

Grand Portage State Park



DRAFT
Concept
Plan

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CONTENTS

1

| | |
|--|-----------|
| I. Introduction | 2 |
| Park Description | 2 |
| Advisory Committee | 2 |
| II. Regional Analysis | 4 |
| Local Attractions | 5 |
| III. Park Resources | 5 |
| Resource Management Objectives | 5 |
| Geology | 5 |
| Soils | 6 |
| Vegetation | 8 |
| Wildlife | 8 |
| Water/Fisheries | 8 |
| History/Archaeology | 9 |
| IV. Physical Development and Recreation Management .. | 10 |
| Recreation Management Objectives | 10 |
| Existing Development | 10 |
| Proposed Development | 12 |
| V. Operations and Staffing | 14 |
| VI. Budget Summary | 15 |

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Park Description

Grand Portage State Park is in the most northeast region of Minnesota on the United States and Canadian border 42 miles north of Grand Marais on Highway 61. The park is encompassed within the Grand Portage Indian Reservation with Lake Superior on the east and the Pigeon River and Canada on the north. The park totals approximately 300 acres with about 2.5 miles of frontage on the Pigeon River. Park land is on both sides of U.S. Highway 61 and surrounds the U.S. Customs and Immigration station. The park is located on the "Circle Route" tour around Lake Superior. Most of the property is heavily wooded and has not been logged for nearly 50 years. The park has unique qualities, such as the highest waterfalls in Minnesota, Pigeon Falls (estimated at 130 feet). The park also offers deep river gorges and high bluffs with breathtaking views.

The land on the Canadian side of the Pigeon River is part of the Ontario Provincial Park system, but at present there is no easy access to Pigeon Falls on that side of the river. This close connection to the Ontario Provincial Park will open the opportunity for establishing an international park in the future.

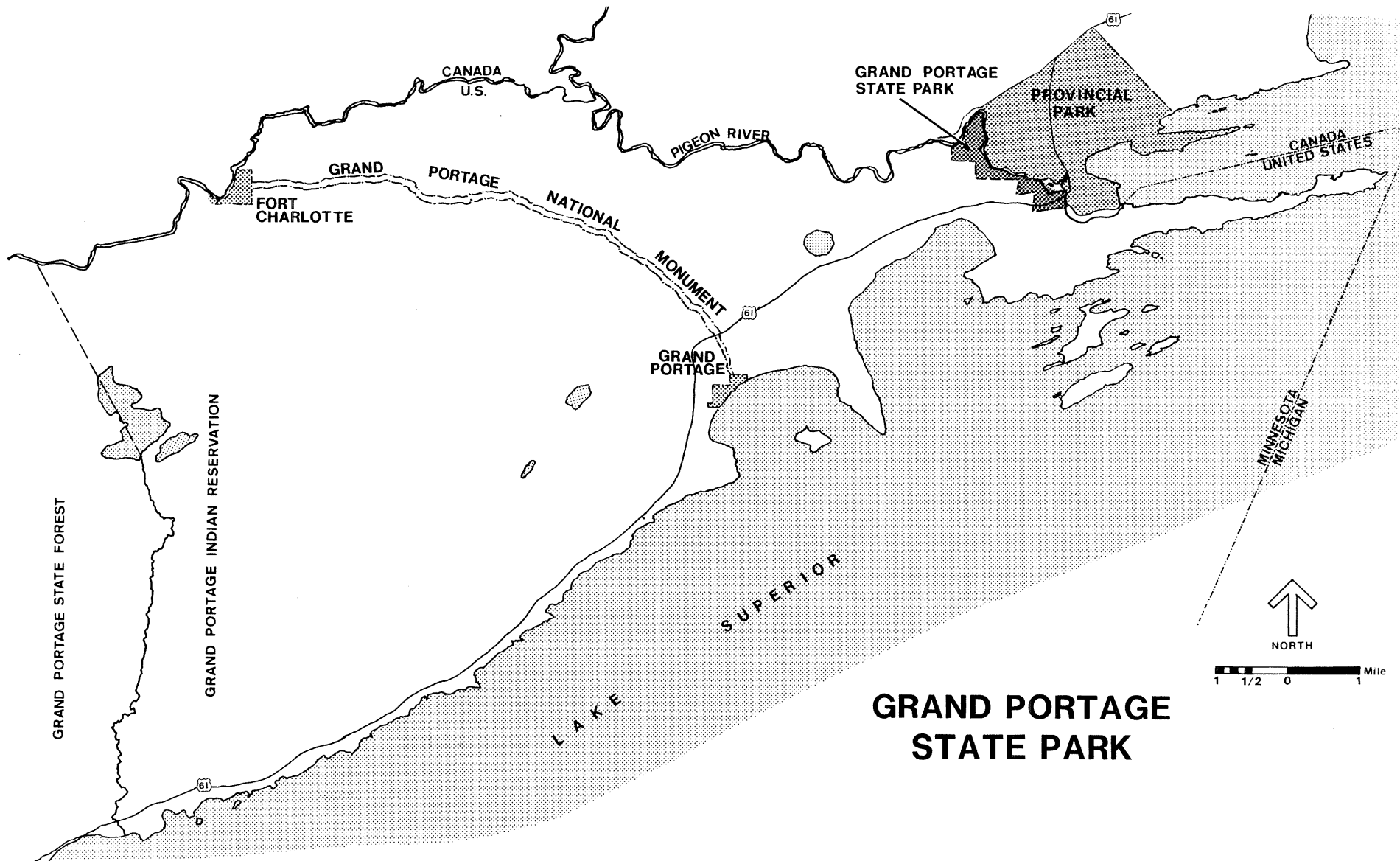
The creation of this park is unique. This will be the only state park not owned by the State of Minnesota. The land is part of the Grand Portage Indian Reservation and will be leased from the Band and developed and run by the Department of Natural Resources, Division of Parks and Recreation. At no time in the past has a state park been developed under these conditions. This cooperative effort with the state and the Indian community will make this one of the most unique and interesting state parks.

Grand Portage State Park will enable thousands of people to see two beautiful waterfalls and enjoy the spectacular qualities unique to this park. There is ample space to develop parking, picnicking facilities and to serve as a trail head for regional hiking, cross-country skiing and snowmobile trails. The area's diverse cultural background (Native American, French, British and early American) and history of the fur and logging industries offers numerous educational opportunities for the nearly half-million people who cross the border at this location every year.

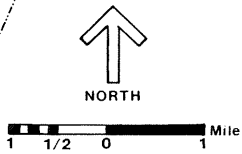
Advisory Committee

The Grand Portage State Park Advisory Committee was established by Chapter 259 subd. 5 of the 1989 Laws of Minnesota. This advisory committee will provide direction on the establishment, planning, development and operation of the park.

The committee is made up of five individuals whose organizations will have direct influence or be influenced by the park. The committee has met on several occasions to establish a set of priorities for new development and park management. They worked together to acquire funding for a cultural survey of the area and to get the park moving forward.



GRAND PORTAGE STATE PARK



REGIONAL ANALYSIS

Population

Cook County hosted a total estimated population of 4,286 residents in 1983. This population is broken down into the city of Grand Marais 1,479 people, Schroeder Township 358 people, Tofte Township 294 people, and the unorganized territory 2,155 people. More than one-half the county is unorganized territory which suggests that the population is very low and widely dispersed. The local population should not make up a big portion of park visitors.

Traffic

Traffic volumes in the Grand Portage area, particularly along Highway 61, decrease steadily from the Duluth area north. At Duluth the average daily traffic volume is 5,755 commercial and private vehicles. At Beaver Bay the volume decreases to 4,565, at Grand Marais 2,930, and at the Port of Entry 1,470 vehicles. This shows a decrease of more than 75% over the 150-mile stretch from Duluth to Grand Portage.

Tourism

The majority of visitors to Grand Portage State Park are going to come from outside the local area. A 1981 survey of the North Shore by Sea Grant Program found that a total of 1.36 million people visited the area, spent an average of two days per person, and a total of \$24 million. Of this 1.36 million, 80% came from Minnesota, 15% from all other states and about 5% from Canada. Of the 15% from other states, Wisconsin and Iowa made up 4% and 3% respectively. The remaining 8% came from all over the country. Grand Portage in particular may receive a higher percentage of Canadian visitors than the 5% average for the entire North Shore.

The same survey listed Grand Portage as having the most unusual and varied features of any area along the North Shore, including: the High Falls, the Canadian Border, dependable snow and a substantial cross-country skiing market.

Lake Superior Hiking Trail

Grand Portage State Park will be a trail head for the Superior Hiking Trail. When completed this trail will extend from Grand Portage State Park to the Knife River, about 220 miles. During the summer months of 1991, the Superior Hiking Trail Association will construct a trail from Grand Portage State Park to Grand Portage National Monument and Grand Portage Lodge. The trail will be extended southwest to Grand Marais during the summer of 1992.

North Shore Trail

The North Shore Trail is a continuous 153-mile trail from Duluth to Grand Marais. The entire trail is groomed for snowmobile use during the winter. The portions suggested for summer hiking and horseback riding are from Duluth to the French River, approximately 14 miles. Extending the trail from Grand Marais to Grand Portage has been requested by snowmobilers for many years. The development of Grand Portage State Park could serve as an excellent trail head if the trail can be extended that far east.

Local Attractions

| Miles From Grand Portage | Name | Description |
|---------------------------------|---------------------------------|---|
| 27 | Judge Magney State Park | Scenic Vistas of Lake Superior. Facilities include a campground, picnic areas, fishing, and hiking and cross-county ski trails. |
| 27 | Naniboujou Lodge North | Shore cuisine. Facilities include twenty-ninerooms, solarium/library, and home cooking. |
| 17 | Reservation River Resort | Facilities include modern cabins on Lake Superior at the edge of Reservation River. |
| 17 | Hollow Rock Resort | Facilities include modern cottages, completely equipped and have beautiful vistas. Campgrounds for tents and all types of RV's are available. |
| 6 | Grand Portage Lodge | Facilities include 100 rooms on Lake Superior. Meeting rooms, marina and charter fishing. |
| 6 | Grand Portage National Monument | First white settlement in Minnesota, est-1731. Starting point of historic portage from Lake Superior to Fort Charlotte. |
| 6 | Isle Royale Boat Service | "WENONAH" and "VOYAGEUER" boats depart and return daily to Isle Royale National Park. |
| Adjacent to | Rydens | Duty free store, restaurant and service station. Merchandise available only to travelers going into Canada. |
| Adjacent to | Grand Portage Port of Entry | The border is open 24 hours a day. The Canadian government requires any visitor entering Canada to be in possession of adequate funds to maintain their visitor status for the time they will be in Canada. |

Resource Management Objectives

- Provide the minimum development necessary to provide access, protect both cultural and natural resources, and retain the primitive setting (also a development objective).
- Identify and protect significant natural and cultural resources.
- Identify degraded resources and design resource management actions to restore them.
- Prioritize resource management objectives.

Geology

The area in and around Grand Portage State Park is dominated by three striking natural features: the Pigeon River with its two waterfalls, narrow gorges, and high rocky ridges. The entire area is forested. Elevations vary over 400 feet from about 615 feet to 1040 feet.

Two of the three largest falls on the Pigeon River are within the park, High Falls (about 40 m, 130 ft.) and Middle Falls (about 9 m or 30 ft.). Both waterfalls were formed when, about 1.9 billion years ago, molten rock rose up from the depths of the earth and pushed between layers of the sedimentary rock and filled existing faults. This rock cooled slowly and formed much harder areas in the bedrock called dikes. It's the intersection of these dikes that formed the waterfalls.

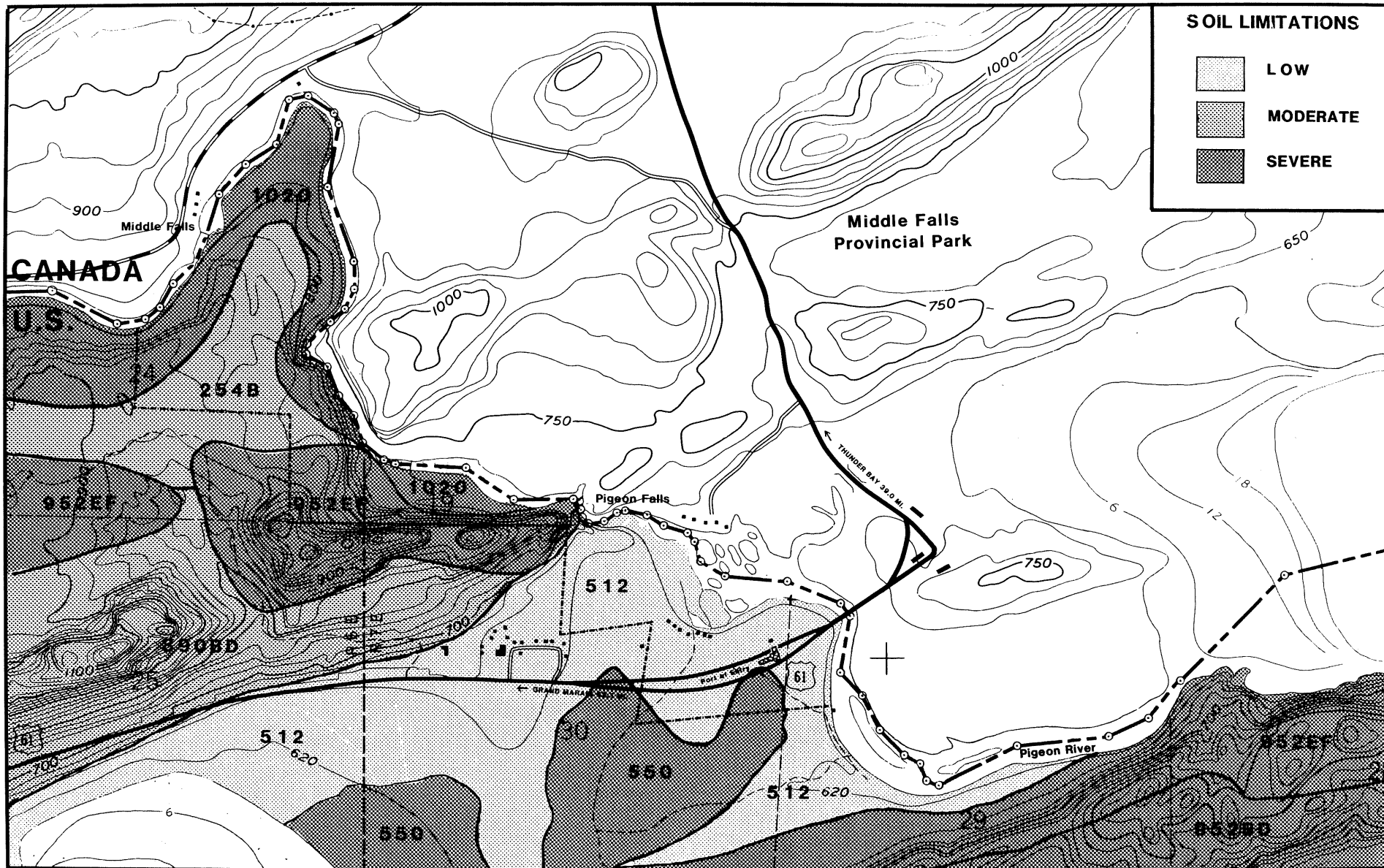
At High Falls the river plunges over a large dike into a deep gorge cut into rove shales. Spray is always present, with rainbows under appropriate sun conditions. The high ridge west of High Falls is held up by the same dike that forms the falls. The occasional open areas on its crest provide dramatic views in all directions.

At Middle Falls, the river first cascades over a 3 m (10 ft.) drop, then over the main 6 m (20 ft.) free-fall. The gorge downstream has been cut primarily into the softer Rove shales but at least one sill and a fault are also present and have influenced the river's course and character. The walls of the gorge are 18-25 m (60 to 80 ft.) high and largely vertical. The mountainous topography of this region is largely the result of the resistance of these great dikes and sills among the softer slate.

Soils

The following chart outlines all types of soils that can be found inside Grand Portage State Park. The soils within the park range from level, well drained soils with good development possibilities to rock outcrops with vertical slopes and major development constraints. The soils map shows the location of each type of soil in the park. One important thing to notice about both the chart and map is that one type 512 has low limitations for development. Conveniently this soil is located in the area of the park where most of the development is needed.

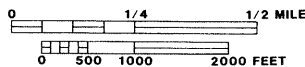
| Soil Type | 254B Silt Loam | 512 Sandy Loam | 550 Muck | 890BD Silt Loam | 952BD Rock Outcrop | 952EF Rock Outcrop | 1020 Clay |
|---|----------------------|----------------------|-------------|-----------------------|--------------------------|--------------------------|--------------|
| Slope (percent) | 2 to 6 | 0 to 2 | 0 to 1 | 2 to 18 | 2 to 18 | 18 to 60 | 18 to 45 |
| Depth (inches) | 6 to 20 | 12 to 24 | 16 to 50 | 4 to 40 | 4 to 8 | 8 to 24 | 4 to 12 |
| Excavations | M | M | S | S | S | S | S |
| Structures Without Basements | M-S | L | S | M-S | S | S | S |
| Structures With Basements | M-S | L | S | S | S | S | S |
| Local Roads & Streets | S | L | S | M-S | M-S | S | S |
| Campground & Picnic Area | M-S | L | S | M | S | S | S |
| Paths & Trails | L | L | S | L | M | M | M |
| Sewage Disposal | S | L | S | S | S | S | S |
| <p>L----- Low limitations or problems M----- Moderate Limitations or Problems S----- Severe Limitations or Problems</p> | | | | | | | |
| <p>Source: Soil Survey of North Shore of Lake Superior 1977, USDA Soil Conservation Service</p> | | | | | | | |



SOIL LIMITATIONS

| | |
|--|----------|
| | LOW |
| | MODERATE |
| | SEVERE |

Grand Portage State Park



No intense survey of the Grand Portage State Park area has ever been done: however, several different ecological communities are represented in the park. There are gradual transitions between these communities, and many species are common to more than one. Dr. John Green, Professor of Geology University of Minnesota Duluth, identified the following five general vegetation communities in the park during his brief survey in August of 1989:

- Mixed Hardwood Forest (lowlands and slopes).
- Boreal Forest (on slopes and uplands).
- Xeric Rock-cliff Communities (exposed ridge-tops, talus).
- Mesic Rock-cliff Communities (shady north slopes, rocky streambanks).
- Streambanks and Alluvial Bottomlands.

There are a few large specimen trees near the existing development, such as a magnificent paper birch that is one of the largest in Minnesota. However, most of the trees are not exceptionally large or old, giving the impression of a second-growth forest. Very few cut stumps were seen and a fairly long recovery time has evidently elapsed since whatever disturbance affected the area. The forests are fairly typical of the northeastern Minnesota part of the Superior Upland. A detailed survey of vegetation communities is necessary to adequately manage the park vegetation.

Wildlife

The variety of plant communities in the park vegetation study area provides habitat for a diversity of wildlife species. No formal study of the area has been done, but some of the larger, more common mammals that would be expected would be beaver, white-tail deer, moose, and black bear. Populations of each species are not known. No rare and endangered species are known to inhabit the area, but a detailed survey of the area should be completed to make sure that no endangered or rare species are disturbed.

Water/Fisheries

The water flow of the Pigeon River is measured at an international gaging station in cooperation with Canada at Middle Falls, 2.5 miles upstream from Highway 61. The Pigeon River drains a basin of approximately 600 square miles (384,000 acres) into Lake Superior. The average slope of the river is approximately 13.0 ft./mile, because of the two large waterfalls on the river (Middle Falls, 30 ft. and Pigeon Falls, 130 ft.), this number is deceiving. The Pigeon river is a very unique river that offers a habitat not found in any other North Shore River, in that it is very slow moving and relatively wide. The average discharge of the river from 1924-84 was 507 ft³/second. The maximum discharge was recorded on May 5, 1934 at 11,000 ft³/second, the minimum was recorded on January 15-21, 1977 at 1.0 ft³/second (essentially dry).

The fishing in Pigeon River is limited to the lower portion near Lake Superior; here the river widens and becomes very slow moving and warm. This area is noted for its good walleye fishing during the summer months.

The area surrounding the park has a colorful and historic background. The Dakota Indians first occupied the forests of Minnesota until they were driven out by the Chippewa Indians during long generations of sporadic warfare. The Grand Portage and the border lakes area to the west were the sites of many Dakota and Chippewa battles. When the Indians ceded their lands to the United States at the treaty of La Pointe in 1854, the Grand Portage Indian Reservation was provided for them.

As far back as the early 1700's French explorers and voyagers visited the area. During the British fur trading period (1750-1850), the Hudson Bay Trail from Grand Portage to Fort William passed through the park. The Webster-Ashburton treaty of 1842 established the Pigeon River as the boundary between the United States and Canada with the boundary land and waters open to citizens of both nations.

One of the early settlements of the area was a trading post. Its location would have been on the east side of U. S. Highway 61 on the eastern edge of the park. It was originally established about 1680 as a trading post. Around 1837, a man named Walter Parker opened a store and fur-trading post at the same location and the area then became known as Parkersville. The town was the local post office from 1856 until the town was abandoned in 1876.

Walter Parker and his family had a farm on the Pigeon River, which was famous for potatoes, vegetables, trees and flowers. Many of the plants and trees he planted were exotic varieties from Europe, most of which would have been wiped out by logging. On August 13, 1898, Alger-Smith Logging announced its move from Georgian Bay to Pigeon River. It was claimed that the company owned about 150,000,000 feet of good pine in the area beyond the Chippewa Reservation. Alger-Smith and Company operated in the area from 1898 to 1902.

As the Alger-Smith Company was logging its timber on the Pigeon River, another large firm, Pigeon River Lumber, began serious logging in 1900. At the same time the Pigeon River Company began negotiations with the government of Ontario to acquire all future water power rights on the Pigeon River below Fowl Lake, but was not successful until 1908. By 1902 Alger-Smith Company had cut most of the best pine in its area and decided to sell out to the Pigeon River Lumber Company.

In 1908 a widespread forest fire destroyed the Gunflint and Lake Superior railroad, which cut short the operation of the Pigeon River Lumber Company. In 1936 another fire on the Pigeon River watershed burned about 11,000 more acres. Remains of old flumes near Pigeon Falls (High Falls) recall the importance of the site to the logging industry, from the late 1800's to the last drive down river in 1949. Most of the property is heavily wooded and has not been logged for 50 years.

Recreation Management Objectives

Development Objectives

- Provide the minimum development necessary for day use recreational activities, provide access, protect both cultural and natural resources and retain the primitive setting (also a resource management objective).
- Cooperate with local concerns for park design, development and operation.
- Develop facilities that allow access for the handicapped, where practical.
- Tie park trails into others (Grand Portage Trail, North Shore Trail, Lake Superior Hiking Trail) and other regional recreational activities.
- Concentrate all park development on the west side of U.S. Highway 61.

Interpretive Objectives

- Interpret the unique geology of the park.
- Interpret the cultural heritage of the area with emphasis on Native American heritage, in a way that complements, without duplicating, the Grand Portage Monument's displays.
- Provide coordinated interpretive programs at several locations in the reservation including the Lodge and Grand Portage National Monument.
- Interpret secondary themes that address geology, logging history, and Parkersville.

Existing Development

Log Cabins

There are three log cabins within the park boundaries that were built in 1933. The smallest was used as a power house and the two larger as rental guest cabins. These buildings have no identified use within the state park. They will be documented with photographs and drawings for future interpretation and then moved out onto the reservation trail system. On the trail system they will be used as summer cabins and winter shelters.

Overlooks

Two overlooks were developed near Pigeon Falls in 1977 when the park was managed as a family campground. The trails leading to the overlooks are in very poor condition and must be replaced. The overlooks are in fair to poor condition, they are a safety hazard to visitors and must be replaced before the park is opened.

Vehicular Bridge

There is a small vehicular bridge over an intermittent stream on the access road to Pigeon Falls overlook. The deck for this bridge was covered with birch logs laid as corduroy. They are now rotted and are unsafe for vehicular traffic. This will need to be replaced by a bridge suitable for pedestrian and service vehicle use.

House

A two-bedroom prefabricated house was constructed in 1977. A detailed assessment has not been done, but it appears to be in fair condition. A park manager's residence will not be provided at this park, and this building would be expensive to try to convert to a public use.

CANADA

UNITED STATES

Pigeon Falls

Overlook

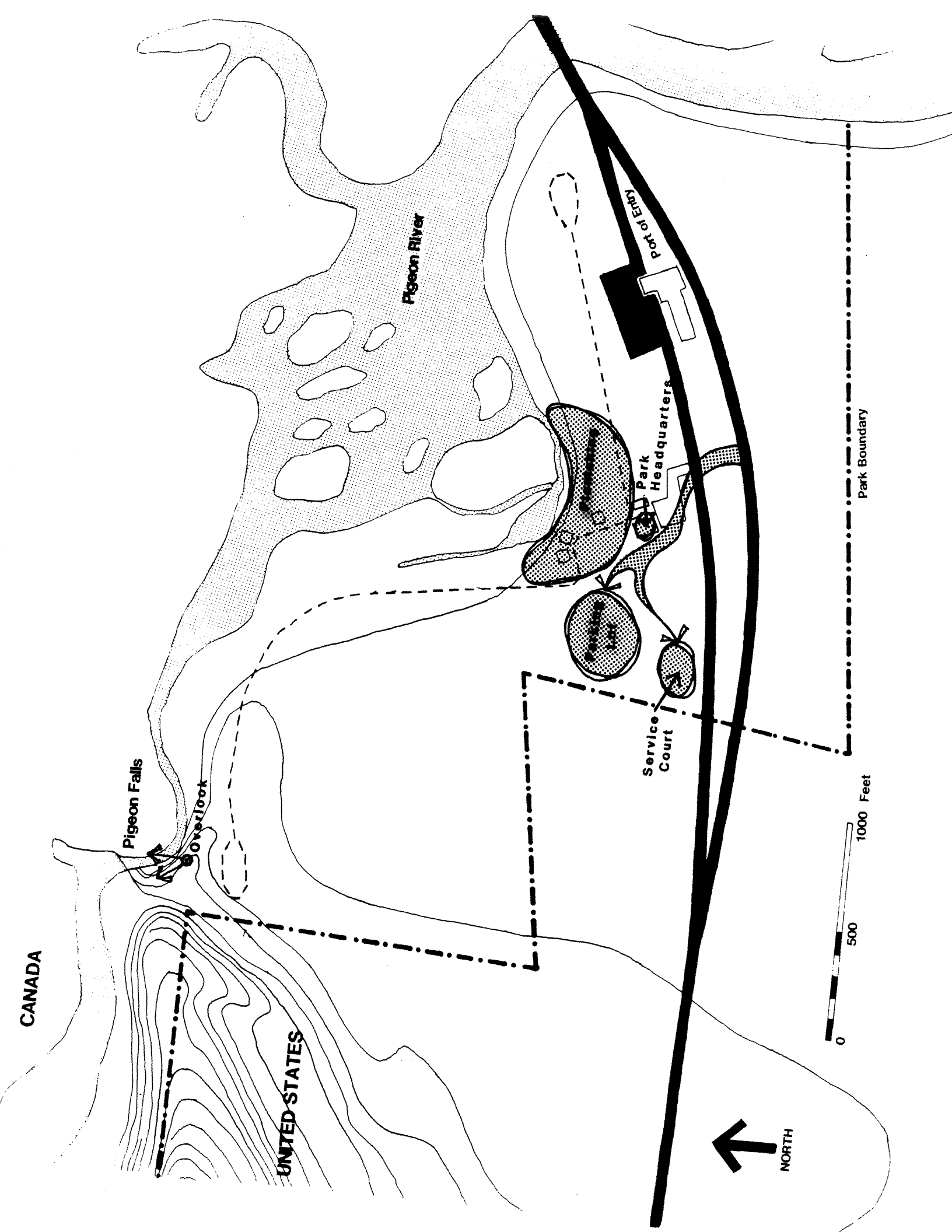
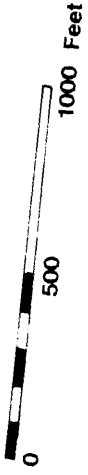
Pigeon River

Port of Entry

Park Headquarters

Service Court

Park Boundary



Park Headquarters-Construction Cost: \$271,000**Displays: \$25,000**

This building will be located at the park entrance. One building which serves all the below functions will save construction, heating, maintenance, and staff costs. It will focus all visitor information and service requests in one area and minimize development sprawl.

- **VISITOR CENTER** The visitor center will provide interpretive displays, a meeting room, and a display preparation area.
- **PUBLIC CONTACT AREA** The contact station is one area of the office, designed for easy observation of incoming traffic, dissemination of information to visitors and sales of vehicular permits and park merchandise.
- **ADMINISTRATIVE** The office space is for the park manager and assistant manager to perform administrative functions while being accessible to the public.
- **TOILETS** Public toilets near a visitor's first stop are very important. Combining them in the same building with the offices and visitor center will be more convenient, cost effective, and justify keeping them open and maintained throughout the year.

Hiking Trails-Construction Cost: \$60,000

Trails will be developed to Pigeon Falls, Middle Falls, and to good overlooks along the river. The trail to Pigeon Falls overlook will be a handicapped accessible trail. The park will also act as a trail head for the Lake Superior Hiking Trail and informal hiking through the Grand Portage Reservation. The terrain in the park is very rugged and will require extensive steps and tread surface leveling to accommodate the expected use. This development must be designed to provide good access with the least visual and physical impact on the park's resources. For safe use of this park, it is essential that trails to the overlooks be developed before it is opened for public use. Construction of some of the interior trails can be put off until next biennium.

Overlooks-Construction Cost: \$30,000

The very rugged nature of Grand Portage State Park allows spectacular views. The best views are also the most hazardous areas in the park. Overlooks must be developed that provide park visitors great views from safe platforms. These overlooks must also be designed for minimum visibility from other parts of the park and the Canadian shore.

Picnic Area-Construction & Equipment Costs: \$60,000

A small picnic area near the parking lot and along the Pigeon River will be a convenient and scenic setting. It will be close enough to the main visitor center so additional toilets will not be needed specifically for picnickers. This area will be developed over two bienniums to distribute budget impact.

Park Entrance Road-Construction Cost: \$11,000

The present road system in the park must be revised. The main entrance road will leave Highway 61, pass the park headquarters building and provide access to the parking lot. A service road needs to be developed from the park headquarters to the service court. The other existing roads need to be obliterated or revised for trail use.

Parking Lot-Construction Cost: \$25,000

A parking lot will be developed in the vicinity of the existing deer pen. This lot will accommodate 20 cars and will be designed to allow future expansion when needed.

Service Area-Construction Cost: \$182,000

Construct a park service area that is close to the major use area, but out of sight from most park users. This area will include a shop building which can be heated for winter maintenance and equipment repair, and an unheated storage building. A gravel parking area will connect the two buildings, and will serve as both equipment parking and graveled access to the buildings. The first phase would develop the shop and gravel parking area. In the next biennium the unheated storage building would be built.

Park Manager

This position will be responsible for administering all programs and activities at Grand Portage State Park. These will include: operations, maintenance, personnel, staff supervision, revenues, budget preparation, expenditures, public relations, marketing, resource management, interpretation, and development.

Assistant Park Manager/ Naturalist

The Pigeon River area is noted for its beauty, special plant communities and historic background. Interpreting the geology and natural history of the area to park visitors and local community members will be the position's primary responsibility. Visitor service is particularly important in this park, because this facility will be the first or last impression visitors receive as they enter or leave Minnesota and the United States. The naturalist will assist in the interpretive development at the other state parks along the North Shore as well as working with Grand Portage Lodge, Grand Portage National Monument, and local schools.

Seasonal Staff

Seasonal staff will be needed for a variety of tasks to keep the park open for the public seven days a week and fourteen hours a day. Most of these hours will be needed during the busy summer season.

Equipment

A variety of equipment is needed in a state park. Park staff are required to complete a broad variety of tasks during the course of a day. Proper equipment is essential for them to maintain this state park in top condition. The equipment needed varies from a pickup truck and small maintenance tractor, to chain saws and hammers.

Maintenance and Operations

| | <u>Annual Cost</u> | <u>1992-93 Biennial Cost</u> | <u>1994-95 Biennial Cost</u> |
|---|--------------------|----------------------------------|----------------------------------|
| Staff | | | |
| Manager | \$32,500 | \$65,000 | \$69,000 |
| Naturalist | \$31,000 | \$62,000 | \$66,000 |
| Seasonal (3,800 hrs.) | 45,500 | \$91,000 | \$96,500 |
| Operating Costs (supplies, communications, duplicating, vehicle rental) | | | |
| Operations | \$18,000 | \$36,000 | \$38,000 |
| Resource and Interpretive programs | \$6,000 | \$12,000 | \$12,500 |
| M & O Total | \$133,000 | \$266,000 | \$282,000 |

Equipment (one-time cost) \$80,000

Development

| | | |
|-----------------------------|------------------|------------------|
| Construct Park Headquarters | \$296,000 | |
| Develop Hiking Trails | \$35,000 | \$25,000 |
| Construct Overlooks | \$30,000 | |
| Construct Picnic Area | \$33,000 | \$27,000 |
| Park Entrance Road | \$11,000 | |
| Construct Parking Lot | \$25,000 | |
| Service Area | \$122,000 | \$60,000 |
| Capital Budget Total | \$632,000 | \$112,000 |
| Total Biennial Need | \$898,000 | \$394,000 |