Draft

Winter Use Plan
Crater Lake
National Park • Oregon

A FEW WORDS FROM THE SUPERINTENDENT

We are pleased to present the draft Crater Lake National Park Winter Use Plan and Environmental Assessment for public review and comment. This plan is the result of a careful analysis of park resources and past, existing and anticipated winter use in the park and the surrounding region. Four potential winter use scenarios were developed as a basis for gathering public comment. The National Park Service conducted a series of four public meetings in mid-January to describe the planning process and solicit public input. In addition to the verbal comments received, a total of 98 written comments were received. While diverse views were expected and presented, the preferred alternative of the draft plan is consistent with a majority of the comments received.

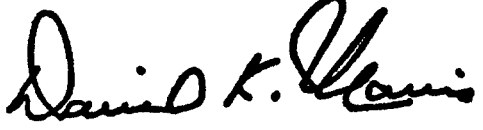
A second series of public meetings is scheduled May 9 through 13 during which the planning team will describe and respond to questions about the four winter use alternatives considered and the selected strategy. Alternatives under consideration for the Development Concept Plan, a separate but related planning document, will also be presented at the same public meetings. The Development Concept Plan will be the subject of a newsletter to be issued later this month. Together, these two plans will set the future directions for winter use policies and an appropriate, long-term, development program.

The schedule of the public meetings is as follows:

Bend, Oregon	Room 154, Boyle Education Center Central Oregon Community College	7:00pm	May 9
Klamath Falls	Main Exhibit Building, Room B Klamath County Fairgrounds	7:00pm	May 10
Medford	Auditorium Jackson County Courthouse	7:00pm	May 11
Roseburg	Room 216, Board Room Courthouse, Church Annex 1134 SE Douglas	7:00pm	May 12
Portland	Bonneville Power Administration Lloyd Center, Suite 2032 3rd Level SW side	3:00pm	May 13

Comments on the draft plan are encouraged and will be accepted until May 31, 1994. Please send written comments to David K. Morris, Superintendent, PO Box 7, Crater Lake National Park, Crater Lake, Oregon 97604. Following an analysis of verbal and written comments, a copy of the final Crater Lake National Park Winter Use Plan and record of decision will be distributed to those who request a copy.

Your interest in and comments concerning the future of winter use in Crater Lake National Park have been very useful in the preparation of this draft Winter Use Plan. Thank you.



David K. Morris
Superintendent

Draft
April 1994

Winter Use Plan
Crater Lake
National Park • Oregon

United States Department of the Interior • National Park Service • Denver Service Center

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INTRODUCTION

The National Park Service (NPS) has prepared a winter use plan that will be used as a tool to guide the growth of winter recreation use in Crater Lake National Park. Winter visitation could increase by 1 to 3% annually in response to regional and statewide participation in winter recreation activities. The winter use plan addresses four active winter recreation activities: snow machine use (snowmobiles and snowcoaches), cross-country skiing, snowshoeing, and overnight camping. The intent of the plan is to preserve the quiet and solitude of the park's backcountry areas by encouraging low-impact modes of travel and overnight camping while providing all user groups access to the park and Crater Lake during the winter season. The winter use plan was developed from a series of four winter use alternatives and is consistent with existing NPS policy and public opinion expressed during the public involvement process.

ALTERNATIVES

Four alternative winter use plan scenarios were evaluated during the planning process. With one exception, the winter use plan is based on Alternative 1, which supports maintaining existing winter use in the park. Under Alternative 1, snow machine access to Crater Lake National Park would continue along the north entrance road. The existing ungroomed cross-country ski trail network would be maintained. Guided interpretive snowshoe walks would continue from the Rim Village activity center. Overnight frontcountry camping would continue at Rim Village. Backcountry camping would continue under the existing permit system.

Under Alternative 2, the use of mechanized snow machines within the park would be prohibited. The existing ungroomed cross-country ski network would continue to be maintained. Snowshoe walks would continue to be offered from Rim Village. Frontcountry camping would continue in a designated area at Rim Village. Backcountry use would be restricted to day use. No overnight backcountry use would be permitted.

Under Alternative 3, the use of snow machines within the park would be limited to the north entrance road. The existing ungroomed ski trail network would continue to be maintained. However, this alternative includes an option to develop a groomed trail network in Mazama Village. Snowshoe walks would continue to be offered at Rim Village; however, if year-round facilities were to be developed in Mazama Village, the NPS would likely provide guided interpretive snowshoe walks in this area as well. Frontcountry camping

would be prohibited in Rim Village; however, facilities would be provided in Mazama Village if year-round facilities were developed. Backcountry camping would continue under the existing permit system.

Under Alternative 4, the use of snow machines would continue along the north entrance road; however, snowmobile access would also be permitted along the Pinnacles road from the former east entrance to the Phantom Ship overlook at Kerr Notch. The cross-country ski network would continue to be maintained; however, the NPS would explore development of groomed trails along portions of Rim Drive. Snowshoe walks and frontcountry camping would be the same as in Alternative 3. Backcountry camping would continue under the existing permit system; however, the NPS would explore development of a hut-to-hut system within the park.

WINTER USE PLAN

Based on park staff and consultant analysis and public comment regarding the alternative winter use scenarios, the winter use plan is based on Alternative 1. Park staff and the public seem most satisfied with maintaining existing types and levels of winter use within Crater Lake National Park. Snow machine access will continue along the north entrance road from Highway 138 to North Junction (see Figure 3-1 in Chapter 3). The existing ungroomed cross-country ski network (see Figure 3-2 in Chapter 3) will be maintained. Guided interpretive snowshoe walks will continue to be offered from the Rim Village activity center. Backcountry camping will continue based on the existing permit system. No groomed trail or hut-to-hut system will be developed. Safety concerns have prompted park staff to prohibit overnight frontcountry camping in the Rim Village area. All overnight frontcountry campers will be referred to year-round overnight facilities outside the park.

The concept of developing a 40-unit, year-round lodge in the Mazama Village area has been approved by the NPS. However, under the preferred alternative, winter use activities will not be encouraged in Mazama Village; only existing levels and types of use, with the exception of frontcountry camping, will be maintained. Although winter use activities in Mazama Village are not considered under the preferred alternative, the issue of year-round lodging will be reexamined in 3 to 5 years.

ENVIRONMENTAL CONSEQUENCES

There is no evidence indicating that existing winter use activities adversely affect the environment. Therefore, because the winter use plan will not change the types of activities permitted in the park or the location of existing activities, plan implementation is not anticipated to cause significant adverse environmental impacts.

The least potential for environmental impact would occur under Alternative 2. Reduced winter use would eliminate the potential for petroleum products to enter surface water resources. Noise impacts on wildlife caused by snowmobiles and overnight backcountry use would be reduced. However, reduced winter use would adversely affect recreation opportunities within the park.

Under Alternative 3, noise levels from the use of mechanized trail grooming equipment in Mazama Village would increase, possibly affecting wildlife. Increased noise levels would affect the backcountry wilderness experience in this area. Recreational opportunities would increase with greater winter use in the Mazama Village area. Other environmental impacts would likely be as described for the winter use plan.

Under Alternative 4, increased snowmobile access along the Pinnacles road would increase noise levels in this area, affecting the quiet and solitude of the backcountry experience. In addition, snowmobile exhaust could affect cross-country skiers traveling in the area. Under this alternative, there would be an increase in the likelihood that petroleum-based exhaust emissions could enter Wheeler Creek or other surface water resources. Recreation opportunities for snowmobilers would increase.

No significant cumulative impacts associated with implementation of this plan are anticipated. Impacts associated with development in the Mazama Village area will be addressed in the environmental impact statement being prepared for the Development Concept Plan.

Chapter 1

Introduction

Chapter 1. Introduction

Crater Lake National Park is located approximately 70 miles northeast of Medford, Oregon, along the crest of the Cascade mountain range (see Figure 1-1). Formed after the volcanic eruption of Mount Mazama approximately 7,700 years ago, Crater Lake, with a depth of 1,932 feet, is the deepest lake in the United States and the seventh deepest lake in the world. Crater Lake National Park encompasses approximately 188,000 acres and was established in 1902 as the United States' sixth national park. Figure 1-2 provides a detailed park map.

Historically, winter activities have been managed through established National Park Service (NPS) policy and guidelines rather than long-term recreational management specific to Crater Lake National Park. It has become apparent that winter activities are an integral part of the visitor experience in Crater Lake National Park and that more specific management and policy direction is needed to guide the growth of active winter recreation within the park.

The number of winter visits to Crater Lake National Park has increased over the past 5 years by an annual average of 3.5%. People visiting Crater Lake during the winter do so for various reasons. Foremost among winter visitor activities is passive viewing of the lake. This includes photography, relaxation, and contemplation of the winter scenery. This will likely remain the primary winter recreation activity in the park. However, for a growing number of visitors, Crater Lake National Park provides a unique and pristine location to enjoy a variety of active winter recreation pursuits. Typically, whether on cross-country skis, snowshoes, or a snowmobile, the winter visitor participating in active recreation is using a means of travel other than the automobile to enjoy Crater Lake National Park.

BACKGROUND

Stimulated by the need to determine the future of the historic Crater Lake Lodge and Rim Village, the NPS underwent an intense planning effort during the late 1980s. The 1988 Development Concept Plan (DCP) (U.S. Department of the Interior 1988), resulted from a series of public planning efforts which addressed the future character of the Rim Village area of the park. Public comments were solicited at three separate points in the planning process. The DCP recommended rehabilitation of the lodge and replacement of the existing gift store and cafeteria with a new year-round activity center/hotel in Rim Village. Following the planning process, the DCP was amended to include the development of an off-rim parking facility and the removal of all parking in Rim Village.

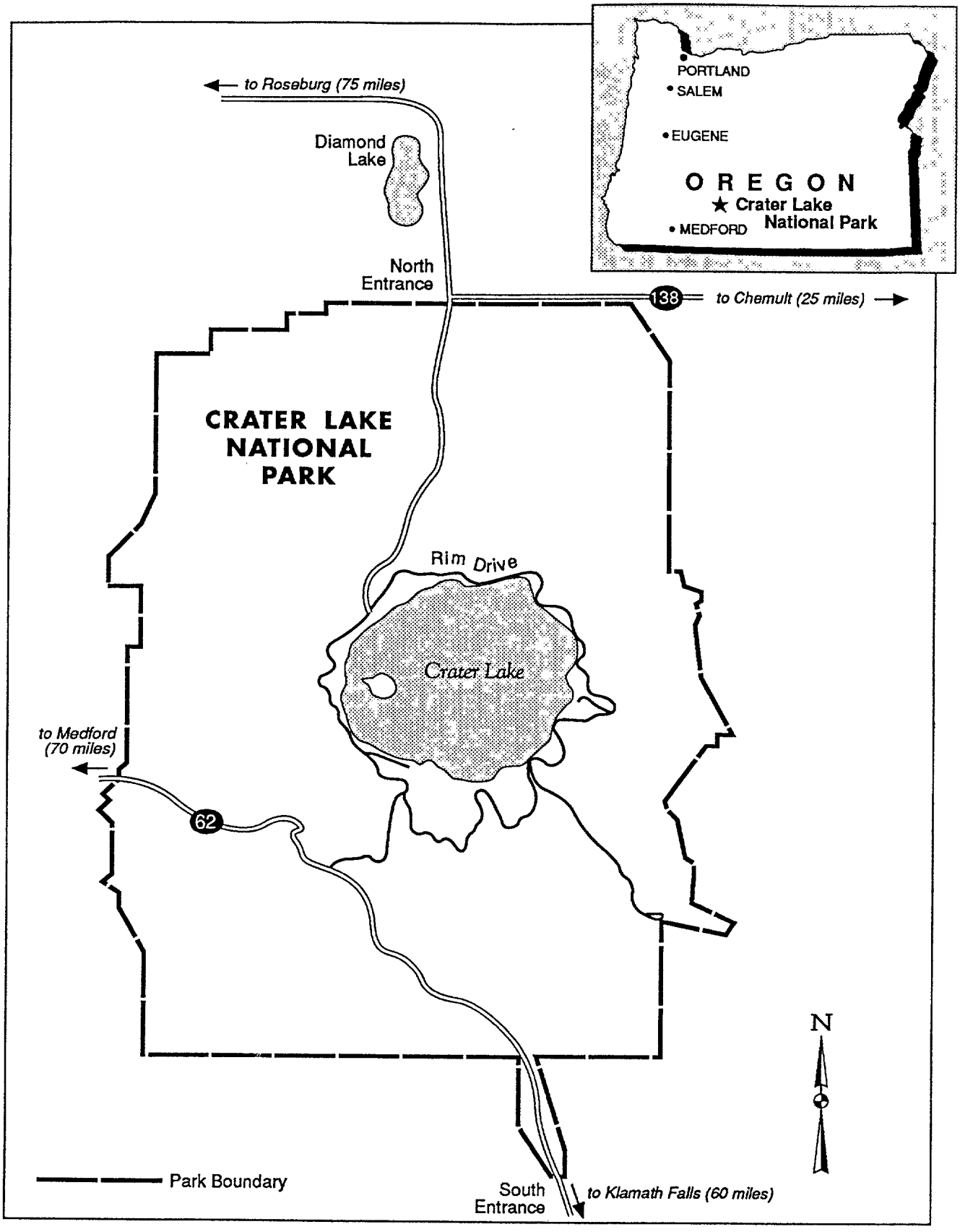


Figure 1-1. Crater Lake National Park Regional Map

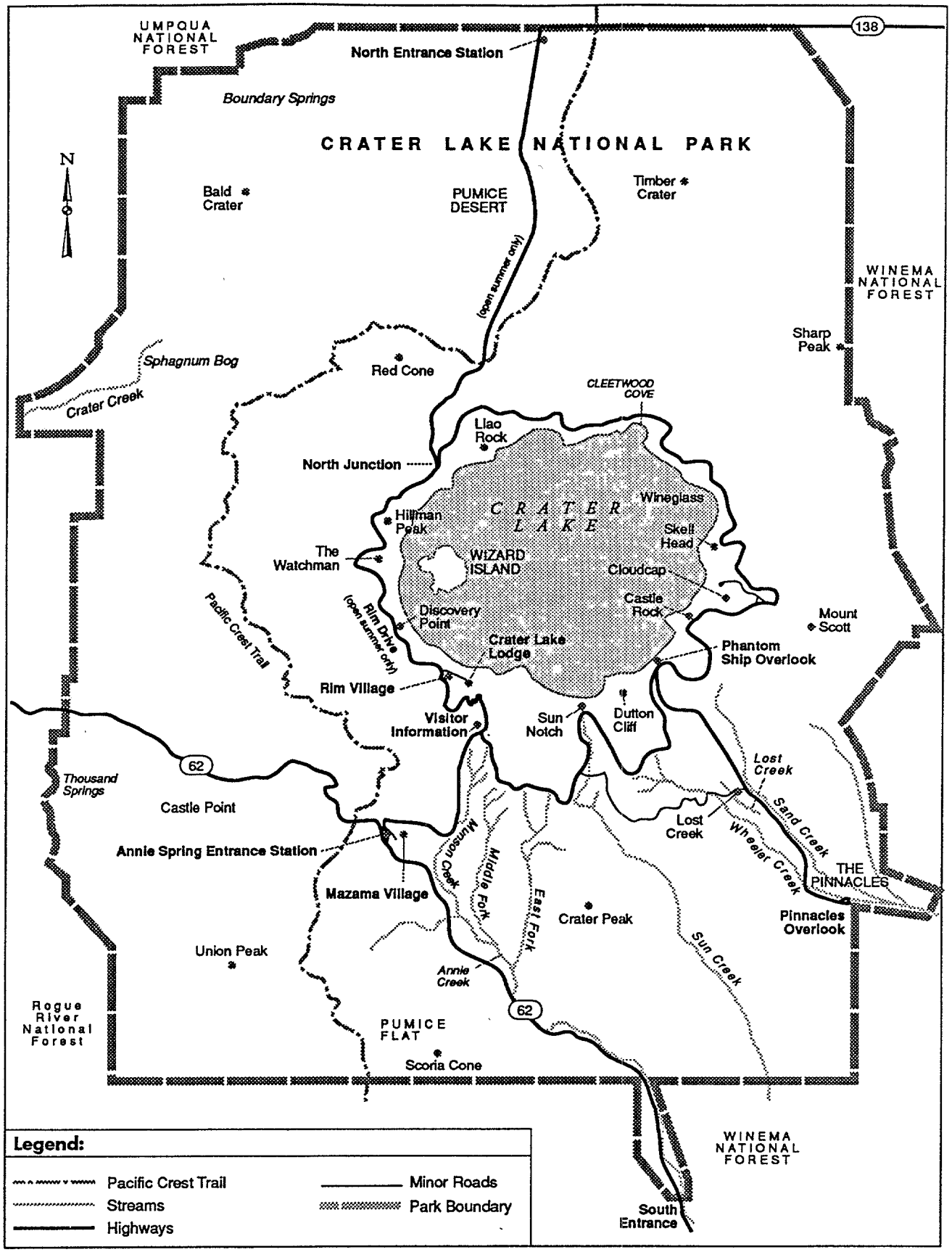


Figure 1-2. Crater Lake National Park Vicinity Map

In October 1992, the House-Senate Appropriations Committee expressed concern over the rising cost and scope of development for the prospective new activity center and hotel in Rim Village. Subsequently, year-round lodging in Rim Village was removed from the DCP by the NPS due to concerns about the cost and appropriateness of year-round lodging on the rim. Additionally, the need to formulate a long-term strategy to address winter use became evident. This need was formalized in a request from the House-Senate Appropriations Committee in September 1992 to prepare a winter use plan for the park. The NPS issued a March 1993 briefing report that addressed numerous development issues and committed the NPS to preparing a winter use plan (U.S. Department of the Interior 1993).

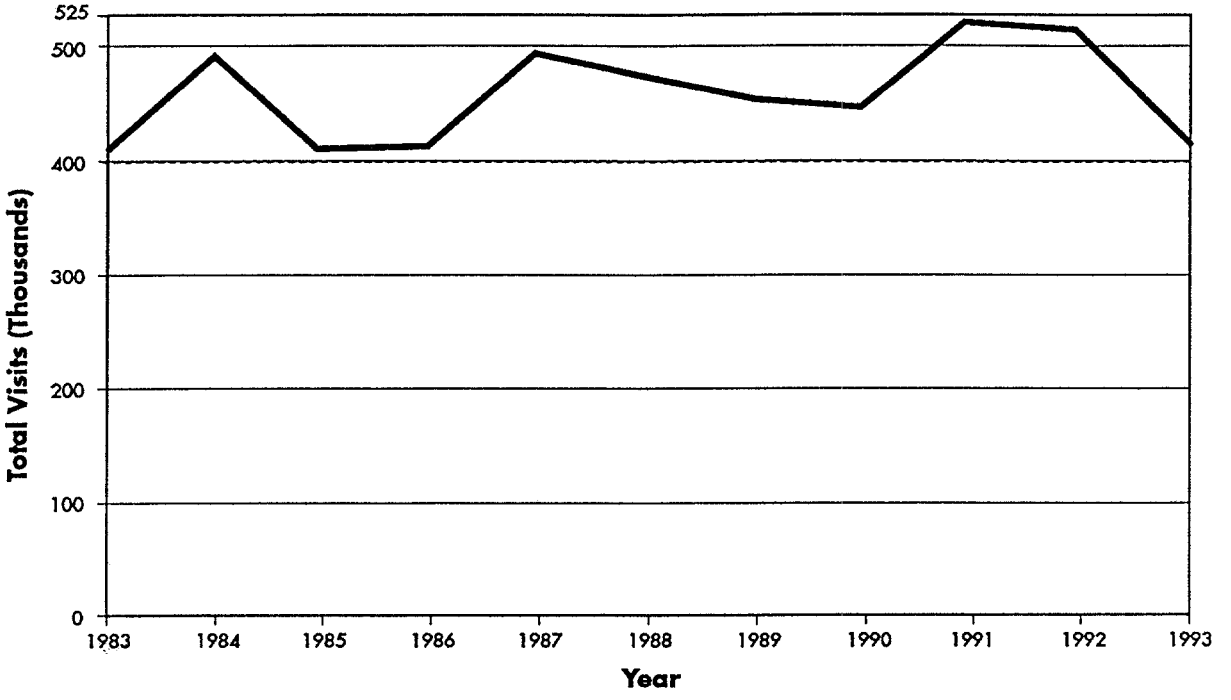
This winter use plan will serve as a tool to guide existing and future winter use within the park by defining the types and levels of winter recreation activities appropriate for Crater Lake National Park and the locations at which these activities should occur. The types and locations of winter activities will determine whether development of concessioner support services, such as year-round lodging, should be considered. The winter use plan will cover elements of the DCP now being prepared for Munson Valley, Mazama Village, and the south entrance area of the park.

CRATER LAKE NATIONAL PARK VISITATION

The data in this analysis provide a general overview of past park visitation and are used to generate conservative visitation estimates. Because data collection is sometimes affected by weather and snow conditions on park roads, the data should be considered as one indicator of potential year-round and winter visitation and must be viewed in context with statewide and regional winter recreation projections.

Annual Visitation

The number of annual recreation visits to Crater Lake National Park fluctuated during the period from 1983 through 1993 (see Figure 1-3). Figure 1-3 indicates that visitation has fluctuated annually between a high of 525,441 in 1991 to a low of 419,914 in 1993. Table 1-1 shows that the total number of annual visitors to Crater Lake National Park remained relatively stable during the 11-year period from 1983 through 1993, decreasing by an average of .2% annually. Visitation declined by an average of 1.6% annually during the 5-year period between 1989 and 1993.



Source: U.S. Department of the Interior 1994a.

Figure 1-3. Crater Lake National Park Annual Visits, 1983-1993

Table 1-1. Recreation Visitors to Crater Lake National Park

Year	Annual Visits	Winter Visits[a]	Summer Visits[b]
1983	429,586	92,279	337,307
1984	499,945	160,375	339,570
1985	427,927	91,272	336,655
1986	427,716	98,233	329,483
1987	492,581	129,888	362,693
1988	468,994	121,264	347,730
1989	454,737	107,353	347,384
1990	454,253	109,156	345,097
1991	525,441	136,058	389,383
1992	511,500	176,288	335,212
1993	419,914	127,286	292,628
5-year AAGR[c] (1989-1993)	-1.6%	3.5%	-3.4%
11-year AAGR[c] (1983-1993)	-0.2%	3.0%	-1.3%

[a] Winter recreation visits are defined as those occuring from January through May and from October through December.

[b] Summer visits are defined as those occuring from June through September.

[c] AAGR = Average annual growth rate.

Source: U.S. Department of the Interior 1994a.

Winter and Summer Visitation

Figure 1-4 shows the number of winter recreation visits from 1983 through the 1993 winter seasons. As shown, winter visitation has ranged from a low of 91,272 during 1985 to a high of 176,288 during 1992. Park staff attribute the 1992 figure to low snow levels which allowed summer visitors to access the park earlier in the season. Table 1-1 shows that the number of winter recreation visits increased by an annual average of 3.5% between 1989 and 1993 and by 3.0% between 1983 and 1993.

The number of summer recreation visitors declined by an annual average of 3.4% from 1989 to 1993 and by 1.3% between 1983 and 1993.

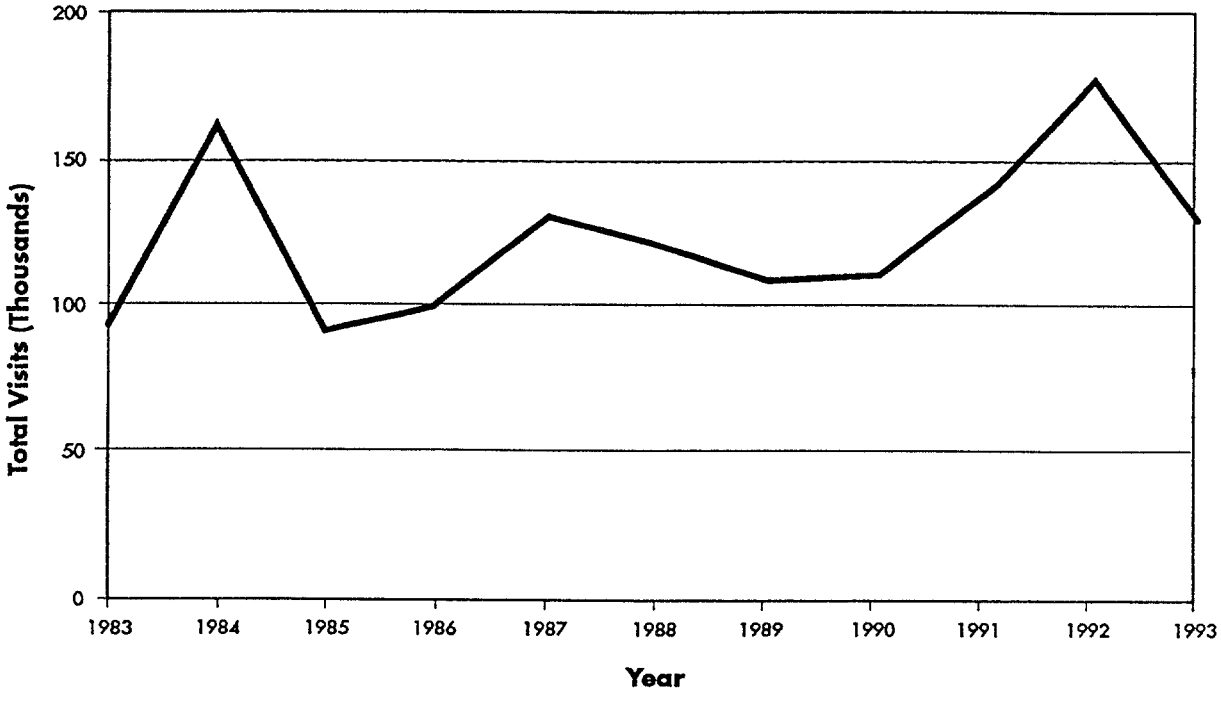
OREGON STATE WINTER RECREATION TRENDS

The primary statewide recreation planning document is the 1988-1993 Oregon State Comprehensive Outdoor Recreation Plan (SCORP). Winter activities addressed in the SCORP include cross-country skiing, snowmobiling, and snow play. The most recent version of the SCORP shows that in 1987 approximately 20% of all Oregon households participated in some form of winter recreation. The plan estimates that demand for winter recreation will increase at approximately 2.4% annually, double the rate of Oregon's annual population growth (Oregon State Parks and Recreation Division 1988).

Approximately 9% of all winter recreation in Oregon takes place in the southwest region, which includes Jackson, Josephine, Klamath, and most of Douglas County (Oregon State Parks and Recreation Division 1988). The Oregon State Parks and Recreation Division projected increases in recreation participation throughout the state from 1988 through the year 2000. In the southwest region, it is projected that snowmobile use will increase by approximately 2%, cross-country skiing by 41%, and snow play by 38% (Eixenberger pers. comm.).

CRATER LAKE NATIONAL PARK VISITATION TRENDS

It is reasonable to assume that winter visitation in Crater Lake National Park will increase as regional and statewide participation in winter recreation increases. Figure 1-5 shows winter recreation visits projected to the year 2005. Assuming that park visitation and regional participation trends remain constant, winter visitation could increase by 1 to 3% each season.



Source: U.S. Department of the Interior 1994a

Figure 1-4. Crater Lake National Park Winter Recreation Visits, 1983-1993

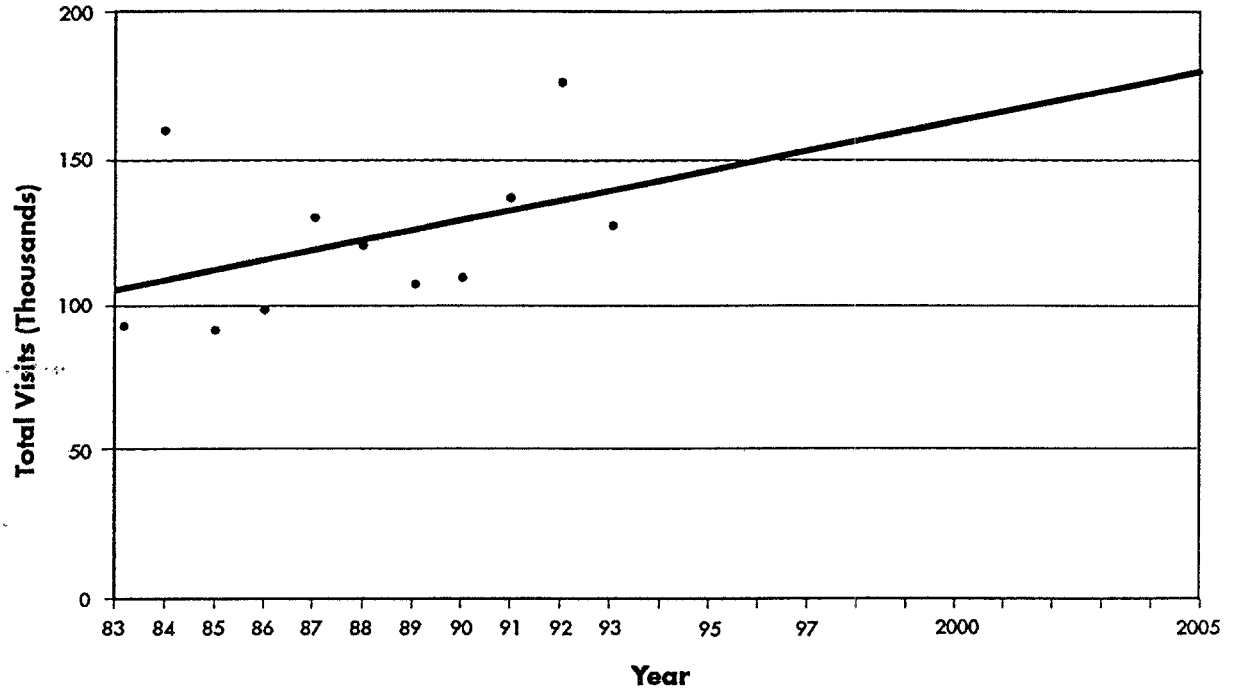


Figure 1-5. Crater Lake National Park Projected Winter Visits, 1983 - 2005

PURPOSE AND NEED FOR WINTER USE PLAN

As mentioned earlier, winter use in Crater Lake National Park has in the past been accommodated or controlled in accordance with existing NPS policy. However, the growth in winter use of Crater Lake National Park has raised concerns regarding impacts on park resources, the need for additional visitor services, and the direction the NPS should take regarding overall winter recreation management. As winter visitation continues to grow, the need for planning the growth is becoming more evident.

Since its inception on August 25, 1916, the National Park Service has managed and regulated national parks, national monuments, and other management units within the national park system for the purpose of protecting and conserving the natural, cultural, and historical resources contained within unit boundaries. However, just as it is the responsibility of the NPS to protect and conserve these resources, it is also their responsibility to impart the significance of these resources to the public. The intent of the ongoing planning process in Crater Lake National Park is to define a balance between resource protection and visitor use. The challenge is to emphasize the park's uniqueness; the guiding principle is to do nothing that will threaten the quality of park resources. Specific policies and management objectives are needed to guide winter use in the park so that these goals are met. The primary purpose of the winter use plan is to identify the types of winter use activities appropriate for Crater Lake National Park and to determine whether existing activities should continue or participation in additional activities be encouraged. The winter use plan is a policy document and does not include site-specific development plans.

PLANNING ISSUES

This section identifies winter recreation planning issues. Issues addressed in the winter use plan include appropriate winter activities, areas where activities should take place and the interaction between conflicting uses, appropriate levels of use, environmental impacts, and the need for additional visitor services.

Winter Activities

Visitors currently participate in a variety of activities within Crater Lake National Park during the winter season. These activities include limited snowmobiling, cross-country skiing, snowshoeing, and winter camping. Winter recreation in Crater Lake National Park has evolved over time with direction from the NPS; however, a long-term strategy and guidelines regarding the types of activities that are appropriate for the park, and locations at which these activities should occur, have never been formally developed. The plan will be used as a tool to manage existing and future recreation activities within the park.

Areas for Winter Use

Winter visitors currently using Crater Lake National Park for recreation do so with some direction from the NPS regarding where activities should take place. Although there are designated recreation areas within the park, some activities can and do occur unrestricted. An issue that was identified during the planning process is the need to formally identify areas suited to various recreation activities. This winter use plan addresses resource protection, visitor enjoyment, visitor safety, and conflicting uses. Conflicting uses are defined as those activities that impair or intrude on the recreational experience of others. The winter use plan formally designates areas most suited to accommodate the various winter activities appropriate for the park.

Levels of Winter Use

People participate in winter recreation activities for various reasons. An important part of the winter experience for many visitors to Crater Lake National Park is the quiet and solitude. Others enjoy the opportunity to participate in snow play activities or to experience the park while riding a snowmobile. The discussion of appropriate levels of use seeks to identify a balance between the number of recreation visitors using a given area within the park, the protection of the winter ecosystem, and maintenance of a quality visitor experience. This balance can be achieved by managing the types of winter use activities that occur within the park in such a way that discourages visitors from congregating in any one area. There are currently regulations and restrictions regarding the use of backcountry areas that address this issue. This issue is further addressed in the winter use plan (see Chapter 4, "Winter Use Plan").

Environmental Impact

The primary responsibility of the NPS is the preservation and protection of park resources. The park should be managed so that it provides public access to recreational and educational opportunities while ensuring that the unique resources that contribute to the national park system remain unimpaired. Although the objective of the NPS is to accommodate winter recreation within the park, the NPS's guiding principle is to ensure that recreation activities do not adversely impact park resources. Impacts on park resources associated with implementation of the winter use plan and alternatives are evaluated in Chapter 5, "Environmental Assessment".

Need for Additional Visitor Services

One objective of the winter use plan is to determine whether additional facilities will be needed to support increased winter use within the park. The potential for development of year-round lodging in Mazama Village will be addressed. The approved General Management Plan allows for the development of an additional 40 rooms in Mazama Village. Construction of these rooms would be funded by the park concessioner and would depend upon the appropriateness and economic viability of the project. The winter use plan defines areas where winter use activities could increase, thereby identifying areas that may be suitable for development of additional visitor services.

Chapter 2

Park Description

Chapter 2. Park Description

WINTER OPERATIONS

The winter season in Crater Lake National Park lasts from October to May. The abundant snowfall attracts many winter recreation enthusiasts. The NPS maintains year-round access to Munson Valley and Rim Village via Highway 62 and the Annie Springs entrance. All other roads, including the 33-mile Rim Drive and the north entrance, are closed throughout the winter season.

Visitor facilities are limited during the winter season. Year-round information and limited interpretive services are provided at the William G. Steel Information Center, located in Munson Valley approximately 3 miles south of Rim Village. Interpretive rangers also staff a visitor information desk and small exhibit area in the Rim Village cafeteria during the winter season. The cafeteria/gift shop, which includes a cross-country ski and snowshoe rental operation, is operated by the park concessioner and is open from 9:30 a.m. to sunset every day except Christmas Day.

NATURAL RESOURCES

Topography

The park topography is defined by Crater Lake, which was formed after the eruption of Mount Mazama approximately 7,700 years ago. The lake covers 21 square miles and is located roughly in the center of the park. The lake's surface elevation is 6,176 feet, and it has a maximum depth of 1,932 feet. The lake is surrounded by a rim of steep-walled cliffs that range from 500 to 2,000 feet in height above the lake surface. Steep to gradual mountain slopes extend downward from the lake rim on all sides. The park's south entrance elevation is 4,400 feet; the elevation at Rim Village is 7,076 feet. The elevation of the park headquarters at Munson Valley is 6,480 feet.

Climate

The Crater Lake area experiences two major seasons: the summer season, which extends from June through September; and the winter season, which extends from October through May. Table 2-1 shows average temperature and precipitation data for 1989 through

Table 2-1. Crater Lake National Park Weather Statistics

Month	5-Year Averages, 1989 through 1993			
	Max. Temp. (°F)	Min. Temp. (°F)	Rainfall (inches)	Snowfall (inches)
January	35	18	8.7	83
February	35	18	6.2	70
March	38	22	8.06	61
April	43	25	7.2	46
May	50	29	4.7	18
June	57	34	2.2	3
July	66	40	1.2	0
August	68	41	1.2	0
September	66	38	1	0
October	54	31	3.9	18
November	41	23	7.8	67
December	35	19	8.8	65

Source: U.S. Department of the Interior 1994b.

1993. As shown, the winter season is typically long and cold, with maximum temperatures generally ranging from the mid 30s to the low 50s. Minimum temperatures range from the high teens to the high 20s. Winter snowfalls are heaviest from November through March; however, snow has been known to fall within the park year-round. Summer maximum temperatures range from the high 50s to the high 60s; minimum temperatures range from the high 20s to the low 40s.

Water Resources

Crater Lake is the dominant water feature and is the park's primary water resource. Crater Lake is known for its deep blue color, which results from the lake's purity: the water contains almost no organic matter and few dissolved materials. The sun's wavelengths of red, yellow, and green are absorbed at a certain depth, but wavelengths at the blue end of the visible light spectrum are reflected and scattered by water molecules, which produces the deep blue color. No streams flow into or out of Crater Lake. The lake's water comes only from snow, rain, and a few springs. Water is lost only through evaporation and seepage. The lake level seldom varies more than 3 feet even in the wettest years (Sierra Club 1985).

There are several creeks located in the western and southern part of Crater Lake National Park. These include Castle, Annie, Sun, Wheeler, and Sand Creeks (see Figure 1-2). Creeks within the park are known for their pristine quality and provide important wildlife habitat.

Air Quality

Crater Lake National Park has near pristine air quality and is classified as a Class I area as defined in the Federal Clean Air Act. Class I areas are those for which maintenance of air quality is critical for protection of the resource. All national parks and national wilderness and recreation areas are Class I areas. One factor that contributes to the clean air in Crater Lake National Park is that there are no significant upwind stationary emission sources. Industrial emissions from the Medford and Klamath Falls areas are carried south/southwest by the prevailing winds. (Lynn pers. comm.)

Soils

The soils of Crater Lake National Park are generally very young, only as old as the eruption of Mount Mazama that either deposited new soil material or rearranged the old. The soil parent material is correlated with the eruption of Mount Mazama and its glacier-carved slopes that were formed during the ice ages. Ash flows associated with the eruption

of Mount Mazama filled Munson and Annie Creek Valleys and continued into the Wood River Valley, the former bed of Upper Klamath Lake. The Munson Valley, Mazama Village, and Panhandle areas are located on this ash flow. A few areas in Munson Valley are composed of remnant glacial moraines and colluvial volcanic rocks and ash. The rim area is composed of andesitic bedrock and glacial and volcanic debris. (Jones & Stokes Associates 1993.)

Vegetation

Except for the pumice desert in the northern part of the park, Crater Lake National Park is almost entirely forested and contains approximately 600 plant species. All plants have recolonized since the eruption of Mount Mazama. The lower elevations are dominated by ponderosa and sugar pine, white fir, and some Douglas-fir. Higher elevations are dominated by Shasta red fir, lodgepole pine, and mountain hemlock. The rim area supports stands of mountain hemlock and Shasta red fir. Whitebark pines are located at higher elevations on the northern rim and on Mount Scott. Most of the trees are evergreens; however, there are some deciduous trees such as bigleaf maple and quaking aspen (Sierra Club 1985). Numerous species of wildflowers also inhabit the forest floor and open meadows.

Wildlife

About 60 species of mammals inhabit Crater Lake National Park. The park's largest animals are black bear and elk. Black-tailed mule deer, marmots, pikas, golden-mantled ground squirrels, and Townsend's chipmunk can frequently be seen within the park. During the winter season, deer and elk migrate to lower elevations to escape the deep snows, while other mammals hibernate. Animals such as the pine marten and snowshoe hare live above the snow, and voles and shrews live and travel in tunnels under the snow. Birds such as Clark's nutcracker, Stellar's and gray jays, blue and ruffled grouse, and mountain chickadee inhabit the park year-round. The summer season brings numerous bird species, including ravens, hawks, golden eagles, and bald eagles. (Sierra Club 1985.)

Bull trout, which inhabit Sun Creek south of the lake, are the only fish that occur naturally in the park. Crater Lake was stocked with trout from 1888 to 1941. A self-perpetuating population of rainbow trout and kokanee salmon, which feed on insects and plankton, currently inhabit the lake. (Sierra Club 1985.)

Threatened and Endangered Species

Three species protected under the Endangered Species Act of 1973 are found in Crater Lake National Park and the surrounding area. Bald eagles occasionally use the aquatic habitat at the lake, and a pair of peregrine falcons nest within the rim approximately 6 miles from Rim Village. The northern spotted owl is also found within the park. Numerous federal candidate species and state-listed species also inhabit the area.

Cultural Resources

There are currently 23 properties in Crater Lake National Park listed on the National Register of Historic Places. Crater Lake Lodge was the first property placed on the register, in 1981. Seven years later, in 1988, 22 other Crater Lake National Park structures were added. Three of the structures, the Sinnott Memorial and two stone comfort stations, are located in Rim Village. One structure, the Watchman lookout and museum, is located west of Rim Village. The remaining 18 constitute a district located at the park headquarters. The old superintendent's residence, located in the park headquarters district, is a National Historic Landmark.

Three cultural landscapes, Rim Village, the park headquarters, and parts of Rim Drive, may be eligible for the National Register. Like the historic structures, these landscapes were designed to fit with the park setting. Components of these landscapes include circulation devices (roads, parking areas, walkways, and trails), planting concepts and materials, structures, small-scale features, and construction technologies such as stonework, planting, and paving.

Crater Lake National Park also has several historic road and trail segments that may be eligible for the National Register. These include a military wagon road (1865-1904), the old Crater Lake Highway (1909-1931), and the first Rim Drive (1913-1931). Trails to destinations such as the Watchman, Garfield Peak, and Discovery Point have historic design features such as rock benches and masonry walls.

A number of archeological sites in the park may also be eligible for listing on the National Register. Although several sites have been recorded, the full extent of these resources is unknown.

Chapter 3

Existing Winter Visitor Use

Chapter 3. Existing Winter Visitor Use

INTRODUCTION

This section describes existing active winter uses within the park and on U.S. Forest Service land surrounding the park. Existing active winter uses in Crater Lake National Park include:

- limited snowmobiling,
- cross-country skiing,
- guided and individual snowshoe walks, and
- winter camping (frontcountry and backcountry).

Most winter visitors drive to the rim to enjoy the view of the lake. However, for a growing number of visitors, overnight stays and other forms of transportation have become part of the experience. The winter use plan specifically addresses snowmobiling, cross-country skiing, snowshoeing, and overnight camping. Winter snow play activities such as sledding and innertubing currently occur within the park but are not sanctioned or monitored uses. Winter snow play is described briefly in this section but is not addressed as a component of the winter use plan.

The following discussion identifies winter recreation areas both within Crater Lake National Park and on U.S. Forest Service land surrounding the park. The purpose of the discussion is to document the types of winter recreation facilities in the Crater Lake area. The availability of winter recreation and support facilities (e.g., lodging, food service, etc.) outside the park will be considered as one factor in determining the types of winter use activities appropriate for the park and where these activities should occur.

Snowmobiles

Under existing NPS policy, the use of mechanized snow machines (snowmobiles and snowcoaches) is allowed only on roads open to traffic during the summer season and closed to traffic during the winter. Currently, snowmobiling is allowed within Crater Lake National Park from the north park entrance to North Junction. This 9-mile route (Route S1), which is closed to vehicle traffic during the winter, leads from Oregon 138 to the northwest rim of Crater Lake (see Figure 3-1). Snowmobiles using this route typically originate at Diamond Lake, approximately 6 miles north of the park boundary. The total number of people using this route each season is unknown; however, over the 1992-93 winter season,

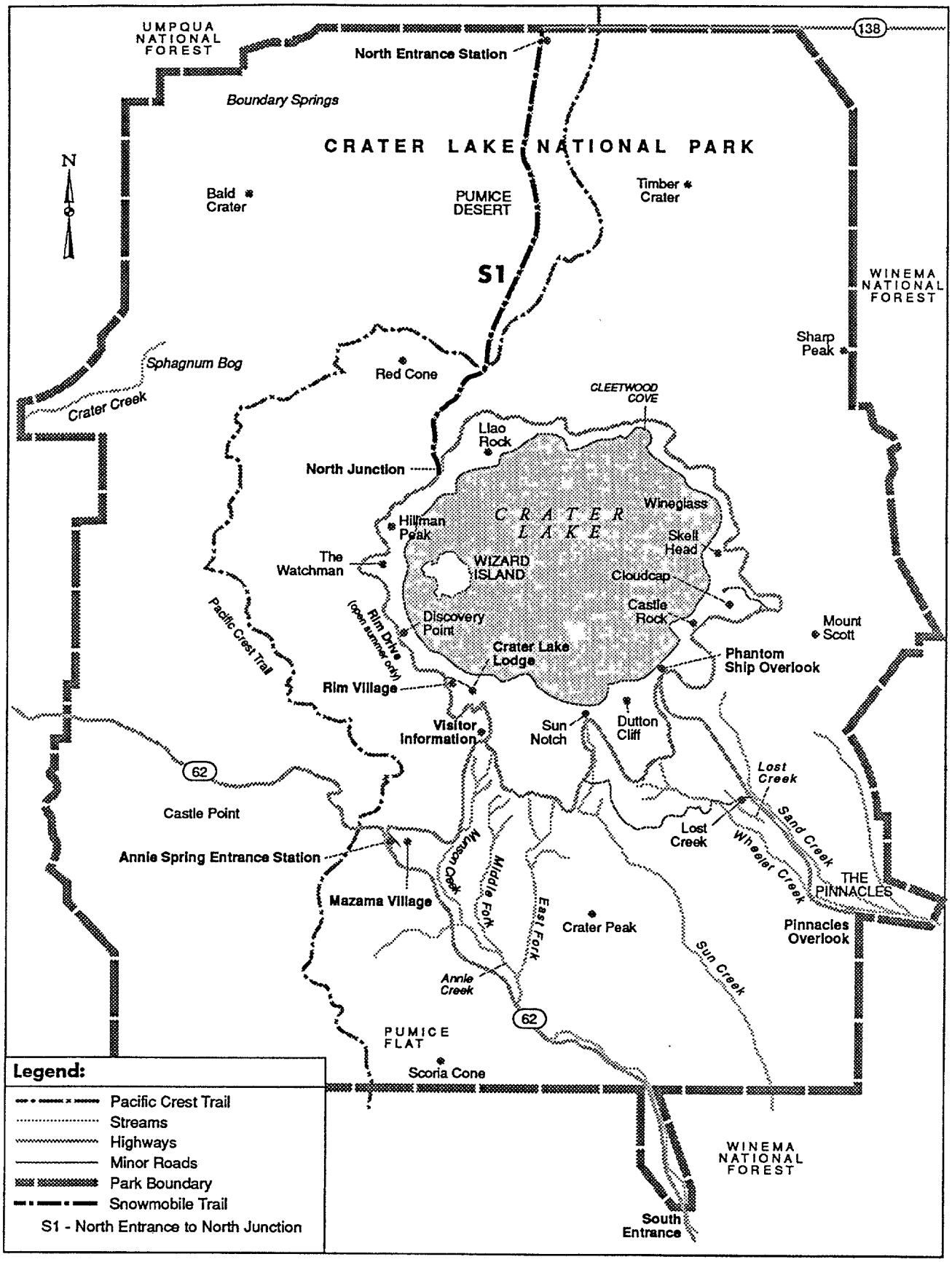


Figure 3-1. Crater Lake National Park Snowmobile Trails

the Diamond Lake Resort staff guided 30 tours, each with approximately 17 snowmobiles, to Crater Lake National Park. Approximately 660 people participated in these tours. (Benson pers. comm.)

Snowcoach tours originating in the Diamond Lake area also use the north entrance route. During the 1992-93 winter season, there were three snowcoach tours, which brought a total of 60 people from Diamond Lake to Crater Lake. Three tours were also scheduled for the 1993-94 winter season. (Wojahn pers. comm.)

All of Crater Lake National Park with the exception of existing roads and developed areas has been proposed as wilderness and will be managed under wilderness guidelines. Recreational snowmobile use is prohibited in wilderness areas. A summary of NPS policy regarding snowmobile use in Crater Lake National Park is provided later in this section.

Crater Lake Area Snowmobile Trails

There are approximately 960 miles of snowmobile trails within the Umpqua, Rogue River, and Winema National Forests. This is a conservative estimate, because the total considers only documented one-way miles and loop trails, not round-trip mileage on all trails. The total also includes the 20-mile one-way trail from Diamond Lake Resort to North Junction in Crater Lake National Park. The following discussion addresses snowmobile trails in the three national forests surrounding the park. Tables detailing the length of each trail are provided in Appendix A of this document.

Umpqua National Forest

Diamond Lake Ranger District. There are approximately 362 one-way miles of trail originating from the Diamond Lake area. In addition, there are approximately 291 miles of loop trails, some of which contain portions of one-way trails. Diamond Lake area snowmobile trails are listed in Table A-1 of Appendix A. The longest loop trail is the 99-mile Crescent Lake Loop. Most trails in this area are located within the Umpqua National Forest Diamond Lake Ranger District. There are currently no recreation use data available from the U.S. Forest Service for snowmobile facilities within the Diamond Lake Ranger District; however, the four snow parks in the area operate at capacity every weekend during winter season. (Graves pers. comm.)

Rogue River National Forest. The Rogue River National Forest is located south and west of Crater Lake National Park. There are approximately 102 miles of snowmobile trails within the Rogue River National Forest. Rogue River area snowmobile trails are listed in Table A-2 of Appendix A. Portions of some trails are listed in Table A-1 of Appendix A.

Two snow parks are located within the Rogue River National Forest near the west boundary of Crater Lake National Park. The Thousand Springs Snow Park is located along Highway 62 approximately 6 miles east of the intersection of Highways 62 and 230. The Farwell Bend Snow Park is located on Highway 62 just south of the intersection. Visitor

counts show that during the 1991-92 season approximately 95% (2,187) of all Thousand Springs Snow Park users were snowmobile recreation users. During the 1992-93 season, approximately 92% (2,935) of all users were snowmobiles recreation users.

Snowmobile use is not allowed at the Farwell Bend Snow Park. The majority of visitors to the Farwell Bend Snow Park participate in snow play activities as the primary form of recreation. The snow park's use data is shown in Table A-3 of Appendix A.

Winema National Forest

Klamath Ranger District. The Winema National Forest borders Crater Lake National Park to the south and west. The Klamath Ranger District borders the park to the south. There are approximately 164 miles of snowmobile trails within the Klamath Ranger District. Table A-4 in Appendix A lists all snowmobile trails in the Klamath Ranger District. During an average winter season, there are approximately 11,000 snowmobile recreation visits; however, 1993-94 seasonal data indicate above-average recreational use (U.S. Forest Service 1994). Table A-5 in Appendix A shows average seasonal visits for snow parks within the Klamath Ranger District. The average number of seasonal visits ranges from a high of 5,200 at the Great Meadow Snow Park to a low of 850 at the Four Mile Lake Road Snow Park.

Chemult Ranger District. Within the Chemult Ranger District, which borders the park to the west, there are approximately 61 miles of snowmobile trails. Table A-4 in Appendix A lists these trails. The longest trail in this district is the Park Boundary/Lake of the Woods trail (44.2 miles), which is typically used to travel from Diamond Lake to Annie Creek or from Lake of the Woods to Diamond Lake. The trail is not heavily used because there are limited enroute facilities. (Parker pers. comm.)

Existing Policy Regarding Snowmobile Use in Crater Lake National Park

The existing policy of allowing snowmobiles only on the north entrance road between Highway 138 (north entrance) and North Junction is the result of an extensive public involvement and decision-making process that took place during 1976. That decision-making process is summarized here and addressed in greater detail later in this plan. A copy of the position statement issued as a result of this process is included as Appendix B.

On February 26, 1976, snowmobile regulations were proposed for Crater Lake National Park and published in the Federal Register. The NPS received 607 responses, of which the majority indicated a preference for no snowmobiling in the park. Other responses favored snowmobiling or an increase in snowmobile access. In August 1976 the regulation that limited snowmobile access to the north entrance road was enacted. Snowmobile use was again addressed in the 1977 General Management Plan, and public comment again supported limiting snowmobile use as defined in the 1976 regulation. A 1980 winter use study considered five alternatives for snowmobile use within the park, including a through route (north to south) and a route up the Pinnacles road from the former east entrance to

Kerr Notch. The estimate included costs for two additional seasonal rangers and two additional snowmobiles. While there was significant support by organized snowmobile clubs for expanded access, 74% of public responses regarding snowmobile use alternatives indicated a preference for limiting snowmobiling to the north entrance road. Steep terrain near the Watchman on West Rim Drive and at Dutton Cliffs along East Rim Drive creates a safety hazard which precludes development of a north-south access route; therefore, only the proposed route from the former east entrance along the Pinnacles road to Kerr Notch was evaluated. The NPS determined that the Pinnacles road would remain closed to snowmobiles for the following reasons:

- safety hazards in the Dutton Cliffs area,
- impacts (noise, odor, etc.) on cross-country skiers and other users,
- impacts on peregrine falcons hunting in the Kerr Notch area,
- conflicts with existing plans and policies, and
- costs to the government.

Cross-Country Skiing

Cross-country skiing is the most popular active winter recreation activity in the park. There are approximately 70 miles of ungroomed marked cross-country ski trails, including the Rim Drive Trail (Route UC1), portions of the Pacific Crest Trail (Route UC2), Lightning Springs Trail (Route UC3), Pumice Flat Trail (Route UC4), Raven Trail (UC5), Dutton Creek Trail (UC6), Hemlock Loop (UC7), Mazama Campground Trail (UC8), and Crater Peak Trail (UC9). These trails are shown in Figure 3-2. Cross-country skiing in the remainder of the park is unrestricted. The NPS uses 25 to 30 volunteers to patrol ski trails. Patrols occur primarily on weekends and holidays. The most popular ski route is Rim Drive, a 33-mile unplowed loop road around the lake. Park staff and ski patrol volunteers conservatively estimate that between 200 and 300 cross-country skiers travel around the rim each winter season. Cross-country ski equipment rental is provided at the Rim Village activity center by the park concessioner.

Crater Lake Area Cross-Country Ski Trails

There are approximately 139 miles of cross-country ski trails in the three national forests surrounding Crater Lake National Park. This total does not include cross-country ski trails located within the park and is a conservative estimate, because it includes both one-way and round-trip miles. Trails are described in the following section. Table A-6 in Appendix A of this document lists each trail and its length.

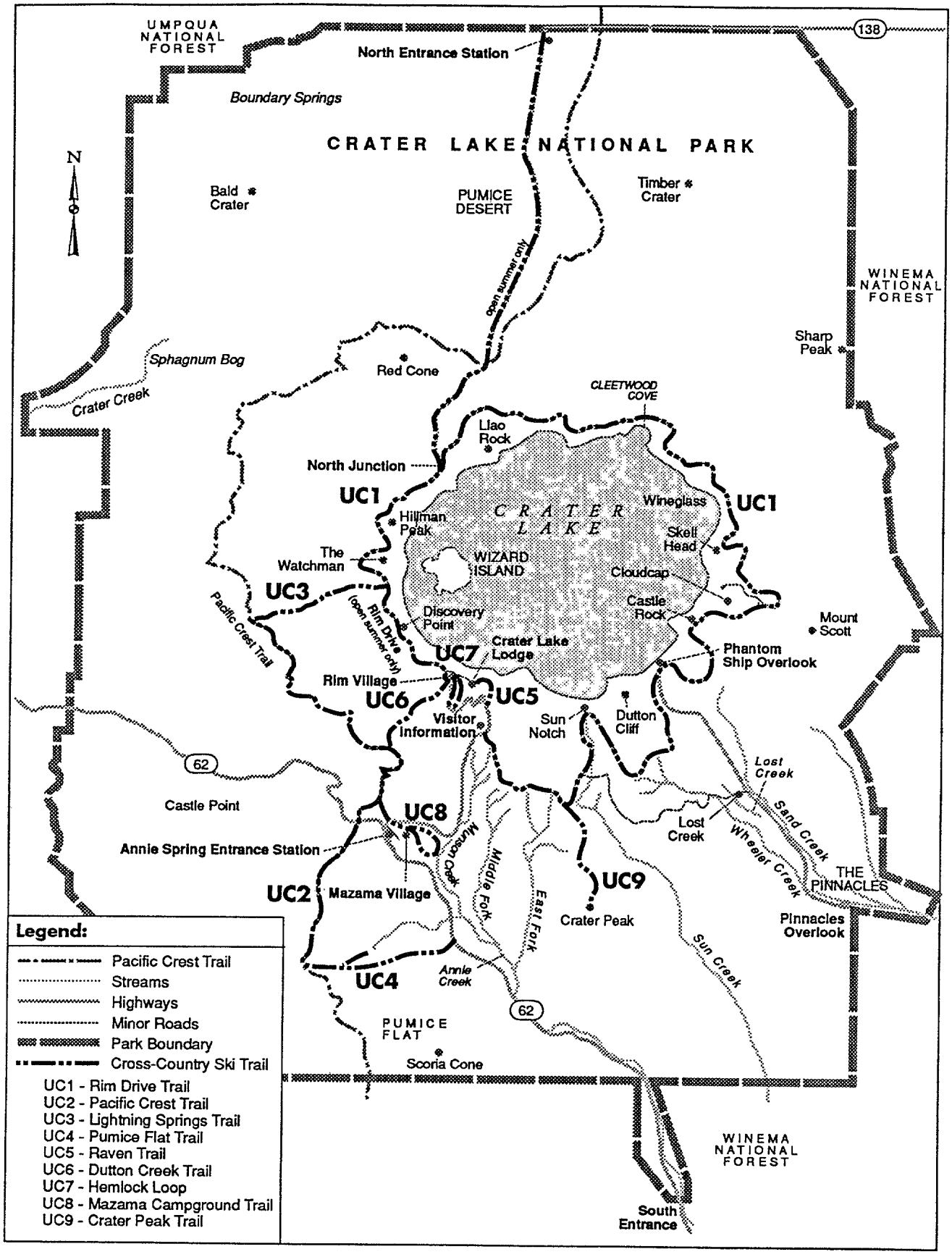


Figure 3-2. Crater Lake National Park Cross-Country Ski Trails

Umpqua National Forest

Diamond Lake Ranger District. There are approximately 54 miles of cross-country ski trails in the Umpqua National Forest's Diamond Lake Ranger District. The longest trail, which is 10.5 miles long, is along a portion of the Pacific Crest Trail. This trail is in a wilderness area and is therefore unmarked.

Rogue River National Forest. There are approximately 45 miles of cross-country ski trails in the Rogue River National Forest. The longest is the 10-mile Union Creek trail, which begins and ends at the Farwell Bend Snow Park previously described. Table A-3 of Appendix A shows that of the 4,480 winter visitors to the Farwell Bend Snow Park during the 1991-92 season approximately 12% (538) were cross-country skiers. Of all winter visitors (6,210) during the 1992-93 season, 18% (1,118) were cross-country skiers. Data show that more cross-country skiers use the Farwell Bend Snow Park than the Thousand Springs Snow Park. This is likely due to the fact that snowmobile use is not allowed at Farwell Bend Snow Park.

Winema National Forest

Klamath Ranger District. There are approximately 40 miles of cross-country ski trails in the Klamath Ranger District. The longest is the Billie Creek Loop, which is approximately 6.6 miles long; the shortest is the South Rye Trail, which is less than 1 mile long. Recreation data show that an average of 7,100 people participate in cross-country skiing seasonally within the Klamath Ranger District. However, 1993-94 data reflect an above-average number of cross-country ski visits.

Chemult Ranger District. The Chemult Ranger District is located adjacent to portions of the eastern border of Crater Lake National Park. Currently there are no cross-country ski trails within the Chemult Ranger District near the park boundary (Parker pers. comm.).

Snowshoe Walks

Snowshoeing is an individual or guided interpretive activity in the park. Guided snowshoe walks are offered by the NPS twice daily on weekends, holidays, and during Christmas and spring breaks. Group walks are offered on weekdays by reservation. The primary purpose for guided snowshoe walks is to provide the winter visitor with a unique opportunity to view park resources from a perspective different than that experienced during the summer season. Guided walks are approximately 0.5 mile in length and originate at Rim Village. Snowshoes can be rented at the activity center. Snowshoeing is unrestricted throughout the park.

During the 1992-93 winter season, guided interpretive snowshoe walks were offered from Thanksgiving Day to March 28, 1993. On occasion, scheduled walks were canceled

because the road to Rim Village was closed as a result of heavy snows or because no one signed up for the tour. (Taylor pers. comm.) Table 3-1 shows the number of tours given per month and the number of people in attendance. As shown, 58 tours were given during the 1992-93 season. A total of 312 visitors participated.

Snow Play

Snow play includes sledding, innertubing, tobogganing, and various other snow play activities. There are no designated or monitored snow play areas in the park; however, these activities do occur near Rim Village, in meadows or clearings, and along the roadside. Park policy does not restrict these activities; however, snow play is not an officially sanctioned activity in the park. The park does not support development of designated snow play areas because snow play is not an activity that provides the enhances the opportunity to experience the resources of Crater Lake National Park during the winter season. There are several snow parks, monitored and maintained by the U.S. Forest Service, located near the park.

Overnight Camping - Frontcountry

Frontcountry areas, by NPS definition, include developed areas of the park such as designated camping areas, Rim Village, Munson Valley, Mazama Village, and all other infrastructure. Currently, winter overnight recreational vehicle and car camping is allowed in Rim Village within a small designated area; however, no facilities are provided. Current NPS policy neither prohibits nor supports overnight camping in this area. The park staff does not keep records regarding visitor numbers; however, park staff estimates that the number of overnight visitor parties generally ranges from zero to three per night. Some concern exists regarding the safety of overnight camping in Rim Village, because snow storms can trap vehicles or leave roads impassable. No frontcountry camping facilities (i.e., developed campgrounds and sanitary facilities) are currently provided, because of high snow levels.

Overnight Camping - Backcountry

By NPS definition, backcountry areas are those areas located away from plowed roadways and developed areas such as Rim Village and Munson Valley. These areas are not maintained but are patrolled by volunteers and park personnel. Backcountry areas are generally used in winter by visitors seeking solitude. Use of these areas is permitted throughout the park with little restriction; however, all visitors must obtain a permit for overnight stays.

Table 3-1. Guided Snowshoe Walks in Crater Lake National Park
1992-93 Winter Season

Month	Tour Number	Total Participants
November 1992	5	23
December 1992	13	44
January 1993	12	105
February 1993	8	29
March 1993	20	111
Total	58	312

Source: U.S. Department of the Interior 1994c.

Table 3-2 summarizes annual backcountry permit data from 1988 through 1993. The average annual growth rate shows a 1.2% increase in winter backcountry use over the last 6 years; however, the total number of visitor nights has decreased by 0.3% annually. NPS data show that backcountry visitors stay an average of 1.6 nights in the park and have an average party size of 3.3 people.

Existing Winter Concessioner Facilities

The park concessioner currently operates the Rim Village cafeteria/gift shop during the winter season. The facility is open from 9:30 a.m. to sunset daily except for Christmas Day. The concessioner facilities include a cafeteria serving breakfast, lunch, and dinner; snowshoe and cross-country ski rentals; and a gift store. It is estimated that 750 people rent snowshoe and cross-country ski packages each season, generating approximately $6,000.00 in revenue. Winter operations in Rim Village currently employ 16 people and generate between 3% and 6% of the concessioner's annual revenue. (Gordon pers. comm.)

Table 3-2. Winter and Summer Overnight Backcountry Use in Crater Lake National Park

Year	Totals			
	Winter Campers	Summer Campers	Winter Visitor Nights	Summer Visitor Nights
1988	392	445	760	664
1989	279	456	424	717
1990	291	321	442	519
1991	413	576	813	838
1992	312	763	566	1077
1993	421	626	746	956
6-year AAGR	1.2%	5.9%	-0.3%	6.3%

AAGR = Average annual growth rate

Source: U.S. Department of the Interior 1994d.

Chapter 4

Winter Use Plan

Chapter 4. Winter Use Plan

WINTER USE PLANNING PROCESS

Development of the winter use plan began with a series of park staff and consultant planning meetings held at Crater Lake National Park headquarters in early November 1993. The purpose of these meetings was to discuss the overall scope of the winter use plan, identify issues to be addressed in the plan, and develop a series of draft alternative winter use scenarios that would provide a framework for public discussion regarding the future of winter use in the park. The winter use alternatives described varying levels of use and locations for the four active winter uses described earlier in this document.

Public meetings were held in Klamath Falls, Medford, Roseburg, and Portland, Oregon, during the week of January 10, 1994. These meetings provided the public with an opportunity to discuss and comment on the four draft alternative winter use scenarios. A Public Meeting Workbook discussing the planning process was distributed to those in attendance and is provided for reference as Appendix C of this document. Approximately 190 people attended the four meetings. More than 135 written comment letters were received.

Consistent with the goals and strategies outlined in other park planning documents and public comment regarding the alternative winter use scenarios, the NPS developed eight winter use management objectives. It is the NPS's intent that the following management objectives be the guiding policies for winter use in the park:

- **Management Objective 1** - Protect the natural, geological, and cultural features of Crater Lake National Park from impacts associated with winter visitation and use.

- **Management Objective 2** - Provide essential information and safety programs for all winter visitors.

- **Management Objective 3** - Provide high-quality interpretive and educational programs relevant to the winter environment of Crater Lake National Park.

- **Management Objective 4** - Preserve the opportunity for a quiet, solitary experience for winter users in the park's backcountry, encouraging nonmotorized, low-impact modes of travel and overnight camping. During winter, treat the unplowed Rim Drive as backcountry wilderness.

- **Management Objective 5** - Provide a frontcountry, handicapped-accessible viewpoint of Crater Lake for all visitors during the winter.

- **Management Objective 6** - Provide access to a Crater Lake viewpoint for mechanized snow machines.

- **Management Objective 7** - Provide adequate, but minimal, commercial visitor support services and facilities to accommodate the modest levels of use expected in the foreseeable future. Encourage private development of new support facilities outside the park.

- **Management Objective 8** - Provide an adequate level of winter emergency and maintenance service capabilities to support winter operations.

THE PREFERRED WINTER USE PLAN

The winter use plan was developed consistent with management objectives and public opinion regarding winter use in Crater Lake National Park. The preferred alternative, which was selected from the four draft alternatives, addresses levels of use and areas within the park most suitable for snowmobiling, cross-country skiing, snowshoeing, and overnight camping. All existing active winter uses were found appropriate for Crater Lake National Park and will continue based on provisions in this plan.

The plan provides justification for decisions regarding each activity based on consistency with management objectives. Through implementation of the preferred winter use alternative, the NPS seeks to provide all winter visitors with access to the park's primary resource while maintaining quiet and solitude in backcountry wilderness areas.

Snowmobiling

Snowmobile access will continue along the north entrance road from Highway 138 to North Junction. This is consistent with NPS policy regarding snow machine use in Crater Lake National Park (see Appendix B) and Management Objective 6, which seeks to provide access to a Crater Lake viewpoint for mechanized snow machines. No additional snowmobile or snow machine routes will be permitted. Diamond Lake Resort snowmobile and snowcoach tours will continue operating pursuant to provisions a commercial use license. Justification for NPS policy regarding snowmobile use in the park is as follows:

- Avalanche hazards in the Dutton Cliffs area near Kerr Notch prevent safe passage of grooming equipment and snowmobiles along the Pinnacles road and East Rim Drive.

- NPS policy requires that snowmobile use be confined to roadways used by vehicles during the summer season and closed to vehicles during the winter. Snow drifts and steep terrain near Dutton Cliffs and the Watchman preclude safe use of trail grooming machinery and snowmobiles on either West or East Rim Drive.

- The quiet and solitude experienced in the Crater Lake backcountry is considered a resource unique to Crater Lake National Park. Additional snowmobile use in the backcountry areas of the park would compromise the wilderness experience for others visiting backcountry areas.

- Visitors riding snowmobiles currently have access to a Crater Lake viewpoint at North Junction.

- There are approximately 960 miles of existing snowmobile trails in the Winema, Umpqua, and Rogue River National Forests that provide recreational opportunities for snowmobile users. The addition of a 12-mile roundtrip route into the park via the Pinnacles road would increase the overall trail network by less than 1%.

- Public comment favored either maintaining the existing level of use or eliminating the use of mechanized snow machines in the park. This alternative provides park access to all user groups while providing a balance consistent with NPS policy and public opinion.

Cross-Country Skiing

The existing cross-country ski trail system will be maintained and cross-country skiing will continue under the unrestricted day use or overnight backcountry permit system. This element of the winter use plan is consistent with Management Objective 4, which seeks to preserve the opportunity for a quiet, solitary experience for winter users in the park's backcountry by encouraging nonmotorized, low-impact modes of travel and overnight camping. Cross-country skiing is considered an appropriate winter use throughout the park because it is a low-impact form of travel that provides participants access to all wilderness backcountry areas while preserving the quiet and solitude unique to Crater Lake National Park.

Snowshoeing

Snowshoeing will remain an unrestricted use within the park. Guided interpretive snowshoe walks will continue at Rim Village based on visitor demand. If year-round visitor facilities were to be developed in Mazama Village, the NPS would consider offering guided

interpretive snowshoe walks in that area. This element is consistent with Management Objectives 3 and 4, which seek to maintain the quiet and solitude of the park's backcountry and provide high-quality interpretive and educational programs relevant to the winter environment of Crater Lake National Park.

Overnight Camping - Frontcountry

No frontcountry overnight camping will be permitted in the park during the winter season. All overnight campers will be referred to year-round privately owned facilities at lower elevations near the south or west entrance. Frontcountry camping currently occurs in Rim Village and, while it is not prohibited by existing park policy, it is not a sanctioned use. Park staff have determined that unpredictable weather and hazardous road conditions during the winter season often make the rim area unsafe for overnight camping. Development of overnight camping facilities will be reevaluated based on future development activities in the Mazama Village area.

Overnight Camping - Backcountry

Backcountry camping will continue under the existing permit system as described in the Existing Winter Visitor Use section of this document.

Year-Round Lodging

The issue of whether year-round winter lodging will be provided in Crater Lake National Park is dependent on many variables. As discussed, the concept of developing a 40-unit year-round lodge in the Mazama Village area had been previously authorized by the NPS. However, one purpose of the winter use plan is to determine whether winter activities will be encouraged in the Mazama Village area, thereby justifying further consideration of this area for year-round use. Under the preferred alternative, winter use activities will not be encouraged in Mazama Village; only existing levels of use, with the exception of frontcountry camping, will be maintained. Although winter use activities in Mazama Village are not considered under the preferred alternative, the issue of year-round lodging will be reexamined in 3 to 5 years.

Existing NPS policy encourages the private development of new support facilities outside park boundaries to accommodate the demand for visitor services. However, if year-round lodging is developed in Mazama Village, activities such as snowshoe walks and frontcountry camping in Mazama Village would be reevaluated. Consistent with

Management Objective 7, development of the new activity center in Rim Village will provide adequate visitor support services and facilities to accommodate the modest levels of use expected in the foreseeable future.

WINTER USE ALTERNATIVES

The following winter use alternative scenarios were developed as part of the planning process and presented during the public meetings held in January 1994. The alternatives were intended to provide a framework for public discussion regarding the future of winter use in Crater Lake National Park. Each alternative supports varying types and levels of winter use. The purpose of this section is to briefly describe each alternative relative to public opinion and the eight management objectives.

Alternative 2 - Reduced Winter Use

This alternative supports reducing winter use in the park and would place greater emphasis on maintaining and restoring the park's winter quiet and solitude. Alternative use scenarios for each winter activity are as follows:

Snowmobiling

Under this alternative, all mechanized snow machine use would be eliminated from the park. No snowmobile/snowcoach access would be permitted via the north entrance road. This was not preferred, because it would be inconsistent with Management Objective 6, which seeks to provide access to a Crater Lake viewpoint for snowmobiles.

Cross-Country Skiing

Under this alternative, cross-country ski routes would remain unchanged; however, the north entrance road would be made available as a cross-country ski trail. Cross-country skiing opportunities under this alternative are consistent with Management Objective 4, which seeks to maintain quiet and solitude for winter users in the park's backcountry by encouraging nonmotorized, low-impact modes of travel.

Snowshoeing

Under this alternative, snowshoe walks would continue at Rim Village based on funding and demand.

Overnight Camping - Frontcountry

Under this alternative, frontcountry camping in Rim Village would be permitted in the designated area; however, no provisions would be made to accommodate this use. As discussed, overnight camping in Rim Village is considered unsafe and therefore is prohibited under the preferred alternative.

Overnight Camping - Backcountry

Under this alternative, overnight backcountry camping would be prohibited. All backcountry activities would be limited to day use. Prohibiting overnight backcountry camping would be inconsistent with Management Objective 4, which seeks to preserve the opportunity for a quiet, solitary experience for winter users in the park's backcountry by encouraging nonmotorized, low-impact modes of travel and overnight camping. In addition, public comments that addressed this issue supported either maintaining the existing backcountry permit system or developing a hut-to-hut system to enhance the backcountry experience.

Alternative 3 - Expanded Cross-Country Skiing

This alternative places emphasis on expanding cross-country skiing opportunities in the park by developing a groomed trail network in the Mazama Village area. In addition, facilities for overnight frontcountry camping would be provided in Mazama Village, assuming that development in this area occurred.

Snowmobiles

Under this alternative, the existing snowmobile route along the north entrance road would be maintained. No additional snowmobile access would be provided.

Cross-Country Skiing

Under this alternative, the existing ungroomed cross-country ski trail network would be maintained. In addition, a groomed cross-country ski trail system would be developed in Mazama Village. The preferred alternative supports maintaining the existing cross-country trail network; however, no groomed trail system will be developed.

Development and maintenance of a groomed trail system in the park would require the use of mechanized snow machines or grooming equipment and would therefore be inconsistent with Management Objective 4, which seeks to maintain the quiet and solitude of Crater Lake's backcountry areas by encouraging nonmotorized modes of travel. In

addition, although it would provide opportunities for beginning skiers, a groomed trail system would serve primarily as a recreational activity and would not enhance the participants' opportunity to enjoy park resources. For the majority of skiers who provided written response to the draft alternatives, a groomed trail system is not essential for use and enjoyment of Crater Lake National Park and would detract from the park's backcountry wilderness experience. The U.S. Forest Service and Diamond Lake Resort provide groomed cross-country ski trails outside park boundaries.

Snowshoeing

Under this alternative, snowshoe walks would remain as previously discussed under the preferred alternative, with the option for additional guided walks in Mazama Village if this area is developed for winter use.

Overnight Camping - Frontcountry

Under this alternative, as with the preferred alternative, frontcountry camping would be prohibited in Rim Village. Camping facilities would be provided in Mazama Village. Overnight camping in Mazama Village would be reevaluated is this area is developed for winter use.

Overnight Camping - Backcountry

The existing backcountry permit system would be maintained under this alternative. In addition, the NPS would explore the option of developing a hut-to-hut system in the park to enhance the use of backcountry areas. The use of backcountry areas under the existing permit system is consistent with Management Objective 4; however, development of a hut-to-hut system would be inconsistent with NPS policy regarding backcountry use. Public comment does not support development of a hut-to-hut system in the park, because many visitors feel it would detract from the backcountry wilderness experience.

Existing NPS policy regarding winter backcountry use seeks to preserve the solitude of the backcountry experience by restricting size of visitor parties to no more than 8 people, and requires parties to camp beyond visible range of one another. Development of a hut-to-hut system could compromise the backcountry experience by congregating groups of backcountry users near the huts, causing user conflicts and generating sanitation problems. In addition to impacts to the backcountry wilderness experience, the NPS has determined that winter snow levels would make maintenance and management of a hut-to-hut system in Crater Lake National Park impractical.

Alternative 4 - Expanded Cross-Country Skiing and Snowmobiling

Under this alternative, additional snowmobile access would be provided and groomed cross-country ski trails would be developed along portions of Rim Drive. Other activities would remain as described under Alternative 3.

Snowmobiling

Under this alternative, a new snowmobile route would be developed along the Pinnacles road from the former east entrance to the Phantom Ship overlook at Kerr Notch. This element would be inconsistent with Management Objective 4, which seeks to preserve the opportunity for a quiet, solitary experience for winter users in the park's backcountry.

Cross-Country Skiing

Under this alternative, the existing ungroomed cross-country ski trail system would be maintained, a groomed trail system would be developed in Mazama Village, and the NPS would explore the possibility of developing of groomed trails on portions of Rim Drive. As previously discussed, the NPS has chosen not to develop groomed trails in the park. Because the unplowed portion of Rim Drive is considered a wilderness area during the winter, this element would be inconsistent with Management Objective 4. Operation of mechanized grooming equipment on Rim Drive would be inconsistent with NPS wilderness management regulations. In addition, public comment does not support development of groomed trails in the park.

Snowshoeing

Under this alternative, snowshoe walks would remain as described in Alternative 3 and would be consistent with Management Objective 3, which seeks to provide high-quality interpretive and educational programs relevant to the winter environment at Crater Lake National Park.

Overnight Camping - Frontcountry

Frontcountry camping under this alternative would be as described under Alternative 3.

Overnight Camping - Backcountry

Backcountry camping under this alternative would remain as under existing conditions.

Chapter 5

Environmental Assessment

Chapter 5. Environmental Assessment

PURPOSE AND NEED

The purpose of this environmental assessment is to identify and evaluate environmental impacts associated with implementation of the winter use plan and alternatives. With the exception of frontcountry camping, the winter use plan proposes to maintain existing levels and locations of winter use activities in Crater Lake National Park. It is not anticipated that the winter use plan will cause environmental impacts within the park or on adjacent U.S. Forest Service land. The detail of discussion for each environmental element in each alternative is commensurate with the level of impact anticipated. Any unforeseen impacts will be addressed and mitigated through the ongoing planning process.

This environmental assessment was prepared in compliance with the National Environmental Policy Act Guideline NPS-12, the Endangered Species Act, the National Historic Preservation Act, the Clean Air Act, and the Clean Water Act. Environmental elements addressed in this environmental assessment are

- water resources,
- wildlife,
- air quality,
- soils and vegetation,
- threatened and endangered species,
- cultural resources,
- noise, and
- recreation.

DESCRIPTION OF ALTERNATIVES

Four alternative winter use scenarios were developed. The alternatives describe varying levels of use for snowmobiling, cross-country skiing, snowshoeing, and overnight camping. A description of the alternatives follows:

Alternative 1 - Winter Use Plan (Preferred Alternative)

Snowmobiling

Under this alternative, the current snowmobile/snowcoach route within the park will remain between the north entrance and North Junction. No changes to existing snowmobile routes will occur.

Cross-Country Skiing

Under this alternative, ungroomed cross-country skiing opportunities within the park will remain unchanged. The existing marked trail system will be maintained, and unrestricted cross-country skiing will continue throughout the park.

Snowshoeing

Guided interpretive snowshoe walks will continue. However, the number and frequency of snowshoe walks could change based on funding and public demand.

Overnight Camping - Frontcountry

Winter frontcountry camping will be prohibited in the park. Those visitors wanting to camp overnight will be referred to year-round private facilities outside park boundaries.

Overnight Camping - Backcountry

Winter backcountry camping will continue based on the current permit system.

Alternative 2 - Reduced Winter Use Opportunities

Snowmobiling

Under this alternative, all use of mechanized snow machines (snowmobiles and snowcoaches) within the park would be phased out; however, use of snowmobiles within the park for winter search-and-rescue activities would be allowed.

Cross-Country Skiing

Same as in Alternative 1.

Snowshoeing

Same as in Alternative 1.

Overnight Camping - Frontcountry

Same as in Alternative 1.

Overnight Camping - Backcountry

Under this alternative, no overnight winter backcountry camping would be allowed in the park. All backcountry activities would be restricted to day use.

Alternative 3 - Expanded Cross-County Skiing

Snowmobiling

Same as in Alternative 1.

Cross-Country Skiing

Under this alternative, the existing ungroomed trail network would be maintained. Unrestricted cross-country ski use would continue to be allowed throughout the park. A groomed trail system would be created at Mazama Village within existing campground roadways. The purpose of this trail system would be to provide a more sheltered location for beginning cross-country skiers. The visitor experience could be enhanced by including an interpretive component designed to educate users about the Mazama Village area and surrounding ecosystem. Cross-country ski instruction could be provided if sufficient demand existed. Instruction would not be provided by the NPS. Year-round lodging, food service, and equipment rental at Mazama Village could be supported under this alternative, because greater winter visitor use in this area would increase demand for lodging and other services.

Snowshoeing

Same as in Alternative 1, with the option for additional snowshoe walks from Mazama Village.

Overnight Camping - Frontcountry

Overnight recreational vehicle parking and camping would be prohibited in Rim Village and Munson Valley. Facilities or spaces for overnight recreational vehicle and car camping would be provided in Mazama Village.

Overnight Camping - Backcountry

The existing overnight backcountry permit camping system would be maintained. In addition, the NPS would explore development of a hut-to-hut cross-country ski system within the park to increase opportunities for winter backcountry use.

Alternative 4 - Expanded Cross-Country Skiing and Snowmobiling

Snowmobiling

In addition to the existing snowmobile/snowcoach route from the north entrance to North Junction, snowmobiles would be allowed access to the rim via the Pinnacles road. Snowmobiles would enter and exit the park via the former east entrance and travel on the Pinnacles road to and from the Phantom Ship overlook at Kerr Notch. This would provide an additional 12-mile round-trip route for snowmobile use in the park. A route along the northeast portion of Rim Drive linking the Pinnacles road with North Junction is not proposed, because of steep terrain and avalanche hazards in the Dutton Cliffs area.

Cross-Country Skiing

In addition to the cross-country skiing system described under Alternative 3, the NPS would explore the possibility of developing a groomed trail system on Rim Drive. Alternatively, a groomed trail could be established on Rim Drive east to Vidae Falls or Sun Notch, and possibly west to the Lightning Springs trailhead.

Snowshoeing

Same as in Alternative 3.

Overnight Camping - Frontcountry

Same as in Alternative 3.

Overnight Camping - Backcountry

Same as in Alternative 3.

ENVIRONMENTAL IMPACTS

The Winter Use Plan

Water Resources

There is no evidence indicating that existing winter recreation activities have an impact on water resources. It is unlikely that pollutants build up in concentrations large enough to cause a measurable impact on surface water quality. Use of snowmobiles and other mechanized snow machines is prohibited near the caldera rim and confined to the north entrance road. As a result, oil or other chemicals that may leak from the snow machines do not enter Crater Lake. Additionally, there are no surface water bodies in proximity to the north entrance road that would be contaminated by exhaust emissions or chemicals leaked from snow machines.

To protect water resources from backcountry skiing and camping activities, regulations require that all campsites be located at least 100 feet from any surface water body. Because winter use in the park will remain much as it is under existing conditions, it is unlikely that impacts on surface water resources would occur.

Wildlife

Crater Lake National Park is not heavily used by wildlife during the winter months, because many of the larger animals, such as deer and elk, migrate to lower elevations to escape deep snow conditions. Other animals hibernate during the winter season. The species that do live at higher elevations during the winter are minimally affected by existing winter activities. There is no evidence indicating that existing winter use activities in Crater Lake National Park adversely affect wildlife. Therefore, because use levels would not increase and areas of activity would not change significantly, no impacts on wildlife species are expected to occur.

Air Quality

Snowmobile and motor vehicle exhaust would continue and potentially increase proportional to increased snowmobile use and the number of motor vehicles entering the park. However, neither snowmobile nor vehicle traffic occurs in volumes great enough to cause notable impacts on air quality. It is unlikely that emissions would noticeably increase as a result of plan implementation. Air quality would remain within Class I area standards.

Soils and Vegetation

Implementation of the winter use plan would not cause impacts on soils or vegetation within the park. Soils are covered by several feet of snow during the winter season, and the winter use plan does not propose to develop any structures or facilities to support winter activities.

Snowmobiles are required to stay on roadway corridors used during the summer season; therefore, impacts on vegetation from snowmobile use are not expected to occur. In addition, backcountry fires are prohibited during the winter season to protect standing vegetation.

Threatened and Endangered Species

Implementation of the winter use plan would not have an impact on threatened or endangered species inhabiting Crater Lake National Park during the winter. A pair of peregrine falcons are known to nest west of Rim Village during the spring and summer months, and it is assumed that they hunt during the park's higher elevations throughout the entire year, although probably at a reduced level during the winter months, when the prey base is reduced. There is no indication that existing winter activities in the park adversely affect these species. Under the preferred alternative, active winter use in Crater Lake National Park will continue, for the most part, as it has in past years. No expanded winter recreation is proposed under the winter use plan, and the continuation of these activities will not affect threatened or endangered species.

Cultural Resources

As discussed, implementation of the winter use plan would not require construction of structures, roads, or other facilities to support winter recreation. Therefore, implementation of the winter use plan would not affect structures, landscapes, or road and trail segments of historical or cultural significance. Potential impacts on cultural resources caused by implementation of the Development Concept Plan (DCP) will be addressed in the environmental impact statement (EIS) that will be prepared for that project.

Noise

Snowmobile use generates the greatest amount of noise of any winter use activity occurring within the park. Snowmobile use will be confined to the existing route along the north entrance road; as a result, noise impacts resulting from plan implementation are not expected to increase. As discussed, it is the NPS's intent that the quiet and solitude of the winter backcountry experienced be preserved. Therefore, no additional mechanized equipment, such as trail groomers, will be permitted.

Recreation

Recreation impacts related to overnight camping in the Rim Village area would not occur, because this activity will be prohibited under the preferred alternative. The plan supports maintenance of existing recreational opportunities for snowmobiling, cross-country skiing, snowshoeing, and overnight camping.

Alternative 2 - Reduced Winter Use

Water Resources

Under Alternative 2, the potential for impacts on water resources would be less because the use of mechanized snow machines would not be permitted in the park, and backcountry use would be restricted to day use. While there is no evidence indicating that existing activities affect surface water resources, eliminating these uses from the park would reduce potential impacts.

Wildlife

There is no indication that existing winter activities in Crater Lake National Park adversely effect wildlife species. However, it is assumed that reduced winter use would have a positive effect on species inhabiting the north area of the park or the backcountry areas frequented by overnight campers.

Air Quality

Eliminating the use of mechanized snow machines in the park would eliminate snow machine exhaust emissions. Existing emissions do not generate a noticeable air quality impact in the park. If snowmobile use were eliminated, exhaust emissions related to these machines would be eliminated. Although this would likely not result in a noticeable change in air quality, short-term odors and irritants associated with snow machine exhaust would not occur.

Soils and Vegetation

No impacts on soil or vegetation occur during the winter season under existing conditions, because snowmobiles are required to stay on road corridors, and because campfires in the backcountry are prohibited. Reduced winter use would not have an impact on soils and vegetation.

Threatened and Endangered Species

While there is no evidence indicating that winter activities have an impact on threatened and endangered species in the park, reduced winter use would lessen impact potential. Eliminating snowmobiling and backcountry camping from the park would reduce noise and decrease human presence in the north entrance area and in the park's backcountry. It is assumed that the reduced potential for impact would benefit any threatened or endangered species in the area.

Cultural Resources

No cultural resources are affected by existing winter use. Reducing winter use would have no affect on the park's cultural resources.

Noise

Eliminating the use of snowmobiles in the park would reduce existing intermittent noise levels in the northern portion of the park. As discussed in the winter use plan, a major objective of the NPS is to preserve the quiet and solitude of the park's backcountry areas while providing access to all user groups.

Recreation

Under this alternative, winter recreation opportunities in Crater Lake National Park would be reduced. Snowmobiling and overnight backcountry camping would be eliminated. As data show, the number of visitors using backcountry areas during the winter is increasing. Eliminating overnight backcountry camping would have an impact on users visiting the park for this reason. In addition, eliminating snowmobile use would also have an impact on those visitors entering the park by snowmobile via the north entrance road.

Alternative 3 - Expanded Cross-Country Skiing

Water Resources

Impacts on water resources would be similar to those described for Alternative 1. The impacts on water resources (e.g., Annie Creek) from development in Mazama Village would be addressed in the EIS being prepared for the DCP.

Wildlife

Under this alternative, impacts on wildlife resources would be similar to those described for the winter use plan, with the exception that intermittent disturbances could occur in Mazama Village with expanded use of this area. It is unlikely that increased cross-country skiing opportunities in the rim area would affect wildlife, because those few species active during the winter months are accustomed to intermittent human activity.

Air Quality

Impacts would be similar to those described for Alternative 1.

Soils and Vegetation

No impacts on soils and vegetation would occur under this alternative.

Threatened and Endangered Species

Impacts on threatened and endangered species would be similar to those described for Alternative 1. If Mazama Village were to be developed, impacts on threatened and endangered species in the Mazama area would be evaluated in the DCP EIS.

Cultural Resources

Impacts on cultural resources would be the same as those described for Alternative 1. However, if Mazama Village were to be developed, impacts on cultural resources in this area would be addressed in the DCP EIS.

Noise

Noise impacts associated with this alternative would be similar to those described for Alternative 1. It is not anticipated that noise impacts under this alternative would affect the quiet and solitude experienced in Crater Lake National Park's backcountry since cross-country skiing is not an activity that generates a high level of noise.

Recreation

No impacts on recreation would occur under this alternative. Development of the Mazama Village area would increase recreation opportunities in the park. The presence of support facilities would further increase park visitation.

Alternative 4 - Expanded Snowmobiling and Cross-Country Skiing

Water Resources

Increased use of mechanized snow machines in the park would increase the potential for impacts on water resources. An incremental increase in the release of pollutants such as petroleum products would be anticipated under this alternative. Use of snow machines and trail grooming equipment on the Pinnacles road would increase the potential for impacts on Wheeler Creek. Cross-country ski trail grooming equipment would also increase the potential for impacts downslope of groomed trail areas.

Wildlife

Wildlife impacts under this alternative would be similar to those described under Alternative 3. However, periodic short-term disturbance to wildlife could occur near Rim Drive when mechanized trail grooming equipment operates in this area.

Air Quality

Increased use of mechanized snow machines in the park for trail grooming and pleasure trips would increase overall emissions. However, it is difficult to predict whether emissions would cause a noticeable air quality impact. Cross-country skiers and other backcountry users may become more aware of snowmobile exhaust, thereby reducing the user experience for those winter activities. In addition, exhaust from mechanized trail groomers may impact cross-country skiers on East Rim Drive.

Soils and Vegetation

Impacts on soils and vegetation would be similar to those described for Alternative 1. Although activity in the park would likely increase, trail grooming and snowmobile use would occur in existing road corridors.

Threatened and Endangered Species

Under this alternative, cross-country skiing and snowmobiling would increase around and southeast of the rim. During the winter months, peregrine falcon activity in the park is limited to perching, foraging, and occasional feeding on whatever avian prey is available. According to Johnsgard (1990), peregrine falcon prey includes rock and mourning doves, gray jays, waterfowl, and microtines (voles) during years of abundance. According to Follett (1979), only the gray jay is commonly present during the winter months. Although no data are available, peregrine falcon use of the park during the winter months is most likely low, with wintering activity primarily in the snow-free lowland areas outside the park where prey is in greater abundance (e.g., Klamath Lake).

Given the relatively minor increases in use that would occur under this alternative (groomed cross-country ski trails along portions of the rim and an additional 6 one-way miles of snowmobile trail), this alternative would not have a significant adverse impact on threatened or endangered species.

Cultural Resources

No impacts on cultural resources would occur under this alternative.

Noise

Noise impacts would increase with the use of mechanized snow machines along the Pinnacles road. Increased noise would disrupt the quiet and solitude of the existing Crater Lake backcountry experience. This impact would be inconsistent with Management Objective 4, which seeks to maintain the quiet and solitude of the backcountry areas by minimizing use of motorized, over-snow machines.

Recreation

Recreation opportunities would increase for snowmobilers and cross-country skiers under this alternative. An additional snowmobile route along the Pinnacles road, along with groomed ski trails along portions of Rim Drive, would increase recreation opportunities for both user groups.

Mitigation

Implementation of the proposed winter use plan would not cause significant impacts on elements of either the built or natural environment. As described, impacts associated with implementation of the winter use plan alternatives would, in some cases, increase the potential for environmental impacts and an associated degradation in the winter backcountry experience. As discussed, environmental impacts associated with DCP development activities will be addressed in the EIS presently being prepared for the DCP.

Cumulative Impacts

No significant cumulative impacts from implementation of the winter use plan together with other actions such as the DCP are anticipated. Because this plan does not support or encourage new activities or increased use levels for existing activities, environmental issues associated with development of additional facilities will be evaluated in future documents.

Chapter 6

Citations

Chapter 6. Citations

PRINTED REFERENCES

Follett, R. 1979. Birds of Crater Lake National Park. Crater Lake National History Association. Crater Lake, OR. Prepared for U.S. Department of the Interior, National Park Service.

Johnsgard, P. A. 1990. Hawks, eagles and falcons of North America. Smithsonian Institution Press. Washington, DC.

Jones & Stokes Associates, Inc. 1993. Wetland delineation report. Rim Village, Munson Valley, Mazama Village, and Panhandle study areas at Crater Lake National Park. Bellevue, WA. Prepared for U.S. Department of the Interior, National Park Service, Denver, CO.

Oregon State Parks and Recreation Division. 1988. Oregon outdoor recreation plan 1988-1993. Salem, OR.

Sierra Club. 1985. The Sierra Club guides to the National Parks of the Pacific Northwest and Alaska. Random House. New York, NY.

U.S. Department of the Interior, National Park Service. 1988. Crater Lake National Park Mazama Campground/Rim Village development concept plan (Amendment to the general management plan). Denver Service Center. Denver, CO.

_____. 1993. Briefing report, Rim Village redevelopment. Denver Service Center. Denver, CO.

_____. 1994a. Crater Lake National Park monthly visitation statistics. Crater Lake, OR.

_____. 1994b. Crater Lake National Park climate data. Crater Lake, OR.

_____. 1994c. Guided snowshoe walk participant data. Crater Lake, OR.

_____. 1994d. Backcountry permit data. Crater Lake, OR.

U.S. Forest Service, Winema National Forest, Klamath Ranger District. 1994. Snow park visitor data. Klamath Falls, OR.

PERSONAL COMMUNICATIONS

Benson, Frank. Resort employee. Diamond Lake Resort, Diamond Lake, OR. February 4, 1994 - telephone conversation.

Eixenberger, Don. Research analyst. Oregon State Parks Department, Salem, OR. February 2, 1994 - telephone conversation.

Gordon, Dick. Concessions manager. Crater Lake Lodge, Inc., Crater Lake, OR. January 28, 1994 - telephone conversation.

Graves, Keith. Recreation forester. U.S. Forest Service, Umpqua National Forest, Diamond Lake Ranger District, Diamond Lake, OR. January 24, 1994 - telephone conversation.

Lynn, Elwood. Maintenance chief. National Park Service, Crater Lake, OR. January 4, 1994 - telephone conversation.

Mark, Steve. Crater Lake National Park historian. Crater Lake National Park, Crater Lake, OR. January 25, 1994 - telephone conversation.

Parker, Judith. Recreation planner. U.S. Forest Service, Winema National Forest, Chemalt Ranger District, Chemalt, OR. January 25, 1994 - telephone conversation.

Street, Butch. Program auditor. National Park Service, Denver, CO. February 9, 1994 - telephone conversation.

Taylor, Kent. Chief interpreter. Crater Lake National Park, Crater Lake, OR. January 25, 1994 - facsimile.

Wojahn, Mark. Diamond Lake Resort, Diamond Lake, OR. February 3, 1994 - telephone conversation.

Appendix A

Crater Lake National Park Winter Recreation Use Tables

Table A-1. Diamond Lake Ranger District Snowmobile Trails

Trail		Distance in Miles
One-Way		
Diamond Lake		12
Crater Lake		20
Lemolo Lake		16
Crescent Lake		38
Summit Lake		31
Skookum Lake		18
Three Lakes		11
Lake West		10
Dog Prairie		18
Mt. Bailey		16
Old Man Camp		12
Kelsey Mountain		14
Windigo Pass		19
Elephant Mountain		14
Union Creek		37
Hamaker Mountain		12
Hamaker Snow Park		16
Chemult		38
Summit Rock		10
	Total	362
Loop		
Kelsey Mountain Loop		38
Elephant Mountain Loop		39
Hamaker Loop		38
Bear Creek Loop		33
Incense Cedar Loop		44
Crescent Lake Loop		99
	Total	291

Source: Diamond Lake Resort. 1993. Diamond Lake trail map. Diamond Lake, OR.

Table A-2. Rogue River National Forest Snowmobile Trails

Trail	Distance in Miles (round-trip)
Rocktop	18.0
Ginkgo	10.0
Thousand Springs	7.0
Huckleberry	6.0
Pipeline	11.0
Whiskey Creek	7.3
Lake West (also shown in Table 3)	10.0
Hamaker (portions included in Table 3)	10.5
Divide	4.1
Bybee	18.5
Total	102.4

Source: U.S. Forest Service, Rogue River National Forest. 1990. Rogue River National Forest recreation opportunity guide 1990. Prospect, OR.

Table A-3. Recreation Use at Snow Parks in Rogue River National Forest

	Total Winter Visits	Winter Activity	
Thousand Springs		Snowmobile Visits	Cross-Country Ski Visits
1991-92	2,302	2,187 (95%)	115 (5%)
1992-93	3,190	2,935 (92%)	255 (8%)
Farwell Bend (no snowmobile use)		Snow Play Visits	Cross-Country Ski Visits
1991-92	4,480	3,942 (88%)	538 (12%)
1992-93	6,210	5,092 (82%)	1,118 (18%)

Source: Dent, Chris. Recreation forester. Rogue River National Forest, Prospect, OR. January 24, 1994 - telephone conversation.

Table A-4. Winema National Forest Snowmobile Trails

Trail		Distance in Miles
Klamath Ranger District		
Goose Nest		5.5
Wild Cat		4.4
Dry Creek Loop		8.8
Diamond Lake		34.2
Seven Mile Loop		5.4
Three Mile Loop		6.7
Pelican Butte		4.6
Cold Springs		14.6
Old Pelican Butte		6.5
Return Loop		4.4
West Four Mile Lake		5.5
East Four Mile Lake		5.2
Pearce		2.3
Resort		1.2
Varney Creek		5.0
Sunset		12.9
Buck Peak Cutoff		1.2
Buck Peak		3.0
Cabin		3.4
Lake of the Woods - Fish Lake		7.0
Hyatt - Lake of the Woods		21.9
	Subtotal	164.3
Chemalt Ranger District		
Park Boundary/Lake of the Woods		44.2
Secondary/Accessory		17.0
	Subtotal	61.2
	Total	225.5

Source: U.S. Forest Service, Winema National Forest, Klamath Ranger District. 1994. Winema National Forest recreation data. Klamath Falls, OR.

Table A-5. Klamath Ranger District Snow Park Visitation

Snow Park	Average Annual Visits
Annie Creek	3,000
Dead Indian	900
Great Meadow	5,200
Lake of the Woods Resort	3,500
Four Mile Lake Road	850
Ichabod Spring	1,100
Summit Ski Area	1,500

Source: U.S. Forest Service, Winema National Forest, Klamath Ranger District. 1994. Winema National Forest recreation data. Klamath Falls, OR.

Table A-6. Crater Lake Area Cross-Country Ski Trails

Trail		Distance in Miles
Rogue River National Forest		
Union Creek		10.0
Old Growth		3.5
Union Creek Campground		3.0
Natural Bridge Loop		6.0
Old Wagon Road		7.0
Jackpine		7.5
Lake West		8.0
	Subtotal	45.0
Umpqua National Forest (Diamond Lake Ranger District)		
Silent Creek		4.0
North Crater		3.5
Howlock Mountain		3.5
Cinnamon Butte		3.0
Wits End Way		5.0
Pacific Crest		10.5
Mt. Thielsen		3.0
Vista		3.0
Horse N' Teal		1.5
Mt. Bailey		5.0
Crater Lake North Rim		9.2
Spruce Ridge		2.5
	Subtotal	54.0
Winema National Forest (Klamath Ranger District)		
Four Mile Lake		6.0
Lake of the Woods		1.9
McLoughlin		4.2
Lower Canal		2.6
Upper Canal		6.5
Powerline		3.0
Billie Creek Loop		6.6
South Rye		.6
Petunia		2.1
Big Mac		1.4

Table A-6. Continued

Trail		Distance in Miles
Pitt View		1.4
Sunset		1.0
Triangle Loop		2.8
	Subtotal	40.1
Winema National Forest (Chemalt Ranger District)		
No trails currently exist		N/A
	Area Total	139.1

Sources: U.S. Forest Service, Rogue River National Forest. 1990. Rogue River National Forest recreation opportunity guide 1990. Prospect, OR.

U.S. Forest Service, Winema National Forest, Klamath Ranger District. 1994. Winema National Forest recreation data. Klamath Falls, OR.

U.S. Forest Service, Umpqua National Forest, Diamond Lake Ranger District. 1994. Recreation data summary. Diamond Lake, OR.

Parker, Judith. Recreation planner. U.S. Forest Service, Winema National Forest, Chemalt Ranger District, Chemalt, OR. January 25, 1994 - telephone conversation.

Appendix B

NPS Position Statement on Proposed Change in Snowmobile Use in Crater Lake National Park

POSITION STATEMENT ON PROPOSED CHANGE IN SNOWMOBILE USE IN CRATER LAKE NATIONAL PARK 1984

CURRENT POLICY:

The existing policy of only allowing snowmobiles in the park on the North Entrance Road between Highway 138 and the North Junction is the result of an extensive public involvement and decision making process. On February 23, 1976, proposed snowmobile regulations for Crater Lake National Park were published in the Federal Register. Six hundred and seven responses were received, of which there were more responses indicating a preference for no snowmobiling in the park than those favoring snowmobiling or an increase in areas available for snowmobiling. In August of 1976, the regulation took effect.

Snowmobile use was addressed in the General Management Plan of 1977 and comment supported snowmobile use as per the 1976 regulation.

A Winter Use Study was conducted in 1980. The team considered five alternatives for snowmobile use, including a through route for snowmobiles (southeast to north), and opening up a southeast (Pinnacles Route) route. Organized snowmobile clubs openly supported the through route as a portion of a north-south route from California to Washington. The study team estimated the annual cost of operating this route to be $22,000 (1980 prices). This included the cost of two additional snowmobiles and two seasonal rangers; grooming costs, if any, would be additional. Public Meetings concerning the alternatives proposed in the study were held in five cities and written comments were received. Seventy-four percent of the public indicated preference for maintaining snowmobiling on the North Entrance Road only.

EXISTING WINTER RECREATION USE EXTERIOR TO PARK:

Crater Lake National Park is surrounded by three national forests and one area of state land. All of these lands are open to snowmobiling with hundreds of miles of groomed snowmobile trails. Additionally, thousands of miles of logging roads are open to snowmobiles and have excellent snow for the entire winter. There are no areas, except within the park, that are for skiers only, restricting snowmobiles and providing opportunities for both recreational users. The north entrance to north junction road in the park is not plowed and is currently open to snowmobiles and serves the large clientele from the Diamond Lake winter

recreation area. This allows individuals from the north to see the lake without driving around to the south or west entrances. The south and west entrances are plowed up to the lake so anyone entering from those entrances may see the lake by vehicle.

ALTERNATIVES:

For the purposes of this document, only one alternative will be addressed. That is, the possibility of opening the paved road from Kerr Notch to the old east entrance (Pinnacles) for winter snowmobile use.

ADVANTAGES:

Opening of this route would provide snowmobilers with an additional point at which they could see the lake. For visitors coming from the Klamath Falls area, this saves them a drive of approximately 30 miles. Opening the Pinnacles route would probably attract snowmobilers using the existing routes on the east side of the park who might otherwise not see the lake.

DISADVANTAGES:

SAFETY - The proposed route goes directly under Dutton Cliff which supports several avalanche paths. Slides from these paths occasionally cross the roadway beneath Dutton Cliff, which is the proposed route. The use of snowmobiles in avalanche prone areas is known to trigger avalanches with resulting injuries or fatalities. There is no bypass available to snowmobiles. Response time for park staff to an emergency in this area would be very slow due to the distance and the potential avalanche hazards between the area and the park headquarters.

AESTHETIC - Numerous cross-country skiers ski around Crater Lake each year. Cross-country skiing is the only opportunity for nonmotorized visitors to enjoy Crater Lake in a wilderness type setting since motorized vehicles are permitted to travel all the way around the rim during the summer months, and there are no trails around the lake which are not immediately adjacent to Rim Drive. Currently visitor skiiing around the lake must contend with the noise and intrusion of snowmobiles only at North Junction. Adding the Pinnacles Road as a snowmobile route would add a second intrusion and would mean that skiers would have to share the same route for a minimum of .5 mile if using the recommended bypass which avoids the worst hazards of Dutton Cliffs. If the

skiers use the Grayback Motor Nature Trail Ski Route, then there will be a distance of 3.5 miles when both types of users will be in conflict. This is a serious intrusion on the backcountry users attempt to obtain a backcountry experience. The additional human contacts, noise, and snowmobile tracks, will all degrade the wilderness experience the cross-country skier has traveled so far to gain.

ENVIRONMENTAL - The Kerr Notch area is frequented by hunting peregrine falcons that nest within the caldera. Arriving in the park in the early spring, the falcons hunt Kerr Valley as well as use it as a travel route to feeding grounds in the Klamath Forest Wildlife Refuge. The peregrine falcon (Falco peregrinus anatum) is a federally listed endangered species and subject to active management and protection. There is concern that snowmobile use in the Kerr notch may disturb the sensitive peregrine falcons in their primary hunting area.

CONFLICTS WITH EXISTING POLICIES:

The General Management Plan calls for snowmobile use to be limited to the existing route.

The Natural Resource Management Plan (1981) calls for active protection for the peregrine falcon.

Following each public review of the snowmobile issue, the public reaction has favored retention of the present regulation. The NPS has used this as justification for retention of the present regulation. Any proposal to increase snowmobile use beyond that established by regulation would require extensive public involvement from all interested parties.

The Backcountry Management Plan (1984) for Crater Lake National Park calls for maximizing the backcountry user's opportunity to enjoy the prime resource of the park, Crater Lake, and to provide a quality wilderness experience for visitors. The proposed snowmobile route will definitely degrade the wilderness experience of cross-country skiers skiing around the lake.

COSTS TO GOVERNMENT:

Additional costs will be incurred due to the need to patrol the route. It has been suggested that local clubs would provide personnel to patrol and insure rules are obeyed. Since this would be primarily a law enforcement patrol, it is not appropriate to allow volunteers to perform this function. Costs were estimated

at $22,000 during the winter use study. Personnel ceilings and limitations would not allow expansion of seasonal work force to cover this additional load.

CONCLUSION:

Based upon the facts and concerns about safety, the wilderness experience of backcountry users, costs to the government, potential impacts to the endangered peregrine falcon, and the demonstrated public opposition to increased snowmobile access to Crater Lake, it is determined that there will be no change to existing regulations and therefore, the Pinnacles road will not be opened to snowmobiles.

BIBLIOGRAPHY:

WINTER RECREATION, SNOWMOBILING AND ITS EFFECTS: A RESEARCH REVIEW Crater Lake National Park, Downing, Starkey, Thompson, 1975, L3427 1976

SUMMARY OF PREFERENCES RELATIVE TO SNOWMOBILE ALTERNATIVESINDIVIDUAL RESPONSE FORMS: Table 1, L3427 1981

NEWS RELEASE, CRATER LAKE NATIONAL PARK, UNDATED TITLED "NO CHANGES IN CRATER LAKE NATIONAL PARK WINTER OPERATIONS", L3427 1981

MEMO TO REGIONAL DIRECTOR, "SNOWMOBILES (Meeting with Don Stonehill and Tom Horn)"

CRATER LAKE WINTER USE STUDY QUESTIONNAIRE, L3427 1980

Appendix C

Crater Lake National Park Winter Use Plan Public Meeting Workbook

Crater Lake National Park
Winter Use Plan
Public Meeting Workbook

Crater Lake

National Park • Oregon

Public Meeting Workbook
January 1994

Winter Use Plan
Crater Lake
National Park • Oregon

United States Department of the Interior • National Park Service • Denver Service Center

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CRATER LAKE NATIONAL PARK WINTER USE PLAN PUBLIC MEETING WORKBOOK

INTRODUCTION

Welcome

Welcome to one of a series of four public information meetings being held during January 1994 by the National Park Service (NPS). The purpose of these meetings is to receive public input regarding preparation of a Winter Use Plan (WUP) for Crater Lake National Park. This workbook includes:

- a brief description of Crater Lake and the NPS,
- a description of the need for the WUP,
- a description of existing winter use at Crater Lake National Park, and
- a description of four alternative winter use scenarios.

Background

Planning the future of Crater Lake

Stimulated by the need to determine the future of the historic Crater Lake Lodge, the NPS undertook an intense planning effort during the 1980s. The approved plan, finalized in 1988, was the result of a series of public planning efforts addressing the future character of the Rim Village area of the park. Public comments were solicited at three separate points in the planning process. The approved plan called for rehabilitation of the lodge and replacement of the existing gift store and cafeteria with a new year-round activity center/hotel in Rim Village. Following this process, the approved plan was amended to include development of an off-rim parking facility and removal of all parking in Rim Village.

In October 1991, the House-Senate Appropriations Committee expressed concern over the rising cost and scope of development for a new activity center and hotel in Rim Village. The NPS, also concerned over costs and the appropriateness of year-round lodging on the rim, removed year-round lodging in Rim Village from the proposal. Additionally, the need to formulate a long-term strategy to address growing demand for winter use became evident. This need was formalized in a request from the House-Senate Appropriations Committee in September 1992 to prepare a WUP for the park.

To initiate the planning process, the NPS first looked at the existing pattern of winter use. Foremost among winter visitor activities is passive viewing of the lake. This includes photography, relaxation, and contemplation of the winter scene. This will likely

remain as the primary winter recreational activity in the park. However, the number of winter visitors participating in active recreation is increasing. Typically, whether they are on cross-country skis, snowshoes, or snowmobiles, winter visitors participating in active recreation are using a means of travel other than the automobile to enjoy Crater Lake National Park during the winter season.

While recognizing the value of passive lake viewing, there is a growing demand to create a formal document that the NPS can use to assist in addressing active winter recreation issues. Active winter activities currently occurring in the park are:

- cross-country skiing,
- front-country camping,
- back-country camping,
- snowshoeing, and
- snowmobiling.

The NPS has developed four alternative winter use scenarios. They define varying levels of winter recreational use and focus on those activities listed above. After receiving public input, the NPS will select a preferred alternative on which to base the WUP. Your input into this process is essential for the successful development and implementation of the plan.

Crater Lake National Park and the National Park Service

Crater Lake National Park is located along the crest of the Cascade Mountain Range, approximately 70 miles northeast of Medford, Oregon (Figure 1). Formed after the volcanic eruption of Mount Mazama approximately 7,700 years ago, Crater Lake, at 1,932 feet, is the deepest lake in the United States and the seventh deepest lake in the world. Crater Lake National Park encompasses approximately 188,000 acres and was established in 1902 as America's sixth national park.

The National Park Service

Since its inception on August 25, 1916, the NPS has managed and regulated national parks, national monuments, and other management units within the national park system for the purpose of protecting and conserving the natural, cultural, and historic resources contained within unit boundaries. However, just as it is the responsibility of the NPS to protect and conserve these resources, the NPS must also impart the significance of these resources and their contributions to the nation and the public.

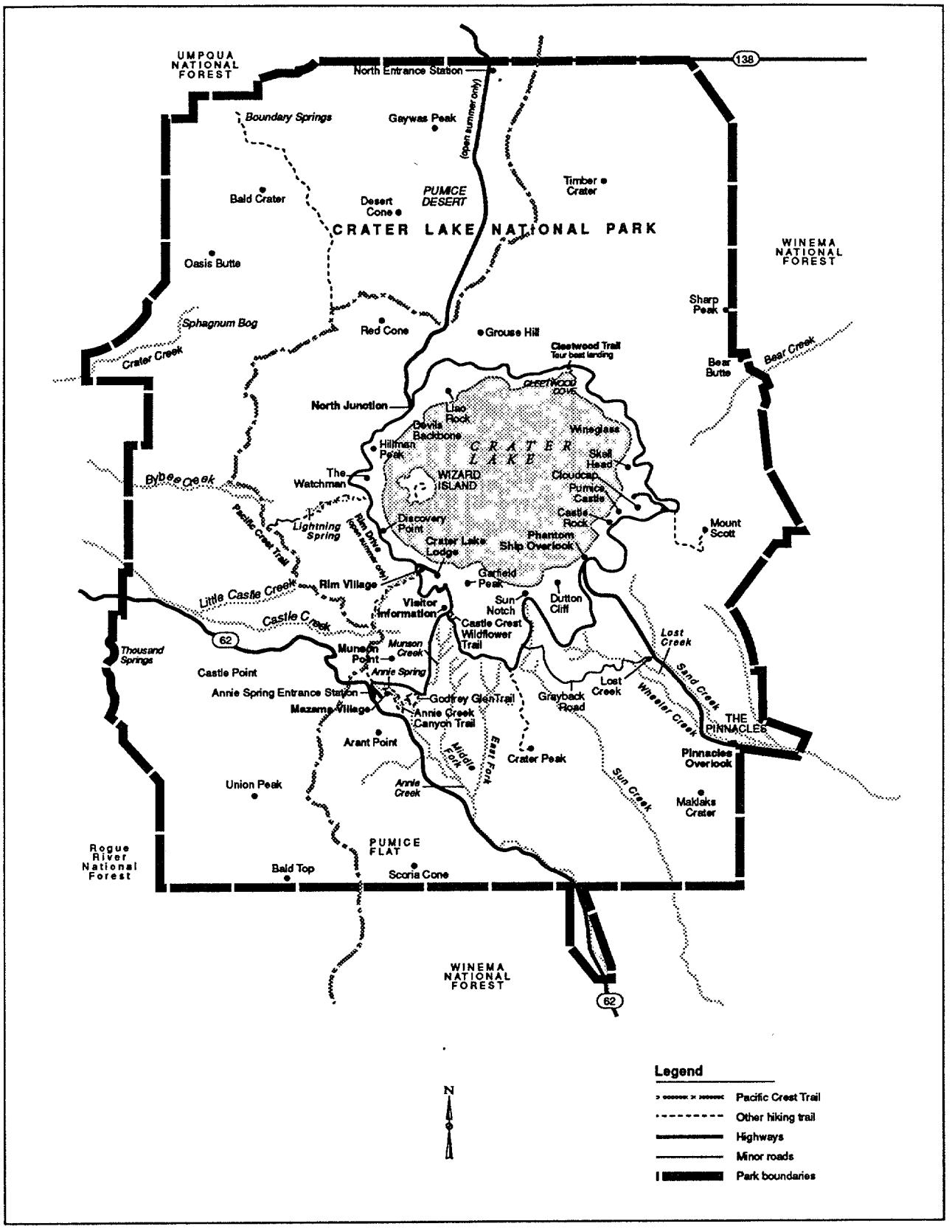

Figure 1. Regional Map and Location of Study Areas

The intent of the planning process ongoing in Crater Lake National Park is to define a balance between resource protection and visitor use. The challenge is to emphasize the park's uniqueness; the guiding principle is to do nothing that will impact the qualities of park resources.

Why Develop a Winter Use Plan?

Why plan?

The WUP is being prepared to better clarify the types and levels of appropriate winter recreational uses. The plan is being prepared to supplement information provided in response to the House-Senate Appropriations 1992 Conference Agreement requesting an evaluation of appropriate winter uses and the locations where these activities would occur. The WUP will address the following:

- purpose and need for the WUP,
- existing winter recreational activities,
- existing winter demand for services and facilities,
- winter activities appropriate for the park,
- winter use alternative scenarios,
- a preferred alternative,
- costs to provide additional services, and
- environmental assessment of each winter use scenario.

The WUP will augment existing planning documents by defining the winter recreational use scenario most appropriate for Crater Lake National Park, and it will provide the NPS a tool for guiding winter use in the park. The WUP will be incorporated into the Development Concept Plan now being prepared for Munson Valley, Mazama Village, and the south entrance area of the park. The environmental assessment will be prepared in compliance with the National Environmental Policy Act. Winter recreational uses in the park will not change until the plan has been completed.

EXISTING WINTER USES

Existing winter activities

Existing winter uses in Crater Lake National Park include:

- relaxation/contemplation of the natural scene,
- viewing the lake/sightseeing,
- winter camping (front- and back-country),
- guided and individual snowshoe walks,
- interpretive activities,
- cross-country skiing,
- photography,
- interpretive activities,

- snowshoeing, and
- limited snowmobiling.

Most winter visitors will continue driving to the rim and passively enjoying the lake. For an increasing number of visitors, other activities and overnight stays have become part of the experience. This plan will specifically address winter camping, snowshoeing, cross-country skiing, and snowmobiling. Winter snow play activities such as sledding and innertubing presently occur within the park but are not sanctioned or monitored uses. Winter snow play will be described briefly in this section but will not be addressed as a component of the WUP. Figure 2 shows the location of existing active winter recreation activities in Crater Lake National Park. Route numbers for existing and future snowmobile and ungroomed/groomed cross-country ski trails are provided for clarity.

Snowmobiling

Snowmobiling

Snowmobiling is allowed within Crater Lake National Park only from the north park entrance to the North Junction. This 9-mile stretch of road (Route S1), which is closed to vehicle traffic during the winter, leads from Oregon 138 to the northwest rim of Crater Lake (Figure 2). Snowmobilers using this route typically start at Diamond Lake, approximately 6 miles north of the park boundary. In addition, snowcoach tours originating in the Diamond Lake area use this route approximately 8 to 10 times per winter season. Information on snowmobile use will be derived from Diamond Lake Resort and the U.S. Forest Service. All but existing roads and developed areas in the park have been proposed as wilderness and will be managed under wilderness guidelines. Recreational snowmobile use is prohibited in wilderness areas.

Cross-Country Skiing

Cross-country skiing

Cross-country skiing is the most popular active winter recreational activity in the park. There are approximately 70 miles of ungroomed, marked cross-country ski trails which include Rim Drive (Route UC1), portions of the Pacific Crest Trail (Route UC2), Lightning Springs Trail (Route UC3), the Pumice Flat Trail (Route UC4), the Raven Trail (UC5), and the Dutton Creek Trail (UC6). These trails are shown on Figure 2. Cross-country skiing in the rest of the park is unrestricted. The NPS uses 25-30 volunteers to patrol ski trails. Patrols occur primarily on weekends and holidays. The most popular ski route is the Rim Drive Trail, a 33-mile unplowed loop road around the lake. Cross-country ski equipment is rented at the Rim Village activity center by the park concessioner.

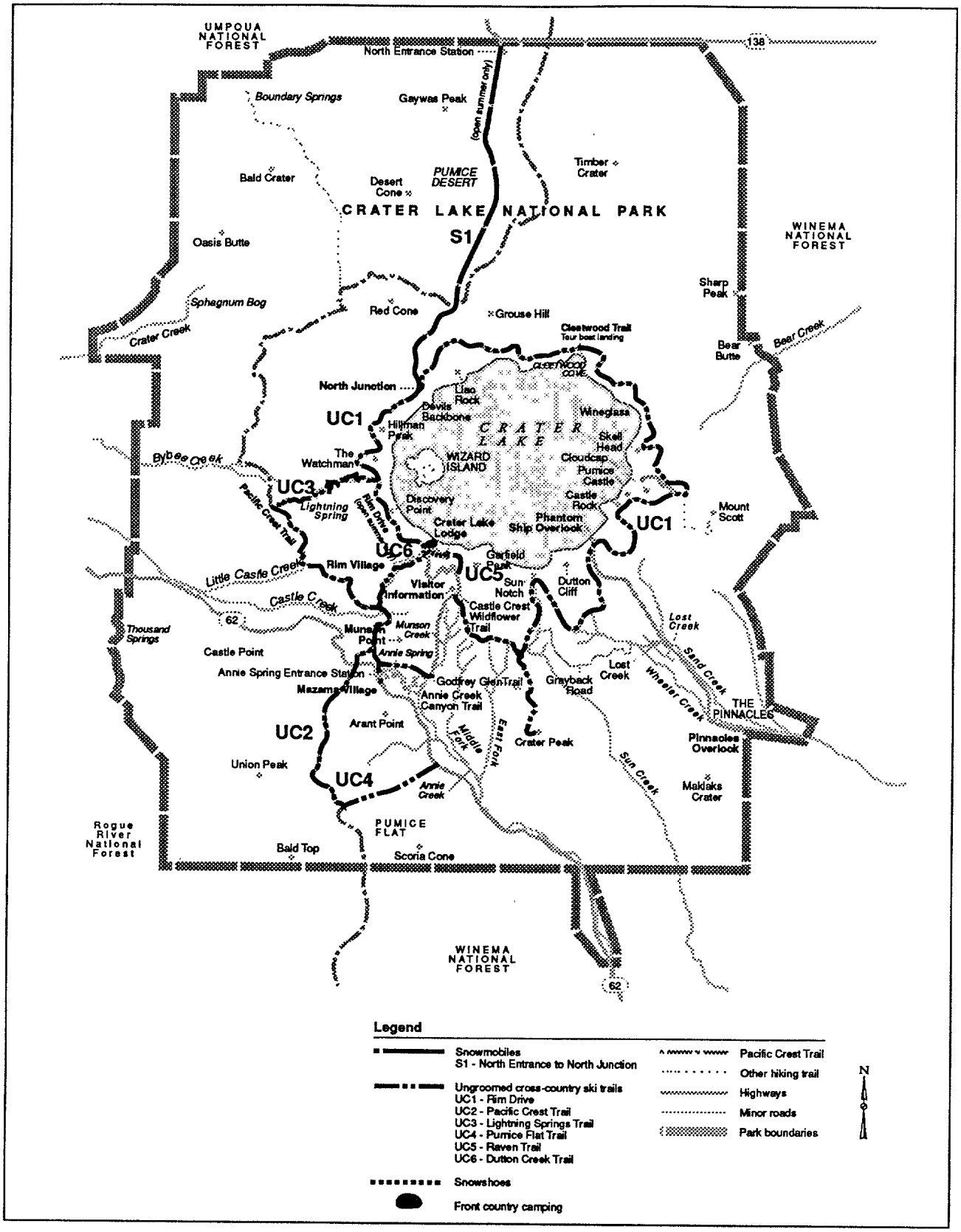

Figure 2. Existing Winter Use

Snowshoeing

Snowshoeing

Snowshoeing is an individual or guided interpretive activity in the park. Guided snowshoe walks are offered by the NPS twice daily on weekends, holidays, and during Christmas and spring breaks. Group walks are offered on weekdays by reservation. The primary purpose for guided snowshoe walks is to provide the winter visitor with a unique opportunity to view park resources from a perspective different than that experienced during the summer season. Guided walks are approximately 1/2 mile long and originate at Rim Village. Snowshoes can be rented at the activity center. Snowshoeing is unrestricted throughout the park.

Snow Recreation

Snowplay

Snow recreation includes sledding, innertubing, tobogganing, and various other snow play activities. There are no designated or monitored snow recreation areas in the park; however, these activities generally occur near Rim Village, in meadows or clearings, and along the roadside. Park policy does not restrict these activities; however, because of liability issues associated with providing designated and maintained snow play areas, snow recreation is not officially sanctioned in the park.

Overnight Camping - Front Country

Overnight camping

Front-country areas by NPS definition include developed areas of the park such as designated camping areas, Rim Village, Munson Valley, and Mazama Village. Currently, winter overnight recreational vehicle and car camping is allowed in Rim Village within a small designated area; however, no facilities are provided. Overnight camping in this area is not sanctioned but it is not prohibited by park policy. The number of visitor parties using this area generally ranges from zero to three per night. Some concern exists regarding the safety of overnight camping in Rim Village because unexpected snow storms can trap vehicles or leave unplowed roads impassable. No front-country camping facilities are currently provided because of high snow levels. A provision to appropriately accommodate this use in the future will be addressed in the WUP.

Overnight Camping - Back Country

By definition back-country areas are those areas located away from plowed roadways and developed areas such as Rim Village and Munson Valley. These areas are not maintained but are patrolled by volunteers and park personnel. Back-country areas are generally used by winter enthusiasts seeking solitude. Use of these areas is permitted

throughout the park with little restriction; however, all visitors must obtain a permit for overnight stays. NPS data show that overnight back-country use is actually higher during the winter than during the summer season. Because winter back-country camping occurs throughout the park and not in designated areas, it is not shown on Figure 2.

DRAFT ALTERNATIVE WINTER USE SCENARIOS

Winter use alternatives

Four alternative winter use scenarios have been developed by park staff. These draft scenarios were developed to provide a framework for public discussion. The public can suggest additional alternatives or amend the draft alternatives. The NPS will select a preferred winter use alternative based on public input upon completion of the scoping phase of the project.

Alternative 1 - No Action

No action

Snowmobiling

Under this alternative, the current snowmobile/snowcoach route (Route S1) within the park would remain between the north entrance and North Junction. No changes to existing snowmobile routes would occur (Figure 2).

Cross-Country Skiing

Under this alternative, ungroomed cross-country skiing facilities within the park would remain unchanged. The existing marked trail system (Routes UC1 through UC6) would be maintained, and unrestricted cross-country skiing would continue throughout the park (Figure 2).

Snowshoe Walks

Guided interpretive snowshoe walks would continue (Figure 2). However, the number and frequency of snowshoe walks could change based on funding and public demand.

Overnight Camping - Front Country

For the foreseeable future, winter front-country recreational vehicle parking or camping would be permitted in Rim Village in the designated area (Figure 2). Front-country camping would not be prevented; however, no provisions would be made to accommodate this use.

Overnight Camping - Back Country

Winter back-country camping would continue based on the current permit system.

Reduced winter use

Alternative 2 - Reduced Winter Use Opportunities (Figure 3)

Snowmobiling

Under this alternative, all use of mechanized snowmachines (snowmobiles and snowcoaches) within the park would be phased out; however, use of snowmobiles within the park for winter search-and-rescue activities would be allowed.

Cross-Country Skiing

Same as Alternative 1; however, the road between the north entrance and north junction could be used as an ungroomed cross-country ski trail. This trail is shown as UC7.

Snowshoe Walks

Same as Alternative 1.

Overnight Camping - Front Country

Same as Alternative 1.

Overnight Camping - Back Country

Under this alternative, no overnight winter back-country camping would be allowed in the park. All back-country activities would be restricted to day use only.

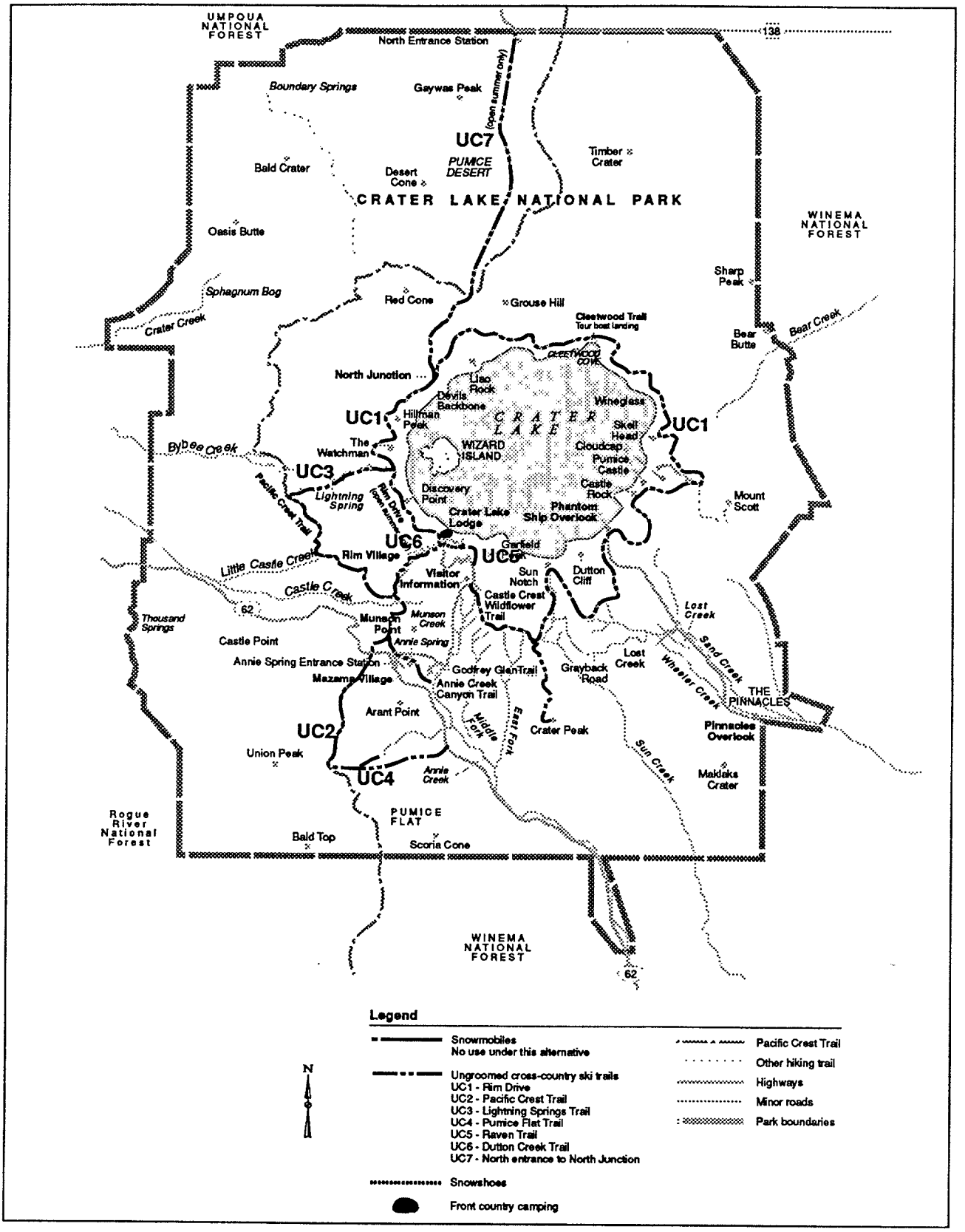

Figure 3. Alternative 2, Reduced Winter Use

Expanded skiing opportunities

Alternative 3 - Expanded Cross-Country Skiing (Figure 4)

Snowmobiling

Provisions for use of snowmobiles and snowcoaches within the park would remain as under existing conditions. Under this alternative, the only snowmobile/snowcoach route in the park would continue to be between the north entrance and North Junction (Route S1). Snowmobile/snowcoach use would not be eliminated under this alternative; however, no additional access would be provided.

Cross-Country Skiing

Under this alternative, the existing ungroomed trail network would be maintained. Unrestricted cross-country ski use would be allowed throughout the park. A groomed trail system would be created at Mazama Village (Route GC1) within existing campground roadways. The purpose of this area would be to provide a more sheltered location for beginning cross-country skiers. The visitor experience could be enhanced by including an interpretive component designed to educate users about the Mazama Village area and surrounding ecosystem. Cross-country ski instruction could be provided if sufficient demand existed. Instruction would not be provided by the NPS. Year-round lodging, food service, and equipment rental at Mazama could be supported under this alternative since greater winter visitor use in this area would increase the demand for such services.

Snowshoe Walks

Same as Alternative 1, with the option for additional snowshoe walks from Mazama Village.

Overnight Camping - Front Country

Overnight recreational vehicle parking or camping would be prohibited in Rim Village or Munson Valley. Facilities or spaces for overnight RV and car camping would be provided in Mazama Village.

Overnight Camping - Back Country

The existing overnight back-country permit camping system would be maintained. In addition, the NPS would explore

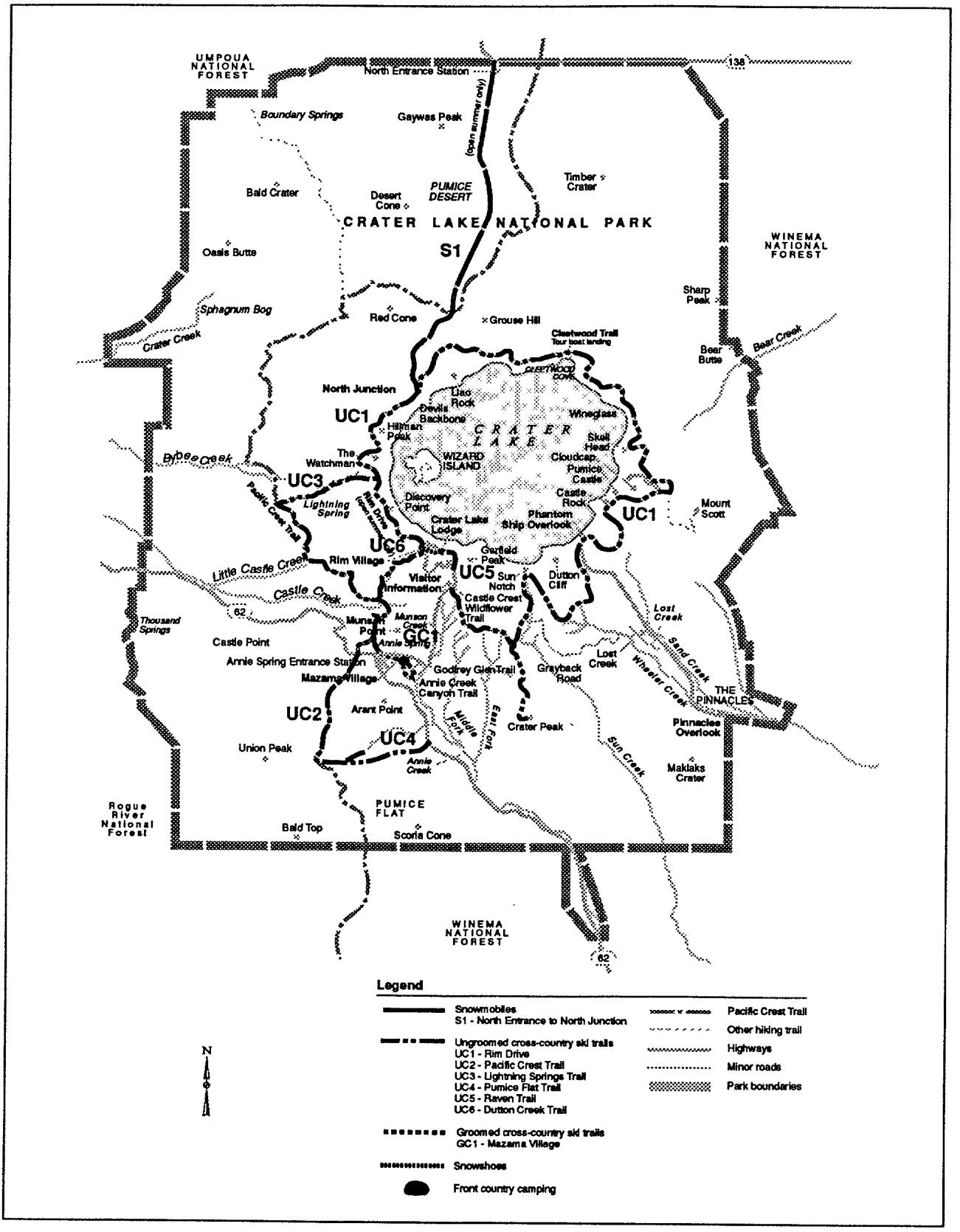

Figure 4. Alternative 3, Expanded Cross-Country Skiing

development of a hut-to-hut cross-country ski system within the park to increase opportunities for winter back-country use.

Expanded skiing and snowmobiling

Alternative 4 - Expanded Cross-Country Skiing and Snowmobiling (Figure 5)

Snowmobiling

In addition to the existing snowmobile/snowcoach route from the north entrance to the North Junction (Route S1), snowmobiles would be allowed access to the rim via Pinnacles Road (Route S2). Snowmobiles would enter and exit the park via the former east entrance and travel on Pinnacles Road to and from the Phantom Ship overlook at Kerr Notch. This would provide an additional 12-mile roundtrip route for snowmobile use in the park. A route along the northeast portion of Rim Drive linking Pinnacles Road with the North Junction is not proposed because of steep terrain and avalanche hazards in the Dutton Cliffs area.

Cross-Country Skiing

In addition to the cross-country skiing described under Alternative 3, the NPS would explore development of a groomed trail system on Rim Drive. Alternatively, a groomed trail could be set on Rim Drive east to Vidae Falls (Route GC2) or Sun Notch, and possibly west to the Lightning Springs trailhead (Route GC3) along the Dutton Creek trail.

Snowshoe Walks

Same as Alternative 3.

Overnight Camping - Front Country

Same as Alternative 3.

Overnight Camping - Back Country

Same as Alternative 3.

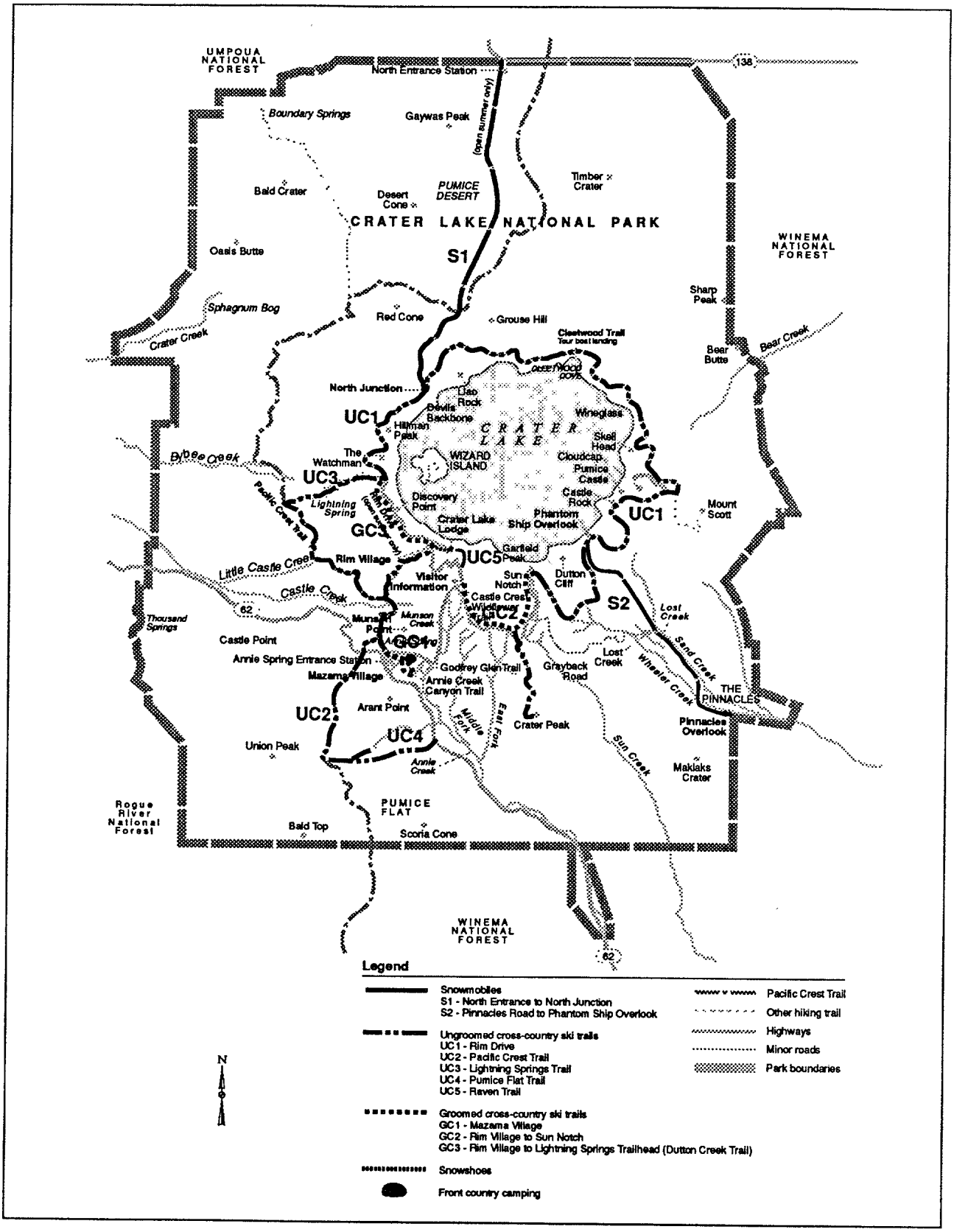

Figure 5. Alternative 4, Expanded Cross-Country Skiing and Snowmobiling

PUBLIC COMMENT

Your written comments regarding the WUP and this document are welcomed and are an important component of the decision-making process. Written comments will be accepted until February 27, 1994. Please send all comments to:

Mr. David Morris
Superintendent
Crater Lake National Park
P.O. Box 7
Crater Lake, OR 97604

As the nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural and cultural resources. This includes fostering wise use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people. The department also promotes the goals of the Take Pride in America campaign by encouraging stewardship and citizen responsibility for the public lands and promoting citizen participation in their care. The department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

NPS D-157