

LEGISLATIVE REFERENCE LIBRARY  
GV199.42.M6 W43ax  
Minnesota. Dept. - A management plan for the Wealthwo



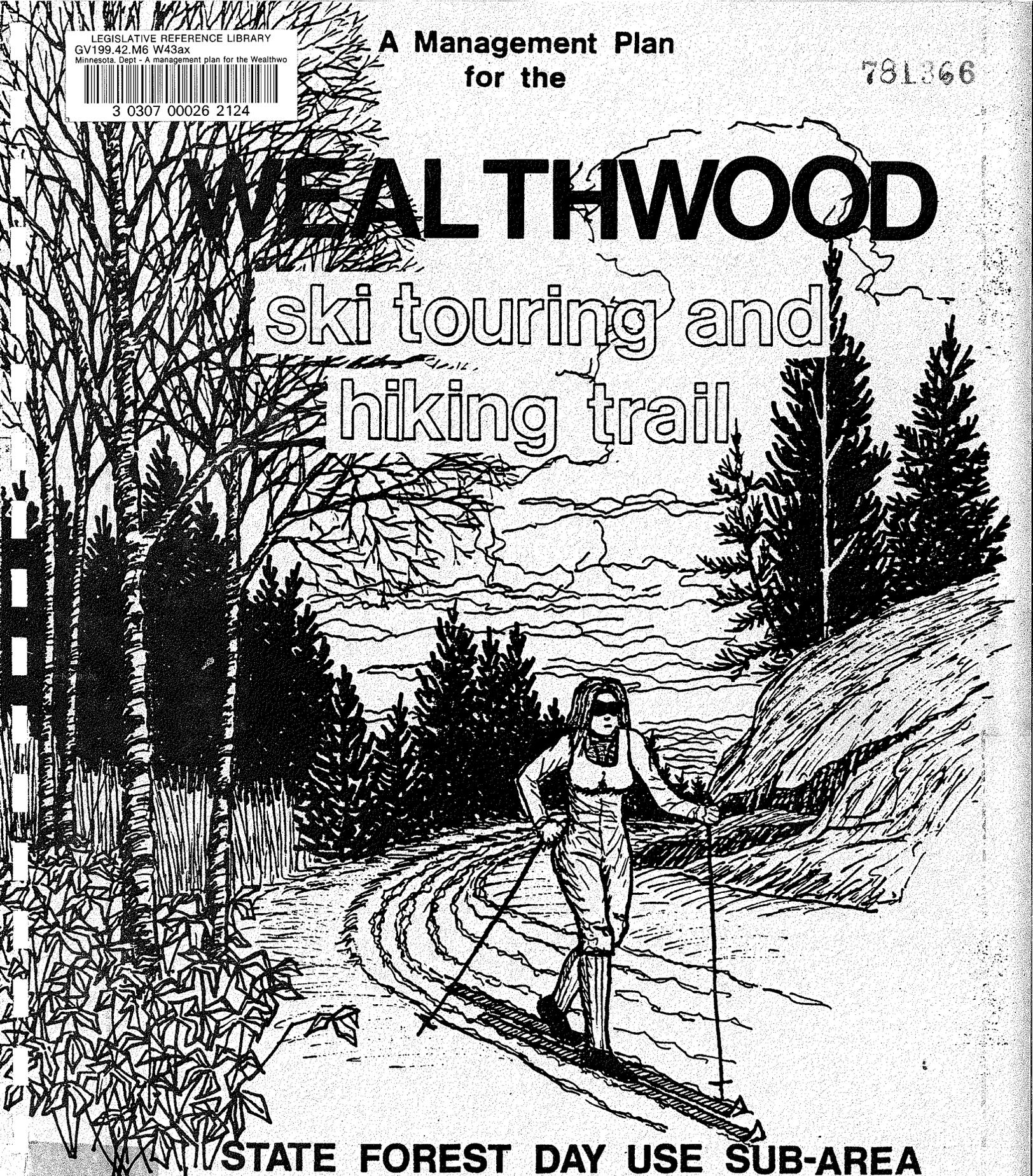
3 0307 00026 2124

**A Management Plan  
for the**

78L366

# WEALTHWOOD

## ski touring and hiking trail



**STATE FOREST DAY USE SUB-AREA**

**Final Draft  
Sept. 1978**

**Minnesota Department  
of Natural Resources**

## Table of Contents

	<u>page</u>
Foreword . . . . .	i
Summary. . . . .	ii
Introduction to the Plan	
Multi Use Concept. . . . .	1
Authority. . . . .	3
Goal and Objectives. . . . .	4
Description of the Proposed Action	
Purpose of the Action. . . . .	7
Location of the Project. . . . .	7
Magnitude of the Project . . . . .	7
Unit Goal and Objectives . . . . .	7
Existing Development . . . . .	9
Proposed Development . . . . .	9
Trailhead Area . . . . .	9
Entrance Drive and Parking Lot . . . . .	9
Trailhead Signs and Development. . . . .	11
Upgrading Existing Treadway. . . . .	11
Bridge Construction. . . . .	16
Rest Areas . . . . .	20
Signs. . . . .	20
Maps . . . . .	22
Maintenance. . . . .	22
Steps Involved in the Planning Process . . . . .	26
Implementation . . . . .	27
Estimated Costs. . . . .	28
Maintenance Costs. . . . .	29
Timing of the Project. . . . .	29
Future Potential Expansion . . . . .	29
Recreational Needs to be Served by the Project . . . . .	30
Description of the Environment	
Topography . . . . .	32
Soils. . . . .	32
Climate. . . . .	34
Water Resources. . . . .	34
Mineral Resources. . . . .	34
Vegetative Cover . . . . .	34
Wildlife . . . . .	35
Land and Timber Resource . . . . .	35
Air and Water Quality. . . . .	35
Historical and Archaeological Resources. . . . .	36
Transportation and Utilities . . . . .	36
Socio Economic Factors . . . . .	37
Land Use and Development Trends. . . . .	38
Facilities in Region 3 . . . . .	38
Facilities in the Forest . . . . .	39
Management Programs Within the Forest. . . . .	39
Potential Concerns and Considerations. . . . .	41

	<u>page</u>
Environmental Impact of the Proposed Project	
Impact on the Physical and Biological Environment. . . .	43
Impact on Historical and Archaeological Resources. . . .	44
Impact on Transportation and Utilities . . . . .	44
Impact on Socio Economic Factors . . . . .	44
Impacts on Land Use. . . . .	45
Impact on Management of the Forest . . . . .	45
References . . . . .	46
Draft Plan Review: Public Meeting. . . . .	48

## FOREWORD

It is the purpose of this document to serve as both a management plan for the development and maintenance of the Wealthwood Ski Touring-Hiking Trail (day use sub-area), and as an environmental assessment of this action. The development and maintenance procedures described in this document will insure that the scenic, historic, scientific, and recreational qualities of the trail are properly managed for the use and enjoyment of the citizens of Minnesota. The environmental impacts of this action have also been assessed to measure their effects on the environment. This assessment may be used in the event that the Department of Natural Resources - Division of Forestry decides to seek Land and Water Conservation Funding (LAWCON).

## SUMMARY

The major sections of the document are: the Introduction, Description of the Proposed Action, Description of the Environment, and Environmental Impact of the Proposed Project.

The Introduction includes: an overview of pertinent legislation, the authority for state forest sub areas, and the goal and objectives for the state forest ski touring and hiking program. The DNR's overall goal is also revealed.

The Description of the Proposed Action reveals: the location of the project, the unit goal and objectives, existing and proposed development, maintenance, how the plan will be implemented, and whose recreational needs will be served.

The Description of the Environment is an inventory-analysis of the natural and socio-economic resources of the project area. This section attempts to "tie together" the interrelated resource factors that are vital in the planning of this unit.

The final section, the Environmental Impacts of the Proposed Project, deals with the possible affects that the proposed action may incur.

The Wealthwood Ski Touring and Hiking Trail management plan will be filed with and be available from Documents Section, Room 140, Centennial Building, St. Paul, Minnesota; 55155.

## Introduction to the Plan

### Multiple Use Concept

It is the policy of the Department of Natural Resources, Division of Forestry, to protect, develop and administer the renewable resources of Minnesota's fifty-six state forests so they are utilized in the combination of uses that will best meet the needs of Minnesota citizens. This requires harmonious and coordinated management of the forest resources to bring about their maximum productivity as well as providing other public benefits.

The primary management objective is to maintain a maximum sustained yield of various forest products while utilizing renewable forest resources to benefit the greatest number of people. Renewable forest resources that require management and protection include timber, wildlife, soil, and water. Management practices such as timber production and harvest, watershed protection, wildlife habitat maintenance, and recreational development are carried out on lands best suited for each use.

This multiple use approach to management is intended to provide equal opportunity for all citizens to enjoy and utilize our forest resource. This means that the forest is a shared resource that must be utilized by various user groups in harmony with each other.

With this multiple use concept in mind, the legislature included state forests in Minnesota's Outdoor Recreation System. This system, created in 1975 by

the Outdoor Recreation Act (ORA), incorporated all state recreation lands into eleven different kinds of areas, each with its own classification. The eleven classifications are: Natural State Parks; Recreational State Parks; State Trails; Scientific and Natural Areas; State Wilderness Areas; State Forests; State Wildlife Management Areas; State Water Access Sites; State Wild, Scenic and Recreational Rivers; State Historic Sites; and State Rest Areas. Each member of the system is referred to as a "unit".

By passing the ORA, the legislature revealed its awareness of a growing problem in Minnesota: The increasing number of people using state lands each year for more diverse forms of recreation. While some areas could withstand higher levels of use, other areas experienced overcrowding and conflicts between different recreational users.

To insure that the administration of each unit is managed in a manner that is consistent with the purposes for which the unit was authorized, it is required by the ORA that the managing agency prepare a master plan for each unit. The act states:

"No construction of new facilities or other development of an authorized unit, other than repairs and maintenance, shall commence until the managing agency has prepared and submitted to the state planning agency and the state planning agency has reviewed, pursuant to this section, a master plan for administration of the unit in conformity with this section. This requirement shall not apply to an existing unit until August 1, 1977."

The following day use sub-area plan has been prepared by the DNR to fulfill the requirements of this act as it pertains to state forests. This day use sub-area plan will be incorporated into the overall state forest master plan when that plan is prepared.

This day use sub-area plan has been written prior to the state forest master plan so that monies from the Outdoor Recreation Bonding Bill can be utilized this year. (Laws 1977, Chapter 421, Section 13, Subdivision 4)

Under the terms of this bill, the DNR has been allocated \$1,105,000:

"For betterment of public land and improvements needed for trails for skiing, hiking and bicycling within state parks and recreation areas as listed and described in sections 85.012 and 85.013 and State Forests, as listed and described in section 89.021."

#### The Authority

The authority for establishment of these ski touring-hiking areas (day use sub-areas) was granted by Minnesota Statutes 86.01 (the Outdoor Recreation Act) subdivision 7 which states:

"Subd. 7. STATE FORESTS AND STATE FOREST SUB-AREAS: PURPOSE; RESOURCE AND SITE QUALIFICATIONS; ADMINISTRATION. (a) A state forest, as established by Minnesota Statutes, Section 89.021, shall be administered to accomplish the purposes set forth in that section, and

a state forest sub-area shall be established to permit development and management of specialized outdoor recreation at locations and in a manner consistent with the primary purpose of the forest.

(b) No unit shall be authorized as a state forest sub-area unless it is located within a state forest and contains suitable natural resources to accommodate any of the following uses:

(1) Day use areas. Areas which permit recreational use of the forest in its natural state, not requiring an overnight stay, including but not limited to picnicking, fishing, swimming, boat launching, hiking, interpretation, and nature observation.

(2) Campground. Provide minimum facilities to accommodate overnight camping.

(c) Outdoor recreation sub-areas located within state forests shall be administered by the commissioner of natural resources in a manner which is consistent with the purposes of this subdivision."

### Goals and Objectives

The statutes and laws previously cited outline the legislation pertaining to state forest ski touring and hiking trails in regard to funding, planning and establishment. Along with this legislation, it is important to establish a goal for the overall State Forest Ski Touring and Hiking Program.

### State Forest Ski Touring and Hiking Program Goal

The goal of the State Forest ski touring and hiking program is to provide

Minnesotans with the highest possible variety of quality ski touring and hiking areas. These ski touring and hiking trails shall be developed so that they may be enjoyed for years to come.

However, since the state forest ski touring-hiking is only a part of the program, it is equally important to recognize the overall DNR ski touring-hiking program.

#### Overall Program Goal

The goal of the overall DNR Ski Touring and Hiking Program (which includes Natural and recreational State Parks, Recreation Areas, and State Forests), is to provide Minnesotans with the finest ski touring and hiking areas in the nation.

#### Objectives for Overall State Forest Ski Touring-Hiking Program

- \* To provide ski touring-hiking opportunities in state forests which are accessible to all citizens of Minnesota.
  
- \* To improve the 64 miles of existing ski touring-hiking trails in state forests throughout Minnesota.
  
- \* To develop 150 miles of new or additional ski touring-hiking trails where feasible in state forests throughout Minnesota.
  
- \* To provide a variety of ski touring-hiking experiences in state forests taking advantage of scenic, topographic, historic and recreational areas.

- \* To involve the governor's appointed ski touring task force and other concerned citizens in the planning and design of state forest ski touring-hiking trails.
- \* To provide complementary facilities along each state forest ski touring-hiking trail to insure the rest and comfort of the trail user.
- \* To implement a system of signing design and specifications that is consistent along each state forest ski touring-hiking trail which promotes user enjoyment and safety.
- \* To disseminate current, accurate literature of each state forest ski touring-hiking trail for public information and use.
- \* To provide interpretation on the cultural, historic and vegetative features along state forest ski touring-hiking trails.

## Description of the Proposed Action

### Purpose of the Action

To develop and maintain a quality ski touring and hiking area in the Wealthwood State Forest for the citizens of Minnesota to enjoy. This development will provide an area for ski touring and hiking in the vicinity of Mille Lacs Lake which is a heavy use tourist area.

### Location of the Project

The Wealthwood State Forest Ski Touring and Hiking Area is located in southwestern Aitkin County, 23 miles southeast of Aitkin, Minnesota. The small communities of Glory, located north of the area, and Wealthwood, located southwest of the area, are close to the trail area (see figures 1 and 2).

### Magnitude of the Project

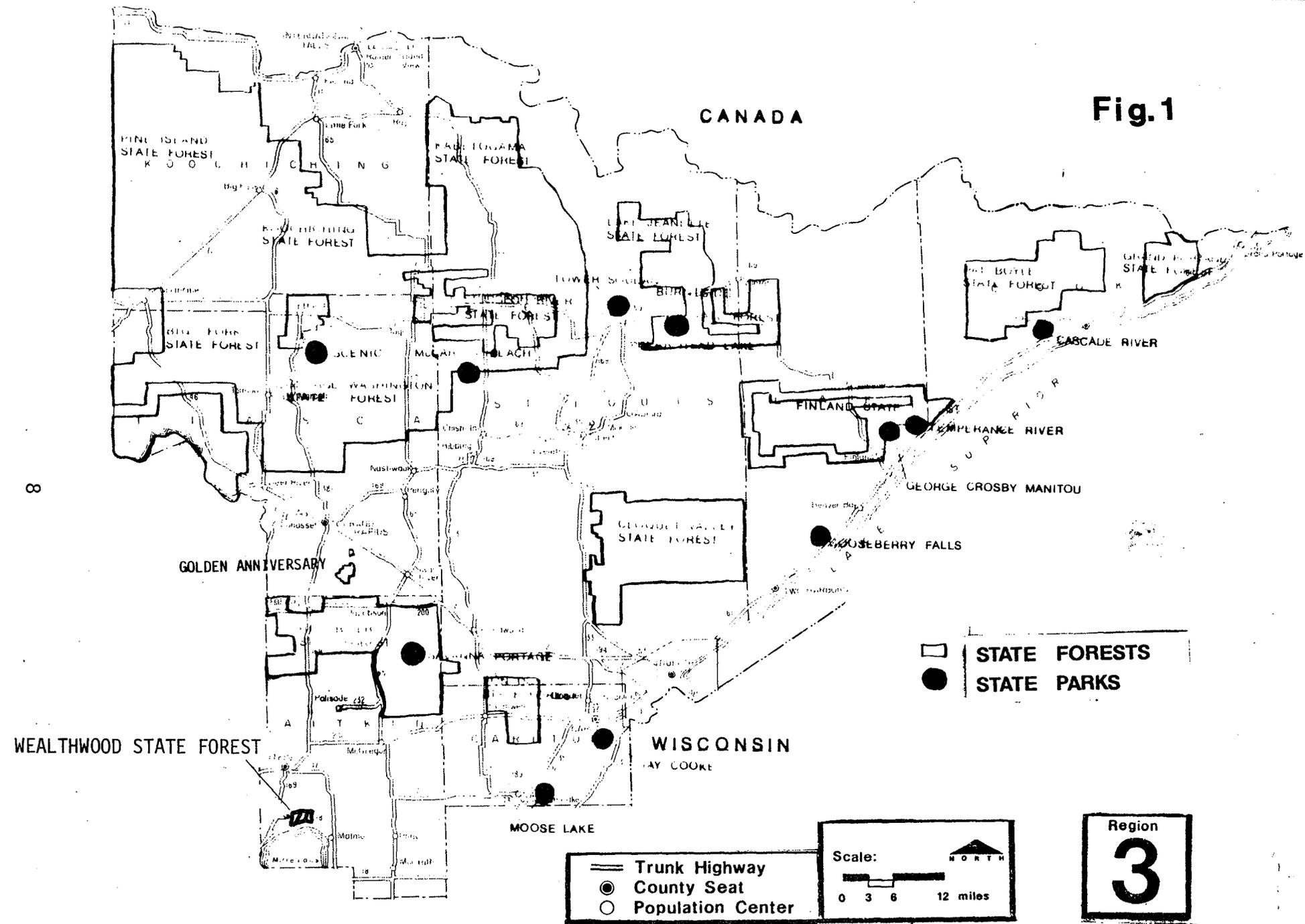
#### Goal Identification

It is the goal of the Department of Natural Resources to improve, develop and maintain the Wealthwood State Forest Ski Touring and Hiking Trail in order to provide a quality recreational opportunity for the citizens of Minnesota.

#### Objectives

- \* To properly upgrade and maintain this area in a manner which will preserve its quality in light of other on-going management practices.

Fig. 1



CANADA

PINE ISLAND STATE FOREST

RED PINE STATE FOREST

KAMINCHANCE STATE FOREST

RED PINE STATE FOREST

RED BOYLE STATE FOREST

GEORGE CROSBY MANITOU STATE FOREST

RED PINE STATE FOREST

SCENIC STATE PARK

MULLEN STATE PARK

BLAICH STATE PARK

LEWIS STATE FOREST

BIRN-LEITE STATE FOREST

CASCADE RIVER

FINLAND STATE FOREST

KAMINCHANCE RIVER

GEORGE CROSBY MANITOU

GOLDEN ANNIVERSARY STATE FOREST

GEORGE CROSBY MANITOU STATE FOREST

ROSEBERRY FALLS STATE PARK

STATE FORESTS

STATE PARKS

WEALTHWOOD STATE FOREST

WISCONSIN

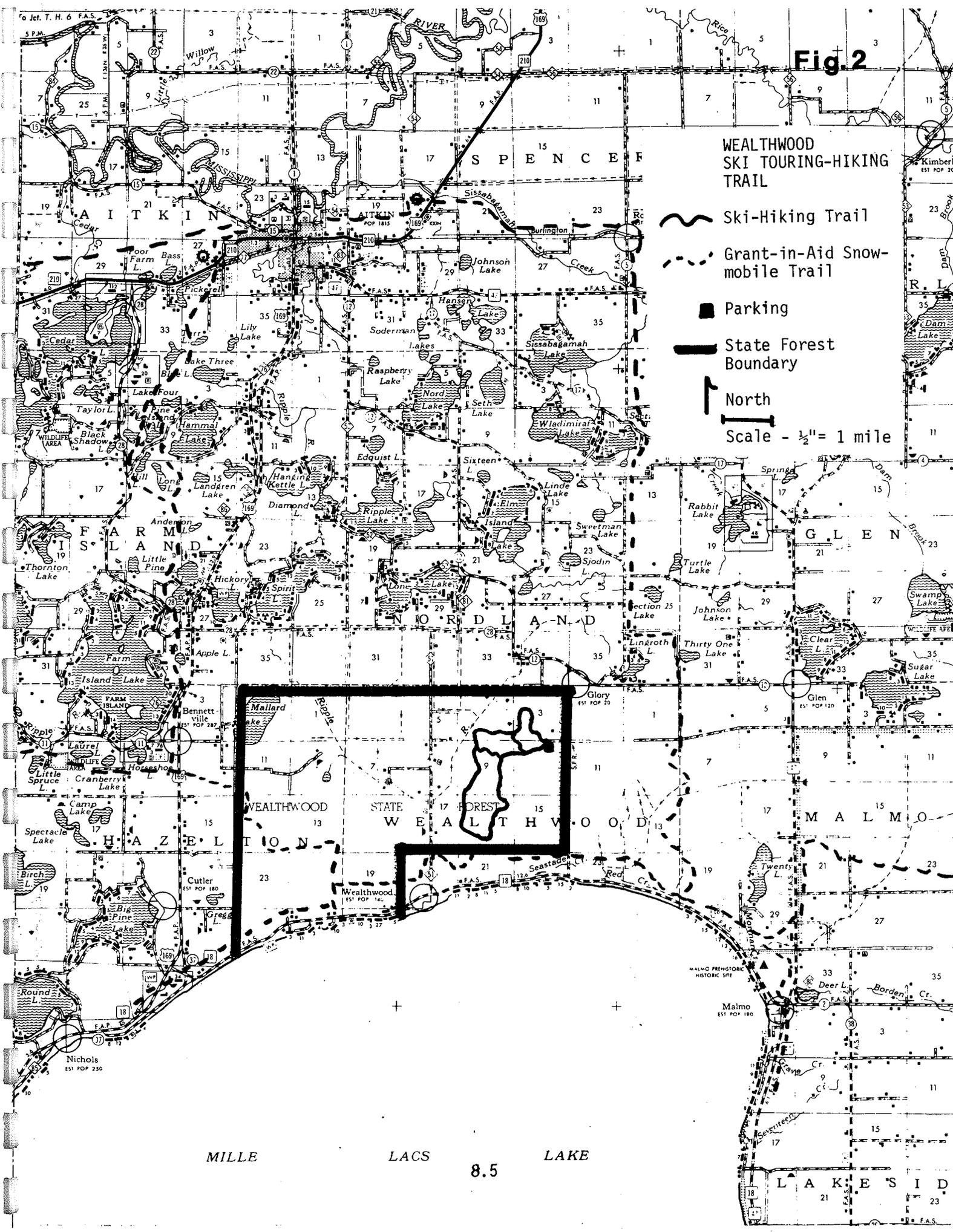
MOOSE LAKE

Trunk Highway  
● County Seat  
○ Population Center

Scale: 0 3 6 12 miles  
NORTH

Region  
3

Fig. 2



WEALTHWOOD SKI TOURING-HIKING TRAIL

-  Ski-Hiking Trail
-  Grant-in-Aid Snowmobile Trail
-  Parking
-  State Forest Boundary
-  North
-  Scale - 1/2" = 1 mile

MILLE LACS 8.5 LAKE

LAKESIDE

- \* To complete development as outlined in this plan by the winter of 1978-79.
- \* To establish this trail for non-motorized use through formal designation as a state forest day use area for ski touring and hiking.<sup>1</sup>
- \* To develop and implement a maintenance program which will sustain the quality of the trail for the future.

### Existing Development

The trail designated for development was originally developed for snowmobile use in 1972. Eight miles of trail were constructed and marked at this time. Maintenance of the area was discontinued two years ago and most signs were removed. Use by snowmobiles on the trail has declined recently due to the expansion of the Aitkin County Grants-in-Aid Snowmobile System and lack of maintenance (see figure 3).

### Proposed Development

The following development activities are recommended for upgrading of the Wealthwood State Forest Trail for ski touring and hiking.

### Trailhead Area

#### Entrance Road and Parking

A wood sign directing users to the parking lot should be placed at the intersection of the Mille Lacs Lake Road (State Forest) and the township access road.

---

<sup>1</sup>Motorized vehicles for administrative purposes and contract services will be allowed.

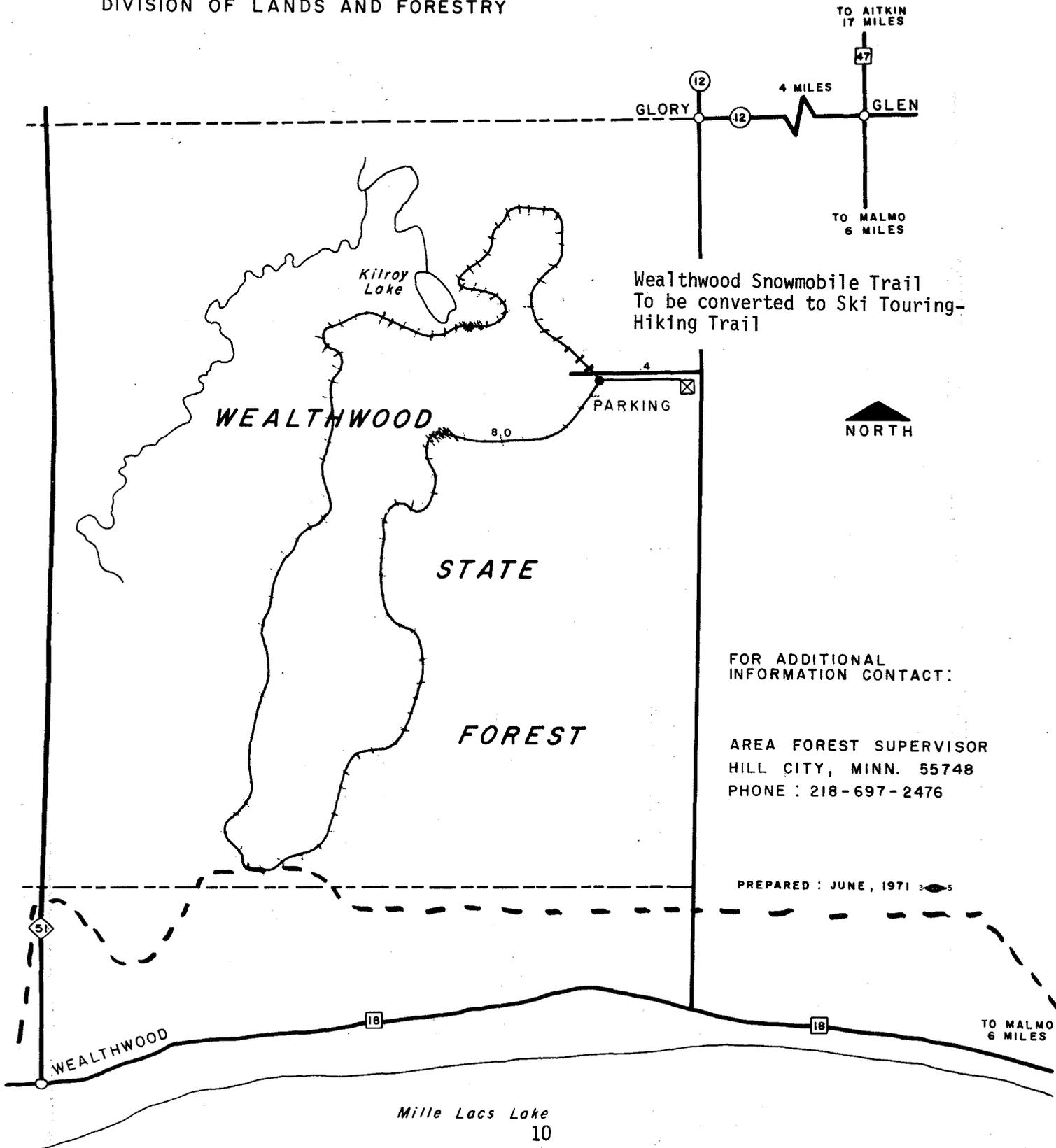
Fig. 3



# WEALTHWOOD STATE FOREST

Marked Snowmobile Trail

DIVISION OF LANDS AND FORESTRY



Wealthwood Snowmobile Trail  
To be converted to Ski Touring-  
Hiking Trail

FOR ADDITIONAL  
INFORMATION CONTACT:

AREA FOREST SUPERVISOR  
HILL CITY, MINN. 55748  
PHONE : 218-697-2476

PREPARED : JUNE, 1971

TO MALMO  
6 MILES

Mille Lacs Lake  
10

A parking lot capable of handling 10-15 cars will be developed at the sight marked on the map in figure 4. Room will be left for future expansion if use increases and more parking spaces are found to be necessary. Parking lot design will be similar to the typical in figure 5. Surfacing of the lot with Class V gravel or other fill may be necessary in the future to make it usable in varying weather conditions.

#### Trailhead Area Developments

A wood routed trail sign outlining the layout of the trail will be constructed near the trail entrance. An informational bulletin board for posting a printed trail map, emergency phone numbers, trail rules and regulations, and other pertinent information will also be constructed here (see sign typicals in figure 13, page 23). Pit toilets will not be constructed at the trail entrance until user demand dictates their need. If toilets are built, they will be constructed according to Bureau of Engineering standards (see typical in figure 6, page 14).

#### Upgrading Existing Treadway

The existing trail treadway will be upgraded and rerouted into a multi-loop system (see map in figure 4). Trail width will vary from 8-12 feet depending on terrain and the difficulty rating of the trail (see design typical in figure 7). A minimum width of 8-10 feet will be maintained on hills to allow skiers to herringbone or sidestep up hills and to snowplow down hills. Runouts will be cleared at the bottom of steep hills to allow skiers to negotiate them safely.

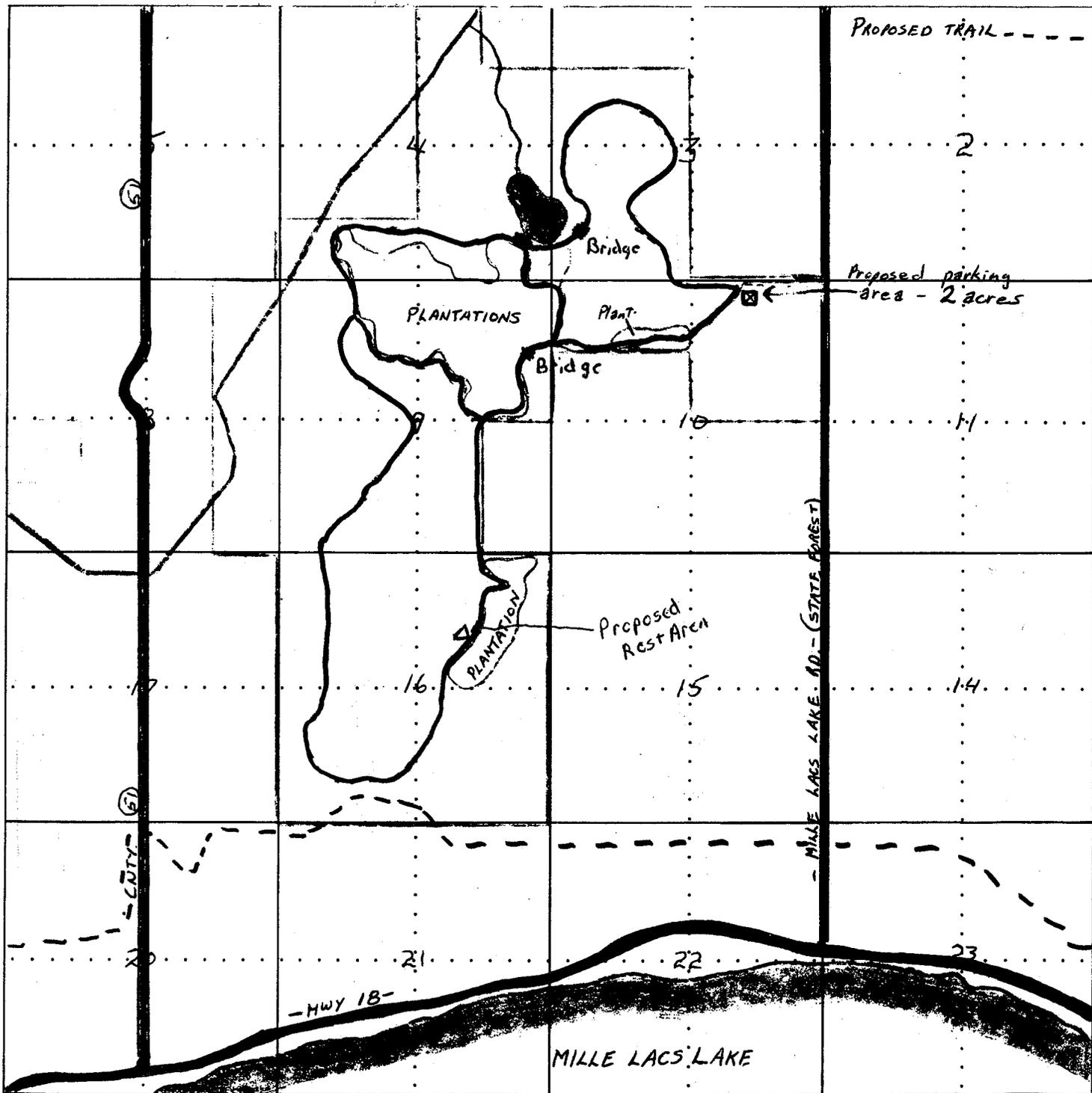
Figure 4

WEALTHWOOD STATE FOREST  
SKI TOURING-HIKING TRAIL

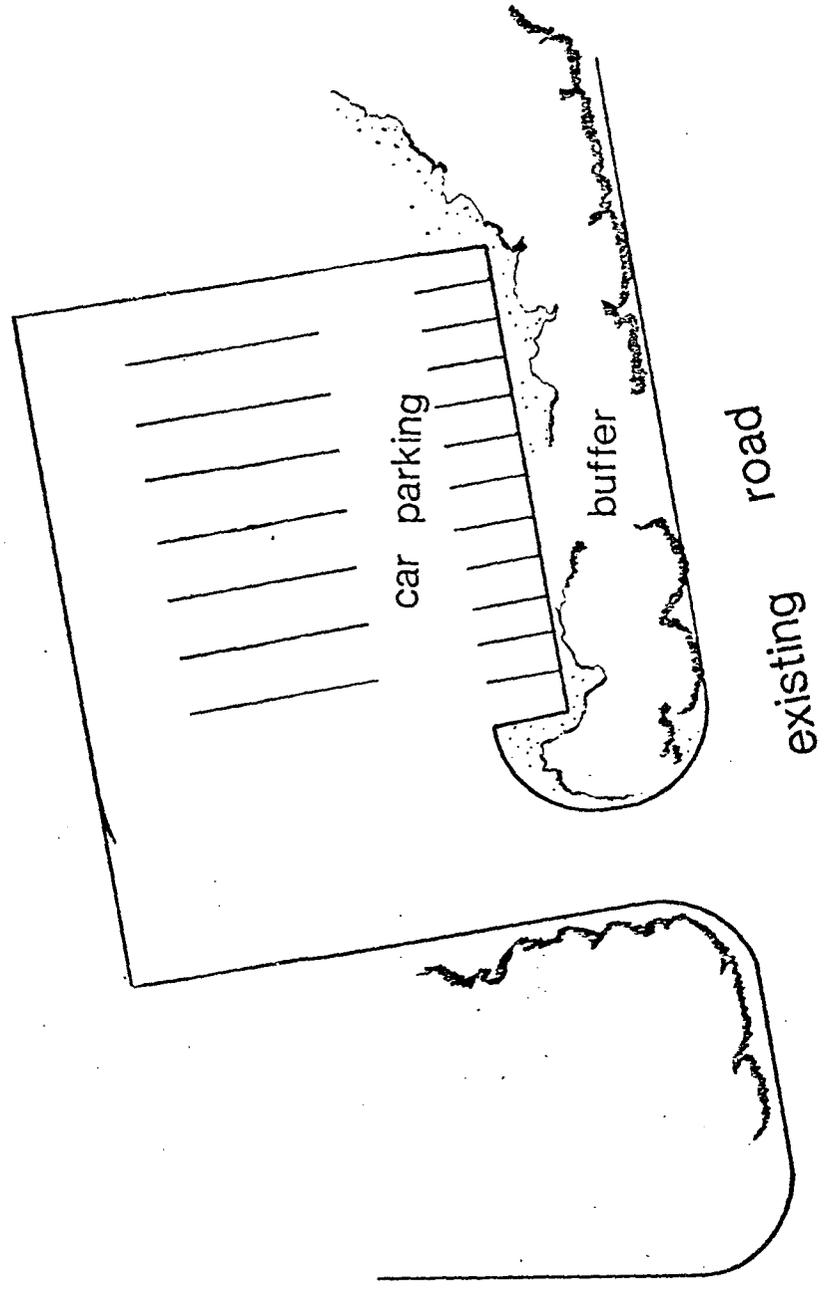
North

Scale- 2" = 1 Mile

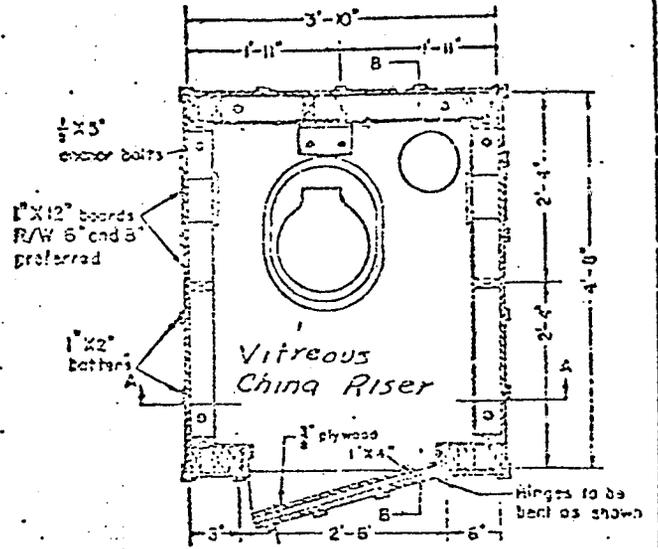
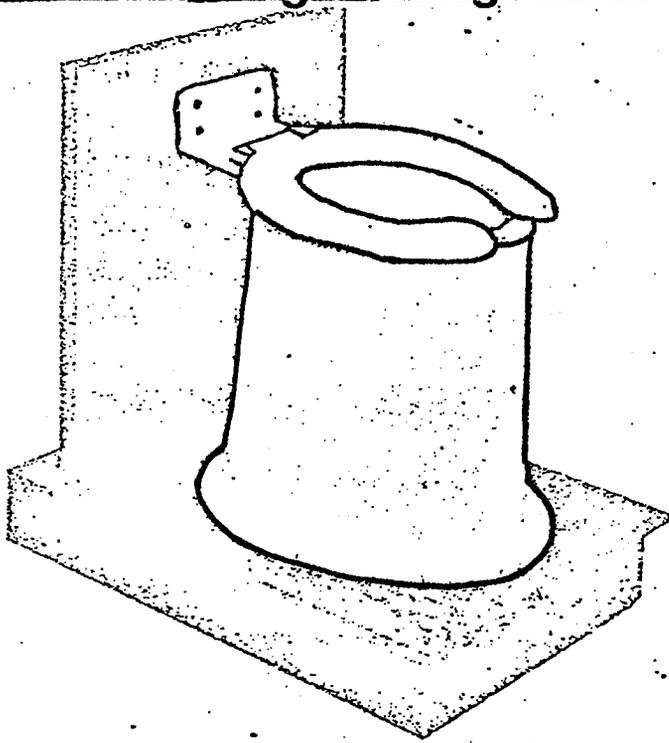
- Parking
- ▲ Rest Area
- ~ Ski-Hiking Trail
- - - GIA Snowmobile Trail



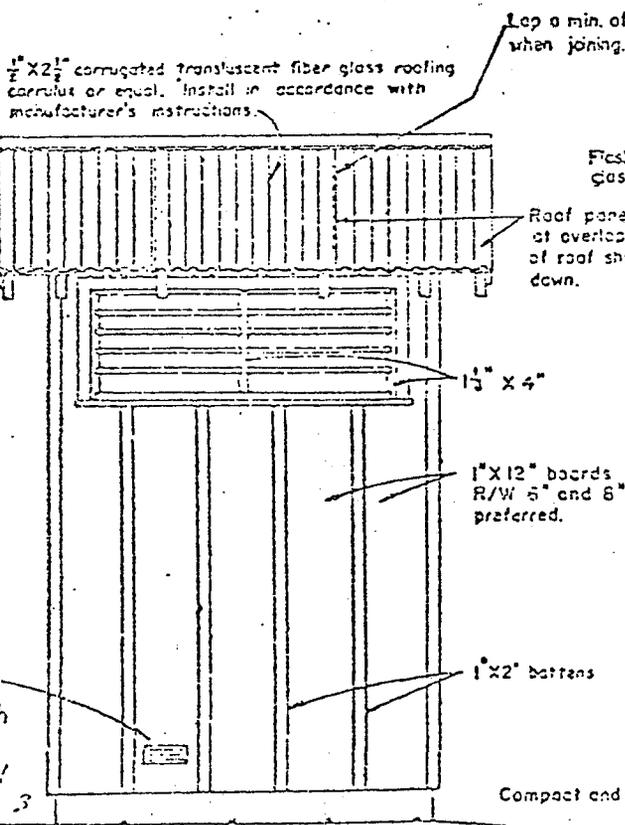
**Fig.5**  
**PARKING LOT TYPICAL**  
**PLAN VIEW**



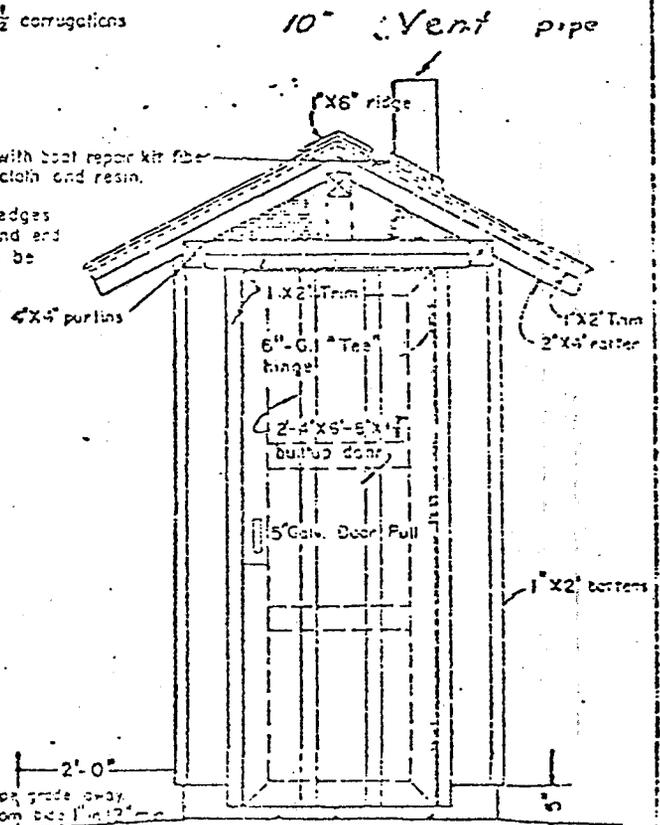
# Fig. 6' Single Seat Pit Toilet



PLAN



SIDE ELEVATION  
(OPPOSITE SIDE SIMILAR)



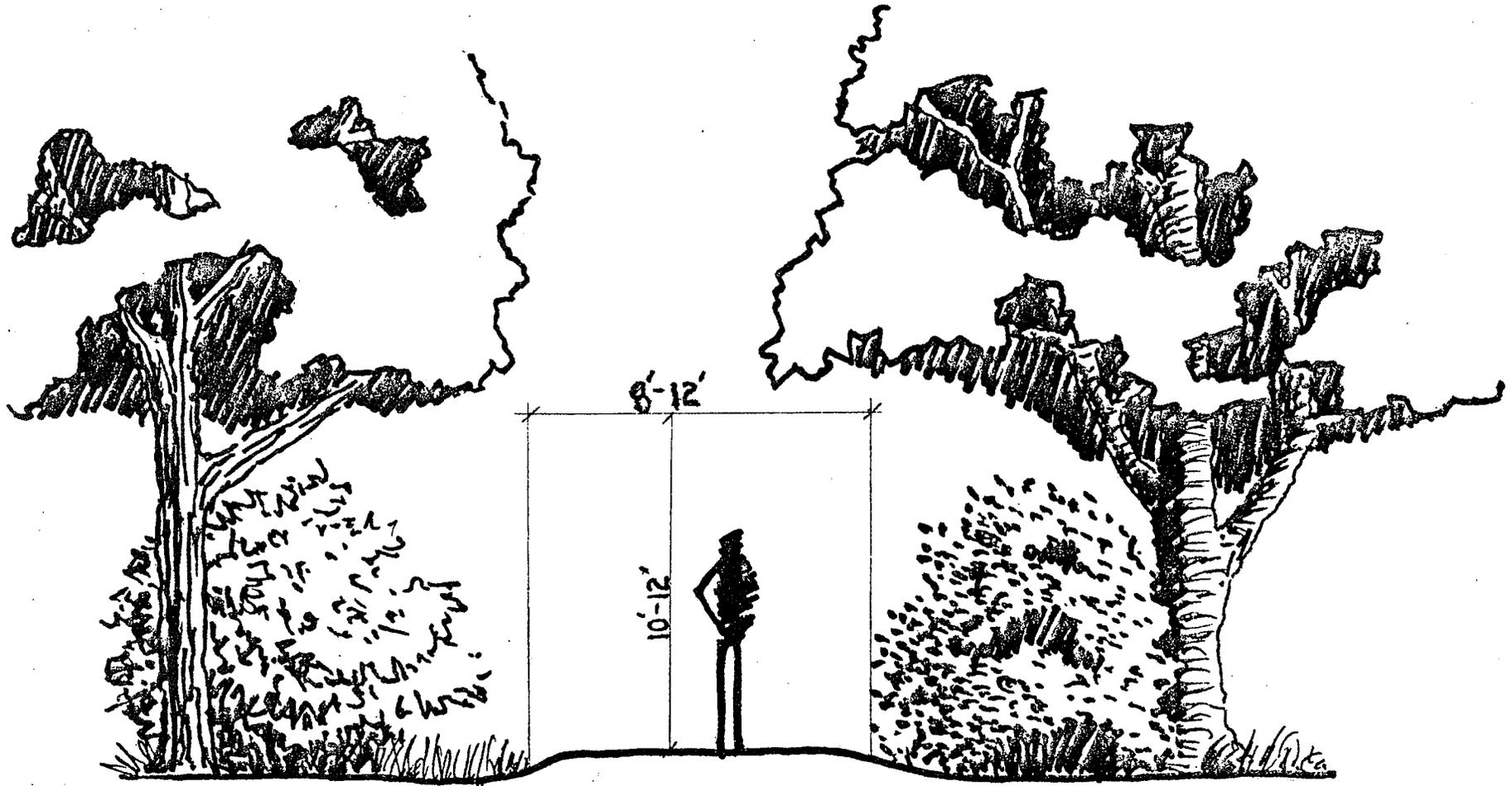
FRONT ELEVATION



Fig. 7

# Ski Touring Trail Treadways

15



minimum clearances needed  
for ski touring trails

width varies with terrain  
height varies with snow depth

In areas where stumps and rocks are a problem, a crawler tractor will be utilized to clear and level the treadway. All stumps and rocks removed, will be pushed into piles in designated areas, inconspicuous from the right-of-way. Cutting and filling techniques as shown in figure 8, may also be used to level the treadway.

All areas where earth is removed or where erosion is currently a problem will be planted with a wildlife seed mixture to protect the trail treadway. This will benefit wildlife at the same time.

Water bars, diversion structures, or rip rap may be necessary on steep slopes to stop erosion (see figure 9).

Wet areas along the trail will require courdoroy and/or fill to allow for all season use (see figure 10). Where the treadway is elevated (by courdoroy or fill), culverts may have to be installed to allow for proper drainage.

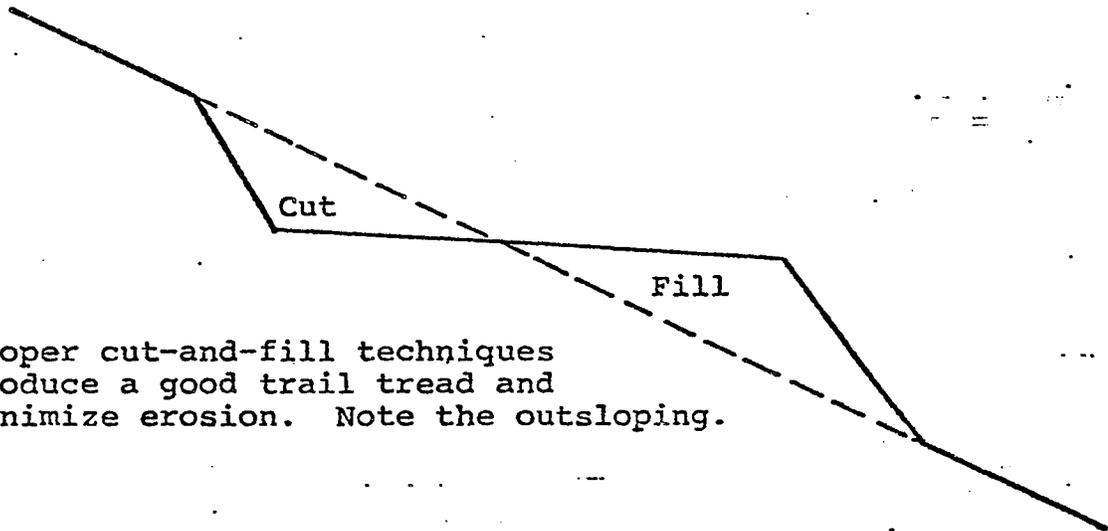
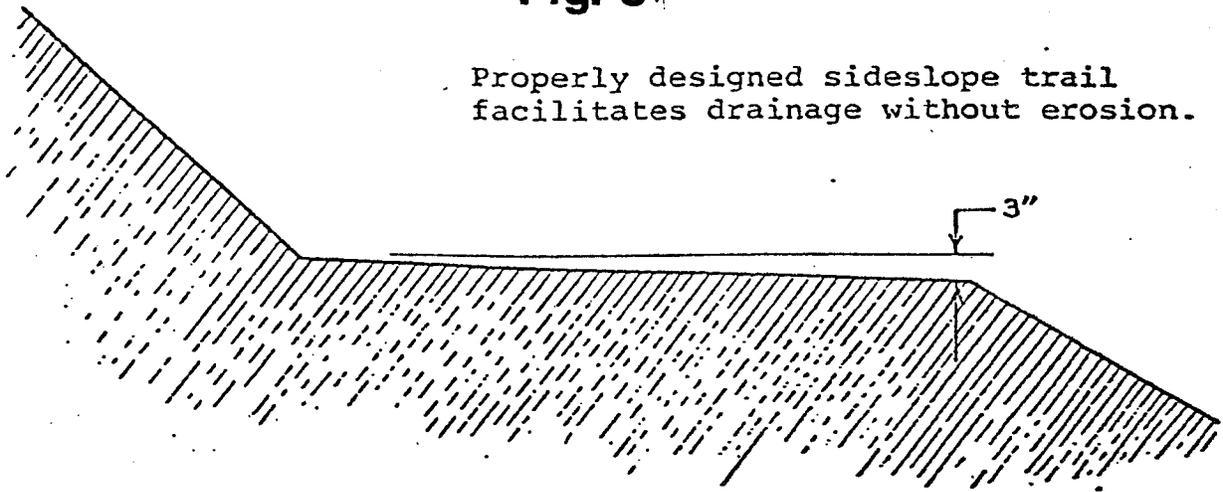
#### Bridge Construction

As presently aligned, the proposed trail crosses an earthen dam built by the Division of Wildlife and Fisheries. This earthen dam has washed out in recent years, leaving a 20-50 foot gap. This gap will have to be reconstructed with fill to allow for a continuous trail route.

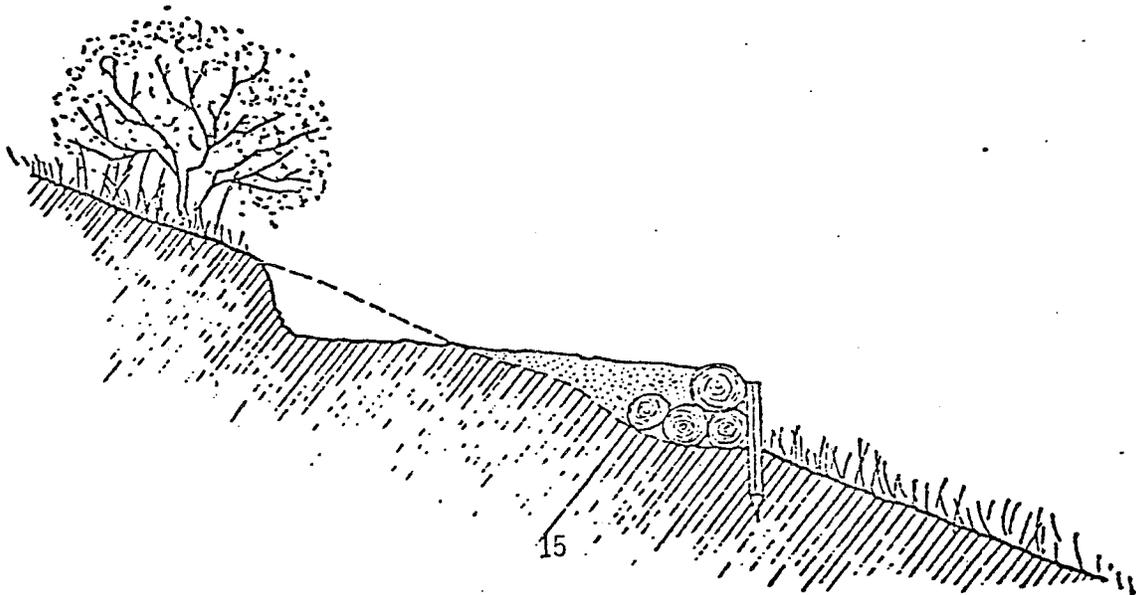
The appropriate wildlife managers in charge of the trail area have been contacted and have recommended that the dam be reconstructed. The DNR

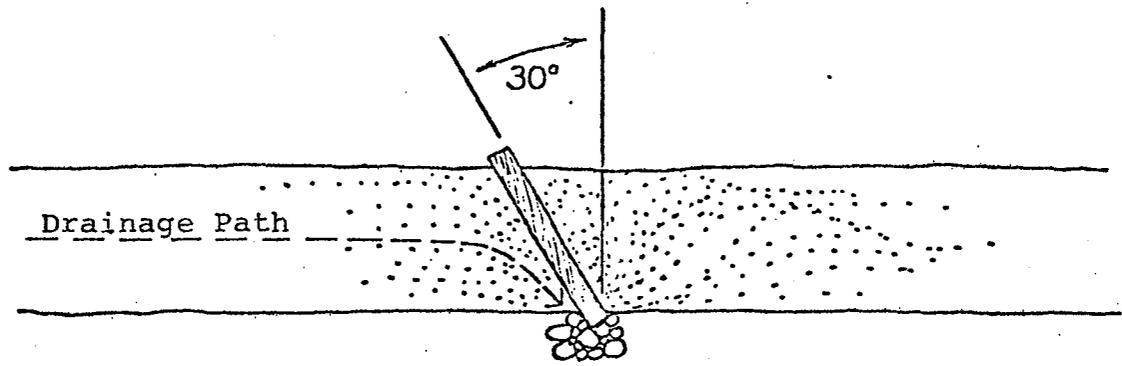
**Fig. 8.**

Properly designed sideslope trail facilitates drainage without erosion.

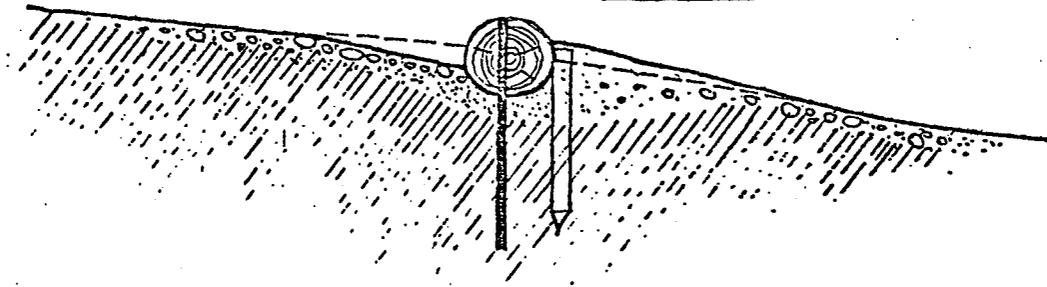


Proper cut-and-fill techniques produce a good trail tread and minimize erosion. Note the outsloping.



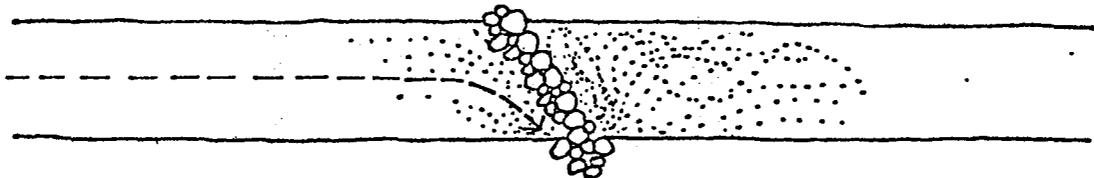


Landscape soil to top of water bar on downhill side.



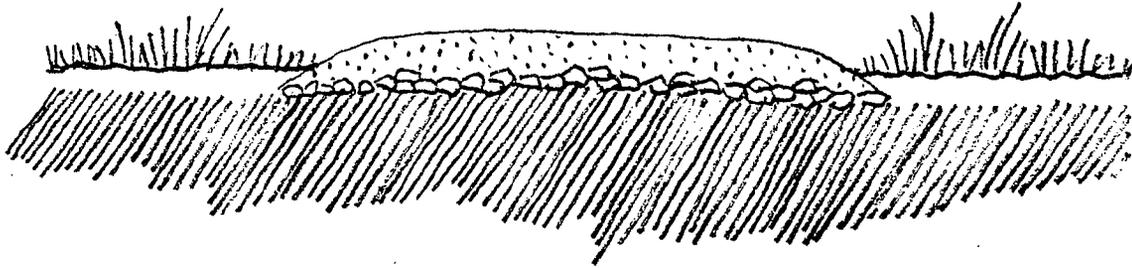
Water Bars

Note log is held in place by steel pin and/or wooden stake. Below, stones are used as a water bar.

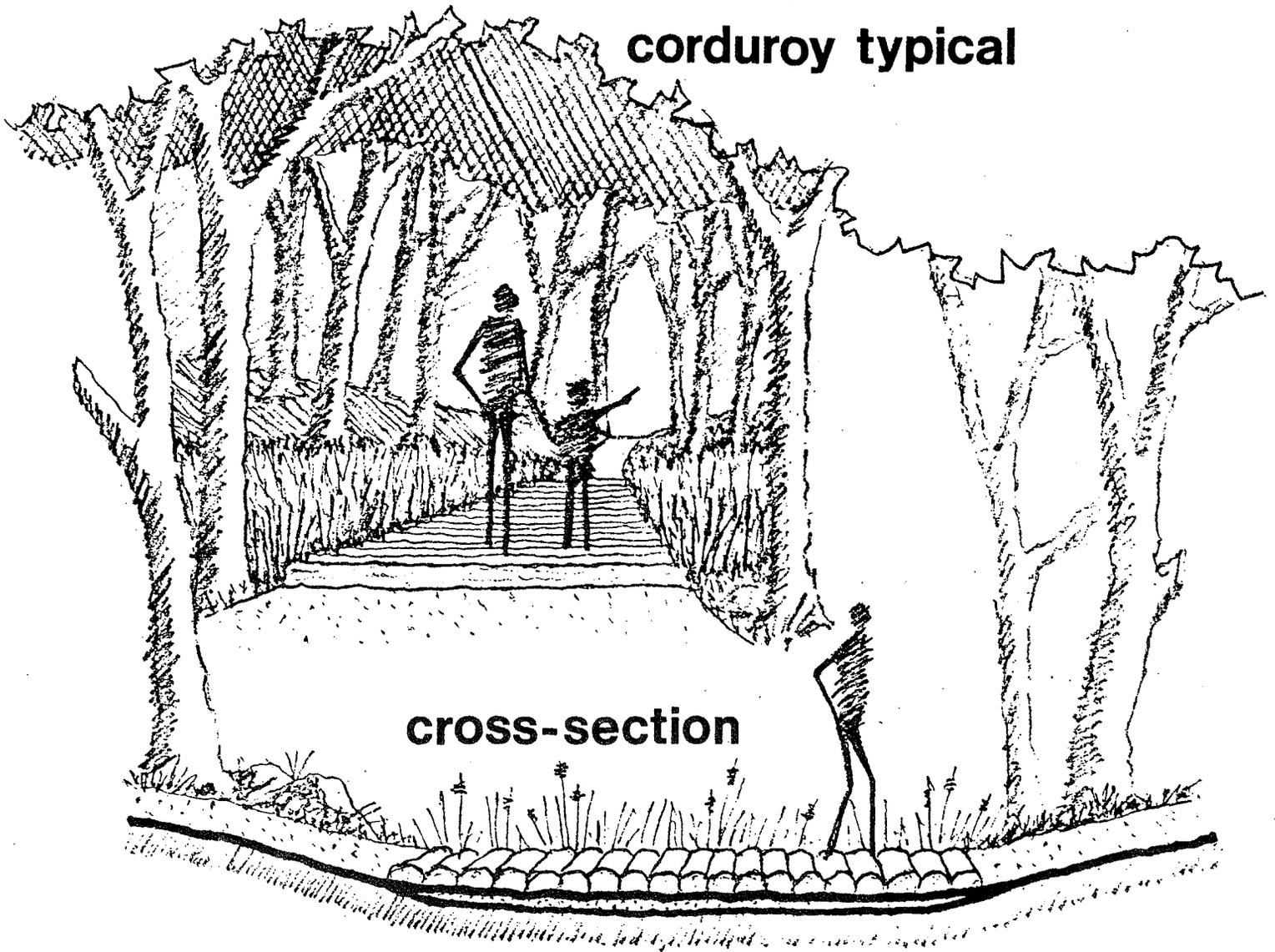


**Fig.10**

**elevated tread**



**corduroy typical**



**cross-section**

Bureau of Engineering will be involved in drawing up the actual plans for this structure. Permits will be required from the Division of Waters before any construction affecting the water resource is started.

#### Rest Areas

One rest area will be constructed in the area on the long south loop (see figure 3, page 12). The rest area will include a trail shelter and fire ring (see typical in figure 11).

The trail shelter will be constructed according to Bureau of Engineering Standards. It is recommended that creosoted logs be used for the bottom three rows, and that redwood stained logs be used for the remainder of the shelter. By using treated logs on the bottom rows and stained logs for the remainder, it should be possible to prevent wood rot near the ground, while still providing a pleasant looking shelter.

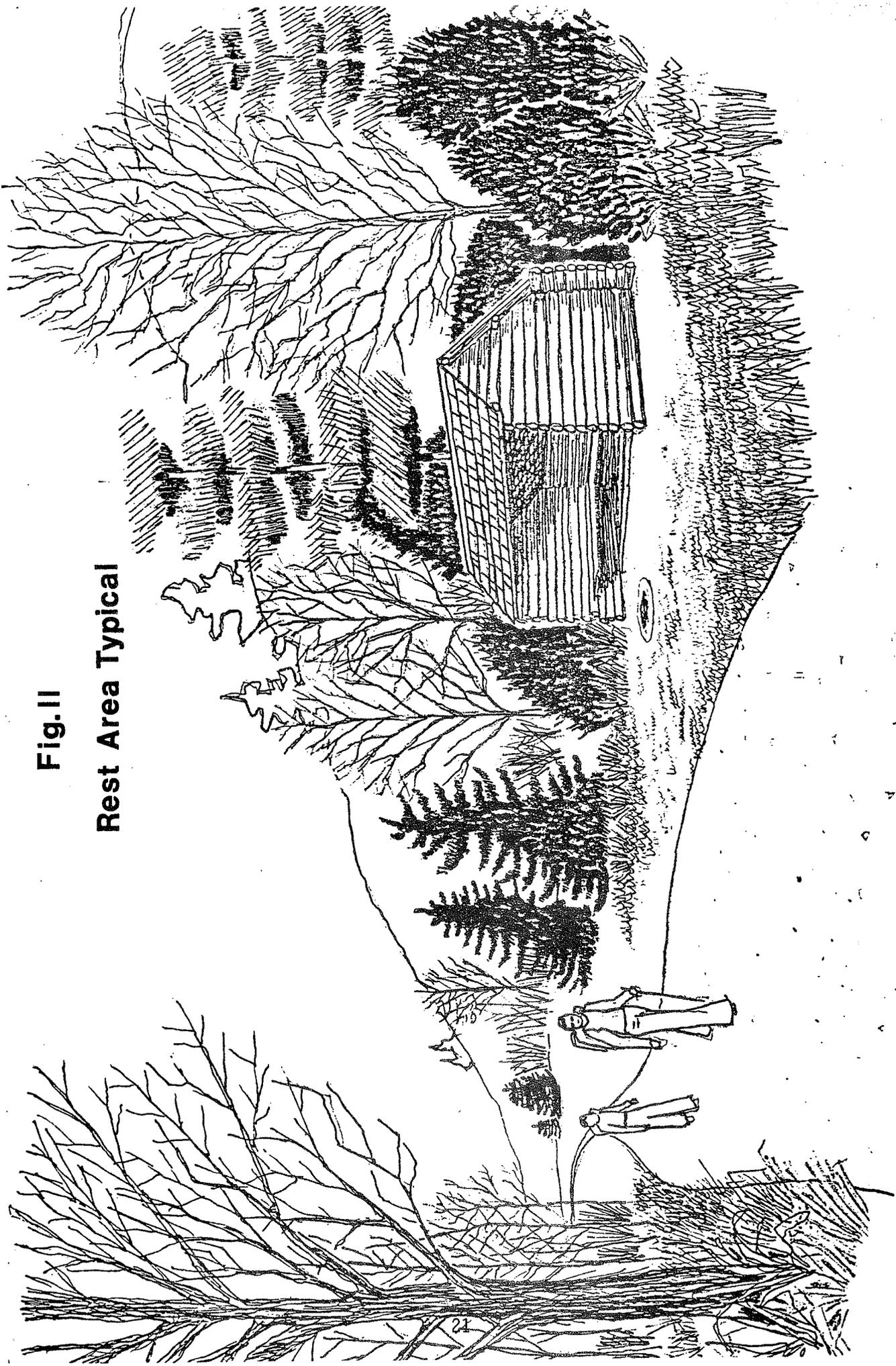
The shelter will be located a short distance from the trail right-of-way and will be placed in a manner which will block the prevailing winds. The shelter should be chinked and banked to prevent wind from seeping in. A fireplace or fire ring will be placed in front of the shelter to provide heat and a place for cooking.

#### Signs

The trail signing system will conform to the State's Standard System when that system has been finalized. The purpose of this signing system is to

Fig. II

Rest Area Typical



provide information and direction for the trail user. Sufficient signs will be provided to transmit information, insure user safety, and facilitate enforcement. Signs are located for maximum visibility and will be kept to the necessary minimum.

"You Are Here" signs will be placed at all trail junctions, and trail difficulty markers will be placed at strategic locations. Warning, regulatory and information signs will be placed where necessary (see sign typicals in figures 12 and 13).

Interpretive signs identifying management practices, tree species, and other special features should also be constructed in appropriate locations.

#### Maps

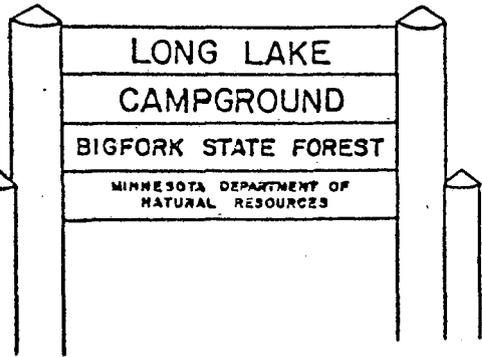
A user map is extremely important and will be available from a box near the trailhead sign. They will also be available from DNR Forestry offices and the Division of Parks and Recreation in St. Paul. The present Wealthwood map will be upgraded for accuracy and information. The new map should show the location of the Wealthwood State Forest in the state, an accurate route for access, trail mileage, trail direction, and complementary facilities such as rest areas and parking lots. Also included should be interpretive information about the history, development, and management of the forest.

Maps will be the responsibility of the Division of Parks and Recreation to develop and print. The Division of Forestry and Trail Project Planning will have input as to their content and makeup.

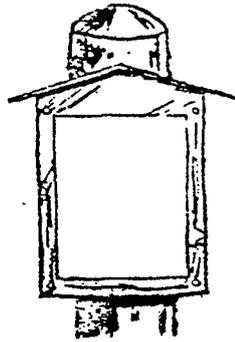
#### Maintenance

Maintenance of a recreation area after development is the most important tool for sustaining its quality. Maintenance monies are essential if the Wealthwood Ski Touring and Hiking area is to become a quality area.

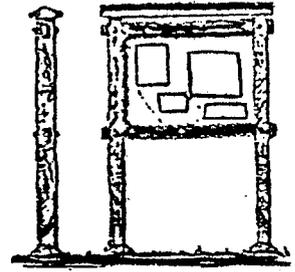
# Fig.12 Sign Typicals



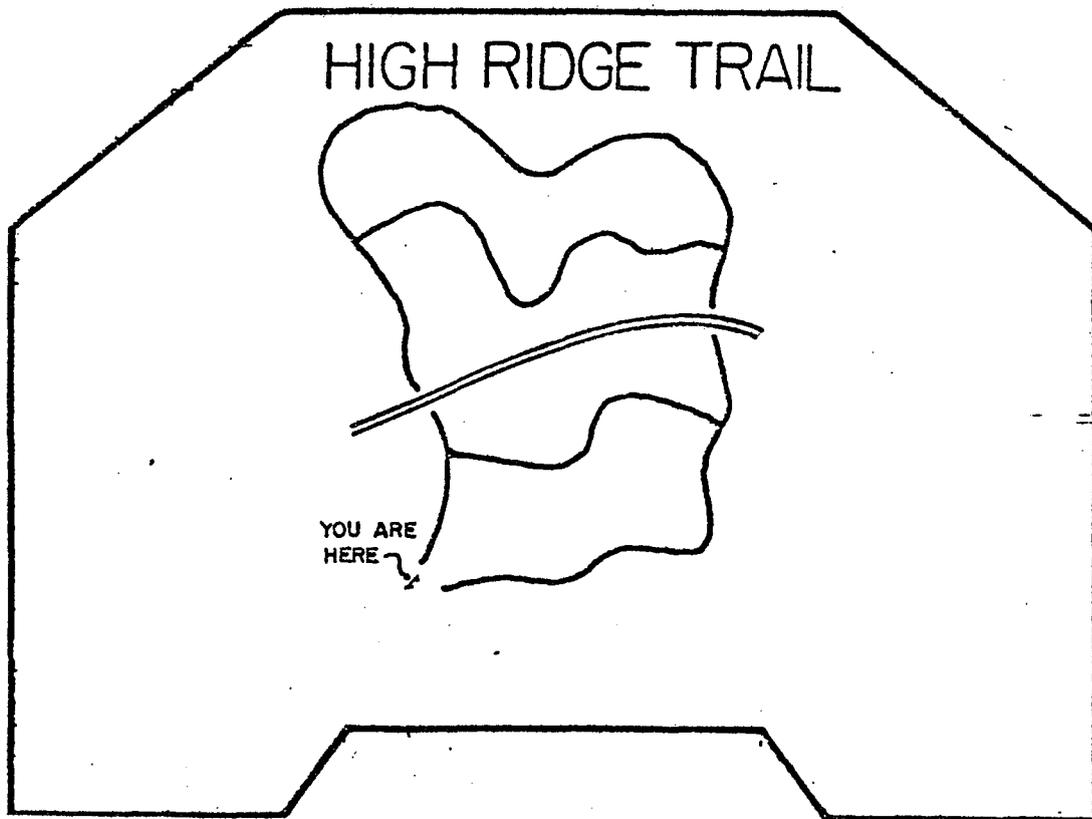
**Entrance Sign**



**"You are Here"  
Sign**



**Information  
Bulletin Board**



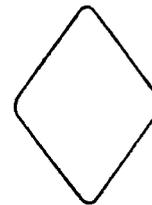
**Trailhead Sign**



**Skier**



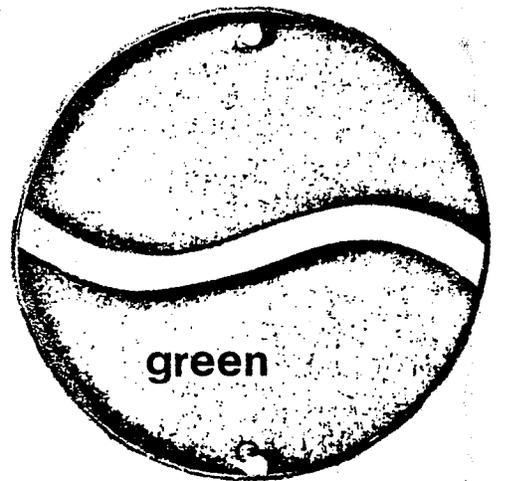
**Hiker**



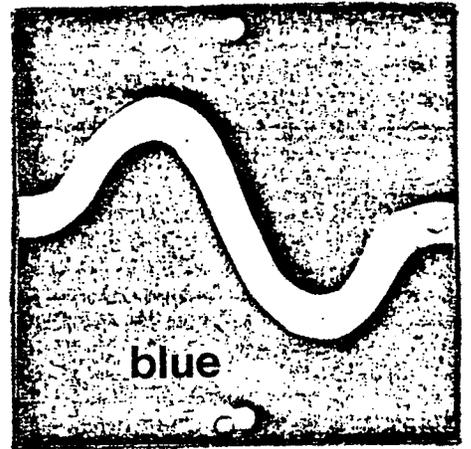
**Blazer**

# Trail Difficulty Symbols

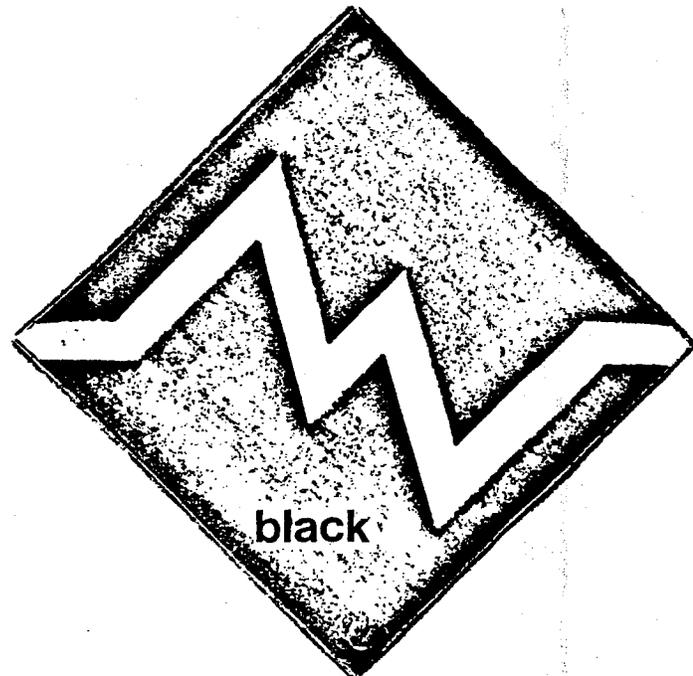
**easy**



**more difficult**



**most difficult**



At present, there are no funds earmarked for maintenance of ski touring and hiking areas developed through the bonding bill program. Therefore, it is a recommendation of this plan that maintenance money be made available through legislation to insure the quality of the area.

Maintenance of the Wealthwood Ski Touring and Hiking Area will require a year-around program. Routine maintenance will involve litter pick-up, cleaning shelters and toilets, and clearing surface vegetation. Major maintenance will involve removal of windfalls, painting and repairing of structures, sign replacing, and controlling erosion.

Winter grooming of ski treadway will be done on a contract basis or by state employees using DNR equipment. Winter grooming will be set up on a flexible schedule to allow for periods of high and low use. If DNR equipment is necessary to groom the trail treadway, it is recommended that equipment be purchased for that purpose. No equipment is presently available for grooming of the area.

Periodic inspections will be made throughout the year to evaluate maintenance problems and actions needed. Inspections may be made by the district forester or his designate (i.e., maintenance foreman); or by the person in charge of trail grooming. The regional trails coordinator may also inspect the trail if necessary.

### Steps Involved in the Planning Process

1. Project proposal is initiated by district forester and is submitted through the area and regional foresters (at this time, the proposal is evaluated for worthiness and the potential for public support).
2. After proven feasible and consistent with the state forest multi-use concept, the proposal is sent to St. Paul.
3. Proposal is then investigated by the Bureau of Planning and Research with the input of the regional trails coordinator, area and district foresters, and other involved divisions.
4. Area of study is defined and a preliminary plan is prepared based on this study. Regional trails coordinator, and the area and district foresters perform necessary "groundwork" and report information to Trail Project Planning. Input is received from various levels of government, special interest groups and others.
5. Preliminary plan is sent out to DNR divisions involved for review.
6. Plan is revised subject to this input and printed for public hearing.
7. A public hearing is held in the local area of the unit.

8. Plan is revised again taking into account, public, departmental, and other agency review.
9. Plan is submitted to State Planning Agency for review for consistency with the Outdoor Recreation Act of 1975.
10. Possible revision subject to State Planning Agency review.
11. Final Review by State Planning Agency.
12. Implementation of the plan by the Division of Forestry and regional trail coordinator.

Note: Planning is an on-going process which does not stop after final State Planning Agency review. The management plan's built-in flexibility allows for site specific decisions at the time of development. After development is completed, periodic re-evaluation of the management program is required for response to changing conditions.

### Implementation

The structure of the Department of Natural Resources is such that the Bureau of Planning and Research - Trail Project Planning is responsible for coordinating the planning process and general implementation monitoring. After the plan is reviewed for consistency with the Outdoor Recreation Act, development can commence.

The Division of Parks and Recreation - Trails Section has the responsibility

for funding the project. They are also responsible for monitoring development and maintenance to insure that funds are spent in compliance with the bonding bill and master plan.

The Division of Forestry implements the plan by assigning the appropriate regional personnel to carryout development and maintenance of the trail. This development and maintenance must be in compliance with the bonding bill and master plan. The regional trails coordinator will coordinate other managers' activities within the region. He will also coordinate the design of trails and facilities with the area and district foresters. Actual construction and maintenance of the trails will be the primary responsibility of the area and district foresters with input from the regional trails coordinator.

Changes to the management plan must be cleared through the Bureau of Planning and Research - Trail Project Planning.

Estimated Costs

Parking Lot and Access Road Improvement	-\$2,000
Entrance sign, Trailhead Sign and Bulletin Boards	-\$1,000
Upgrading of Existing Trail Treadway	-\$3,000
Bridge Construction (1) or Fill	-\$3,000
1 Rest Area	-\$1,000

<u>Trail Signs and Maps</u>	- \$1,000
Estimated Cost	\$11,000

Maintenance Costs

Maintenance costs will be worked out by the District Forester, Area Forester, and Regional Trails Coordinator. A rough estimate of maintenance costs is \$1,000/year.

Timing of the Project

Sixteen state forest ski touring and hiking areas have been identified as prime areas for development or improvement during 1978. The Wealthwood Ski Touring and Hiking area is one of these projects.

The proposed developments are scheduled to be constructed during the summer and fall of 1978 so that they will be ready for use in the winter of 1978-79.

The area will be monitored continually by the district forester and other personnel to assess any problems that have occurred or to assess any additional developments which may be necessary.

Future Potential Expansion

No areas for expansion of the Wealthwood Area were discussed while the management program was formulated. Most available public lands have been utilized for this project making expansion unfeasible at this time.

### Recreational Needs to be Served

Ski touring and hiking are two activities that have experienced a tremendous growth in popularity in recent years. The 1974 Minnesota State Comprehensive Outdoor Recreation Plan (SCORP) identified ski touring and hiking as two of the fastest growing recreational activities in the state.

At that time, it was estimated that the number of Minnesotans participating in hiking was 300,000 users and it was projected that over 100,000 Minnesotans would be participating in ski touring by 1975. SCORP also emphasized that these activities would continue to grow in popularity in the future.

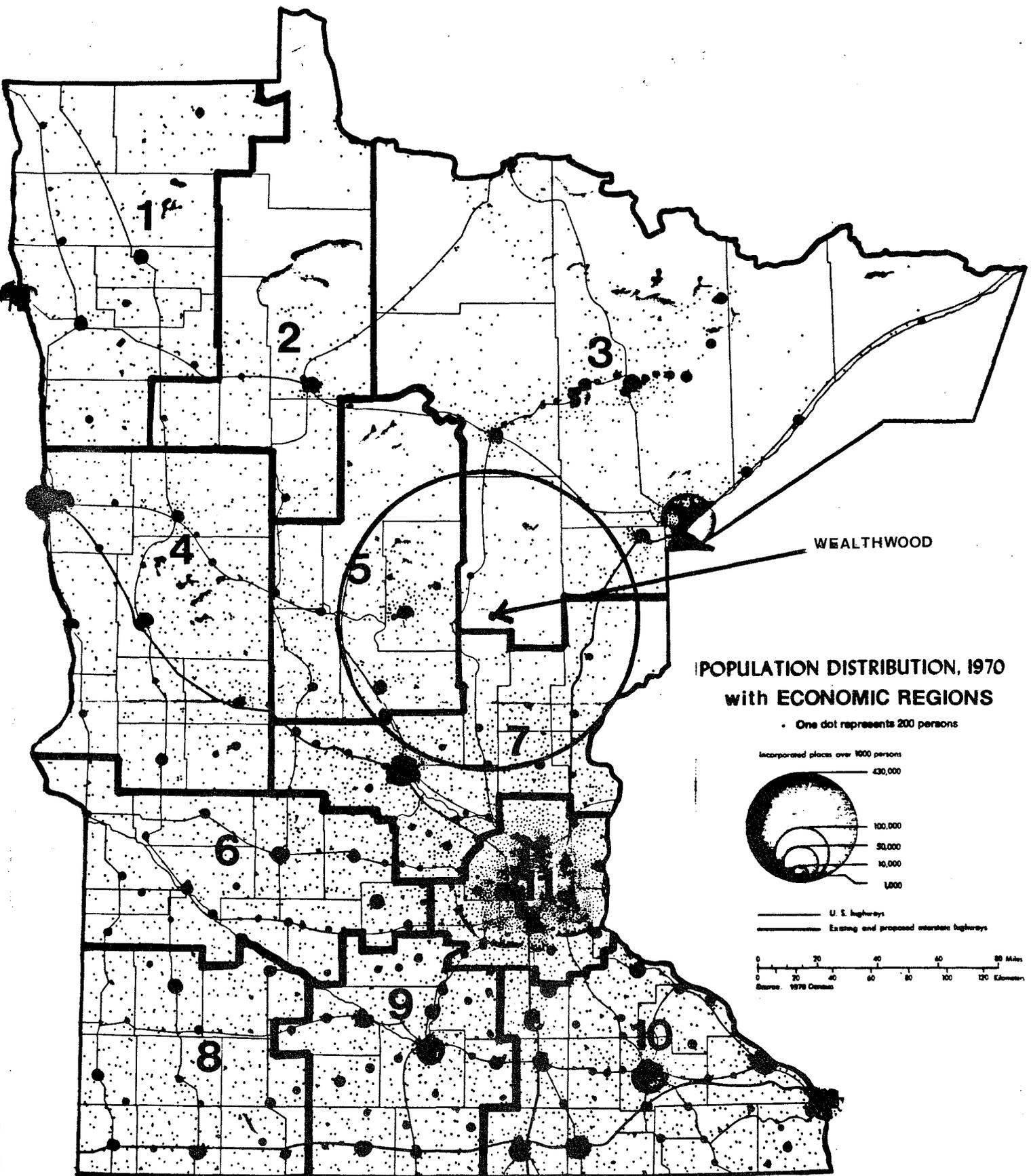
No figures are presently available to predict demand for the Wealthwood State Forest Ski Touring-Hiking Area.

The potential use area for the Wealthwood Unit includes Economic Development regions 3, 5, 7, and 11.

Most day use can be expected from people within a 1½ hour drive. Figure 14 shows the hypothetical area from which day users can be expected. This is defined as the distance people will drive to participate in an outdoor recreational activity without requiring an overnight stay.

Weekend users can be expected from regions 3, 5, 7, and the Twin Cities where trails are in short supply.

Fig. 14



## Description of the Environment

### Topography

The topography of the area is level to gently rolling with elevations ranging from 1247 feet at Kilroy Lake to 1286 feet in the rolling areas. The area surrounding the forest is classified as the Tamarack Lowlands. This broad, flat, swampy plain covers much of Aitkin County and was once occupied by Glacial Lake Aitkin (see figure 15).

### Soils

The Wealthwood State Forest is located in an area classified as the Automba Drumlin Area.

Soil landscape units found in the area are the following:

SSPL - Loamy over sandy, poorly drained, light colored soils

SSWL - Loamy over sandy, well drained light colored soils

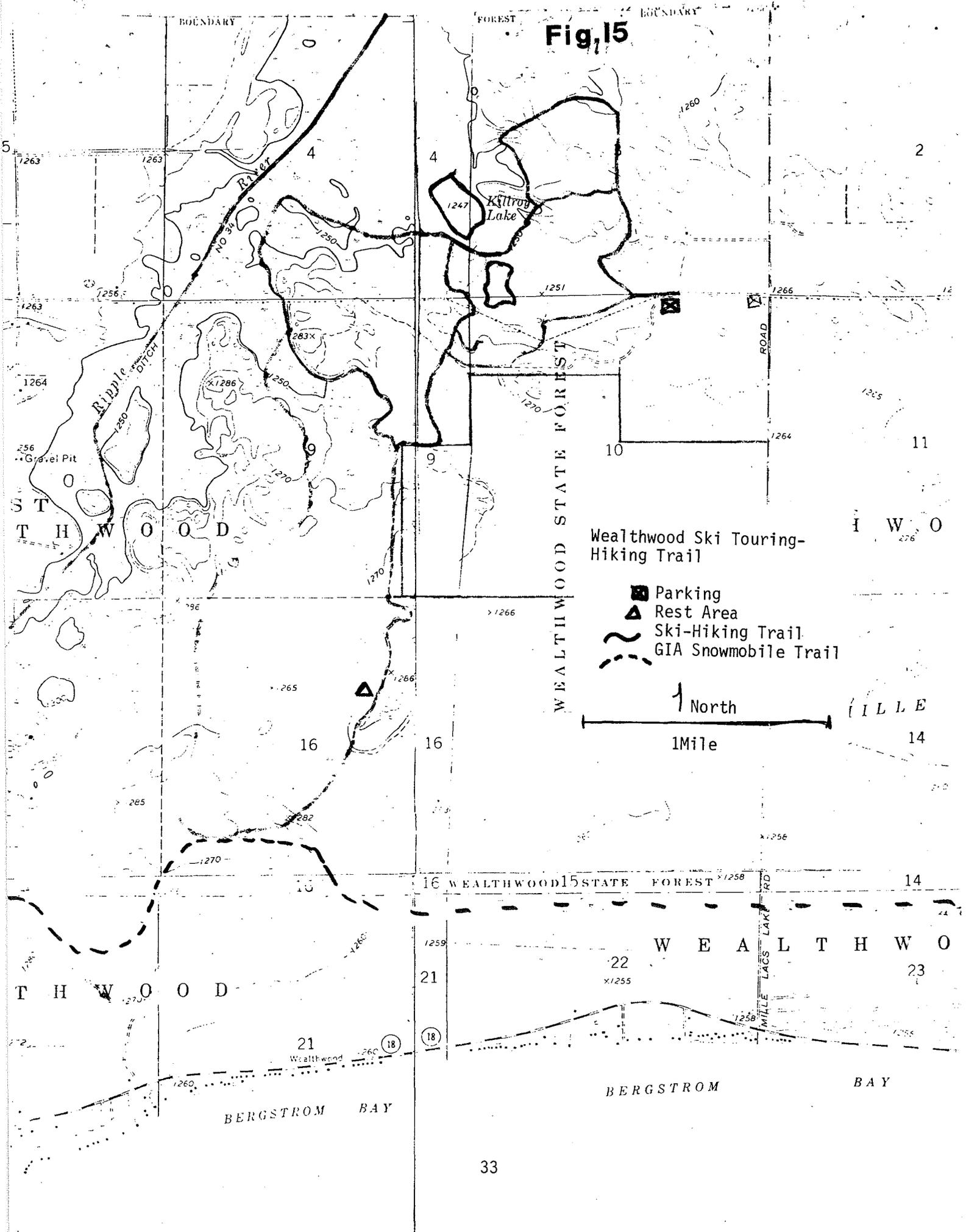
AP - acid organic soils

NP - non-acid organic soils

AP and SSWL soils are the major units found in the forest area. SSWL soils occur in more rolling areas while AP soils are found in the more level to rolling areas.

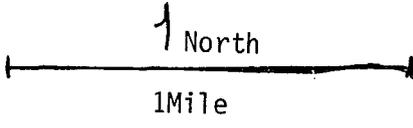
SSPL and NP soils occur in the level areas and are poorly drained.

Fig. 15



Wealthwood Ski Touring-Hiking Trail

- Parking
- ▲ Rest Area
- Ski-Hiking Trail
- ⋯ GIA Snowmobile Trail



### Climate

The average annual snowfall for the Wealthwood State Forest is 50" with an average annual number of days with snowcover of 1" or more for 120 days. Winter (December, January, February) normal temperature is 13°. Mean maximum and minimum temperatures for January are 19° and -4°.

Mean annual precipitation is 26" with a summer normal temperature of 67°. Mean maximum and minimum temperatures for July are 80° and 54°.

### Water Resources

Surface water resources in the Wealthwood State Forest consist of four small to medium sized lakes. The Ripple River and numerous marshes also exist in the forest.

### Mineral Resources

No economic concentrations of mineral resources are known to occur within the Wealthwood State Forest.

### Vegetative Cover

The uplands of the forest are covered by aspen, birch, mixed hardwoods, and scattered norway, jack and white pine. The lowlands contain cedar, spruce, and tamarack.

### Wildlife

A variety of mammals including deer, squirrels, rabbits, mink, and raccoon are found in the area. Other animals and birds include porcupine, roughed grouse, woodcock, waterfowl, and songbirds. Sighting wildlife from the trail is possible, but variety and numbers will vary with the season.

### Land and Timber Resources

The Wealthwood State Forest contains a gross land area of 17,744 acres. Of this acreage, 8,930 acres are under DNR-Forestry control, five acres under federal control, and 8,809 acres under private control.

Of the 8,930 acres of state forest land, 4,821 acres are timber producing. Bottomland and Northern Hardwoods (3,227 acres) is the largest coverytype, with Aspen-Birch (1,098 acres) the second largest. The remaining timber producing acreage is made up of cedar, jack pine, Norway pine, white pine, black spruce, spruce-balsam, and tamarack types.

Lowland and upland brush and grasses cover 1,268 acres, while 2,841 acres are non-forested.

### Air and Water Quality

The area surrounding the Wealthwood State Forest is relatively undeveloped and not densely populated. Industrial air pollution is not a problem in the area. Auto emissions are a minor source of local air pollution. Surface

water quality in the area is good and water pollution is not considered a problem.

No groundwater from wells has been provided by the state in the area at this time. Therefore, groundwater quality has not been checked.

#### Historical and Archaeological Resources

No historical or archaeological sites have been identified by the State Historical Society in the Wealthwood State Forest at this time. The Historical Society will review the management plan prior to development to decide whether future investigation in the area is necessary.

#### Transportation and Utilities

Access is provided to the area from the north-south direction via State Highway 47 and U.S. Highway 169. Access to the area from the east-west direction is via State Highway 18.

The area is located north of Highway 18 between U.S. Highway 169 and State Highway 47. Access to the day use area from Highway 47 is via Aitkin County Road 12 to Glory and then south on the Mille Lacs Lake Road. Access from Highway 169 is via County Road 28 to County Road 12. Then south from Glory on the Mille Lacs Lake Road. Access from Highway 18 is not recommended because of the narrowness of the road (see figure 2, page 10).

No utilities (telephone or electricity) are presently available or needed for use in the Wealthwood State Forest. A powerline does cross the area from east to west and intersects the trail in two places (see figure 14).

Socio-Economic Factors

The Minnesota State Planning Agency (SPA) population projections for Aitkin County and Economic Development region 3 shows a modest population increase for Aitkin County through 2,000, with a slight decrease in population by 2000 for Region 3.

Population Projections

<u>YEAR</u>	<u>AITKIN COUNTY</u>	<u>REGION 3</u>
1975	12,400	331,100
1980	12,300	330,300
1985	12,600	332,600
1990	12,600	332,400
1995	12,600	330,200
2000	12,800	325,400

Three types of major employment for Aitkin County are: agriculture; forestry and fisheries (10.2% of employed labor force); wholesale and retail trade (22.9%); and professional and related services (19.7%).

Touring travel expenditures during 1974 totaled \$8,568,741 in Aitkin County. These expenditures accounted for 18.4% of gross sales.

Land Use and Development Trends

Aitkin County General Land Use

(Forty Acre Parcels)

Forested	-	20,796	Marsh	-	3,013
Cultivated	-	1,675	Urban	-	443
Pasture & Open	-	3,353	Extractive	-	1
Water	-	2,603	Transportation	-	3

Total - 31,887

Source: 1975 Pocket Data Book - State Planning Agency

All lands involved in the trail proposal are currently under state forestry control and will be managed for that purpose. Lands surrounding the trail area are predominately private and will be subject to agricultural, residential, and commercial development.

Facilities in Region 3

Economic Region 3 encompasses all of northeastern Minnesota, a region that has a great number of outdoor recreation facilities. Two national forests, the BWCA, 16 state parks, four corridor trails, 12 historic sites, 22 state forests, 559 miles of ski trails, and 1,800 miles of snowmobile trails can be found there. One reason for this areas large number of recreational facilities is that over 85% of the land in this region is in public ownership.

Numerous resorts, motels, hotels, and campgrounds can also be found throughout the region. Many of these facilities are open year-around to accommodate the needs of outdoor enthusiasts. Gas stations, repair shops and ski shops can also be found throughout the region.

#### Facilities in the Forest

At present, no recreational facilities are maintained by the DNR within the Wealthwood State Forest. A grant-in-aid snowmobile trail is located along the southern boundary of the forest.

The previously mentioned snowmobile trail was developed in 1972, but has not been maintained by the state in recent years.

No camping or picnic facilities have been developed in the forest because private industry in the area has done an adequate job to accommodate these needs.

Hunting, fishing, and ricing are permitted in the forest.

#### Management Programs within the Forest

Management of the Wealthwood State Forest is based on recommendations outlined in the Aitkin District Forest Management Plan. These plans are formulated for each forestry district throughout the state and are based on the state "Timber Management Guide" and other policy manuals. The management program is based on a ten year period, while necessary adjustments are made to fit

local conditions.

The management program includes timber, wildlife, soils, water, and recreation. Management of these resources requires a coordinated program which brings about maximum productivity and protection as well as providing other public benefits such as recreation.

Development of the Wealthwood ski touring and hiking trail will be an integral part of this management program and will not inhibit other forest management practices.

Necessary adjustments will be made in the area to avoid conflicts between other management activities and the trail. Development of the ski touring and hiking trail, however, will not exclude use of administrative vehicles and/or contractors who have been assigned to do work in the area. It will also not exclude automobiles from roads which are normally plowed during the winter.

When timber harvest is recommended in the area, cutting and hauling will try to be scheduled between May 1 and November 1 to avoid conflicts between skiers and contractors. In some instances, such as when swamp conifer types are recommended for harvest, logging operations will have to be performed in the winter to take advantage of frozen ground conditions. In these instances, portions of the trail treadway may have to be closed or rerouted temporarily to permit timber harvest operations to be run efficiently.

Timber sale contracts will be adjusted to insure that trees are not felled blocking the treadway. Provisions will be written so that the trail treadway, if damaged, will be returned to its original condition. Provisions will also be written to insure that slash and other debris are scattered away from the trail.

It should be emphasized at this point, that some forest trails will not always be permanent. As forests change in age, timber harvest will preclude established trail use in some areas. To adjust for these changing conditions, the trail will be rerouted into other areas in the forest. Thus, while trail use will be an established use in state forests, the trail location may not.

All management decisions concerning the area will be made in a manner that insures that the needs of other management activities and recreation are met with the least possible conflict.

#### Potential Concerns and Considerations

The Wealthwood State Forest was originally developed for snowmobile use and the southern portion of the trail is presently used as part of a grant-in-aid trail. This grant-in-aid trail will be allowed to continue on this route, and the ski loop will be rerouted to avoid conflicts with this trail.

No conflicts are expected in the area from motorized recreationists because adequate snowmobile mileages have been provided in the area by the state grant-in-aid program.

Signing, natural and constructed barriers, and publicity in local newspapers will also help to reduce conflicts that may arise.

## Environmental Impact of the Proposed Project

### Impact on the Physical and Biological Environment

Since the soils in the area are medium to fine textured, some soil compaction may occur in high use areas of the trail treadway. Overuse of such areas may also cause denudation of vegetation from the trail treadway, making soils more susceptible to erosion. Reseeding of the trail treadway after upgrading, however, should help to minimize this problem.

The proposed action will not have a significant impact on the surface or groundwater resources. Bridge construction and treadway elevation will be undertaken in a manner which will not inhibit natural drainage.

No impacts on mineral resources will occur.

Adverse impacts of the proposed action on vegetation will be minimal because a large portion of the trail system has already been constructed.

Reseeding of newly developed portions of the trail treadway should minimize this impact.

Adverse impacts on wildlife will be insignificant. Wildlife will probably benefit from seeding of the treadway with a wildlife mixture.

Increased use will cause some deterioration in air quality as a result of increased auto emissions. Use of heavy equipment in development will have a temporary adverse impact on air quality.

Increased use may have an adverse impact on water quality, erosion, and other control measures, however, should help to minimize this impact.

#### Impact on the Historical and Archaeological Resources

No impact on these resources has been identified at this time. Further study by the Historical Society may reveal sites that must be avoided or studied further.

#### Impact on Transportation and Utilities

Expected increases in use of the area will have an insignificant impact on traffic volumes on the highway access routes to the area. Access to the area via the Mille Lacs Lake Road and township road should not be adversely affected.

No impact on utilities will occur.

#### Impact on Socio-Economic Factors

Since all of the land has already been acquired, no loss from local tax revenue will occur.

Change over from snowmobile to ski touring use will have an impact on local snowmobilers. This impact, however, should be able to be offset through increased snowmobile mileage in other areas of the county.

The addition of a ski touring trail will add to the diversity of recreational opportunities in the area and should have a beneficial impact on the economy. This should result from more diverse and increased tourist-travel expenditures.

#### Impacts on Land Use

Upgrading of the trail for ski touring will not change the land use of the area.

#### Impact on Management of the Forest

Normal forest management activities will only be slightly affected by the development and maintenance of this trail. The area and district foresters along with the regional trails coordinator will be delegated further responsibility and jurisdiction by this action. This, however, cannot be considered an adverse impact.

## References

### Facilities In Economic Region III

1. Minnesota State Comprehensive Outdoor Recreation Plan - Minnesota DNR - Bureau of Environmental Planning and Protection, 1974.

### Climate

2. Climate of Minnesota Part III. "Temperature and its Application"; Donald G. Baker and Joseph H. Strub, Jr., University of Minnesota Agriculture Experiment Station, 1965.
3. "Minnesota Soil Atlas - Duluth Sheet", University of Minnesota Agriculture Experiment Station, 1969.

### Topography

4. "Minnesota Soil Atlas - Duluth Sheet", University of Minnesota Agriculture Experiment Station, 1969.

### Vegetative Cover, Wildlife Timber Resource, and Management Program

5. Aitkin District Management Plan - Minnesota DNR - Division of Forestry, 1970.

### Soils

6. "Minnesota Soil Atlas - Duluth Sheet", University of Minnesota Agriculture Experiment Station, 1969.
7. "Soils of Minnesota", H.F. Arneman, University of Minnesota, Agriculture Experiment Station, June, 1963.

### Development Specifications

8. "The Ski Touring Trail Planner", Timothy B. Knopp and Jack P. Maloney, 1972.
9. "Trail Construction Guidelines", Ontario Ministry of Natural Resources, 1976.

### Population

10. SPA/CURA Wall Map Series.
11. Population Projections 1970-2000, State Demographer, State Planning Agency.

### Socio Economic

12. Minnesota Socio-Economic Characteristics, State Planning Agency.
13. Minnesota Research Bulletin #06, Department of Economic Development.

### Land Use

14. Pocket Data Book, 1975, State Planning Agency.

## Draft Plan Review - Public Hearing

A public information meeting was held by the Department of Natural Resources on August 7, 1978 at the Wealthwood Town Hall. Ten citizens attended the meeting.

Some citizens were in favor of the project while others were more reluctant to support the Wealthwood Ski-Touring-Hiking Trail.

The main topic discussed at the meeting was that the department was "condemning" a snowmobile trail in favor of a ski touring-hiking trail. Representatives from the local snowmobile clubs were concerned that they were losing the only permanent snowmobile trail mileage in the area. Most trails in this area have been developed under the grant-in-aid program and therefore are not permanent. The snowmobilers were not opposed to a ski touring trail but did not want to lose this permanent mileage. Some felt that the trail would be a good addition to the area.

After a long discussion concerning the ski touring-hiking trail, a reasonable compromise was reached. It was decided, and the snowmobile club representatives agreed, that the area would be converted to a ski touring trail for the next five years. During this time, use and support of the trail will be evaluated. If the trail does not get significant use by skiers, the trail will be converted back to a snowmobiling trail.

Use will be evaluated by the number of requests for maps of the trail, the number of cars in the parking lot, a trail registration system, and possibly a post card survey distributed from a box at the trailhead. After five years another public meeting will be held in the area to discuss this issue. This meeting could be held in conjunction with the overall forest management plan meeting if times coincide. If use of the trail is not significant or there is no public support at the meeting to continue ski touring use, the trail will be converted back to snowmobile use.

The DNR feels that this is a workable compromise and that re-evaluation of this project is necessary to maintain good working relations with the local citizens. Since planning is an on-going process, all projects should be re-evaluated periodically to assess their ability to serve the public.