIT  
JUNEAU AND MONROE COUNTIES

	Devel. Recrea. Lands	Undevel. Recrea. Lands	Picnic Areas Tables	Campsites	Hunting Areas Acres
JUNEAU COUNTY					
Federal	40	89,390	3	0	89,590
State	70	232	49	90	117
County	145	15,730	140	420	15,600
City-Village-Town	43	84	84	47	35
Private	252	8,140	10	455	7,867
Quasi-Public	15	0	4	0	250
TOTAL	565	113,576	290	1,012	109,450
MONROE COUNTY					
Federal	75	18,508	0	20	18,508
State	106	2,152	59	21	1,938
County	50	4,935	20	10	4,935
City-Village-Town	131	41	139	6	0
Private	366	1,641	118	140	1,374
Quasi-Public	0	0	0	0	0
TOTAL	729	27,277	336	197	26,755
GRAND TOTAL	1,293	140,853	626	1,209	136,214

According to their respective Outdoor Recreation Plans, activity demand projected to 1990 indicates a need for additional hiking, nature study, picnicking and cross-country ski facilities in Juneau and Monroe Counties. No need was expressed for additional swimming facilities although upgrading existing natural ponds would be useful for meeting local swimming needs.

V. Management and Development Alternatives

A. Operate the park as it is presently

Although Mill Bluff will remain classified a State Roadside Park, its inclusion as a unit of the Ice Age National Scientific Reserve calls for expanded facilities to interpret the many land forms to be found on the property. The existing development including 28 picnic tables, parking for 60 cars and .3 miles of trail cannot do this job adequately.

Joint planning between the U.S. Department of the Interior and the State produced in 1968 a tentative plan which established the boundary of the reserve and of Mill Bluff as one of its units. Basically, the plan proposed enlargement of the park to 1,406.42 acres. This increase over the original 1963 acreage of 74.09 was deemed necessary to provide sufficient space for trails, interpretive and day use facilities as well as roads, parking and associated developments. The plan was accepted by the Governor and Secretary of the Interior in May, 1971. Therefore, to operate the park as it is presently would not be in accord with this plan.

B. Expand, improve and manage the park for intensive recreational purposes

A second alternative for the property could be to develop a segment for intensive recreational use. Under this plan, a man-made lake and swimming beach would be constructed north of the Interstate and east of Camel Bluff. The lake would give focus to the park and the allure of water would augment its use. Additional facilities would include, picnic areas, family campground, group camp, hiking and interpretive trails, an Ice Age Interpretive Center and extensive natural area. The plan could best be implemented if C.T.H. "W" were abandoned and the existing park area between I 90-94 and U.S. Highway 12-16 were utilized for the park entrance, visitor contact and service area. The positive aspects of this plan are that by obliterating C.T.H. "W" and constructing a new entrance road, the land presently dissected by the road would no longer be separated and the availability of day-use and natural areas within the park could be increased.

Although there are a number of good aspects in the alternative, there are also a number of drawbacks. The first and greatest is the impact intensive recreational development could have on the Ice Age Reserve of which Mill Bluff is a unit. The primary reason the park was expanded in size was to protect and preserve the outstanding geological features in the area. Secondly, the creation of an artificial lake is not in keeping with the park and unit's mission. Without the lake and beach as the park's focus point and mainstay, it is questionable that additional developed family campground and a group camp would be needed. This is especially important in light of the proximity and availability of public and private campground establishments in the area. Finally, the user impact on the fragile geological and archeological features created by intensive development and high annual visitation could destroy the very characteristic which makes the property unique.

C. Expand, improve and manage the park for preservation and interpretation purposes.

The third alternative places emphasis on the goals of the Ice Age Scientific Reserve and the recreational needs of Wisconsin residents. Major development could include a park visitor contact station, Ice Age Interpretive Center and service area. The center building would be a cooperative effort between the State and Federal governments and include the park's administrative office as well as providing assembly and displays for the nature interpretive program. All buildings could be grouped to share common utilities. Additional development would include roadways, picnic area and parking lot as well as interpretive and hiking trails. The existing day-use area at the base of Mill Bluff could be retained to provide parking and picnic facilities for those individuals who use the overlook. This would eliminate the need to walk along C.T.H. "W" from the park's main area, north of the Interstate, to the Mill Bluff mesa south of the Interstate. Similarly, the beach area could be retained to meet local need and the park visitor's desire for swimming facilities. As with the Mill Bluff use area, parking should be retained in the beach area to eliminate the potential vehicular-pedestrian conflict created by walking along C.T.H. "W".

It must be noted that if C.T.H. W could eventually be abandoned, these potential vehicular-pedestrian conflicts would be reduced. Furthermore, the park would have greater areas of uninterrupted land for extensive uses such as hiking and cross-country skiing. Landscape quality and associated plant and animal habitat could also be controlled better.

Additional family and group camping would not be provided as the large number of public and private campgrounds in the area could adequately meet these demands. Furthermore, the existing 21-unit campground could be phased out if use figures, operational cost and policy so dictates. Primitive campsites could be provided if an Ice Age bike trail or state trail is developed in the future. An example would include the state's acquisition and development of the Wyeville to Reedsburg line which runs adjacent to and within the park's north boundary.

#### VI. Recommended Alternative

The park should be expanded, improved and managed to preserve and enhance the property's landscape quality and particularly those features that caused it to be selected as one of the important units of the Ice Age National Scientific Reserve. Development should include a park visitor-interpretive center, service area and day-use facilities including picnic area, beach, hiking and cross-country skiing trails, interpretive trails and support facilities such as access roads, parking lots, toilets and water fountains (See section V.C. for further detail).

#### VII. Goal and Objectives

##### A. Goal

To make available a public roadside park which is instructional in nature, particularly as regards to the ice age phenomena and provide facilities in such a manner as to protect, preserve and enhance the natural assets of the area.

##### B. Objectives

1. To provide recreational facilities which will accommodate 125,000 annual visits for such activities as picnicking, swimming, hiking, nature study, cross-country skiing, snowshoeing and general study of geological features.
2. To manage, maintain and enhance the safety, aesthetic quality and game habitat of the park's landscape through selective vegetative management.
3. To provide for the handicapped within practical limits.
4. To prohibit such nonconforming uses as snowmobiles, off-road vehicles, horseback riding and as yet other unforeseen uses which are not in keeping with the park's goal.

#### VIII. Proposed Action

##### A. Acquisition

The present park acreage goal is 1,278 acres of which 1,129.55 acres are state-owned, however, 111.42 acres of this state-owned land are outside the park boundary. 260 acres are in private ownership and remain to be acquired. See Figure 3 - Land Acquisition Map in the Appendix.

The proposed park acreage goal is 1,544.96 acres which includes 415.41 acres remaining to be purchased and 111.42 acres presently state-owned outside of the park boundary. The 111.42 acres is located between Ragged Rock and the existing north park boundary line.

The Mill Bluff Ice Age Unit has an acreage goal of 875 acres, the boundary of which lies totally within the park boundary. 615 acres of land are presently state-owned within the unit boundary with 277 acres yet to be purchased.

Acquisition at Mill Bluff is presently ongoing and land will continue to be acquired as it becomes available. Those lands designated by the National Park Service to be part of the Ice Age National Scientific Reserve will be first priority purchases. In addition, lands which have subdivision potential, especially those near the mesas and buttes, must be purchased to guard against further rural residential development. All acquisition of land for inclusion in the reserve and park will be financed through applications for Land and Water Conservation Fund (LAWCON). LAWCON grant-in-aids would be based upon the regular LAWCON procedure under which 50% of the acquisition would be borne by the State of Wisconsin through the state's Outdoor Recreation Act Program (ORAP) and the remaining 50% would be derived from the state's apportionment of the LAWCON fund.

The total estimated land acquisition cost for Mill Bluff is \$440,971. Of this, \$238,971 have already been spent and the remaining acquisition cost is estimated at \$202,000.00. Total relocation costs for the Mill Bluff Unit are estimated at \$20,000 for the four resident landowners.

## B. Development

In accord with the Ice Age National Scientific Reserve goal, development within the park will emphasize preservation and interpretation with limited active recreational facilities provided. Major development will consist of an interpretive-visitor center located north of the Interstate Highway and east of County Highway "W". Contained within the building will be various interpretive displays and exhibits pertaining to Wisconsin's glacial history and the unique landscape of the Mill Bluff area. An auditorium for presentations, office facilities for interpretive and park administrative personnel and toilet facilities will be included within the interpretive-visitor center. Parking facilities adjacent to the center would be provided for 30 cars and 4 buses. The parking area will be paved with bituminous concrete. See Figure 4, Development Map in the Appendix.

In conjunction with the interpretive-visitor center will be a 10-15 acre area developed for picnicking and related day-use activities. A shop-storage building will be located in the vicinity of this complex. All buildings will share common utilities. A contact station for sticker sales and information will also be located on the entrance road leading to the interpretive-visitor center. All buildings will share common utilities. Sanitary wastes generated by the facilities will be treated by a common septic tank-soil absorption system if possible based on engineering studies.

Landscaping for architectural accentuation, shade, and screening will be performed to maximize aesthetic appeal. Development of several miles of interpretive hiking trails winding throughout the property will link points of interest located within the park. One trail will lead to the top of Long Bluff where an interpretive overlook is proposed. Consideration to pedestrian separation from rail and vehicular corridors will be given to eliminate possible conflicts. In addition, a combination of design techniques and user education will be employed to minimize user impact on geological and archaeological features.

The existing day-use area at the base of Mill Bluff will be retained and upgraded to provide parking and picnicking facilities for people interested in using the overlook. New pit toilets and well will be provided. Similarly, the beach area will be retained to meet local and visitor needs for swimming and picnicking facilities. New pit toilets and well will be provided. The existing campground will be retained for the present with future disposition based on use, operational costs and impact on the Ice Age mission. Park boundary fencing and signing will be done to eliminate encroachment, hunting and other nonconforming uses. Surveying will be done as needed to establish boundary lines.

Development costs will be apportioned to the Wisconsin DNR, the National Park Service and the Heritage Conservation and Recreation Service (HCRS), formerly the Bureau of Outdoor Recreation. Twenty-five percent (25%) of the project cost will be paid by Wisconsin through its ORAP program. Twenty-five percent (25%) will be paid by the National Park Service with appropriated construction funds if available, and the remaining 50% of the project cost will be derived from the state's apportioned share of the LAWCON fund administered by the HCRS. However, the maximum amount of development costs to be paid by the National Park Service could not exceed \$425,000 for the Ice Age in total and any costs in excess of that amount will be borne by the state.

The development schedule for the park and Ice Age Unit is divided into two stages. The first phase includes land acquisition and development necessary to adequately interpret the Ice Age Story. The second includes redevelopment of existing use areas.

### 1. Phase I - \$313,500

- Interpretation-visitor center
- Entrance road, contact station loop and parking
- Contact station building (12' X 16') or part of the Ice Age Building
- Exhibits
- 6.5 miles of trail
- Site preparation and landscaping
- Entrance sign
- Fencing

2. Phase II - \$250,000

Service building (40 X 75) and apron  
East use area development  
4 unit pit toilet  
Replace well and hand pump  
Remove office building

West use area development  
8 unit pit toilet  
Replace well and hand pump  
Renovate or remove 21 unit campground including pit toilets and well  
Dredge east and west ends of pond  
Site preparation and landscaping

Total development cost including 15% for engineering and contingency is estimated to be \$563,500.

The combined proposed acquisition and development cost is estimated to be \$765,500.

C. Management

1. Facilities management

As set forth in the Ice Age Act, the IANSR will be managed for the protection, preservation and interpretation of the nationally significant geologic features which are evidence of the Wisconsin stage of the continental glaciation. Under terms of the agreement between the Secretary of the Interior and the State of Wisconsin, the Wisconsin DNR will have overall responsibility for the administration and management of the park and reserve. The actual operation and maintenance will be carried out by DNR employees, however, the National Park Service will conduct biennial reviews of the administration and management of the reserve.

Although Mill Bluff is a unit of the IANSR it is subject to the normal requirements of Wisconsin law with respect to such matters as state or local taxes, licensing and wildlife management. As a unit of the Wisconsin State Park System, Mill Bluff will be developed and managed under the provisions of Chapter 27, Laws of Wisconsin, specifically Section 27.01, which governs state parks. The property will be managed under the provisions of Wisconsin Administrative Code 45 which contains the rules of the Wisconsin DNR pertaining to the conduct of visitors in state parks, state forests and other properties under the jurisdiction of the DNR.

In addition to the present park staff, a permanent park superintendent and seasonal naturalist will be needed. The naturalist will present programs and conduct hikes focused upon the overall glacial story and features of the property. Routine law enforcement duties will be handled by park personnel with support available from local DNR wardens and from the county sheriff's officers. A pickup truck, tractor with mower, hand mowers, chainsaw and other maintenance equipment will be needed to maintain the property. A radio system will also be needed to provide communications with the Wildcat Mountain work unit, DNR wardens and various law enforcement offices.

The actual operating cost for Mill Bluff was \$14,814 in fiscal year 1976-77. The projected operating costs would be approximately \$18,434 for 1978-79. Upon completion of the Ice Age and added park facilities, the operations budget is expected to increase due to the additional services offered. The annual cost for management, protection, maintenance and rehabilitation of the park and reserve will be divided equally between the National Park Service and the DNR. The NPS will utilize funds appropriated specifically for management of the reserve and the DNR will use ORAP monies.

Under the terms of the agreement between the Secretary of the Interior and the State of Wisconsin, individual units of the IANSR are subject to Wisconsin park user fees. Wisconsin presently charges user fees for access to its state parks in the form of a vehicle sticker. Under Chapter 27 of the Wisconsin State Statutes, money collected from admission fees is applied toward operation and maintenance costs of Wisconsin's park and forest recreation program.

Under the terms of the agreement with NPS, Wisconsin will honor the "Golden Eagle" and the "Golden Age Passports" in the Ice Age Units. The "Golden Eagle Passport" is an annual permit available from the National Park Service for a fee of ten dollars, permits admission into all national parks, monuments, recreation areas, seashores, historical and memorial parks administered by the NPS. The "Golden Age Passport"

provides the same privileges and is available free of charge to any citizen 62 years of age or older. Currently, the National Park Service passports are being honored at the Kettle Moraine, Devils Lake, Mill Bluff and Interstate State Park Units.

## 2. Vegetative management

Vegetative management techniques will be used to maintain and enhance the safety, aesthetic quality and wildlife habitat of the park. Pathological tree removal will occur to insure a healthy timber stand. Intensive recreation areas will be maintained to appear as natural as possible so as to harmonize with the rest of the park landscape.

Edge, which is the area where forest cover meets open land and is usually composed of shrub cover, will be maintained. Edge is highly productive in terms of flora and fauna species and number. It provides the amenity of shade to the park visitor yet gives them the visual pleasures of overlook.

Some open areas of the park will be planted with native prairie grasses and forbs. This will reduce maintenance costs and add visual diversity as well as provide a diversified base for nature interpretation programs in the park. The prairie fire protection mowing strips will provide trails for walking and hiking pleasure.

Plantings will be of species native to the area. Trees and shrubs will be placed in a random fashion to avoid the formal look of plantation planting. This will maximize the natural appearance of the area and provide spaces of intriguing and aesthetically pleasing shape and size.

## 3. Wildlife management

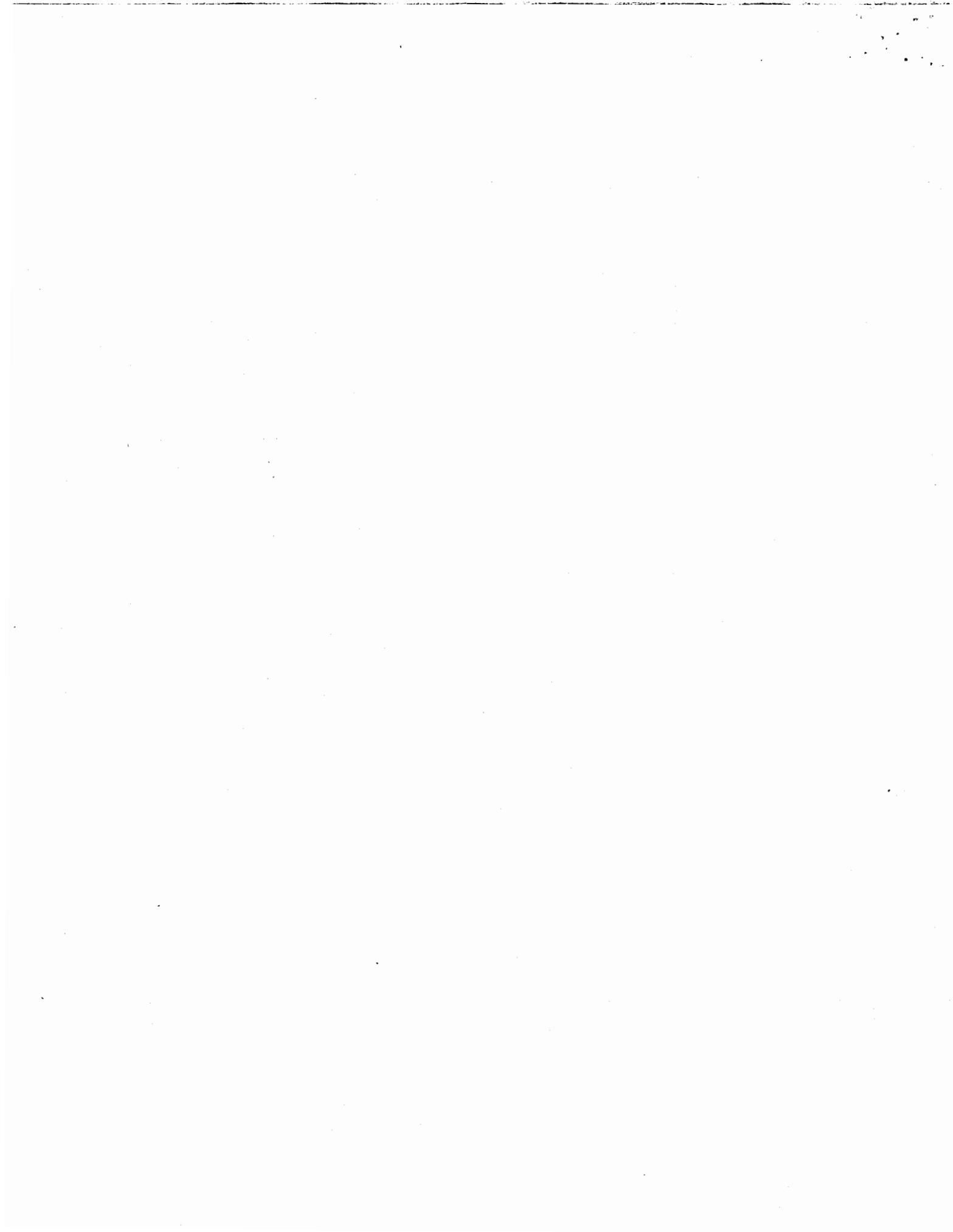
Although there are no formal wildlife management programs for habitat manipulation within the property, a number of activities should be employed which will be beneficial for wildlife. Many of these are associated with routine forestry practices and include; encouraging greater aspen reproduction on desirable sites, maintaining wetlands, allowing vegetative succession where the climax type is desirable, timber removal along open field borders to encourage brushy edge and maintain high water levels on cranberry marsh ditches to encourage fur bearer use and discourage brush development on bog areas. The benefits to be derived from this program include greater wildlife numbers and diversity for nature observation and study.

Presently, hunting is not allowed and will not be permitted unless it becomes necessary to reduce numbers due to excessive vegetative damage.



**APPENDIX A**

**Prior Board and Administrative Action**



~~It was moved by Commissioner Stouffer that approval be given to the request of Lincoln County for withdrawal of 20 descriptions of county forest crop land in Sections 27, 28, and 34, Township 34 N., Range 4 E., and that the State be reimbursed as provided for by Section 28.12 (4) of the statutes.~~

~~The motion was seconded by Commissioner Rahr. When put to a vote, motion was carried unanimously.~~

10. Mill Bluff and Castle Mound Roadside State Parks. (Page 12, Minutes of Mar. 8, 1956)

Chairman Seyberth stated that the Commission had been circularized and had given consideration to a more positive identification of the two areas that have recently been conveyed to the state from the Federal government and which are known as Mill Bluff and Castle Mound roadside state parks. He further stated that it was the recommendation of the Department that these two properties be added officially to the list of state parks; that they be administered under the provisions of Chapter 27 of the Statutes; that the land records of the Department be amended accordingly; and that they be officially named in accord with the authority vested in the Commission under the provisions of 27.01 (h) as follows: (1) Mill Bluff Roadside Park and (2) Castle Mound Roadside Park.

It was moved by Commissioner Stouffer that approval be given to the recommendation of the Department.

The motion was seconded by Commissioner MacArthur. When put to a vote, motion was carried unanimously.

11. 1956 program of road work for state forests and parks.

~~Mr. Harrington, Supt. of Forests and Parks, explained that each year the Department brings to the Commission the program for improvement of state park and forest roads. The present work would be done at Pattison and Wyalusing Parks and in the Northern Highland and American Legion forest areas, taking in parking areas as well as access roads. No new work is involved, only betterments that must be done periodically. Mr. Harrington further explained that there is sufficient money in the road fund for this purpose and recommended that the improvements as listed, about which the Commission has been circularized, be approved.~~

~~It was moved by Commissioner Stouffer that the 1956 program of road work for state forests and parks be approved.~~

~~The motion was seconded by Commissioner Rahr. When put to a vote, motion was carried unanimously.~~

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES  
Madison, Wisconsin

ITEM RECOMMENDED FOR NATURAL RESOURCES BOARD AGENDA

TO THE SECRETARY:

Date May 1, 1974

FROM: D. L. Weizenicker

SUBJECT: Approval of preliminary master plan and establishment of acreage goals for National Scientific Ice Age Reserve

1. To be presented at May Board meeting by D. L. Weizenicker

2. Appearances requested by the public:

Name	Representing whom?
<u>Robert Chandler</u>	<u>National Park Service</u>

3. Reference materials to be used:

Memorandums; master plan

JUN 16 1974

4. Summary: Board approval is requested of the preliminary master plan, containing a favorable environmental impact statement, and the establishment of acreage goals for National Scientific Ice Age Reserve in Wisconsin.

National Scientific Ice Age Reserve was officially established by Federal action, with approval of Governor Lucey, by publication of unit boundaries in the Federal Register on 29, 1971.

Final master plan, environmental impact statement, public hearings and review will be complete 1975 or early 1976.

5. Recommendation: That the Natural Resources Board approve the preliminary master plan, contingent upon a favorable environmental impact statement. It is also requested that preliminary acreage goals for the National Scientific Ice Age Reserve in Wisconsin be approved as listed, for addition to the State Parks System under Chapter 27, Wisconsin Statutes.

APPROVED:

S. W. Welsh 5/17/74  
Mr. Welsh Administrator Date

DM  
Mr. Beale Administrator Date

B  
Secretary L. P. Voigt Date

Signed:

D. L. Weizenicker  
D. L. Weizenicker, Assistant Director  
Bureau of Parks and Recreation

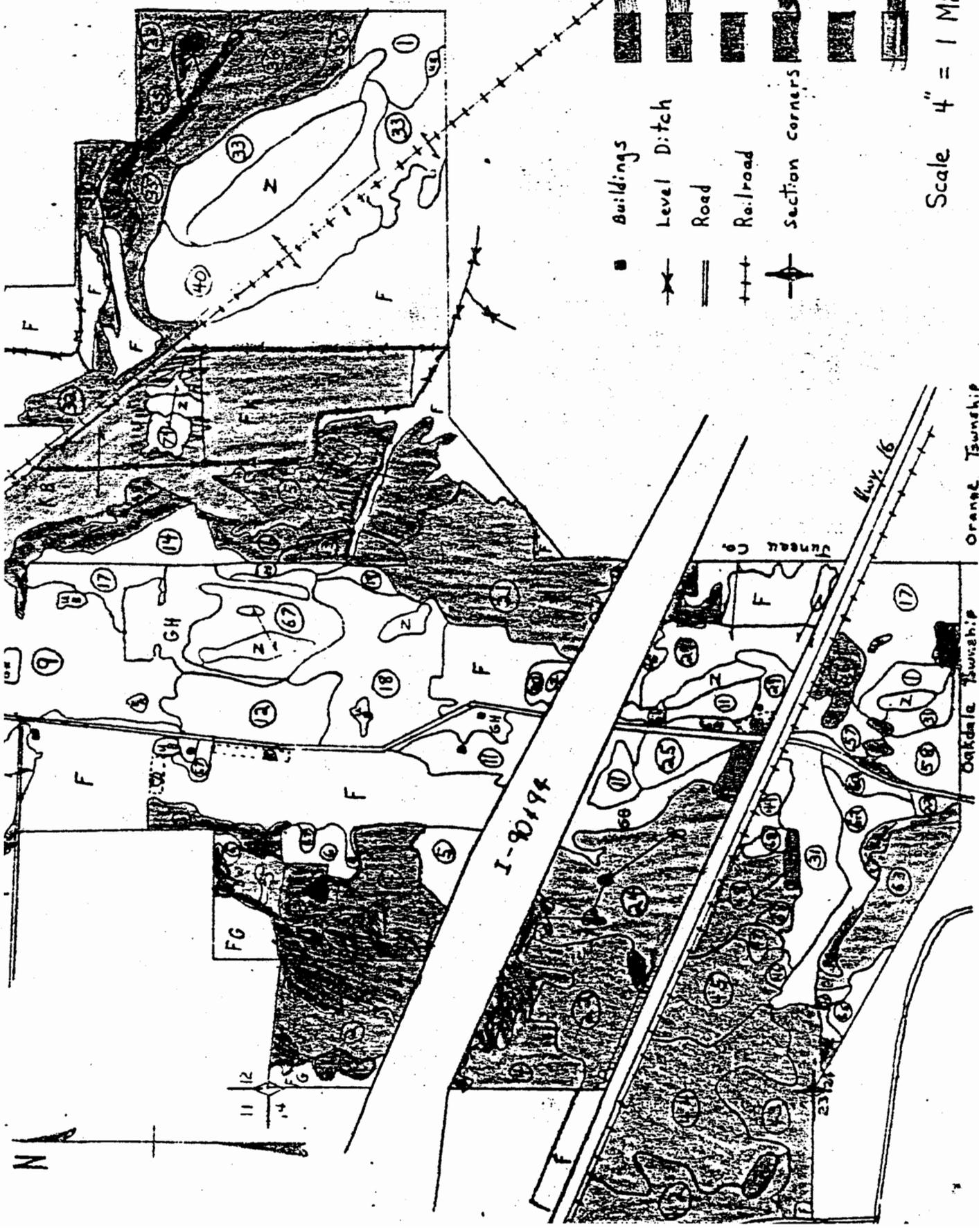
cc: Miss Korn  
E. J. Faber  
D. W. Konkol

5/17/74

APPENDIX B

List of Flora and Forest Management Report





- Buildings
- +— Level Ditch
- == Road
- ++ Railroad
- ⊕ section corners
- Type 1 Basin seasonally flooded
- Type 2 Inland Fresh Meadow
- Type 5 Inland Open Fresh H<sub>2</sub>O
- Type 6 Shrub Swamps
- Type 7 Wooded Swamps
- Type 8 Bog

Scale 4" = 1 Mile

Orange Township

Oakdale Township

I-90194

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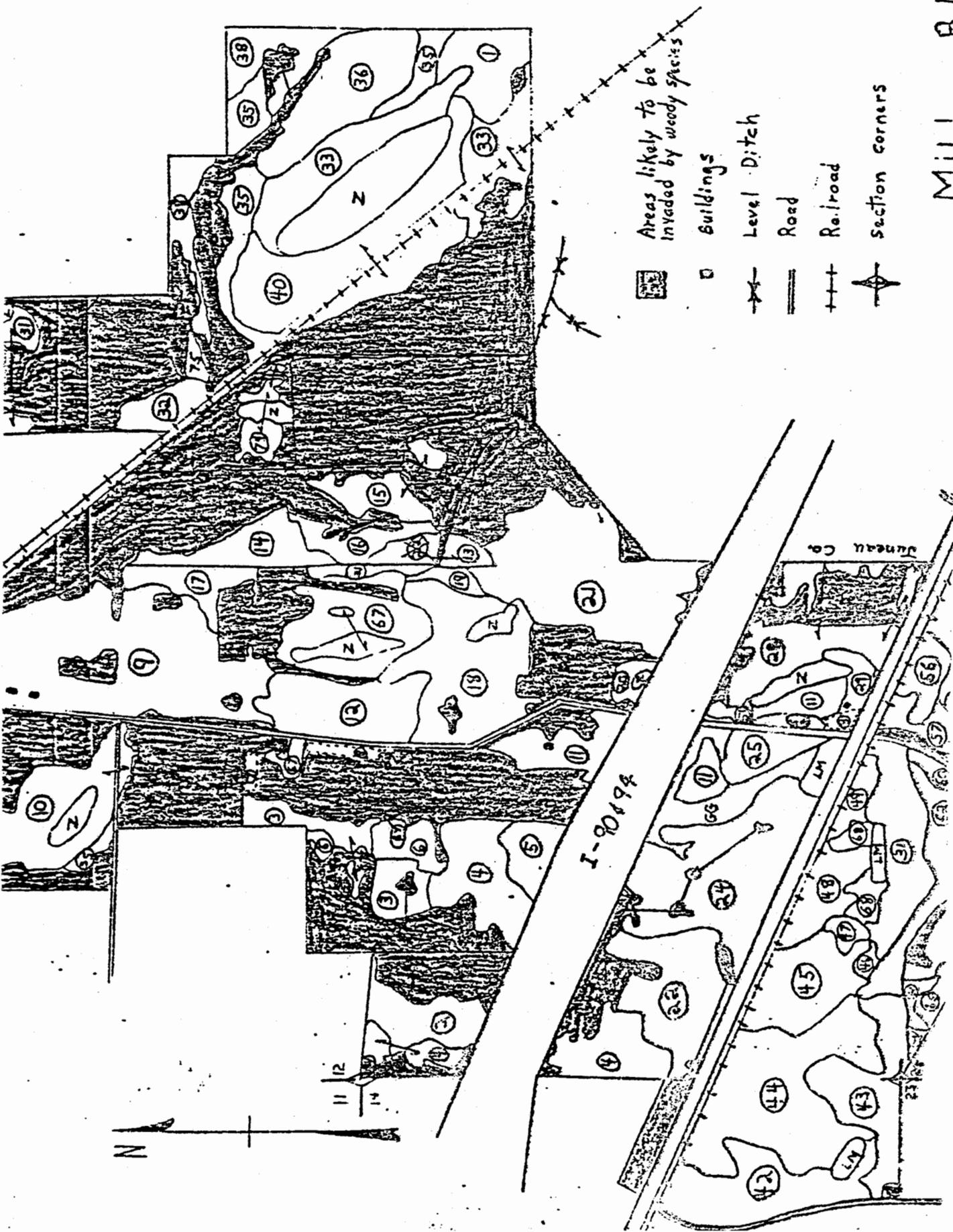
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- Areas likely to be invaded by woody species
- Buildings
- Level Ditch
- Road
- Railroad
- section corners

MILL BLUFF

## MILL BLUFF

## Cover Type Descriptions

Stand Number	Type	Acres	Stand Condition
1	A 5-11"	21	Merchantable, vigorous young stand.
2	A 5-11 <sup>0</sup> /LB	13	Poor, scattered, diseased aspen & elm over alder & marsh gr. wet site.
3	(A) BW 5-11'	17	Young, poor vigor stand on low site. Some aspen reproduction.
4	A 5-11"	36	Merchantable; mature & young timber diseased growing on low wet site.
5	PJ 5-9"	6	Merchantable; fair quality healthy but wolfy.
6	A 1-5"	5	Sapling size; vigorous growing natural reproduction on a productive site. (Good wildlife habitat.)
7	PW 5-9"	1	Plantation; merchantable, should be thinned & pruned, Growing on good site. Vigorous but had weevil damage in past.
8	PR 5-9"	4	Plantation; merchantable should be thinned. Vigorous & growing on good site.
9	(PJ), OX $\frac{5-9''}{1-5'}$	65	Merchantable, contains some overmature PJ, but mostly healthy pole size and understory of PJ reproduction need to be released from overtopping scrub oak.
10	O $\frac{11-15^0}{5-11''}$	25	Merchantable, contains some over mature PJ, but vigorous healthy stand on good site.
11	O $\frac{11-15'}{5-11'}$	58	Merchantable, mature should be cut, healthy, on a productive site.
12	(PJ) OX $\frac{5-9''}{0-5'}$	28	Merchantable, mature PJ with natural reproduction on good site. Release PJ from OX.
13	PJ 5-9"	9	Merchantable, maturing timber, good condition on low site. Being cut at present.
14	$\frac{(OX) 5-11''}{PJ 1-5'}$	15	Non-merchantable, maturing oak over natural PJ reproduction on productive site; release pine.
15	BW $\frac{5-9'}{1-5'}$	11	Non-merchantable offsite birch and elm, poor vigor on wet site with natural reproduction understory.

Stand Number	Type	Acres	Stand Condition
16	(T) PJ $\frac{5-9''}{1-5'}$	7	Merchantable, young timber, healthy & growing on wet site.
17	(MR), OX 5-11"	7	Merchantable, young timber on productive site.
18	(OX) PJ $\frac{5-11'}{0-5}$	37	Non-merchantable, off site scrub oak, some PJ reproduction present. Good site for pine convert.
19	(O) PJ $\frac{11-15''}{5-11''}$	3	Merchantable oak maturing, good condition on productive site.
20	(PJ) O 5-9"	4	Merchantable fair condition on marginal site. Hold rock outcrop buffer.
21	MR 5-11"	49	Merchantable young stand, fair vigor on marginal site.
22	(SH), A $\frac{11-15'+}{5-11'}$	24	Merchantable, maturing timber on productive low site, good condition.
24	(A), BW $\frac{5-11'}{0-5'}$	44	Poor merchantability disease evident, growing on low non-productive site.
25	O $\frac{11-15''}{5-11'}$	6	Fair merchantability, healthy on dry site. Hold as long as possible for campground cover.
28	O $\frac{11-15''+}{5-11''}$	15	Merchantable mature timber on productive site, healthy. Hold as long as possible for park buffer.
29	PR-W $\frac{9-15'+}{5-9'}$	5	Merchantable maturing timber on productive site. Healthy; hold as long as possible for park headquarters area.
31	(OX), PJ 5-11"	30	Fair merchantability, young healthy on fair site, best site for pine; scattered PJ reproduction.
32	SH 5-11"	7	Fair merchantability, young healthy stand on low site.
35	A 5-11"	22	Merchantable, overmature & diseased timber on wet site. (Being cut.)
36	BW 5-11"	27	Merchantable, young stand, good condition on productive low site.
38	A 5-11'	20	Marginal merchantability, young & fair condition on low site.
40	O 11-15"	27	Merchantable and overmature stand on fair site. Natural pine reproduction coming in converting to pine.

Stand Number	Type	Acres	Stand Condition
41	OX 1-5"	2	Non-merchantable reproduction on good site. Good wildlife habitat.
42	MR $\frac{5-11''}{1-5'}$	21	Merchantable young stand good quality, on productive low site.
43	(MR), A $\frac{5-11''}{1-5'}$	23	Merchantable young stand. Fair quality on wet site, has springs.
44	SH $\frac{11-15'}{5-11''}$	43	Merchantable young stand with some mature timber that should be cut, fair to poor quality, low site.
45	SH $\frac{11-15''}{5-11''}$	19	Merchantable mature timber, good quality on productive low wet site.
46	(PJ) MR $\frac{9-15'}{5-9'}$	1	Merchantable mature timber, good quality, good site.
47	PJ 5-9"	3	Merchantable mature stagnating timber should be cut, on low poor site for pine.
48	(MR) PJ $\frac{5-11''}{1-5'}$	11	Merchantable, poor quality on low marshy non-productive site.
49	PJ $\frac{5-9''}{1-5''}$	4	Merchantable overmature timber, good productive site.
51	(PJ) O 5-9"	2	Merchantable mature timber of good quality on good productive site. Hold as rock buffer.
52	O 5-11"	2	Merchantable, young timber of good quality on productive site.
56	(MR), A 5-11"	7	Merchantable, young vigorous stand, good condition on low productive site.
57	(O), A $\frac{5-11''}{1-5''}$	5	Fair merchantability, young stand on productive site with good natural reproduction.
58	$\frac{PW 11-15'+}{(FJ), A 5-9''}$	11	Good merchantable mature stand, in good condition on a highly productive site.
60	PR 5-9"	5	Marginal merchantability, young vigorous stand on good site.
62	(OX) PJ $\frac{5-9''}{1-5''}$	14	Non-merchantable, young timber, good condition on good pine site. Pine should be released from OX.
63	PJ 5-9'	23	Merchantable maturing stagnate and diseased timber on poor wet site.
64	(A) BW 1-5"	2	Small pocket of natural reproduction on poor low site, good wildlife habitat.

Stand Number	Type	Acres	Stand Condition
65	PJ 5-9'	3	Marginal merchantability, young timber on fairly good site with rock outcropping.
67	OX 5-9"	27	Small stands of marginal merchantability on fair sites that should be converted to pine.
68	PJ 1-5"	5	Natural reproduction on brushy wet low productive site.
74	(A), O 5-11"	5	Merchantable, young stand on marginal site. Fair condition.
75	BW 0-1"	2	Natural reproduction on non-productive wet site, good wild life habitat.
	UB	6	Mostly dogwood and hazel brush.
	Z	43	Rock outcropping, most of which have stunted red & white pine growing on top.
	FG	12	Abandoned grass & weed farm fields.
	FK	41	Abandoned cranberry beds, wet site.
	F	224	Farm field-Hay?
	GG	12	Campground area.
	GH	21	Abandoned farm field growing up to weeds & brush.
	LBW	14	Low wet sites with diamond willow.
	LBA	98	Low wet sites with alder some PJ and T, & BW reproduction coming in.
	KFG	15	Wet marsh grass grazed, scattered brush & trees.
	KG	6	Wet marsh grass, scattered brush.
	KB	71	Wet bog, marsh grass, Labrador tea, brush, etc.
	LM	8	Small dug out ponds.
	Total -	1,446	

Table 4. Type I - Plant species found

Billy spp.\*  
Birch\*  
Red maple\*  
White oak  
Red oak  
Fog alder  
Red osier dogwood\*  
Elm\*  
Sassafras\*  
Box elder  
Hazelnut\*  
Cottonwood  
Sumac  
White birch  
Yellow birch  
Black ash  
Large toothed aspen  
Trembling aspen  
Elderberry\*  
Black cherry\*  
Pin cherry\*  
Rosa sp.\*

Grasses  
Reed canary\*  
Blue joint\*  
Bromus sp.\*  
Quack  
Glyceria sp.\*

Plants  
Smartweed\*  
Jewelweed\*  
Boneset  
Snakeroot  
Thistle\*  
Chickweed  
Common plantain\*  
Curled dock\*  
Water dock  
Blue vervain\*  
Giant ragweed\*  
Chicory  
Cow parsnip  
Wild mint\*  
Slender nettle  
Stinging nettle  
Wood sorrel\*  
Purslane  
Bugleweed  
Ground ivy  
Viola\*  
Burdock  
Rubus spp.\*

Type II - Plant species found

Carex spp.\*  
Cow parsnip  
Angelica  
Wild carrot\*  
Ground ivy  
Water dock  
Curled dock\*  
Thistle\*  
Tall meadow rue  
Stinging nettle  
Slender nettle  
Wild sunflower\*  
Swamp milkweed  
Common milkweed  
Goldenrod  
Bur marigold\*  
Bidens spp.\*  
Cyperus spp.\*  
Wild cucumber  
Joe-pye weed  
Boneset  
Branched coneflower  
Bedstraw  
Aster spp.

Water hemlock  
Water hemlock (bulb bearing)  
Daisy fleabane  
Cup plant  
Water whorlhound  
Bugle weed  
Giant ragweed\*  
Cowvetch\*  
Sneezeweed  
New England aster  
Blue vervain\*  
Strawberry\*  
Polygonum sp.\*  
Smartweed\*  
Common plantain  
Wild mint\*  
Scirpus sp.\*  
Wild lettuce  
Jewelweed\*  
Snakeroot  
Gooseberry\*  
Rubus sp.\*  
Solomon's seal  
3-way sedge\*

Grasses  
Quack  
Bromus sp.\*  
Reed canary\*  
Glyceria sp.\*  
Panicum sp.

Table 4 - contd. Type III - Plant species found

Carex spp.\*  
Cyperus sp.\*  
Spikerush\*  
Purslane\*  
Cattail\*  
Bonaset  
Blue vervain\*  
Iris sp.\*  
Sweet flag\*  
Water dock  
Curled dock\*  
Bur marigold\*  
Water whorlhound  
Mosses  
Lemma sp.\*  
Arrowhead\*  
Sagittaria sp.\*  
Wild celery  
Coontail\*  
Bladderwort\*  
Scirpus sp.\*  
Water hemlock  
Smartweed\*

Grasses  
Reed canary\*  
Glyceria sp.\*

Type V - Plant species found

Emergents  
Water lily\*  
Spine rush\*  
Duckweed\*  
Carex sp.  
Cattail\*  
Sweet flag\*  
Arrowhead\*  
Sagittaria sp.  
Scirpus sp.\*  
Water hemlock

Submergents  
Potamogeton spp.  
Coontail\*  
Ranunculus sp.  
Bladderwort\*  
Elodea\*  
Algae\*

Grasses (shore)  
Reed canary\*  
Glyceria sp.\*

Type VI - Plant species found

Salix sp.\*  
Tag alder  
Red osier dogwood\*  
Stink cabbage  
Carex sp.\*  
Cattail\*  
Water dock

Grasses  
Reed canary\*

Table 5 -

Type I - Plant species listed, utilized by wildlife for food and cover

Waterfowl - mainly wood duck

Marsh birds, upland game birds and song birds - Ruffed grouse, woodcock, quail, purple finch, pheasant, towhee, pine grosbeak, red bellied woodpecker, common red poll, blackbirds, black-capped chickadee, yellow bellied sapsucker, pine siskin, fox sparrow, tree sparrow, gold finch, sharp-tailed grouse, band-tailed pigeon, clapper rail, crow, grackle, bluejay, horned lark, meadow lark, white-breasted nuthatch, brown thrasher, rose-breasted grosbeak, tufted titmouse, starling, downy woodpecker, pileated woodpecker, red-headed woodpecker, Carolina wren, Myrtle warbler, English sparrow, Eastern bluebird, catbird, Indigo bunting, cardinal, fish crow, evening grosbeak, Baltimore oriole, orchard oriole, robin, Henslow sparrow, scarlet tanager, olive-backed thrush, vesper sparrow, cedar warbling, pine warbler.

Mammals - Beaver, muskrat, red fox, gray fox, cottontail, whitetail deer, red squirrel, gray squirrel, eastern chipmunk, least chipmunk, raccoon, white-footed mouse, opossum, flying squirrel (southern), pocket gopher, meadow vole, skunk, long-tailed weasel, least weasel, woodchuck, shrews.

Type II - Plant species listed, utilized by these animals for food and cover

Waterfowl - Coot, baldpate, black duck, canvasback, goldeneye, mallard, pintail, redhead, ruddy duck, lesser scaup, shoveller, blue-winged teal, green-winged teal, wood duck, gadwall, blue goose, Canada goose, snow goose, whistling swans, bufflehead.

Marsh birds, upland game birds, songbirds - clapper rail, sora rail, Wilson snipe, ruffed grouse, pheasant, woodcock, snow bunting, cardinal, six-colored junco, horned lark, song sparrow, swamp sparrow, Hudsonian Godwit, long-billed dowitcher, white-rumped sandpiper, Lapland longspur, yellow rail, blackbirds, quail, bobolink, cowbird, rose-breasted grosbeak, meadow lark, pipit, redpoll, grasshopper sparrow, Henslow sparrow, fox sparrow, savannah sparrow, towhee, purple finch, black-capped chickadee, crow, grackle, white-breasted nuthatch, mourning dove, english sparrow, yellow-headed blackbird, indigo bunting, pine grosbeak, robin, starling, tufted titmouse, hummingbird, catbird, brown thrasher, white-throated sparrow, pine siskin.

Mammals - Muskrat, meadow vole, raccoon, mink, fox squirrel, gray squirrel, chipmunk, porcupine, white-tailed deer, cottontail rabbit, bog lemming, 13-lined ground squirrel, pocket gopher, least chipmunk, eastern chipmunk, white-footed mouse, opossum, skunk, woodchuck, harvest mouse, shrews.

Type III - Plant species listed, utilized by these animals for food and cover

Waterfowl - Coot, baldpate, black duck, pintail, golden eye, mallard, ruddy duck, shoveller, blue-winged teal, green-winged teal, wood duck, gadwall, blue goose, Canada goose, snow goose, whistling swans.

Marsh birds, upland game birds, and songbirds - Basically most birds listed for Type I and II wetlands.

Mammals - Muskrat, beaver, otter, mink, shrews, cottontail rabbit (winter).



APPENDIX C

List of Wildlife and Game Management Report



Department of Natural Resources  
INTRA-DEPARTMENT  
MEMORANDUM

Black River Falls  
Station

Date March 25, 1975

IN REPLY REFER TO: 2510

TO: William T. Moorman

FROM: Eugene M. Kohlmeier

SUBJECT: Wildlife Management Information and Wetland Inventory for PER Ice Age Scientific Reserve - Mill Bluff

A. Descriptive Information

1-2. Vegetation is classified into three broad cover types: 1) Forest land on productive dry sites, 2) Open fields, 3) Wetlands. Cover types are indicated on attached maps. Wetland areas are classified according to the U.S. Fish & Wildlife Service system, Circular 39. Wetland types and acres within the Mill Bluff project boundary are as follows:

Type 1 - Seasonally flooded basins or flats	- 273 acres
Type 2 - Inland fresh meadows	- 21 acres
Type 5 - Inland open fresh water	- 8 acres
Type 6 - Shrub swamps	- 112 acres
Type 7 - Wooded swamps	- 172 acres
Type 8 - Bogs	- 112 acres
	<u>698 acres</u>

The area is primarily suited for forest game wildlife species (white-tailed deer, ruffed grouse, squirrels). Wildlife habitat as exists is good, no major changes are needed outside of normal timber management practices to maintain habitat.

3. Primary mammal species - white-tailed deer, gray and fox squirrels, cottontail rabbit, raccoon, striped skunk, red squirrel, chipmunk, red fox, weasel, flying squirrel, ground squirrel, coyote, muskrat, mink, otter, opossum, woodchuck, microtus spp.

Primary game bird species - ruffed grouse (very common).

Amphibians & reptiles - Leopard frog, green frog, spring peeper, toad, eastern garden snake, hognose snake, bull snake, painted turtle and snapping turtle.

4. List is attached.

5. There are no uncommon wildlife features existent on the area and no rare or endangered species are known to permanently occupy the area. Bald eagles may occasionally pass through the area.

6. Historically, sharptail grouse were probably hunted in and around the Mill Bluff area until the 1940's. Since the 1940's, white-tailed deer and ruffed grouse are the primary game species. Presently, hunting within the State Park is prohibited while white-tailed deer and ruffed grouse are still the primary game species within the area and are considered very common. Fall pre-hunting population estimates for white-tailed deer average 20-30 per square mile of deer range within the immediate and surrounding area.

No wildlife management activities for habitat manipulation are currently employed on the area. No major wildlife management activities are planned for the area except for routine forestry practices which are beneficial for maintaining forest wildlife habitat. Minor management activities which would be beneficial for wildlife include:

- 1) Encourage greater aspen reproduction on the more desirable sites,
- 2) Maintain wetlands, except for forestry practices on Types 1 & 7,
- 3) Allow vegetational succession on aspen field sites,
- 4) Timber removal along open field borders to encourage brushy edge development,
- 5) Water levels on cranberry marsh ditches should be maintained at a high level to encourage fur bearer use and discourage brush development on bog areas.

#### B. Impact Analysis

1-2. All factors being equal, except for habitat manipulation and considering forest wildlife species population levels at present compared to a decade beyond, the following is expected to occur:

- 1) A no cut policy would result in a lower carrying capacity for forest wildlife species using the area,
- 2) Routine forestry practices would maintain the population level,
- 3) Minor wildlife management activities associated with routine forestry practice would increase the population levels,
- 4) Those wildlife species considered rare and endangered at present would not be adversely affected by the above actions.

3. Primary wildlife use within the state park is for bird watching and other wildlife observations. This activity is expected to increase in the future. Presently hunting is not permitted within the park. This is not expected to change unless a wildlife species increases to a popular level damaging to the flora. In such a case, it may be necessary to reduce numbers by hunting under special regulations.

4. There are no anticipated special management needs other than those previously discussed.

#### C. Alternatives

More intensive development leading to increased public use would reduce available wildlife habitat and displace some numbers of wildlife. Development goals should recognize a degree of reduction in wildlife habitat and wildlife numbers and consider trade-offs accordingly. It would be difficult as a wildlife manager to indicate a state whereby development and wildlife value trade-offs merge compatible.

This is written in response to S. W. Walsh's memorandum of December 11, 1974 to Elmer W. Sprick.

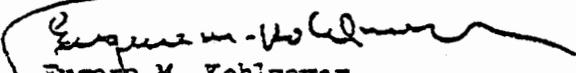
  
Eugene M. Kohlman

Table 2.

BIRDS OF MONROE COUNTY, WISCONSIN\*Summer

Common Loon	Northern Waterthrush
Pied-Billed Grebe	Yellowthroat
Green Heron	Redstart
Common Egret	Bobolink
Least Bittern	Yellow-Headed Blackbird
American Bittern	Baltimore Oriole
Canada Goose	Brewer's Blackbird
Mallard	Cowbird
Black Duck	Rose-Breasted Grosbeak
Blue-Wing Teal	Indigo Bunting
Wood Duck	Dickcissel
Ring-Necked Duck	Rufous-Sided Towhee
Lesser Scaup	Savannah Sparrow
Turkey Vulture	Grasshopper Sparrow
Broad Winged Hawk	Vesper Sparrow
Sandhill Crane	Lark Sparrow
Virginia Rail	Chipping Sparrow
Sora Rail	Clay-Colored Sparrow
Coot	Field Sparrow
Killdeer	Swamp Sparrow
Woodcock	White-Throated Sparrow
Spotted Sandpiper	Catbird
Black Tern	Short-Billed Marsh Wren
Yellow-Billed Cuckoo	Long-Billed Marsh Wren
Black-Billed Cuckoo	House Wren
Whippoorwill	Purple Martin
Nighthawk	Cliff Swallow
Chimney Swift	Barn Swallow
Ruby-Throated Hummingbird	Bewicks Wren
Yellow-Bellied Sapsucker	Carolina Wren
Eastern Kingbird	Blue-Gray Gnatcatcher
Crested Flycatcher	Loggerhead Shrike
Phoebe	Bell's Vireo - rare
Trails Flycatcher	Blue-Winged Warbler
Least Flycatcher	Cerulean Warbler
Wood Pewee	Louisiana Water Thrush
Tree Swallow	Orchard Oriole
Rough Winged Swallow	Scarlet Tanager
Brown Thrasher	Bank Swallow
Robin	Upland Sandpiper
Wood Thrush	Yellow-Crowned Night Heron
Veery	Great Blue Heron
Bluebird	Black-Crowned Night Heron
Yellow-Throated Vireo	White Pelican - rare
Red-Eyed Vireo	Double-Crested Cormorant - rare
Warbling Vireo	King Rail
Black and White Warbler	
Golden-Winged Warbler	
Nashville Warbler	
Yellow Warbler	
Chestnut-Sided Warbler	
Pine Warbler	
Ovenbird	

Table 2 - contd.

BIRDS OF MONROE COUNTY, WISCONSIN \*\* - Con't.

Transient

Red-Throated Loon	Palm Warbler
Red-Necked Grebe - rare	Connecticut Warbler
Whistling Swan	Wilson's Warbler
Horned Grebe	Harris's Sparrow
Snow Goose	White-Crowned Sparrow
Blue Goose	Fox Sparrow
Gadwall	Lincoln's Sparrow
Pintail	Lapland Longspur
Green-Winged Teal	Whimbrel - rare
American Widgeon	Marbled Godwit - rare
Shoveler	Rudsonian Godwit - rare
Redhead	Knot - rare
Canvasback	Western Sandpiper - rare
Greater Scaup	Red Phalarope - rare
Bufflehead	Hawk Owl - rare
Oldsquaw	Boreal Owl - rare
Ruddy Duck	Yellow-Bellied Fly Catcher
Pigeon Hawk	Acadian Fly Catcher
Semipalmated Plover	Water Pipit
Solitary Sandpiper	Townsend's Solitaire - rare
Greater Yellowlegs	Mocking Bird
Lesser Yellowlegs	Prothonotary Warbler
Pectoral Sandpiper	Mourning Warbler
Baird's Sandpiper	Canada Warbler
Least Sandpiper	Henslow's Sparrow
Dunlin	Le Conte's Sparrow - rare
Stilt	Sharp-tailed Sparrow - rare
Semipalmated Sandpiper	Herring Gull
Buff-Breasted Sandpiper - rare	Long-Billed Dowitcher
Sanderling	Short-Billed Dowitcher
Wilson's Phalarope	Ruddy Turnstone - rare
Northern Phalarope	Black-Bellied Plover
Ring-Billed Gull	American Golden Plover
White-Rumped Sandpiper	Western Grebe - rare
Franklin's Gull	Eared Grebe - rare
Bonaparte's Gull	Brant - rare
Forster's Tern	European Widgeon - rare
Caspian Tern	Surf Scoter - rare
Common Tern	White-Winged Scoter - rare
Olive-Sided Flycatcher	Yellow Rail - rare
Hermit Thrush	American Avocet - rare
Swainson's Thrush	Red-Breasted Merganser
Gray-Cheeked Thrush	Hooded Merganser
Ruby-Crowned Kinglet	Harlan's Hawk - rare
Philadelphia Vireo	Swainson's Hawk - rare
Solitary Vireo	Osprey
Tennessee Warbler	Peregrin Falcon - rare
Orange-Crowned Warbler	Gyr Falcon - rare
Parula Warbler	Piping Plover - rare
Magnolia Warbler	
Cape May Warbler	
Black-Throated Blue Warbler	
Myrtle Warbler	
Black-Throated Green Warbler	

Table 2 - contd.

BIRDS OF MONROE COUNTY, WISCONSIN - Con't.

All Year-Round

Cooper's Hawk  
Red-Tailed Hawk  
Ruffed Grouse  
Sharp-Tailed Grouse  
Ring-Necked Pheasant  
Great Horned Owl  
Screech Owl  
Barred Owl  
Long-Eared Owl  
Short-Eared Owl  
Flicker  
Pileated Woodpecker  
Red-Headed Woodpecker  
Hairy Woodpecker  
Downy Woodpecker  
Prairie Horned Lark  
Blue Jay  
Raven  
Crow  
Black-Capped Chickadee  
White-Breasted Nuthatch  
Starling  
House Sparrow  
Red-Winged Blackbird  
Cardinal  
Goldfinch  
Grackle  
Song Sparrow  
Western Meadowlark  
Eastern Meadowlark  
Cedar Waxwing  
Marsh Hawk  
Red Shouldered Hawk  
Sparrow Hawk  
Bobwhite  
Great Blue Heron  
Common Snipe  
Mourning Dove  
Belted Kingfisher  
Saw-whet Owl  
Red-Bellied Woodpecker  
Tufted Titmouse

Winter

Common Goldeneye  
Common Merganser  
Goshawk  
Rough-Legged Haw  
Snowy Owl  
Red-Breasted Nuthatch  
Brown Creeper  
Golden-Crowned Kinglet  
Northern Shrike  
Rusty Blackbird  
Evening Grosbeak  
Pine Grosbeak  
Common Redpoll  
Pine Siskin  
Red Crossbill  
White-Winged Crossbill  
Slate-Colored Junco  
Oregon Junco  
Tree Sparrow  
Snow Bunting  
Sharp-shinned Hawk  
Bald Eagle  
Golden Eagle  
Boreal Chickadee  
Winter Wren  
Bohemian Waxwing  
Hoary Red Poll - rare  
Purple Finch

\* Wisconsin Society for Ornithology, Field Check List of Birds of Wisconsin

\* Peterson, R. T., 1967. A Field Guide to the Birds. Houghton-Mifflin Co. Boston.

\*\* Grouse, Owen, J. 1963. Birds of Wisconsin. University of Wisconsin Press, Madison

Table 3.

MAMMALS OF MONROE COUNTY, WISCONSIN\*

Opossums	Muskrat
Long-Tailed Shrew	Harvest Mice
Giant Mole Shrew	Prairie Deer Mouse
Prairie Mole	Northern White-Footed Mouse
Little Brown Bat	Meadow Vole
Eastern Long-Eared Bat	Prairie Vole
Silver-Haired Bat	Northern Pine Mouse
Big Brown Bat	Norway Rat
Red Bat	House Mouse
Hoary Bat	Meadow Jumping Mouse
White-Tailed Jack Rabbit	Porcupine
Varying Hare	Coyote
Hearn's Cottontail	Eastern Red Fox
Southern Woodchuck	Gray Fox
13-Lined Ground Squirrel	Raccoon
Franklin's Ground Squirrel	Long-Tailed Weasel
Gray Chipmunk	Least Weasel
Least Chipmunk	Mink
Gray Squirrel	Radger
Fox Squirrel	Striped Skunk
Red Squirrel	Otter
Flying Squirrel (Southern)	Bobcat
Pocket Gopher	White-Tailed Deer
Beaver	

\* Jackson, Hartley T., 1961. Mammals of Wisconsin. University of Wisconsin Press, Madison, Wisconsin.

Table 5 - contd.

Type V

Waterfowl - Coot, baldpate, black duck, pintail, golden eye, mallard, ruddy duck, shoveller, blue-winged teal, green winged teal, wood duck, gadwall, blue goose, Canada goose, snow goose, whistling swans.

Marsh birds, upland game birds, songbirds - Most birds already mentioned inhabit areas around Type V wetlands.

Mammals - Muskrat, beaver, mink, otter, raccoon.

Type VI

Waterfowl - Mainly wood duck.

Marsh birds, upland game birds, songbirds - Most birds already mentioned inhabit Type VI wetlands.

Mammals - Beaver, otter, muskrat, red fox, gray fox, shrews, meadow mice, opossum, porcupines, coyote, skunk, mink.



APPENDIX D  
Acquisition Map







APPENDIX E  
Development Map



MAY 21 1979

**UWEC**

UNIVERSITY OF WISCONSIN-EAU CLAIRE/EAU CLAIRE, WISCONSIN 54701

DEPARTMENT OF GEOGRAPHY

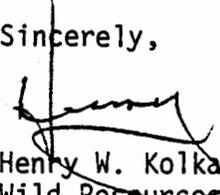
May 17, 1979

D. J. Mackie  
Bureau of Parks  
Box 7921 - DNR  
Madison, Wisconsin 53707

Dear Don:

The Mill Bluff State Park Master Plan is a strong document and well planned by the committee. Since this unit provides an unusual mix of state and federal programs the final result evidences a very credible fusion of the interests of both. The Wild Resources Advisory Council, a sort of a citizen's review board, does not intend in any way or wish to discredit a very good plan--it wishes by its comments and recommendations to point out some of the discrepancies and needed additions in the plan, so it may become even a better plan.

Sincerely,

  
Henry W. Kolka, Chairman  
Wild Resources Advisory Council



Comments and recommendations on the Mill Bluff Master Plan by the Wild Resources Advisory Council, May 18, 1979

pp. 3 F. Description of area

pp. 3 & 4 1. Geology (1st paragraph) Not all of the outlier forms are flat topped, some are rounded crests and not all possess "cliff-sided rock structures." All of these outliers may have some cliff-like characteristics. Some also possess rounder forms often bulging outward as they approach the crest. Likewise they possess talus deposits of soil, rock rubble and frost pried blocks. (2nd paragraph) secondline--incorrect grammar "capped by a strata"--strata is plural for stratum. Last sentence could be misinterpreted in present form. Why not? South of the park the outliers are capped by limestone, while in the park the caps are weather resistant sandstones. Last paragraph--We recommend that the last sentence end at the comma. The erratics in all of the outliers that I have observed are not "lodged in the sides of the rock formations", they are at the base of the outliers quite well mixed with talus debris.

pp. 7 I. Resource Capabilities

A. Soil potential--an addition should be included regarding peripheral agricultural land use. Very active drainage projects next to north boundary and beyond will definitely affect the water table levels of the northern boundary area of the park. This could dislocate the ecological systems in that vicinity.

pp. 7 B. Vegetative potential

The WRAC questions the advisability of cutting all of the overmature trees or stands. Certainly some wildlife species (birds and animals) find this type of habitat much more suitable for their existence and propagation than young vigorous stands. Since the objectives of the park do not cater to game species the overmature stands will add to the diversity of wildlife. Where planned trails and use areas exist, extraction of hazard vegetation for sake of safety makes good sense.

pp. 7 C. Game potential

Since the park is considered to be a sanctuary for all species (no hunting allowed), WRAC cannot see any logic in the title of content of the paragraph. Why not name it Wildlife potential and develop a theme to fit the title.

pp. 8 F. Land use potential

The WRAC advises that the Mill Bluff master plan change the land classification from (N) natural to (WA) wild area. The Natural Areas description of Manual Code 1031.1 has been modified (please refer) and subsequently it does not conform to the patterns of use and character suggested for this block, labelled as natural area in the master plan.

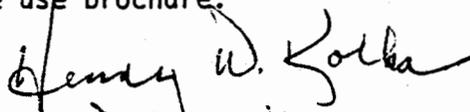
pp. 8 F Land use potential (last paragraph on p. 8)

The WRAC recommends that the Bureau of Parks arrange with the Scientific Areas Preservation Council for an early designation of Ragged Rock as a Scientific Area. Dr. Adam Cahow, Geomorphologist at U of W-Eau Claire and Henry W. Kolka carried out a cursory reconnaissance of Ragged Rock outlier on May 10th. This geomorphic structure is one of the most unique of all of the park outliers. About eighty-five percent of the northwest-southeast trending Ragged Rock Bluff (to the northwest) has a series of small flat tops at different levels. The south east sector of about 15 percent is made of a series of chimney-like towers with 3 needle eye openings and one open ski one, wide enough to drive a car through. The south side has a sand and rock rubble talus slope about 1/5 of the way up and the north and northwest slope has sheer cliffs with a predominant large rock talus apron. The bluff is scalable (Cahow did it) but not recommended. The little soil that exists there can be easily disturbed and the limited plants' life endangered and the climb is hazardous.

The WRAC recommends that the proposed trail listed on the aerial chart projecting northward about half way between Camels Bluff and Long Bluff be not developed. The Ragged Rock Bluff has easy road access. The park trail access will encourage too much foot traffic to this unique and very fragile landform. Not only should climbing the bluff be forbidden but any defacing of walls should be discouraged by limiting an easy trail access. The outside surface or weathering rind is a very thin protective skin which when scratched will lead to peel off before another weathering rind (dura crust) heals the rock sore.

Comment on appendix

Dr. Cahow suggests that since the main significance of the Mill Bluff State Park and the unit of the Ice Age National Scientific Reserve is geological and geomorphic, the master plan should include in its appendix a Geological and Geomorphic Report. This report could list names of the bluffs, approximate sizes, heights, geological characteristics, brief description, vegetation, animal life, micro-climates, history, etc. Maybe not all of the listed but at least the geological-geomorphic ones. Total description could be left for the use brochure.

  
Henry W. Kolka, Chairman  
Wild Resources Advisory Council



# The State of Wisconsin

SCIENTIFIC AREAS PRESERVATION COUNCIL  
P. O. Box 7921  
Madison, Wisconsin 53707

June 13, 1979

IN REPLY REFER TO:

Mr. Don Mackie  
Bureau of Parks and Recreation  
Dept. of Natural Resources  
P. O. Box 7921  
Madison, WI 53707

Dear Mr. Mackie:

We have reviewed the concept phase of the Mill Bluff State Park Master Plan and offer the following comments:

1. The Council favors adoption of the recommended alternative c. - "Expand, improve and manage the park for preservation and interpretation purposes."
2. The boundary revision on the northeast corner to include Ragged Rock and classify as a scientific area is appreciated. This is a significant geological feature previously recommended for inclusion by the Scientific Areas Preservation Council.
3. Classifying 1,377 acres of the 1,406 park acres natural areas is not consistent with the land use history (some former agricultural land) and proposed wildlife management and timber management. However we recommend that an inventory of potential natural areas within the park be conducted to delineate natural areas that fit the criteria adopted by the Natural Resources Board.
4. Since Ragged Rock is a fragile natural feature we recommend that it not be served by a trail providing convenient access.

Sincerely,

Forest Stearns  
Chairman



Comments and recommendations on the Mill Bluff Master Plan by the Wild Resources Advisory Council, May 18, 1979

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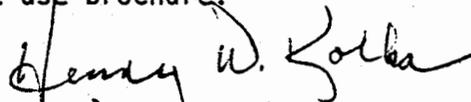
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