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A Management Plan for Forestville State Park

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A Management Plan for
Forestville
State Park

September, 1978

Prepared by the
Minnesota Department of Natural Resources



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STATE OF MINNESOTA

Credits

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The planning team also wishes to thank the many elected officials and private citizens who attended meetings and provided their thoughts and ideas.

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Purpose of Plan

MANAGEMENT AND DEVELOPMENT PHILOSOPHY

Minnesota is blessed with an abundance of high quality resources and, even more importantly, with leaders who have the wisdom and foresight to protect these resources. As a result, Minnesota today has one of the finest state recreation systems in the country. The Department of Natural Resources, with the assistance of concerned lawmakers, conservation and recreation groups, and private citizens, intends to do its utmost to provide planning that will be responsive to the needs of this generation while protecting the birthright of the next.

The management and development philosophy for the Minnesota state park system consists of two major objectives. The first is the protection of the natural resources within the recreation system. Without this protection, a resource can be destroyed in an alarmingly short period of time. Thus, protection benefits not only future generations, but present-day users as well. The second objective is maximizing the recreation opportunities available to the user, both in terms of quality and variety. It is the DNR's position that every citizen should share in the beauty and recreational opportunities of Minnesota's natural resources as well as the responsibility for maintaining and preserving them.

Obviously, there are going to be situations where use and preservation conflict. Every attempt will be made to reconcile these conflicts by the use of responsible management and development techniques. When this is not possible, however, the primary concern must be preservation of the resource. Allowing our resources to deteriorate would not only jeopardize high quality recreation for this generation but for future generations as well. To maintain a high quality recreational experience, it may be necessary to limit the number of people using a unit at a given time or to restrict certain activities within that unit. When this occurs, an attempt will be made to provide these activities at a nearby unit that has a higher tolerance to use.

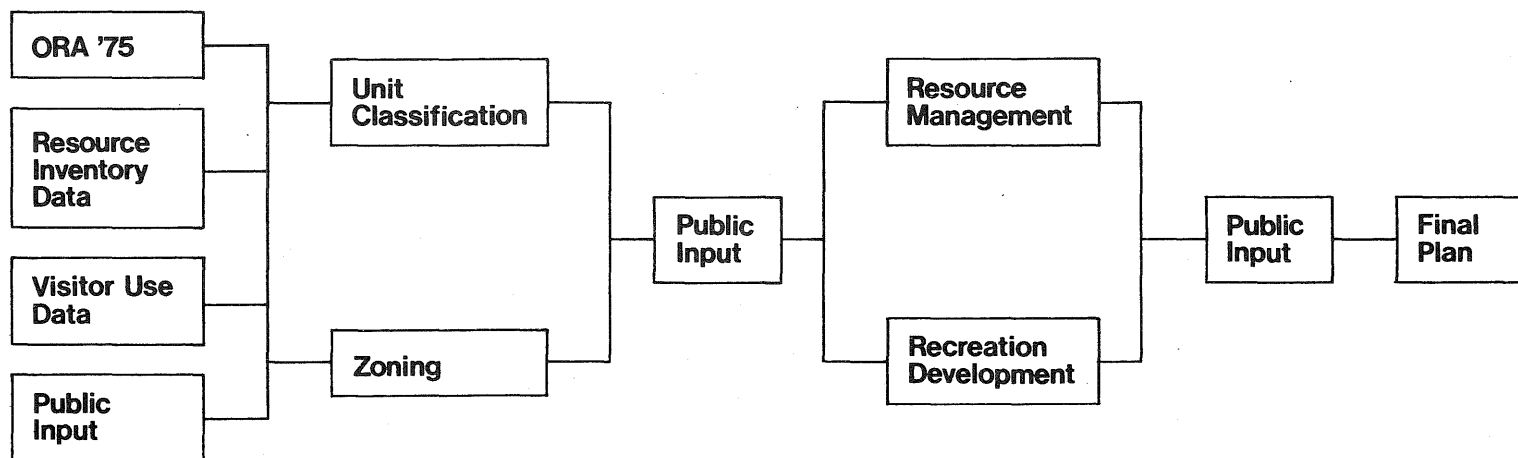
In planning management and development of the various units, the DNR will consider probable future impacts which would affect each unit. In spite of this, unforeseen circumstances are bound to occur. Therefore, each plan should be reviewed periodically to see that it is still relevant in light of current conditions. While a plan can and should be modified if conditions change, nothing should be done that would be detrimental to the objectives set forth in this philosophy.

OUTDOOR RECREATION ACT REVIEW

The Outdoor Recreation Act of 1975 (ORA '75) was enacted by the Minnesota Legislature to "preserve an accurate representation of Minnesota's natural and historical heritage" and to "provide an adequate supply of scenic, accessible, and usable lands and waters to accommodate the outdoor recreation needs of Minnesota's citizens." In an effort to improve long-range planning for the state recreation system, the legislature has directed that management and development plans be prepared for each unit in the system.

ORA '75 also redefined certain recreation unit classifications. For example, the state park classification was divided into recreational state parks and natural state parks. As a part of the overall planning process, the classification of each unit will be reviewed to insure that it is consistent with the resources in that unit. These plans will be used as a guide for developing management policies and planning recreation facilities in each unit. The ORA '75 also states that after August 1, 1977, no development funding will be permitted for any unit until a management and development plan has been completed and reviewed for that unit. By authorizing this planning program, the legislature has taken a significant step toward building a state recreation system in which every Minnesotan can take great pride.

Planning Process Diagram



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Summary of Plan

INTRODUCTION TO FORESTVILLE

Forestville is located in the stream-dissected, southeastern corner of Minnesota. The region is characterized by rolling uplands; steep, wooded valleys with exposed rock bluffs; and flat valley floor floodplains. The park today attracts visitors for many of the same reasons that settlers and Native Americans went there years ago. The river-formed valleys protect users from harsh weather, the vegetation and sheer limestone bluffs are very scenic, and there is plentiful trout in the rushing streams.

Another important attraction for park users is evidence of the area's former residents. The town of Forestville, which flourished in the middle to late 19th century, served as an agricultural and milling community and was a stepping stone to future settlement of the state. Today, the Forestville (Meighen) store and the Foster house are the sole reminders of the town's past prosperity.

CLASSIFICATION

Forestville has been recommended for classification as a natural state park and the town site of Forestville has been recommended as a state historic site under the custodial control of the Minnesota Historical Society. A natural state park classification is recommended because the park's scenic and unusual natural resources are characteristic of the stream-dissected landscape region. It has the potential to attract park users from throughout the state.

GOAL

The goal of Forestville State Park is to provide the people of Minnesota with a variety of recreational facilities while protecting and perpetuating the abundant natural and historical resources of the park.

RESOURCE INVENTORY AND MANAGEMENT SUMMARY

Soils

Soil characteristics were used to verify current facility placement and to locate future development. The inventory found loess-covered soils which require few restrictions for development occupying the gently rounded ridgetops of the park. Loess and limestone residual soils which occupy the upper valley slopes along tributary streams pose few limitations for campground and picnic area development, however, these soils are generally not suitable for drain fields or sewage lagoons. While alluvial soils found in the valleys require few restrictions for development, flood danger limits these areas to day-use facilities.



Objectives:

To locate development areas on soils which can withstand the intended use

To minimize erosion

- Management

In addition to development location, soils management will include reconstruction of some trails and vegetation management on steep slopes in order to control erosion.

Underground Hydrology

Due to the prevalence of fractured limestone, surface waters can, in some areas, seep directly into the water table without the usual necessary filtration.

Objectives:

To maintain high quality groundwater

To provide high quality drinking water for park users

- Management

Wells dug to supply water for public consumption will be drilled deep enough and encased to avoid potentially contaminated water.

Surficial Hydrology and Fisheries

There are three clear streams within the park: South Branch Root River, Canfield (or South Branch) Creek, and Forestville (or North Branch) Creek.

Objectives:

To maintain high water quality in South Branch Root River, Canfield Creek, and Forestville Creek

To manage the park streams as wild (non-stocked) trout streams

To stop river bank erosion in development areas

- Management

All three streams in the park support a natural brown trout population and can be managed as wild trout streams because of improved land management in the watershed and habitat management in the streams.

- Vegetation and Wildlife

Eighty percent of the park is covered with two vegetative associations: northern hardwoods (sugar maple, red oak, basswood, green ash, and elm) and bottomland hardwoods (American elm, red elm, green ash, cottonwood, silver maple, willow, and ironwood).

Objectives:

To retain or reestablish the vegetative cover in a major portion of the park consistent with pre-white settlement vegetation patterns

To manage vegetation for spatial diversity

To manage vegetation for wildlife diversity

To manage vegetation in development areas to allow intensive use without major resource deterioration

To preserve rare plant communities

To maintain a diverse native wildlife population

To reintroduce, where practicable, extirpated species that were indigenous to the park area at the time of settlement by white man

To give park visitors the opportunity to observe wildlife — their habits and habitat

To maintain wildlife populations which are consistent with the biological carrying capacity of the habitat

- Management

Vegetation management will be directed toward retaining hardwood communities and some small areas of white pine and prairie through selective timber removal, burning, and replanting. These management techniques will in turn increase wildlife habitat diversity and the potential for park users to view wildlife.

Cultural Resources

Although there is evidence of prehistoric activity within the park, little is known in detail about these early inhabitants. Settler activity, however, is well documented. Through the voluminous records left behind by Joseph Meighen, one is able to conceptually re-create the town of Forestville as it existed in 1857. Its business community, at its height, consisted of two stores, two hotels, two sawmills, a gristmill, a distillery, a tavern, a chair factory, and a wagon shop. Of these, only the Forestville store and the Foster house remain.

Objective:

To create an historic atmosphere reminiscent of pioneer life in the town of Forestville

- Management

Administrative control of the small portion of the park which includes these two structures has been transferred to the Minnesota Historical Society (MHS). Their scholars will research the 168 volumes of Meighen papers now housed in their manuscript collection. Archeologists will also use this data to field check the exact locations of the various structures which once existed. This data will provide the basis for future preservation, restoration, and reconstruction. This information should also be the basis for an interpretive program which will be conducted by guides in period costumes.

TRAFFIC MANAGEMENT

A road currently bisects the park. It is designated as CSAH 12 from the park's western boundary to the Forestville bridge and as Township Road 118 from the bridge to the northern boundary.

This road has negative impact on the park for a number of reasons.

It is a safety hazard to park users.

It provides an additional, unnecessary access to the park.

Vehicular traffic past the Forestville store and Foster house is inconsistent with the restoration project proposed by the MHS.

This road serves only a minimal number of users as a primary route and it is not a regionally significant traffic corridor.

Objectives:

To minimize modern day impact on the character of the Forestville historic site restoration project

To provide a safe, slow-paced, relaxing atmosphere within the park for visitors

To control user entrance and exit from the park at a minimal cost

To maintain efficient local traffic flow

To provide easy access to the park for people from throughout the state

To provide vehicular access to the nearest county state aid highway, or state highway

- Management

In view of the road's negative impact on the park, it is recommended that Forestville Township be requested to close Township Road 118 from the Forestville bridge to the Sorenson farm and to upgrade the road north of the park boundary. The DNR will provide assistance in this endeavor where possible.

DEVELOPMENT PLAN

Objectives:

To restrict development according to the final zoning map (see Zoning Section) in order to preserve the park's resources

To organize development so that park visitors enter and leave the park through controlled entrances

To increase the horse (multi-use) trail system

To separate incompatible recreational activities

To provide a suitable atmosphere for park visitors to relax, enjoy, and learn about the natural resources within the park

To limit facility development to that which is necessary for management and appropriate for park use and enjoyment

To provide access for the handicapped to the major facilities within the park

To preserve the historic and prehistoric resources of the park

To utilize already disturbed areas for proposed development

- Implementation

Picnic Area

1. Construct a picnic shelter with attached modern sanitation facilities. This building will also serve as a trail center for winter users.
2. Expand the picnic area (with handicapped accessible picnic tables) as use warrants.
3. Pave the existing parking lot.

Fishermen's Parking Lot

1. Regrade portions of the lot.

Equestrian Area

1. Construct a campground with 20-25 campsites. Each site will include a picnic table, fire ring, tie rail, trailer/camper site, and tent pad. Central facilities will include pit toilets and a water supply.
2. Construct an equestrian day-use area. Facilities will include an unloading ramp, parking spaces for 20 cars and trailers, picnicking facilities, tie rails, and pit toilets.
3. Pave the road to these facilities.

Primitive Group Camp

1. Construct an informal camping area to accommodate up to 75 campers.

Campground

1. As use warrants, construct an additional campground with 30-35 sites adjacent to the existing lower campground. Sites will be accessible to the handicapped. Modern sanitation facilities will be shared by the two campgrounds.
2. Consider the elimination of the campsites which are on the South Branch Root River floodplain.

Service Center

1. Construct a park maintenance area which will include a heated vehicle maintenance building, an unheated storage structure, and a small oil and gas storage building.

Contact Station/Park Office

1. Construct a contact station and park office to dispense user information, supervise visitors entering the park, and provide office space for the manager.

Council Ring

1. Construct an open-air movie projection area and group interpretation center in close proximity to the campground.

Forestville Town Site

(Minnesota Historical Society Portion)

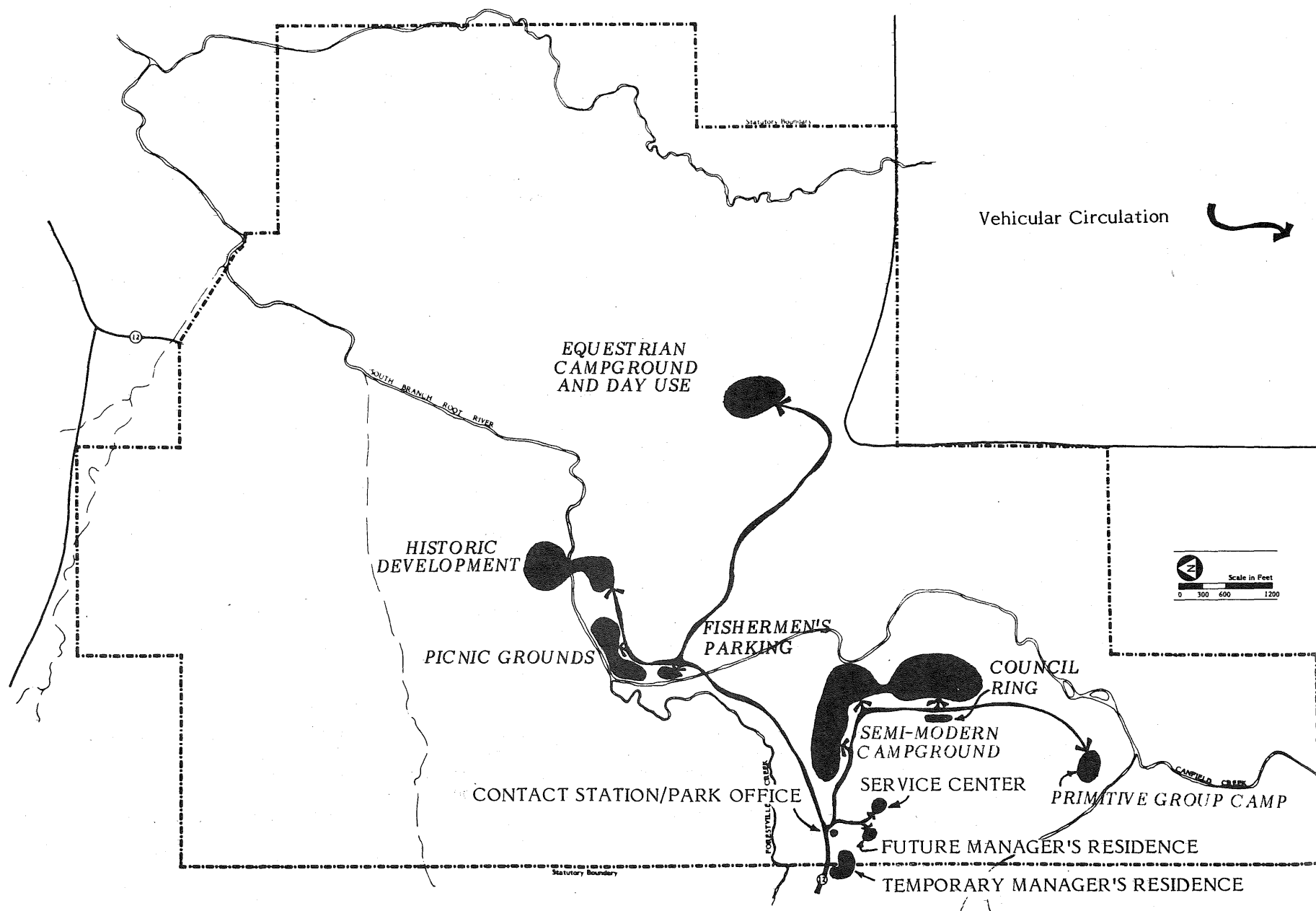
1. Restore the Forestville store.
2. Remove log cabin from the site.
3. Identify the stagecoach route.
4. Reconstruct a stagecoach way station after verification of its original location.
5. Retain the barn for an indoor demonstration and craft display area.
6. Determine final disposition of the Foster house upon completion of a feasibility study.

(Department of Natural Resources Portion)

1. Restore bridge for pedestrian, horse, and service vehicle traffic after township road is closed.
2. Pave historic site parking lot.

Trails

1. Construct a handicapped accessible trail with a hard surface and gradual slopes to connect the campgrounds, picnic areas, and historic site.
2. Segregate snowmobilers and cross-country skiers into different areas of the park with the picnic/trail shelter serving as common departure point.
3. Develop horse trails along the durable bluff tops with one trail passing through the historic town site.



BOUNDARY MODIFICATION

Objectives:

To preserve unusual geological formations, plant associations, and areas of high scenic quality for public use and enjoyment

To establish a buffer of land, under the custodial control of the Division of Forestry surrounding the park

To manage wildlife populations by allowing hunting in the immediate vicinity of the park

To allow more intensive forest management of the blufftop areas

- Management

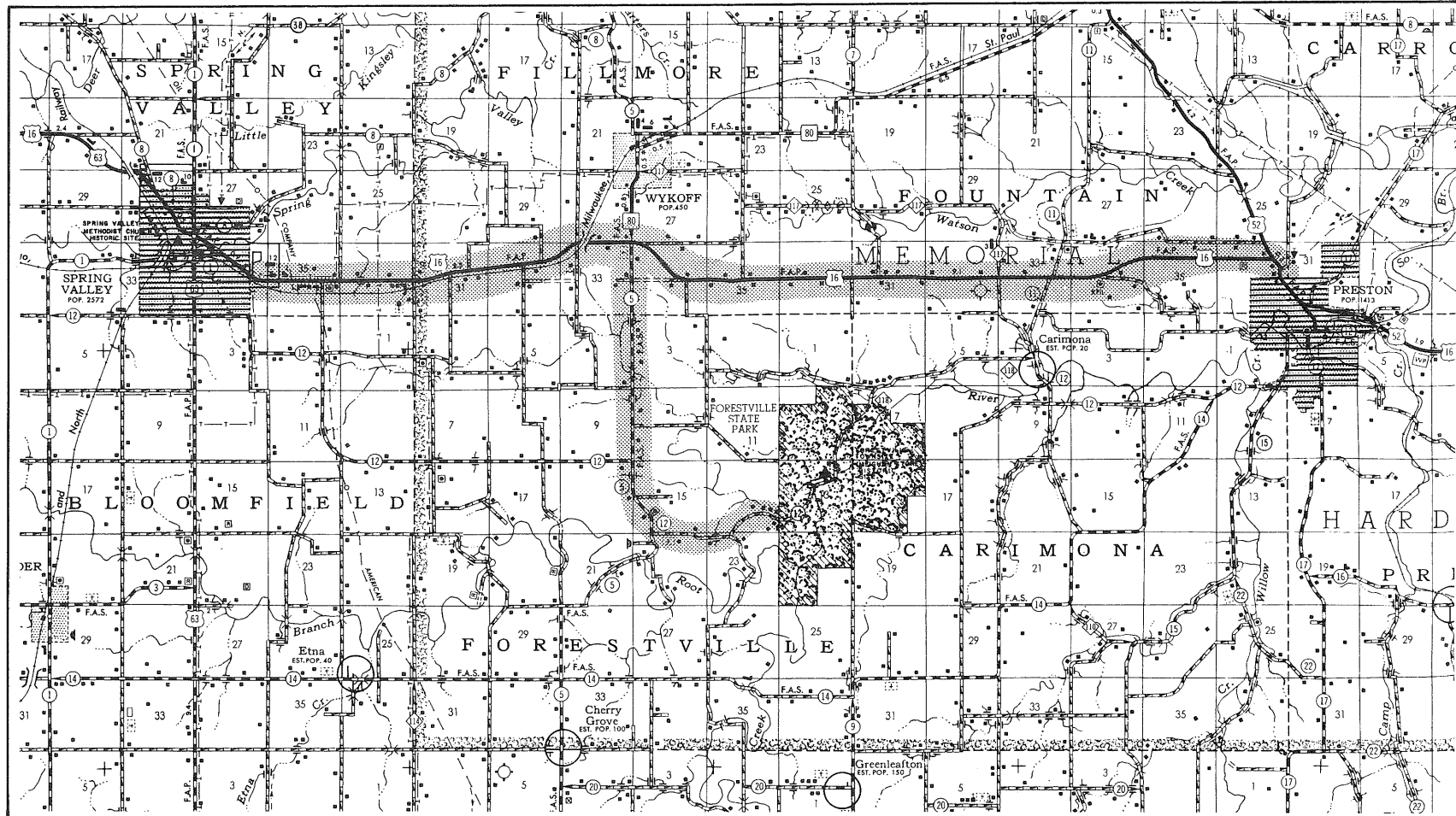
Contingent upon willing sellers and statutory boundary expansion by the Minnesota State Legislature, parcels of land along Canfield and Forestville Creeks will be purchased for inclusion into the park. Portions of park land along the blufftops will be transferred to the Division of Forestry to facilitate more intensive forest management.

Unit Character

GEOGRAPHIC PERSPECTIVE

Forestville State Park is comprised of 2,643 acres between Spring Valley and Preston in Fillmore County.

It can be reached from US 16 by turning south and traveling four miles on CSAH 5 and then turning east and traveling two miles on CSAH 12.



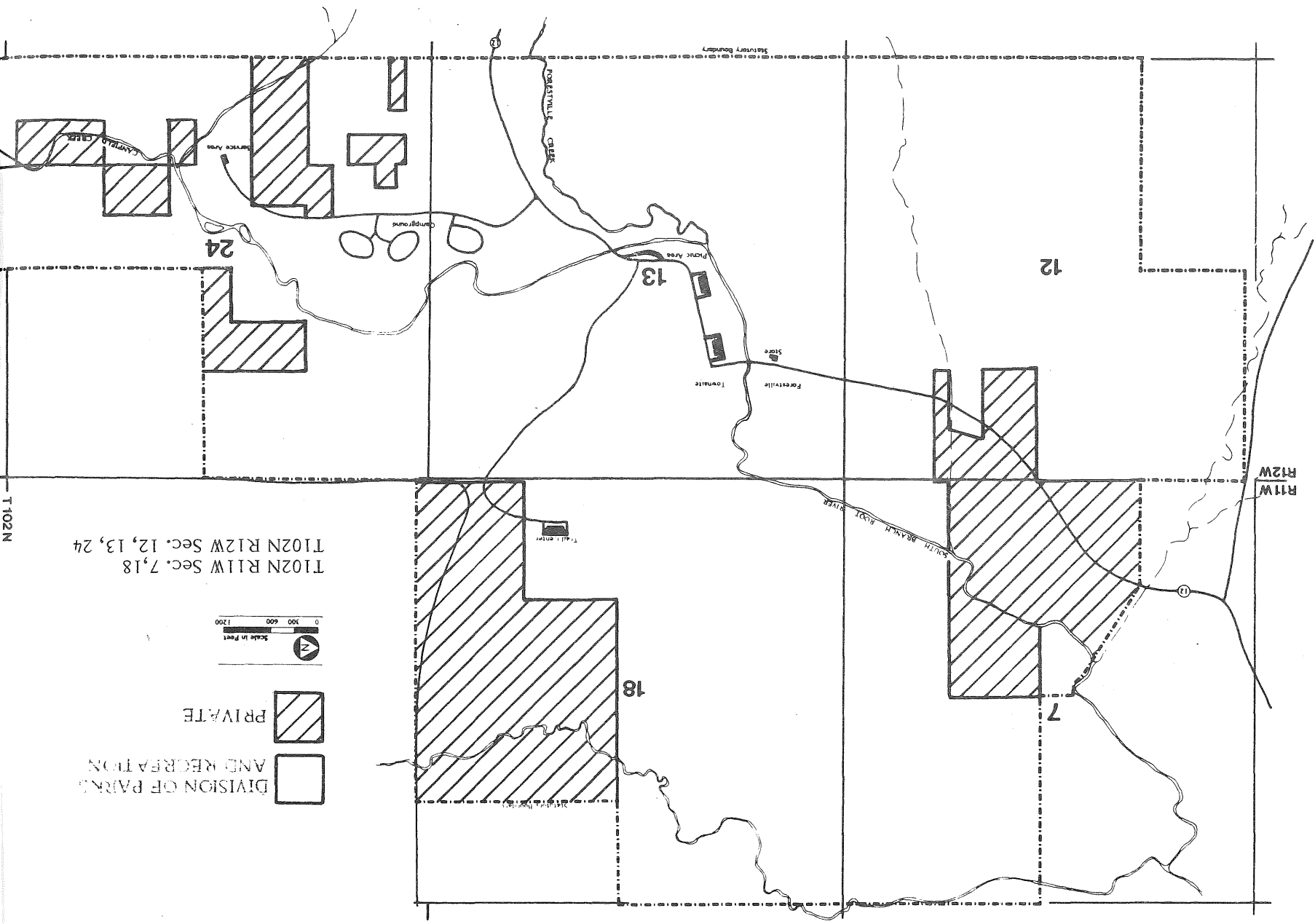
MAJOR LANDSCAPE REGIONS

RED RIVER
LAKE SUPERIOR
BIG BOG
PINE RIDGE
ST. LOUIS R.
KETTLE R.
ST. CROIX RIVER VALLEY
MISSISSIPPI RIVER
DISSECTED VALLEY
WET MINNESOTA PRAIRIE
WET MISSOURI PRAIRIE
WET DISSECTED PRAIRIE
SCOURED
NORTH SHORE
GIANT'S RIDGE
ICE
Beach Ridges
WET MINNESOTA PRAIRIE
WET MISSOURI PRAIRIE
WET DISSECTED PRAIRIE

Major Landscape Regions
Minor Landscape Regions or Areas of Transition

0 10 20 30 40 50 60
Miles

Project 80 Staff Report No. 1, July 1971



The major portion of this part of the state was not covered by the Ice Age glaciers that covered most of Minnesota, however its deep valleys were carved out by voluminous glacial meltwater.

Originally, the region was covered by hardwood forest, bounded by prairie to the southwest and big woods to the northeast. Over half of the land (62.7%) in Fillmore County is cultivated, 20.3% is pasture and open land, and 15.6% is forested. Much of the forested land is included in Dorer Memorial Hardwood Forest. Population within the county was estimated by the State Planning Agency to be 22,000 in 1974. This represents a slight increase since the census was taken in 1970.

Southeastern Minnesota is probably the most unrecognized recreational area in the state. Often referred to as Hiawatha Land, the region exhibits a variety of recreational potentials. Fine trout fishing, an abundance of game (deer, ruffed grouse, and pheasant), excellent sailing on 43,000 acre Lake Pepin, trails, and camping are all available within a relatively small area crossed by several principal highways. It has been estimated by the Department of Economic Development that Fillmore County derived \$1,103,623 or slightly less than 1% of the total gross sales within the county from tourism/travel expenditures in 1974.

In the future, it can be expected that tourism/travel will play a greater role in the county's economy. As the northern part of the state reaches its recreational carrying capacity and as the private sector in the southeastern region develops more extensive recreational facilities, more tourists will undoubtedly use the area.

Sources

Bureau of Planning and Environmental Planning Division, Minnesota Resource Potentials in State Outdoor Recreation, Project 80 Staff Report No. 1, (St. Paul: Department of Natural Resources and Minnesota State Planning Agency, 1971).

Development Planning Division, Minnesota Pocket Data Book, 1973 and 1975, (St. Paul: State Planning Agency, 1975).

Bureau of Environmental Planning and Protection, Minnesota State Comprehensive Outdoor Recreation Plan, (SCORP), (St. Paul: Department of Natural Resources, 1974).

Department of Economic Development, "The Economic Distribution of Tourist Travel Expenditures in Minnesota by Regions and Counties," October 1975.

CLIMATE

Minnesota is subject to strong continental weather patterns influenced by cold Arctic air masses in winter and hot Gulf of Mexico air masses in the summer.

Due to its southern location in the state, the Forestville area experiences winter temperatures which average 10°F warmer than the northern third of Minnesota. Although Forestville experiences periods of bitter cold during the winter, it is far less likely to maintain a snow cover usable for recreational purposes throughout the season. Strangely enough, summer temperatures do not vary as much. Except for the North Shore, only 3 or 4 degrees separate summer temperatures throughout the state.

Temperature

	<u>Mean Minimum</u>	<u>Mean Maximum</u>
January	4°F	24°F
July	58°F	83°F

An average of 36 days/year are 0°F or below

An average of 12 days/year are 90°F or above

Annual Snowfall 38.6"

Total Annual Precipitation 30"

Due to its topographic location, wind in the park is less than outside the valley. What little wind there is does not conform to prevailing wind patterns but rather follows the valley's course. The valley's structure also contributes to a "fog zone" in low-lying areas.

Sources

U.S. Department of Commerce, Climates of the States, United States No. 60-21, by Earl L. Kuehnast, 1959, Rev. June 1972.

"Seasonal Snowfall," an unpublished report by Earl L. Kuehnast, State Climatologist, Department of Natural Resources, 1976.

GEOLOGY

The soils of Fillmore County are composed largely of deposits laid down by wind and water during the glacial period (Pleistocene). Terraces of the Root River valley consist of stratified gravel, sand, and silt, which were deposited by meltwater from the waning glaciers.

The deep valleys of the Root River and its fanlike tributaries show exposures of many different sedimentary rock formations. At Forestville, the South Branch Root River has cut through several strata of limestone, sandstone, and shale, including the Galena dolomite, Decorah shale, Platteville limestone, and at present is within the St. Peter sandstone stratum.

Limestone outcrops are the most prominent feature of the landscape. They project along the summits of the bluffs and constitute the escarpments of benches or terraces. Soft and crumbly sandstone outcrops are commonly found below these limestone exposures on steep slopes. They are much less spectacular, and are, in many places, covered with a thin layer of loess. Green shale deposits are layered within the limestone on prominent benches on the uplands. They are characterized by many springs and wet spots.

Fillmore County has numerous caves and sinkholes. Only one cave has been found within the existing park boundaries, but several others are located in the general vicinity.

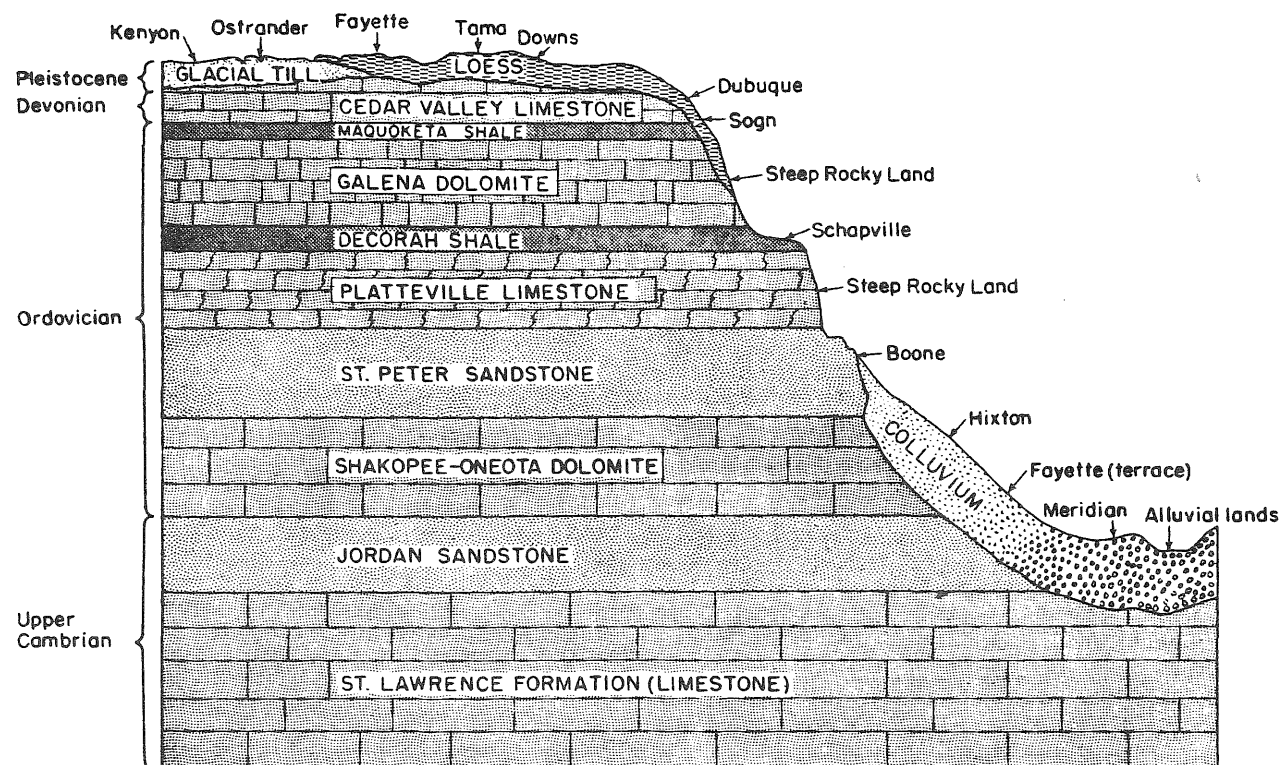
Early settlers in this area found layers of iron oxide as they dug their wells, and often plowed it up in loose chunks while cultivating their fields. The most extensive deposits occur near Forestville. Even though the iron content is only 1-20%, mining operations began in 1942 and to date more than five million tons of iron ore have been taken from the deposits.

David Meineke, mineral exploration supervisor for the DNR, has given the Forestville area a high rating for its metallic mineral potential. With much less certainty, he has also indicated that a fair potential exists for deposits of lead, zinc, and uranium. It must be noted that these deposits are not necessarily located within the park.

Sources

United States Department of Agriculture, Soil Survey, Fillmore County, Minnesota, Soils Conservation Service, 1954 Series, No. 1, 1958.

Memos from David Meineke, mineral exploration supervisor, to Dan Collins, assistant park planner, January 6, 1976 and January 27, 1976.



Schematic diagram of a cross section of a valley showing geologic formations and some of the principal soil series and miscellaneous land types.

AREA HISTORY

In 1851 the treaties of Traverse des Sioux and Mendota formally opened the Forestville area to white settlement. The first settlers were welcomed by a wealth of resources which promised to soften some of the hardships of life in a new unknown land. A heavy growth of hardwood timber along the South Branch Root River and its tributaries, extending well back from the streams, provided building materials, fence rails, and fuel. The river itself afforded potential mill sites, both for sawmills to exploit the lumber resources and for gristmills to grind the wheat that would soon be growing on the rich prairie land that spread over much of western Fillmore County.

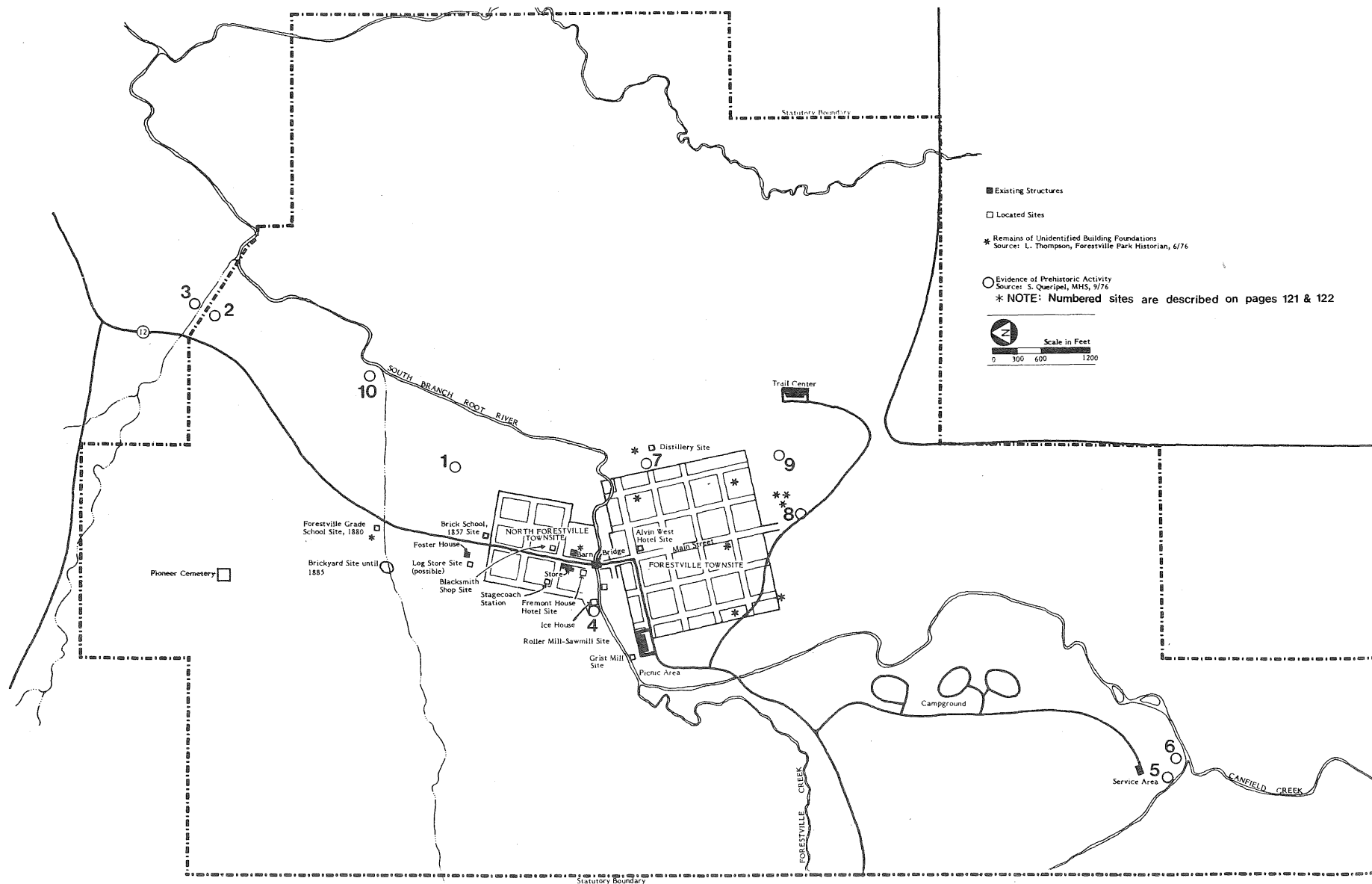
Although not among the first arrivals, the people most closely associated with Forestville in its early years were Robert M. Foster, who came in the spring of 1853, Forest Henry, for whom the town was named, and Felix and William Meighen, boyhood friends of Foster.

Felix Meighen probably accompanied Foster on his first visit to the area, but returned home to Galena, Illinois. Foster remained and his letters to Felix, now on file in the Forestville store, provide a fascinating account of life in Minnesota in the 1850's. Late in the summer of 1853, having bought out an earlier settler, Foster, in partnership with the Meighen brothers, opened a store in a double log building under the name of Foster and Meighen. Business was good the following winter with customers coming from as far away as the Zumbro River, fifty miles to the north. He traded with the Native Americans for venison and furs until a competitor in the nearby settlement of Carimona threatened to have him arrested for trading without a license.

Meanwhile Forest Henry, in partnership with his brother-in-law, William Renslow, purchased and completed a sawmill, to which a gristmill was soon added. By the end of 1854 two more stores opened and a tavern was thriving. Foster's letters to Meighen urged him to move west because the country was filling up, and the claims he had made for the Meighen brothers were being threatened. Also, William's services as a surveyor were needed for laying out the town site. Meighen and his wife followed this advice and left Galena on May 8, 1855. The town of Forestville was laid out the same year, with the acquisition of a post office on October 16.

Forestville reached the peak of its prosperity in the last half of the 1850's when it boasted at least two stores, two hotels, two sawmills, a gristmill (with its necessary adjunct, a cooper shop), a distillery, a tavern (perhaps run in connection with one of the hotels), a chair factory, and a wagon shop. In 1857 Foster and the Meighens replaced the original log store with the fine brick building which is today a principal attraction of the park. In the same year a brick schoolhouse was built. The village was important enough to be a contender, along with Carimona and Preston, for the county seat in 1856. A remote, isolated frontier settlement in its first years, Forestville was designated as a way station on the Burbank stage line from Brownsville to Mankato and later on the St. Paul to Dubuque line.

PREHISTORIC AND HISTORIC FEATURES





Forestville undoubtedly enjoyed a certain amount of economic importance in the pre-Civil War years. This prosperity lasted for a time after the war, but failure to obtain the county seat and changes in transportation routes - especially being by-passed by the railroads - brought the same decline in fortune that was suffered by so many other frontier towns in the early, speculative days of settlement. By 1878 the only businesses remaining in Forestville were the Meighen store, from which Foster had withdrawn a decade earlier, Forest Henry's gristmill and probably the blacksmith and wagon repair shop. Two years later the mill ceased operation, and although several proposals to reopen it were considered in subsequent years, the evidence indicates that it remained silent thereafter. It had fallen into ruin by 1900 and was destroyed by a flood in 1917.

Robert Foster sold his share of the store in 1868. Even though it was said to be barely operating at a profit in 1878, the old brick store kept its doors open inspite of the discontinuance of the post office in 1902. Thomas Meighen, a banker, lived in Preston and operated the store in his spare time until 1910 when he decided he no longer had time for the declining rural mercantile store. One May evening he simply locked the doors with its inventory intact.

Historic Features

Log Store Site - This substantial log building with a stove chimney was constructed during the summer of 1853. Probably most of the community joined in building it. Foster ran both the store and hotel, doing the cooking himself. The store carried hardware, crockery, dry goods, flour, molasses, whiskey, tinware, and patent medicines. In 1857 it was replaced by the new brick store.

Forestville (Meighen) Store - This brick structure replaced the log store. The bricks were molded by John Gill from local clay. The residence of Felix and Eliza Jane Meighen and their seven children ajoined the store.

Foster House - This brick house was built for Robert M. Foster around 1867. Foster, in addition to holding half interest in the Forestville store, was the first coroner of Fillmore County, a justice of the peace, and a county commissioner.

Distillery Site - In 1856 a distillery was built by Robert Douglas, Rueben Odell, and Felix Meighen. The product was pure rye whiskey. The imposition of the high war tax on liquor and distilleries caused this plant to be closed (and eventually abandoned) during the first year of the Civil War.

Gristmill Site - Operated by Forest Henry and William Renslow from 1854 to 1880. It was destroyed by the flood of 1917. Only its foundation timbers remain today.

Brick School Site - Reportedly this was the first school in Fillmore County. Forestville children were initially taught in the home of Joseph Bisby by his daughter Minerva. The school was moved to a log cabin in 1855, and finally into the brick structure in 1857.

Forestville Grade School Site - By the summer of 1879, it was evident that a larger and better facility was needed to replace the small brick school opened in 1857. The new school was a two-story frame building with a bell tower. Two teachers operated seven-month school sessions in the structure.

Pioneer Cemetery - Some of the markers which are still standing bear the names of individuals who were born in the 18th century. Probably the last burial there was that of William Meighen in 1899.

Sources

Memo from Minnesota Historical Society, Historic Sites and Archeology Division, to the park planning staff, July, 1976.

Thompson, Luther, Forestville Park historian, park handout, 1976.

Meyer, Roy M., "Forestville, the Making of a State Park," Minnesota History, 44/3 Fall 1974, pp. 82-96.

Department of Anthropology, University of Minnesota, Prehistoric Archaeological Sites in Minnesota State Parks, (Minneapolis: University of Minnesota), revised June 3, 1976.

PARK HISTORY

As early as 1903, people were aware of the value of the woods that the Meighen family had so carefully managed. But it wasn't until 31 years later that serious talk about the establishment of a park at Forestville began. Thomas Meighen contacted both Frank Yetka, secretary of the Conservation Commission, and the Division of Forestry, but received little support for his idea, largely due to lack of funds. Meighen fully recognized that the state was in no position to pay what the land was worth, but he was anxious to have a park created and would have been satisfied with only partial reimbursement for the value of the land and timber.

In 1935 an attempt was made to purchase the land with State Relief Agency funds. It was thought that development in the park could be done by the agency's work programs. Unfortunately, before the proposal was finalized, Thomas Meighen died and his heirs asked more for the land than the state was prepared to pay.

In 1938 the Conservation Department recommended purchase of 600 acres of land on the Root River near Spring Valley for a park, however an economy program endorsed by the 1939 Legislature made acquisition of the land an impossibility.

In the early 1940's, prohibitive taxes forced Joseph F. Meighen to log an 80 acre tract. Local citizens, concerned about the fate of the woods, tried to interest the University of Minnesota in buying the land for use as an outdoor biological laboratory. They were informed that the university had no money for such a sizable purchase. Inquiries addressed to the Division of Forestry brought much the same response. United States' entry into World War II in 1941 put a halt to any further action for the next several years.

In 1947 interest was renewed and an agreement was formulated with the U. S. Forest Service whereby the Forest Service would purchase the land and then trade it for state-owned land in the Superior National Forest. For the next two years negotiations proceeded. In 1949 Senators John A. Johnson, Werner E. Wuertz, and Helmer C. Myre introduced a bill in the legislature which mandated "the establishment, maintenance, and control of a state park in Fillmore County" not to exceed 850 acres, to be acquired through exchange with the federal government. This exchange of land fell through and all attempts for an appropriation to purchase the land were frustrated on every front. The situation was furthered complicated by the outbreak of the Korean War in the summer of 1950.

It was not until the Natural Resources Act of 1963 was passed that funds were provided "to establish a new state park located in Fillmore County to be known as Forestville State Park, giving the Commissioner of Conservation power to acquire said lands by gift, purchase, or eminent domain (this right has since been recinded) and transferring any tax-forfeited land within the park boundaries to the Commissioner of Conservation." The sum of \$122,000 was set aside for the purchase of lands at Forestville with an additional \$20,865 for capital improvements. Unfortunately this amount would buy only half the acreage originally envisioned for the park, which had been given statutory boundaries enclosing an area of 2,400 acres.

Because of the large number of parks established by the Natural Resources Act and the limited staff available to carry out appraisal work, land acquisition proceeded slowly for the next two years. In 1949 the legislature expanded the statutory boundary to include a total of 2,643 acres. As of January 1978 approximately 2,149 acres were in state ownership.

The park was opened to the public at the beginning of the 1968 park season, though the formal dedication was not held until May 21, 1972.

Source

Meyer, Roy W., "Forestville, The Making of a State Park."

THROUGH-SITE DEVELOPMENT

Along with power and telephone lines that service the park, there is also a power line that passes through the park near the manager's residence.

CSAH 12/Township Road 118 is the major through-site road. It enters Forestville near the middle of the western boundary and passes the contact station, picnic area, historic town site, and Forestville store before it exits on the northern boundary.

For a number of reasons, the road has an adverse effect upon the park.

It is a safety hazard to users. Park users are unaccustomed to and often unprepared for through-site public roads.

It provides an additional access to the park. Having more than one entrance, makes it impossible to monitor the activities of users.

The vehicular traffic which passes the historical site destroys the image and consequently the impact of the structures from yesteryear.

From all indications the road has a very limited use (see Average Daily Traffic Flow Map, page 115).

ACCESS CORRIDOR

Access to Forestville is directed off US 16 south on CSAH 5. This highway travels through farmland along the top of a plateau with several views into wooded valleys that give a hint of the park to come. A small sign then directs traffic onto CSAH 12, which winds gradually into the valley and the forest. It passes through the park, past the contact station and picnic grounds, and terminates at the old Forestville bridge, where it turns into a gravel township road which continues past the Forestville store and out of the park to the north. At present, park users may also use this as an entrance road from the north if they wish.

Introduction

In accordance with the Outdoor Recreation Act of 1975 (ORA '75), the park planning staff has reviewed the classification of each park under study this biennium. After the park resource inventory was completed for each unit, the planning staff determined:

- A. Which of the eleven classifications from ORA '75 was most appropriate for the unit
- B. Whether sub-units should be considered to deal with special areas within the unit (scientific and natural areas or other sub-units authorized in ORA '75)
- C. Whether administration of the unit should be reassigned to other governmental bodies (other state agencies, county, or local governments)

Objective:

To determine the most suitable management direction for a given park based on its natural resources and recreational potential

Discussion

The primary concern in setting management direction is the protection and perpetuation of those natural resources which set a particular park apart from all other parks. Also of concern, is the need for a statewide recreation system which will meet the legitimate recreational needs of our society without unduly harming the resources of the park.

It should be noted that the natural state park classification does not exclude recreational activities from a unit. This classification places management and development emphasis on the preservation and interpretation of the natural resources within the park. By the same token, a recreational state park classification emphasizes a wide range of recreational activities, but not to the exclusion of interpretive activities or to the point where the natural resources within the park are damaged.

Recommendations and Rationale

Forestville has been recommended for classification as a natural state park with a portion recommended as a state historic site.

The three conditions that must be met in order for a park to be classified as a natural state park, as mandated by the Outdoor Recreation Act of 1975 are as follows:

1. "Exemplifies the natural characteristics of the major landscape regions of the state, as shown by accepted classifications in an essentially unspoiled or restored condition or in a condition that will permit restoration in the foreseeable future; or contains essentially unspoiled natural resources of sufficient extent and importance to meaningfully contribute to the broad illustration of the state's natural phenomena."
2. "Contains natural resources sufficiently diverse and interesting to attract people from throughout the state."
3. "Is sufficiently large to permit protection of the plant and animal life and other natural resources which give the park its qualities and provide for a broad range of opportunities for human enjoyment of these qualities."

Forestville is an excellent example of the stream-dissected region of southeastern Minnesota. Though some logging has been done in the area, primarily selective cutting was used. Consequently, little damage was done to the integrity of the vegetation.

The park offers the user an excellent fishing opportunity in the South Branch Root River. It is widely thought of as one of the finest trout streams in the state. The river is also used in the spring for canoeing, the summer for wading, and is a sensory focal point in all seasons because of the idyllic quality of its rushing rapids and quiet serene pools. The topography is sometimes gentle and occasionally steep providing both easy and challenging trails, complete with panoramic views. The dramatic white pine protruding up through the hardwoods on rocky ridges are very impressive and the variety and abundance of wildflowers in the spring are exciting to both the casual observer and the botanist.

The town site of Forestville, listed in the National Historic Registry, provides an opportunity to view the remains of a town which thrived in early settlement times.

Although the park is relatively new, it already has experienced a good deal of use. In 1975, it was visited by 50,000 people, an increase of 10,000 from 1970. Sixty percent of its users come from a 50 mile radius. Although this is a relatively high percentage of local use, it must be remembered that this radius includes the population centers of Rochester, Winona, LaCrosse, and Albert Lea.

Forestville's present statutory boundary is 2,643 acres. Approximately 60% of the park has soils which are suitable for recreational development and the vegetation is hardy. After the proposed boundary modification, the size of the park will decrease, however the area deleted will stay in state ownership under the custodial control of the Division of Forestry.

In conclusion, it was felt that the natural state park classification was most appropriate for this park because it typifies the stream-dissected landscape region, has resources sufficient to attract visitors from throughout the state, and is large enough to protect the resources while providing quality recreational experiences for park users.

Source

Bureau of Environmental Planning and Protection, Minnesota 1974 State Park Users Survey, (St. Paul: Minnesota Department of Natural Resources, 1974).

Resource Management

ZONING

Introduction

Before the specific management of an area within a park can be considered, a zoning concept must be established to evaluate the various management alternatives within the park. General management strategies can then be determined and expressed by zoning the park according to prime management objectives.

Objectives:

To establish a zoning system which formally recognizes the various features of a park

To identify those areas suitable for specific uses and establish management requirements necessary to provide for recreational needs while protecting the park's resources

Management Zoning

A land classification system utilizing six major management zones has been adopted which will permit effective, economical management and use of park resources.

Land Classification Zones

To aid in understanding the final zoning concept map, each of the six potential zones have been defined along with a description of their prime management objectives. All six management zones may not be found in each park. (The numbers refer to the map code on page 37.)

- 1 Ecological Protection Zone - The ecological protection zone includes areas having ecological communities which are either sensitive to certain uses, require special management or protection, and/or have significant value for research. Areas having unique or endangered wildlife habitat or vegetative communities are included in this zone. Management will be directed toward perpetuating these ecological values. Development will be restricted to interpretive facilities or trails which do not disturb these values. All forms of access may be prohibited when necessary. In certain instances, small structures may be necessary to orient use and protect habitat.

- 2 Outstanding Natural Feature Zone - The outstanding natural feature zone includes areas which are geologically or biologically of statewide significance. These features often are the park's principal resource attractions and will be managed to provide for visitor enjoyment without impairing their quality. Development of restricted forms of recreational facilities may be necessary to allow for enjoyment and interpretation. All development must be compatible to the features of the site to protect its natural character. Resource management will be restricted to restoring the resources and perpetuating their natural characteristics.
- 3 Primitive Zone - The primitive zone includes extensive areas of land and water remote from high-density use areas and major development within the park and removed from the external influences of civilization. Development will be restricted to non-riding trails, primitive walk-in campsites, and appropriate interpretive facilities. Resource management will be directed toward restoring and perpetuating the natural environment and the aesthetic character of that environment.
- 4 General Environment Zone - This zone includes areas which, while they may be very scenic, contain no identified outstanding natural, historical, or cultural features. In addition, the resources in this zone must be able to tolerate moderate use. Properly managed, this zone will serve to unite the other zones into a cohesive unit.
- 5 Historical and Cultural Zone - The historical and cultural zone includes those sites which help to illustrate the historical and archeological heritage of the area that should be preserved or restored. Activities should emphasize the interpretive values of the site. Recreational development will be restricted to activities such as non-riding trails, small picnic areas, interpretive facilities, and parking. Activities and improvements should be limited to those which will not detrimentally affect the preservation and restoration of these sites and should be reviewed with the Minnesota Historical Society. All historical or cultural sites should be surrounded by sufficient natural buffers to minimize encroachment from other activities. Natural resource management activities should maintain and perpetuate historical and cultural values while insuring regeneration of native or historically compatible plant and animal species.
- 6 Development Zone - The development zone includes lands and waters where major park development and intensive use, both existing and proposed, has or will substantially alter the environment. This zone will be managed to provide and maintain the level of development necessary to serve the needs of relatively large numbers of visitors and of park administration. Park roads extending beyond this zone may be included in appropriate natural or historical zones through which they pass. Resource management will be directed toward improving the recreational capabilities and characteristics of the environment. However, native vegetation should not be extensively replaced solely for aesthetic reasons.

Potential Zones

Potential Ecological Protection Zone - The South Branch Root River, Canfield Creek, and Forestville Creek have been designated because of their excellent trout habitat and scenic quality. Also designated are the park's steep bluffs because of potential erosion problems and unusual vegetation.

Potential Historical and Cultural Zone - The principal potential historic zone encompasses the platted portion of the historic town of Forestville and associated historic sites in the vicinity. These include the sites of: the school, the brickyard, the log store, the Foster house, the gristmill, the distillery and areas that show evidence of having had structures at one time. Some distance from the town site is the pioneer cemetery which also qualifies for inclusion in this zone.

The University of Minnesota has identified a habitation area believed to be from the Adena-Hopewell culture (500 B.C. to 500 A.D.) just outside the park boundary near the mouth of the Canfield Creek. No major prehistoric sites have been located within the park, however the Minnesota Historical Society has located a number of areas which contain evidence of prehistoric activity. If further study should specifically locate such a site, it would be considered for inclusion within this zone.

Development Zone - The potential development zones were determined primarily by suitable soils and topography. Areas which are structurally stable but subject to occasional flooding are suitable for day-use activities such as picnicking.

Established Zones

The final zoning map is a composite of all potential zones. Management decisions have been made to eliminate conflicts between individual zones. This final zoning map will guide the recreation and resource management decision making process.

Zone 1 - Ecological Protection Zone (page 34)

The only areas designated as potential ecological protection zones which were deleted from this zone are two portions of steep slope where well constructed, erosion-resistant roads and trails provide access to the bluff tops.

Zone 4 - General Environment Zone (page 37)

All areas not designated as another zone are included within this zone.

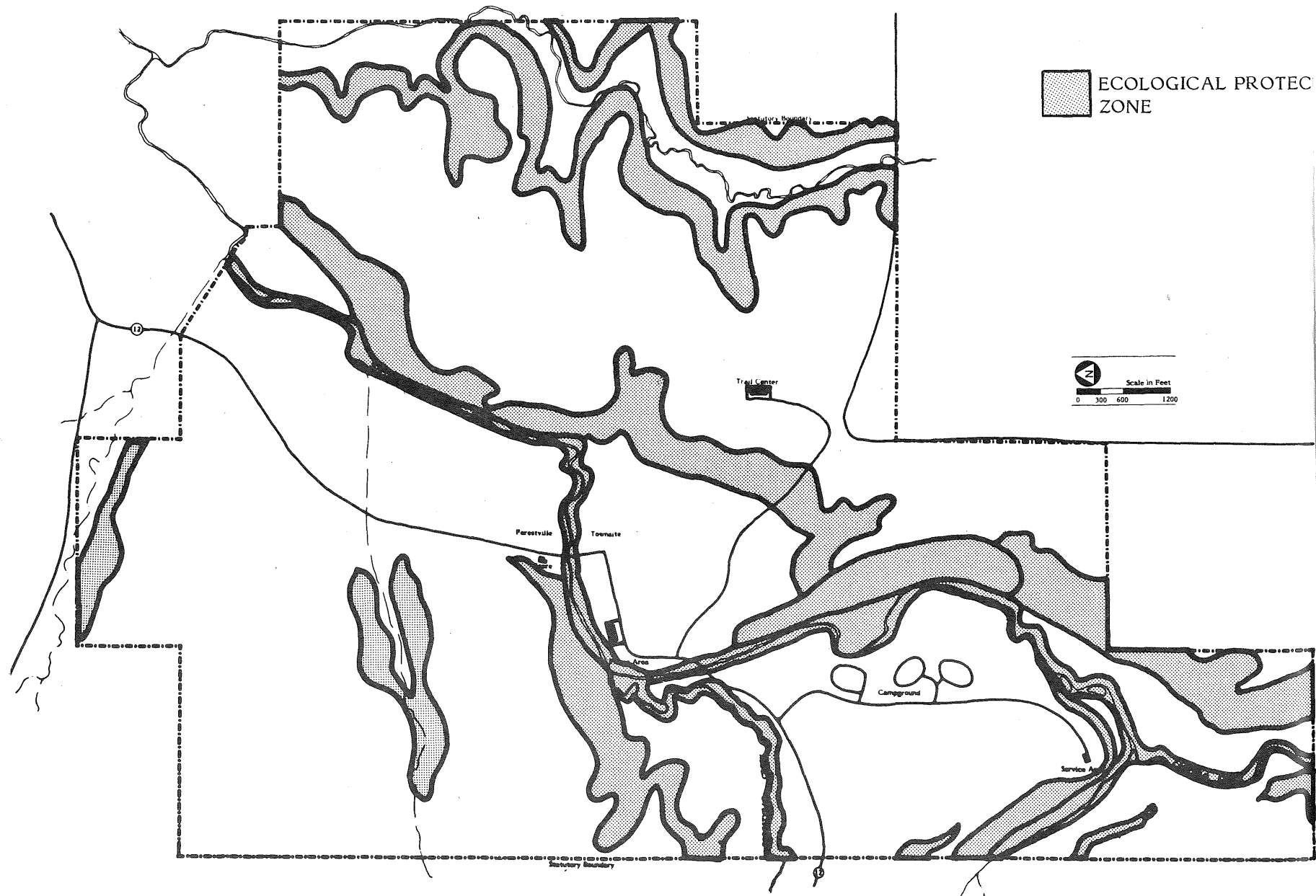
Zone 5 - Historical and Cultural Zone (page 35)

All of the area designated as potential was retained except the South Branch Root River and its banks which was put in an ecological protection zone because of the quality of this stream and the fact that in its native state it is historically compatible.

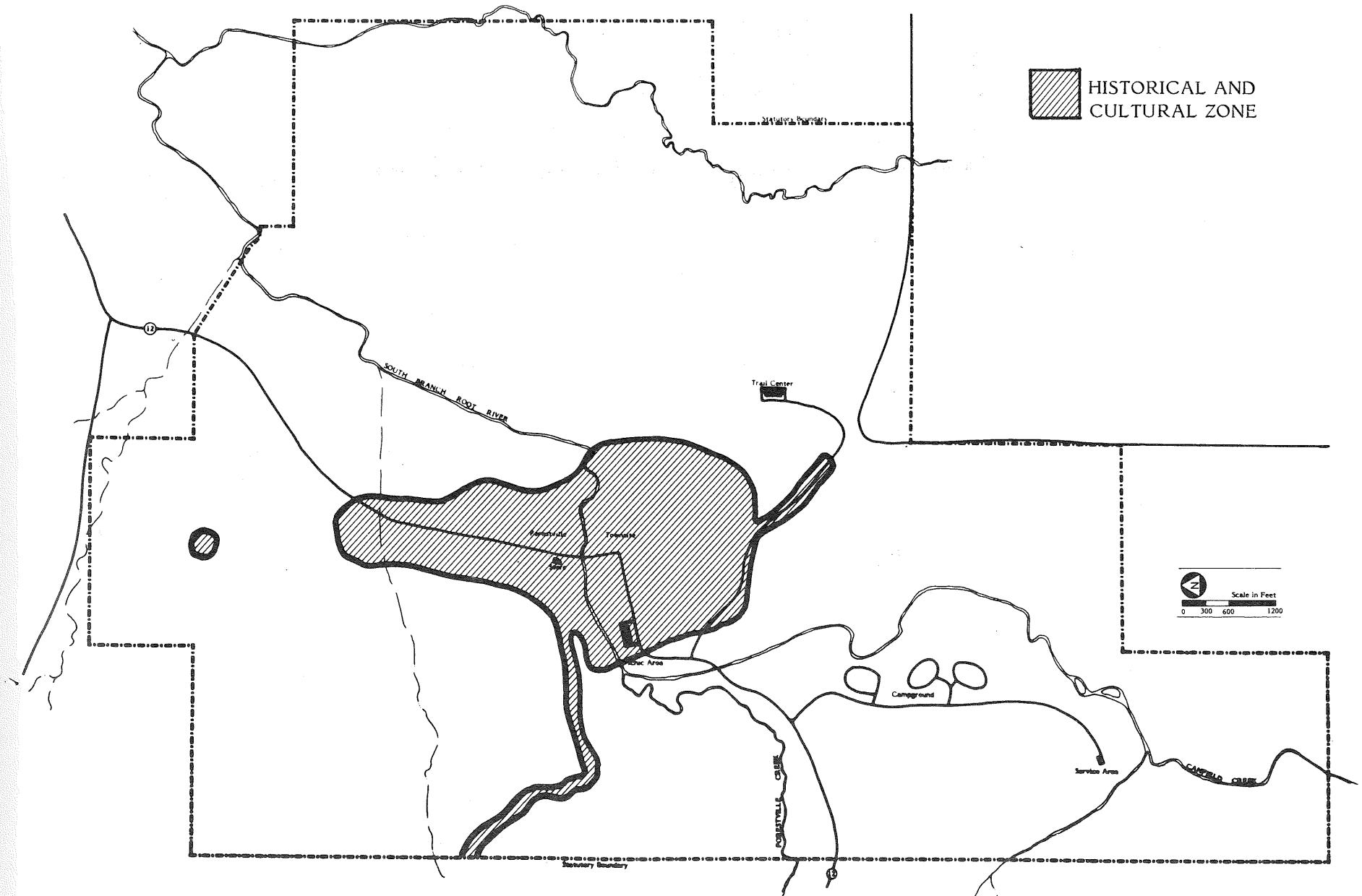
Zone 6 - Development Zone (page 36)

As indicated on the final zoning map, only those areas of the potential zone which were necessary to provide the major facilities for park users were zoned for development.

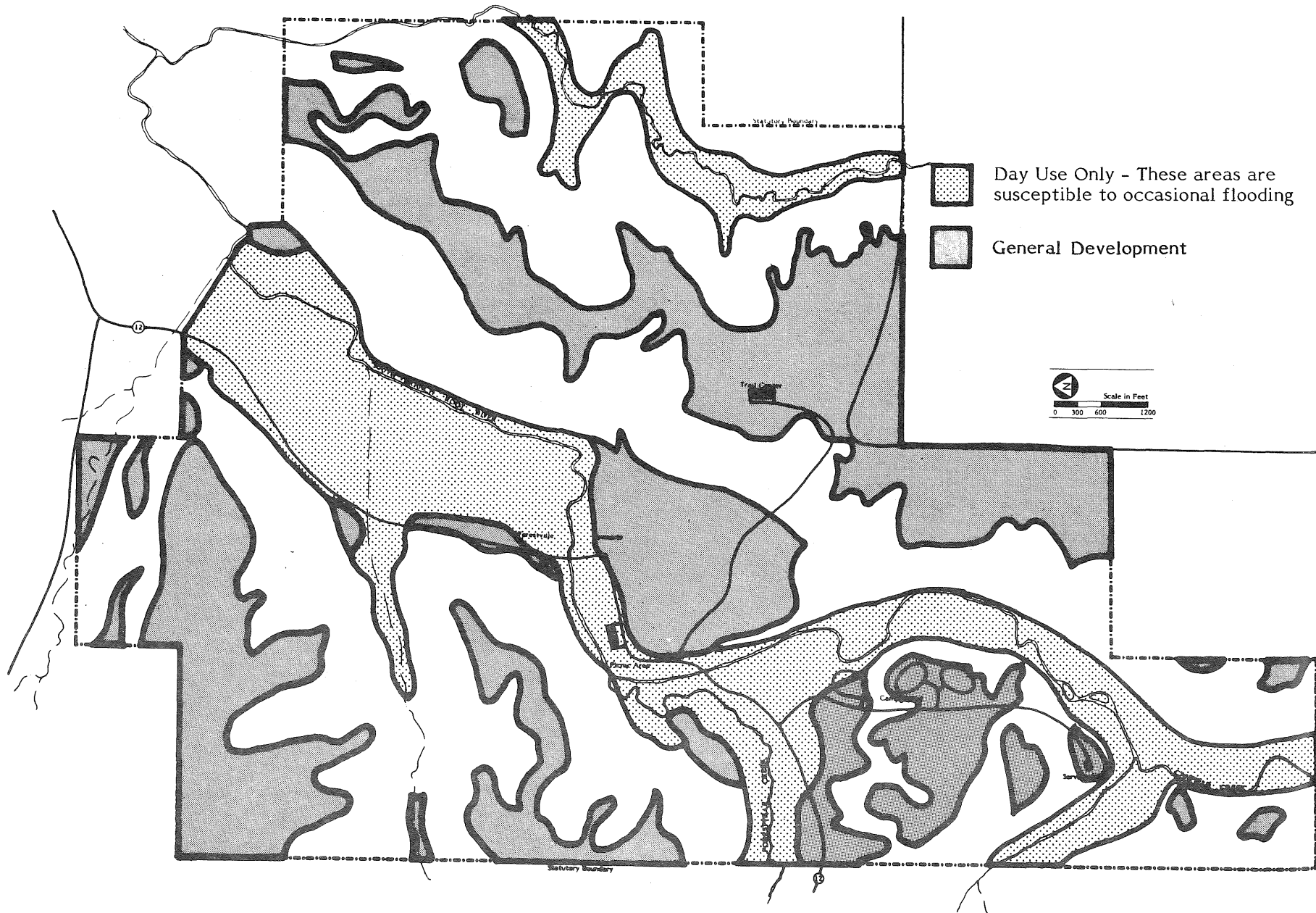
POTENTIAL ECOLOGICAL PROTECTION ZONE

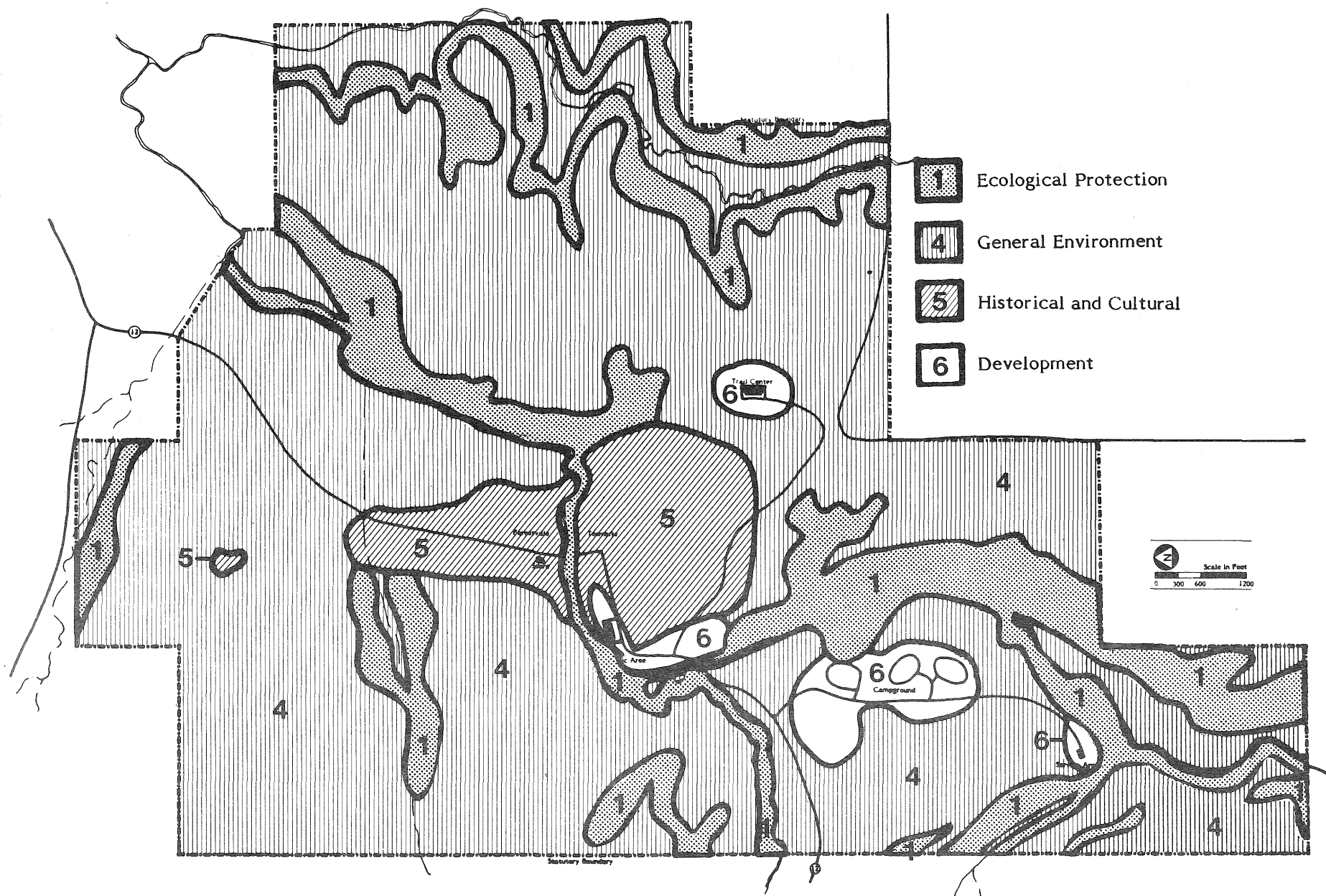


POTENTIAL HISTORICAL AND CULTURAL ZONE



POTENTIAL DEVELOPMENT ZONE





UNDERGROUND WATER RESOURCES

Inventory

This part of southeastern Minnesota is underlain by a layer of fractured limestone which allows surface water to seep directly into the water table without the usual filtration. This condition can pose a serious threat to the quality of the drinking water.

Well Logs for Two of the Existing Wells

Picnic Area Well - 84' Deep

0-9'	Sandy drift
9-21'	Platteville limestone
21-50'	St. Peter sandstone
51-67'	Shakopee dolomite, sandy
67-84'	Shakopee dolomite, fairly hard

Campground Well - 138' Deep

0-31'	Clay drift
31-45'	Platteville limestone
45-58'	Glenwood shale
58-80'	Sandrock and shale
80-138'	St. Peter sandstone

Surface water in the area often drains into sinkholes entering directly into underground drainage channels. Many sinkholes occur in lines on the uplands and increase in number and size near large valleys. Underground passages connect many of them and in places subterranean gorges can be traced several miles by a succession of large sinkholes.

Objectives:

To maintain high quality groundwater

To provide high quality drinking water for park users

Management

Location and design of sewage disposal facilities must be carefully analyzed and field checked prior to implementation.

Wells dug to supply water for public consumption will be drilled through the fractured limestone to the St. Peter sandstone aquifer. Water reaching this layer will have been filtered adequately. The portion of the well shaft within the fractured limestone will be encased to prevent the water in these layers from entering the water supply system.

Sources

"Sinkholes Vex Farmers," Minneapolis Tribune, June 13, 1976, Section 1B.

Picnic Area Well Log, Minnesota Department of Natural Resources, Bureau of Engineering (PO-87-3130), November 15, 1968.

Campground Well Log, Minnesota Department of Natural Resources, Bureau of Engineering (PO-87-3130), Circa. 1967.

SURFICIAL WATER RESOURCES

Inventory

The South Branch Root River is the primary water body within the park. It is fed by two tributaries: Canfield Creek and Forestville Creek.

- South Branch Root River

According to a 1956 Department of Natural Resources fisheries report, the South Branch Root River is 65% riffles and 35% pools, with an average width of 30 feet. The width varies from 8 feet in the riffles to 60 feet in the pools.

The stream bed is predominantly composed of coarse material. The bottom soil consists of 50% rubble, 35% boulder, 10% ledge rock, and 5% silt. The silt is generally found in the large pools.

Clear and colorless for the most part, the water averages 15-20°F below air temperature.

- Canfield Creek

Canfield Creek begins in a bog area outside of the park and flows 8 miles through nearly level prairie, then disappears and flows underground for 5 miles. It reappears from a cave approximately one half mile from the park at the base of an almost sheer limestone bluff and flows 1.5 miles north to join the South Branch Root River.

Canfield Creek's width ranges from 10 to 40 feet but averages 25 feet. Depth averages 5 inches although there are numerous deep pools. Its bottom consists of 90% coarse and 10% fine materials.

The water is clear and colorless. Water temperature in August, 1955 was 61°F while air temperature at the time was 91°F. Laboratory analysis of the water showed it to be a moderately hard water stream with good fertility.

- Forestville Creek

Forestville Creek is a 2.5 mile creek which originates in a cave just outside the park boundary. It has a normal flow of 4 c.f.s. near its source with good water quality. It drains 9,920 acres of agricultural land. This water shed is characterized by sinkhole drainage which minimizes surface run-off.

Objective:

To maintain high water quality in the streams for recreational purposes

Management

Surficial water management will be directed toward controlling the amount of sediment which enters the streams by minimizing the number of horseback riding trail ford crossings and aligning trails to provide access without causing erosion of the stream banks.

Sources

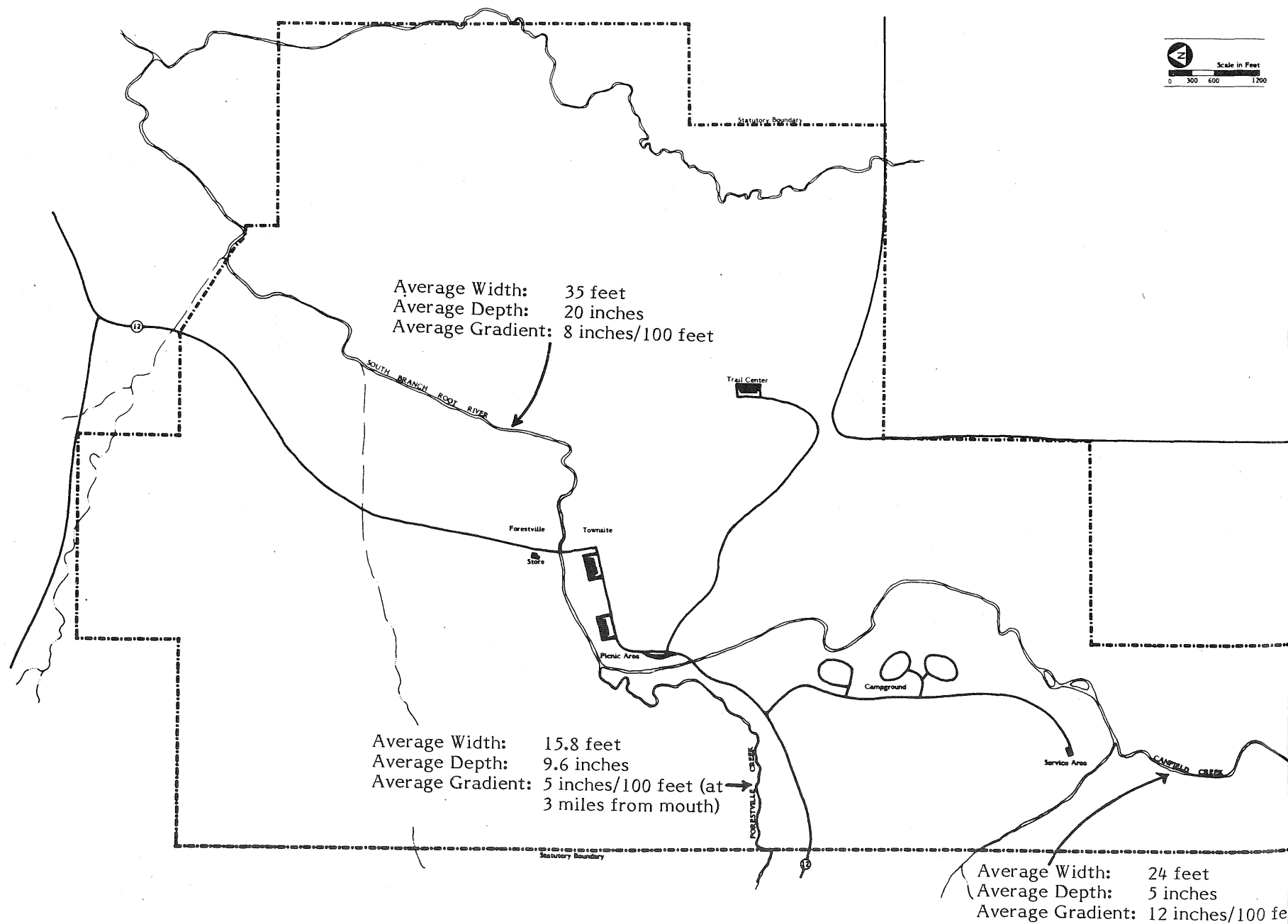
Minnesota Department of Conservation, Stream Survey Report, South Branch (Canfield) Creek, T-25-10, Fillmore County, (St. Paul: Division of Game and Fish), August 2, 1955.

Minnesota Department of Conservation, Stream Survey Report, North Branch Creek, T-25-9, Fillmore County, (St. Paul: Division of Game and Fish), August 4, 1955.

Minnesota Department of Conservation, Stream Survey Data Summary, M-9-25, Fillmore County, (St. Paul: Division of Game and Fish), July 29, 1956.

Minnesota Department of Conservation, North Branch Creek, Trout Habitat Improvement Project Report, (St. Paul: Division of Game and Fish), January, 1960.

HYDROLOGY



FISHERIES

Inventory

Portions of all three streams in the park are classified as natural trout streams.

- South Branch Root River

Fresh water buttercup, pondweed, watercrest, and green algae are found growing in the stream. Approximately 5-10% of the stream bottom is covered with vegetation with fair to good spawning conditions for stream trout. The following species inhabit the river:

Brown trout	Northern redbelly dace
Rainbow trout	Northern common shiner
Common white sucker	Bluntnose minnow
Hog sucker	Central stoneroller
Western blacknose dace	Central Johnny darter
Great Lakes longnose dace	Striped fantail darter
Northern creek chub	Slimy muddler

- Canfield Creek

Canfield Creek enters the South Branch Root River from the south, directly across the river from the proposed group campground. Aquatic vegetation is abundant along the entire stream with buttercup being the most common species. An estimated 15% of the stream bed is covered with aquatic vegetation. Seining samples taken at two stations in 1955, found the following fish:

Brown trout
Common sucker
Longnose dace
Common muddler
Brook stickleback

- Forestville Creek

A major trout habitat improvement project for the creek was implemented in 1958. The emphasis of this project was placed on erosion control through bank stabilization and channel consolidation by means of deflectors, channel blocks, and removal of undesirable flood debris.

Aquatic vegetation is common in the upper two miles of the stream, especially in open or unshaded pastured areas. The remainder of the stream which flows through densely-wooded, well-shaded areas, is nearly devoid of aquatic vegetation. Seining samples taken at two stations in 1955, found the following fish:

Brown trout
Common sucker
Longnose dace
Common muddler

Objective:

To maintain the South Branch Root River, Canfield Creek, and Forestville Creek as wild (non-stocked) trout streams

Management

Changing land management in the watershed and habitat improvement have resulted in increased natural reproduction of trout, thereby reducing the need for stocking. No stocking of hatchery fish is planned unless future population monitoring shows a need. At the present time, DNR Fisheries expects to continue maintaining the habitat character of the streams by structure maintenance and beaver control, with no major improvements planned in the near future.

Sources

Stream Survey Report, South Branch (Canfield) Creek, T-25-10, Fillmore County.

Stream Survey Report , North Branch Creek, T-25-9, Fillmore County.

Stream Survey Data Summary, M-9-25, Fillmore County.

North Branch Creek, Trout Habitat Improvement Project Report.

SOILS

Inventory

The park has four major soil associations: Fayette-Dubuque-Whalan soils, steep rocky land and escarpments, alluvial soils, and Dakota-Waukegan soils (see Soils Map, page 50 and Soil Characteristic/Suitability Chart, page 49).

Fayette-Dubuque-Whalan is the largest soil association within the park, occupying approximately 60% of the land within the statutory boundary. Except for land adjacent to the streams, it is evenly distributed throughout the park. Fayette soils mainly occupy the loess-covered, gently rounded, ridgetops and adjacent slopes. Dubuque and Whalan soils are found on the upper valley slopes along the streams. They have formed on thin wind-laid silt, which lies over bedrock.

Steep rocky land and escarpments occupy approximately 15% of the park. Steep rocky land is a miscellaneous land type that lies chiefly below the upland Fayette-Dubuque-Whalan association and above the alluvial soils of the valley.

Alluvial soils occupy about 20% of the park. This association consists of alluvial, mixed alluvial, and undifferentiated units of Chaseburg and Judson soils. The alluvial soils are found near the Forestville store, the mixed alluvial soils next to the streams, and Chaseburg and Judson soils along an intermittent stream northwest of the store. All of the alluvial soils are medium-textured, well-drained to moderately well-drained, and subject to overflow.

One element of the Dakota and Waukegan association is present within the park. Waukegan soils, which are dark silty or loamy, are found on the stream terrace in the vicinity of the picnic ground. Approximately 5% of Forestville is comprised of Waukegan soils.

Objectives:

To locate development areas on soils which can withstand the intended use

To minimize erosion

Management

The Soil Conservation Service (SCS) has established recommended limitations for development based on the suitability of soils. For a breakdown of the types of development rated by this system see the Soils Suitability Chart on page 49 . The type of limitations on development range from only slight limitations to severe limitations.

These stated limitations are not absolute, but they generally provide a sound basis for the selection of development locations. However, in the final determination of the location of the picnic area (see Soil Suitability/Intensive Picnic Areas and Campground Areas Map, page 53) it should be noted that the SCS has determined that all alluvially deposited soils require severe limitations for either picnic or campground development. These are the soils that usually comprise a floodplain. In other recreational units, floodplains have been successful locations for day-use facilities such as picnicking. For this reason, a large portion of the picnic ground near the Forestville historic town site will be located on the floodplain of the South Branch Root River. (See Development Section, page 90 for further discussion.)

The west bank of the South Branch Root River near the northern most loop in campground A is eroding. The situation is particularly critical during periods of high water. It is recommended that large boulders be placed at the base of the bank to deflect the rushing water as it rounds the bend. Bank stabilization should be considered in all the developed and historical zones of the park. In all other zones such action should be considered only when necessary for fisheries management.

Several trails within the park are creating soil erosion problems and should be realigned or developed further (see Trails Section, page 103). Generally, trails should not be developed with sustained gradients over 15%. Steps are often an acceptable construction technique on these steep slopes. Where runoff erosion is a problem, small logs or rows of logs placed diagonally across a trail will intercept and divert water into vegetated areas. Finally, on the heavily used trails, a surfacing material may be necessary.



^A Permeability measured in inches per hour

^B Based on buildings without basements

^C Based on buildings with basement or foundation

^D Estimated from available data

^E No data

LIMITATIONS

¹ SLOPE

² SURFACE TEXTURE

³ DEPTH TO BEDROCK

⁴ FLOODING (DURATION & FREQUENCY)

⁵ POLLUTION POTENTIAL

⁶ PERMEABILITY

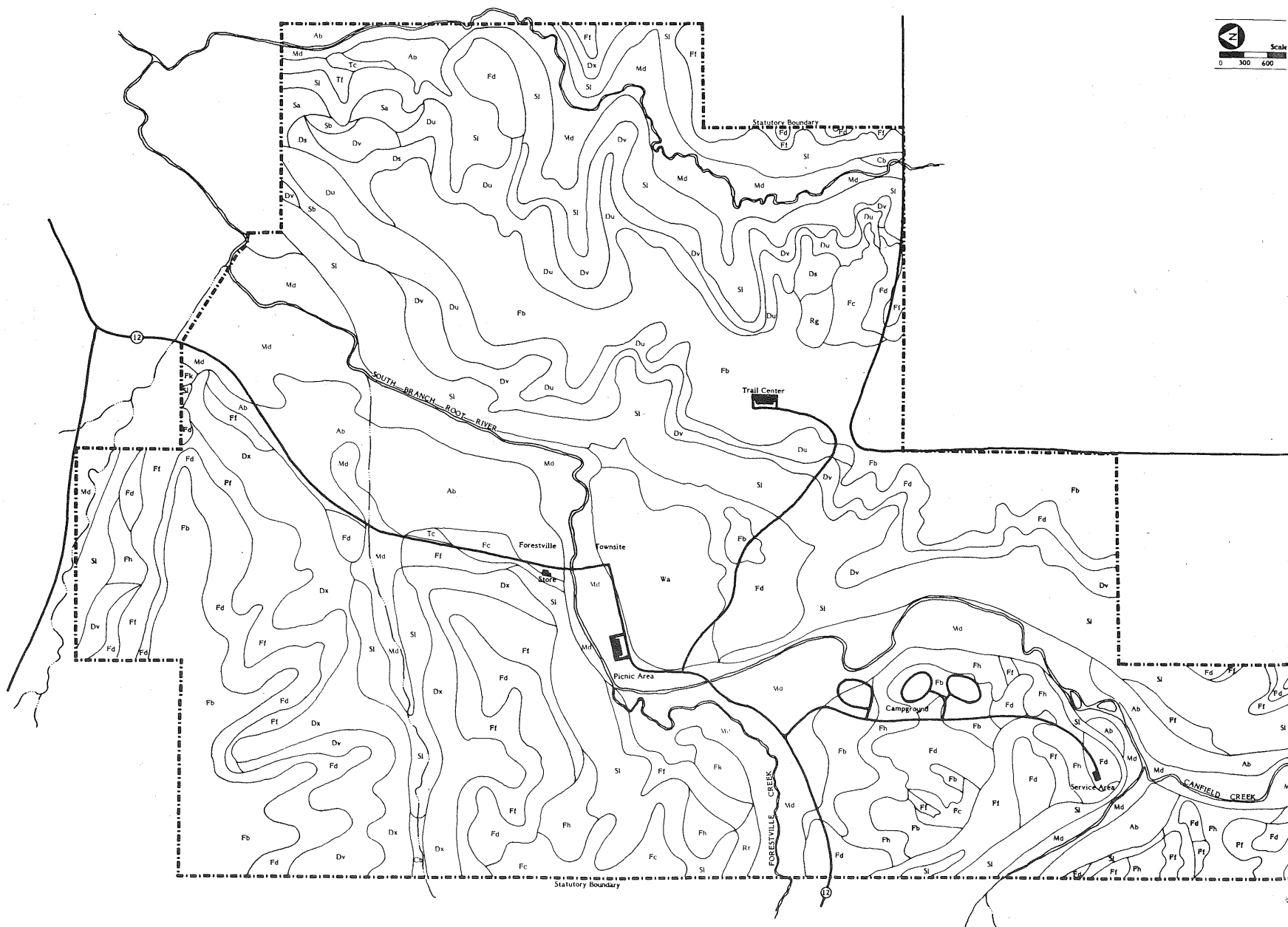
⁷ WATER TABLE

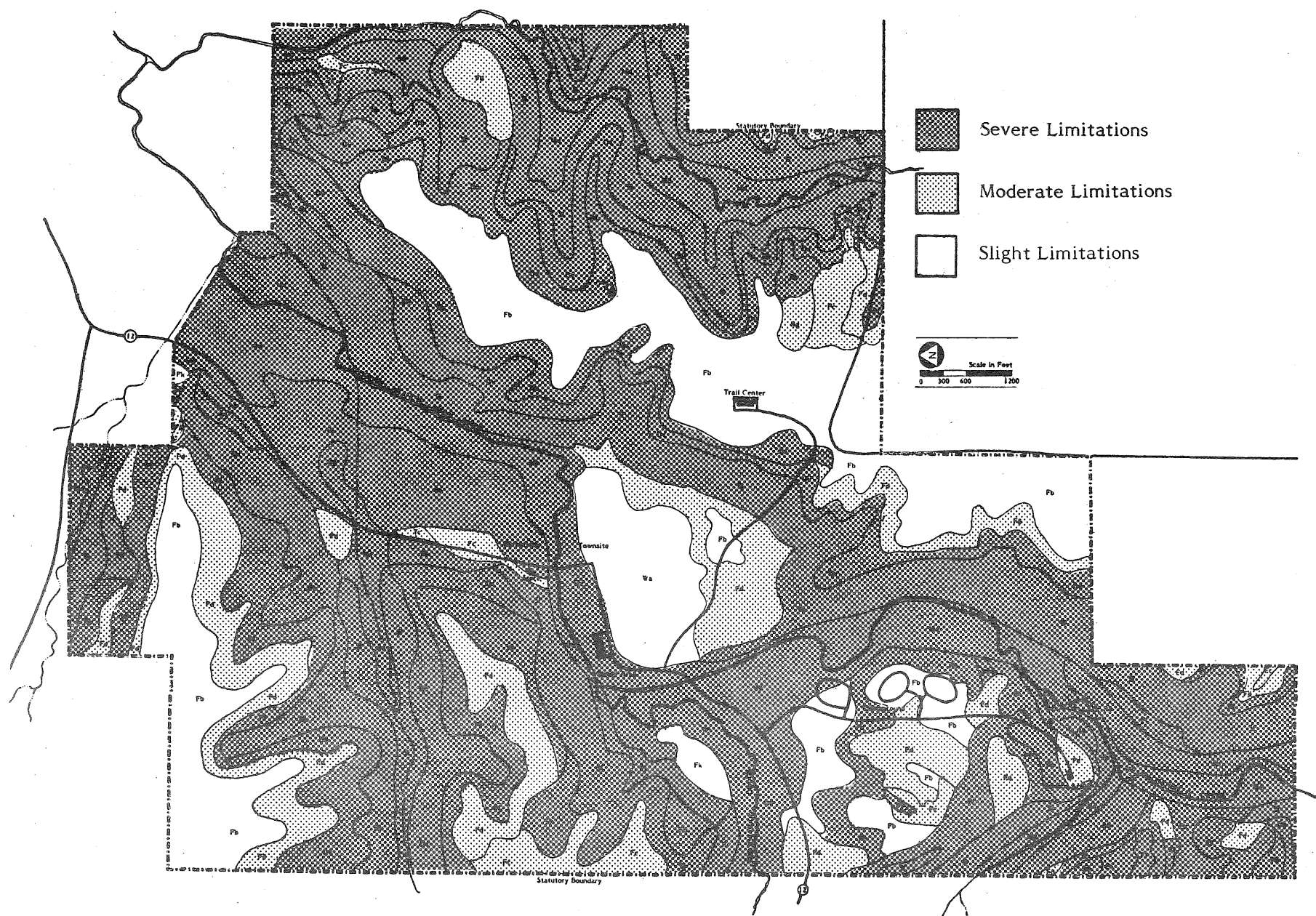
⁸ FROST ACTION

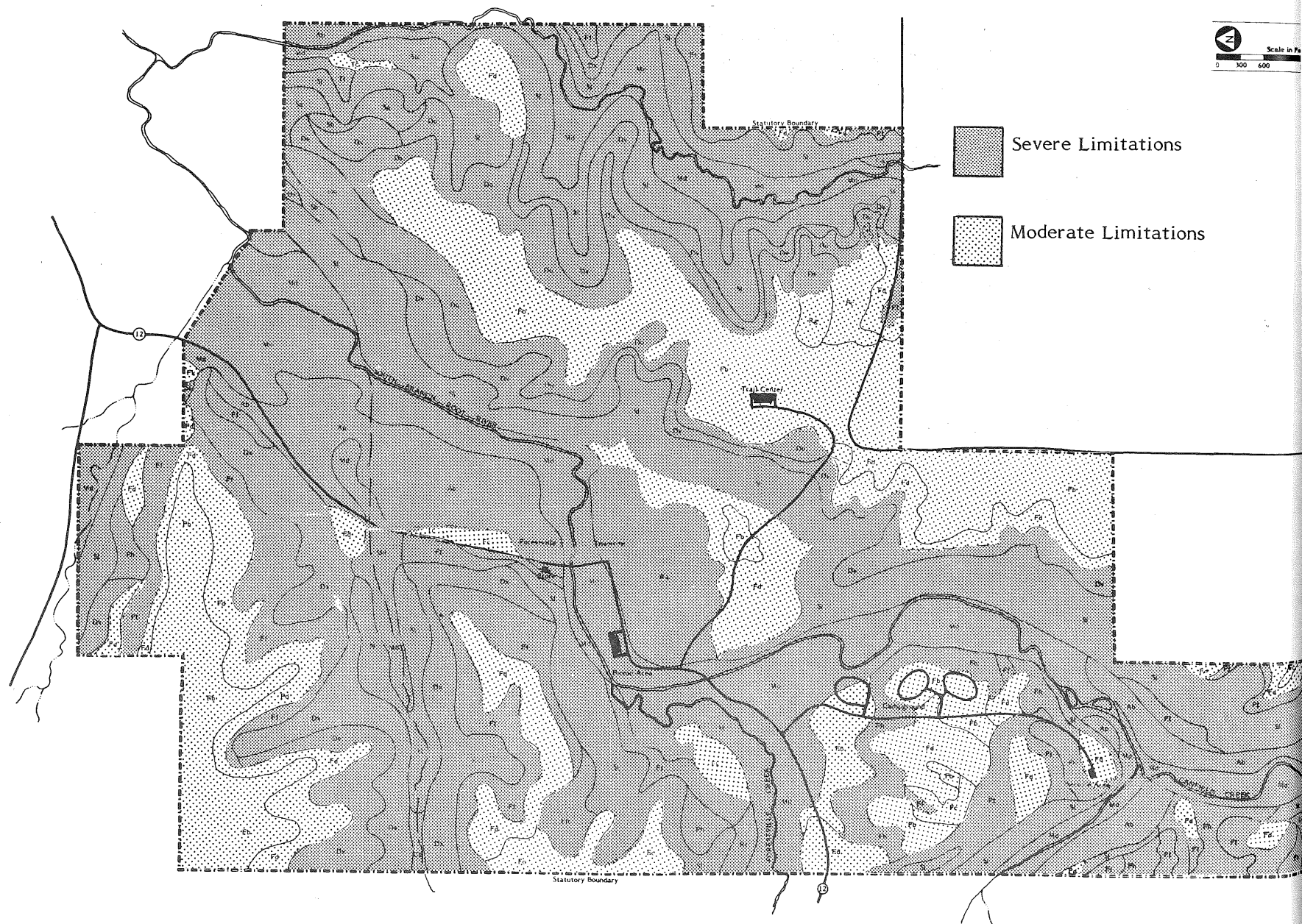
⁹ DRAINAGE

¹⁰ SHRINK-SWELL

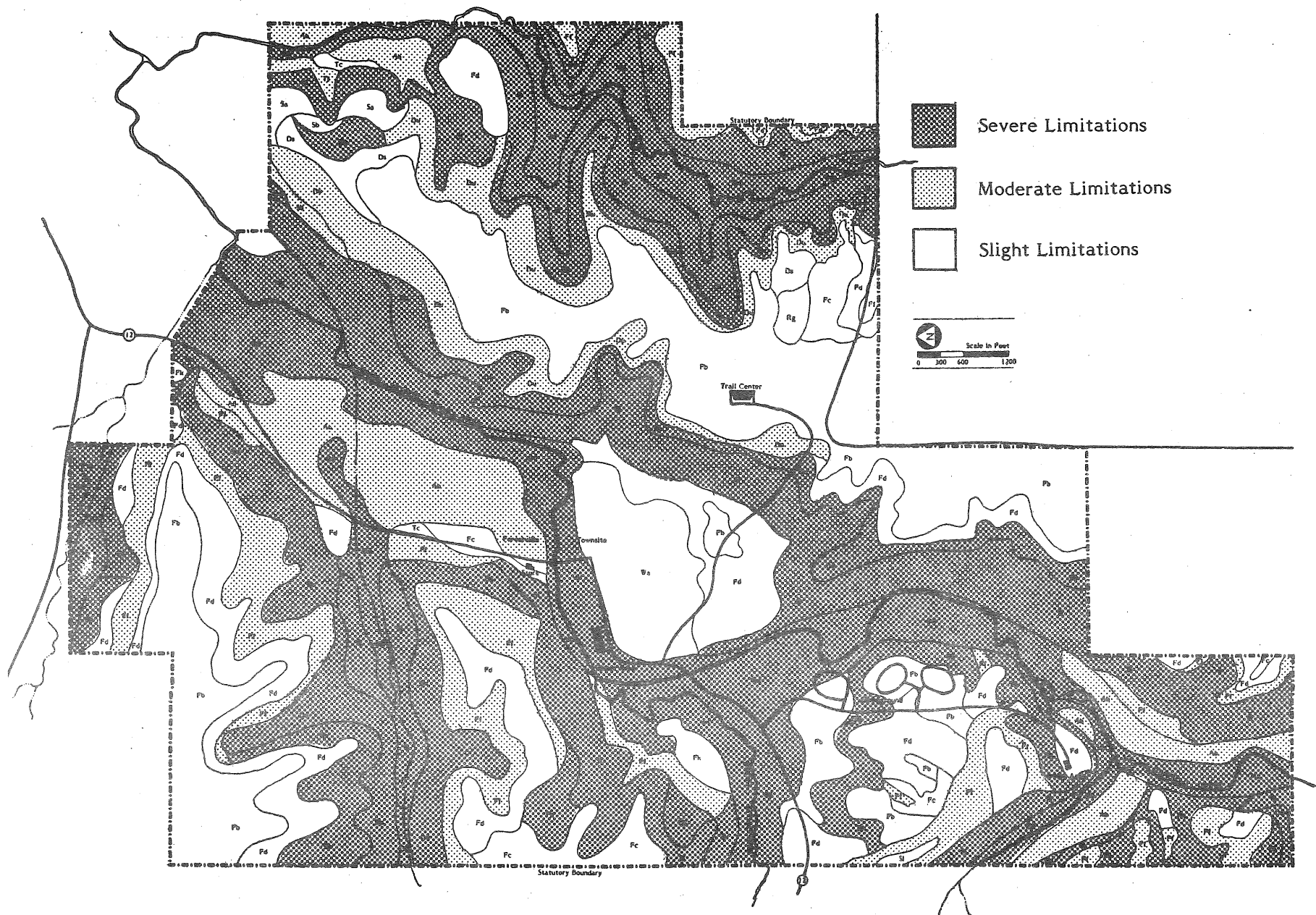
Soil Type	Map Code	Slope	Permeability	Erosion Hazard	Potential Frost Action	Intensive		Paths and Trails	Recreation Buildings	Sewage Lagoons	Septic Tank Filter Fields
						Picnic Areas	Camp Areas				
Alluvial land	AB	0-2%	Variable	Slight	Moderate	Moderate ⁴	Moderate ^{4,2}	Slight	Severe ^{4,7}	Severe ^{4,6,7}	Severe ^{4,5,7}
Chaseburg and Johnson	C6	0-12%	.6-2.0	Slight	Moderate	Moderate ⁴	Severe ⁴	Moderate ²	Severe ⁴	Severe ^{4,6}	Severe ⁴
Dubuque and Whalan	Ds	2-6%	.6-2.0	Slight	Low	Slight	Slight	Slight	Moderate	Severe ^{3,5}	Severe ^{3,5}
	Du	7-11%	.6-2.0	Slt-Mod	Low	Moderate ²	Moderate	Slight	Moderate	Severe ^{3,5}	Severe ^{3,5}
	Dv	12-17%	.6-2.0	Slt-Mod	Low	Severe ²	Severe ¹	Moderate	Mod-Sev	Severe ^{3,5}	Severe ^{3,5}
	Dx	18-45%	.6-2.0	Mod-Sev	Low	Severe ^{1,2}	Severe ^{1,2}	Moderate	Severe	Severe ^{3,5}	Severe ^{3,5}
Fayette	Fb	2-6%	.6-2.0	Slt-Mod	Moderate	Slight	Slight	Slight	Slight	Moderate ⁶	Slight
	Fc	2-6%	.6-2.0	Slt-Mod	Moderate	Slight	Slight	Slight	Slight	Moderate ⁶	Moderate ⁶
	Fd	7-11%	.6-2.0	Slt-Mod	Moderate	Slt-Mod ⁹	Slt-Mod ²	Slight	Slt-Mod ^{1,2}	Mod-Sev ^{1,6}	Moderate ⁶
	Ff	12-17%	.6-2.0	Slt-Mod	Moderate	Mod-Sev ⁹	Mod-Sev ²	Slt-Mod ²	Mod-Sev ¹	Severe ^{1,6}	Mod-Sev ¹
	Fh	18-45%	.6-2.0	Severe	Moderate	Severe ^{1,9}	Severe ^{1,2}	Mod-Sev ^{1,2}	Severe ¹	Severe ^{1,6}	Severe ¹
Mixed Alluvial land	Md	0-6%	Variable	No Data	High	Severe ⁴	Severe ⁴	Moderate ⁴	Severe ^{4,7}	Sev ^{4,5,6,7}	Severe ^{4,5,7}
Fayette	Fk	2-6%	.6-2.0	Slt-Mod	Moderate	Slight	Slight	Slight	Slight	Moderate	Slight
Renova	Rg	2-6%	.6-2.0	Slt-Mod	Moderate	Slight	Slight	Slight	Moderate ⁸	Moderate ⁶	Moderate ⁶
Schapville	Sa	2-6%			Moderate	Slight	Moderate ⁹	Slight	Moderate	Severe ³	Severe ³
	Sb	7-11%			Moderate	Moderate ¹	Moderate ^{1,9}	Slight	Moderate ^{1,3,8}	Severe ^{1,3}	Severe ^{1,2}
Steep, rocky land	Sl	17-35%		Severe		Severe ¹	Severe ¹	Severe ¹	Severe ¹	Severe ¹	Severe ¹
Tama & Downs	Tc	2-6%	.6-2.0	Slt-Mod	Moderate	Slight	Slight	Slight	Slight	Moderate ⁶	Slight
	Tf	12-17%	.6-2.0	Slt-Mod	Moderate	Moderate	Moderate ^{1,6}	Slight	Moderate ¹	Severe ^{1,6}	Moderate ¹
Waukegan	Wa	0-1%	.6-2.0	Slt-Mod	Low	Slight	Slight	Slight	Slight	Severe ^{3,5,6}	Slight







SOIL SUITABILITY/INTENSIVE PICNIC AREAS AND CAMPGROUND AREAS



VEGETATION

Pre-White Settlement Vegetation

During the past few centuries, the majority of the park has been cloaked with hardwood vegetation - primarily oak on the uplands, northern hardwoods and scattered white pine on the valley slopes and terraces, and bottomland hardwoods and sedge on the valley floor. An area of tall grass prairie existed where the town of Forestville was built.

Inventory

Today the primary vegetation of this park is northern hardwoods with occasional white pine rising above the deciduous blanket. Large tracts of bottomland forest and old field are scattered along the valleys, with some old field and agricultural land on the bluff tops. The ecological communities currently existing within the park and their acreage are as follows:

Northern Hardwoods (NoH) 1,585.5 acres (62.5%)

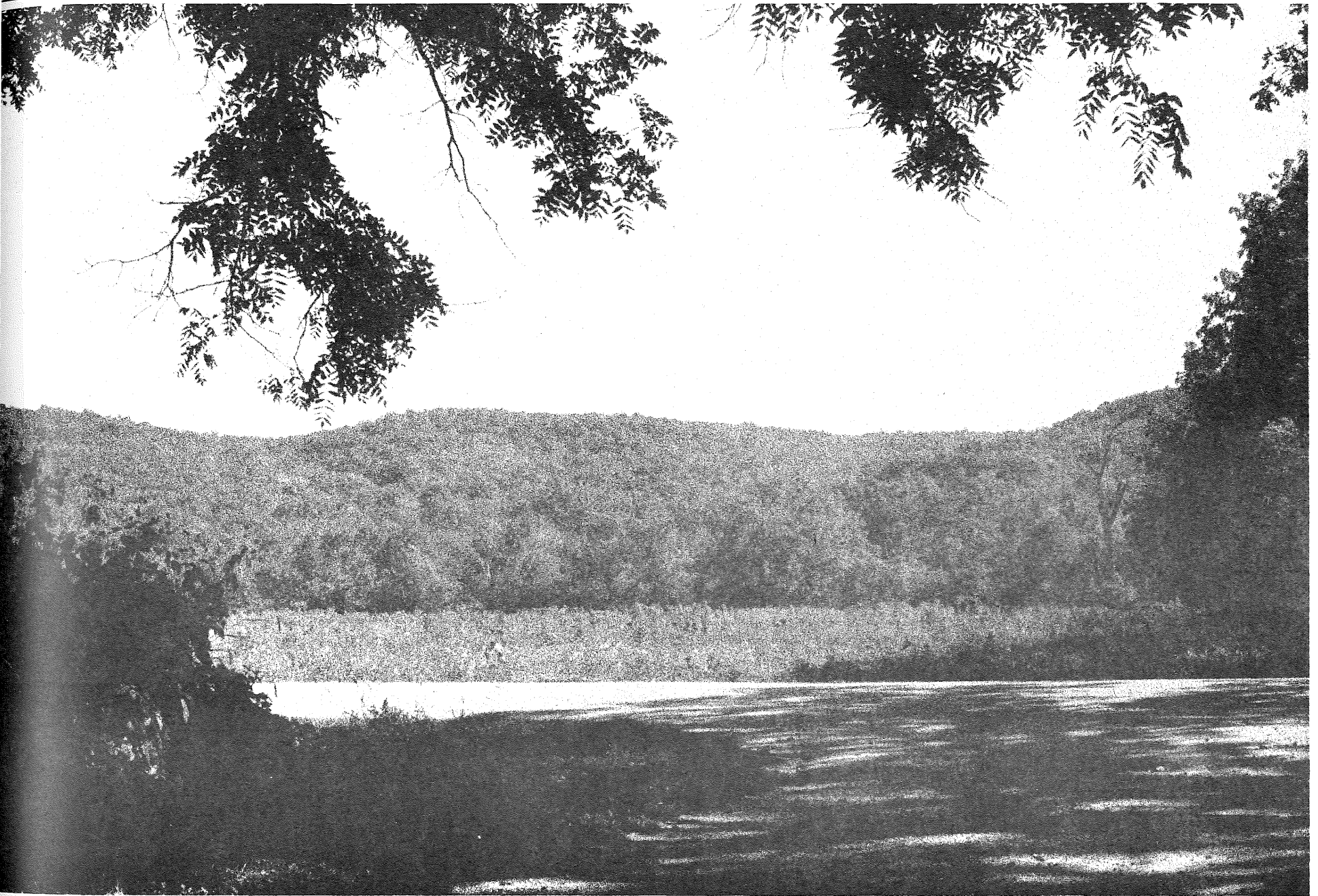
Northern hardwoods which cover the majority of the park are composed of sugar maple, red oak, basswood, green ash, elm, and scattered white pine. A variety of size classes exist, but the majority of the trees are 5 - 15 inches in diameter.

Bottomland Forest (BoT) 475.7 acres (18.7%)

This community occurs on nearly all major floodplains and valley bottoms within the park. The species within this community include American elm, red elm, green ash, cottonwood, silver maple, willow, and ironwood. The majority of trees are 9-15 inches in diameter with occasional older and larger trees.

Old Field (OF) 257.7 acres (10.1%)

The old field areas within the park are located primarily in the valley. These areas were formerly cultivated fields or other disturbed areas which have been characterized by bluegrass, weeds, and brome grass, but are being invaded by boxelder, ash, sumac, and oak seedlings.



Oak Savanna (SV) 52.1 acres (2.1%)

Just north of the trail center is an oak savanna community. This open woods area is comprised primarily of open grown bur oaks, which are 9 to 15 inches in diameter.

Big Woods (BiW) 50.8 acres (2%)

This community can be found along the south central portion of the park boundary. The predominant tree species within this relatively young community are sugar maple, basswood, elm, red oak, bur oak, hickory, black walnut, and butternut.

Agriculture (Ag) 47.6 acres (1.9%)

The only land cleared for agriculture is located in the valley or on the bluff tops. Much of this land has been allowed to succeed into old field and pioneer hardwood. Several areas, primarily those still in private ownership, are being farmed. One major cultivated area is located at the northern end of the Root River Valley, with other smaller parcels on the southeastern edge of the park (See map, page 59).

Open Brush (BR) 44 acres (1.7%)

The predominant species of this community are hazel, dogwood, wolfberry, sumac, and blackberry, with some scattered, small clumps of young quaking aspen and oak. This vegetational community can be found on bluff edges in the northeastern and southwestern corners of the park and in cultivated areas where natural succession has been allowed to take place.

Pioneer Hardwoods/Aspen (PHas) 33.8 acres (1.3%)

A sample of this type of vegetation can be found just west of the upper campground and is characterized by dense stands of aspen saplings.

Lowland Prairie (PL) 23 acres (.9%)

Lowland prairies are comprised of moisture-loving grasses and forbes such as blue-joint, stargrass, and black-eyed Susan. They can be found along the South Branch Root River near the existing service area.

Pioneer Hardwoods/Saplings (PHs) 4.9 acres (.2%)

This area, located east of the Forestville town site, is characteristic of pioneer hardwood succession into an old field community with dense sapling stands of cottonwood, quaking aspen, paper birch, boxelder, oak, and elm.

Disease Problems

Dutch elm disease is taking its toll here, as in other areas of the state. Although elms are scattered throughout the bottomland forest, only in the area along Canfield Creek is there a high proportion of elm. At present, many of the elms within the park are dead or dying and this trend is expected to continue.

Source

Reister, Floyd, Forest Cover Typing, (under the supervision of Barry Morse, DNR Area Forester), 1976.

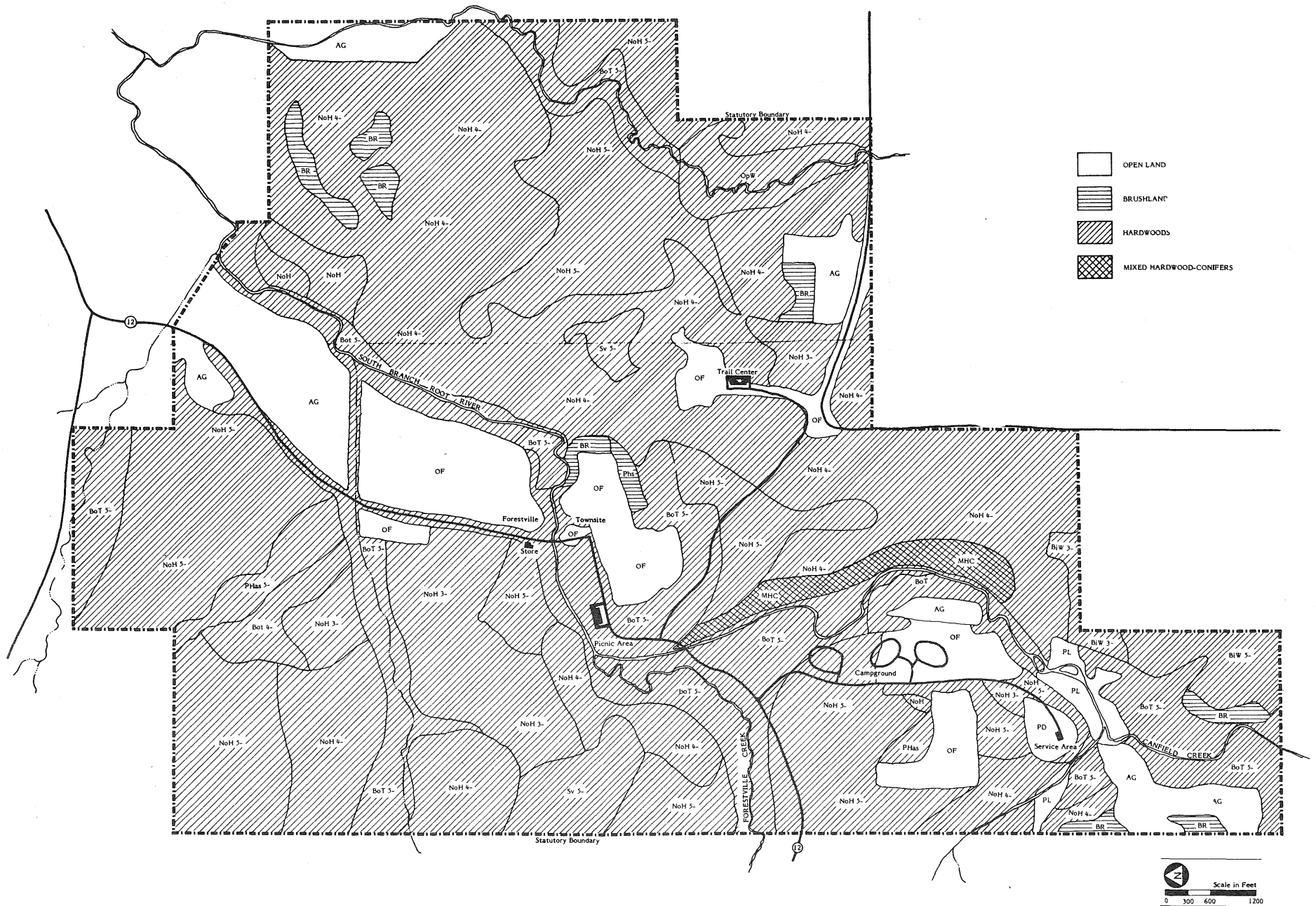
<u>Code</u>	<u>Community</u>
AG	Agriculture
BW	Big Woods
BoT	Bottomland Forest
BR	Open Brush
NoH	Northern Hardwoods
OF	Old Field
PHas	Aspen
PHs	Pioneer Hardwood/ Sapling
PL	Lowland Prairie
SV	Oak Savanna

Ecological Community → **PH_h 36** ← * Size * Density

NOTE: Where there are no size and density number designations on map, there is no data available.

<u>Overstory Size and Density Code</u>					
* Size					
	1	2	3	4	5
* Density	Seedlings (0-1" dbh) Trees/Acre	Saplings (1"-5" dbh) Trees/Acre	Poles (5"-9" dbh) Trees/Acre	Small Saw Timber (9"-15" dbh) Trees/Acre	Large Saw Timber (15"+ dbh) Trees/Acre
0	*	*	0-30	0-19	9-5
1	0-500	0-250	31-90	11-40	6-20
2	500-1,000	251-500	91-150	41-60	21-30
3	1,001-2,000	501-1,000	151-210	61-80	31-45
4	2,001-5,000	1,001-2,500	211-270	81-100	46-60
5	5,001-10,000	2,501-5,000	271-330	101-130	61-75
6	10,000-20,000	5,001-10,000	331-390	131-150	76-90
7	20,001-30,000	10,001-15,000	391-450	151-180	91-105
8	**	**	451-510	181-200	**
9	**	**	511+	201+	**

* dbh - diameter/breast height
 ** Not a valid density code for these size classes



Objectives:

To retain or reestablish the vegetative cover of the majority of the park consistent with pre-white settlement vegetation patterns

To manage vegetation for spatial and wildlife diversity

To preserve rare or unusual plant communities

To manage vegetation in development areas to allow intensive use without major resource deterioration

Management

The dense northern hardwood vegetation is one of the primary reasons for the park's existence. If the suggested statutory boundary modification (see page 126) is adopted, the custodial control of the blufftop portion of the forest will be transferred to the Division of Forestry. This area will then be managed for sustained yield, preserving the existing character of the vegetation. The portion of northern hardwoods under the custodial control of the Division of Parks and Recreation will be allowed to grow, mature, and die uninterrupted. Consequently the age, class, and species composition of this area is expected to change through the years, while the upland hardwood forest character will be maintained.

The following vegetation management map and its associated key describes the proposed management. Some of the specific management recommendations concern areas which have been recommended for transfer to the Division of Forestry and would therefore be carried out under Forestry's control.

<u>Map Code p. 64</u>	<u>Management Projects</u>	<u>Specific Recommendations</u>
1	Passive Management	Wild fire control.
2	Maintain Open Brush	Maintain by cutting every 10-15 years.
3	Cut 4 Openings	Cut four openings (1 to 3 acres in size) near the trail alignment for visual diversity and wildlife habitat enhancement.

4	Cut 4 Openings	Cut four openings (1 to 3 acres in size) near the trail alignment for visual diversity and wildlife habitat enhancement.
5	Reforest Old Field (Orchard)	Native hardwoods should be interplanted randomly and apple trees removed as the newly planted vegetation nears maturity.
6	Thin Overlook	Selected small trees and/or branches should be removed on the side hill below the overlook to allow a view of the valley and far bluff.
7	Reforest Agricultural Land	Walnut and other bottomland hardwood vegetation should be planted in scattered clumps allowing the majority of the area to succeed naturally.
8	Reforest Old Field	Walnut and other bottomland vegetation should be planted in scattered clumps allowing the majority of the area to succeed naturally.
9	Cut 2 Openings	Cut two openings (1 to 3 acres in size) near the trail alignment for visual diversity and wildlife habitat enhancement.
10	Plant Trees	Plant scattered trees where historically appropriate (as approved by Minnesota Historical Society) and maintain a small historical garden to illustrate historical land use practices and to provide raw materials for a crafts program and a food source for wildlife. Mow the remainder.
11	Plant Trees and Reestablish Prairie	Plant scattered trees where historically appropriate (as approved by MHS). The remaining area should be seeded with native vegetation and burned every 3-4 years.
12	Maintain Pioneer Hardwoods	As trees mature they should be harvested to maintain a sapling character which will provide a food source for wildlife.

13	Cut 1 Opening	Cut one opening (1 to 3 acres in size) near the trail alignment for visual diversity and wildlife habitat enhancement.
14	Cut 4 Openings	Cut four openings (1 to 3 acres in size) near the trail alignment for visual diversity and wildlife habitat enhancement.
15	Thin Overlook	Selected small trees and/or branches should be removed on the side hill below the overlook to allow a view of the valley and far bluff.
16	Thin Picnic Area	Selected trees and diseased elms should be removed to allow more sunlight to reach the ground cover in the actively used portion of the picnic ground. Clumps of unmowed vegetation should be left in this area to act as spatial delineators and control circulation.
17	White Pine Regeneration	Although good white pine reproduction conditions should be encouraged by some understory thinning and soil scarification, no attempt should be made to establish a dense monotypic stand due to the danger of blister rust.
18	Thin Northern Hardwoods	Remove selected trees and diseased elms to provide more light for the ground cover. Plant with a shade tolerant grass mixture and implement an annual fertilization program.
19	Thin Northern Hardwoods	Remove selected trees and diseased elms to provide more light for the ground cover. Plant with shade tolerant grass mixture and implement an annual fertilization program.

20	Plant Hardwoods	Although many hardwood trees have been planted in this area, more hardwoods and a few scattered clumps of white pine should be added. In order to permanently maintain some of the openness, plantings should be spaced 80-100 feet. Due to problems with lawn mowers, mast-producing trees, such as walnut should not be planted.
21	Reforest Old Field	Scattered clumps of native northern hardwood species should be planted and the rest of the area allowed to succeed naturally maintaining small openings of pioneer hardwood saplings and brush.
22	Plant Permanent Wildlife Food Plot	This annual food plot should be replaced with a permanent wildlife plot which would include saplings and indigenous fruit-bearing shrubs.
23	Reforest Old Field	Scattered clumps of native northern hardwood species should be planted and the rest of the area allowed to succeed naturally maintaining small openings of pioneer hardwoods saplings and brush.
24	Plant White Pine	Scattered clumps of white pine should be interplanted with existing young hardwood vegetation.
25	Maintain Lowland Prairie	This vegetation type should be maintained by burning approximately every three years.
26	Timber Removal/Reforestation	Existing elm trees should be harvested. After the elm removal, some clumps of native bottomland hardwoods trees should be planted in any large openings that the removal creates. The rest of the area should be allowed to revegetate naturally.
27	Reforest Agricultural Land	Scattered clumps of native hardwoods species should be planted and the rest of the area allowed to succeed naturally, maintaining small openings of pioneer hardwood saplings and brush.



WILDLIFE

Inventory

Many species are commonplace but unnoticeable because of their elusive or secretive behavior. For many visitors, the mere awareness of the presence of wildlife is all that is needed to change a dull, uneventful walk through the brush into a challenging, refreshing stroll through nature's handiwork. In order to provide such an experience for park users, detailed inventories of park wildlife are needed so that managers are better able to manage habitat to attract certain species or protect habitat to ensure the continued presence of existing species. The following wildlife inventory was based on checklists and reports submitted to us by local residents, 'birders', naturalists, area game managers, and park managers. The list is not all inclusive and will continue to be revised and updated as new data is reported.

Certain wildlife species occurring within a park are especially noteworthy because special precautions are required in their management or protection. These species may be sensitive to human activity or have the potential of damaging vegetation and property or they may pose a threat to park visitors. These wildlife species and the potential problems are discussed in the following paragraphs.

Endangered, Threatened, or Rare Species

Species within this group are those which are presently in danger of extinction in Minnesota in the immediate future; species which could become endangered in the foreseeable future in Minnesota, but not necessarily throughout their entire range; or species that once resided in Minnesota, but have been extirpated because of changes in land and water use patterns.

Seasonal Residents

Birds

Bobwhite

Mammals

None indicated

Reptiles and Amphibians

None indicated

Species of Special Interest

Species within this group include those which are uncommon or locally distributed in Minnesota and are not presently threatened or endangered, but might become so. Also included are those species which presently are not in any particular difficulty but should be closely watched because of unusual or special values, because they are of special public interest, or because their habitat is especially vulnerable. Special habitat management techniques may be required.

Birds

None indicated

Mammals

None indicated

Reptiles and Amphibians

Wood turtle

Snapping turtle

Troublesome Species

Troublesome species include those species of wildlife which might be detrimental to either the natural resources of a park, park property, or park visitors.

<u>Species</u>	<u>Potential Problems</u>
Birds	
None indicated	
Mammals	
Raccoon	Raiding garbage cans
Deer	Overbrowsing of vegetation
Beaver	Overutilization of vegetation and warming stream water
Reptiles and Amphibians	
Timber rattlesnake	Potential hazard to trail users

Forestville with its variety of vegetational types has the habitat required for many species of wildlife. Those species observed in the park to date are shown on the following checklists. Of course, as new information is gathered the list will have to be updated. Definitions used in these checklists are as follows:

DEFINITIONS (for Wildlife Charts, pages 68 - 72)

Abundant - Trained observer may see several individuals in one day during the residency period of the species.

Common - Trained observer may see one or more individuals in one day.

Uncommon - Trained observer may see one individual in the course of one year.

Rare - Species normally not observed by the trained observer.

Endangered - Listed in the federal register as a threatened or endangered species.

Unknown - Abundance of an individual species in a given park has not been determined.

Permanent Resident - Resident in the park area on a year-around basis.

Summer Resident - Only found in the park area during the summer months, presence may or may not indicate breeding activity.

Migrant - Normally found in the park area only during the spring or fall migratory season.

Winter Visitant - Normally found in the park area only during the winter months.

Seasonal Inactive - Species is seasonally inactive in the park area, may enter dormancy, hibernation, or aestivation.

Uncertain - Seasonal occurrence status is not known for the species in the park area.

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE						SEASONAL OCCURRENCE		
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	WINTER VISITANT
	Common Loon									
	Red-throated Loon									
	Red-necked Grebe									
	Horned Grebe									
	Eared Grebe									
	Western Grebe									
	Pied-billed Grebe									
	White Pelican									
	Double-crested Cormorant									
●	Great Blue Heron			●						●
	Green Heron									
	Cattle Egret									
	Great Egret									
	Black-crowned Night Heron									
	Yellow-crowned Night Heron									
	Least Bittern									
	American Bittern									
	Whistling Swan									
	Canada Goose									
	White-fronted Goose									
	Snow Goose									
●	Mallard		●							●
	Black Duck									
	Gadwall									
	Pintail									
	Green-winged Teal									
●	Blue-winged Teal		●							●
	American Wigeon									
	Northern Shoveler									
●	Wood Duck		●							●
	Redhead									
	Ring-necked Duck									
	Canvasback									
	Greater Scaup									
	Lesser Scaup									
	Common Goldeneye									
	Bufflehead									
	Oldsquaw									
	Harlequin Duck									
	White-winged Scoter									
	Surf Scoter									
	Black Scoter									
	Ruddy Duck									
	Hooded Merganser									
	Common Merganser									
	Red-breasted Merganser									
●	Turkey Vulture		●							●
	Goshawk									
	Sharp-shinned Hawk									
	Cooper's Hawk									
●	Red-tailed Hawk				●					●

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE						SEASONAL OCCURRENCE		
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	WINTER VISITANT
●	Red-shouldered Hawk		●							●
	Broad-winged Hawk									
	Swainson's Hawk									
	Rough-legged Hawk									
	Ferruginous Hawk									
	Golden Eagle									
	Bald Eagle									
●	Marsh Hawk		●							●
	Osprey									
	Peregrine Falcon									
	Merlin									
●	American Kestrel					●				●
	Spruce Grouse									
●	Ruffed Grouse		●							●
	Greater Prairie Chicken									
	Sharp-tailed Grouse									
●	Bobwhite					●				●
●	Ring-necked Pheasant		●							●
	Chukar									
●	Gray Partridge		●							●
	Sandhill Crane									
	King Rail									
●	Virginia Rail		●							●
	Sora									
	Yellow Rail									
	Common Gallinule									
	American Coot									
	Semipalmated Plover									
	Piping Plover									
	Killdeer									
	American Golden Plover									
	Black-bellied Plover									
	Ruddy Turnstone									
●	American Woodcock		●							●
	Common Snipe									
	Whimbrel									
	Upland Sandpiper									
	Spotted Sandpiper									
	Solitary Sandpiper									
	Greater Yellowlegs									
	Lesser Yellowlegs									
	Willet									
	Red Knot									
	Pectoral Sandpiper									
	White-rumped Sandpiper									
	Baird's Sandpiper									
	Least Sandpiper									
	Dunlin									
	Semipalmated Sandpiper									
	Western Sandpiper									
	Sanderling									

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE					SEASONAL OCCURRENCE				
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT
●	Yellow-throated Vireo					●					●
	Solitary Vireo										
●	Red-eyed Vireo					●					●
	Philadelphia Vireo										
●	Warbling Vireo					●					●
	Black-and-white Warbler										
	Prothonotary Warbler										
●	Golden-winged Warbler					●					●
●	Blue-winged Warbler					●					●
●	Tennessee Warbler					●					
	Orange-crowned Warbler										
●	Nashville Warbler					●					●
	Northern Parula										
●	Yellow Warbler					●					●
	Magnolia Warbler										
	Cape May Warbler										
	Black-throated Blue Warbler										
	Yellow-rumped Warbler										
	Black-throated Green Warbler										
●	Cerulean Warbler					●					●
	Blackburnian Warbler										
	Chestnut-sided Warbler										
	Bay-breasted Warbler										
	Blackpoll Warbler										
	Pine Warbler										
	Palm Warbler										
●	Ovenbird					●					●
	Northern Waterthrush										
	Louisiana Waterthrush										
	Connecticut Warbler										
	Mourning Warbler										
●	Common Yellowthroat					●					●
	Wilson's Warbler										
	Canada Warbler										
●	American Redstart					●					●
●	House Sparrow					●					●
●	Bobolink					●					●
●	Eastern Meadowlark					●					●
●	Western Meadowlark					●					●
	Yellow-headed Blackbird										
●	Red-winged Blackbird					●					●
	Orchard Oriole										
●	Northern Oriole					●					●
	Rusty Blackbird										
	Brewer's Blackbird										
●	Common Grackle					●					●
	Brown-headed Cowbird										
●	Scarlet Tanager					●					●
●	Cardinal					●					●
●	Rose-breasted Grosbeak					●					●
	Blue Grosbeak										

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE					SEASONAL OCCURRENCE				
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT
●	Indigo Bunting					●					●
●	Dickcissel					●					●
	Evening Grosbeak										
	Purple Finch										
	Pine Grosbeak										
	Hoary Redpoll										
	Common Redpoll										
	Pine Siskin										
●	American Goldfinch					●					●
●	Red Crossbill										
	White-winged Crossbill										
●	Rufous-sided Towhee					●					●
	Lark Bunting										
	Savannah Sparrow										
	Grasshopper Sparrow										
	Henslow's Sparrow										
	Le Conte's Sparrow										
	Sharp-tailed Sparrow										
●	Vesper Sparrow					●					●
	Lark Sparrow										
	Dark-eyed Junco										
	Tree Sparrow										
●	Chipping Sparrow					●					●
	Clay-colored Sparrow										
●	Field Sparrow					●					●
	Harris' Sparrow										
	White-crowned Sparrow										
	White-throated Sparrow										
	Fox Sparrow										
	Lincoln's Sparrow										
	Swamp Sparrow										
●	Song Sparrow					●					●
	Lapland Longspur										
	Smith's Longspur										
	Chestnut-collared Longspur										
	Snow Bunting										
●	Tree Frog					●					●

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE					SEASONAL OCCURRENCE				
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT
	Short-billed Dowitcher										
	Long-billed Dowitcher										
	Stilt Sandpiper										
	Buff-breasted Sandpiper										
	Marbled Godwit										
	Hudsonian Godwit										
	American Avocet										
	Wilson's Phalarope										
	Northern Phalarope										
	Parasitic Jaeger										
	Glaucous Gull										
	Herring Gull										
	Ring-billed Gull										
	Franklin's Gull										
	Bonaparte's Gull										
	Forster's Tern										
	Common Tern										
	Caspian Tern										
	Black Tern										
	Rock Dove										
	Mourning Dove		•								•
•	Yellow-billed Cuckoo					•					•
•	Black-billed Cuckoo					•					•
	Screech Owl										
•	Great Horned Owl		•								•
	Snowy Owl										
	Hawk Owl										
	Burrowing Owl										
	Barred Owl										
	Great Gray Owl										
	Long-eared Owl										
	Short-eared Owl										
	Saw-whet Owl										
	Whip-poor-will										
	Common Nighthawk										
	Chimney Swift										
•	Ruby-throated Hummingbird					•					•
•	Belted Kingfisher					•					•
•	Common Flicker					•					•
•	Pileated Woodpecker			•							•
•	Red-bellied Woodpecker					•					•
•	Red-headed Woodpecker					•					•
	Yellow-bellied Sapsucker										
•	Hairy Woodpecker					•					•
•	Downy Woodpecker					•					•
	Black-backed 3-toed Woodpecker										
	Northern 3-toed Woodpecker										
•	Eastern Kingbird					•					•
	Western Kingbird										
•	Great Crested Flycatcher					•					•
	Eastern Phoebe										

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE					SEASONAL OCCURRENCE				
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT
	Yellow-bellied Flycatcher										
	Acadian Flycatcher										
•	Willow Flycatcher					•					•
	Alder Flycatcher										
•	Least Flycatcher					•					•
•	Eastern Wood Pewee					•					•
	Olive-sided Flycatcher										
	Horned Lark										
	Tree Swallow										
•	Bank Swallow					•					•
	Rough-winged Swallow										
•	Barn Swallow					•					•
	Cliff Swallow										
•	Purple Martin					•					•
	Gray Jay										
•	Blue Jay					•					•
	Black-billed Magpie										
	Common Raven										
•	Common Crow					•					•
•	Black-capped Chickadee		•								•
	Boreal Chickadee										
•	Tufted Titmouse					•					•
•	White-breasted Nuthatch					•					•
	Red-breasted Nuthatch										
	Brown Creeper										
	House Wren										
	Winter Wren										
	Long-billed Marsh Wren										
	Short-billed Marsh Wren										
	Mockingbird										
•	Gray Catbird					•					•
•	Brown Thrasher					•					•
•	American Robin					•					•
	Varied Thrush										
•	Wood Thrush					•					•
	Hermit Thrush										
	Swainson's Thrush										
	Gray-cheeked Thrush										
•	Veery					•					•
•	Eastern Bluebird					•					•
	Blue-gray Gnatcatcher										
	Golden-crowned Kinglet										
	Ruby-crowned Kinglet										
	Water Pipit										
	Sprague's Pipit										
	Bohemian Waxwing										
•	Cedar Waxwing					•					•
	Northern Shrike										
	Loggerhead Shrike										
	Starling										
	Bell's Vireo										

[illegible][illegible]

FOUND IN PARK	SPECIES	RELATIVE ABUNDANCE							SEASONAL OCCURRENCE				
		ABUNDANT	COMMON	UNCOMMON	RARE	ENDANGERED	UNKNOWN	PERMANENT RESIDENT	SUMMER RESIDENT	MIGRANT	WINTER VISITANT	SEASONALLY INACTIVE	UNCERTAIN
●	Common Snapping Turtle					●						●	
●	Wood Turtle			●		●						●	
	Map Turtle												
●	Western Painted Turtle					●						●	
	Blanding's Turtle												
	False Map Turtle												
●	Western Spiny Softshell					●						●	
	Eastern Spiny Softshell												
	Northern Prairie Skink												
	Five-lined Skink												
	Six-lined Racerunner												
●	Northern Red-bellied Snake					●						●	
	Texas Brown Snake												
●	Northern Water Snake					●							
●	Eastern Plains Garter Snake		●										
●	Eastern Garter Snake		●										
●	Red Sided Garter Snake					●							
	Plains Hognose Snake												
●	Eastern Hognose Snake		●										
	Blue Racer												
	Eastern Smooth Green Snake												
●	Western Smooth Green Snake					●							
●	Bullsnake		●										
●	Western Fox Snake					●							
	Black Rat Snake												
●	Eastern Milk Snake					●							
	Eastern Massasauga												
●	Timber Rattlesnake		●										
	Mudpuppy												
	Central Newt												
	Jefferson Salamander												
●	Eastern Tiger Salamander					●							
	Gray Tiger Salamander												
	Red-backed Salamander												
	Dakota Toad												
●	American Toad					●							
	Great Plains Toad												
●	Northern Spring Peeper					●							
●	Eastern Gray Treefrog					●							
	Blanchard's Cricket Frog												
	Boreal Chorus Frog												
	Western Chorus Frog												
	Pickerel Frog												
	Mink Frog												
●	Northern Leopard Frog		●										
●	Green Frog					●							
●	Wood Frog					●							
●	Swamp Tree Frog					●							

Objectives:

To maintain a stable, diverse native wildlife population

To reintroduce where practicable, species that were present in the general area of the park at the time of settlement by white man, but which have since been extirpated

To maintain the South Branch Root River, Canfield Creek, and Forestville Creek as wild (non-stocked) trout streams

To provide opportunities for park visitors to observe wildlife and learn more about their habits and habitat

Management

The wildlife within the park will be managed primarily by creating and maintaining vegetation diversity (e.g. openings, brush, and pioneer hardwood/aspen islands within the primarily mature northern hardwood forest, see Vegetation Management Map, page 64). These openings will be located near the trail alignments facilitating wildlife observation.

The food plot of corn that is planted annually east of the campground should be converted into a permanent food plot consisting of saplings and indigenous fruit-bearing shrubs. This food plot will also provide an excellent opportunity for park users to observe wildlife.

Harvest of animal populations will be considered as a management tool, rather than a recreational sport. It will be utilized only in those instances in which it is determined that wildlife populations are adversely affecting the vegetation or other natural components of a park or are a threat to the health and safety of park visitors. In recent years, hunting in the vicinity of the park has sufficiently controlled the deer population. However, if the population begins to increase too rapidly, the most efficient method of population reduction which causes the least disruption to ongoing park activities should be implemented.

As stated in the Fisheries Section, the streams within the park are excellent trout streams and will be managed as such. This necessitates control of beaver activity which, in past years, has adversely affected trout habitat.

An attempt has been made by a private group to reestablish wild turkey in an area near the park. Although the park manager has not seen them himself, he has received reports of a number of wild turkey sitings.

Other species that were present at the time of settlement but are no longer suitable here include: black bear, elk, antelope, and buffalo. These species can not be reintroduced into the park at this time due to the inability of the existing park land to support them in their natural habitat.

Sources

Memo from Nick Guilden, area wildlife manager, to Dennis Thompson, Department of Natural Resources park planner, February 10, 1976.

Moyle, John B., ... The Uncommon Ones, 10-75-10M (St. Paul: Bureau of Information and Education , 1975).

USER ANALYSIS

Introduction

Careful consideration must be given to future needs of the park user. Although a great deal of data exists concerning disparate elements of the subject, no comprehensive authoritative study on recreational tourism demand within Minnesota is currently available. Trends in travel patterns are now discernible, but estimates of the time period over which this demand develops and of its magnitude are only speculative at this time. Furthermore, published data largely documents what people have done in the past. Only if we assume that these trends will continue, can conclusions be drawn. Obviously, this data is not (nor can it be) sensitive to any unpredictable technological changes or political events. For example, the oil embargo created an "energy crisis" overnight. This development and its implications have had a direct impact upon travel patterns.

There are two basic aspects of recreational demand. The first involves measurement of the amount and kind of recreational opportunities/facilities currently demanded by the public (e.g., the size of the park or the number of campsites). The second aspect involves an estimate of latent demand for recreational opportunities/facilities which would exist if citizens were given ample opportunity and adequate conditions to participate in an activity (e.g., the number of handicapped campers that would have utilized campsites if the architectural barriers to their use had been removed).

In the planning for the use and development of state parks, an attempt has been made to anticipate the recreational needs of the public by providing increased recreational opportunities while protecting the park's natural resources.

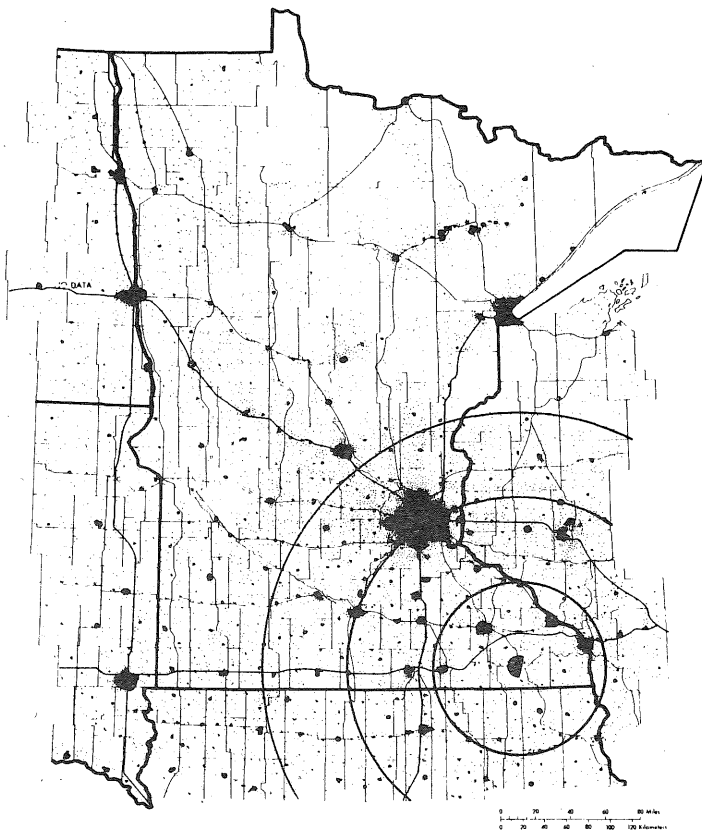
Statewide Analysis

Minnesota's population in 1970 was 3,805,000. The Population Distribution Map (page 77) indicates distribution of residents throughout the state in that year. Of course, the heaviest population concentration is in the Twin Cities and surrounding area. Other important urban centers include Duluth-Superior, Fargo-Moorhead, Rochester, St. Cloud, and Austin-Albert Lea.

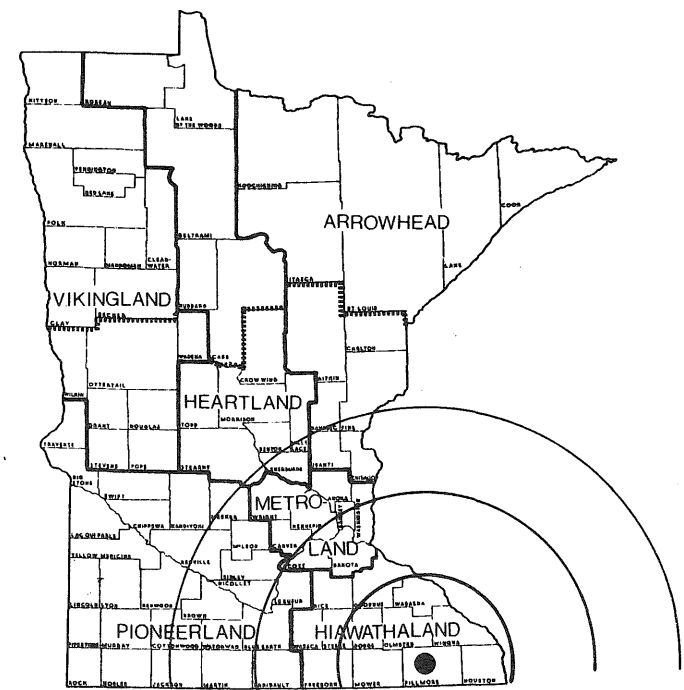
Minnesota covers approximately 84,000 square miles, of which nearly 4,000 square miles is water. More than 12,000 lakes of ten acres or more in size are scattered across the landscape, thousands of miles of rivers and streams wind through the state, and approximately 19 million acres of land are forested. These waters and forests, coupled with seasonal changes and abundant wildlife, form a unique resource base providing outstanding recreational opportunities.

Not all of Minnesota is appreciated the same way. For instance, one person might prefer a forest experience over a prairie experience or vice versa. One thing is clear: when a significant portion of the population identifies an area as a vacation destination, it is the result of a complex process of positive reinforcement between lodging facilities, natural resources, and other supporting businesses. It would appear that those areas offering the greatest diversity of opportunities receive the greatest use.

MINNESOTA POPULATION DISTRIBUTION MAP

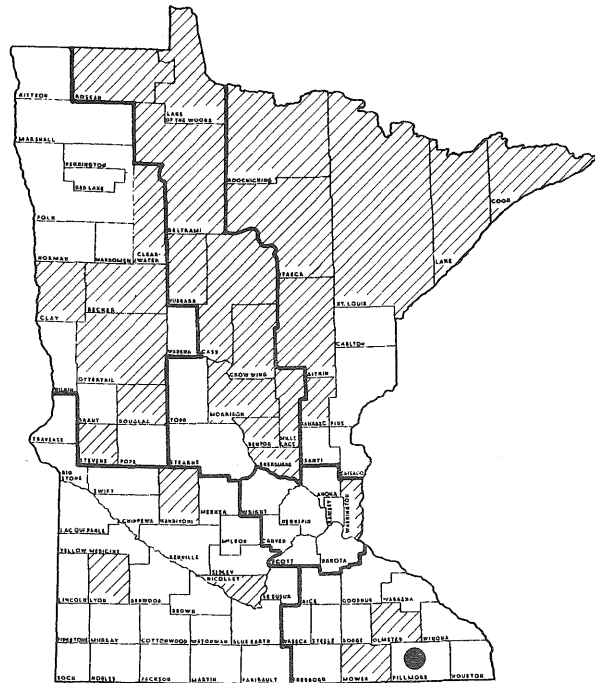


TOURISM REGIONS MAP



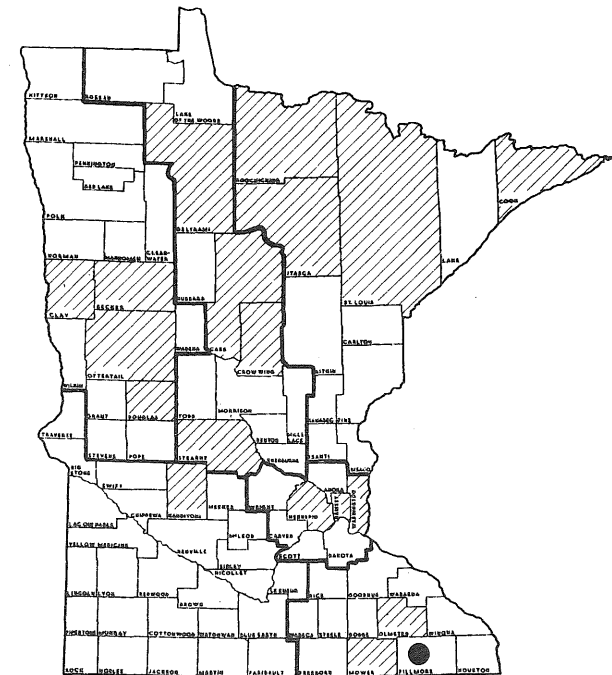
Map indicates 50, 100, and 150-mile radii from park.

TOURIST-TRAVEL MAP #1



Minnesota Counties with Tourist-Travel Expenditures as Percent of County Gross Sales above State Average

TOURIST-TRAVEL MAP #2



Minnesota Counties with Estimated Tourist-Travel Expenditures of \$10,000 and Over in 1974

Vacation Destination Survey

Planned Destination	Vacation of One Week or Longer	Vacation of Less Than One Week
North Arrowhead	38%	39%
South Arrowhead	6	7
North Heartland	11	9
South Heartland	25	25
North Vikingland	6	4
South Vikingland	7	9
Pioneerland	4	8
Hiawathaland (Region 10)	3	8
Metroland	2	3
Undecided	6	12
	<hr/> 108%*	<hr/> 125%*

*Does not total 100% because some respondents named more than one area.

The Statewide Comprehensive Outdoor Recreation Plan of 1974 has identified considerable deficiencies in outdoor recreational opportunities within Region 10 where Forestville is located. Facilities for camping, picnicking, swimming, hiking, and snowmobiling are judged deficient currently and this deficiency is expected to increase in the future. This region, which includes Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, and Winona counties. Although it is not the intent of the state to provide for the total recreational needs of Minnesota, the DNR is committed to assisting in the development of recreational facilities wherever the private sector or local units of government are unable to underwrite such projects.

Scorp Identified Facility and Land Deficiencies (-) or Surpluses (+) in Region 10

	Swimming (Wat. Ac/Land Ac)	Camping (Sites/Acres)	Picnicking (Tables/Acres)	Trails (Miles/Acres)	
				<u>Snow</u>	<u>Hiking</u>
1975	-35.0/-350	-488/-122	-1,366/-137	-818/-3,272	-221/-884
1980	-41.1/-411	-1,068/-267	-1,653/-165		
1990	-53.8/-538	-2,115/-529	-2,247/-225		

REGIONAL AND PARK CONSIDERATIONS

As can be seen from the statewide analysis, Forestville State Park is not currently in a prime tourism region. However, there is considerable evidence pointing to its discovery in the not too distant future. For instance, the energy crisis has underscored the importance of locating recreational facilities where they are accessible to large numbers of people. The park is close to both Rochester and LaCrosse, is within 100 miles of the Twin Cities, and is served by interstates 35 and 90.

Forestville contains elements of native prairie vegetation, hardwood forests, and trout streams as well as bluffs and valleys. Furthermore, because it was one of the first settled areas within Minnesota and because later development within the state occurred primarily in the fertile farmlands to the west and industrial areas to the north, some pioneer developments still remain relatively unnoticed to this day. This combination of accessibility and attractiveness puts the region and the park in an enviable tourism potential position.

Already there are signs of development. For instance, both Mower and Olmsted Counties are among the top ten counties within the state for total tourist-travel expenditures in 1974. High investment on the part of the private sector for lodging facilities has also been documented. Although the draw of the Mayo Clinic has a considerable effect upon this data, still it points toward further appreciation of the area. In Fillmore County, where Forestville is located, it was estimated by the Department of Economic Development that \$1,104,000 was spent on tourist-travel in 1974.

Use of state parks within Hiawathaland appears to be on the increase. The 10 state parks in this region registered a 33.7% increase in attendance during 1975 and 1976. Forestville is part of that trend. Over the years, the park has, in general, experienced a steady increase in demand for use of its resources.

Regional Park Attendance Summary for January - September

<u>STATE PARK</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>
Beaver Creek	15,186	15,512	15,504
Carley	6,214	12,400	11,860
Forestville	38,530	41,902	46,764
Frontenac	60,121	46,980	62,036
Helmer Myre	92,080	107,411	104,847
John Latsch	3,488	2,768	2,593
Lake Louise	17,022	23,017	28,584
Nerstrand Woods	52,293	64,532	49,020
Rice Lake	24,061	38,387	51,562
Sakatah	36,963	41,841	39,911
Whitewater	108,737*	103,642*	253,668
REGION TOTALS	454,695	498,392	666,349
PERCENTAGE OF ATTENDANCE INCREASE		9.6%	33.7%

*Flood curtailed some use.

Assuming that the stream-dissected area acts as a total recreation package with many of the parks having similar potentials, the parks found in this region must act together to eliminate duplication and maximize the range of experiences available to the user.

Following the example of the U. S. Forest Service's Superior National Forest Plan (May, 1974), a Need Fulfillment Matrix, page 87, has been developed for parks within Region 10. Although it is recognized that other recreational facilities should eventually be added to this system (e.g., Whitewater Wildlife Management Area, Richard Dorer Memorial Hardwood Forest, corridor trail system, and U.S. Fish and Wildlife lands), the scope of this study does not permit their inclusion at this time. This system is somewhat rough, but it does provide a basis for the direction of regional park development.

Human needs may be divided into two distinct groups--the physiological and the psychological. The physiological needs are those that must be satisfied in order for one to sustain life. This group includes the need for food, water, air, elimination, and protective shelter. These basic physiological needs are within the capability of most people to provide for themselves or are provided through appropriate community services and, therefore, are not of specific concern here. However, the psychological needs of people are of major concern since they imply satisfaction through experiences, situations, features, spaces, facilities, objects, characteristics, and conditions that are within the realm and capability of the state park system to provide within a recreational context.

The following list gives the need definitions and descriptions of the relative conditions necessary for the satisfaction of those needs to specified degrees.

Solitude: Solitude is the need to be apart from others and implies intimacy with maximum audio and visual privacy for its satisfaction.

High	No human auditory and visual presence.
Moderate	Discernible human auditory and visual presence.
Low	Obvious human auditory and visual presence.

Achievement: Achievement is the need to accomplish or master difficult tasks; to meet challenges and to succeed in the face of adversity or obstacles; and to attain a high standard for oneself. It implies the presence of areas and situations where opportunities for unique accomplishment, long-term involvement, and competition with a standard of excellence exist.

High	The presence of opportunities for unique accomplishment with long-term involvement under adverse conditions in competition with a standard of excellence.
Moderate	The presence of opportunities to master difficult tasks and meet challenges with possible adversity and in competition with one's own standard of excellence.
Low	The presence of opportunities to master certain tasks and meet some challenges as a basis for establishing a standard of excellence for oneself.

Autonomy: Autonomy is the need to be independent and free; to be self-sufficient and able to act without restraint; to be unattached and able to determine one's own pattern or course. It implies the opportunity for, as well as the availability of, choices and experiences with as few restraints as possible. Where restraints are needed, they should be explicit and reasonable.

High	The opportunity to be independent and able to determine one's own course without restraint or control.
Moderate	The opportunity to determine one's course from a range of choices within a framework of subtle control.
Low	One's course is determined from a limited range of choices within a highly structured and controlled situation.

Aesthetic: The aesthetic need is the human desire for beauty in either its natural state or in human-created forms. It implies the need to seek areas, objects, or facilities that inspire, impress, intrigue, or invite contemplation. The satisfaction of the aesthetic need is determined, to a great extent by the quality of recreational experience opportunities. However, the amount of satisfaction may be limited by factors such as current land uses.

High	Most views are natural.
Moderate	Many natural views available but some discordant visual or auditory stimulus exists.

Security: Security is the need for a sense of well being and a desire to be free from fear, anxiety, risk, and danger. It implies that there is a clear definition of patterns and routes; that the intended meaning and use of areas and spaces is well defined; and that sequences are discernible, allowing for choices and reassurance.

High	A structured and clearly defined situation where appropriate measures are taken to ensure public safety.
Moderate	Situations with predictable patterns of use where public safety is of concern.
Low	Unpredictable situations exist where people are responsible for their own well being.

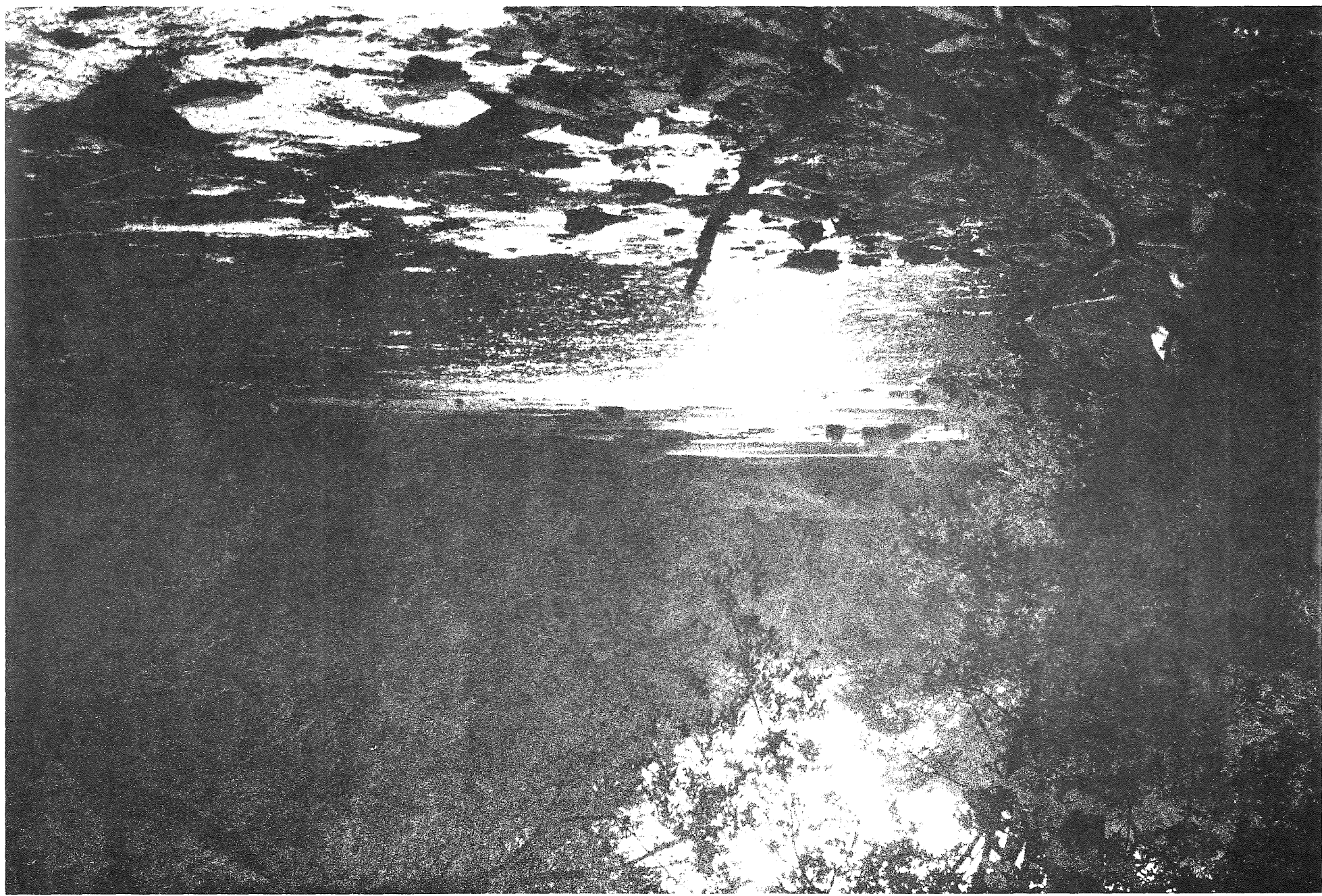
Orientation: Orientation is the need for a consistent and stable way of perceiving and comprehending one's surroundings. It implies the presence of distinctive features or landmarks that provide a sense of form and place which distinguishes it from other places or the presence of a discernible understructure that provides a frame of reference and direction.

High	A consistently discernible format that is similar to one's normal personal environment.
Moderate	The presence of a discernible format with little similarity to one's normal personal environment.
Low	The absence of a discernible format without similarity to one's normal personal environment.

Affiliation: Affiliation is the need to belong, to associate with others, and to win approval and affection. It implies the convenience of gathering places where conversation is possible and/or where one can observe what is happening without having to participate.

High	Accommodations for groups of people in an organized and structured setting.
Moderate	Unstructured accommodations for the gathering of people within an area.
Low	No accommodations for the gathering of people within an area.

The Regional Need Fulfillment Matrix shows what needs the parks within the stream-dissected area are presently fulfilling and what needs they may fulfill in the future. At present, Forestville is rated medium in solitude, achievement, autonomy, orientation, and affiliation and high in aesthetics and security. Future management will attempt to provide more challenge (i.e., achievement), independence (i.e., autonomy), and consequently decrease the sense of well being of the user (i.e., security). This will be accomplished by the development of long distance trail systems which separate potential user conflicts (e.g., cross-country skiers and snowmobilers) and the encouragement of their use by providing interpretation of the park's natural features. Up until this time, the historic features of the park have been highlighted almost to the exclusion of its natural features.



ANGLER'S DELIGHT

Need Fulfillment Matrix							
Needs	O.L. Kipp	John Latsch	White-water	Forest-ville	Carley	Frontenac	Beaver Creek
Solitude							
Present Development	High	High	Low	Moderate	Low	Low	Moderate
Future Direction	Moderate	High	Low	Moderate	Moderate	Low	Moderate
Achievement							
Present Development	High	High	Moderate	Moderate	Low	Moderate	Moderate
Future Direction	Moderate	High	High	High	Low	High	Moderate
Autonomy							
Present Development	High	High	Low	Moderate	Low	Low	Moderate
Future Direction	Moderate	High	Low	High	Moderate	Moderate	Moderate
Aesthetics							
Present Development	High	High	High	High	Moderate	Moderate	High
Future Direction	High	High	High	High	Moderate	High	High
Security							
Present Development	Low	Low	Moderate	High	High	Moderate	High
Future Direction	Moderate	Low	Moderate	Moderate	High	Moderate	Moderate
Orientation							
Present Development	Low	Low	Moderate	Moderate	High	Moderate	High
Future Direction	Moderate	Low	Moderate	Moderate	High	Moderate	Moderate
Affiliation							
Present Development	Moderate	Moderate	High	Moderate	Moderate	Moderate	Moderate
Future Direction	High	Moderate	High	Moderate	Moderate	High	Moderate

Regional Activities Summary

Key

L - Low Present Potential
M - Medium Present Potential
H - High Present Potential
X - Tentative Development
Projected

	<u>Camping</u>					<u>Water</u>				<u>Trails</u>					<u>Miscellaneous</u>			
	River	Backpack	Rustic	Semi-Modern	Group	Swimming	Fishing	Boating	Canoeing	Hiking	Equestrian	Bicycle	Snowmobile	Cross-Country	Auto Sight Seeing	Handicap Access	Picnicking	Interpretive Center
O. L. Kipp																		
Present Potential	L	H	H	M	M	L	L	L	L	H	L	L	M	M	L	M	L	H
Future Development Direction			X	X	X					X			X	X		X	X	X
John Latsch																		
Present Potential	M	H	M	L	L	L	M	M	L	H	M	L	M	M	L	L	H	L
Future Development Direction	X	X					X	X		X				X			X	
Whitewater																		
Present Potential	L	M	M	H	H	M	H	L	L	H	L	M	M	M	L	M	H	H
Future Development Direction		X		X	X	X	X			X		X		X		X	X	X
Forestville																		
Present Potential	L	M	H	H	M	L	H	L	L	H	H	M	H	H	L	H	L	M
Future Development Direction				X	X		X			X	X		X	X		X	X	X
Carley																		
Present Potential	L	L	H	L	L	L	H	L	L	M	L	M	L	L	L	M	L	L
Future Development Direction			X				X			X		X				X		
Frontenac																		
Present Potential	M	L	M	H	H	M	M	M	L	H	H	H	H	M	L	M	H	H
Future Development Direction				X	X		X			X	X	X	X	X			X	
Beaver Creek																		
Present Potential	L	L	H	M	L	L	M	L	L	M	L	L	L	L	L	M	M	L
Future Development Direction			X				X			X						X	X	

Sources

"A Concept of Recreational Focal Areas," Technical Paper by Uel Blank, 23rd Annual Meeting of Institute of Traffic Engineers, Minneapolis, Minnesota, August, 1973.

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DEVELOPMENT

Existing Development

Forestville has three campground loops. The one located along the South Branch Root River is equipped with pit toilets and a well. The other two are on a higher plateau and have access to a modern sanitation building which is equipped with shower facilities. In total, there are sixty-eight campsites in the park.

Parking for fishermen is provided along the South Branch Root River on the floodplain in an area covered by a dense canopy of bottomland hardwoods.

A small picnic area with 20 tables and pit toilets is located along the South Branch Root River between the fishermen's parking lot and the Forestville store.

The Forestville store is one of the last remaining buildings of the once thriving town of Forestville. Visitors are taken back in time to experience a pioneer store and see the type of stock that was once sold. Across the street from the store is an old barn which was built in the late 19th century.

The park also has a trail center area. From that point, horseback riders can embark on eight miles of park trails. Ten miles of snowmobile trails are also provided.

The service area is at the end of the campground road. The manager's residence is just west of the park boundary near CSAH 12.

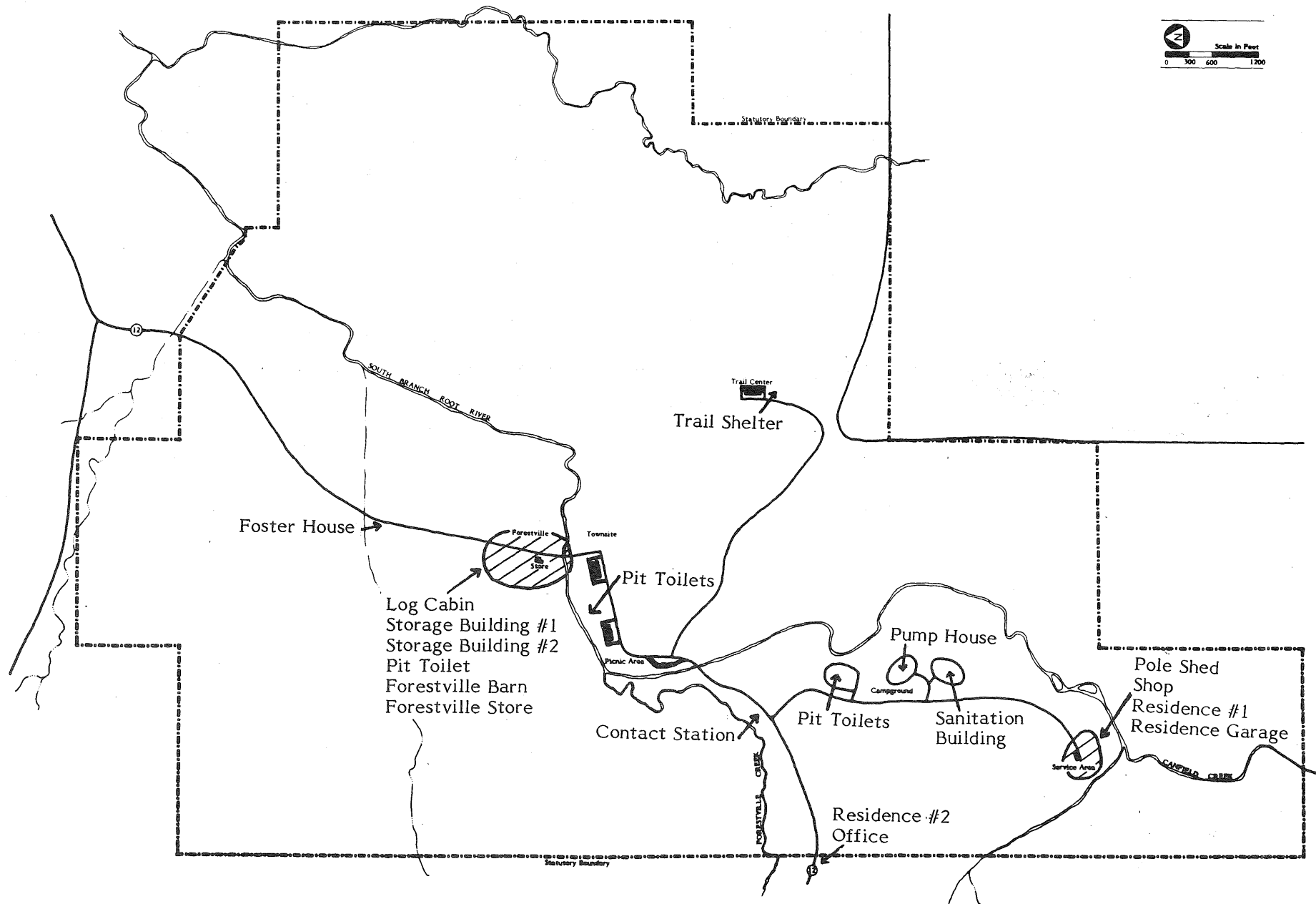
The contact station is presently located at the junction of CSAH 12 and the campground road.

Summary of Buildings

<u>Map Key</u>	<u>Building Description</u>	<u>Outside Dimensions</u>	<u>Construction</u>	<u>Date Built</u>	<u>Condition of Building*</u>
1	Pole Shed	32' x 61'	Wood	1960	Fair
2	Shop	18' x 34'	Wood	1940	Fair
3	Residence Garage	20' x 24'	Block	1930	Poor
4	Residence #1	26' x 34'	Wood	1930	Fair
5	Pumphouse	11' x 11'	Block	1970	Good
6	Trail Shelter	14' x 22'	Block and Wood	1930	Fair
7	Foster House	30' x 40' (approx.)	Brick	1867	
8	Forestville Store	45' x 49'	Brick	1853	Fair
		21' x 50'			
9	Forestville Barn	58' x 80'	Wood	1898	Poor
10	Storage Building #1	24' x 34'	Wood	1920	Poor
11	Storage Building #2		Wood	1920	Poor
12	Log Cabin	18' x 24'	Log	1854	Good
13	Contact Station	9' x 10'	Wood	1967	Poor
14	Sanitation Building	20' x 30' (approx.)	Wood	1975	
15	Residence #2	20' x 30' (approx.)	Wood	1930 (approx.)	
16	Office	14' x 20'	Wood	1930 (approx.)	
17	Pit Toilets		Wood		Good
18	Pit Toilets		Wood		Good
19	Pit Toilets		Wood		Good

*Rated by Orville Stensgard, Building Maintenance Supervisor, DNR, September, 1974.

EXISTING DEVELOPMENT



Proposed Development

Objectives:

To restrict development according to the final zoning map (see Zoning Section) in order to preserve the park's resources

To organize development so that park visitors enter and leave the park through controlled entrance /exit

To provide an extensive horseback riding (multi-use) trail system

To separate incompatible recreational activities

To provide an atmosphere in which park visitors can relax, enjoy, and learn about the natural resources within the park

To limit development to that which is necessary for efficient management and appropriate park use and enjoyment

To make all major facilities in the park handicapped accessible

To preserve the historic and prehistoric resources of the park

To utilize already disturbed areas for proposed development

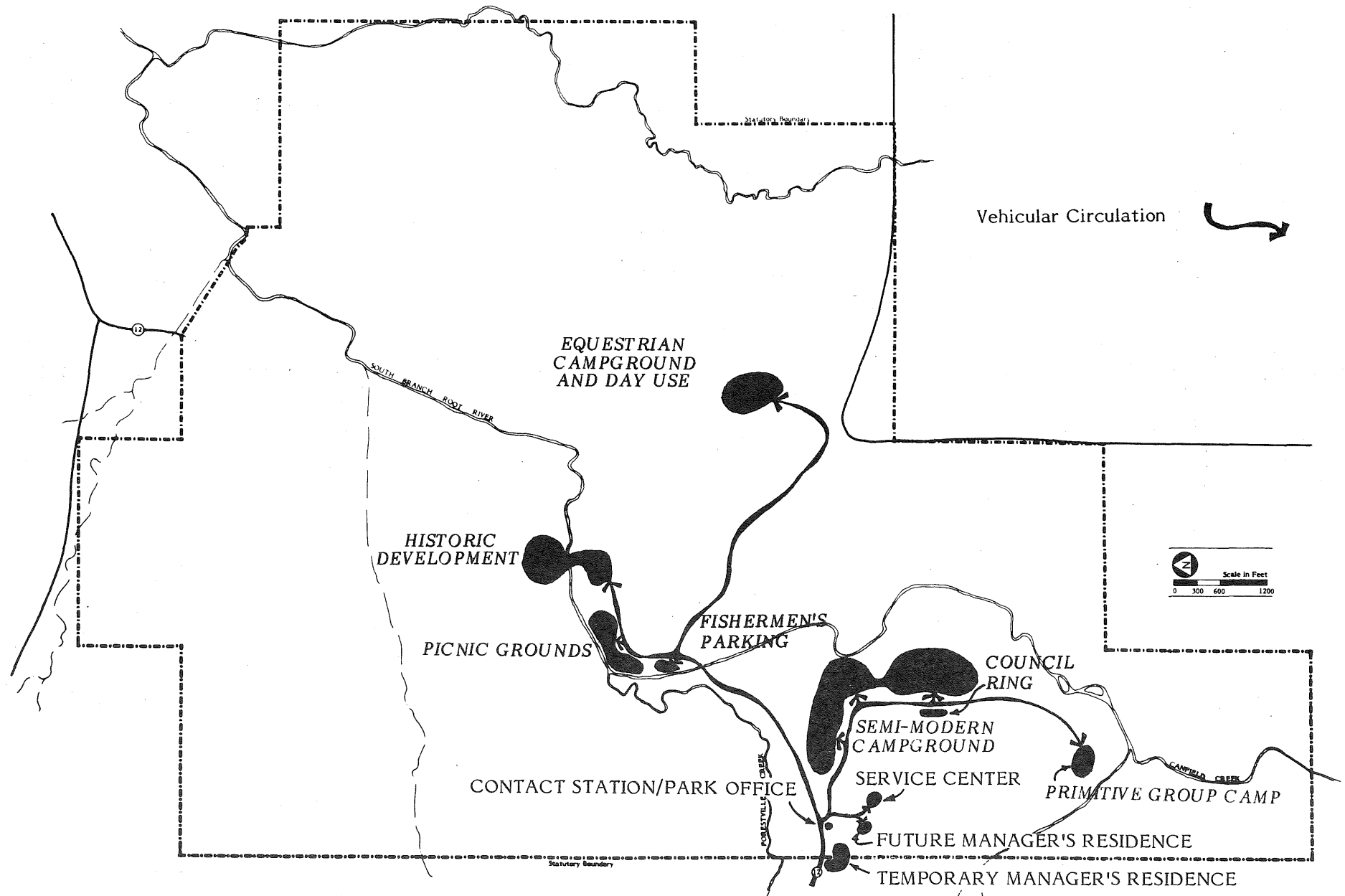
• Contact Station

Objective:

To construct a contact station and park office near the park entrance to dispense user information, to maintain supervision over those entering the park, and to ensure consistent management of the park

Action

The structure should be large enough to provide office space for the manager, assistant manager, receptionist, and one other future staff person. In addition, space should be provided for an orientation display and modern sanitation facilities.



Site Advantages

1. Suitable soils (Fayette)
2. Out of floodplain
3. Close to existing park entrance and within view of proposed expansion (see Boundary Modification Section, page 126).
4. Permits separation of campers from other users
5. Allows for partial realignment of campground entrance road necessary for campground expansion

Site Disadvantages

1. Requires development in a previously undeveloped area

•Semi-Modern Campground

Objective:

To provide the opportunity for park visitors to experience a natural environment on a 24-hour-a-day basis in which interaction between campsites is decreased and interaction with the natural surroundings is enhanced

Action

The existing development will be retained, although intersite vegetative screening is needed. A new 30-site campground expansion loop is proposed for development when user demand increases.

Campground A - According to the data available at present, some of the campground spurs on the northeast edge of this loop appear to be in the floodway. If a detailed topographical and hydrological survey shows this location to be hazardous due to flood waters these spurs should be removed.

The South Branch Root River has cut a very steep bank adjacent to the east edge of the loop. Before the erosion encroaches upon the campground further, this eroded bank should be stabilized and easy access down to the river should be provided. (See Soils Management, page 46.)

In order to facilitate use by the handicapped, at least five of the campsites should have picnic tables that are handicapped accessible. The pit toilets should be replaced by handicapped accessible facilities.

Campground B and C - Much of the area utilized by these two loops was an old field. Many young trees have been planted, but more are needed (see Vegetation Section). A detailed planting plan should be developed that would provide shade in the campsites, screening between sites, and yet retain some of the panoramic views of the South Branch Root River that now exist.

Proposed Campground D - This proposed campground loop will satisfy the expected increased demand for camping that the park can fulfill without major resource degradation. It will be located east of loop A and will include approximately 30 sites and a modern sanitation building which will be shared with the users of campground loop A. Auxiliary pit toilets should also be provided for those campers more than 400 feet from the sanitation building.

The existing campground entrance road should be relocated to pass loop D. This road change would allow campers in the new loop to hike to the South Branch Root River and the main hiking trail without crossing a road. This new road would also move the contact station closer to the park boundary and the service area. (See map, page 97.)

• Primitive Group Camp

Objective:

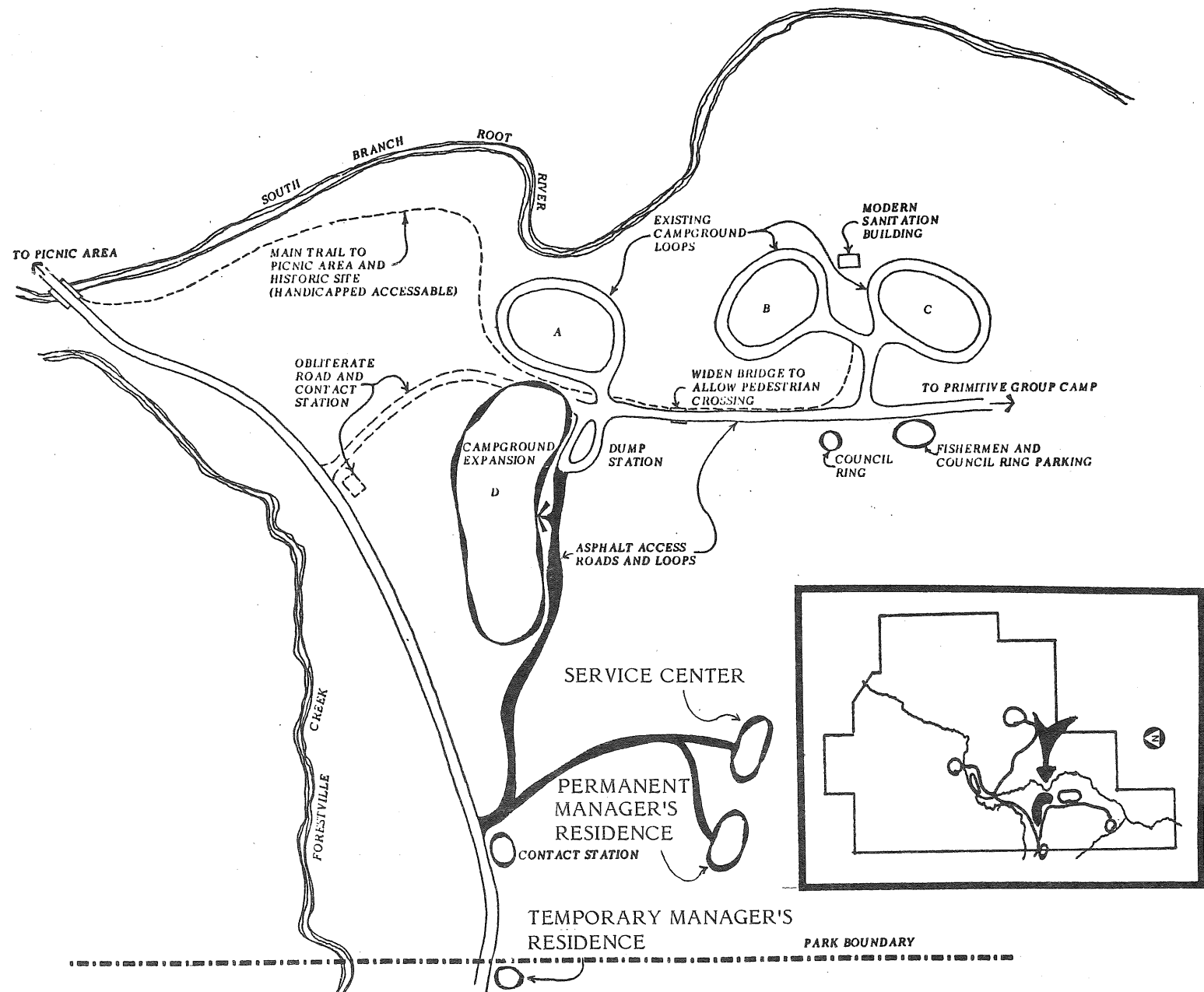
To provide facilities where groups, particularly children, can experience, study, and enjoy the natural environment on a 24-hour-a-day basis

Action

A primitive group camp for 50-75 people will be developed on the site of the service area and former manager's residence. A well, access road, and a small parking lot are already developed at the site. The house must be dismantled and sanitation facilities provided. Some landscaping will also be required.

Site Advantages

1. Soil is stable and relatively flat (Fayette silt loam, 2-6% slope)
2. Site is already disturbed
3. A good well exists in the area



-
4. Good access to hiking trail system
 5. Site (at the end of the campground road) is secluded from the rest of the development
 6. Close to a variety of different vegetational communities
 7. Good view of and easy access to both South Branch Root River and Canfield Creek

Site Disadvantages

1. Currently quite open and sunny
2. Preliminary search indicates possible prehistoric site in the area

• Horsemen Campground and Day-Use Area

Objectives:

To provide facilities that allow a horseback rider, or a group of riders to experience the natural environment on a short term or 24-hours-a-day basis in an area separated from high-use areas

To locate this facility on stable soils near the origin of both horse trail loops

To control resource degradation by controlling the number of campers and day-users

Action

Approximately twenty-five camping sites will be provided in this area. Trailer and camper parking, an unloading ramp, pit toilets, and water will be provided in the area. Each site will have a picnic table, fire ring, horse tie area, and an area for a tent. This would provide camping facilities for 75 riders if trailer capacity averaged 3 horses. At the end of 8-10 years, after the campground has been organized and the trails upgraded, the carrying capacity of the trails should be reassessed and if, at that time, it is found that the resources will tolerate heavier usage, a minor expansion of the campground should be implemented. In this general vicinity, but separated from the campground, a day-use facility would also be provided. This day-use area would provide an unloading ramp, parking for twenty cars and trailers, picnicking facilities, tie areas, and pit toilets.

The grade of the gravel access road is difficult to climb during inclement weather. Paving the road would improve access and generally enhance the area.

Site Advantages

1. Removed from other park facilities
2. Soil is stable and relatively flat (Fayette silt loam, 2-6%)
3. Site is already disturbed (former residence site)
4. Good access to the horse trail system

Site Disadvantage

1. The access road is quite steep and must be paved to provide better traction for vehicles

Discussion

This state park receives heavy use by horseback riders. At present, many of the trails are lowered channels, 2-3" deeper than the area through which they pass. A spring in the vicinity of the existing horse camp is greatly disturbed because it is the only nearby place to water the horses. The trees in the horse campground are, in some cases, almost debarked because horses have been tied to them. In addition to these natural resource degradations, hikers complain of droppings on the trails and fishermen complain about horses disturbing the water upstream. These complaints and problems do not require closing the park to horses, but rather call for separation of use and more control of facilities.

The area utilized for the present equestrian campground is an open, unstructured area vegetated with grasses and scattered apple trees. Restructuring this area to define the vehicular circulation, tethering, camping, and parking is essential in order to allow the regeneration of the area.

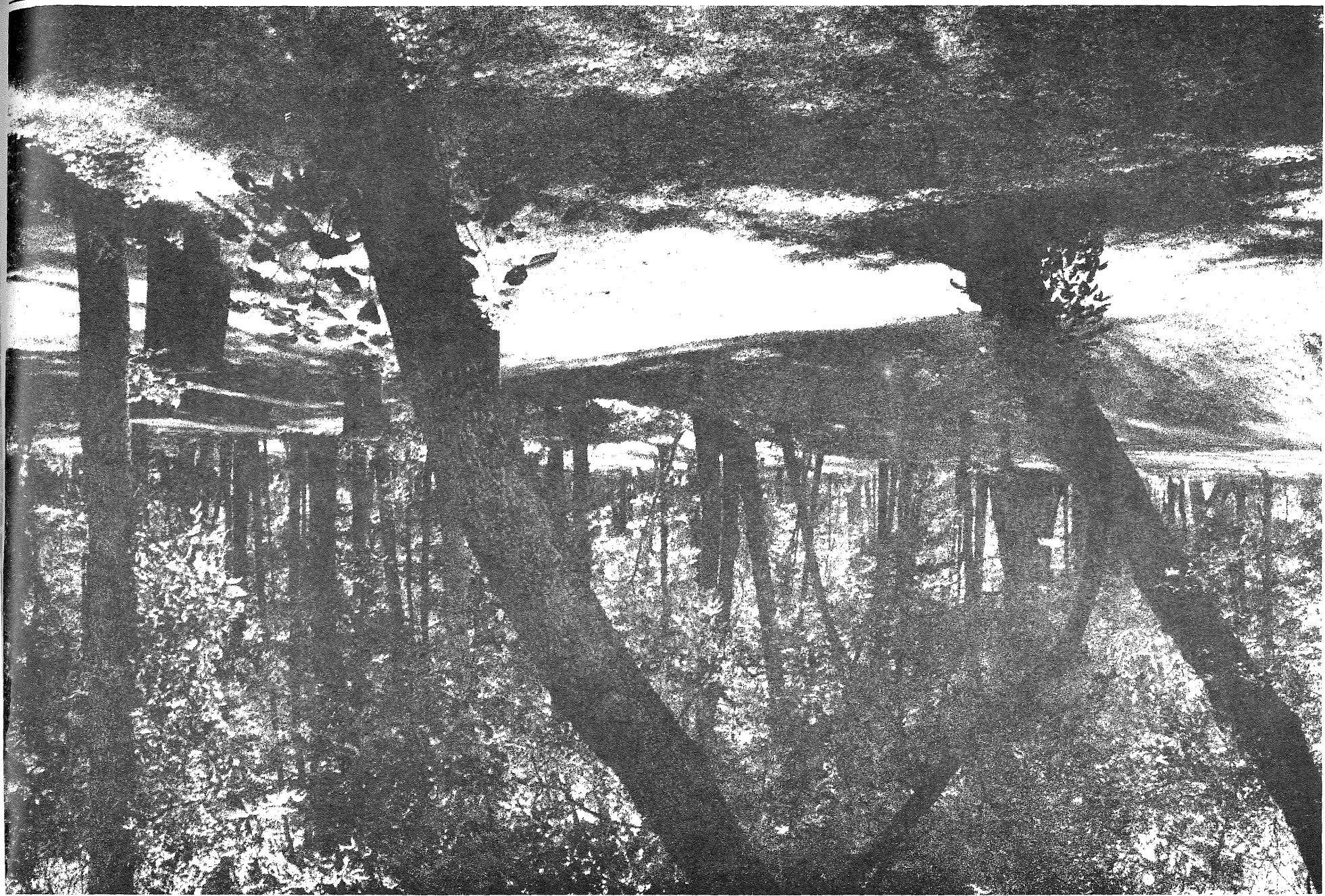
•Council Ring

Objective:

To provide an easily accessible area where large groups of park visitors can gather for programs and film presentations

Action

Although the historic town site is the interpretive highlight of the park, there is still a need for an open air movie projection area and group interpretive center near the campground. The council ring will have seating for approximately 30 people with room for larger numbers if users bring their own chairs. In addition to seating, a permanent viewing stand, and bulletin board will be necessary. Electricity will also be needed for the movie projector. (See Campground Development Map, page 97).



PICNIC GROUND

Site Advantages

1. Good soils (Fayette)
2. Accessible from all campgrounds
3. Within a previously disturbed site
4. Close to power lines (approximately 100 feet)

•Picnic Area

Objectives:

To provide a scenic, shaded area where park visitors can prepare and eat meals in relative privacy

To provide easily accessible modern sanitation facilities which will not be endangered by floods

Action

The existing picnic area will remain relatively unchanged except for the construction of a new, modern sanitation building with attached picnic and trail shelter on high ground that has not flooded in many years. An inclement weather shelter is very beneficial to users who come some distance to visit the park. This structure will serve as a winter trail shelter. It is conveniently located at the origin of the cross-country ski trail to the northeast and snowmobile trail to the southwest. A minor expansion may take place with the addition of some picnic tables, if the use demands. Native vegetation should be allowed to grow in selected areas to develop smaller, somewhat secluded, spaces within the picnic area (refer to Bureau of Engineering Map P.087.00.01).

Site Advantages

1. Very good soil stability (alluvial)
2. Mature bottomland hardwoods provide a cool, shaded environment
3. All sites are close to the river
4. Gentle slope from the picnic sites to the river
5. Easy walking distance (600-1,600') to the historic town site

Site Disadvantage

1. Most of the area is on the floodplain of the South Branch Root River



•Trails

Objectives:

To provide access to a variety of areas within the park along alignments chosen for their slight gradient, scenic views, interesting study areas, connection of use areas, avoidance of sensitive areas, and separation of conflicting use

To provide a summer trail system for hikers and horseback riders, with preference given to pedestrian trails due to their universal popularity, but with sufficient mileage to provide an interesting experience for horseback riders

To provide quality winter for ski touring and snowmobiling and separate to minimize conflict

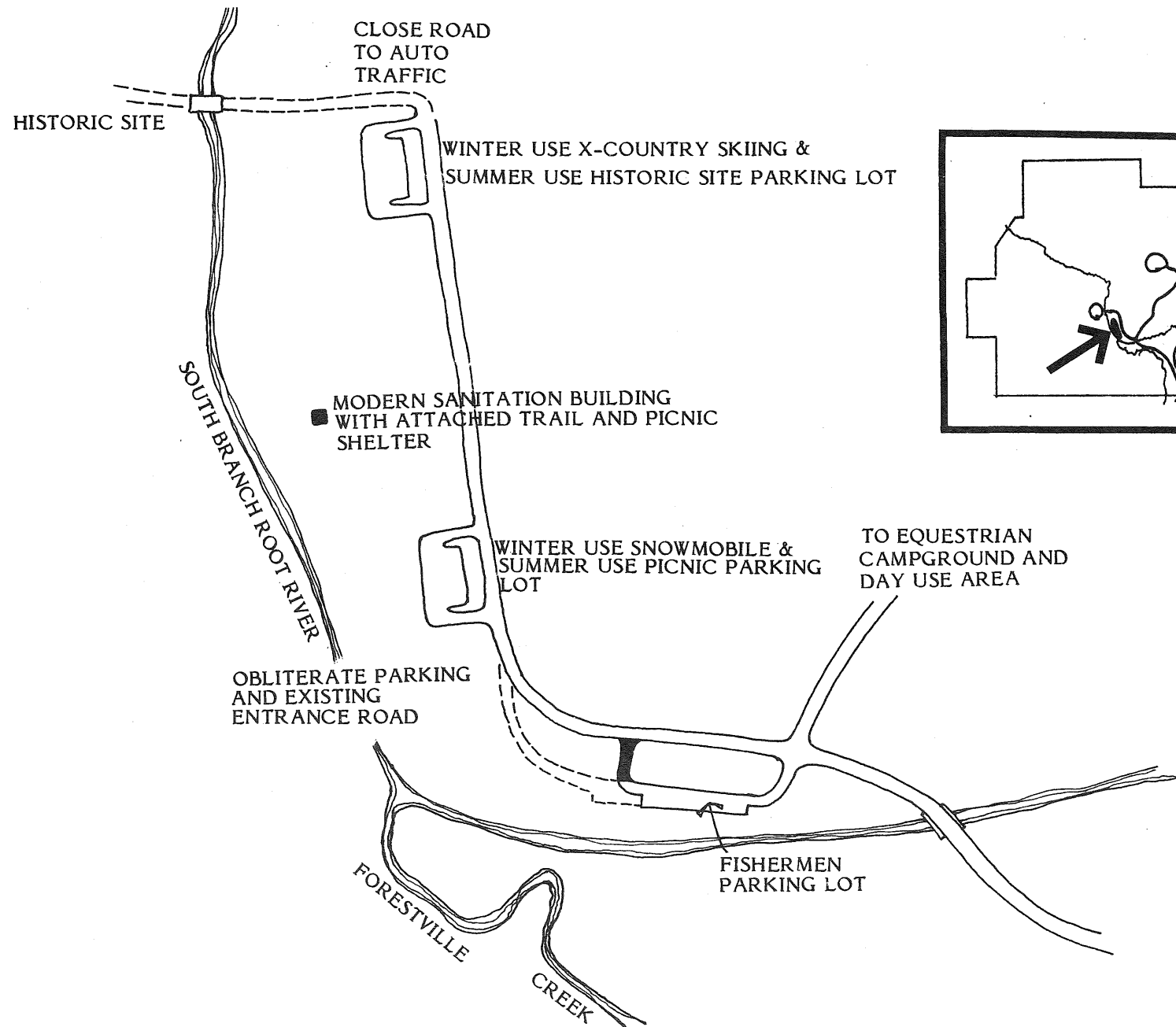
To connect park trails with area Grant-in-Aid trails and forest trails

Discussion

Park users will follow the course of least resistance and/or maximum fulfillment. Defining pedestrian paths is necessary in areas where any significant amount of traffic is desired or expected. Whenever many people pass through an area, the environment will be altered, but the impact on the total area is minimized if these visitors are channeled onto a carefully planned path rather than left to wander indiscriminately.

A well-designed path leads users along rather than forcing them to stay on the alignment with artificial barriers. A meandering path is pleasant to walk, but only if the curves are located in logical places. An unnecessary curve will be short-circuited. Those areas along a path where users will stop to investigate, view, or discuss some natural phenomenon will require an area which is wider than the general path surface. Slippery surfaces -- algae-covered rocks, wet logs, and wet clay or peat --are both hazardous and distracting and should be avoided. All obstacles should be removed from trailways and overhanging branches and limbs should be trimmed.

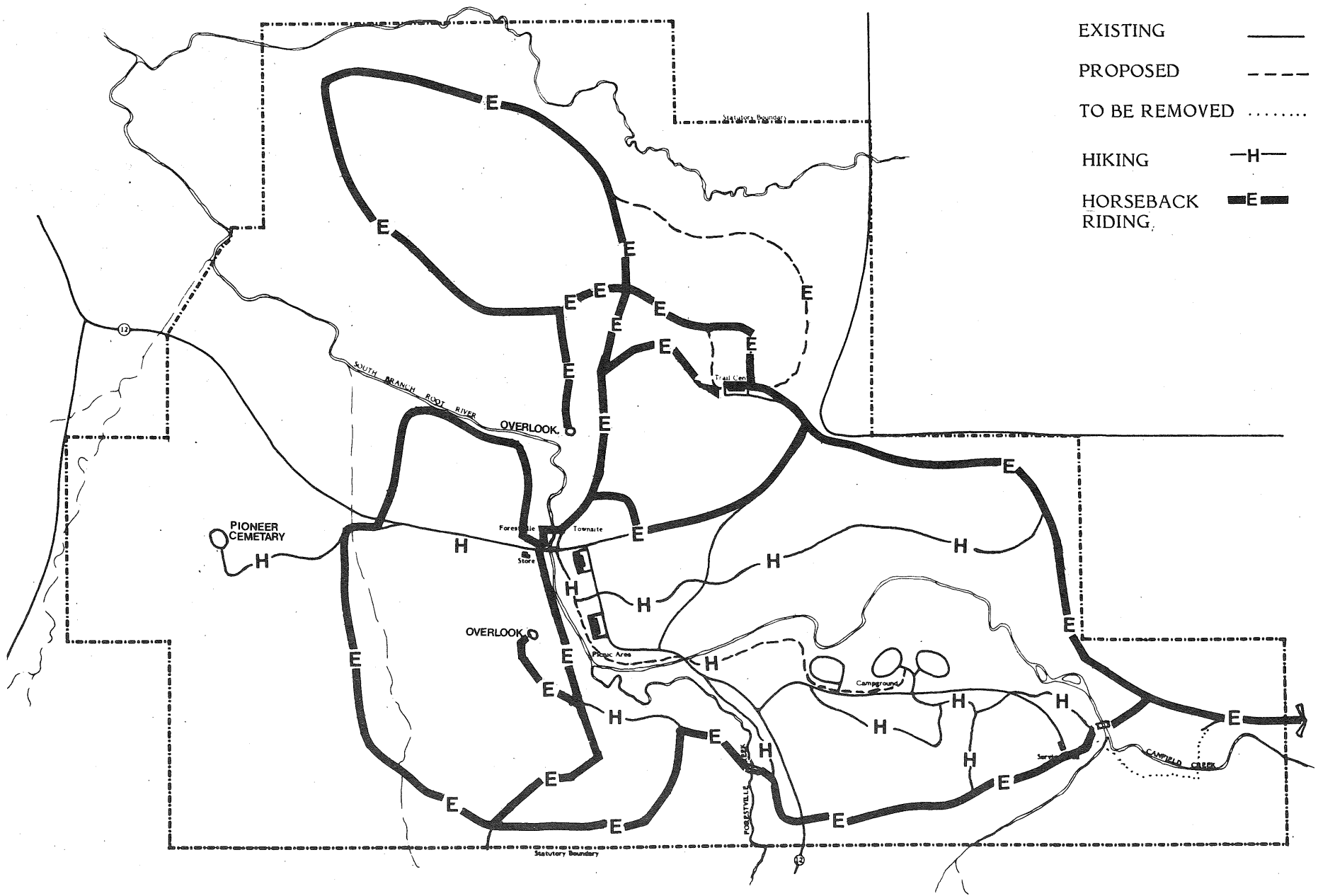
This park is utilized for many reasons. The trail system should reflect these differences and be sensitive to their divergent needs. Several types of recreation utilize the park's trail system: hiking, horseback riding, cross-country skiing, and snowmobiling. None of these trail users is entirely compatible with the others, therefore, a separated trail system has been developed which minimizes conflict (see Trail System Maps, pages 105 - 108). It should be pointed out that every effort will be made to utilize forestry land in the immediate area for trails.



SUMMER TRAIL SYSTEM

PHASE I


- EXISTING ———
- PROPOSED - - - - -
- TO BE REMOVED
 - HIKING —H—
 - HORSEBACK RIDING —E—





SUMMER TRAIL SYSTEM


PHASE II


LEGEND


 A large percentage of the area enclosed by this line but outside of the line..... should be owned by the State of Minnesota under the custodial control of the Division of Forestry.

 Existing Forestville State Park statutory boundary 90% owned by the State of Minnesota.

 Proposed Forestville State Park statutory boundary, which should be totally owned by the State of Minnesota at some time and under the custodial control of the Division of Parks and Recreation.

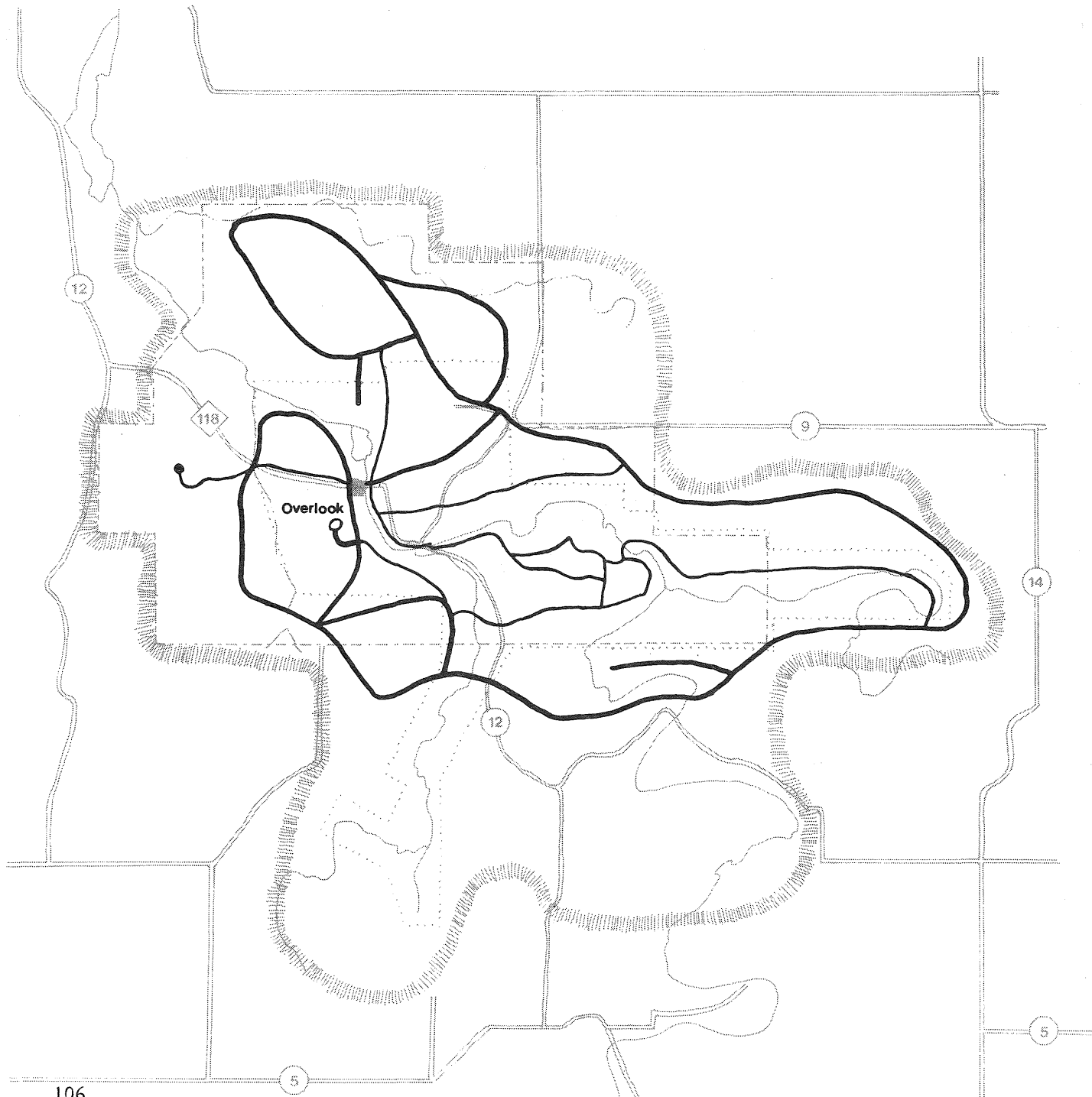
 This area currently under the custodial control of the Division of Parks and Recreation, will be transferred to the Minnesota Historical Society.

 HORSEBACK RIDING TRAILS
(Also Used by Hikers)
Existing 8 Miles
Proposed 12 Miles

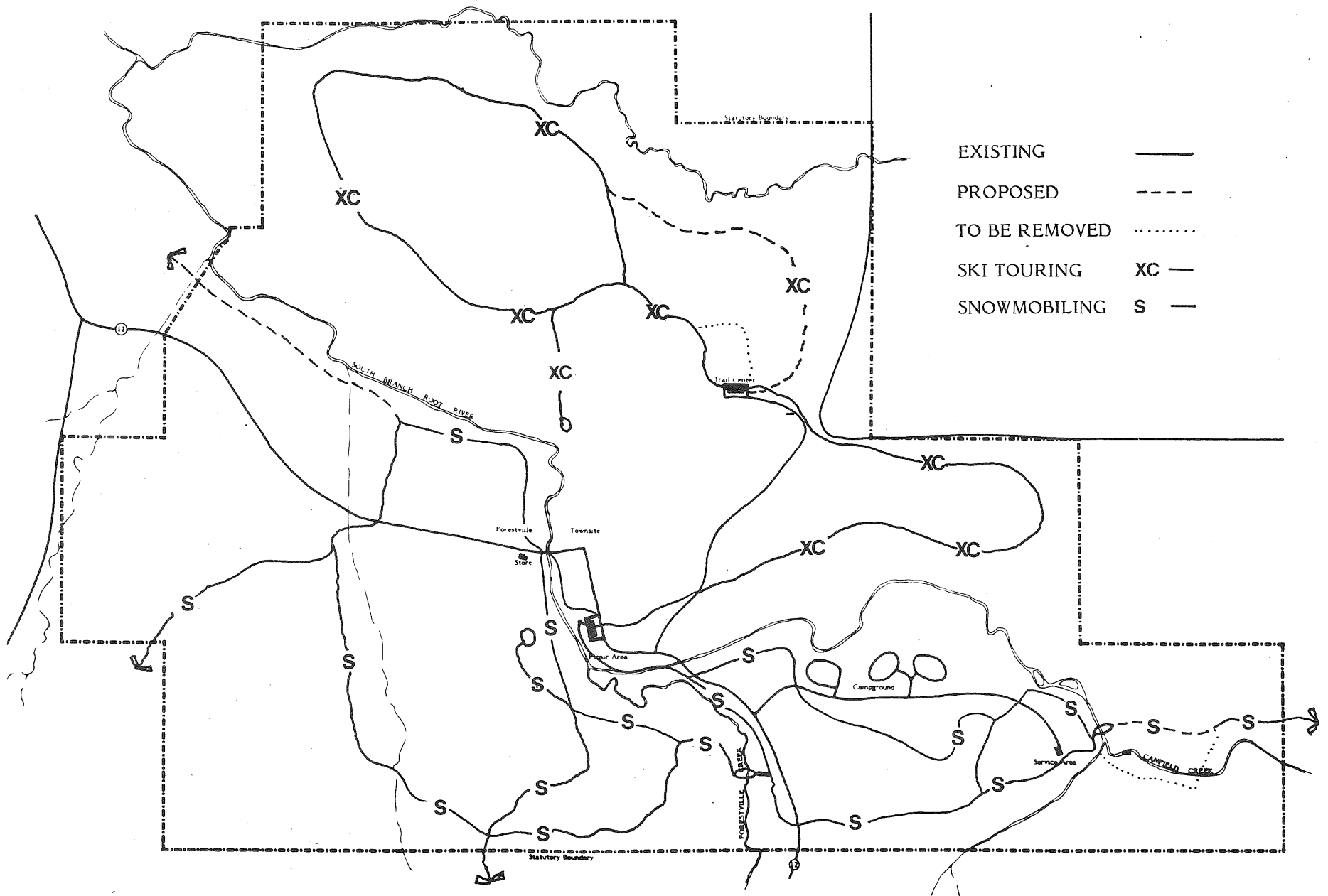
 HIKING ONLY TRAILS
Existing 4.5 Miles
Proposed 6.5 Miles



Scale in Feet




WINTER TRAIL SYSTEM





WINTER TRAIL SYSTEM


PHASE II

LEGEND

 A large percentage of the area enclosed by this line but outside of the line..... should be owned by the State of Minnesota under the custodial control of the Division of Forestry.

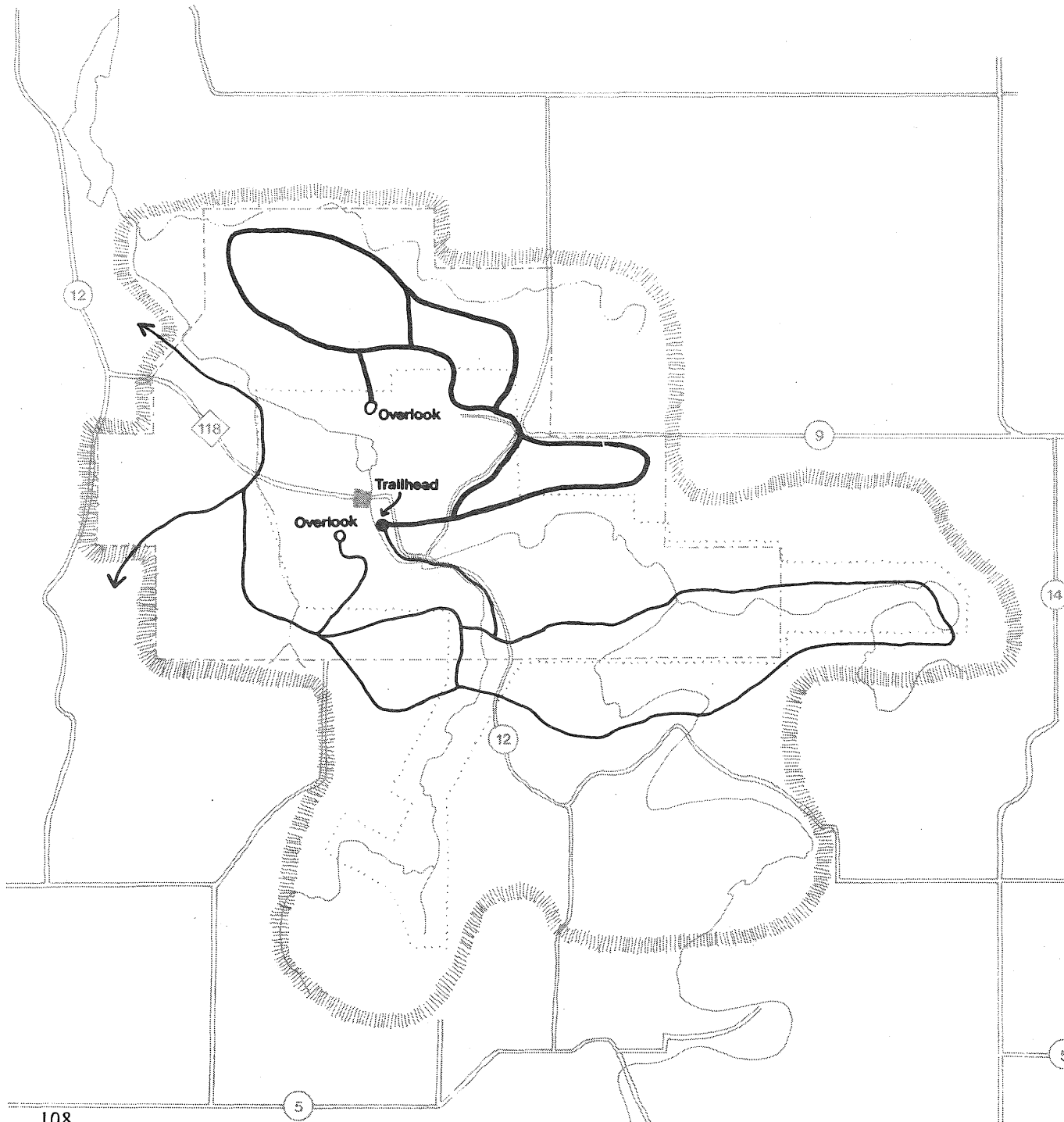
 Existing Forestville State Park statutory boundary 90% owned by the State of Minnesota.

 Proposed Forestville State Park statutory boundary, which should be totally owned by the State of Minnesota at some time and under the custodial control of the Division of Parks and Recreation.

 This area currently under the custodial control of the Division of Parks and Recreation, will be transferred to the Minnesota Historical Society.

 **SKI TOURING TRAILS**
6.5 Miles

 **SNOWMOBILING TRAILS**
9.5 Miles



Scale In Feet



Pedestrian Trails - They have the highest priority within the park because they can be used by everyone. Overlaps with horseback riding trails occur only at overlooks and portions of the overlook access trail. Some of the existing trails will be assigned to pedestrians providing access to most portions of the park. A main trail accessible to the handicapped will connect the campgrounds to the picnic area and the Forestville store.

Horseback Riding Trails - The horseback riding trail system will be laid out in two loops. A short loop will wend through the hardwood forest on the northeastern bluff near the equestrian campground and day-use area and a large loop with alternate routes will exit the park on top of the bluff above Canfield Creek and reenter the park via the stagecoach road on the western park boundary.

The proposed trail system will be implemented in two phases. The first phase, as shown on the maps, pages 105 and 107 will be implemented immediately. Phase two, which includes trails outside the park boundary will be implemented as land acquisition and/or Grant-in-Aid trail agreements occur. Some of the phase #1 trails will be deleted as the phase #2 trails are developed.

Ski Touring Trails - The prime ski touring trail area lies on the blufftop near the equestrian campground. This area with its rolling terrain and protective hardwood forest vegetation will provide an excellent setting for skiing. The historic site parking lot will provide a good access to the trail shelter in the picnic area.

Snowmobiling Trails - The western half of the park will be utilized by snowmobilers. The snowmobiling trails will utilize the picnic area parking lot and will also use the same trail center as the cross-country skiers. This will allow them good access to Canfield and Forestville creeks. The Grant-in-Aid trail now being planned to connect the park to Preston can enter the park at four locations as shown on the Trail System Map, page 107.

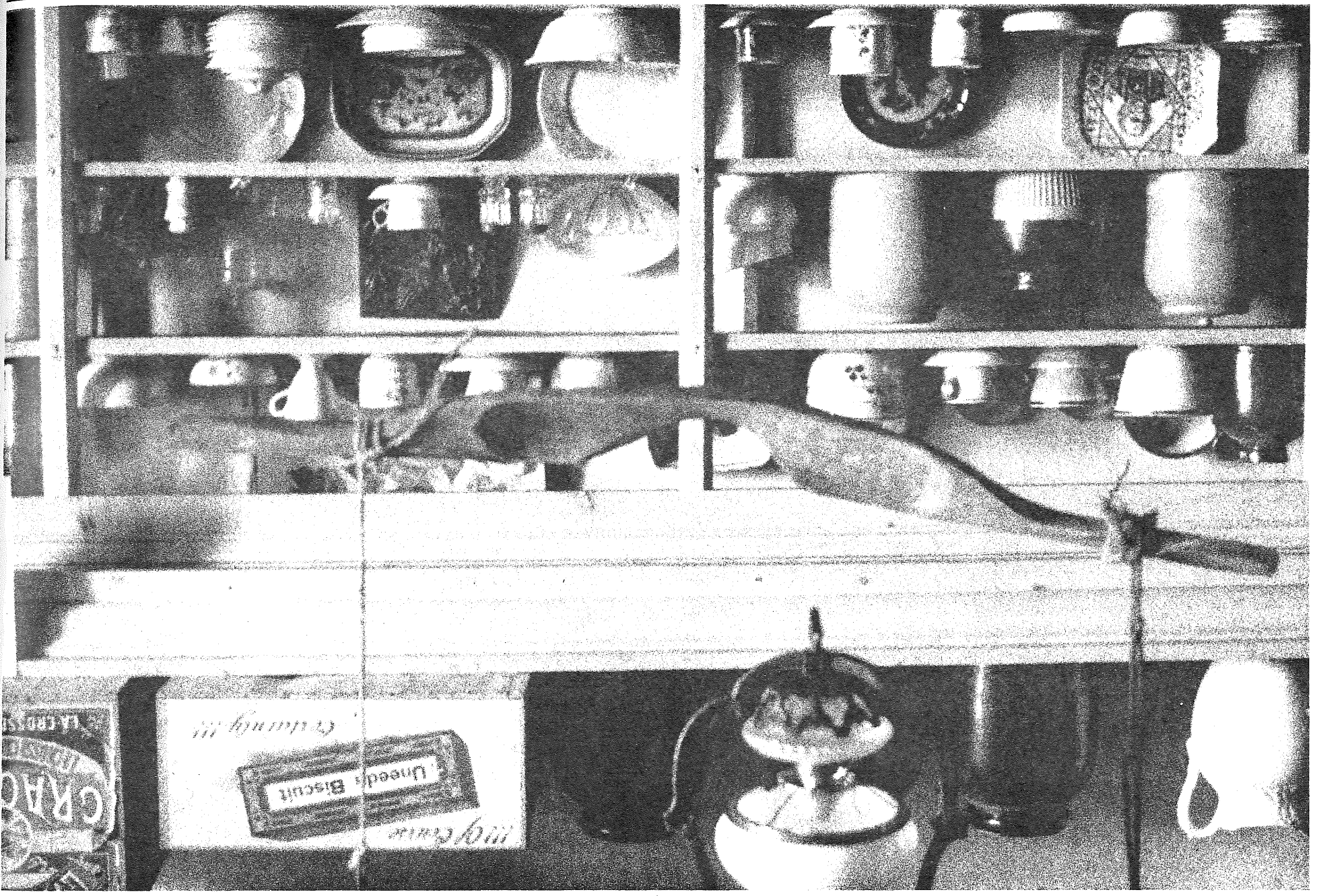
- **Historical Site Restoration**

Objective:

To create an historic atmosphere reminiscent of pioneer life in the town of Forestville

Forestville Store

When Thomas Meighen abandoned Forestville in 1910, he left behind a general store which told the story of settlement of this area. Because of its historical integrity and importance in reconstructing the story of small town pioneer life, the building should be saved.



In order to open the entire building to the public, numerous structural repairs are necessary (e.g., roof repairs and floor bracing) and defenses against fire and theft will have to be incorporated (e.g., smoke detector and security alarm). At this point in time, the MHS has made preliminary plans to use the second story of this structure as a residence for the site manager.

Foster House

Although the Foster house is an authentic example of the 19th century construction (1867), its appearance does enhance the early pioneer setting. It is somewhat removed from the circulation patterns of town site visitors and is in need of immediate rehabilitation if it is to remain standing. It was conservatively estimated that repairs would total \$50,000 if the structure is to be used as a modern residence. Restoration as a pioneer residence complete with period furniture would be considerably more expensive. Needed repairs include:

- Restoring foundation and interior basement walls
- Building the southwest exterior wall
- Replacing weak wooden structural beams in floor, walls, ceiling, and roof
- Refurbishing interior walls, floors, and ceiling
- Replacing roof
- Replacing windows
- Upgrading plumbing
- Supplying the house with electricity, heat, and water
- Replacing bannisters
- Landscaping

Before specific uses for this structure can be contemplated, a detailed MHS feasibility study will be necessary.

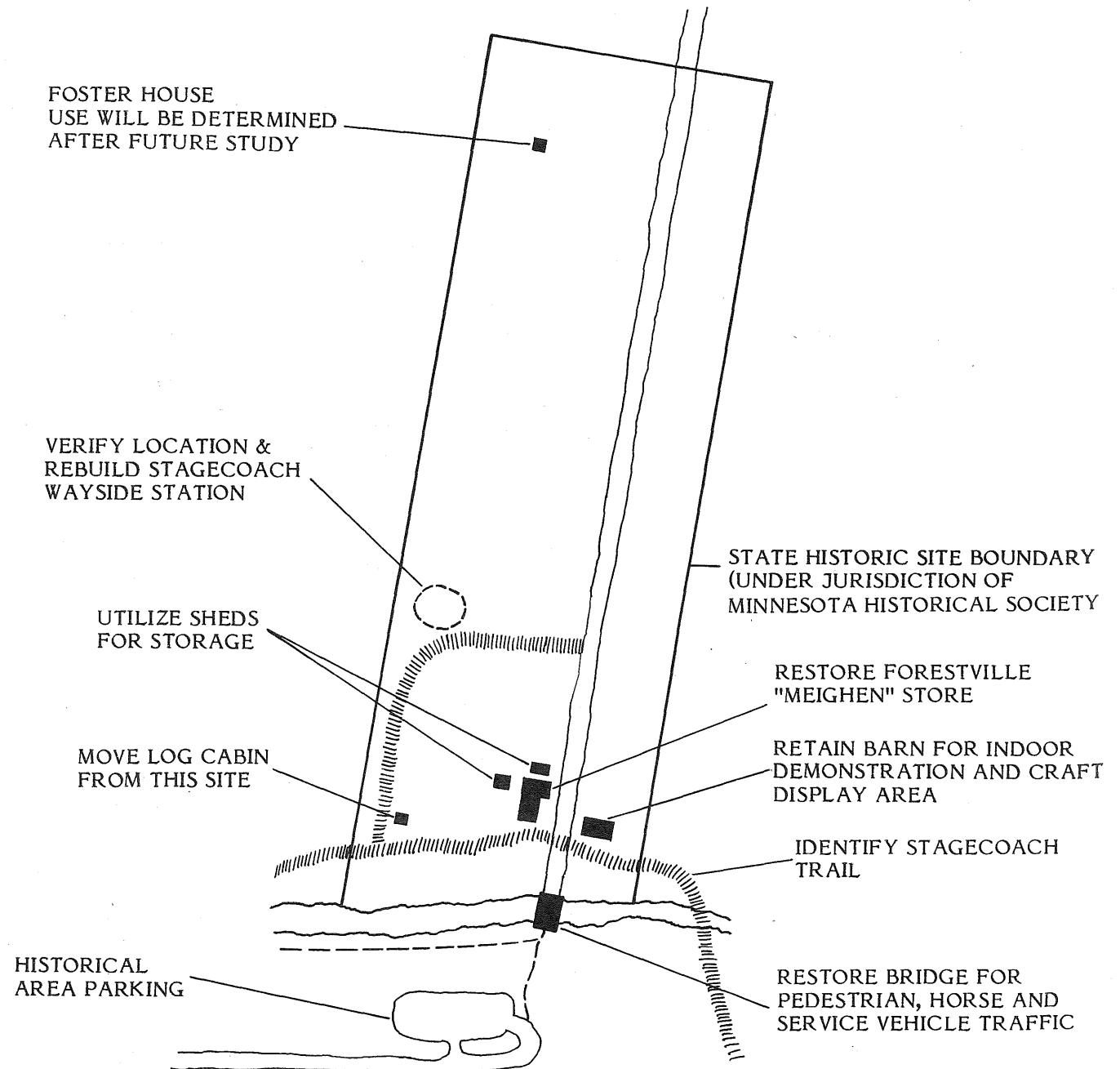
Stage Line Wayside Rest

A remote, isolated frontier settlement in its early years, Forestville was finally designated as a way station for the Burbank State Line. Reconstruction of the town's original wayside rest building and re-creation of a blacksmith shop would focus attention on this old trail.

Bridge

It is recommended in the following Traffic Management Section that the bridge be closed to all traffic, except hikers, horseback riders, snowmobilers, and service vehicles. Numerous timbers must be replaced and the stone abutments repaired in order to ensure safe usage.

HISTORICAL RESTORATION AREA



Log Cabin

At this time the MHS has expressed little interest in retaining this structure. It was constructed during the 1850's and was moved nearly 15 miles to be placed on this site in 1976. Five alternatives appear feasible at this time:

1. Retain it in its present location, under MHS ownership, or return it to its original owners.
2. Sell or donate it to an interested party.
3. Move it from its present location, but retain it for 10-15 years for use as an interpretive headquarters for the DNR and MHS. A new structure would cost about \$40,000 at today's prices. If \$20,000 was put into remodeling this old structure, a savings of \$20,000 would be realized. A negative aspect of this proposal is that the structure would remain unoccupied for a period of years until remodeling is possible. In addition to being a possible liability hazard, in its present condition, it is a visual blight.
4. Dismantle the structure.
5. Move it from its present location for use as the contact station. The same savings would be realized as mentioned in alternative #3.

TRAFFIC MANAGEMENT

Township Road 118

Objective:

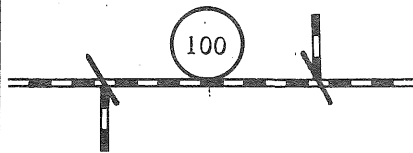
- To minimize modern day impact on the character of the Forestville historic site restoration project
- To provide a safe, slow paced, relaxing atmosphere for visitors within the park
- To control user entrance and exit from the park with minimal annual cost
- To cause the least possible disruption to local traffic flows
- To provide easy access to the park for people statewide
- To provide vehicular access to the nearest county state aid highway or trunk highway

Discussion

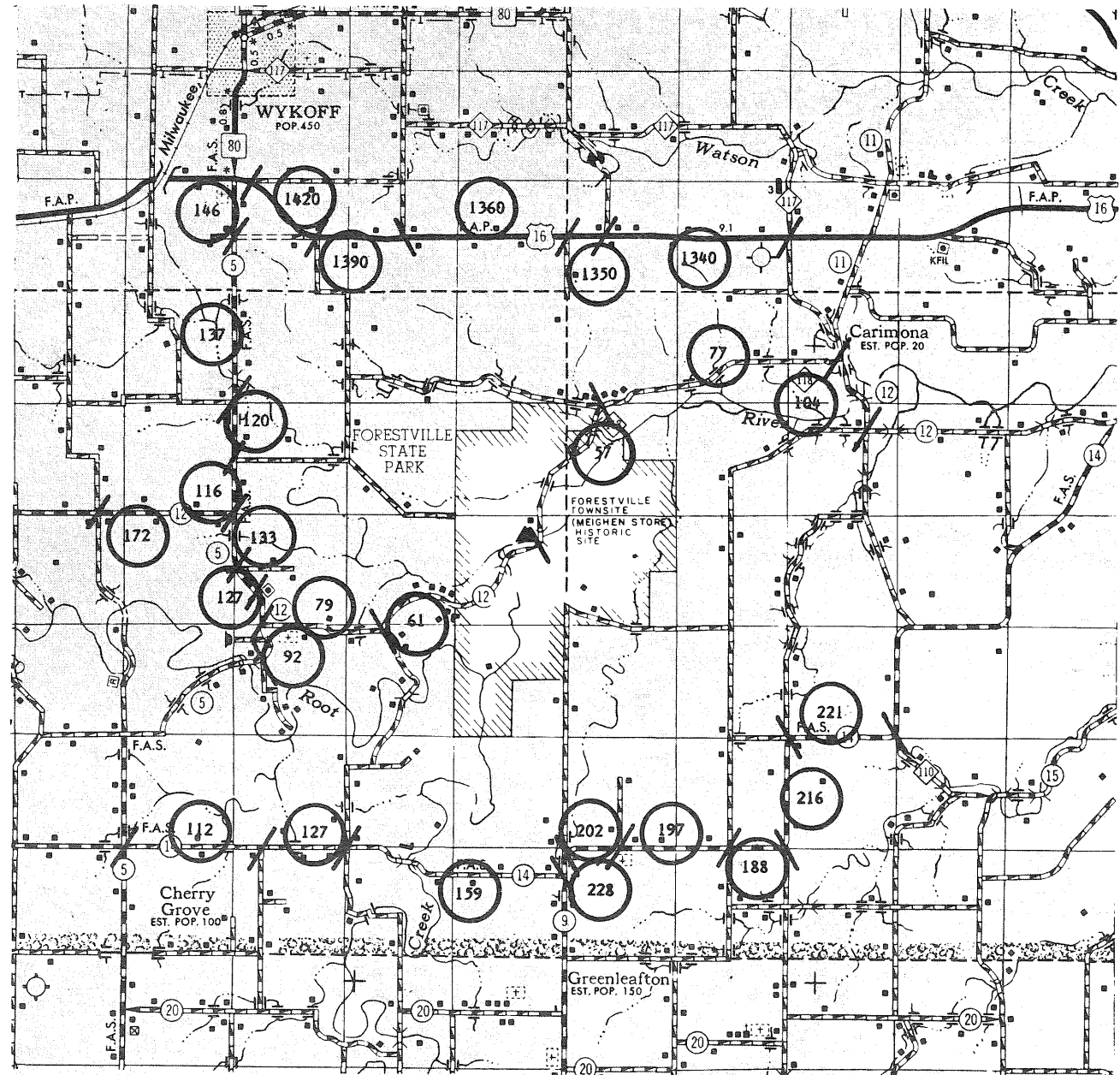
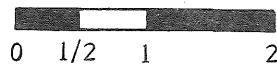
The park is currently bisected by a through-road which has two designations. From the park's western boundary to the Forestville bridge, it is designated as CSAH 12 and from that point on, it is designated as Township Road 118. CSAH 12 is a paved highway that includes the bridge over the South Branch Root River within the park. This highway was upgraded and is maintained with special funds set aside each biennium for county state aid highways which provide access to and within state parks. On the other hand, Township Road 118 which begins at the Forestville bridge is a gravel surfaced road which has not had a major rehabilitation in several years. Its funding comes from limited local township revenues.

According to average daily traffic flow figures provided by the Fillmore County engineer, the township road accommodates on the average 57 vehicles per day (see page 115). This is a year-around figure which includes park visitors. One must also take into consideration that this also includes park users that are either sightseeing in the general vicinity or are entering the park from the west by way of CSAH 12. In fact, it appears that less than a dozen farmsteads in the local vicinity use this route on a regular basis. Because of the 5-ton load limit restrictions on the Forestville bridge, the road can not serve as the school bus route. Although it is used regularly for mail service, the road through the park serves only a minimal number of users as a primary route and is not a regionally significant traffic corridor.

Average Daily Traffic Count
Between Intersections.
Information furnished by Fillmore
County Engineer, 1976.



Scale in Miles



For a number of reasons this through road has a negative impact on the park:

The road is a safety hazard to park users. Although no traffic related accidents have occurred as of yet, park users are generally unaccustomed and unprepared for through-site public roads.

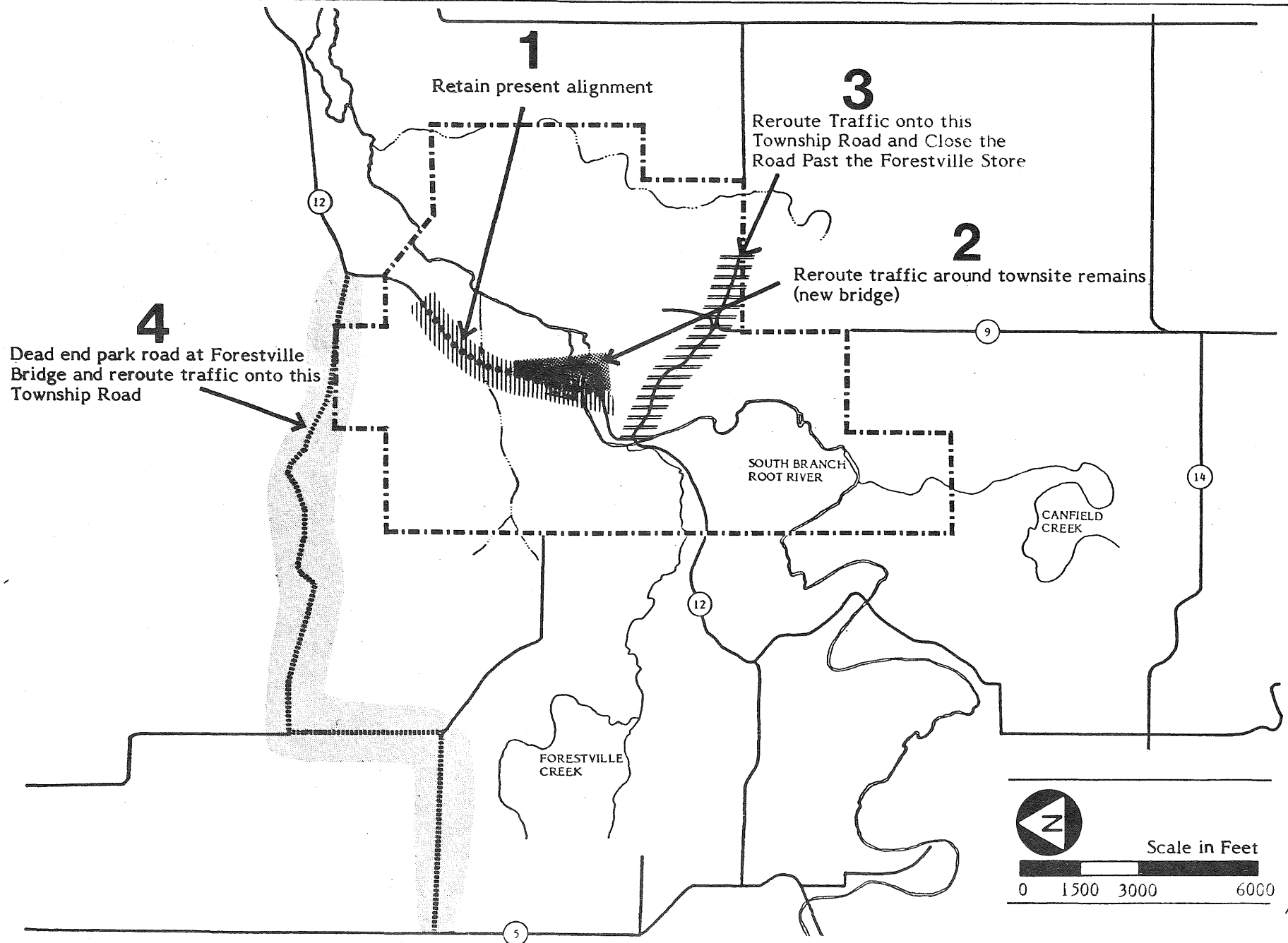
The road provides an additional access to the park. By having more than one entrance, it is impossible to monitor the activities of users, without two contact stations.

Vehicular traffic past the Forestville store and Foster house destroys the image and consequently much of the potential historical impact of the Forestville restoration project.

Alternatives

1. Retain the present highway alignment, renovate the Forestville bridge (the stone abutments are in an advanced state of deterioration and the center spans and roadbed decking are in need of repair), intensify security precautions to protect the Forestville store, and construct an additional contact station on the west park boundary.
2. Reroute the traffic to the east of the historic site, build a new bridge over the South Branch Root River, and construct an additional contact station on the west park boundary. It would be desirable to keep the road as historically compatible as possible. This might be accomplished by historically designed hitching rails and directional signs.
3. Reroute traffic down an existing park road past the equestrian campground, rejoining CSAH 12 near the new bridge across the South Branch Root River and the fishermen's parking lot. Then close the existing Township Road 118 from the Forestville bridge to the Sorenson farm. This would require construction of an additional contact station near the equestrian campground.
4. Close Township Road 118 at the South Branch Root River bridge and reroute through park traffic around the park onto existing roads. These roads will require a minimum amount of grading to facilitate increased utilization.

If the existing alignment is not changed (alternative 1), the negative impact of the road on the Forestville historic site would not be alleviated. As the Minnesota Historical Society re-creates the historical context of this site, this negative impact will be even greater. The negative impact of alternative 2 will be less, but the road will still be very visible and its construction could disrupt other very historic areas. Alternatives 3 and 4 would both remove the traffic from this site and allow the historical setting to be re-created.



Alternatives 1, 2, and 3 all provide through-access for non-park traffic. Non-park users are primarily concerned with reaching their destination by the most direct route, but this route may also be chosen because of its scenic qualities. Park user traffic can be typified as being slower, more relaxed, with the driver being more interested and observant of the surroundings. Also, there is generally little traffic on park roads. Alternative 4 would allow the safe, slow-paced, relaxing atmosphere that state park users expect from the state park system.

User entrance and exit control is important because it facilitates collection of user fees, control of the number of users, and protection of the natural resources and visitors from theft and vandalism. In order to achieve this control with alternatives 1, 2, and 3, constructing and staffing a second contact station would be required. This is simply not feasible for Forestville at this time or in the foreseeable future. Alternative 4 would provide user entrance and exit control with only one contact station.

The alternatives which cause the least disruption to existing traffic flow are 1 and 2. Alternative 3 allows fairly good access to the park from Preston, but is not any better than 4 for mail service. Alternative 4 would increase the travel distance to the park contact station from Preston via county and township roads from 10 miles to 14 miles, but would not affect the 15 mile travel distance via TH 16 and CSAH 5.

Although alternative 4 would increase the travel distance from Preston by 4-5 miles, this would affect relatively few people. The mailman would have to travel approximately 4 additional miles per day, costing approximately \$250 per year. This cost is much less than constructing and staffing another contact station. The few homes west of the park that are protected by the Preston Fire Department can perhaps be serviced as quickly by the TH 16 route where high speed is possible, rather than the county state aid route which has many turns. Alternative 4, therefore, appears to be the best solution.

The existing signed park entrance is from TH 16 onto CSAH 5 to CSAH 12. This provides an adequate access to the park for the people statewide. A new park entrance road directly off TH 16 has been discussed, but does not seem justifiable.

Action

Request that Forestville Township close Township Road 118 from the Forestville bridge to the Sorenson farm, and upgrade the township road north of the park boundary. The DNR will provide assistance in this endeavor where possible.

Service Center

Objective:

To provide efficient storage and work space for the operations and maintenance of the park which is screened from park users; easily accessible from the manager's residence; and to which access can be controlled from the park office

Action

Commensurate with Forestville's emerging importance within the state park system, a major service center is proposed. It will consist of two 30' x 50' buildings equipped with electricity. One of these will be heated for equipment maintenance, and the other unheated for cold storage. In addition, a small oil and gas storage building and loading ramp will also be built (see Campground Development Map, page 97).

Site Advantages

1. Good soils (Fayette)
2. Out of sight of most users
3. Readily accessible to manager's residence

Site Disadvantage

1. The access road will have to pass through a relatively undisturbed wooded area.

Interpretive Program

INTRODUCTION

Interpretation is "an educational activity which aims to reveal meanings and relationships through the use of original objects, by first-hand experience, and by illustrative media, rather than simply to communicate factual information" (Freeman Tilden). In this light, the interpretive services program fosters in the public an understanding of park resources and management by:

1. Revealing the kinship of park visitors to the park environment and, by association, their even broader involvement within ecosystems.
2. Illuminating the historic and ongoing impacts of natural forces within the park and upon the people who use them.
3. Assisting park visitors in the discovery of meaningful and satisfying ways in which to enjoy their visits without intruding on the experiences of others or impairing the quality of the park environment.
4. Explaining the mission of the Department of Natural Resources' interdisciplinary park management practices and the importance of public participation and support in the operation of this agency.

Interpretive services will be developed in recognition of the following:

1. All parks are fragile communities of life which can be perpetuated only through careful management.
2. People are a natural and necessary element in the park, free to enjoy the environment in non-destructive ways.
3. All natural resource units and the public they serve are tied to one another ecologically, economically, socially, and politically.

It is hoped that the people who recreate and learn in the parks will, by experiencing the parks and related interpretive services, derive a better quality of life with increased environmental awareness. As people are encouraged to think and to feel more about park environments, they can be expected to do more on behalf of these environments. They can also be expected to strengthen their ties with the land and with our state's cultural heritage.

Objectives:

To provide orientation information

To provide interpretive information with minimal expenditure of time by existing staff

To facilitate historical interpretation of the area by the Minnesota Historical Society

To interpret the natural history aspects of the park and vicinity

Interpretive Themes

A. Geology

The upland plain into which the stream valleys of southeastern Minnesota were cut by glacial meltwater is a sequence of parallel and nearly level rock strata largely of the Paleozoic Age. These sandstones, limestones, and shales were laid down in ancient seas which spread over the continent 200 to 500 million years ago. As a result of the porous and easily dissolvable nature of the limestone, the area has a great number of springs, underground rivers, caves, and sinkholes. The Mystery Cave complex, one of the largest and most commercially developed in the state, is within 10 miles of the park. Canfield Creek originates from a series of caves several miles upstream from the park.

B. Prehistory

At the present time there is no immediate need to excavate areas where prehistoric material was located during the preliminary field survey conducted by the Minnesota Historical Society (MHS) in September of 1976. If at all possible, intensive park development should be restricted in the vicinity of field sites 2, 3, 5 and 6 (see Prehistoric and Historic Site Map, page 20). The fact that prehistoric evidence was found throughout the park indicates that care should be taken in all park development. It is important to preserve sites for research goals that may be formulated in the future. Before any major development takes place, the state archeologist should inspect the site and make recommendations relative to potential damage. Furthermore, if additional sites are verified within the park (see Potential Historical and Cultural Zone Map, page 35 and Zoning Map, page 37) the zoning maps should be reviewed for possible changes.

The University of Minnesota is now in the process of planning the excavation of the Vrieze site, FL-23, located on Canfield Creek approximately 1/2 mile south of Forestville State Park. The data recovered by this excavation might, in turn, stimulate interest in prehistorically sensitive areas in the park which share geographical similarities, (i.e. field sites 5 and 6, see Prehistoric and Historic Site Map, page 20).

C. History

Although the town of Forestville flourished in the latter half of the 19th century and served as an agricultural and milling community, as well as a stepping-stone to future settlement of the state (see History Section, page 19), little evidence exists today which tells of this past prosperity. The only structures which remain are the Forestville store and the Foster house. Two sheds (approximately 24' x 34'), a barn, the bridge, and a few small wooden out buildings were all constructed after the town was either on the decline or completely abandoned.

As a result of a cooperative agreement between the DNR and the MHS, the MHS will assume administrative control of these vestiges of the past (see Historical Restoration Area Map, page 20). Scholars will research the 168 volumes of Meighen papers now housed in the society's manuscript collection. Archaeologists will also use this data in field checking the site to find the exact locations of the town's original structures. This data will provide the basis upon which future restoration, preservation, and reconstruction can be accomplished. They will also act as consultants in other matters throughout the park which relate to history and prehistory.

Although historical investigation is not a primary objective of the DNR, artifacts found on land under DNR's administrative jurisdiction will be used to help interpret the natural resources found there. Often these relics of the past can serve as the key in illustrating the meaning and the affect of various land use practices to the general public. If former uses are documented, a cause and affect relationship may be deduced. In short, acknowledgement of a park's former use helps to set the land and its resources into context with the social world in which we exist today.

The MHS' primary interpretive theme for Forestville will be transportation. It was the stagecoach that promoted Forestville's growth, the road system which made it a regional center (it was in contention for the county seat), and eventually it was the decision on the part of the railroads to bypass the town which sealed its fate.

The unique setting of the town site of Forestville offers possibilities for instituting a limited summer field school. Prior to the archaeological work, a research plan must be developed and coordinated between DNR and MHS staff. No doubt, a study of this nature would be of great interpretive value to the park.

D. Natural Features

One of the prime natural features of Forestville State Park is the approximately 1,000 acres of timber that was preserved by the Meighen family. Such a vast area of uncut timber is relatively rare in the state of Minnesota and as such, provides an excellent basis for interpretation of native hardwood forests.

The variety and abundance of wildflowers that exist in Forestville is striking and excites both the casual observer and botanist.

Three trout streams, the South Branch Root River, Canfield Creek, and Forestville Creek flow through the park and are currently under fisheries management. The high water quality of these streams which is, in great part, the result of the area's preserved tracts of timber, can be used to an advantage in the interpretation of historical land use, as well as food chains, water quality, trout habitat, pollution, and fish management practices.

Program Coordination

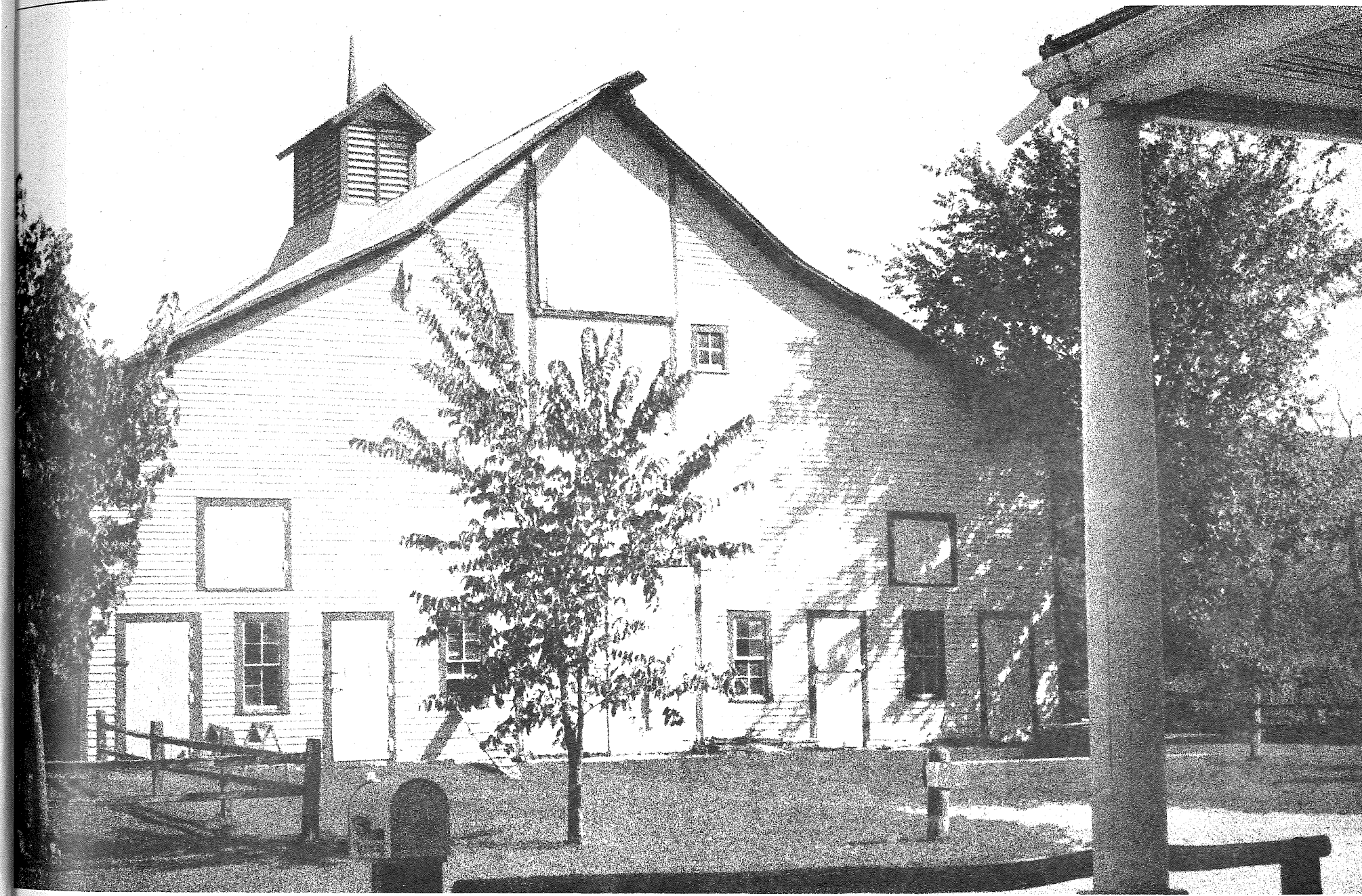
The DNR's interpretive thrust, in the near future, will be to develop, with the aid of the MHS, a brochure which will illustrate the undisturbed nature of the park and its relationship to the town site, former land use, and transportation routes of the middle 19th century.

In addition, the brochure will contain facts and figures which illustrate the natural history of the land and its resources. The council ring planned for the campground area (see Campground Development Map, page 97) will be operated under the jurisdiction of the DNR. However, it is hoped that this program will be enhanced from time to time by the presence of staff from the MHS. It is envisioned that a full-time seasonal naturalist will one day be assigned to the park. This person will work out of the contact station until a combined DNR and MHS staff headquarters can be provided.

Special Events and Festivals

In most cases, athletic or competitive recreational events are discouraged in natural state parks. However, events such as pageants or anniversary observations, if staged without undue impact on the natural resources, may be permitted if there is a meaningful association between the area and the event and if the observance contributes significantly to the visitor's park experience.

The Forestville Arts and Crafts Festival has, in the past few years, met with a great deal of success. In 1977, 4,000 people attended the rain-abbreviated event. This festival has a unique home in the park. The historical atmosphere of the town site is the perfect setting for artisans displaying crafts and trades grounded in yesteryear. With the administrative transfer of the Forestville store, future festivals will have to be carefully planned and coordinated between the festival sponsors, the DNR, and the MHS.



Boundary Modification

Introduction

Boundary changes and acquisition must be considered in the management of any state park. The amount of land necessary to manage a park correctly must be determined and acquired before management can be efficiently carried out. There are two goals that should be strived for in every park:

1. To provide sufficient park acreage to preserve and perpetuate the natural resources and provide the necessary recreational facilities to interpret and enjoy these resources, without including acreage that would be unnecessary or unreasonable to purchase. In cases where buffer land is needed, but purchase is not reasonable or possible, an attempt should be made to zone the area to protect it or to obtain easements (partial interest) or other forms of agreement with the adjacent landowner. Such agreements would state that the landowner would agree not to develop any non-conforming use on the land in question.
2. To control all land within the statutory boundary by fee title (direct ownership).

Areas Considered for Expansion

As was pointed out in the Water Resources Management Section, this area is underlain with fractured limestone. Sinkholes and caves dot the landscape. This geological condition permits two trout streams, the Canfield (area 1) and Forestville (area 2) to make dramatic entrances into the landscape. Both creeks gush out of the side of limestone bluffs having traveled underground for some distance. They continue through tranquil valleys until they meet the South Branch Root River within park boundaries. The South Branch Root River directly upstream from the park (area 3) is also very scenic.


(Note: Numbers refer to Map Code, page 130.)


1 Canfield Creek Area


In general, the Canfield Creek area has bottomland hardwoods on the valley floor and northern hardwoods and white pine on the valley walls and upland area. Near the Big Spring (see map), a loop of Canfield Creek has cut into the limestone, leaving a steep, shaded, moist, north-facing cliff. At least 100 balsam fir, up to 30 feet high and 8 inches dbh cling to the face of this cliff. Along with the balsam fir are white pine (*Pinus strobus*), red cedar (*Juniperus virginiana*), paper birch (*Betula papyrifera*), hornbeam (*Ostrya*), and basswood (*Tilia*). American yew (*Taxus canadensis*) grows below the firs, just above the foot of the cliff. Further examination of the area may reveal other species.


BOUNDARY MODIFICATION

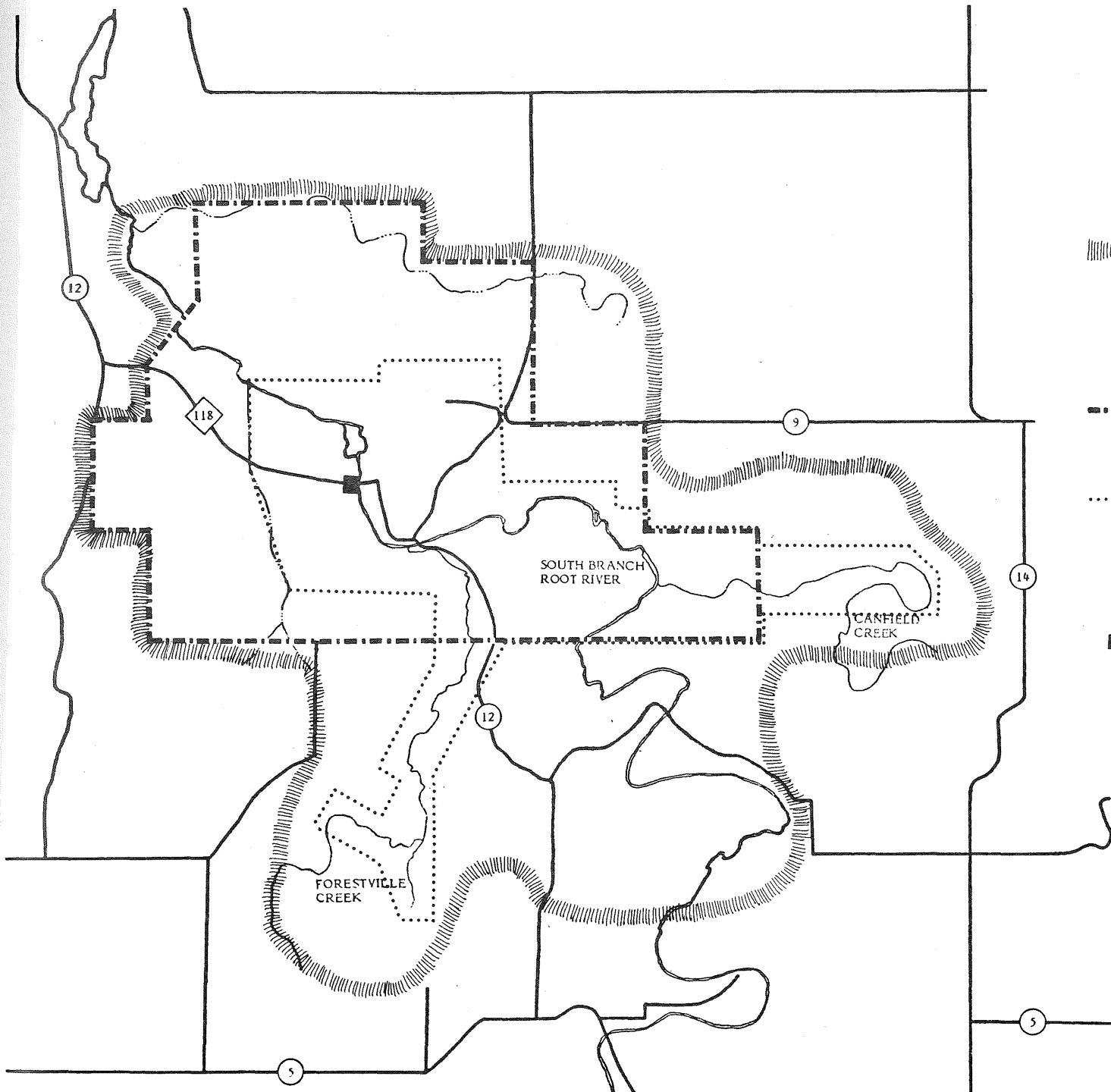
LEGEND

 A large percentage of the area enclosed by this line but outside of the line..... should be owned by the State of Minnesota under the custodial control of the Division of Forestry.

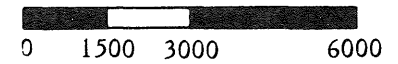
 Existing Forestville State Park statutory boundary 90% owned by the State of Minnesota.

 Proposed Forestville State Park statutory boundary, which should be totally owned by the State of Minnesota at some time and under the custodial control of the Division of Parks and Recreation.

 This area currently under the custodial control of the Division of Parks and Recreation, will be transferred to the Minnesota Historical Society.



Scale in Feet



The University of Minnesota has identified a prehistoric habitation site of the Adena Hopewell period near the Canfield Creek Big Spring. Detailed investigation of this site is needed.

2 Forestville Creek Area

The vegetation in the Forestville Creek area has been disturbed to a greater extent than the Canfield Creek area. Some land along Forestville Creek has been farmed. But as the valley gets narrower and the walls steeper, the amount of disruption decreases. The valley floor is cloaked with bottomland hardwoods and the valley walls with northern hardwoods and white pine. Primarily northern hardwoods, oak savanna, and agricultural lands are found on the uplands. Near the Forestville Creek spring, the steep, north-facing valley walls are carpeted with dense clumps of Canadian yew. Further examination of the area may reveal other species.

Near the mouth of Forestville Creek is an area of historic interest. An enterprising early settler constructed an earthen dam across the entire valley with resulting backwater providing the energy for a mill.

3 South Branch Root River Area

The other area under consideration for expansion lies along the South Branch Root River west of the park near the southern boundary. A dramatic limestone bluff, topped with scattered white pine, with the river running at its base is exceptionally scenic and would be an excellent area for trails.

Areas Considered for Deletion

- 4 The two areas under consideration for deletion are both located on the gently rolling, heavily wooded blufftop. The northern hardwood vegetative cover provides an almost unbroken canopy over this area. The soils are generally stable and productive. Use of these areas is essential to continue to provide horseback riding and snowmobiling trails within the park. They are also very desirable areas for long trails, and these uses could be continued even if the areas are under the custodial control of the Division of Forestry.

Areas to Remain for Park Use

- 5 The valley walls and floor included in this area are essential for the park to preserve and protect the natural resources and to develop recreational facilities for the people of the state. The high activity areas and the most scenic resources are in this area.

Objectives:

To preserve unusual geologic formations and plant associations, as well as areas of high scenic quality, for public use and enjoyment

To provide a 'natural' forested buffer of land around the park

To provide land and facilities for additional compatible recreational activities

To control wildlife populations by allowing hunting in the immediate vicinity of the park

To allow some commercial harvest of timber, thereby retaining good stand quality

To establish the park/forest boundary along major topographic features which are easily discernible


Discussion


At present the Division of Forestry has custodial control of most of the Canfield Creek (area 1) proposed expansion area, and they are actively pursuing the purchase of certain lands along Forestville Creek (area 2). These two areas are very scenic, ecologically unusual, and sensitive to uncontrolled use. On the other hand, some of the land under the custodial control of the Division of Parks and Recreation (area 4) is well suited for forest multi-use management purposes.


By retaining the valley land (area 5) within the park, and expanding out to include the valley portion of Canfield Creek (area 1) and Forestville Creek (area 2), the prime recreational areas and the areas which need the most protection will be within the park. The blufftop areas (area 4) can be deleted from the park and transferred to the Division of Forestry without detrimental impact upon the park but with a definite benefit for public use and resource management.

BOUNDARY MODIFICATION ALTERNATIVES

LEGEND

 A large percentage of the area enclosed by this line but outside of the line..... should be owned by the State of Minnesota under the custodial control of the Division of Forestry.

 Existing Forestville State Park statutory boundary 90% owned by the State of Minnesota.

 Proposed Forestville State Park statutory boundary, which should be totally owned by the State of Minnesota at some time and under the custodial control of the Division of Parks and Recreation.

AREAS CONSIDERED FOR EXPANSION

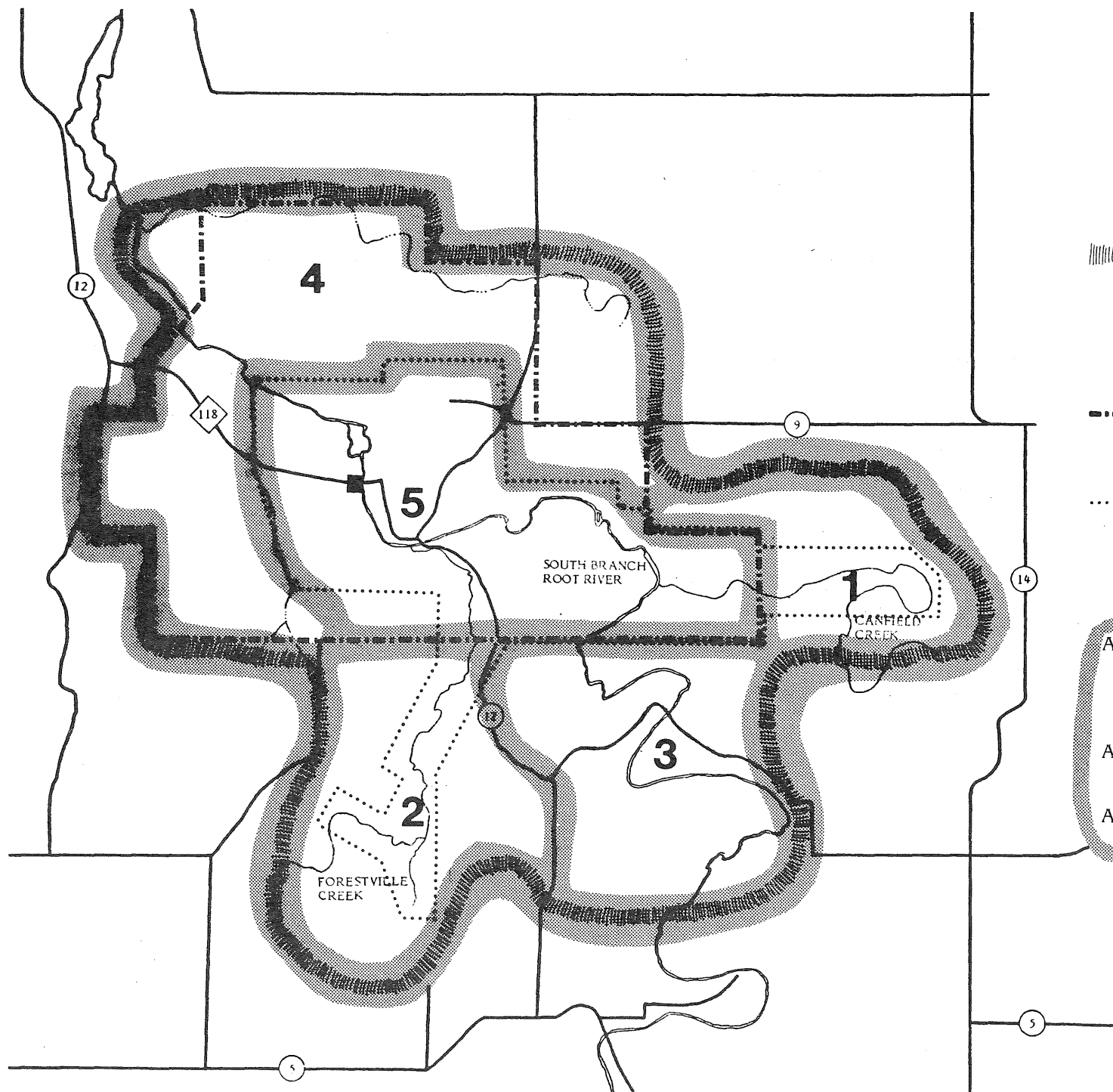
- 1 Canfield Creek Area
- 2 Forestville Creek Area
- 3 South Branch Root River Area

AREA CONSIDERED FOR DELETION

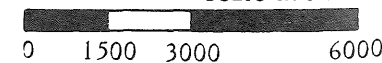
- 4 Blufftop Area

AREA ESSENTIAL FOR PARK USE

- 5 Valley Land



Scale in Feet



Action

Through a series of meetings between the divisions of Parks and Recreation and Forestry, the following proposal was agreed upon in concept. The park boundary should be enlarged to include parts of areas 1 and 2. Area 5 will remain under the control of Parks. Area 4 will be deleted and turned over to Forestry. Area 3, remaining parts of 1 and 2, and the area around the proposed park boundary (see Proposed Boundary Modification Map, page 127) should be high priority for Forestry acquisition, unless Fillmore County will agree to a restrictive development zone in this area.

Land acquisition by both Forestry and Parks will continue in its present direction and boundaries will remain as they are until a mutually acceptable interdepartmental agreement can be developed. Local landowners on the park's periphery should be considered throughout the boundary determination process. It would be desirable to have complete state ownership of area 4 prior to implementation of the transfer, to be assured that the necessary land for recreational activities, administrative control, and a buffer for the historic site and other major park facilities will be available. Land use changes in the proposed park expansion areas may necessitate an agreement and boundary change prior to complete state ownership of area 4.

Some of the topics and suggestions which should be addressed in this interdepartmental agreement would include:

Type of timber harvest – selective cutting and disease control programs only

Control of use – users must stay on designated trails, no four-wheel-drive use

Management plans – Forestry will prepare a management plan prior to transfer

Trail maintenance – park staff will maintain the recreational trails within the forest in the park vicinity

Type of planting – random hand planting preferred over machine planting

The public benefits gained by this transfer of land would include:

1. Current park operations will not be hindered and future trail system expansion will be possible.
2. There will be some monetary return to the county from timber sales.
3. Public hunting in the park vicinity would be allowed on these lands after transfer to Forestry.
4. The boundary between Forestry lands and Park lands will be cleared and posted on easily discernible land features.
5. Prime recreation areas and areas which need the most protection will be within the park.

The disadvantage to the public of this transfer of land would be:

1. Some of the trails would go into areas where hunting is allowed.

STAFFING AND EQUIPMENT

Introduction

Maintenance is an essential, little noticed, and difficult to finance responsibility of the Parks and Recreation Division. The basic obligation of the state is to maintain the landscape resources and state park facilities in a safe, sanitary, environmentally sound, and aesthetically pleasing condition. These facilities must be operated in a manner that provides maximum use and enjoyment at the least possible cost, consistent with state law. There are four basic aspects to maintenance and operations:

1. Maintenance of the landscape resources for the use and enjoyment of future generations
2. Maintenance of the recreational facilities that provide access to those resources
3. Provision of services to the park visitors for maximum enjoyment of facilities and resources
4. Enforcement of rules and regulations to protect the resources from abuse and to ensure enjoyment of the facilities by park visitors

To accomplish these goals requires: (a) trained staff, (b) sufficient supplies, and (c) proper equipment to maintain efficiency in operation and keep costs to a minimum.

The task of providing services to the public and security for park facilities and resources 24 hours per day, 12 months of the year is monumental. During the busy season, full-time operations are necessary 98 hours per week (8:00 to 10:00 p.m., seven days a week). The remaining hours are covered by night patrol and the presence of the resident manager. During other seasons, only part-time operations are provided 98 hours per week, however, maintenance, repair, and park security responsibilities account for many extra man-hours. If these responsibilities are to be met, competent trained personnel are necessary.

A work load analysis of park operating functions has been initiated to ascertain the personnel needs of each park, based upon existing facilities and current operations. This study identifies the man-hours needed to perform each task required for adequate maintenance and operation. Initial results reveal:

1. there is an extreme shortage of adequate personnel,
2. that due to procedures necessary in hiring seasonal workers, high cost labor employees are used for jobs more appropriate to other job classifications, and
3. that a high percentage of man-hours are related to direct services to the public.

These factors limit the personnel available for proper maintenance of facilities. Extensive development since the inception of the Natural Resources Act of 1963 has been a primary contributor to the widening gap between maintenance and development. From the work load study, standards can be established to determine man-hour operating requirements for future facilities as they are proposed for development, so that sufficient personnel and supplies can be provided. Facilities must be properly designed to meet the needs of the public, while being operational with minimum personnel at the lowest possible cost to the public.

Another contributing factor to the current park operations problem is the heavy reliance on federally funded work programs, such as CETA, N.Y.C., and Green Thumb. The low cost personnel provided by these programs make it possible for parks to offer programs and services which would otherwise be impossible. However, these employees are hired on a short-term basis, usually 8 to 10 weeks and often do not have the training and experience necessary to provide needed services without constant supervision in already understaffed parks. To avoid these problems funding should be made available to hire adequately trained personnel for major public service and maintenance programs using temporary employees only for minor maintenance and special projects.

Enforcement of park rules and regulations is a vital element in the management of state parks. Currently, violations are referred to DNR enforcement officers for follow-through on prosecution. Park personnel should have the technical training and tools needed to carry out this responsibility in a manner which will protect the resources from abuse, while educating the visitor to the importance of environmental protection.

One of the major maintenance problems of recreational areas is the extreme impact of large numbers of people concentrating use in specific locations. These areas include campsites, trails, lakeshore, river banks, the area around buildings, and scenic points of interest. This overuse affects the ground

cover and frequently exposes tree roots to damage from foot traffic. The eventual result may be erosion, slides, disfigured sites, and even danger to the visitors. Regular maintenance programs with adequate personnel, supplies, and equipment would reduce the damage and consequently prevent major reconstruction expenditures. It will also preserve the aesthetic character by preventing unsightly scars or exposed areas.

The purpose of a maintenance and operations plan is to identify specific problems in each park, establish the basis for solution of those problems, and to specify techniques of management which would decrease the costs of operation. It should make specific recommendations for facilities which will serve the needs of visitors with a minimum of regimentation and provide for ease of maintenance and enforcement. It should also identify basic management duties, establish adequate staffing requirements, and identify supply and equipment needs.

Objective:

To ensure that there is adequate staff and equipment to efficiently and effectively operate Forestville State Park

Park Management Duties and Responsibilities

Park Manager

The park manager at Forestville State Park will administer the total park maintenance and operations program, and implement appropriate segments of the development program under the direct supervision of the regional park supervisor at DNR headquarters, Rochester, Minnesota. This consists of supervising park employees, providing law enforcement, providing interpretative services, maintaining sound public relations, recruiting employees, soliciting volunteers for various work programs, and assisting in park operations when possible. These administrative responsibilities limit the time available for actual participation in maintenance and operations activities during the busy season. Additional seasonal and part-time personnel, as specified in the following pages, are necessary to provide adequate public services and fully implement this plan.

Other Park Duties and Responsibilities

1. At the contact station, park workers provide initial part-time public contact, dispense information, sell permits and firewood, and register campers. Currently this service is only provided during peak visitor periods, but should be extended throughout the 98-hour week. One additional park worker is needed for this. At this time a great deal of the necessary permit sales and registration is conducted by the manager while making the rounds of park facilities.

-
2. Interpretive services have been provided 12 months a year by an individual hired either as a park laborer or on the CETA program. Providing security for the Forestville store and its valuable contents is a prime responsibility of this position. The transfer of the historical site to the Minnesota Historical Society for operations and maintenance will eliminate the need for the park to provide this employee. The labor funds for this position may then be used for park maintenance and operations. Since the theme of Forestville is primarily historical, interpretative services will be limited to interpretive trails, brochures, and part-time programming at the council ring. A brochure will be developed under contract and will provide initial interpretation until there are sufficient funds available to hire a naturalist.
 3. Maintenance constitutes a broad range of duties provided by laborers, park workers, and student workers. This includes maintaining buildings, grounds, trails, roads, parking areas, tables, signs, and equipment; conducting night patrol; and providing semi-skilled labor for rehabilitation and development projects. CETA and other programs can provide valuable assistance when they are available, however, these employees require qualified park employees for supervision.

Operating Seasons

Summer - The opening of fishing season, generally March 1st, initiates heavy fishing pressure on the trout streams which continues throughout the summer. The campground operates at capacity on holidays and occasional weekends through Labor Day. Camping, fishing, hiking, and horseback riding are the primary activities along with the enjoyment of the historical site. Horseback riding is a major activity in this park from May 1st through autumn.

Spring and Fall - As in most parks, spring and fall are the primary maintenance and construction seasons. Operations involve part-time service weekdays and weekends, primarily for riding clubs.

Winter - When snow cover is sufficient for snowmobile and ski trail activity, maintenance, supervision, and enforcement services are required. The development of a trail shelter and parking lot will increase the influx of visitors for winter use of park and trails. Maintenance of tables, buildings, and equipment and timber management are also important winter activities.

Operational Problems

- Through-park traffic is the biggest operational problem of this park. The control of visitors entering and leaving is not possible. Vast amounts of time and funds are expended enforcing the vehicle permit law and security patrol. With the great value of the Forestville store and its contents, control and protection is absolutely essential.

Recommendation: Only one controlled entry point must be provided.

-
- There is inadequate staff to provide park services 12 months per year, 14 hours a day, with enforcement required 24 hours a day. These long hours put a tremendous strain on existing park staff.

Recommendation: A full-time assistant manager, a seasonal park worker (5 months), and additional laborer funds (2 months) must be provided in order to:

1. Operate the contact station
 - a. provide camper information
 - b. register campers
 - c. sell firewood
2. Provide maintenance services
 - a. regular cleaning of sanitation building and pit toilets
 - b. replacement of fire rings every three to five years
 - c. solid waste removal
 - d. hazardous tree removal
 - e. mowing
 - f. night patrol
 - g. general park regulations enforcement
 - h. trail maintenance and grooming

- Horseback riding is one of the most popular activities in Forestville from early May through the autumn season. This activity has the potential for causing serious erosion problems and requires continual supervision, enforcement, and trail inspection and maintenance by park personnel.

Recommendation: Horseback riding must be restricted to designated trails and facilities, to the user capacity determined by this plan, and to established rules. Development funds for bridges and trail improvements necessary to prevent erosion are specified in the Recreation Section of this plan.

- Trout fishing is a major activity in the park. The three trout streams receive a great deal of fishing pressure throughout the fishing season.

Recommendation: Fishermen must be restricted to designated facilities, approved parking areas, and applicable park rules.

-
- Winter trail use, mainly snowmobiling and cross-country skiing, is becoming continually more popular in the park and on adjacent forestry trails. This requires trail maintenance and grooming as well as permit and regulation enforcement.

Recommendation: Activities must be restricted to designated trails and facilities. The full-time manager's assistant will assist in trail maintenance and enforcement.

- Dutch elm disease, as in all state parks, has taken a tremendous toll requiring extensive tree removal and revegetation.

Recommendation: Revegetation will be carried out as laid out in the Vegetation Management Section. Removal of obstructing and hazardous trees from trails and use areas is also constantly required.

- Campsites and trails receive highly concentrated use many hours per day, greatly impacting soil and vegetation. Maintenance and rehabilitation of these resources have long been neglected in most parks, primarily because of funding shortages and insufficient soil and vegetation research and information. Resource degradation is just beginning to be evident in Forestville.

Recommendation: All activities must be restricted to their designated use. A detailed study and testing program of soil and vegetation requirements for management, including fertilizers, hardy grasses, and shrub screenings is necessary to provide on-going rehabilitation and maintenance of heavily-used areas. To accomplish these goals, funds for research, rehabilitation, and personnel must be provided through this plan.

- Many of the buildings in the park were acquired as part of land purchases and will be removed or replaced as new buildings eliminate their need. Primary access roads to facilities are currently gravel which causes dust problems for visitors and roadside vegetation. They also require regular grading.

Recommendation: Pave all park roads except campground loops. The road to the horse trail parking area also needs paving for erosion control and traction because of the steep gradient.

- There is insufficient equipment to implement major rehabilitation and development programs.

Recommendation: Provide a tractor, trucks, and other equipment as itemized in the equipment proposals of this plan.

- Prompt, on-site enforcement of rules and regulations is difficult for staff which has no enforcement training or summons authority. Currently violations must be processed through DNR Enforcement or by formal process through the county attorney.

Recommendation: Each permanent park officer must obtain enforcement training and be given the authority to issue summonses.

Current Personnel Staffing Requirements

The chart shows existing staff and the staff needed to adequately accomplish current operations and maintenance. The needs shown here are based upon a work load analysis which identifies present park functions and man-hours necessary to accomplish those functions.

	<u>Existing - 1976</u>		<u>Needs - 1977</u>	
<u>Administrative Personnel</u>				
Park Manager	12 months	\$ 12,228	12 months	\$ 12,288
Assistant (Technician)			12 months	9,456
Assistant (Technician)	9 months	7,596	9 months	7,596
<u>Public Services Personnel</u>				
1 Park Worker	7 months	4,275	7 months	4,375
1 Park Worker			5 months	2,925
<u>Maintenance Personnel</u>				
1 Laborer I	7 months	6,208	7 months	6,208
1 Laborer I	5 months	4,496	7 months	6,208
<hr/>				
Total		\$ 35,063		\$ 49,056

CETA and other programs currently supplying staff should be used to supplement maintenance and cleanup functions and for public services in emergency situations only. Funds for student workers would provide additional personnel for maintenance and would also provide needed jobs for students.

STAFFING SUMMARY The \$14,093 increase in salary request (1977) will provide the following by 1978:

- | | |
|---|----------|
| (1) Twelve month assistant for winter trail maintenance and qualified supervision (98 hours per week) for warm weather activities and maintenance programs. | \$ 9,456 |
| (2) Five month park worker will provide contact station service for an additional part of the 98-hour week that the park is open. | \$ 2,925 |
| (3) Labor funds will provide for: | \$ 1,712 |
| (a) Night patrol | |
| (b) Campground maintenance | |
| (c) Trail maintenance | |
| (d) Vegetation management | |
| (e) Road and building maintenance | |

\$14,093

Because of the wide variety of activities at Forestville, it has one of the longest work days and service seasons of any state park. The staff described above is minimum for current programs.

FUTURE DEVELOPMENT - Personnel Needs (Refer to chart page 141)

Formal development and regimentation of the equestrian campground by 1981, development of additional semi-modern campsites by 1987, the anticipated heavy increase in use, and implementation of resource management will require additional personnel estimated as follows:

1. One park worker by 1982 to operate the contact station full-time during the summer.
2. Extend the second technician position from 9 months to 12 months by 1980 to provide for increase winter activity and maintenance demands.
3. Provide additional laborer and student worker funds to implement resource management in heavy use areas as the demand on facilities increases.
4. Provide seasonal naturalist.

MAINTENANCE AND OPERATIONS SUMMARY

The figures for the period 1980 through 1987 are estimated projections intended to illustrate the scope of the potential maintenance and operations costs, including the operation of new facilities plus an estimated 10% 2-year salary inflation cost.

		Biennium			
	78-79	80-81	82-83	84-85	86-87
<u>PERSONNEL:</u>					
Existing 76-77	\$70,000				
Actual Needs (for current operations based on staffing chart)	\$ 98,100				
Personnel Costs (from previous biennium)		\$107,900	\$122,000	\$ 141,900	\$ 161,000
*Additional Personnel Needs (to operate new facilities)		1. 3,000	2. 7,000	3. 5,000	4. 4,000
Subtotal	98,100	110,900	129,000	146,900	165,600
10% Salary Inflation	9,800	11,000	12,900	14,700	16,600
TOTAL BIENNIAL PERSONNEL COSTS (rounded figures)	107,900	122,000	141,900	161,600	182,200
SUPPLIES Administrative Overhead and Expenses (20% of personnel costs)	21,600	24,400	28,400	32,300	36,400
EQUIPMENT (from equipment schedule)	14,800	25,000	16,900	10,400	20,400
TOTAL PROJECTED BIENNIAL MAINTENANCE AND OPERATIONS COSTS	\$144,300	\$171,400	\$187,200	\$ 204,300	\$ 239,000
ANNUAL COST BREAKDOWN	\$ 72,150	\$ 85,700	\$ 93,600	\$ 102,150	\$ 119,500
TOTAL 10-YEAR COST PROJECTION	\$946,200				

EQUIPMENT The items of equipment listed below, when replaced on a regularly scheduled basis, are considered sufficient for the current overall operations of this park, although the needs may change periodically throughout the 10-year projection. Heavy equipment and specialized equipment not listed should be obtained through the regional office. Equipment of the proper size and specifications must be selected on a park by park basis to match the conditions and job being accomplished. Proper up-to-date equipment will reduce the personnel needs, the cost of repairs on old equipment, and the cost of maintenance and improvement projects.

1978 - 1987 PROJECTED EQUIPMENT REPLACEMENT SCHEDULE

Unit	Existing	78-79	80-81	82-83	84-85	86-87	Total
1/2 Ton Truck	1975	\$ 4,400	\$ 4,800	\$	\$ 5,800	\$ 6,400	\$ 21,400
3/4 Ton Truck w/compactor	1968						
1 Ton Truck		5,100				7,400	12,500
4-Wheel-Drive Power Wagon	1963		6,000				6,000
Tractor	1968			11,000			11,000
Snowmobile (Groomer)	1971		10,000				10,000
Snowmobile	1972	1,300		1,500		1,800	4,600
Small (mowers)		4,000	4,200	4,400	4,600	4,800	22,000
TOTAL		\$ 14,800	\$ 25,000	\$ 16,900	\$ 10,400	\$ 20,400	\$ 87,500

Future replacement will be based upon the following general criteria:

- Light maintenance and administrative vehicles: 5 years or 70,000 miles.
- Heavy maintenance equipment: With the limited use received, this equipment could last a long time and be replaced on an individual item basis when necessary or be exchanged through the region for other improved vehicles.
- Small equipment: Mowers and chainsaws need regular replacement with the consistent use received. Other motorized equipment will be purchased and replaced as needed.
- Other equipment: Interpretive, furniture, fixtures, etc. will be purchased as needed.

OVERALL COST ESTIMATE

The Department of Natural Resources has prepared the following cost estimates to cover the 10-year development program as proposed by the Forestville State Park Management Plan. It must be kept in mind that this cost estimate is based on current prices and available information. It will be reasonable to expect cost increases in management and development estimates. As new information is made available and as new or modified programs are initiated, revised cost estimates will be prepared to more realistically represent costs and expenses at that time.

DEVELOPMENT COST AND PHASING

<u>Project</u>	<u>Biennium</u>					<u>Total</u>
	<u>78-79</u>	<u>80-81</u>	<u>82-83</u>	<u>84-85</u>	<u>86-87</u>	
Equestrian Campground	\$	\$	\$	\$	\$	\$
Pave access road		67,000				67,000
Drill well	29,000					29,000
Construct two pit toilets		5,000				5,000
Equestrian Day-Use Area						
Grade and pave parking lot		3,000				3,000
Construct picnic sites		2,500				2,500
Fishermen's Parking Lot						
Pave parking lot					12,000	12,000
Council Ring	3,000					3,000
Semi-Modern Campground						
Construct 30 sites					90,000	90,000
Contact Station/Office			40,000			40,000
Service Center Complex						
Construct 30 x 50 service building	50,000					50,000
Grade roads and miscellaneous	20,000					20,000
Construct 30 x 50 cold storage building	30,000					30,000
Construct gas and oil storage building	5,000					5,000
Drill well	10,000					10,000

	<u>78-79</u>	<u>80-81</u>	<u>82-83</u>	<u>84-85</u>	<u>86-87</u>	<u>Total</u>
Primitive Group Camp						
Remove former residence			2,500			2,500
Construct site for 50 campers				5,000		5,000
Campground Roads						
Pave (except loops)			57,000			57,000
Parking Lots						
Pave picnic ground lot			8,000			8,000
Pave historical area lot			8,000			8,000
Picnic Shelter						
Construct addition to sanitation building	10,000					10,000
Interpretive Facilities/Brochure		20,000				20,000
Hiking Trail (Handicapped Accessible)						
Surface with crushed limestone	30,000					30,000
Impregnate with soil binder					93,000	93,000
Trail Erosion Control	2,000	5,000	4,000	4,000	4,000	19,000
Hiking and Snowmobiling Bridge				50,000		50,000
Equestrian Trail (7 miles)					17,500	17,500
Snowmobile Trail (3 miles)		6,000				6,000
Cross-Country Ski Trail (3 miles)		3,000				3,000
Refurbish Bridge (After road is closed)	21,000					21,000
Historical and Cultural Survey		3,000				3,000
TOTAL	\$ 212,500	\$ 114,000	\$ 119,500	\$ 59,000	\$ 216,500	\$ 749,000

VEGETATION MANAGEMENT COST AND PHASING

	Biennium					TOTAL
	78-79	80-81	82-83	84-85	86-87	
1 Passive Management	Budgeted as part of ongoing park management					
2 Maintain Open Brush				5,000		5,000
3 Cut 4 Openings			2,000			2,000
4 Cut 4 Openings			2,000			2,000
5 Reforest Old Field (Orchard)			1,000			1,000
6 Thin Overlook	500					500
7 Reforest Agricultural Land					2,500	2,500
8 Reforest Old Field		2,500				2,500
9 Cut 2 Openings				1,000		1,000
10 Plant Trees		6,000				6,000
11 Plant Trees and Reestablish Prairie		2,000	4,000	1,500		7,500
12 Maintain Pioneer Hardwoods			2,500			2,500
13 Cut 1 Opening				1,000		1,000
14 Cut 4 Openings				2,000		2,000
15 Thin Overlook	500					500

16 Thin Picnic Area	1,000					1,000
17 White Pine Regeneration				2,000		2,000
18 Thin Northern Hardwoods		2,500				2,500
19 Thin Northern Hardwoods		1,500				1,500
20 Plant Hardwoods	4,000	4,000				4,000
21 Reforest Old Field			10,000			10,000
22 Plant Permanent Wildlife Food Plot		3,000				3,000
23 Reforest Old Field	4,000					4,000
24 Plant White Pine		3,000				3,000
25 Maintain Lowland Prairie			2,000		2,000	4,000
26 Timber Removal and Reforest		10,000				10,000
27 Reforest Agricultural Land					2,000	2,000
GRAND TOTAL	\$ 10,000	\$ 34,500	\$ 23,500	\$ 12,500	\$ 6,500	\$ 107,000

TOTAL COST AND PHASING

<u>Project</u>	Biennium					<u>Total</u>
	<u>78-79</u>	<u>80-81</u>	<u>82-83</u>	<u>84-85</u>	<u>86-87</u>	
Vegetation Management (Cut, burn, and landscape)	\$ 10,000	\$ 34,500	\$ 23,500	\$ 12,500	\$ 6,500	\$ 87,000
Stream Control		20,000				20,000
Development	212,500	114,500	119,500	59,000	216,500	722,000
Maintenance and Operations	144,300	171,400	187,200	204,300	239,000	946,200
GRAND TOTAL	\$ 366,800	\$ 340,400	\$ 330,200	\$ 275,800	\$ 462,000	\$1,775,000

OVERALL AUTHORITIES

DIVISION OF PARKS AND RECREATION

General

Once the management plan has been completed and approved, it will become the responsibility of the director of Parks and Recreation (hereafter referred to as the director) to insure proper implementation of the concepts established in the plan. As such, the director will act as the coordinator and liaison between the planning staff, regional staff, local officials, and the general public to insure that the plan is kept current, remains on schedule, and becomes a reality.

In order to insure the accomplishment of this cooperative planning and implementation effort, the following responsibilities have been established and must be followed.

Specific Requirements

The director and staff will:

1. Coordinate and administer field operations as delegated by the assistant commissioner of operations.
2. Develop and administer all programs necessary to accomplish plan goals and objectives. Programs include those necessary to implement management plans and to maintain and operate parks and other programs assigned to the division. Specific program responsibilities at this time are: acquisition, development, resource management, maintenance and service operations, interpretive services, and accessibility.
3. Prepare policies, guidelines, procedures, and standards necessary to implement programs established in the plan (e.g., responsibilities relating to contracts and force account project.)
4. In coordination with DNR legislative liaison, prepare legislation necessary to provide program funding, boundary changes, and operational authorities.
5. Review and approve all detailed plans, specifications, and project proposals prepared by the Bureau of Engineering (BOE) or field staff. Coordinate on-site field staking and site layouts with BOE and regional staff.
6. Coordinate divisional administrative functions with other DNR administrative offices.

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7. Work with DNR's federal grant specialists in order to obtain maximum federal funding (e.g., LAWCON) for all division programs.
 8. Recommend modifications and provide information necessary to update the management plan. All modifications to the concepts established in the approved plan will be processed through the Office of Planning and Research. The director will submit requests for modifications in writing, stating justification for change and what impact the change would have on the overall management plan. If comments and rationale for opposing a proposed change are not received within 25 working days, agreement is implied. In the event that significant change in the direction of the plan is proposed (e.g., altering goals and/or objectives of the plan) it will be necessary to follow the same procedures established in developing the original plan. If the director and the Office of Planning and Research cannot come to an agreement on the requested change, the director will then submit the request to the commissioner's Planning and Environmental Review Board (PERB) which will formulate the final recommendation to be submitted to the commissioner's Executive Council.
 9. Assign responsibilities and funding for implementation of the development program to BOE for contracts and to the regional staff for force account projects. In addition, the director shall coordinate the implementation of resource management programs.
 10. Make recommendations which will expedite the park planning process and evaluate progress toward the achievement of goals and objectives stated in the plan.
 11. Forward BOE requisitions and field project proposals to the Office of Planning and Research so that the progress of implementation can be monitored.

REGIONAL OFFICE

General

The regional administrator and staff will supervise the physical implementation programs for the approved plans as established by the division.

Specific Requirements

1. The regional administrator will assign qualified staff to help implement this management plan. The district forester, wildlife managers, and other specialists should be consulted on specific aspects of the resource management of the plan.
2. The regional park supervisor will supervise and direct the park manager to insure that the management plan is implemented correctly.
3. The regional park supervisor will regularly field inspect all development in the park.
4. The regional park supervisor will submit written reports as necessary to keep the regional administrator and the director informed on the progress of development and any problems encountered.

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5. The regional park supervisor will submit information to facilitate plan updates and changes. The regional park supervisor will submit his recommendations for change in writing to the regional administrator and the director. The recommendations should include rationale and an analysis of the impact the requested change will have on the management plan.
 6. The regional park supervisor will submit project proposals to the regional administrator and the director for review and approval. The director and staff will review all project proposals verifying compliance with the intent of the plan and its schedule.

The region may implement approved project proposals once detailed specifications have been prepared and funding has been provided.

PARK MANAGER

General

It will be the responsibility of the park manager, under the direct supervision of the regional park supervisor, to coordinate the physical implementation of assigned sections of the management plan. The manager will inform the regional supervisor concerning the progress of the implementation through project proposals and written progress reports.

Specific Requirements

The park manager will:

1. Seek the assistance of the regional park supervisor in the resolution of any major implementation problem.
2. Consult the regional park supervisor if there is uncertainty, concern, or opposition to recommended management of a specific item within the plan.
3. Assist and give direction to field personnel assigned to the implementation of specific sections of this management plan.
4. Maintain records on the development of specific items in this plan to insure continuity and reference for future updating and revision.
5. Work with the regional park supervisor in initiating project proposals to be submitted to the director for review and approval.
6. Submit to the regional park supervisor information to aid in the updating and revision of the plan.

OFFICE OF PLANNING AND RESEARCH

General

The Office of Planning and Research will monitor and evaluate implementation of the management plan and make revisions to the plan as necessary.

Specific Requirements

The Office of Planning and Research will:

1. Review all BOE requisitions and project proposals to evaluate the proposed actions for consistency with the approved plan. Comments, suggestions, or corrections will be submitted to the director.
2. Process all modifications to the approved management plan (see Parks and Recreation section).
3. Provide additional information and justification for specific recommendations within the plan when requested by the division.
4. Maintain contact with the public, local officials, legislators, and DNR staff regarding the updating of the plan.

PROCEDURES

DEVELOPMENT

The development procedure for the Division of Parks and Recreation can be broken down into two categories: (1) contract, and (2) force account.

Contract

Director initiates project by preparing a program, which complies with the management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director requests BOE to prepare detail drawings and specifications in accordance with approved program.

BOE prepares detailed drawings and specifications and submits them to the director.

Director approves drawings and specifications, insuring compliance with management plan objectives and goals, and re-submits them to the BOE.

BOE processes contract documents through the Department of Administration, Division of Procurement for bidding and contract award procedures.

Force Account

Director initiates project by preparing the program, complying with the management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director assigns funds to regional administrator.

Regional administrator directs regional park supervisor and necessary staff to implement program.

Regional park supervisor may:

Request that the BOE prepare detailed drawings and specifications for review by the director

Assign the park manager to complete the project with field personnel

Assign park manager and with the regional staff to let bids to local contractors

BOE provides direction to the contractor and establishes site location and field staking.

BOE supervises construction and approves completed work according to contract documents.

Director and staff monitor the progress, funding, and necessary coordination between other state agencies and funding sources.

Supervision over the project will be the responsibility of regional, divisional, or BOE staff, depending on the complexity of the specific project.

Regional park supervisor will certify to the division that the project has been completed as planned.

Director and staff will monitor the progress of the development program.

RESOURCE MANAGEMENT

The resource management program for the Division of Parks and Recreation is also broken down into contract and force account categories.

Contract

Director initiates a project by preparing the program, in compliance with management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director approves project and initiates bidding process through the Department of Administration.

Force Account

Director initiates project by preparing the program, in compliance with the management plan.

Director distributes copies of preliminary program and drawings to the planning section and regional staff for review.

Director assigns funds to regional administrator.

Regional administrator directs regional park supervisor and necessary resource management staff to implement program.

Director supervises and monitors the program.

Consultant or contractor, in coordination with divisional and regional staff, completes the project.

Director approves the completed project.

Regional park supervisor and resource staff prepare detailed resource implementation program.

Detailed resource management program is submitted to the director for approval.

Once approved, the regional park supervisor and resource managers may:

Assign the park manager and field personnel to implement program

Prepare contracts to be let to local contractors or consultants to implement program

Regional staff supervises project.

Director and staff monitor the progress of the resource management program.

Regional park supervisor certifies to the division that the project has been completed as planned.

MAINTENANCE AND OPERATIONS

The Division of Parks and Recreation will provide the regional staff with necessary direction to maintain and operate state parks as a statewide system. The director will establish rules and regulations pursuant to the ORA '75 for administering state parks. In addition, training courses and manuals will be prepared by the division on park operations, maintenance, enforcement, signing, and construction standards. If necessary, special operational orders will be prepared by the commissioner for specific problem areas. The following illustrates the general operation and maintenance procedures:

Director in cooperation with the assistant commissioner of operations, will establish policies, guidelines, and statewide procedures for maintenance and operations of all state park facilities.

The regional park supervisors, directed by the regional administrator, will follow policies, guidelines, and statewide procedures, of the Division of Parks and Recreation as well as commissioner's orders.

The regional park supervisor will provide the necessary supervision and direction to the park managers to insure that park maintenance and operation policies, guidelines, and procedures are followed.

It will be the responsibility of the park manager, under the supervision of the regional park supervisor, to maintain and operate all park facilities.

The director and staff will inspect and review operations of state parks on a regular basis to insure that statewide procedures are being implemented and followed correctly.

