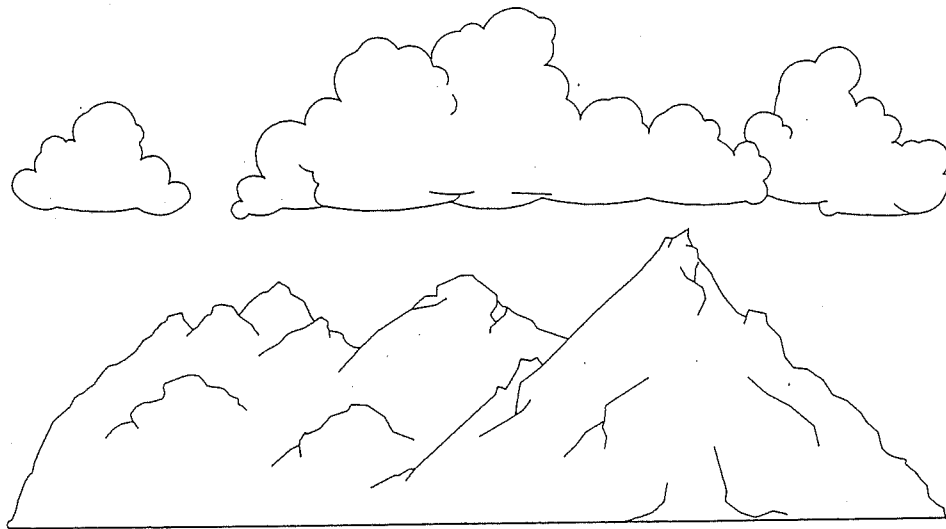


Redesignation of Oregon's Class II Wilderness Lands

- Final Draft -



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Preface

This report is a draft of a document being prepared by the Air Quality Division of the State of Oregon Department of Environmental Quality. The text was developed from wilderness and national park land description provided by the Federal Land Managers as well as information obtained by Department staff during visits to Class II wilderness areas during the summers of 1987 - 1989. This report represents the Department's assessment of Air Quality Related Values in Oregon's Class II wilderness areas, management implications associated with redesignation and assessment as to the adequacy of air resource protection afforded by Class II PSD provisions of the Oregon Administrative Rules.

The report is provided as a progress report to those interested in the redesignation process and will form the basis for an assessment of the energy, economics and health implications of redesignation.

Following completion of the economics assessment, the Department may request the Environmental Quality Commission for approval to conduct public hearings on proposed rule changes related to redesignation. If the Commission approves public hearings, a series of meeting will be held throughout Oregon to receive public input on the proposed rule changes. Following Department consideration of public comment, the proposed rules will be brought before the Commission for final rule adoption. The Commission may elect to revise, table or adopt the proposed rules. Final action is not expected until the fall of 1990.

John Core, Principal Author/Editor
Air Quality Division

October 5th, 1989

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Executive Summary

Congressional Amendments incorporated Section 169, Prevention of Significant Deterioration (PSD), into the Clean Air Act. This section of the Act set aside all Wilderness and National Park Lands existing as of August 7, 1977 as Federally Mandated Class I Areas within which air quality and Air Quality Related Values (AQRVs) were to be maintained in a pristine state. AQRVs include visibility, aquatic chemistry and biology, terrestrial effects, archeological and cultural resources and odors. There are currently 12 Class I areas within the State of Oregon.

Since 1977 Congress has enacted new legislation setting aside an additional 29 areas greater than 10,000 acres in size as either additions to the existing Class I areas or as entirely new wilderness areas. These new wilderness lands are currently designated as Class II areas which under current Oregon Administrative Rules receive no greater air quality protection than urban areas. During adoption of the Oregon Visibility Protection Program for Class I wilderness lands, the issue of visibility protection for Class II wilderness lands and additions was raised during public testimony on the proposed rules. In response to these concerns, the Department made a commitment to evaluate the importance of AQRVs within Class II wilderness to determine if they should be redesignated to Class I status and, if so, if they should also be afforded visibility protection.

During the summers of 1987 to 1989, the Department has worked with the USDA Forest Service and USDI National Park Service to survey and assess the importance of AQRVs of each of the 29 Class II areas or additions, implication regarding management of these lands (specifically as they related to forest prescribed burning), geothermal development and possible economic effects were also explored. In addition, five public workshops were held in the Spring of 1989 to receive public comment on redesignation issues.

The findings from the wilderness surveys indicate that insufficient protection from visibility impairment, acid deposition and effects of other air pollutants is provided by the current Class II designation for many of Oregon's new wilderness areas.

In view of the sensitive nature of wilderness AQRV's, the importance of these resources to the State of Oregon and the Congressional mandate to preserve and protect wilderness lands in a pristine state, the Department concludes that Oregon Administrative Rules should be revised to redesignate many of the Class II wilderness lands. These recommendations are contingent upon the forthcoming analysis of the energy, economic and health implication of redesignation. The final decision regarding

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redesignation will be made by the Environmental Quality Commission following public comment during the rulemaking process.

Areas Recommended for Redesignation to Class I & Visibility Protection

- 1 Columbia Wilderness
- 2 Salmon-Huckleberry Wilderness
Mt. Hood Wilderness Additions
- 3 Badger Creek Wilderness
- 4 Bull of the Woods Wilderness
Mt. Jefferson Wilderness Additions
Mt. Washington Wilderness Additions
- 5 Waldo Lake Wilderness
Diamond Peak Wilderness Additions
- 6 Mt. Thielsen Wilderness
Crater Lake National Park Additions
- 7 Rogue-Umpqua Divide Wilderness
- 8 Sky Lakes Wilderness
- 9 Wild Rogue Wilderness
Gearhart Mountain Wilderness Additions
Kalmiopsis Wilderness Additions (Southern)
Strawberry Mountain Wilderness Additions
North Fork John Day Wilderness Addition (Baldy Unit, Only)
Eagle Cap Wilderness Additions
Hells Canyon Wilderness Additions
- 10 Wenaha-Tuscanon Wilderness
- 11 John Day Fossil Beds National Monument

Areas Recommended for Class I Redesignation, Only

- 12 Boulder Creek Wilderness
Kalmiopsis Wilderness - Northern Additions

Areas Recommended to Remain as Class II Wilderness

- 13 Grassy Knob Wilderness
- 14 Mill Creek Wilderness
- 15 Black Canyon Wilderness
- 16 Monument Rock Wilderness
- 17 North Fork John Day Wilderness - Tower, Greenhorn and North
Fork John Day Units
- 18 North Fork Umatilla Wilderness
- 19 Gorge

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Acknowledgements

This document was prepared with the assistance of the USDA Forest Service Region 6, the National Forest staff throughout Oregon and the USDI National Park Service, Pacific Northwest Region. Illustrations are by Jerri Wildfong-Ritter and first appeared in the Draft Environmental Impact Statement for the Proposed Land and Resource Management Plan of the Siskiyou National Forest, 1987. The Department also thanks Joe Higgins and Val Descamps, USDA Forest Service Region 6, for their assistance in coordinating this work with other Forest Service staff and to Sheila E. Logan, Associate Area VI Ecologist, Willamette National Forest, for the wilderness inventories of endangered animals and sensitive plant species.

Disclaimer

The redesignation recommendation found herein are those of the Department and do not necessarily reflect the position of either the USDA Forest Service or the USDI National Park Service.

Background

In the Fall of 1986, the Department adopted a new series of State Implementation Plan rules designed to protect visibility within Oregon Federal mandatory class I areas (OAR 340-20-047, Section 5.2).¹ During adoption of these rules, controversy arose regarding protection of visibility within the new wildernesses created by the Oregon Wilderness Act of 1984. These new wildernesses are Class II areas, and are not addressed in the Environmental Protection Agency's Visibility Protection Rules (40CFR 51.300-307).²

Because visibility protection within these wildernesses was not required by the Clean Air Act or EPA rule, the Department did not include them within the scope of its visibility protection program. In response to concerns raised by the Environmental Quality Commission, the Department committed to development of a program to assess the Air Quality Related Values (AQRV's) of Oregon's Class II wildernesses to determine if they should be redesignated to Class I status under the Prevention of Significant Deterioration (PSD) section of the Oregon Administrative Rules.³

The program was conducted in cooperation with the USDA Forest Service and the USDI National Park Service. The evaluation includes all new Oregon wildernesses greater than 10,000 acres and all wilderness additions; additions to Crater Lake National Park and the John Day Fossil Beds National Monument. Wildernesses less than 10,000 acres have not been considered for redesignation pursuant to the requirements of Department rules on Restrictions On Area Classifications (OAR 340-31-120 (2)).

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Purpose

The purpose of this document is to provide the technical basis needed to support decisions regarding redesignation of Class II Wilderness and National Park Lands to Class I status. Redesignation to Class I requires revision of OAR Chapter 340, Division 13 (Wilderness, Recreational and Scenic Area Rules; Division 31, Section 120 (Standards for Air Purity, Restrictions on Areas Classifications), Division 20 (New Source Review) and Division 47, Section 5.2 (State Implementation Plan, Visibility Protection for Class I Areas). Once a decision has been made to redesignate an area to Class I, a separate decision must be made as to whether the land should be included within the visibility protection elements of the Oregon Clean Air Implementation Plan (SIP). These decisions must be weighed against existing legislative intent, Federal and State land management and environmental protection policies and the economic as well as societal impacts of the redesignation decision.

Rule Making Procedures

OAR 340-31-130 describes the process through which area in Oregon may be redesignated. ⁴ The procedure (in brief) requires that a discussion of the reasons for the proposed redesignation be developed, including a description and analysis of the health, environmental, economic, social and energy effects of redesignation be prepared; that public hearing on proposed rule making be held; that consultation with local governments occur and that the Federal Land Managers have sufficient opportunity to provide comment and recommendations on the proposed actions. Following the required consultation, public hearing and receipt of Federal Land Manager recommendations, the Department will bring the matter before the Environmental Quality Commission for rule adoption.

Schedule

The Department will be working with the USDA Forest Service and USDI National Park Service during the summer, 1987-fall, 1990 period to evaluate the air quality related values of the lands listed in Table 2, leading to completion of this document and development of a final list of lands to be redesignated to Class I. An assessment of the economic, energy and health implication of redesignation must then be completed. Should the Department decide to move forward on these issues and if the Environmental Quality Commission concurs, formal rule making and public hearing may occur during 1990. Areas redesignated to Class I and afforded visibility protection will later be incorporated into the Visibility Protection Plan elements of the Oregon SIP.

~~1. Introduction~~

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1. Introduction

The Clean Air Act as amended August 1977 contains provisions for the Prevention of Significant Deterioration (PSD) of air quality. Part C, Section 160 (2) of the Act describes the purpose of this part of the Act as follows:

"To preserve, protect, and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic or historic value."

Under Section 162 of the Act, all national wilderness areas which exceed 5,000 acres in size which are in existence on the date of enactment of the Act (August 7, 1977) were established as Class I areas and may not be redesignated. All other areas were established as Class II areas unless redesignated under the provisions of Section 164 of the Act.

Section 164 specifies that a State may redesignate such areas as it deems appropriate as Class I areas and notes that national wilderness areas established after the date of enactment of the Act which exceeds ten thousand acres in size may be redesignated, provided that notice is afforded and public hearings are conducted. The Act also requires that a satisfactory description and analysis of the health, environmental, economic, social and energy effects of the proposed redesignation be prepared for review by the public and redesignating authorities. This document has been prepared in response to the requirements of the Act and Oregon Administrative Rules.

Redesignation of an area from Class II to Class I assures a greater degree of protection of Air Quality Related Values (AQRV's) under the provisions of the Oregon Administrative Rules and the State of Oregon Clean Air State Implementation Plan (SIP). Proposed new major air pollution point sources or sources that wish to increase their emissions may be required under the provisions of the Prevention of Significant Deterioration New Source Review Rule to assess their impact on areas redesignated to Class I to assure compliance with the PSD Class I increments described below. Further, if an area is redesignated to Class I and it is determined that the area should be afforded visibility protection, mitigation or control of area sources (principally slash and agricultural burning) may be required. As a result, redesignation can affect the cost of constructing new point sources and land manager burning practices.

The Wilderness Act of 1964 defines "Wilderness" as an area "where the earth and its community of life are untrammelled by man; where man himself is a visitor who does not remain," and more

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specifically, as an undeveloped area of Federal land "retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions." ⁵ The Act further characterizes wilderness as areas which (1) appear to have been affected primarily by the forces of nature; (2) have outstanding opportunities for solitude or primitive types of recreation; (3) are of sufficient size to make preservation practicable; and (4) may contain ecological, geological or other features of scientific, educational or historical value. Congress adopted the Wilderness Act of 1964 creating the Wilderness Preservation System (PL 88-577) ⁶.

The Act brought previously designated national forest "primitive" areas into the wilderness system as Federal Mandatory Class I areas. Congress has adopted several additional Acts which have expanded Oregon's wilderness areas or created new ones. None of these additional lands have been redesignated from Class II to Class I status.

The Oregon Wilderness Act of 1984

Enactment of the 1984 Oregon Wilderness Act (PL 98-328) of June 26, 1984 established 22 new wilderness areas and expanded eight existing areas for a total of 2,172,000 acres within the national forests of Oregon ⁷. One tract of BLM land, the Table Rock Wilderness was also created. Of the 22 new wildernesses, 14 are greater than 10,000 acres, the lower limit of lands subject to redesignation under Oregon Administrative Rules (OAR 340-31-120).

Crater Lake National Park Additions

23,014 acres was added to Crater Lake National Park in December of 1980 (P.L. 96-553) to assure that lands geographically related to the features of the park were managed by the National Park Service. ⁸

John Day Fossil Beds National Monument

Public Law 93-486, which authorized the John Day Fossil Beds National Monument, set aside a total of 14,402 acres of the John Day Basin because of the national significance of the area's geological and paleontological resources. These Class II lands may have important air quality related values that need to be considered for the special protection afforded by Class I status. ⁹

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Eagle Cap Wilderness Additions

Public Law 92-521 (October, 1972), which set aside 32,000 acres of national forest land adjacent to the Eagle Cap Wilderness area.¹⁰

The Endangered American Wilderness Act of 1978

This Act set aside the following lands as wilderness: ¹¹

- Kalmiopsis Wilderness Additions of 92,000 acres
- Wild Rogue Wilderness of 36,700 acres
- Wenaha-Tucannon Wilderness of 180,000 acres in Oregon and Washington
- Mt. Hood Wilderness Addition of 33,000 acres
- Three Sisters Wilderness Addition of 45,400 acres

In total, 29 areas currently set aside as wilderness are designated as Class II lands. Table 1 lists current Class II wilderness lands greater than 10,000 acres in size which may be redesignated to Class I status. All of Oregon's wilderness areas are shown in Figure 1. Wilderness legislation noted above is discussed below in greater detail.

Class I Vs Class II Wilderness Lands

There are two distinct differences between Class I and Class II wilderness lands:

1. Class I lands are administratively protected to a much greater degree from new industrial source pollutant impact through the Prevention of Significant Deterioration (PSD) New Source Review permitting process administered by the Department. The permitting process provides the Federal Land Managers with an opportunity for permit review and comment. New source impacts are limited to the Class I PSD increments for sulfur dioxide and particulates, only.

Although new source acid deposition, ozone, nitrogen oxide or other pollutants may be restricted through the Federal Land Manager and public permit comment process, the only direct protection of Class II wildernesses provided under the current Oregon Administrative Rules is that afforded by the PSD Class II increments and National Ambient Air Quality Standards. A key question, then, is the degree to which the Class II increments protect the AQRV's of the Class II wilderness lands. Table 2, below, lists the maximum allowable increases in pollutant concentrations for Class I and Class II areas.

2. All Federal Mandatory Class I areas are provided protection from visibility impairment under Section 169 of the Clean Air Act. Class II wilderness are managed by the USDA Forest Service as

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Class II lands. Class II wilderness are not directly protected under the Oregon Visibility Protection Program (OAR 340-20-047, Section 5.2). As a result, Class II wildernesses which have visibility impairment cannot be addressed in the Visibility Protection Plan's control strategies. Within the context of the Wilderness Act of 1964 and the Resources Planning Act, all wilderness areas are managed by the USDA Forest Service for the protection of their wilderness character and the protection and, when necessary, the improvement of their air resources. As Class II lands, however, the protective provisions of the Department's PSD New Source Review and Visibility Protection Programs do not apply.

Table 1 Prevention of Significant Deterioration Increments
(Micrograms Per Cubic Meter)

Class I Areas Increments				
Pollutant	Annual	24-Hour	8-Hour	3-Hour
SO2	2.0	5.0		25.0
TSP	5.0	10.0		

Class II Areas Increments				
Pollutant	Annual	24-Hour	8-Hour	3-Hour
SO2	20.0	91.0		512.0
TSP	19.0	37.0		

Implication of Redesignation to Prescribed Burning

Redesignation to Class I (Only): If prescribed fire emissions projected within the adopted National Forest Plan are at or below PSD baseline emission levels, then no additional Class I increment is consumed. There are therefore no direct consequences to prescribed burning practices upon redesignation to Class I. In this case, the consequences of redesignation fall exclusively on industrial point sources that may impact the new Class I area.

Redesignation to Class I with Visibility Protection: If a wilderness is redesignated and afforded visibility protection, prescribed and agricultural burning emissions may not be transported into the wilderness if it is found the smoke results in visibility impairment during the visibility protection period of July 4 to Labor Day (inclusive). If burning can be accomplished at times outside of the protection period, or if the burning can be accomplished such that visibility impairment is avoided then redesignation to Class I with visibility protection may not be in

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conflict with land manager burning programs. If, in the future, the visibility protection period is expanded, conflicts with land manager burning may change.

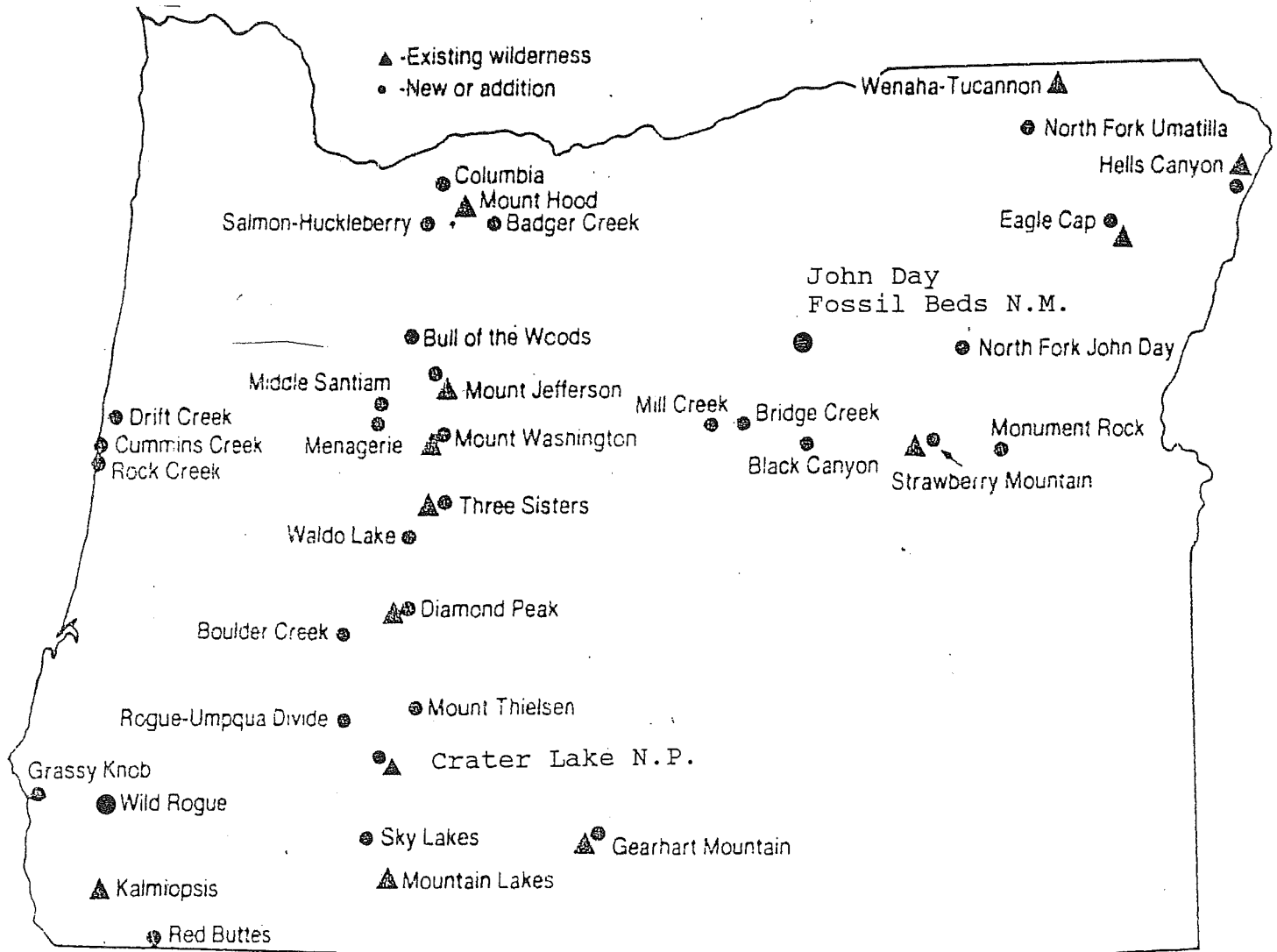
Table 2: Lands Subject to Redesignation Assessment

<u>Area</u>	<u>Class I Acres</u>	<u>Class II Acres</u>
1. Columbia Wilderness	None	39,000
2. Salmon-Huckleberry Wilderness	None	44,600
③ Mt. Hood Wilderness Additions	14,160	33,000
4. Badger Creek Wilderness	None	24,000
5. Bull of the Woods Wilderness	None	34,900
⑥ Mt. Jefferson Wilderness Addition	100,208	6,800
⑦ Mt. Washington Wilderness Addition	46,116	6,400
⑧ Three Sisters Wilderness Addition	201,702	83,500
9. Waldo Lake Wilderness	None	46,600
⑩ Diamond Peak Wilderness Addition	36,637	15,700
11. Boulder Creek Wilderness	None	19,100
12. Mt. Thielsen Wilderness	None	55,100
⑬ Crater Lake National Park Addition	✓160,290	22,934
14. Rogue-Umpqua Divide Wilderness	None	33,200
15. Sky Lakes Wilderness	None	116,300
16. Wild Rogue Wilderness	None	36,417
⑰ Gearhart Mountain Wilderness Addition	18,709	4,100
18. Grassy Knob Wilderness	None	17,200
⑱ Kalmiopsis Wilderness Additions	76,900	102,800
20. Mill Creek Wilderness	None	17,400
21. Black Canyon Wilderness	None	13,400
⑳ Strawberry Mtn. Wilderness Addition	33,653	35,697
23. Monument Rock Wilderness	None	19,650
24. North Fork John Day Wilderness	None	121,400
㉑ Eagle Cap Wilderness Addition	293,775	66,500
㉒ Hells Canyon Wilderness Addition	109,740	21,293
27. North Fork Umatilla Wilderness	None	20,144
28. Wenaha-Tucannon (Oregon Portion)	None	39,200
29. John Day Fossil Beds National Monument	None	14,402

Note: Current State of Oregon Administrative PSD Rules limit redesignation to new wilderness areas of greater than 10,000 acres. Additions to existing Class I wilderness areas of less than 10,000 acres are also included. 12

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Figure 1
Oregon Wilderness Areas Map



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2. Wilderness Legislation

Existing National Park Service Federal Legislation

The following federal legislation is relevant to the establishment and management of Crater Lake National Park and the John Day Fossil Beds National Monument:

The Antiquities Act of 1906 provides legislative reinforcement for the protection of paleontological resources on Federal lands. P.L. 94-429 regulates mining activity within areas of the National Park System.

Executive Order 11593 (protection and Enhancement of the Cultural Environment, May 13, 1971) and Section 110, P.L. 96-515 (National Historic Preservation Act, as amended, December 12, 1980).

These authorities establish affirmative responsibilities for Federal agencies in the preservation of cultural resources. Agencies are to identify, consider, preserve, and positively use historic properties under these authorities in order to achieve the basic purposes of the Act, which are:

1. Use measures, including financial and technical assistance, to foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony and fulfill the social, economic, and other requirements of present and future generations;

2. Provide leadership in the preservation of the prehistoric and historic resources of the United States and of the international community of nations;

3. Administer federally owned, administered, or controlled prehistoric and historic resources in a spirit of stewardship for the inspiration and benefit of present and future generation;

4. Contribute to the preservation of non-federally owned prehistoric and historic resources and give maximum encouragement to organizations and individuals undertaking preservation by private means;

5. Encourage the public and private preservation and utilization of all usable elements of the Nation's historic built environment; and

6. Assist State and local governments and the National Trust for Historic Preservation in the United States to expand and accelerate their historic preservation programs and activities.

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Section 106 of the Historic Preservation Act of 1966. Section 106 requires Federal agencies to take into account the effects of Federal or federally assisted undertakings on National Register eligible or listed properties and to give the Advisory Council on Historic Preservation an opportunity to comment on such undertakings. Documentation is being submitted for listing the Cant Ranch in the National Register in 1984.

Section 2124 of P.L. 94-455, the Tax Reform Act of 1976; Section 701(f) of P.L. 95-600, the Revenue Act, 1978; P.L. 97-34, the Economic Recovery Tax Act, 1981. These laws contain a variety of incentives to encourage capital investment in historic buildings and to spur revitalization of historic neighborhoods. These preservation tax incentives apply only to commercial neighborhoods. These preservation tax incentives apply only to commercial or income-producing structures. Rehabilitation must be done according to the Secretary of the Interior's historic preservation standards. The tax incentives are available for any project which the Secretary designates as a certified rehabilitation of a certified historic structure.

Archaeological and Historic Preservation Act of 1974; Public Law 93-291; 16 U.S.C. 460. This act calls for the preservation of historic and archaeological materials and data that otherwise would be lost as a result of Federal construction or federally licensed or aided activities. Data recovery or in situ preservation is available to the Secretary.

Archaeological Resources Protection Act of 1979; Public Law 96-95; 16 USC 470aa. This act further protects historic, prehistoric, and archaeological properties on Federal and Indian lands by providing criminal and civil penalties against unauthorized use and destruction of those properties.

State and Local Law and Policies. Oregon Administrative Rules, Chapter 340 Division 13 establish environmental standards for wilderness areas. By policy, the rule states (Section 5) that:

"Wilderness areas represent a natural resource of unique importance. Congress has protected such areas by enacting the Wilderness Act, P.L. 88-577, 16 USC Sec. 1131, et seq. Those wilderness areas located within the geographical limits of the state are a major part of the cultural heritage of the citizens of Oregon and are a key element in developing and maintaining tourism and recreation as a viable industry. Thus, the environment of wilderness areas is deserving of the highest level of protection and safeguarding by the state in order to preserve Oregon's unique primitive and natural land areas. The Wilderness Act allows certain activities in wilderness areas. Most of these have minimal present impact on the environment. However, mining and some other activities

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allowed by the Wilderness Act pose a serious threat of a substantial harm to the unique environment of wilderness areas. Therefore, it is declared to be the policy and purpose of the Department of Environmental Quality to maintain the environment of wilderness areas essentially in a pristine state and as free from air, water and noise pollution as is practically possible and to permit its alteration only in a manner compatible with recreational use and the enjoyment of the scenic beauty and splendor of these lands by the citizens of Oregon and of the United States."

(Note: These policies do not apply to wilderness areas established after January 1, 1977 until a public hearing on the possible application of these or other rules have first been held by the Commission (OAR 340-13-035)).

State law requires Oregon cities and counties to develop and implement land use plans that are consistent with statewide goals and guidelines. With respect to the John Day Fossil Beds National Monument, Grant County has complied with the State Land Conservation and Development Commission (LCDC) enforcement order by submitting its revised plan. The Grant County plan includes the John Day Fossil Beds Monument within the SNSA (Significant Natural or Scenic Area) Combining Zone. Most of the land adjacent to the Monument is zoned EFU (Exclusive Farm Use) with minimum parcel sizes varying between 10 and 160 acres. Wheeler County does not have an acknowledged plan, either. However, a revision is expected soon, with State review and probable acknowledgement to be completed by May or June 1984.

3. Wilderness Redesignation Criteria

Lands listed in Table 1 may be recommended for Class I redesignation if they possesses Air Quality Related Values (AQRV's) as an important attribute and it is determined that redesignation is appropriate.

Air Quality Related Values

The April 10, 1978 Federal Register defines Air Quality Related Values as:

"Air quality related values are all those values possessed by an area except those that are not affected by changes in air quality and include all those assets of an area whose vitality, significance or integrity is dependent in some way upon the air environment. These values include visibility and those scenic, cultural, biological and recreational resources of an area that are affected by air quality. Important attributes of an area are those values or assets that make an area significant as a national monument, preserve or wilderness area. They are the assets that are to be preserved if the area is to achieve the purposes for which it was set aside."

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AQRV's describe a variety of resources including visibility, aquatic biology, aquatic chemistry, terrestrial plants, geology and soils, cultural and archaeological, odors, other ecosystem effects and recreational resources. The purpose of redesignating an area to Class I is to protect those resources in the area that possess air quality related values as important attributes.

The first action in identifying the resources of an area is a review of information found in the area's enabling legislation and in management and planning documents. After the resources of an area are identified they should be evaluated to determine if they possess air quality related values discussed below. In addition to a review of the enabling legislation, several criteria are used in reaching a decision on this issue. The criteria were extracted from the Federal Register of April 10, 1978 (Vol.43, No.69), National Monuments, Preserves and Primitive Areas Review for Class I Redesignation Recommendation.

4. Redesignation Considerations

^{on} Criteria 1: Area Size.

Is the area of such small size, with its resources so interdependent of those of the surrounding region, that redesignation is impractical? Many of the smaller study areas have resources which are highly interdependent with those of the surrounding region such that special air quality protection for such areas beyond that provided the surrounding region will not produce noticeable benefit within the area. In this sense, Class I redesignation of highly interdependent areas may be impractical. Under this Criteria, study areas in excess of 10,000 acres are presumed practical for redesignation. Study areas of 5,000 acres or less are considered impractical to redesignate to Class I, unless the analysis indicates that the resources of the area are sufficiently independent of those of the surrounding region such that it is practical to protect the air quality related values of these resources to a level higher than the level of protection afforded the surrounding region. (Note: OAR 340-31-120 permits redesignation of lands greater than 10,000 acres, only).

^{Criterion} ~~Criteria~~ 2: Importance of AQRV's.

Are air quality related values important attributes of the area? The purpose of this step is to analyze the air quality related values of the area to determine whether they are important attributes of the area. Important attributes of an area are those values or assets that make an area significant as a national monument, preserve, or wilderness. They are the assets that are to be preserved if the area is to achieve the purposes for which it was set aside. In weighing the importance of AQRV protection in the redesignation process, judgement must be made as to (1) the adequacy of air quality ambient air quality standards and Class II increment to protect the resource and (2) the

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probability that current and/or changes in future pollutant concentrations are adequately managed under current regulations.

Probably the most important AQRV common to Oregon's Wildernesses is visibility. The scenic values of the lands under consideration can be discussed in terms of the significance of scenic vistas and visibility (a) within the wilderness boundaries and (b) external vistas viewed from within the wilderness. Although the Clean Air Act Section 169 (A) only requires protection of visibility within Federal Mandatory Class I Areas, the value of external vistas such as the view of Mt. Jefferson or Mt. Hood from within the Bull of the Woods Wilderness is, in the Department's judgement, important to the visitor's experience. In assessing visibility-related AQRV's, the Department believes that the value of external vistas should be considered in the redesignation process. The issue of protection of visibility along these integral vistas is a separate but related question that must be considered by the Department and the Federal Land Manager during development of visibility control programs for Oregon Wilderness Areas.

Criteria 3: Effects on Major Facilities

What effect will Class I redesignation have on planned major emitting facilities? Major emitting facilities (MEF) are large point sources of air pollution, defined at Section 169(1) of the Clean Air Act. Information concerning the MEF that are presently being developed or planned within 10 miles of the area can be obtained from the Department or EPA. If a MEF is presently planned in the vicinity of an area, a determination will be made as to whether or not the Class I increments within the area will be exceeded by operation of the MEF. If the increments will not be exceeded, then it is concluded that redesignation will have no significant effect upon the MEF. If the Class I increments will be exceeded, then it is concluded that redesignation may have an effect on the MEF and that redesignation to Class I may require relocation and redesign of the MEF.

As of the date of publication, no major emitting facilities that would be effected by redesignation have applied to the Department for an air contaminant discharge permit. The issue is one of future consequences to MEF construction or process modification that may result from redesignation decisions.

Criteria 4: Consideration of the Public Interest

Is it in the public interest to redesignate the area as Class I? For those areas where Class I status may be practical and which possess air quality related values as important attributes, Class I redesignation may not be appropriate due to the effect redesignation will have on planned MEF. Additionally, redesignation to Class I status may place future restrictions on existing point sources expansion. If an area is redesignated to Class I and afforded visibility protection, restrictions may be placed on forestry and/or agricultural

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burning practices if it is determined that visibility within the wilderness during the visibility protection period (currently July 4 - Labor Day) is impaired by smoke from these sources. In all cases, newly redesignated Class I areas afforded visibility protection would be included in the Department of Forestry's and DEQ's Smoke Management Plans as "smoke sensitive" areas not to be impacted by smoke during the July 4 - Labor Day period. In addition, major new industrial point sources would be required to conduct a visibility impairment analysis as a part of the New Source Review permitting process to demonstrate that no adverse impact on visibility will occur.

The impact of these restrictions and potential costs to the forest and agricultural industries will be considered in this step as will the positive benefits to the public, Oregon tourism and recreational interests. A determination will be made as to whether the public interest is better served by redesignation or by maintaining existing Class II status. In making this determination, consideration has been given to the relative importance of the AQRV's and the sensitivity of the AQRV to deterioration as well as the likelihood that pollutant concentrations would reach levels of concern. An area is considered for redesignation only if current Class II PSD increments are found to afford insufficient AQRV protection.

5. Sensitivity To Acid Deposition

A major reason to consider redesignation of PSD Class II lands is their sensitivity to acid deposition. Although it is generally agreed that ecosystem damage has not occurred in Oregon as a result of acid deposition, it is also agreed that many of Oregon's wilderness lands are found in regions where surface water buffering capacity is very limited. In his summary of Acid Precipitation in the Pacific Northwest, Baldwin and Kozak ¹³ state that:

"Although the Pacific Northwest has not to date experienced measurable environmental damage from acid precipitation, significant resources are at risk. The combination of poorly buffered soils and water, steep mountain slopes, heavy precipitation, heavy intermittent snowmelt, localized pollution and significant economic and aesthetic resources at risk create concern about potential impacts of acid precipitation."

In their survey of 63 Oregon Cascade lakes, Nelson and Delwiche ¹⁴ concur with Baldwin and Kozak in concluding that:

- "1. Oregon's Cascade lakes have an extremely dilute ionic composition relative to typical freshwater lakes;
2. Most Oregon Cascades lakes are highly sensitive to acid precipitation and could be adversely impacted if acid precipitation were to increase;

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3. Based on chemical composition, Oregon's Cascade lakes show no signs that significant acidic inputs have occurred to date."

Surface Water Alkalinity

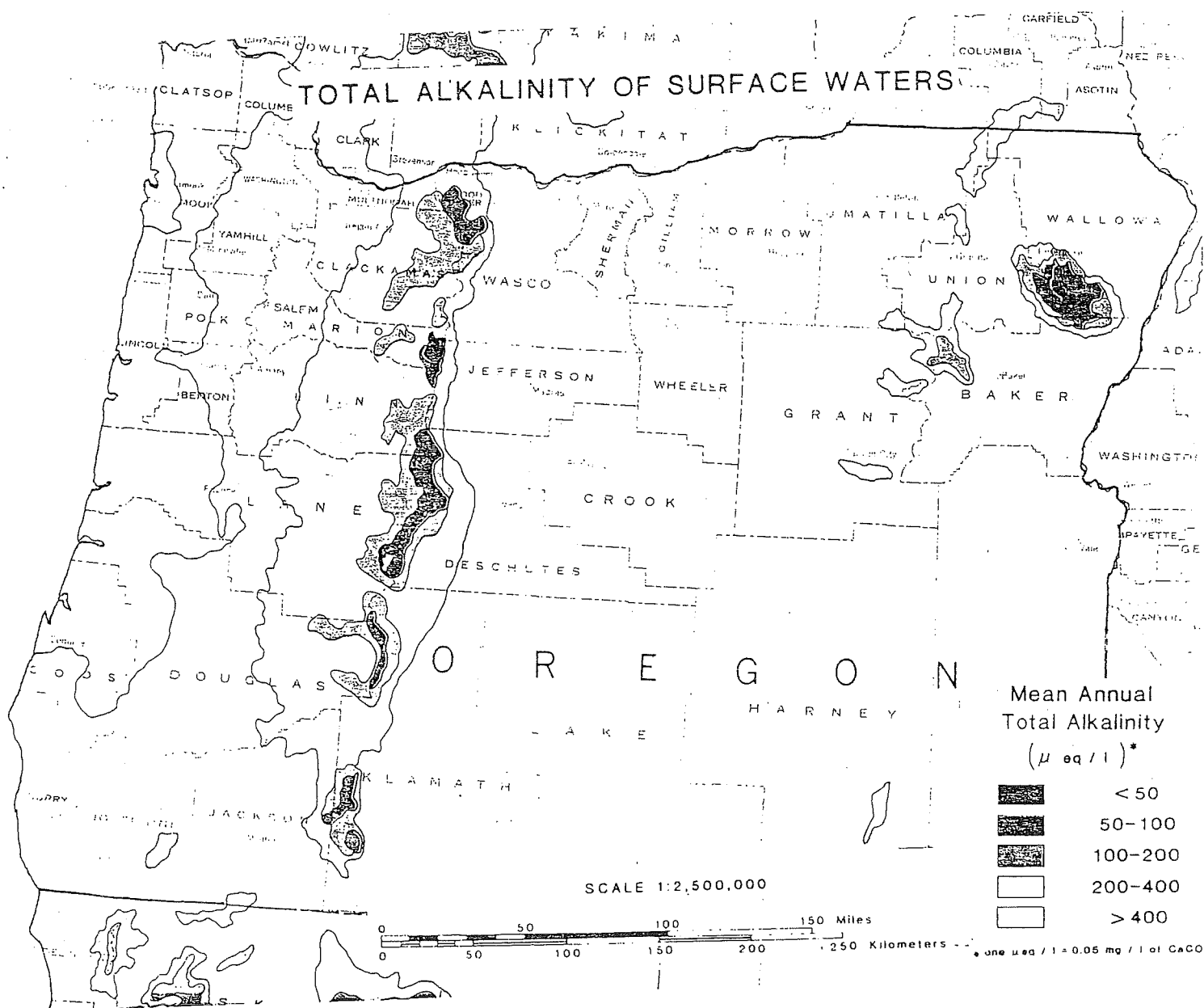
The alkalinity of surface waters in Oregon's wildernesses is related to several important geochemical and hydrologic processes that determine whether waters will acidify and the rates at which acidification proceeds. Alkalinity is a measure of the acid-neutralizing capacity of surface waters and is largely a function of the carbonate-bicarbonate system within the watershed. If these inorganic anion concentrations are low, other substances such as organic acids, silicates, ammonia or aluminum-hydroxy compounds may also contribute to the acid neutralizing capacity.¹⁵

The map shown in Figure 2 is based on available measurements of surface water alkalinity data, geology and physiography within the western U.S.¹³. In their manuscript on the alkalinity of western surface waters, Omerick and Griffith state that "Although it is not possible to define exact break points between sensitive, moderately sensitive and insensitive waters, it is generally agreed that waters of total alkalinity $> 200 \mu\text{eq/l}$ are relatively insensitive to acidic deposition."¹⁶



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Figure 2
Surface Water Total Alkalinity



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There are two distinct physiographic regions within the Oregon Cascades; the western Cascades which are composed of older deposits of basalt, andesite and pyroclastic rocks deposited during the Oligocene and Miocene eras. Most of the surface waters within this region, including most of the major reservoirs of the Willamette Basin have alkalinities of 200-400 $\mu\text{eq/l}$. Within the High Cascades, geologically younger volcanic peaks, cones and basaltic lava flows reach elevations between 3000 to 3424 meters (9,800 to 11,235 feet). Andesite and basalt are the dominant rock types. Two areas with an abundance of very low alkalinity lakes ($< 50 \mu\text{eq/l}$) are found north of Mt. Jefferson and in the vicinity of Waldo Lake. There are a number of other lakes scattered along the crest of the Cascades and within the Eagle Cap Wilderness that have very low surface water alkalinity.

Acid Deposition Sensitive Wilderness Lands

Class II wilderness lands located in acid deposition sensitive area illustrated in Figure 2 ($< 200 \mu\text{eq/l}$ total alkalinity) include:

- Mt. Hood Wilderness Additions
- Badger Creek Wilderness
- Salmon Huckleberry Wilderness
- Bull of the Woods Wilderness
- Mt. Jefferson Wilderness Additions
- Mt. Washington Wilderness Additions
- Three Sisters Wilderness Additions
- Waldo Lake Wilderness
- Diamond Peak Wilderness
- Mt. Thielsen Wilderness
- Sky Lakes Wilderness
- North Fork John Day Wilderness (Baldy Unit)
- Eagle Cap Wilderness Additions

6. Wilderness & National Park/Monument Land Descriptions

The following pages describe the wilderness and National Monument lands currently designated as PSD Class II lands which have been considered for redesignation to PSD Class I status. Note that descriptions of current Class I wildernesses have been included if additions to these lands have been adopted by Congress. The descriptions and maps that follow have been provided by the USDA Forest Service and USDI National Park Service for use herein.

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1. Columbia Wilderness

National Forest:	Mt. Hood, Columbia Gorge District
Size:	39,000 acres
Access Points:	I-84, Wahtum Lake
Miles of Trail:	123
Elevation Range:	1200 to 4600'

General Description

This area is located about 30 miles east of Portland and eight miles west of Hood River, Oregon. The landscape exhibits a wide variety of scenic features and farms. The breaks of the Gorge are characterized by spectacular basalt cliffs, rocky slopes, and rock outcroppings. Mountain peaks, talus slopes, waterfalls, and lakes are other significant and recurring features. The main drainage are Tanner Creek, Eagle Creek, and Herman Creek and are all oriented in a north-south direction. About half of the area is within the Western hemlock ecosystem, the upper slopes contain the Pacific Silver fir zone. Recreational use totals about 64,450 RVD per year with an expected 4% increase. Most of the use occurs during the June-late September period.

Other Features

Most trails are within the major drainage and therefore have a north-south orientation. The Pacific Crest National Scenic Trail and Eagle Creek Trail are the most well-known and heavily used trails within the Wilderness. Other trails, such as Tanner Butte, Herman Creek, Nick Eaton Ridge, and Gorton Creek offer less populated opportunities. Lakes in the east end of the Wilderness such as Rainy, North and Bear were dammed in the early 1900's as part of an irrigation scheme for the Hood River Valley.

Recreational use of the Wilderness includes hiking on the Pacific Crest National Scenic Trail and Eagle Creek Trails. Popular attractions include Punch Bowl Falls, Tunnel Falls and Wahtum Lake.

Air Quality Related Values

Visibility: Since 1982, the Mt. Hood National Forest has been involved with the USDA Forest Service Region 6 office and the Department of Environmental Quality in monitoring visibility within the Mt. Hood Wilderness. In 1982, the Department established a monitoring site at Hickman Butte which has been used since the summer of 1987 to photograph a view into the Columbia Wilderness.

Visibility is the most important AQRV of the Wilderness. Scenic resources include two popular views: (1) Tanner Butte (4500') is accessed by trail #401 and offers a 360 degree panoramic view of Tanner Creek, Opal Creek, Eagle Creek and numerous peaks to the south and east; (2) Chinidere Mountain (4674') is accessed by the Pacific Crest

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National Scenic Trail and offers a 360 degree panoramic view of Wahtum Lake, Herman Creek, Eagle Creek and Tanner Butte. Although the view of the Columbia Gorge and Cascade mountain peaks from Benson Plateau is important to a minority of visitors, the short range views of waterfalls within the Wilderness is very important.

Aquatic Chemistry: Aquatic chemistry is not an important issue as there are no lakes within the wilderness.

Terrestrial Plants: Sensitive plant species include :

Cimifuga laciniata
Corydalis aquae-gelidae
Hypopitius monotropa
Isopyrum hallii
Lycopodium annotinum
Penstemon subseratus
Silene douglasii var monantha

Other AQRV's: Few cultural/archeological assets are known to exist within the Wilderness. Old lookouts and cabins have long since disappeared. The Nick Eaton Ridge Trail leading to Wahtum Lake is an old Indian trail. Little information is available on geology and soils, cultural or archeological assets, odors or other ecosystem effects.

Ecologist's Report (Provided by S. Logan, Region 6 Ecologist)

The Columbia Wilderness is a heavily used recreation site near the Columbia River Gorge. The area is popular with hikers and sightseers and has many miles of trails. Many short-range views of waterfalls, lakes and steep drainage are found along the trails and viewpoints within the Wilderness. More long-range internal vistas include a view of the Benson Plateau and major drainage. Integral vistas of the major peaks to the south and east of the Wilderness Area are seen from some of the major points.

The Wilderness Area consists of forested habitats of both the western hemlock and Pacific silver fir plant associations as well as basalt cliffs, talus slopes, lakes and other riparian habitats. Spectacular stands of Noble fir and Pacific silver fir may be found on the Benson Plateau.

A major source of odor pollution to the Wilderness Area is the pulp mill at Camus. Other sources of air pollution are the industrial, slash and field burning smoke from Washington State.

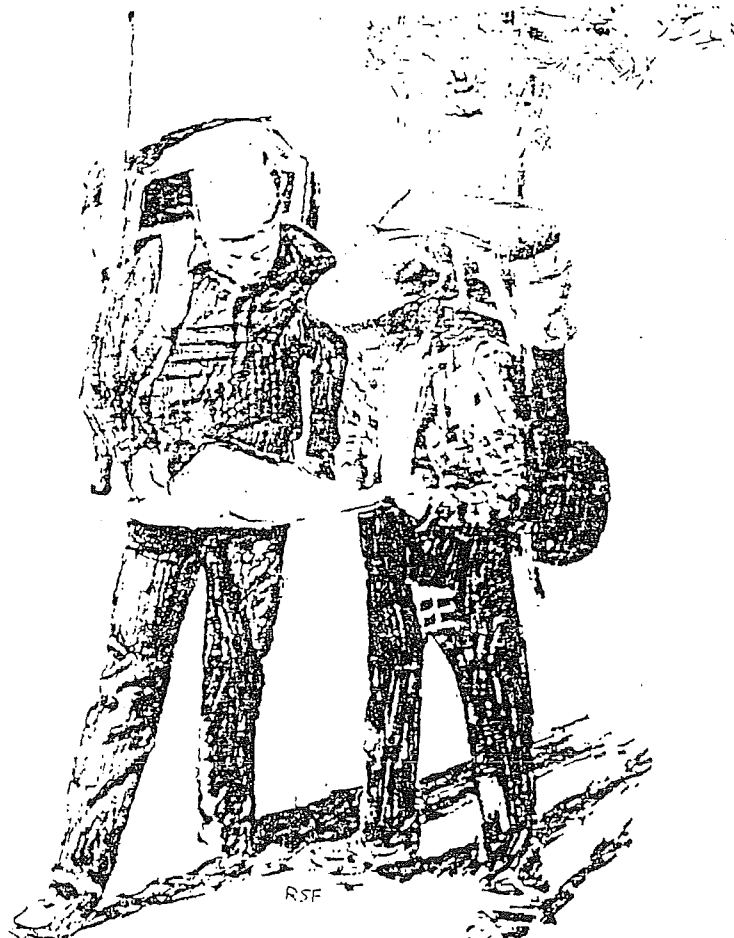
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Management Implications

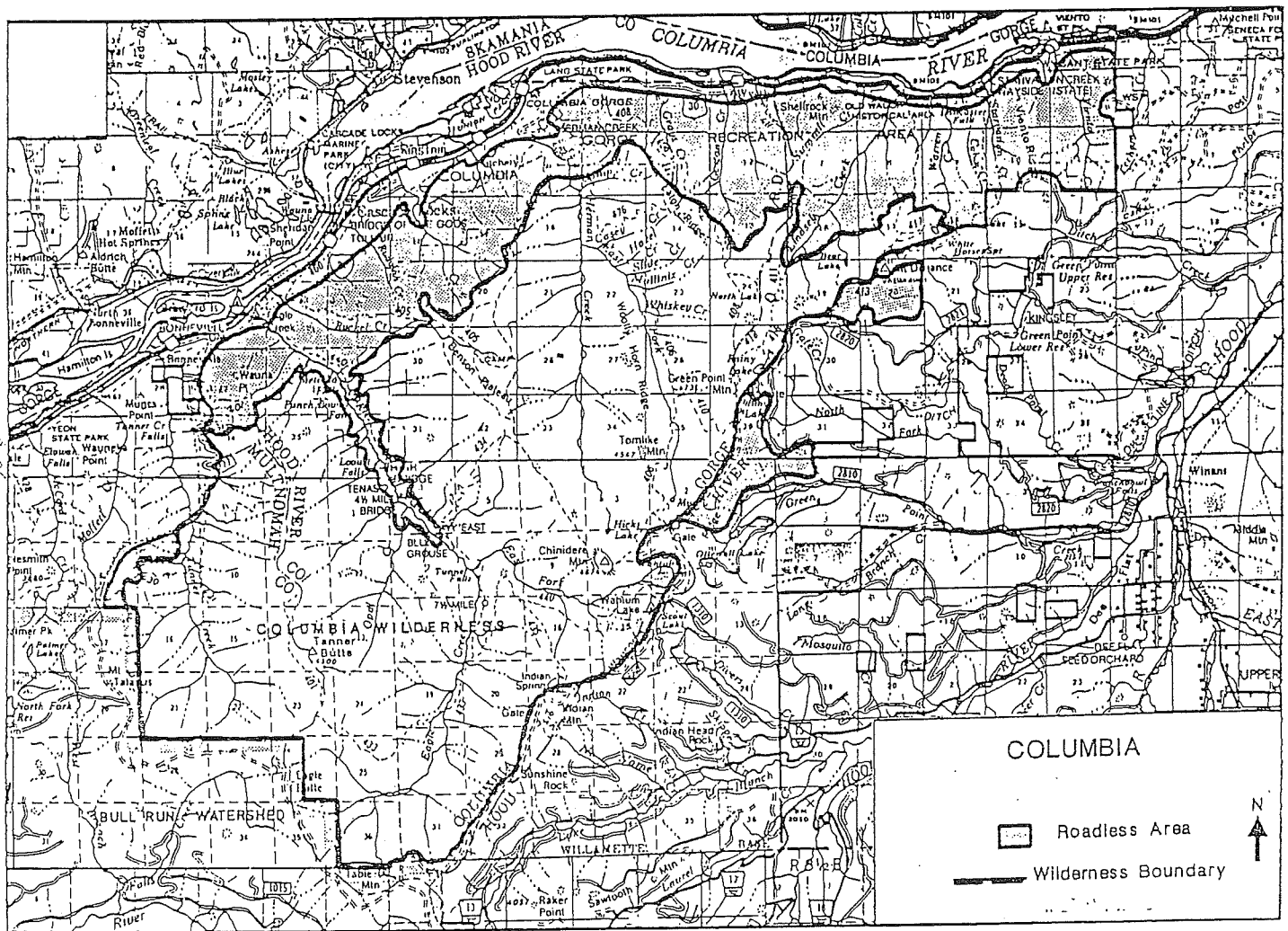
The principal management implication of redesignation is that of constraints on forest prescribed burning programs in the State of Washington and, if included under the visibility protection plan, to burning within the Bull Run watershed. Slash burning within Hood River County in the Fall during east wind conditions may also be restricted if the visibility protection period were extended beyond the July 4-Labor Day period. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

The principal issue is the degree to which the PSD Class II increments protect sensitive plants and the level of protection that should be afforded to long-range views of the Columbia Gorge. The importance of further protecting these AQRVs must be weighed against potential slash burning restrictions to the Oregon and Washington forest industry. In view of the numerous sensitive plants within the Wilderness and the importance of long range vistas, it is recommended that the Columbia Wilderness be redesignated to Class I and afforded visibility protection.



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Columbia Wilderness Map



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2. Salmon-Huckleberry Wilderness

National Forest: Mt. Hood, Zigzag District
Size: 44,600 acres
Access Points: Highway 26 and Salmon River Road; Highway
224 and Abbot Road; Sherar Burn Road #2613
Miles of Trail: 70
Elevation Range: 1400 to 4800'

General Description

This area is located about 15 miles southeast of Sandy, Oregon and 5 miles southeast of Portland. The area contains two major drainage; the Salmon River and Eagle Creek. The area contains geologic features such as volcanic plugs, pinnacles and cliffs. There are very steep and sharply dissected side slopes. The slopes are consistently 60 to 90%. The mid and lower slopes of the major slopes are occupied by Western hemlock zone forests. The upper slopes are within the Pacific Silver fir zone. Rocky, high elevation forb and grass ecosystems are found on Salmon Butte and along Huckleberry Mountain. Annual recreational use totals 11,550 RVD's, primarily in the June-late September period. Much of the visitation is related to viewing of the streams and waterfalls along the major drainage, especially the Salmon River Gorge.

Other Features

The Salmon River National Recreation Trail lies within the Wilderness. The Salmon River Gorge with its many waterfalls is a major attraction. Although the Salmon River Trail appears to parallel the River, it in fact lies several hundred feet above the river, except for the lower 2-1/2 miles of trail. Other trails include Eagle Creek, Wildcat Mtn. and Huckleberry Mtn. Hunchback Trail is along the northeastern boundary of the Wilderness.

Ecologist's Report

(Following provided by S. Logan, Region 6 Ecologist)

The Salmon Huckleberry Wilderness ranges from 1400 to 4800 feet in elevation. The Salmon River and Eagle Creek drainage are within the area. The Salmon River is a wild and scenic river and is used by fishermen. Otherwise there is relatively little recreational use of this Wilderness.

The mid and lower slopes of this Wilderness are dominated by Douglas-fir and western hemlock forests with understories of rhododendron, dwarf Oregon grape and swordfern. The upper slopes are typical of those of the Pacific silver fir zone, consisting of Pacific silver fir, Douglas-fir and western hemlock. Many of the stands seen along the Douglas trail are very moist and rich forests of Pacific silver fir with Alaska yellow cedar and a rich herbaceous layer dominated by Oregon oxalis. In contrast, on the rocky ridges, forb and grass

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communities and shrub fields are common. There are numerous openings on andesitic outcrops with plant communities of vine maple, kinnickinick, lichens and mosses.

A sensitive species of club moss, Lycopodium selago was observed on the Douglas Trail. In addition, another sensitive species, Corydalis aquae-gelidae has been reported in this Wilderness.

Air Quality Related Values

Visibility: Scenic resources of the Salmon-Huckleberry Wilderness include three popular vistas: (1) Hunchback Mtn. and Devil's Peak (5045') accessed by trail #793 offering a view of most of the Wilderness from the north across the Salmon River to Salmon and Hambone Buttes to the south; (2) Salmon Butte (4877') accessed by trail #791 offering excellent views north, west and northeast including the South Fork of the Salmon River, Devil's Peak and Mt. Hood; (3) Huckleberry Mountain accessed by trail #783 running along a major ridge in the western portion of the Wilderness and offering a view of Boulder Creek, Cheney Creek, Eagle Creek and the South Fork of the Salmon River.

Visibility is the most important AQRV of the Wilderness. A major resource that would be protected under Class I\visibility status are the integral vistas from the Salmon-Huckleberry north toward Mt. Hood, Mt. Adams, Mt. St. Helens and Mt. Rainier as well as south toward Mt. Jefferson. Visibility within the wilderness is of lesser importance than the integral vistas.

Aquatic Biology: Since there are no major lakes within the wilderness, aquatic biology is not an important AQRV.

Aquatic Chemistry: Since there are no major lakes within the wilderness, aquatic chemistry is not an important AQRV.

Other AQRV's: Little information is available on terrestrial plants, geology and soils, cultural or archeological assets, odors or other ecosystem effects.

Management Implications

Redesignation of the Salmon-Huckleberry Wilderness to Class I would primarily impact prescribed burning activity on the northern side of the Estacada District. Prescribed burning for wildlife habitat purposes near the Wilderness may also be restricted. Private and State forestry slash burning would be more severely impacted than Forest Service burning because of the prevailing wind patterns. Burning practices on Clackamas County lands may also be restricted. There are no major emitting facilities in existence, or planned, that would be effected by redesignation of the Wilderness.

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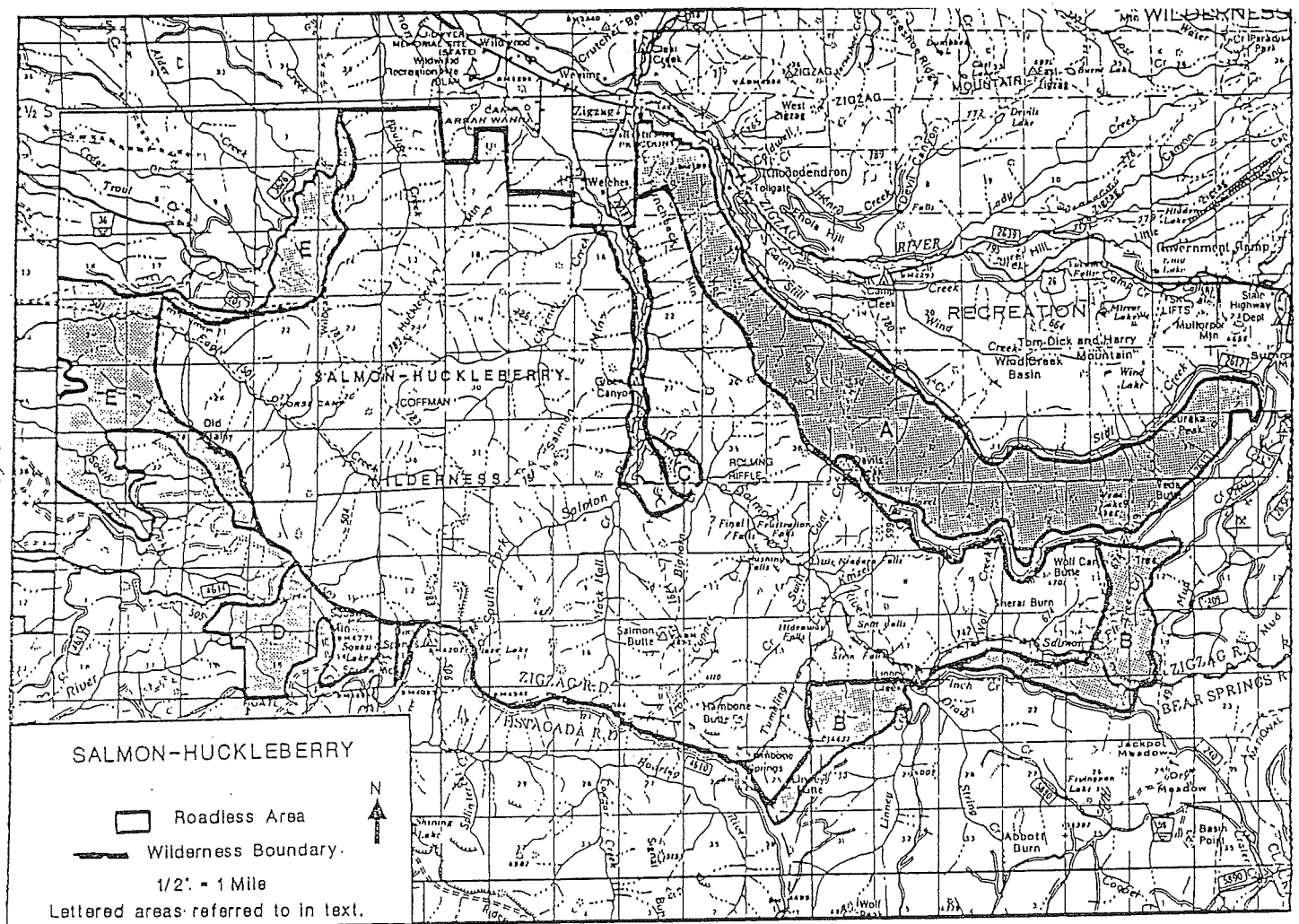
Discussion

The primary resource at issue is that of integral vista protection from the Salmon-Huckleberry Wilderness toward Mt. Hood and the Washington Cascade peaks. Protection of visibility and sensitive plants within the area require that the Salmon-Huckleberry Wilderness be redesignated to Class I and afforded visibility protection.



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Salmon-Huckleberry Wilderness Map



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3. Mt. Hood Wilderness and Additions

National Forest:	Mt. Hood, Zigzag & Hood River Districts
Size:	47,160 acres
Access Points:	East Zigzag Mtn. is accessed by trails #722, 773 and 775; Cairn Basin and Elk Cove by trails # 600, 625 and 631; Summit of Mt. Hood by climbing routes primarily on the South side.
Miles of Trail:	104
Elevation Range:	1720 to 11,235'

General Features

Mt. Hood dominates this wilderness with its many glaciers and high alpine meadows. Colorful wildflowers fill the meadows in July and August. The Pacific Crest National Scenic Trail traverses the wilderness while the Timberline Trail circles the mountain. The Timberline Trail and its many stone trail shelters were built by the CCC during the 1930's as was the log and stone Upper Sandy Guard Station which, collectively, are cultural/archeological assets. A CCC camp and Depression Era lookout once existed in the Zigzag Mtn. area. Popular trail destinations are Elk Meadows, Ramona Falls, Elk Cove and Paradise Park. Mt. Hood is the most popular climbed peak in the lower 48 states. Annual RVD use totals 65,500, primarily in July and August.

Air Quality Related Values

Visibility: Popular view points include vistas from East Zigzag Mt. which offers a view of Mt. Hood and overlooks Burnt Lake Basin; Cairn Basin and Elk Cove with their wide scenic view of Mt. Hood's north face and glaciers; the summit of Mt. Hood with its 360° panoramic view of the entire wilderness.

Aquatic Chemistry and Biology: acidification would be detrimental for the fish populations which inhabit several of the high lakes. The aquatic chemistry of the lakes is believed to be sensitive to acid deposition. As noted in Section 5, lakes within the Mt. Hood Wilderness Addition have low alkalinity and are considered sensitive to acid deposition.

Other AQRV's: Terrestrial plants, geology and soils, odors and other ecosystem effects are unknown at this time or are not felt to be a problem. No information is available to indicate a threat to cultural or archeological assets.

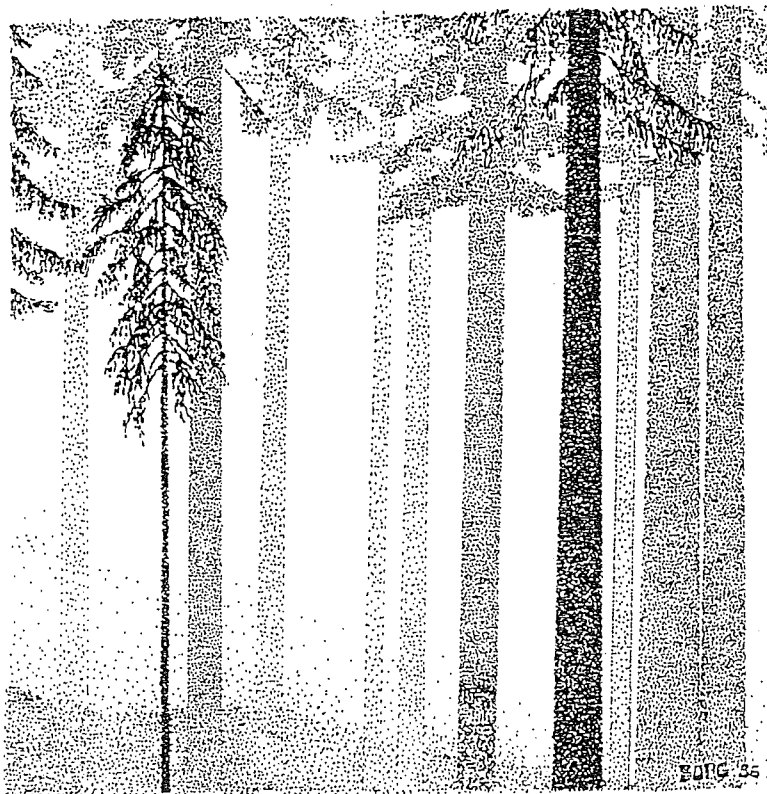
Management Implications

Because the additions are contiguous to an existing Class I area, there are few implications to land manager burning programs.

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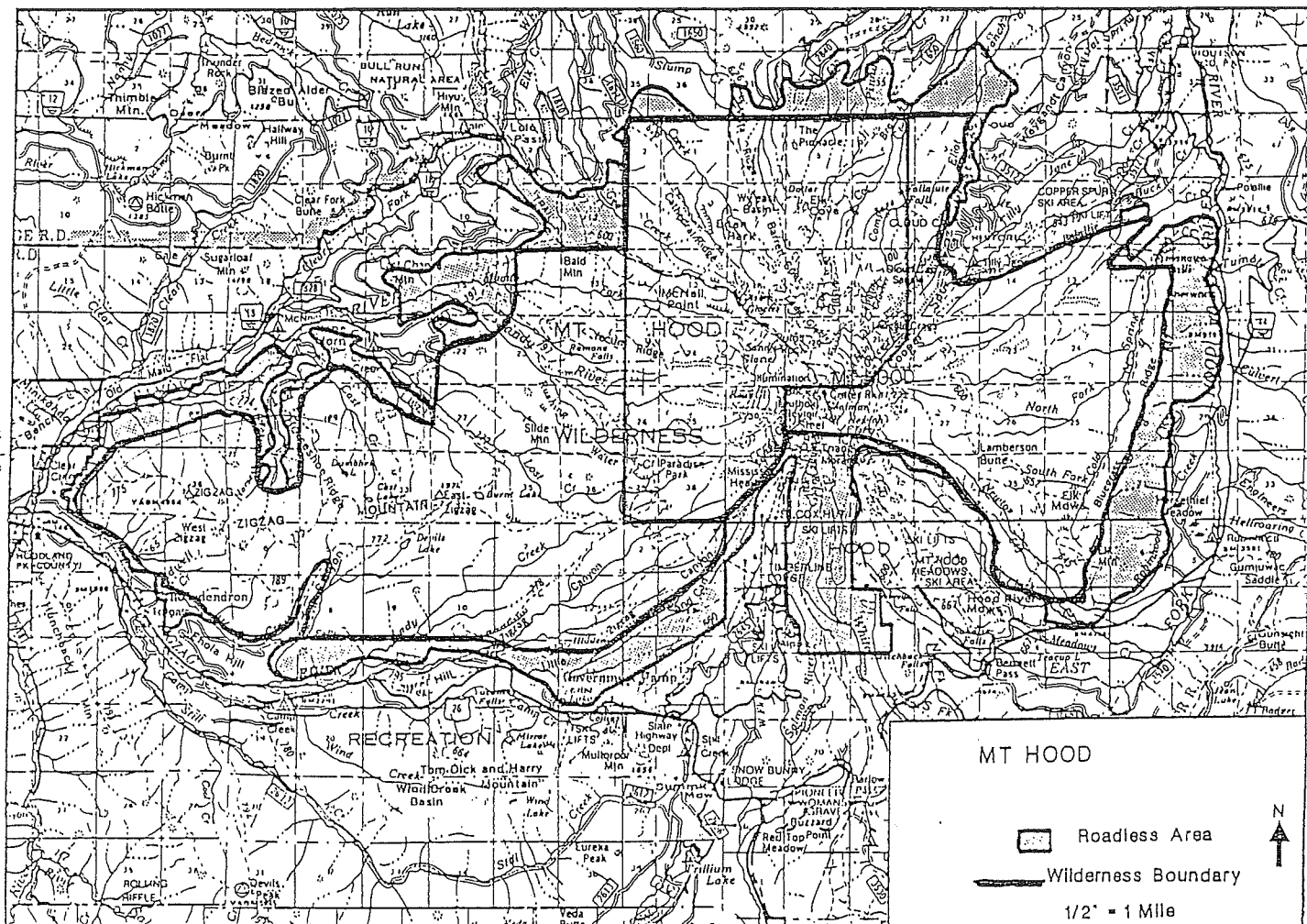
Discussion

Redesignation of the Mt. Hood Wilderness Addition to Class I\visibility is likely to add few additional constraints to the management of surrounding lands because (1) the additions are contiguous to the existing Class I area and (2) because of the size of the addition (33,000 acres) it is impractical to manage the added lands differently than the Class I area. The added lands are also in close proximity to other wilderness lands which places additional constraints on management of surrounding lands. It is therefore recommended that the additions to the Mt. Hood Wilderness be redesignated to Class I and afforded visibility protection.



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Mt. Hood Wilderness & Additions Map



Pre-1978 Wilderness Boundary

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4. Badger Creek Wilderness

National Forest:	Mt. Hood, Barlow District
Size:	24,000 acres
Access Points:	State Highway 35, Forest Road 44 and 4410; U.S. Highway 197 and Forest Road 27 and 2710, Forest Road 48 and 4811.
Miles of Trail:	55
Elevation Range:	2000 to 6500'

General Features

This area is 45 miles southwest of The Dalles and 67 miles east of Portland. The area is characterized by steep slopes, talus slides and basalt outcrops. Three major drainage dissect the area; Badger Creek, Little Badger Creek, and Tygh Creek. Glacial features dominate the Wilderness, the most prominent being the upper miles of Badger Creek. Smooth glaciated uplands are also present. Slopes range from 30 to 70%. Lookout Mountain is the highest point in the Wilderness with commanding views of the Cascade Range and the eastern high desert country from here. Extensive ecological diversity characterizes this Wilderness. The upper reaches of the major drainage are within the Mountain hemlock zone. At the eastern end of the area, the warm dry climate of the Ponderosa pine zone dominates. Extensive areas of Oregon White Oak and grass occur. Lookout Mountain and the extending eastern Ridge support subalpine ecosystems and a high elevation grass-forb land occurs at High Prairie. Other features include the Badger Creek National Recreation Trail which is within the wilderness.

Glacial features dominate the area; it has extensive ecological diversity from subalpine to the Ponderosa pine zone. Badger Creek National Recreation Trail is popular. RVD's total about 3,235 per year, nearly 50% of which occurs in July and August. Much of the use is by nearby residents for horseback riding, elk hunting and hiking. Badger Creek Trail is the most heavily used (about 324 persons in 1982).

Air Quality Related Values

Visibility: During the summers of 1986 and 1987, the Forest, Regional Office and DEQ jointly cooperated in the establishment of a visibility monitoring site intended to gather data within the Badger Creek Wilderness. Visibility within the Wilderness is not an especially important asset but external views of Mt. Hood to the north and the Cascade peaks to the south are dominant features of the Wilderness.

Scenic resources include two popular vistas:

1. West Point - Elevation 5651 accessed by trails #470, 458 and 477. This point has excellent vistas of Badger Creek and Little Badger Creek within the Wilderness, plus Mt. Hood to the west and the high desert country to the east.

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2. Badger Creek Trail #479 - The uphill travel direction from Bonney Crossing to Badger Lake is the major experience in the Wilderness. Views of the rocky, rugged Badger Creek canyon and Mt. Hood to the west.

Aquatic Chemistry: There are no major lakes within the Wilderness. Badger Lake is not included within the wilderness boundary. The aquatic chemistry of the few small lakes within the Wilderness, however, is believed to be very sensitive to acid deposition as the lakes have very low alkalinity levels (see Section 5).

Terrestrial Plants: Sensitive plants include:

Allium campanulatum
Arabis furcata
Botrychium lanceolatum
Botrychium lunaria
Botrychium montanum
Botrychium pinnatum
Cypripedium montanum
Heuchera grossularifolia var tenuifolia
Polystichum kruckebergii

Other AQRV's: Cultural/Archeological assets include an old log cabin in good to fair condition, irrigation ditches and a small diversion dam and prehistoric sites including small lithic scatters and rock cairns. No other information on other AQRV's is available.

Ecologist's Report
(Provided by S. Logan, Region 6 Ecologist)

The location of the Badger Creek Wilderness at the eastern slopes of Mt. Hood makes it a unique botanical area in the state. There are very few undisturbed areas just east of the Northern Oregon Cascades Crest. In addition, this wilderness is unusually rich in biological and landscape diversity. Forested, open woodland, hardwood, meadow, grasslands and talus and basalt rock habitats occur. Many forested types are represented, including subalpine parklands, mountain hemlock, Engelmann spruce, Ponderosa pine and Oregon white oak stands.

A rock outcrop visited at Flag Point is one example of the range in botanical diversity found within the wilderness area. The community is comprised of a variety of shrubs and wildflowers including sage, buckwheat, gooseberries, Wyetia, Pemstemmon, wild strawberry, small headed sedge and a bentgrass. The surrounding forest stands are comprised of grand fir, western larch, Douglas-fir and lodgepole pine.

Viewpoints within the wilderness provide excellent internal vistas of the Badger and Little Badger drainage and spectacular basalt outcrops. Important integral vistas from Mt. Washington to the Southern

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Washington Cascade peaks, to the high desert bring recreationists to the area.

Several Regional Forester's list sensitive plants have been discovered in this Wilderness Area. It appears that others may be located in some of the unique habitats as more extensive botanical work is done. Based on the surface water alkalinity measures, this Wilderness Area may be sensitive to acid deposition. Although little is know of the response of some of the sensitive plants found in the area to acid deposition, it may be necessary to protect them from any point source air pollution.

Management Implications

The principal management implication of redesignation to Class I \ visibility is that of constraints on forest prescribed burning programs of the surrounding National Forest lands, specifically on the Bear Springs District. Because of the current prohibition on Western Cascade forestry burning during the July 4-Labor Day period, Clackamus District burning is already restricted.

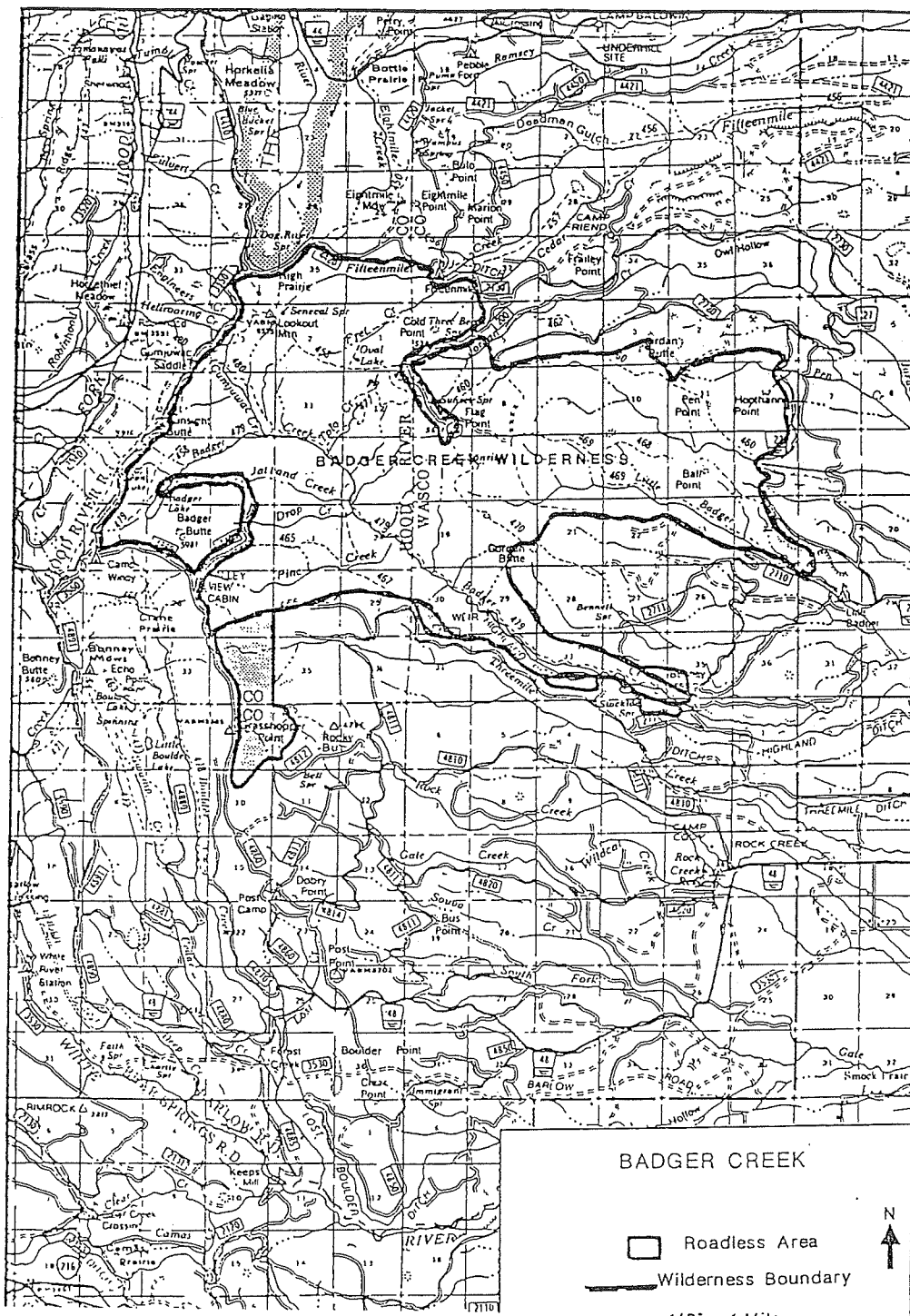
There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

The principal issue is the sufficiency of protection provided by the Class II increments in protecting sensitive plants species and external views seen from the Wilderness. Although surface waters within the Wilderness are potentially sensitive to acid deposition, there are few important aquatic resources within the Wilderness. Visibility within the wilderness is not an important asset because of the terrain. To assure that sensitive plants and integral vistas are to be protected, the Badger Creek Wilderness should be redesignated to Class I and afforded visibility protection.

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Badger Creek Wilderness Map



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5. Bull of the Woods Wilderness

National Forest:	Mt. Hood & Willamette National Forests Estacada and Detroit Districts
Size:	34,900 acres
Access Points:	State 22 and Forest Roads 46 and 2209; State 224 and Forest Roads 63, 6340 and 6341; State 224 and Forest Road 70.
Miles of Trail:	75
Elevation Range:	2000' to 5700'

General Description

This area is 68 miles southeast of Portland and 65 miles east of Salem. The country is characterized by very steep, mountainous terrain, deeply dissected by streams. There are at least 12 lakes larger than one acre scattered throughout the wilderness, isolated from one another by high ridges. These lakes support fish populations. The lower slopes are typically steep (30 to 60 %) and covered with dense stands of timber. The upper slopes are very steep (60 to 90 %) and also mostly covered by dense timber. The area contains the major head waters of the Collawash, Breitenbush and Little North Fork of the Santiam River. Most of the area falls within the Western Hemlock zone with the mid-slopes within the Pacific Silver fir zone. The major ridges are in the Mountain hemlock zone. Recreational use totals 2,500 RVD's per year. Probably 90 % of the wilderness use is fishing in Welcome, Twin, Lenor, Silver King, Big Slide and Pansy lakes.

Other Features

The Bull of the Woods area has some evidence of past mining activity. Mine shafts, old pieces of equipment and other man-made features indicate that at one time this was an active mining area. The Bull of the Woods lookout still remains and commands a spectacular view of the surrounding area.

Ecologist's Report

(Following provided by S. Logan, R-6 Ecologist)

The Bull of the Woods Wilderness ranges from 2000 to 5700 feet elevation. It is generally steep terrain with scattered lakes between the high ridges. The headwaters of the Collawash, Breitenbush and Little North Fork of the Santiam Rivers are located within this Wilderness. The area is densely forested. Most of the forests at the lower elevations are mixed Douglas-fir and western hemlock with rhododendron and swordfern in the understories. The mid- to upper-slopes are dominated by plant associations common to the Pacific silver fir zone, including Pacific silver fir/big huckleberry/beargrass, Pacific silver fir/ big huckleberry/queencup beadrily and Pacific silver fir/rhododendron associations. Most of these stands are old growth and there are many large, impressive Pacific silver fir trees.

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At the upper elevations, mountain hemlock is the most common species. Aster gormanii, Gorman's aster, is a sensitive species that has been reported from this area.

This wilderness is considered poor elk habitat. There is a Spotted owl habitat area in the Wilderness. Coyote sign was noted near the Bull of the Woods lookout on the day the task force visited the area.

Many of the views from Bull of the Woods Wilderness are outside of the wilderness. Most of the long distance vistas are of the Cascade peaks. Visitor use is low, usually concentrated near the lakes where fishing is a major recreational pursuit.

Air Quality Related Values

Visibility: A principal AQRV of the Wilderness are the views within the Wilderness and those of the major Cascade peaks (Mt. Adams, Mt. Hood, Mt. Jefferson and the Three Sisters) from Bull of the Woods lookout which is a popular hiking destination.

Aquatic Biology: Because the Wilderness is located in an area sensitive to acid deposition and several major lake system of high recreational value are within the wilderness, aquatic biology is an important AQRV.

Aquatic Chemistry: As noted in Section 5, the Bull of the Woods Wilderness is located in a region projected to be sensitive to acid deposition effects by reason of its poor buffering capacity of the soils. The wilderness has several botanical and marshy areas as well as aquatic life in its many lakes.

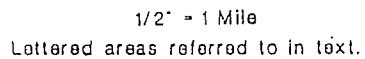
Management Implications

Redesignation of the Bull of the Woods to Class I status would not have any direct impact on Forest Service land management practices. If the wilderness were to be included under the Class I visibility protection provision, prescribed burning on the Detroit District would be effected since the lands would be N-NE of burning, transporting smoke into the wilderness under S-SW winds. Because of the closeness of the wilderness to the Mt. Jefferson Class I area, land managers are already limited in their smoke management practices. There are no major emitting facilities planned that would be effected.

Discussion

The principal issue is that of providing increased levels to protection to visibility within the Wilderness and of integral vistas; the sensitivity of the area to acid deposition and the presence of some sensitive plant species. To assure that these resources are protected, the Badger Creek Wilderness should be redesignated to Class I and afforded visibility protection.

Bull of the Woods Map



-DRAFT Redesignation of Oregon Class II Wilderness Lands-

6. Mt. Jefferson Wilderness & Additions

National Forest:	Willamette and Deschutes, Detroit and Sisters Ranger District
Size:	107,008 acres
Access Points:	Pacific Crest Trail (PCT) #2000 and Summit Lake Trail #65 from Hwy. 20 at the south end; Marion Lake Trail #3436 off Road #1157; Pamela Lake Trail #3439 off Road #109. 13 miles south of Detroit; Jefferson Park Trail #3429 off Road #104, 11 miles south of Detroit, PCT #2000 from Breitenbush Lake in the north; Triangulation Peak #3373 from Road #650 (Hwy. 2); Trail #3421 Bingham Ridge) from Road #2253 (Hwy 2); and Trail #3490 (Pine Ridge) from Road #2261 (Camp Pioneer). Popular east-side entry points are Cabot Lake Trail #69 from Road #1210-B, Minto Pass Trail #3437 starting at Jack Lake; Jefferson Lake Trail #66 leaving from Road #1154; and Round Lake Trail #73 Road #1210.
Miles of Trail:	193.6
Elevation Range:	2400 to 20,497'

General Description

Mt. Jefferson (10,497 feet) is the predominant feature of this high Cascades area. Eighty-seven percent of the wilderness has vegetation cover; 62% is covered with timber. The forest consists mainly of Douglas-fir, silver fir, subalpine fir, mountain hemlock, lodgepole pine, ponderosa pine, and several species of cedar, as well as such brush species as vine maple, huckleberry, and rhododendron. There are over 150 lakes, approximately one half of which are stocked with eastern brook trout and/or rainbow trout. Deer, elk, black bear, and coyotes are common. Geographic features include steep talus slopes, rock outcrops and alpine meadows. Recreational use in the Wilderness totals 110,600 RVD's per year. Use on Additions to the Wilderness total 54,300 RVD's per year.

Minto Meadows Addition is used primarily by hunters; the area offers nice views of Mt. Jefferson. There are no lakes on the addition but it may have some special plant communities.

Terpentine Peak Addition has no lakes but offers views to the west. It is used by deer and elk hunters.

Spire Rock and Triangulation Additions has a popular trail system through rugged country. No lakes and some hunting use.

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Crown Lake Addition is used for hunting and by hikers that use Crown Lake as a destination.

Other Features

Three Fingered Jack (7,841 feet) and Mt. Jefferson have long been favorite climbing areas with mountaineers.

Air Quality Related Values

Visibility: Visibility is the most important AQRV of the Wilderness. A major resource that would be protected under Class I\visibility status are the integral vistas from the Mt. Jefferson Wilderness additions toward Mt. Adams, Mt. Hood, the Three Sisters and other major peaks along the Cascade Range.

Aquatic Chemistry: There are some major lakes within the Wilderness additions. The aquatic chemistry of these lakes is believed to be very sensitive to acid deposition as the lakes have very low alkalinity levels (see Section 5).

Other AQRV's: Little information is available on terrestrial plants, geology and soils, cultural or archeological assets, odors or other ecosystem effects.

Management Implications

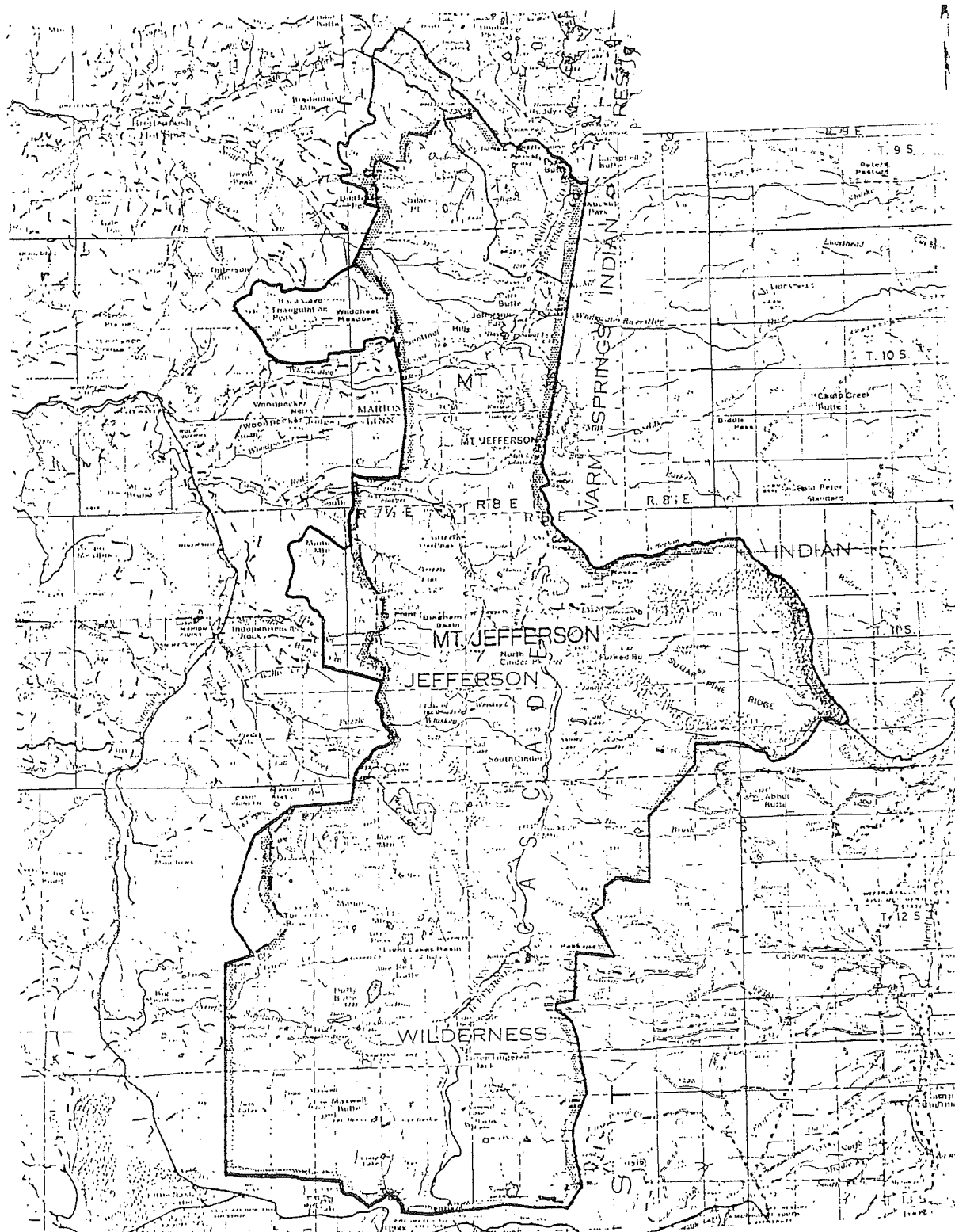
Redesignation of the Mt. Jefferson Wilderness Addition to Class I is likely to add few additional constraints to the management of surrounding lands because (1) the additions are contiguous to the existing Class I area and (2) it is impractical to manage the added lands differently than the Class I area and (3) the size of the wilderness addition (6,800 acres) constrains management options inconsistent with Class I area management.

Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants, integral vistas and the aquatic chemistry and biology within the Mt. Jefferson additions. As a result, the Mt. Jefferson Wilderness is recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.

-DRAFT Redesignation of Oregon Class II Wilderness Lands-

Mt. Jefferson Wilderness & Additions Map



-DRAFT Redesignation of Oregon Class II Wilderness Lands-

7. Mt. Washington Wilderness & Additions

National Forest:	Willamette and Deschutes, McKenzie and Sisters Ranger District
Size:	52,516 acres
Access Points:	Pacific Crest Trail (PCT) #2000 from Hwy. 242; or PCT from Road 811 (off Hwy. 20, Big Lake Campground). Patjens Lake Trail #3395 from Road #2690. Benson Lake Trail #3502 from Road #260. Hand Lake Trail #3513 from Hwy. 242.
Miles of Trail:	40
Elevation Range:	3000 to 7794'

General Description

Often referred to as the "Black Wilderness" this area is dominated by Mt. Washington which rises above more than 75 square miles of lava-strewn plains. It is the home for blacktailed and mule deer, as well as black bear and an occasional cougar. Approximately one-half of the 28 lakes are stocked with trout. Vegetation cover consists of lodgepole pine and associated species as well as mountain hemlock. Benson and Tennis Lakes receive about 60 % of the wilderness use.

The Mt. Washington Additions are little used by hikers and relatively flat. There are no lakes in the additions but there are some ponds and wet areas. There is some concern, however, about sensitive plants within the lava flows of the additions and aquatic biology and chemistry within the bog and ponds.

Other Features

A rugged retreat used primarily by hunters, hikers, and mountain climbers. Mt. Washington, a dissected volcano, is a popular climb. This area includes Belknap Crater, a 6,872-foot cinder and ash cone.

Air Quality Related Values

Visibility: Visibility is the most important AQRV of the Wilderness and the additions. A major resource that would be protected under Class I\visibility status are the integral vistas from the Mt. Washington Wilderness additions toward Mt. Adams, Mt. Hood, Mt. Jefferson, Three Fingered Jack, the Three Sisters and other major peaks along the crest of the Cascade Range.

Aquatic Chemistry: There are several ponds and bogs within the Wilderness additions that may be of concern as the aquatic chemistry of these lakes is believed to be very sensitive to acid deposition as the lakes have very low alkalinity levels (see Section 5).

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Other AQRV's: Little information is available on terrestrial plants, geology and soils, odors or other ecosystem effects. Present information is that there are no cultural or archeological resources within the additions.

Management Implications

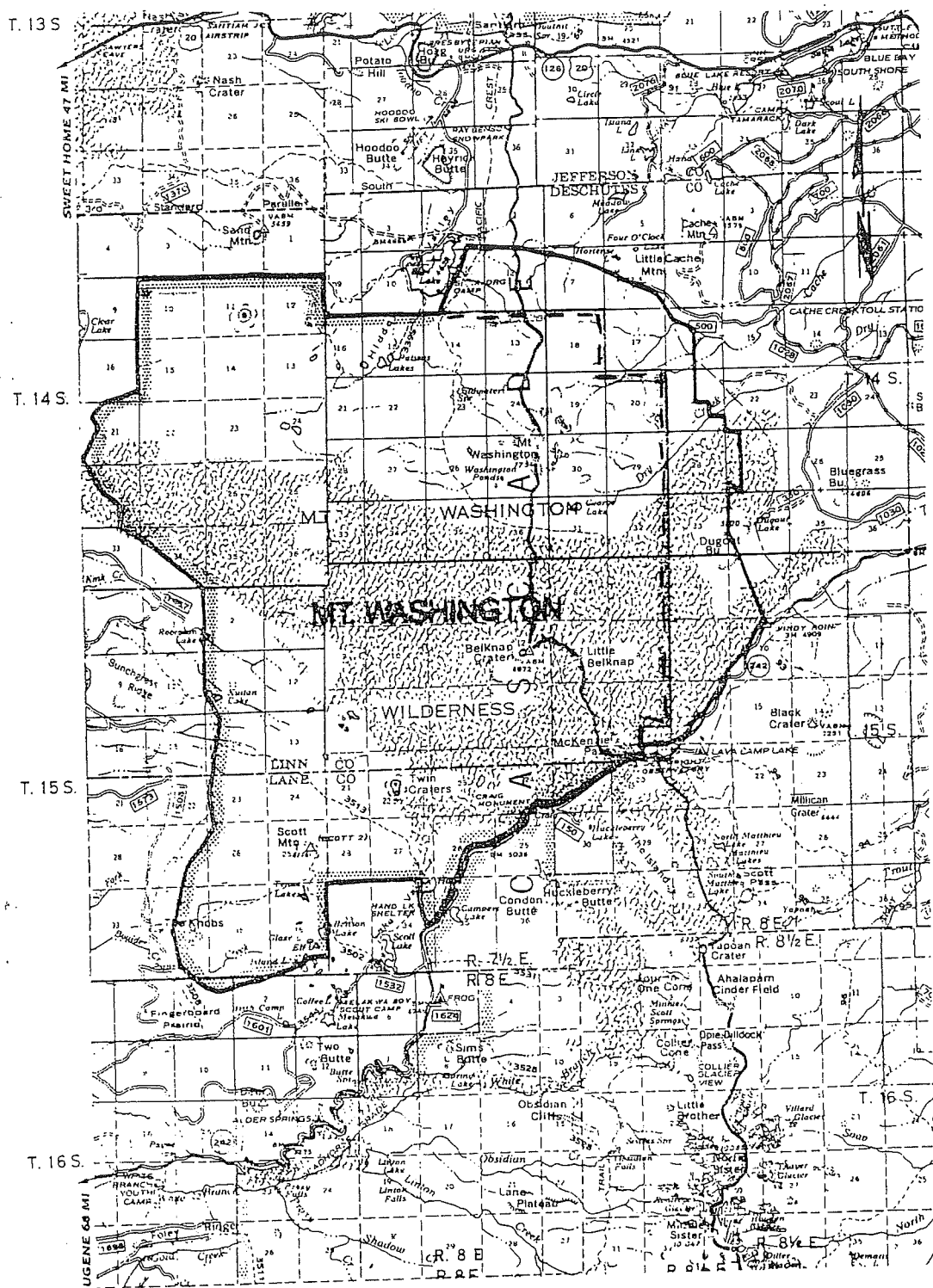
Redesignation of the Mt. Washington Wilderness Addition to Class I is likely to add few additional constraints to the management of surrounding lands because (1) the additions are contiguous to the existing Class I area and (2) it is impractical to manage the added lands differently than the Class I area and (3) the size of the wilderness addition (6,400 acres) constrains management options inconsistent with Class I area management.

Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants, integral vistas and the aquatic chemistry and biology within the Mt. Washington additions. As a result, the Mt. Washington Wilderness is recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.

-DRAFT Redesignation of Oregon Class II Wilderness Lands-

Mt Washington Wilderness & Additions



-DRAFT Redesignation of Oregon Class II Wilderness Lands-

8. Three Sisters Wilderness & Additions

National Forest: Willamette and Deschutes, McKenzie, Bend, Blue River, Oakridge and Sisters Ranger District

Size: 285,202 acres

Access Points: West side: PCT Trail #2000 from Hwy.242; Obsidian Trail #3528 from Hwy.242; Foley Ridge Trail #3511 from Road 2643; Separation Lake Trail #3536 from Road #2643; Olallie Lake Trail #3529 from Road #1993; French Pete Trail #3311 from Road #19; Elk Creek Trail #3510 from Road #1964; Rainbow Falls Creek Trail #3543 from Road #2643; Road #517 (Taylor Burn) to various trail and Trail #358 & #3563 from Road #1957(Skookum Creek). East Side: Park Meadow Trail #96 from Road #16; Pole Creek Trail from Road #46; Lucky Lake/Six Lakes Trail #14 from Road #46; Wickiup Plains Trail #12 from Road #46.

Miles of Trail: 443.1

Elevation Range: 2000 to 10,358'

General Description

Forests consist mainly of Douglas-fir, silver fir, sub-alpine fir, mountain hemlock, western hemlock, true fir, lodgepole pine, and ponderosa pine. Alpine meadows, waterfalls, glaciers, and glacial lakes, and lava fields are abundant. Major peaks include: the North, Middle, and South Sisters (all above 10,000 feet). Along with Broken Top, the peaks are the best example in the Pacific Northwest of the effect of advanced glaciation. Wildlife in this area include blacktail and mule deer, Roosevelt elk, black bear, bobcat, and coyote. Fish populations include Eastern brook trout and rainbow trout. Recreational use of the Three Sisters Wilderness for 1986 was about 101,200 RDV's per year. Use on the Additions to the Wilderness is estimated at 4,500 RVD's per year, mostly in June through September.

Erma Bell Lake Additions receive heavy recreational use. Water quality is an important issue as the North fork of the Middle Fork of the Willamette River has headwaters within the addition and has been designated as a Wild River by Congress. The primary viewing point is from Irish Mountain. The addition is also the watershed for the City of West Fir.

Rainbow Falls Addition receives moderate use. Aquatic chemistry and biology are not important values. Visibility is the most important AQRV.

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Cascade Lakes Perimeter Addition has important visibility values from Williamson Mountain with good views of the Cascade peaks.

French Pete Addition is the largest addition to the Wilderness. Most of the use is along French Pete trail within the first three miles. The upper high country day use on Louder Mountain Trail is about 10 person per weekend where visibility and views of old old grown forests are the primary AQRVs. Ripple Rock lookout is a popular destination point.

Other Features

Collier Glacier, which lies between the North and Middle Sisters is the largest glacier in Oregon. Other geologic features include Rock Mesa, Collier Cone, and Yapoah Crater.

Air Quality Related Values

Visibility: Visibility, aquatic chemistry and biology and sensitive plants are all important AQRV of the Wilderness and the Wilderness additions. A major resource that would be protected under Class I\visibility status are the integral vistas from the Three Sisters Wilderness additions toward Mt. Adams, Mt. Hood, Mt. Jefferson, Three Fingered Jack, Mt. Thielsen and other major peaks along the crest of the Cascade Range.

Scenic resources of the Wilderness additions include:

Three Sisters Addition (Rainbow Falls). The view from the end of Rainbow Falls Trail looking southeast at Rainbow Falls. Because of the distance to the falls from the viewpoint, visibility is important. One hundred recreation visitor days of use occurred on this trail in 1986.

Three Sisters Addition (French Pete Addition). Yankee Mountain Trail (#3318) crosses open ridgetops allowing views of adjacent drainage. Walker Creek Trail (#3330) crosses Lowder Mountain allowing views to the south and east. The Rebel Rock Trail (#3324) provides views of the ridgetops of the entire French Pete Addition as well as wilderness lands to the east from atop Rebel Rock. Ollalie Mountain Trail (#3529) allows a panoramic view to the west, south and east including views of the Cascade Crest peaks.

The Oakridge Management Zone (Travel zones 012 to 051) of the Three Sisters Wilderness typically has more open stands of timber and offers some excellent middle/background views of the wilderness panoramas viewed from Irish Mountain and outstanding views of uninterrupted wilderness. Scenic resources within the Management zone include:

1. Dennis Lake - This lake is located in the northeastern corner of the Management Zone and is accessible by about two

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miles of cross-country travel from the nearest trail. The view from a ridge a short distance from the lake is equalled only by the view from Irish Mountain.

2. Lindick Lake - This lake is located about 1/2 mile northeast of Dennis Lake and is accessible by cross-country travel from the Pacific Crest National Scenic Trail or from Dennis Lake. Views from the ridge above the lake are of the same quality as from Dennis Lake.

3. Peak 6225 - This summit is located to the east of East McFarland Lake and is accessible by steep and somewhat difficult cross-country travel from the lake or the Pacific Crest National Scenic Trail. Views from the open timbered summit include the Three Sisters and East McFarland Lake.

Aquatic Chemistry: There are several major lakes within the Wilderness addition. The aquatic chemistry of these lakes is believed to be very sensitive to acid deposition as the lakes have very low alkalinity levels (see Section 5).

Terrestrial Plants: Sensitive plant species include:

Allium amplexans
Arnica viscosa
Botrychium pumicola
Calypso bulbosa
Claytonia megarhiza var. bellidifolia
Draba aureola
Eriogonum cascadenis
Eriogonum umbellatum
Gentiana newberryi
Haploppapus hallii
Hypopitys monotropa
Lilium washingtonianum
Lycopodium annotinum
Mimulus pulsifer
Polygonum cascadenis
Silene suksdorfii
Smelowskia calycina

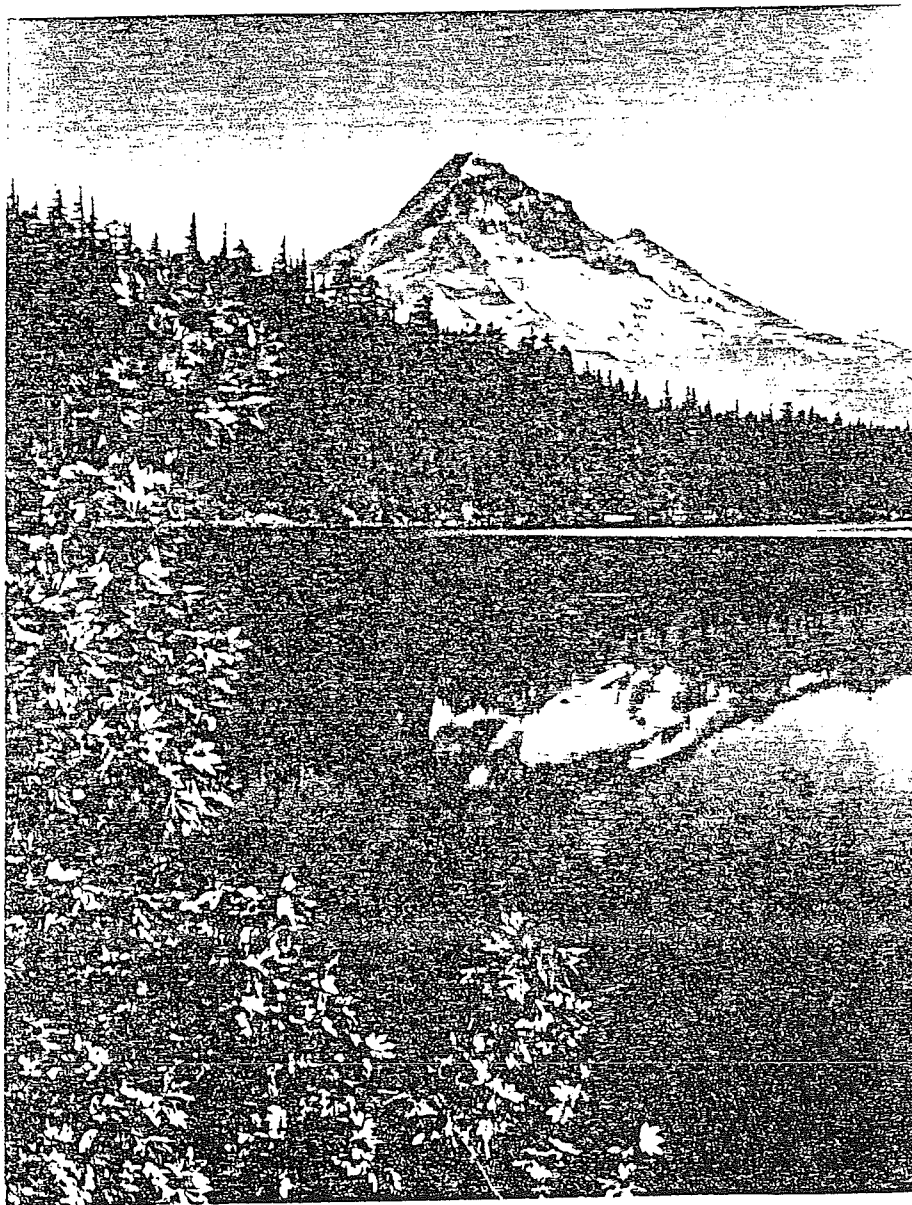
Management Implications

Redesignation of the Three Sisters Wilderness Addition to Class I is likely to add few additional constraints to the management of surrounding lands because (1) the additions are contiguous to the existing Class I area and (2) it is impractical to manage the added lands differently than the Class I area and (3) the size of the wilderness addition (38,100 acres) constrains management options inconsistent with Class I area management.

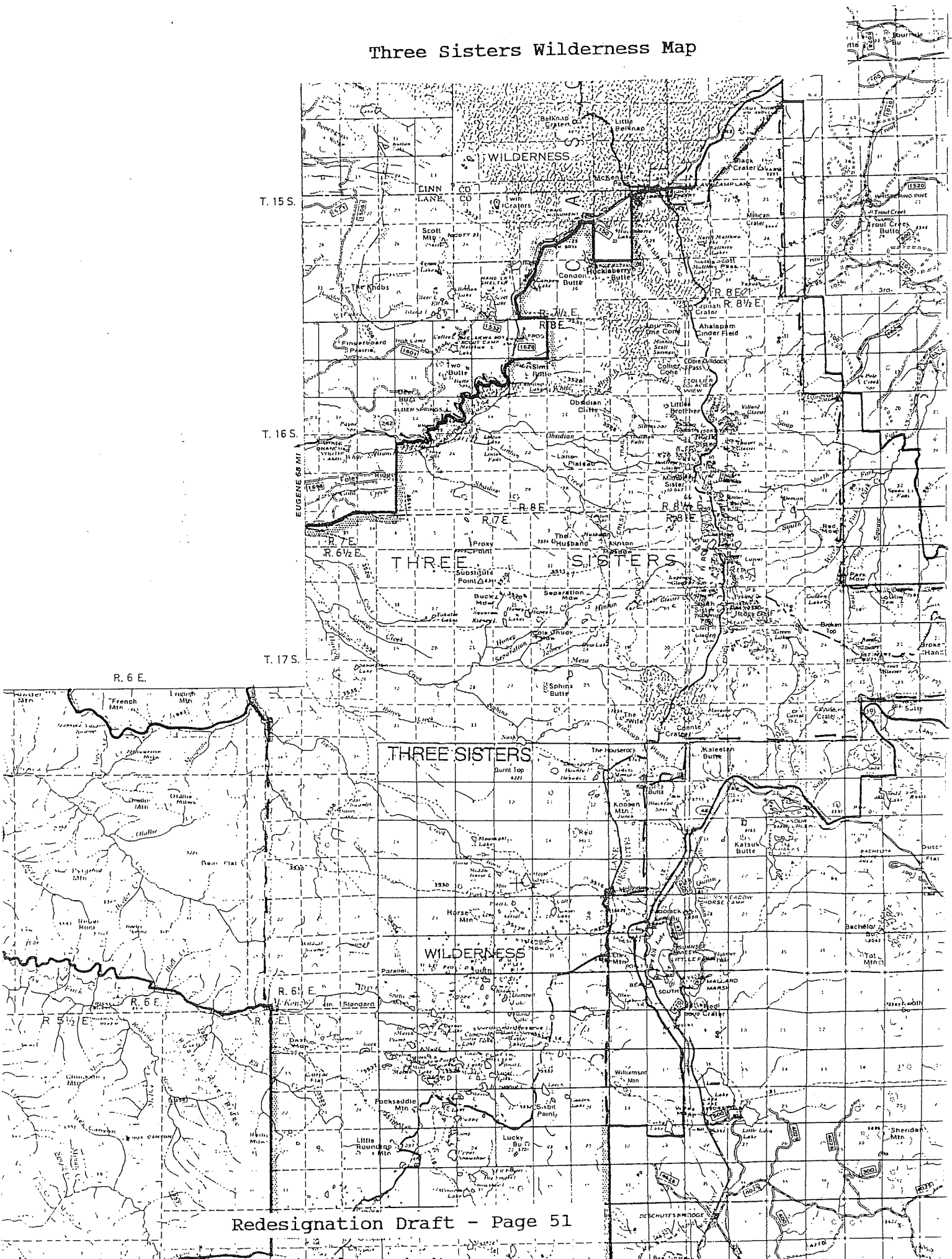
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Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants, integral vistas and the aquatic chemistry and biology within the Three Sisters Wilderness additions. As a result, the Three Sisters Wilderness additions are recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.



Three Sisters Wilderness Map



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9. Waldo Lake Wilderness

National Forest:	Willamette National Forest, Oakridge Ranger District
Size:	46,600 acres
Access Points:	Road 514 (Taylor Burn Campground) to numerous trails. Road 5898 to North Waldo Campground to Trail 3590. Road #5896 (Shadow Bay Campground) to Trail #3590.
Miles of Trail:	102
Elevation Range:	2800 to 7200 ft

General Description

Located in the Western Cascades and High Cascades province. The High Cascades are characterized by steep to moderate slopes and includes many basin areas with lakes, meadows, and rock outcrops. The Western Cascades portion is typified by steep, dissected slopes. The High Cascades are mostly Douglas-fir and mountain hemlock and some true fir with some natural openings. Waldo Lake, one of the purist in the world is a predominant feature of the High Cascades but is not located within the Wilderness boundary. There are, however, many other lakes within the Wilderness. Recreational use totals 19,000 RVD's per year, principally in July through September.

Other Features

Hiking, camping and fishing are primary uses of the area. On the west side of Waldo Lake, Klovdahl Bay contains a dam built in 1919 that once released Waldo water into Black Creek. The project was called Waldo Lake Irrigation and Power Co. The dam was never used. The North Fork of the Middle Fork of the Willamette River is a federally designated Wild and Scenic River. The North Fork and Waldo Lake are designated by the State of Oregon as Wild and Scenic Waterways.

Air Quality Related Values

Visibility: The Waldo Lake Wilderness is typically covered by dense stands of trees and generally does not allow many opportunities to view the landscape for any great distance. Most visual opportunities are limited to foreground views across lakes and meadows; however there are some excellent panoramic views from the volcano peaks and buttes in the Wilderness. The following is a list of scenic viewing opportunities in the Waldo Lake Wilderness:

1. Fuji Mountain - This 7,144 foot peak lies on the southwestern boundary of the Waldo Lake Wilderness and is easily accessible by a two mile trail. The vista from the summit affords excellent views of Waldo Lake, Black Meadows, the three lakes below Fuji Mountain and the Three Sisters.

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2. Mt. Ray - At 7,002 feet, this peak lies on the southeastern boundary of the Waldo Lake Wilderness and is accessible by a 1.5 mile cross-country hike from the south end of Waldo Lake. The view from the summit affords an excellent panorama of the Waldo Lake Wilderness and Waldo Lake.

3. Cupit Mary Mountain - This 6,165 foot peak lies on the southwestern boundary of the Waldo Wilderness. The open timber on the summit affords views of Waldo Mountain, parts of Waldo Lake and Cupit Mary Meadows.

4. Waldo Mountain - Waldo Lookout sits atop the 6,359 foot peak in the heart of the Waldo Wilderness. There is an outstanding view of Waldo Lake as well as views of Salmon Lakes, Gander Lake, the Eddeeleeo Lakes, Round Lake and Waldo Meadows.

5. Rigdon Butte - This small butte is located a short distance to the West of Rigdon Lake. The summit affords good views of the Rigdon Lakes and Waldo Mountain.

6. Peak 5848 - The high point is located on the Winchester Ridge Trail and affords good views of Gander Lake, Swan Lake and some views of the wilderness to the east.

7. Winchester Trail - This viewpoint is located 100 feet to the north of the trail and offers a view of Winchester lake and the surrounding area.

8. Blair Lake Trail - This vista is located just north of the trail and provides an excellent view of the steep and primitive Fisher Creek drainage.

9. Taylor Butte - The 5,825 foot butte is located near the northeastern boundary of the Wilderness. Access to the summit affords views of Irish Mountain, Waldo Mountain and the surrounding area.

10. Irish Mountain - The 6,843 foot summit of this mountain offers a view which, on a clear day, can extend as far north as Mt. Jefferson and as far south as Diamond Peak.

Like other wilderness lands along the crest of the Cascade Range, visibility is an important AQRV. A major resource that would be protected under Class I/visibility status are the integral vistas from the Waldo Lake Wilderness north toward Mt. Hood, Mt. Jefferson, the Three Sisters and Mt. Washington as well as south toward Mt. Thielsen and Mt. Shasta.

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Aquatic Chemistry: The Waldo Lake Wilderness surface waters have been found to have very low alkalinity and to therefore be sensitive to acid deposition (see Section 5).

Terrestrial Effects: Threatened, endangered and sensitive plant surveys have not been conducted in the wilderness. Many of the plants listed as threatened, endangered or sensitive within Region 6 are found in habitats that are relatively common in the Waldo Lake Wilderness.

Archeological and Cultural: No known resources are present in the Wilderness.

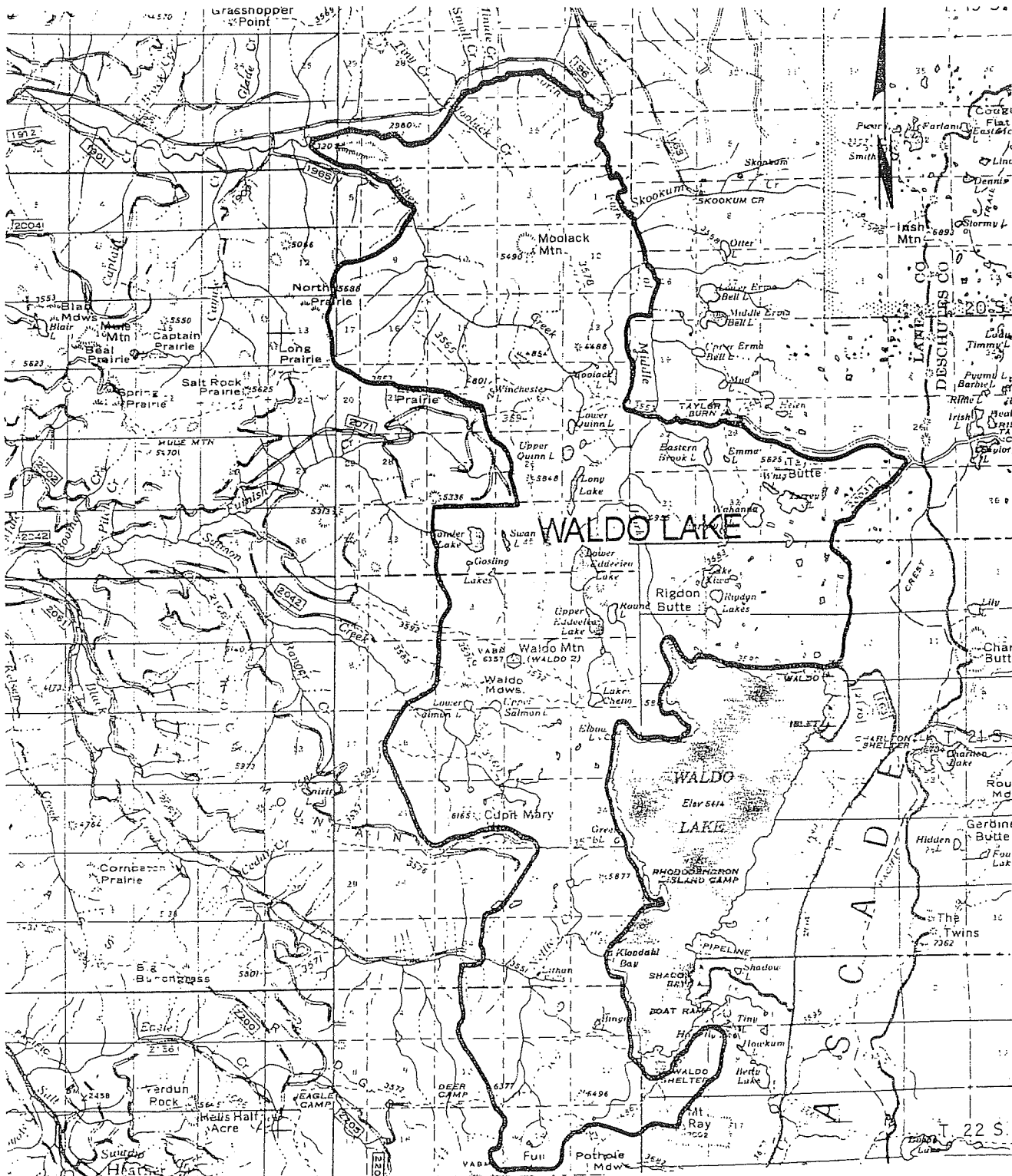
Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest lands should the visibility protection period be extended beyond the July 4-Labor Day period. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants, integral vistas and the aquatic chemistry and biology within the Waldo Lake Wilderness. As a result, the Waldo Lake Wilderness is recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.

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Waldo Lake Wilderness



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10. Diamond Peak Wilderness and Additions

National Forest:	Deschutes and Willamette, Crescent and Rigdon Ranger Districts
Size:	52,337 acres
Access Points:	Deschutes National Forest Trails - #49 to Yoran Lake from west end Odell Lake; #42 to Diamond View Lake from west end Odell Lake; #44 to Fawn and Saddle Lake from east end Odell Lake; #44A to Diamond View Lake from east end Crescent Lake; Pacific Crest from Summit Lake along Crest Willamette National Forest Trails - #3699 to Ruth Lake from Road 380; #3645 to Blue Lake from Road 2149; #3662 to Vivian Lake from Hwy. 58; #3637 to Rockpile Lake from Road #2160.
Miles of Trail:	125
Elevation Range:	4787 to 8744'

General Description

Diamond Peak was formed as the entire land mass of the Cascades was undergoing volcanic activity and uplift. Great glaciers carved the large volcanic peak. When they receded, the carved bulk of the mountain remained, with snowfields near the summit and dozens of small lakes surrounding Diamond Peak near the perimeter of the wilderness. Many of these lakes (1 to 28 acres in size) fill depressions gouged out by the movement of glaciers. Recreational use is estimated at 4,200 RVD's per year. The additions offer views of Diamond Peak but not long range vistas.

Air Quality Related Values

Visibility: The Deschutes National Forest feels that "visibility is probably one of the most important items that affect a wilderness visit. The Forest receives comments from visitors when it is clear or hazy. They want the wilderness to be fresh, clean and unmarred by human influence" ¹⁷ Like other wilderness lands along the crest of the Cascade Range, visibility is an important AQRV. A major resource that would be protected under Class I\visibility status are the integral vistas from the Diamond Peak Wilderness north toward Mt. Jefferson, the Three Sisters and Mt. Washington as well as south toward Mt. Thielsen and Mt. Shasta. Scenic resources of the Wilderness include:

1. Diamond Peak/Swift Creek - Trail #3699 offers a view of Diamond Peak from a point outside of the old Wilderness boundary as one walks down the trail.
2. Vivian Lake - Trail #3662 offers a view of Diamond Peak from the wilderness boundary. The vista includes the Swift Creek

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and Bear Creek drainage and lower and upper slopes of Diamond Peak.

3. Bear Mountain - Trail #3602 has views from several meadows along the trail which provide vistas of the Scout Creek drainage and Diamond Peak.

There are many spots along the Pacific Crest Trail that offer spectacular views of mountains, lakes and adjoining forests. There are also many vistas within the current Class I Wilderness that look into the new areas but they have not specifically been identified.

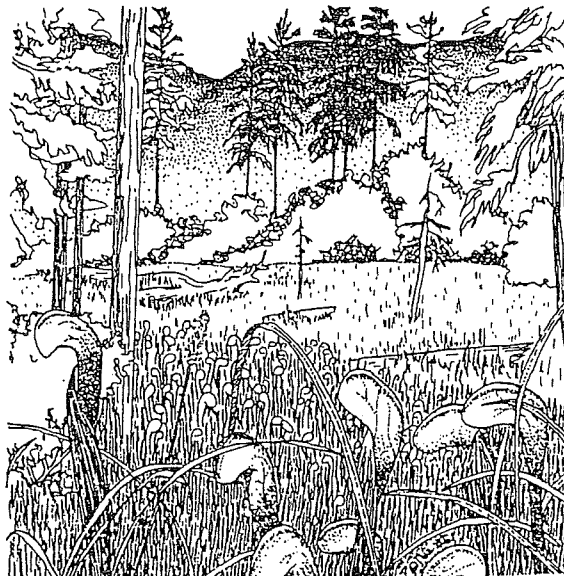
Aquatic Chemistry: The Diamond Peak Wilderness surface waters have been found to have very low alkalinity and to therefore be sensitive to acid deposition (see Section 5). Sensitive plants include Draba aureola.

Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest lands. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

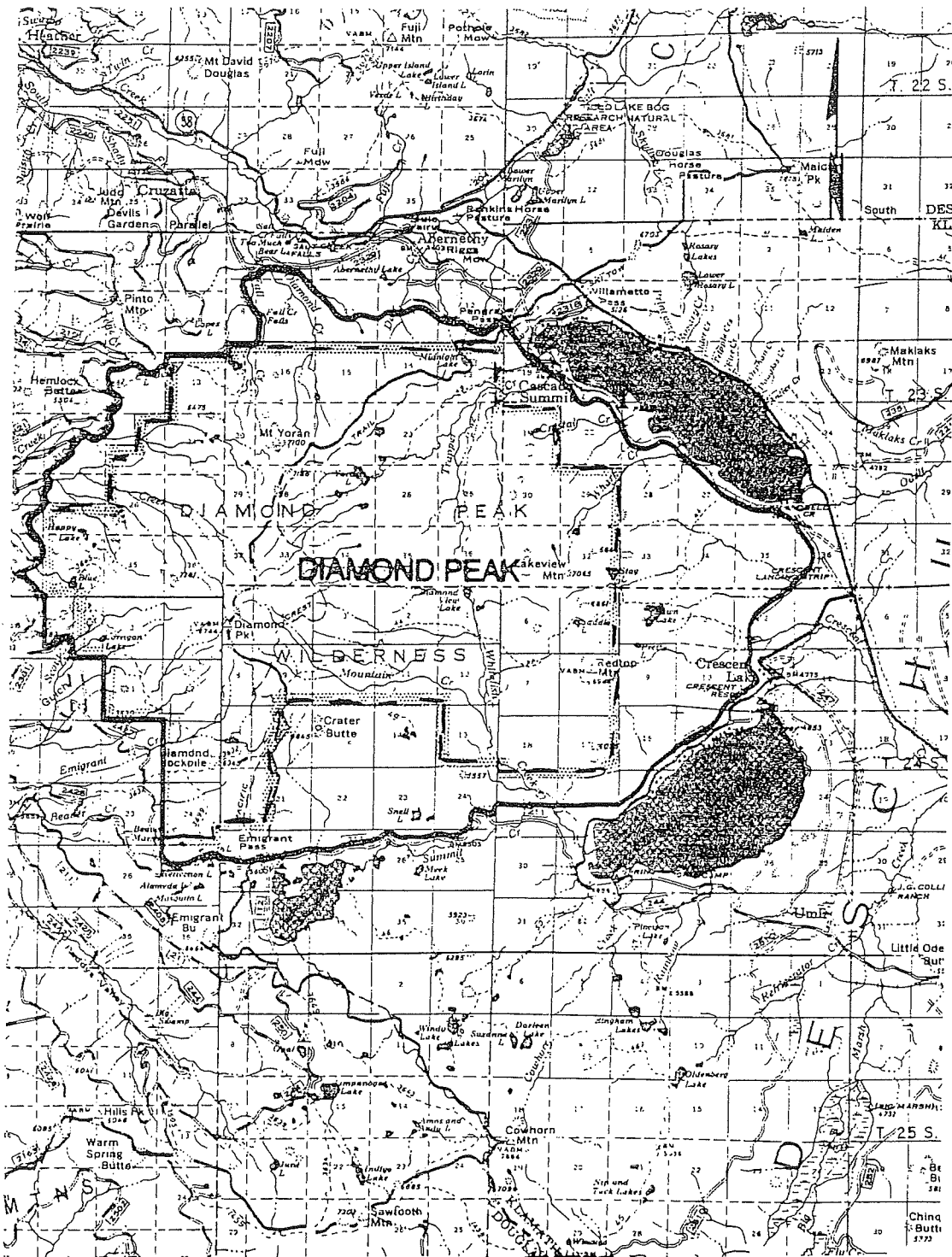
Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants, integral vistas and the aquatic chemistry and biology within the Diamond Peak additions. As a result, the Diamond Peak Wilderness Additions are recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.



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Diamond Peak Wilderness Map



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11. Boulder Creek Wilderness

National Forest:	Umpqua National Forest, Steamboat Ranger District
Size:	19,100 acres
Access Points:	Boulder Creek Trailhead, Perry Butte Trailhead.
Miles of Trail:	30
Elevation Range:	1600 to 5600 ft

General Description

The 19,100-acre Boulder Creek Wilderness and associated stream is an important, old growth timbered tributary of the North Umpqua River located 50 miles east of Roseburg, Oregon. The area contains numerous rock monoliths and outcroppings. Boulder Creek itself is a series of quiet pools connected with small waterfalls and rapids. Pine Bench, located in the lower portions of the Wilderness, contains unusual stands of large ponderosa pine thought to be the largest stand this far north and west of the summit of the Cascades. Recreational use is 2,800 RVD's per year.

Other Features

The Umpqua Rocks Special Interest Geologic Area is located in the lower portion of the Wilderness Area.

Air Quality Related Values

Visibility: The Boulder Creek Wilderness contains the entire drainage area of Boulder in the Western Cascade geological province. The landscapes are typical of and common to this province. The basalt cliffs in lower Boulder and Rattlesnake Creeks and Pine Bench (a plateau with old growth ponderosa pine) offer the only variety of visual experiences available within the wilderness. The main use route is the trail in the creek bottom allowing no expansive views. Only from Pine Bench can one have a moderate panoramic view of the North Umpqua Canyon.

Aquatic Biology: This is important for the propagation of all the components of the aquatic ecotypes in the lakes and streams of the wilderness. Within the Boulder Creek Wilderness, important anadromous spawning habitats exist in Lower Boulder Creek. With respect to cultural and archeological assets, no known "vision quest" mounds have been identified in the Wilderness.

Sensitive plant species include Pellae brachyptera and Pityopus californicus.

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Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest lands if the current July 4 - Labor Day visibility protection period were to be extended. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

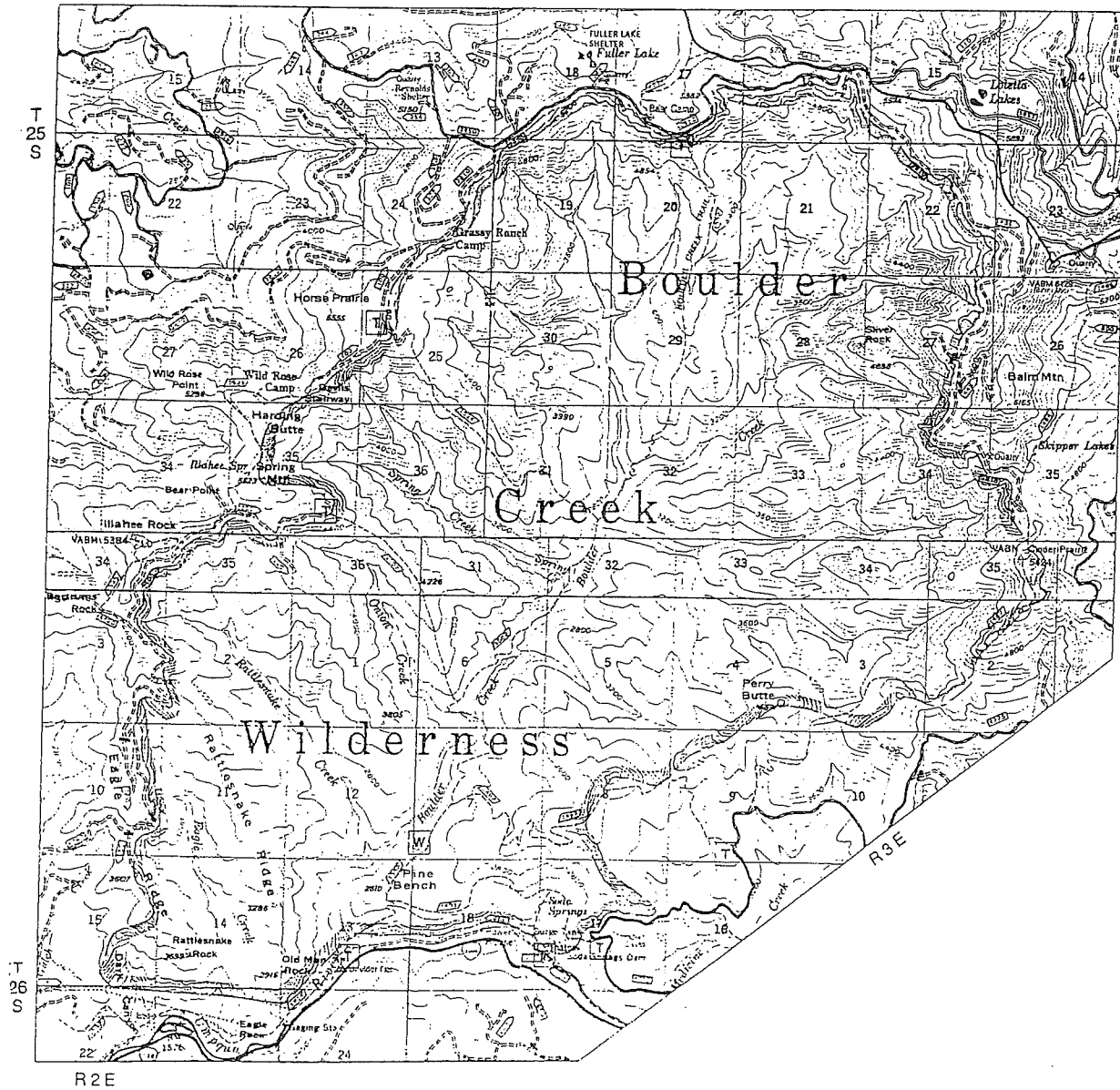
Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants and the aquatic chemistry within the Wilderness. Since visibility is not an important resource, however, the Boulder Creek Wilderness is recommended for redesignation to Class I, only.



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Boulder Creek Wilderness



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12. Mt. Thielsen Wilderness

National Forest:	Umpqua, Winema, and Deschutes National Forest, Steamboat, Chemult, Diamond Lake and Crescent Ranger Districts
Size:	55,100 acres
Access Points:	Pacific Crest Trail, Mt. Thielsen Trailhead, Howlock Mtn. Trailhead, Diamond Lake, Windigo
Miles of Trail:	78
Elevation Range:	4300 to 9182 ft

General Description

The Mt. Thielsen Wilderness is located directly north of Crater Lake National Park along the Crest of the Cascade Mountain Range. The Pacific Crest National Scenic Trail traverses the wilderness area near Summit Rock to Tolo Mountain. It is characterized by prominent peaks, the most prominent of which is Mt. Thielsen. Other peaks are Tipsoo, Howlock Mtn., and Tolo Mountain. Lake Lucile and Maidu Lake are also located within the wilderness. Recreational use is estimated at 5,500 RVD's per year. Approximately 40 % of the use is on the trails.

Air Quality Related Values

The area, which is dominated by pumice flats, lodgepole pine and mountain hemlock timber stands and the peaks of the Cascades are in the high or recent Cascades character type. The various peaks, Maidu and Lucille Lakes, the North Umpqua River, Cottonwood Creek and the Little Deschutes River are unique in visual variety and high in contrast to the rest of the Wilderness which is relatively monotonous. Large, open glades between and west of Tipsoo Peak and Mt. Thielsen are also unique landscapes. Views of past forest management activities, Diamond Lake and the southern Cascade Range are available both east and west from the Crest.

Visibility: Good visibility is especially important for a quality wilderness experience in high elevation portions of the Mt. Thielsen Wilderness. It is the primary value on major ridgetop trails. Integral vistas from within the Mt. Thielsen Wilderness north to Mt. Jefferson, the Three Sisters and south to Mt. Shasta are important to the visitor's experience while in the Wilderness. These views are especially important to the large number of people that climb Mt. Thielsen.

Aquatic Chemistry: The Mt. Thielsen Wilderness is located in an area where surface water alkalinity is expected to be < 200 $\mu\text{eq/l}$ and therefore sensitive to acid deposition (see Section 5). Resident fisheries are an important recreation component in Maidu and Lucille Lakes. The Wilderness is the headwaters of the North Fork of the Umpqua River.

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Cultural and Archeological: Assets include the Mt. Thielsen Rock Cairns Site and "vision quest" mounds located on high, prominent geological features. A description of "vision quest" mounds is found under the AQRV discussion of the Rogue-Umpqua Wilderness.

Sensitive plant species include Erigeron cascadensis.

Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest lands should the visibility protection period be extended beyond July 4 - Labor Day. There are no proposed geothermal or industrial facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

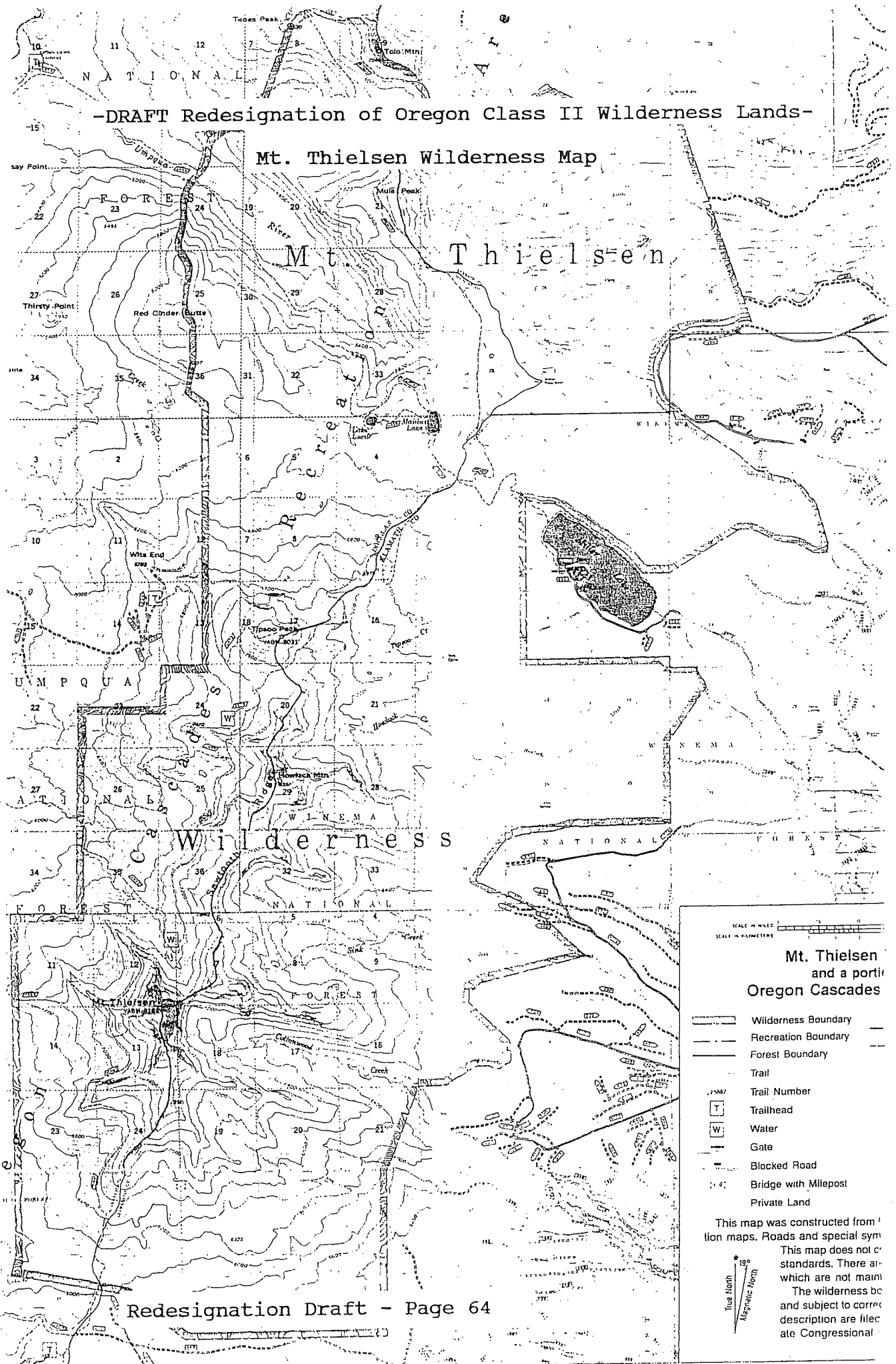
Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants, integral vistas and the aquatic chemistry and biology within the Mt. Thielsen additions. As a result, the Mt. Thielsen Wilderness is recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.



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Mt. Thielsen Wilderness Map



Mt. Thielsen
and a portion of
Oregon Cascades

- Wilderness Boundary
- - - Recreation Boundary
- Forest Boundary
- Trail
- Trail Number
- Trailhead
- Water
- Gate
- Blocked Road
- Bridge with Milepost
- Private Land

This map was constructed from
topographic maps. Roads and special sym-
bols are not shown. This map does not
show standards. There are many
which are not main-
tained. The wilderness boundary
is subject to correction
and subject to correct
description are filed
with Congressional

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13. Crater Lake National Park Additions

(The following text was provided by the National Park Service Pacific Northwest Regional Office and by Park Service staff at Crater Lake National Park.)

Establishing Authority: P.L. 96-553

Location: Adjacent to the northern, western and eastern boundaries of Crater Lake National Park

Size: 22,410 acres

Purpose: "to preserve ... certain unique and ancient volcanic features ... together with significant forest and fish and wildlife resources..."

General Description

Crater Lake National Park was designated Class I by the Clean Air Act Amendments of 1977. On December 19, 1980, 22,410 acres were added to the Park (P.L. 96-553) from contiguous U.S. Forest Service Lands which were Class II and had been designated for study under USFS RARE II. The lands are adjacent to the north, west and east boundaries of the Park.

In March 1987, 166,149 acres of Crater Lake National Park were nominated as wilderness. The wilderness proposal included the entire 22,410 acres transferred to Crater Lake in 1980.

The 1980 land additions are located downslope on the lower flanks of Mt. Mazama. They include fine examples of coniferous species including ponderosa pine, lodgepole pine, mountain hemlock, and red shasta fir. Hydrologic features include springs, mountain streams, and bogs; geologic features include small volcanic features, pumice deposits, and erosional features known as "The Pinnacles."

Scenic vistas from Crater Lake Rim extend 270 degrees around the caldera and encompass the north, east and south view directions. These panoramic views are almost as important to the visitor as a clear view of Crater Lake itself. Air quality and visibility are very important resource values to Crater Lake National Park. Current analysis of the fine particulate monitor has shown the park's air quality to be comparable to that found at the South Pole (UC Davis).

California Energy Company is conducting exploratory drilling along the east and south boundaries of the park in search of geothermal resources.

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Overview of Crater Lake Additions

A. Legislative Acts concerning Crater Lake National Park.

Act of May 22, 1902, reserving a certain tract of land from public lands in Oregon as a public park...Act of Legislature of Oregon, approved January 25, 1915, ceding exclusive jurisdiction to the United States for Crater Lake National Park...Act of August 21, 1916, accepting cession by Oregon of exclusion jurisdiction over lands embraced within Crater Lake National Park...Act of May 14, 1932, adding certain land to Crater Lake National Park...Act of December 19, 1980, adding 22,890 acres to the Park...Act of September 8, 1982, deleting 480 acres from the December 19, 1980, addition due to previously negotiated timber sale and requiring the Secretary to investigate lake clarity.

B. Legislative Factors

The Clean Air Act of 1977 as amended gives the Secretary of the Interior an affirmative responsibility to protect air quality related values (AQRV's). Section 162(a) designates Crater Lake National Park as a mandatory Class I area under the Prevention of Significant Deterioration (PSD) program. The prime resource, of both geologic and scenic importance, is Crater Lake and its encircling caldera walls. "...Crater Lake is unique among American lakes... The lake is an incomparable example of a deep, pure and stable caldera lake. Only six lakes in the world are known to exceed the 1,932 foot depth of Crater Lake. The beauty and wonder of the lake constitutes one of the great scenic fascinations of the country. It is the deepest lake in the United States, and because of its remarkable clarity, it has been designated as a natural hydrological benchmark and is being studied by an increasing number of scientists...."18.

C. Additional Lands Legislation

In April 1979, the administration transmitted to Congress a recommendation for management of some 62 million acres of roadless US Forest Service lands. Included in the wilderness recommendation was a 30,000-acre strip of land surrounding Crater Lake National Park. Though these lands were recommended by the Forest Service for designation as wilderness, Congress felt that since they are geographically related to the features of the park, they should be managed by the National Park Service. In addition, the proposed minor changes would improve the park boundary by more closely following topographical features. It would also add to the park key natural features associated with the geological formations in the park.

On the east, boundary modifications would include the Sand Creek drainage, a canyon which contains geological pumice formations commonly referred to as "The Pinnacles," as well as Bear Butte, a

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significant scenic feature viewed from within the park. To the north, the proposed boundary incorporates the lower slopes of Timber Crater, and the Desert Ridge Boundary Springs ecological units. Sphagnum Bog, an area to the west of the park, which exhibits a flora of mosses and herbs, is fed by Crater Springs. The proposal incorporates into the park those springs, as well as the scenic Spruce Lake. Just outside the southwest corner of the park is a unique area known as Thousand Springs. This feature also would be included in the park."¹⁹

On December 19, 1980, Crater Lake's Enabling Act was amended to read as follows: "That in order to preserve for the benefit, education, and inspiration of the people of the United States certain unique and ancient volcanic features, including Crater Lake, together with significant forest and fish and wildlife resources, there is hereby established the Crater Lake National Park in the State of Oregon. The boundary of the park shall encompass the lands, waters, and interest therein within the area generally depicted on the map entitled, 'Crater Lake National Park, Oregon', numbered 106-80,001, and dated February, 1980, which shall be on file and available for public inspection in the office of the National Park Service, Department of the Interior. Lands, waters and interests therein within the boundary of the park which were national forest and the boundary of such national forest is revised accordingly."²⁰

D. Recreational Values

The lands included in the December 19, 1980, legislation provide the public with pristine forest, wildlife viewing areas, geologic wonders for exploration and scientific research and the peace and quiet of reflective recreation. Crater Lake is an extremely quiet park. The park's pristine air quality provides the public the opportunity to view nature and all its wonders in an unimpaired setting. The high value of air quality in a pristine state is valued by the people of southern Oregon. Major urban areas in the Rogue Valley are in the Medford Air Quality Maintenance Area, which is a nonattainment area for carbon monoxide and PM₁₀ particulates. In contrast, Crater Lake air quality is comparable to the pristine air of the South Pole and on the average, has impaired visibility only 4% of the year (Oregon Department of Environmental Quality).

Air Quality Related Values

Since the additional lands considered in this proposal were added to the park after 1977, they are designated Class II. In considering the Crater Lake additions for redesignation, it is important to realize that these lands are pristine ecosystems. They have not been altered by man and are currently as they existed prior to the arrival of modern man. The lands surround Crater Lake National Park and, therefore, impacts on them could, in turn, impact the main body of the park. The following information describes the air quality related values in the Crater Lake National Park additions.

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Visibility

Crater Lake National Park provides spectacular vistas of the crest of the Cascade Mountain Range and the Klamath Basin, with scenic vistas over 150 miles away. The most spectacular views in the park are seen from Rim Drive surrounding the caldera of Crater Lake. Other vantage points are on the summits of Mt. Scott (northeast and central boundary), the summits of Union Peak (southwest boundary), Bald Crater, Red Cone and Mt. Llao (central and western boundary). From Rim Drive, where some 500,000 visitors view Crater Lake annually, vistas exceed a 270 degree panorama to encompass the north, east, and southern viewsheds. On clear days, one can see as far south as Mt. Shasta (14,000+ feet ASL) located about 100 miles south in northern California. The additional lands (1980) are included in these important viewsheds. Visibility is regarded as a primary resource of Crater Lake National Park.

Aquatic Biology

Extensive baseline studies have been started on Crater Lake, the prime resource of Crater Lake National Park (Larson, G. OSU-CPSU-NPS 1982 to present). Other studies that have recently been completed include: "Ecology of Streams of Crater Lake National Park", Gregory, Lamberti, Wildman and Ashkenas, OSU, Jan. 7, 1987; "Sphagnum Bog: An ecological inventory and recommendations for the management and use", Susan Seyer and Jerry Franklin, OSU, June, 1980; and Trout Studies and a Stream Survey of Crater Lake National Park, OSU, M.S. Thesis, 1948, pgs. 124. The above studies do not include the lower drainage or the lands added to the park. However, they are likely representative of the lower drainage found in the new added lands. These studies include important baseline data to determine changes over time to the environment including those that may occur to the additional lands.

Based on the information and field monitoring available to date, the new added lands have not been impacted by modern man. Over thirty-eight research studies have been published on the aquatic environments of Crater Lake National Park. Aquatic ecosystems and environments are regarded as a primary resource of the Park.

Terrestrial Plants

There are extensive studies on certain ecosystems found in Crater Lake National Park. Over eighteen published reports have been produced on the botany of the park and over ten reports have been published on fire ecology. Vegetation maps have been produced for the park and some information is available concerning the new lands added in 1980. The forests and vegetation of Crater Lake National Park are regarded as a primary resource of the park and are specifically listed as a resource for protection in the 1902 enabling legislation. Because of the extensive forest communities found at Crater Lake, the park is very

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concerned about any air pollution which could affect the growth and regeneration of the forest and sensitive vegetation in the park. The park has five species of plants that are regarded as rare, and some of these plants are unique to Crater Lake National Park.

Geology and Soils

Over ten published reports have been produced concerning the geology of Crater Lake National Park. An extensive study is currently underway by the USGS (Charlie Bacon), which incorporates the lands added in 1980. The soils and geologic features of the park are primary resources and are specifically mentioned in the amended 1980 enabling legislation (P.L. 96-553). The law reads "That in order to preserve for the benefit, education and inspiration of the people of the United States certain unique and ancient volcanic features, including Crater Lake, together with significant forest and fish and wildlife..." Crater Lake's new lands hold excellent geologic examples of volcanic landforms including pumice deposits, erosional features and glacial deposits and features. People come from all over the world to view the geologic features of Mt. Mazama.

Cultural and Archaeological

Crater Lake has a very limited archaeological resource known at this time. The cultural resource of the park has more significance and depth. The Klamath Indians entered the park during the summer time and regarded Crater Lake as a very significant spiritual place. Many legends and lore are associated with Crater Lake through the Klamath Indian Tribe. Currently, there is very little known about whether the new added lands hold any significant cultural resources. If they do, they are most likely associated with primitive man.

Odors

Crater Lake National Park holds significant resources in regard to passive reflective recreational values. The park's clean air and high visibility provide for remarkable forest fragrances, especially in the spring, summer and fall. The park's heavy snow load during the winter season appears to provide a neutral scent in which it is hard to smell the distinctive forest aroma. This is a unique characteristic of a winter wilderness environment. As a result, any introduction of foreign odors is very distinctive to the casual observer during the winter season (automobile exhaust, wood smoke, etc.).

The spring, summer and fall seasons provide the visitor with an abundant palette of natural aromas found only in old growth forest stands, mountain springs, streams and bogs, alpine mountain tops, meadows, pumice deserts, pristine lake waters and on sites of natural lightning fire sites. This is only a partial list of the aromas found in the park, however, nearly all of these can be sought out in the lands added in 1980 to the park. The resource of natural aromas and

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scents is regarded highly by the park visitor, yet very little is known about them.

AQRV Summary

A total of 166,149 acres have been recommended as wilderness for Crater Lake National Park. This includes all of the 22,410 acres added to the park in 1980. These lands were also recommended as wilderness by the USFS RARE II Study. The park regards these lands as a significant contribution to the wilderness recommendation for Crater Lake National Park. If any of these AQRV's were impaired, the impacts might be felt in the core of the park. The AQRV's are listed below in priority order for Crater Lake National Park.

- | | |
|-----------------------|--------------------------------|
| 1. Visibility | 5. Geology and soils |
| 2. Aquatic biology | 6. Odors |
| 3. Aquatic chemistry | 7. Cultural and archaeological |
| 4. Terrestrial plants | |

In summary, the Crater Lake National Park additions have significant scenic and recreational value to the public.

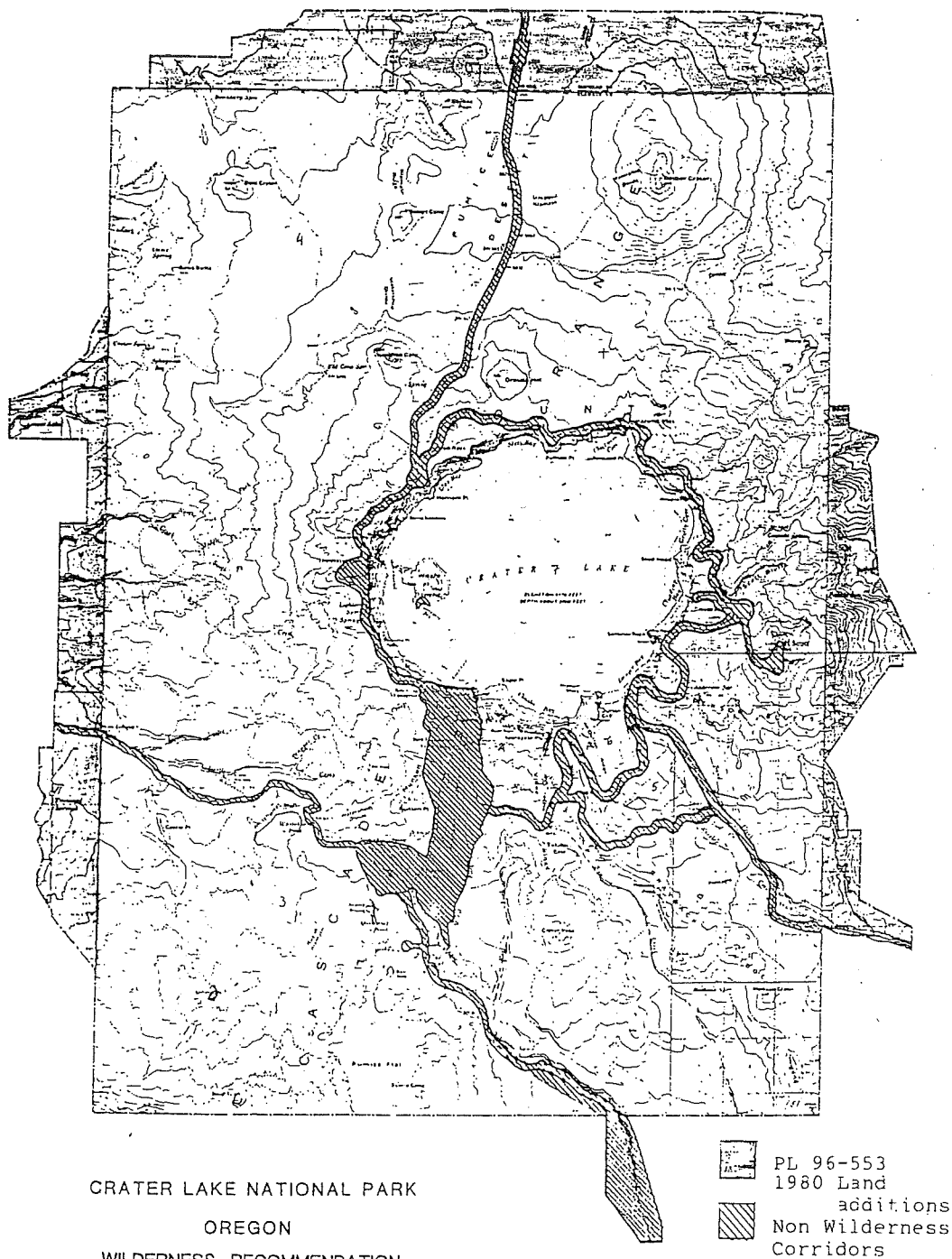
Management Implications

With the exception of the development of geothermal resources, redesignation of the Crater Lake National Park additions is not likely to add additional constraints to the management of surrounding forest lands because the additions are contiguous to existing Class I National Park lands. Exploratory drilling for geothermal resources is occurring along the east boundary of the park. In the event that these resources were developed, an analysis of the impact of the facility on Crater Lake AQRVs would be required. Should the emissions adversely impact redesignated portions of Crater Lake National Park, mitigating measures would have to be taken. There are no other known major emitting facilities being proposed which would be affected by the redesignation.

Discussion

Redesignation would add no additional constraints to forestry slash burning but would provide additional protection provided for AQRVs sensitive plants, integral vistas and the aquatic chemistry and biology within the Park additions. There may be implication for geothermal development along the eastern Class II boundary but because of the sensitive nature and importance of AQRV additions, these lands are recommended for redesignation to Class I and should be incorporated into the Oregon Visibility Protection Plan.

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Crater Lake National Park Additions Map



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14. Rogue-Umpqua Wilderness

National Forest:	Umpqua and Rogue River National Forests, Tiller and Prospect Ranger Districts
Size:	33,200 acres
Access Points:	Fish Lake Trailhead, Beaver Swamp Trailhead, Skimmerhorn Trailhead, Cripple Camp Trailhead, Acker Divide Trailhead, Anderson Mountain Trailhead Abbott Butte Road, Hershberger Lookout Road, Fish Creek Valley Road, Castle Rock Fork Trail
Miles of Trail:	100
Elevation Range:	2800 to 6783 ft

General Description

The Rogue-Umpqua Divide Wilderness is located in southwestern Oregon, 10 miles northwest of Crater Lake National Park, in the Western Cascade geologic province. Grasshopper Mountain and the associated Fish Lake Basin contain unique geologic formations with 90-acre Fish Lake dominating. Other features include Cliff, Buckeye, and Wolf Lakes; Elephant Head, and High Rock geologic formation; and meadows such as Whitehorse Meadows. The wilderness area has an extensive trail system which affords the visitor the experience of timbered valleys of Douglas-fir climbing to subalpine meadows mixed with stands of true fir. Several large streams originate in the wilderness area, the largest being Castle Rock Fork Creek.

Other Features

The Civilian Conservation Corps built trail shelters located at Rocky Ridge, Cripple Camp, and Fish Creek Valley. Most of the former Rogue-Umpqua Divide Scenic Area is encompassed by the wilderness area.

The 34,904-acre Rogue-Umpqua Divide Wilderness is located in the Western Cascades, along the watershed divide between the South Umpqua River and the Rogue River. By far the largest portion drains into the South Umpqua. The area is composed of steep terrain which supports a mosaic of high-elevation timber stands, moist meadows and extensive outcrops of volcanic rocks. Ancient landslide activity has created several small lakes on the Umpqua side of the watershed divide; Fish Lake (approx. 90 acres) is the largest.

Current Conditions

Prior to its 1984 Wilderness designation, much of the present Rogue-Umpqua Divide Wilderness was managed as a Scenic Special Interest Area, established in 1974. Past recreational use data for the Scenic Area includes roaded portions outside of the Wilderness; as a result, statistically-based conclusions about current levels of use are difficult to make. However, field observations over the past decade

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indicate use-patterns similar to those in Sky Lakes Wilderness with heavy concentrations of visitors at Fish Lake and at the nearby smaller lakes in Fish Lake Basin during weekends and holidays. However, due to the relatively low elevation of Fish Lake (3,405 feet), far more of this use occurs during the spring and autumn months than does lakeshore use in the other two Wilderness areas.

The margins of Fish Lake and Cliff Lake have over used (devegetated) campsites. There are slightly over 100 miles of trail in the Rogue-Umpqua Divide Wilderness and day-hiking may be increasing in popularity here due to good access from major trans-Cascade highways. "Off season" use includes deer and elk hunting along the roaded periphery of the Wilderness. Due to its relatively small size, as well as to its location along a mount "crest zone," much of the Rogue-Umpqua Divide Wilderness is subject to the sight and sound of motorized vehicles. Timber harvest units are also easily visible from most of the high points. The Fish Creek Valley road, although excluded from the Wilderness, penetrates four miles into the area, forming an intrusive corridor of motorized travel. Cross country skiing or other wintertime use of the Wilderness is negligible (snowmobiling was permitted prior to the 1984 Wilderness designation).

The Rogue-Umpqua Divide is known locally for its scenic geological features (volcanic plugs, outcrops and cliffs) and for its profusion of meadow wildflowers. The area contains several classified "sensitive" plant species. No threatened or endangered resident animal species are known to occur in the Rogue-Umpqua Divide Wilderness. The forest/meadow mosaic provides good summer habitat for deer, elk and bear. Stocked trout are present in Fish Lake and Cliff Lake. The Rogue-Umpqua Divide Wilderness is located in a geologically diverse portion of the Western Cascades; some mineral values do occur, but these are not believed to be commercially significant.

The Wilderness contains portions of two range allotments. Livestock grazing is concentrated in the high elevation meadows, particularly in the eastern section of the area; range use has resulted in some degradation to trails.

Historical Trends and Anticipated Use Levels

Historic uses of the Rogue-Umpqua Divide Wilderness have included stock grazing (exclusively sheep from the 1880s through the 1920s), berry-picking, hiking, camping, fishing and small scale mining. Grazing has undoubtedly declined in importance from the sheepherder days of the early twentieth century. Cattle (up to a current maximum of 370 head) are ranged each year on two allotments, portions of which include the Wilderness.

Recreational use of the present Rogue-Umpqua Divide Wilderness was probably quite minor until after the 1930s, when road\trail construction and campsite developments by the Civilian Conservation

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Corps opened up the Fish Lake Basin and Fish Lake Valley to more visitors. Later development of the Rogue-Umpqua Divide Trail (designated a National Recreation Trail in 1980) also served to bring somewhat increased use, especially by organized groups of day hikers. Increasing numbers of motorcyclists visited the present Wilderness, especially the Fish Lake Basin, during the 1970s and early 1980s.

The Forest Service estimates that the Rogue-Umpqua Divide Wilderness has received approximately 10,000 Recreation Visitor Days annually during the 1980s; by far, most of this use occurs in the Fish Lake Basin. Use is not evenly distributed; the focal points of over-use are the lake basins. Determining the areas limits of acceptable change will be an important task so that corrective management action can be taken.

Role of the Rogue-Umpqua Divide Wilderness

The current total amount of land included in the Rogue-Umpqua Divide Wilderness is 34,904 acres. The Wilderness provides watershed protection for some of the major source streams of the upper Rogue River and the upper South Umpqua River, as well as a significant amount of summer habitat for big game. Several spotted owl habitat areas (SOHAs) are located within or partially within the Wilderness.

The Rogue-Umpqua Divide Wilderness abuts the Abbott Creek Research Natural Area. Ecological research has been conducted at a number of meadows along the Divide; the Wilderness also contains habitat for "sensitive" plant species, such as Frasera Umpquaensis (gentle gentian) and Colliomia mazama.

The Rogue-Umpqua Divide Wilderness offers good opportunities for backcountry recreation and natural scenery. In the areas exclusive of Fish Lake Basin and Fish Creek Valley there is good potential for solitude; the lakes, especially Fish Lake, present more of a developed-type than a wilderness-type setting. Currently, the Wilderness has local recreational significance; most visitors come from within Douglas County and Jackson County (and many of these are probably residents of nearby communities like Prospect, Tiller and Canyonville).

The Cow Creek Band of Umpqua Indians has identified the western section of the Wilderness as being part of an area of special tribal interest and traditional activities. Due to its proximity to three major recreation "centers" (Diamond Lake/North Umpqua River corridor, Crater Lake National Park, and Union Creek/Upper Rogue River corridor), the Wilderness could become a popular destination for day-hikers seeking scenic diversity and solitude.

The desired future condition of the Rogue-Umpqua Divide Wilderness is an essentially unmodified environment with a high degree of solitude. The Wilderness Recreation Opportunity Spectrum (WROS) classification of the Rogue-Umpqua Divide Wilderness shows its role for providing

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different kinds of wilderness experience. Currently, the WROS classification for the Wilderness is 10,317 acres of Primitive Trailed (all of it located in the Umpqua NF portion) and 24,587 acres in the Semi-Primitive WROS class (5,877 acres in the Rogue River NF and 18,710 acres in the Umpqua NF portion).

Air Quality Related Values

Visibility: Expansive views of the Rogue River Valley are in evidence on the Rogue-Umpqua Divide and more local views are available from some of the ridgeline trails within the Wilderness. The vistas of Mt. Shasta from Hershberger and Abbott Butte Lookouts are striking. Short range views within the Wilderness are also an important resource.

Aquatic Biology: Aquatic biology is important for the propagation of all the components of the aquatic ecotypes in the lakes and streams in the wilderness. Resident fisheries are important in Fish, Cliff, Buckeye and Triangle Lakes. Streams generally receive less fishing pressure than the lakes.

Aquatic Chemistry: The west Cascades are not considered to be sensitive to acid deposition (see Section 5).

Cultural and Archeological AQRV's: These include "vision quest" mounds associated with important Indian religious sites are located on Abbott Butte, Elephant Head and Rattlesnake Mountain. "Vision quest" mounds mark locations (usually ridgetops offering expansive vistas) where Indian youths underwent a right-of-passage to manhood. Youth spent several days in the wilderness seeking a vision of an animal spirit that they could claim as their own. Rock cairns or "vision quest" mounds mark these locations. "Vision quest" experiences continue to the present day. Although the rock mounds are not sensitive to increased air pollution, the "vision quest" experience may be degraded if visibility becomes impaired.²¹

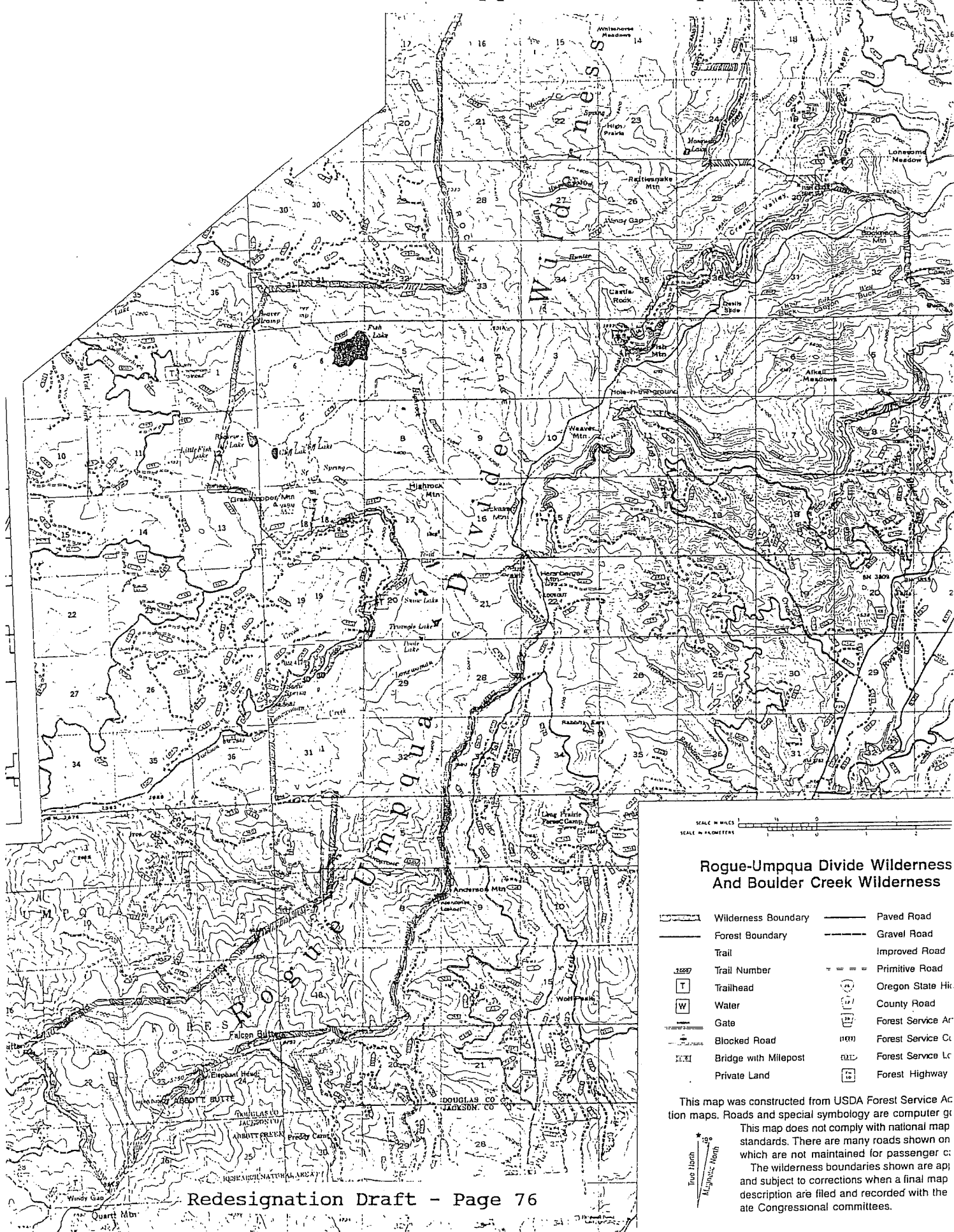
Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest lands if the visibility protection period were to be extended beyond the July 4 to Labor Day period. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources yet would provide additional protection provided for Wilderness AQRVs. As a result, the Mt. Washington Wilderness is recommended for redesignation to Class I and incorporated into the Oregon Visibility Protection Plan.

Rogue-Umpqua Wilderness Map



Rogue-Umpqua Divide Wilderness And Boulder Creek Wilderness

	Wilderness Boundary		Paved Road
	Forest Boundary		Gravel Road
	Trail		Improved Road
	Trail Number		Primitive Road
	Trailhead		Oregon State Hi.
	Water		County Road
	Gate		Forest Service Ar
	Blocked Road		Forest Service C
	Bridge with Milepost		Forest Service L
	Private Land		Forest Highway

This map was constructed from USDA Forest Service Action maps. Roads and special symbology are computer generated. This map does not comply with national map standards. There are many roads shown on which are not maintained for passenger cars. The wilderness boundaries shown are approximate and subject to corrections when a final map description are filed and recorded with the appropriate Congressional committees.

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15. Sky Lakes Wilderness

National Forest:	Rogue River & Winema National Forest Butte Falls, Klamath Ranger Districts
Size:	116,300 acres
Access Points:	Pacific Crest Trail #2000
Miles of Trail:	145 miles
Elevation Range:	3800 to 9495 ft

General Description

The Sky Lakes Wilderness totals about 116,300 acres. Of the total acres, 70,113 are on the Rogue River NF and the remainder are on the Winema National Forest. This area straddles the southern Oregon Cascades from Crater Lake National Park southward to Highway 140. It is about 27 miles long and 6 miles wide. Elevations range from 3,800 feet in the Middle Fork of the Rogue River to 9,495 feet atop Mount McLoughlin. Over 200 pools of water dot the landscape. They vary from mere ponds to shallow lakes of 30 to 40 acres in size. Numerous springs give rise to many perennial streams and rivers. The gentle lake basins attest to huge ice fields and glaciers that once covered the area.

The Pacific Crest Trail winds along the Cascade Mountain's crest for about 35 miles. North end wilderness trail access is via Crater Lake National Park and southern access is from Highway 140. Nearly 25 east-west trails provide entry into the area.

Common trees are Pacific yew, white fir, mountain hemlock, and subalpine fir. The Sky Lakes Wilderness consists of the crest zone of the High Cascades, extending from the boundary of Crater Lake National Park on the north to Mt. McLoughlin and Fourmile Lake on the south. Although steep relief is found in such places as the glacially-carved Middle Fork (Rogue River) Canyon and the slopes of Mt. McLoughlin, Sky Lakes is generally characterized by gentle, forested terrain of volcanic origin.

The Wilderness contains a number of small lakes, most of them concentrated in three or four glacial basins near the crest of the Cascade Range. Seven Lakes Basin is the most heavily used.

Current Conditions

Field data for the Sky Lakes Wilderness (compiled from the 1976-1983 field observations and records of Wilderness guards, trail head registration, and trail counter data) indicate that most recreation uses (camping, fishing, pack stock grazing, and other potentially "high impact" activities) within the Wilderness are concentrated in the three major lake basins (Seven Lakes, Sky Lakes, Blue Canyon basins). These uses are further concentrated at specific sites on the margins of 10-12

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popular lakes. The field data also show that 75 percent of visitor use occurs on weekends and holidays from mid-June through mid-October.

At the southern extreme of the Wilderness, the summit of Mt. McLoughlin attracts large numbers of day hikers each summer who climb the mountain for challenge and the excellent long range vistas of the Three Sisters to the north and Mt. Shasta to the south. From 700 to 800 people climb Mt. McLoughlin each year.

The less used northern part of Sky Lakes abuts Crater Lake National Park along a portion of the Park which has been proposed for Wilderness designation; there have been no apparent administrative problems or management conflicts along this boundary.

"Off season" use of the Wilderness is confined largely to deer and elk hunting, particularly in the northernmost and southernmost sections. Some cross country ski touring occurs during the winter. Portions of the Sky Lakes Wilderness are subject to sounds and sights of nonwilderness character from adjacent areas (for example: logging, road construction, motorized vehicles along roads and highways).

The Wilderness is primarily timbered or open, rocky terrain with numerous small meadows. Wildlife species found in Sky Lakes Wilderness are also common to the remainder of the Forest. No known conflicts currently exist between recreation use and wildlife habitat needs.

Several introduced species of trout are present in the deeper lakes. There are no mining claims in the Sky Lakes Wilderness; geothermal potential is considered to be minor, especially in comparison to known, relatively nearby geothermal sources in the Klamath Basin. Portions of three cattle-grazing allotments extend into the Wilderness. For the most part, conflicts between grazing and recreational use have been rare; recent range improvements have lessened this potential.

Historical Trends and Anticipated Use Levels

Historic uses of the Sky Lakes Wilderness have included stock grazing (particularly sheep in the late 19th and early 20th centuries; and cattle since about 1920), hunting, berry picking, hiking, camping, and (after lake stocking projects in the early 20th century) fishing. Grazing has declined in importance. The Rogue River portion of the Sky Lakes Wilderness currently supports 106 AUMs of use, concentrated on 174 acres of primary range and 147 acres of secondary range. As stated above, specific range management measures have further limited the impact of cattle upon visitors' wilderness experience.

Recreational use of the present Sky Lakes Wilderness probably increased during the 1920s (due to construction of the Oregon Skyline Trail) and the 1930s (when the first "backcountry protection" measures were applied to the area, and when additional trail and camp shelter construction occurred). More recently, completion of the new Pacific

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Crest National Scenic Trail has undoubtedly become a significant factor in the use level of certain portions of Sky Lakes. However, based on visitor use records kept by the Butte Falls Ranger District over the last decade, the Sky Lakes Wilderness has shown a decline in use of approximately 52 percent since peaking in 1972. This decline is attributed in part to recent climatic changes which have caused snowpacks to linger well into the summer season. Nevertheless, over the long run, use of the Sky Lakes Wilderness is expected to rise, largely in proportion to local/regional population growth rates.

Currently, the Forest Service estimates that Sky Lakes has received approximately 18,000 Recreation Visitor Days annually during the 1980's. Based on local population growth projections, recreation demand in Sky Lakes is expected to increase by ten percent over the next decade, and to rise by approximately five percent each decade thereafter. Actual visitor use is not distributed uniformly over the entire Wilderness. Specific carrying capacities are needed for heavy recreation use areas in order to meet established Wilderness management standards. Demand for primitive recreation experience in the National Forests has increased faster in the last 30 years than all other recreation uses. Demand for the area by the year 2030 will exceed theoretical capacity.

Role of the Sky Lakes Wilderness

The current total amount of land included in the Sky Lakes Wilderness is 116,300; this figure is not expected to change (i.e., through additional Wilderness designations). The Sky Lakes Wilderness is an important environmental factor in southwestern Oregon, providing watershed protection, wildlife habitat, vegetation diversity and having high values as an ecological/scientific benchmark area. The Wilderness provides old growth forest habitat for spotted owls and pine martens. Sky Lakes Wilderness also includes two potential Research Natural Areas (Wickiup Springs and Cherry Creek) which contain essentially undisturbed, representative high-elevation ecotypes.

Socially, the Sky Lakes Wilderness offers good opportunities for backcountry recreation, natural scenery and solitude. The area has local and regional (or interstate) recreational significance; most visitors come from southern Oregon and northern California. Probably due to Sky Lakes' proximity and visibility (i.e., the forested crest of the Cascades which rises from the western shore of Upper Klamath Lake), a large proportion of users reside in the Klamath Falls vicinity.

The Wilderness also has an economic impact; currently three commercial outfitter/guides bring guests into the Sky Lakes area under special use permit. Recreationists travelling to and from the Wilderness undoubtedly provide at least some economic support to local communities (e.g., Rocky Point, Fort Klamath, Prospect, Butte Falls) through purchases of gasoline and food supplies. Whether recreational use of Sky Lakes increases or stabilizes, the potential for localized

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degradation of the Wilderness conditions remains strong unless special efforts are taken to manage the types of uses.

The desired future condition of the Sky Lakes Wilderness is an essentially unmodified environment, one which provides the opportunity for users to experience a high degree of solitude and isolation from the sights and sounds of human activities. characterized by an extensive unmodified natural environment. The area is managed to be as free as possible from the influence of man's activities.

Air Quality Related Values

Visibility: Interior vistas important to the visitor's experience include two major scenic vistas; from Devil's Peak (the highest peak along the Pacific Crest National Scenic Trail in Oregon) and from the summit of Mt. McLoughlin. Devil's Peak provides a dramatic view of the Seven Lakes Basin, Middle Fork (Rogue River) Canyon and the rim of Crater Lake to the north; Mt. McLoughlin, the highest point in southern Oregon, gives a 360° panorama of the surrounding countryside with views as far south as Mt. Shasta and north to the Three Sisters. Both of these viewpoints are important to visitor enjoyment as evidenced by (a) the numerous hikers who make the short side hike to the Devil's Peak vista and (b) the fact that 500-700 people make the arduous hike up Mt. McLoughlin each summer. Both views within the Wilderness and integral vistas of peaks along the crest of the Cascade Range are important assets of the Sky Lakes Wilderness.

Aquatic Chemistry: There are several major lakes within the Wilderness. The aquatic chemistry of these lakes is believed to be very sensitive to acid deposition as the lakes have very low alkalinity levels (see Section 5).

Terrestrial Plants: Sensitive plants include:

Asarum wagneri
Collomia mazama
Hieracium bolanderi
Mimulus jepsonii

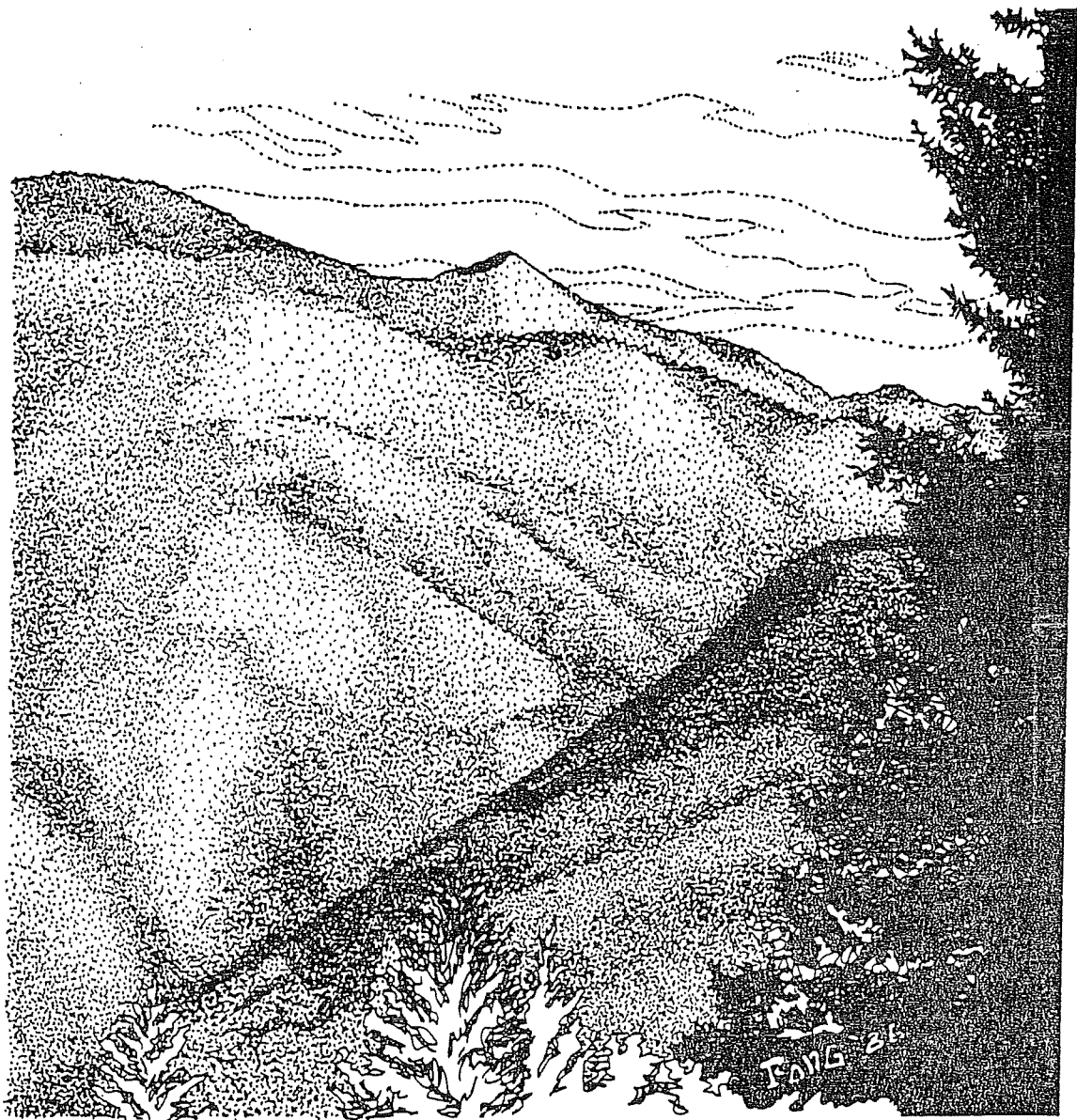
Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest lands should the visibility protection period be extended beyond the July 4 to Labor Day period. There are no proposed facilities or geothermal resources within the area that would be effected in the event that the Wilderness were redesignated to Class I.

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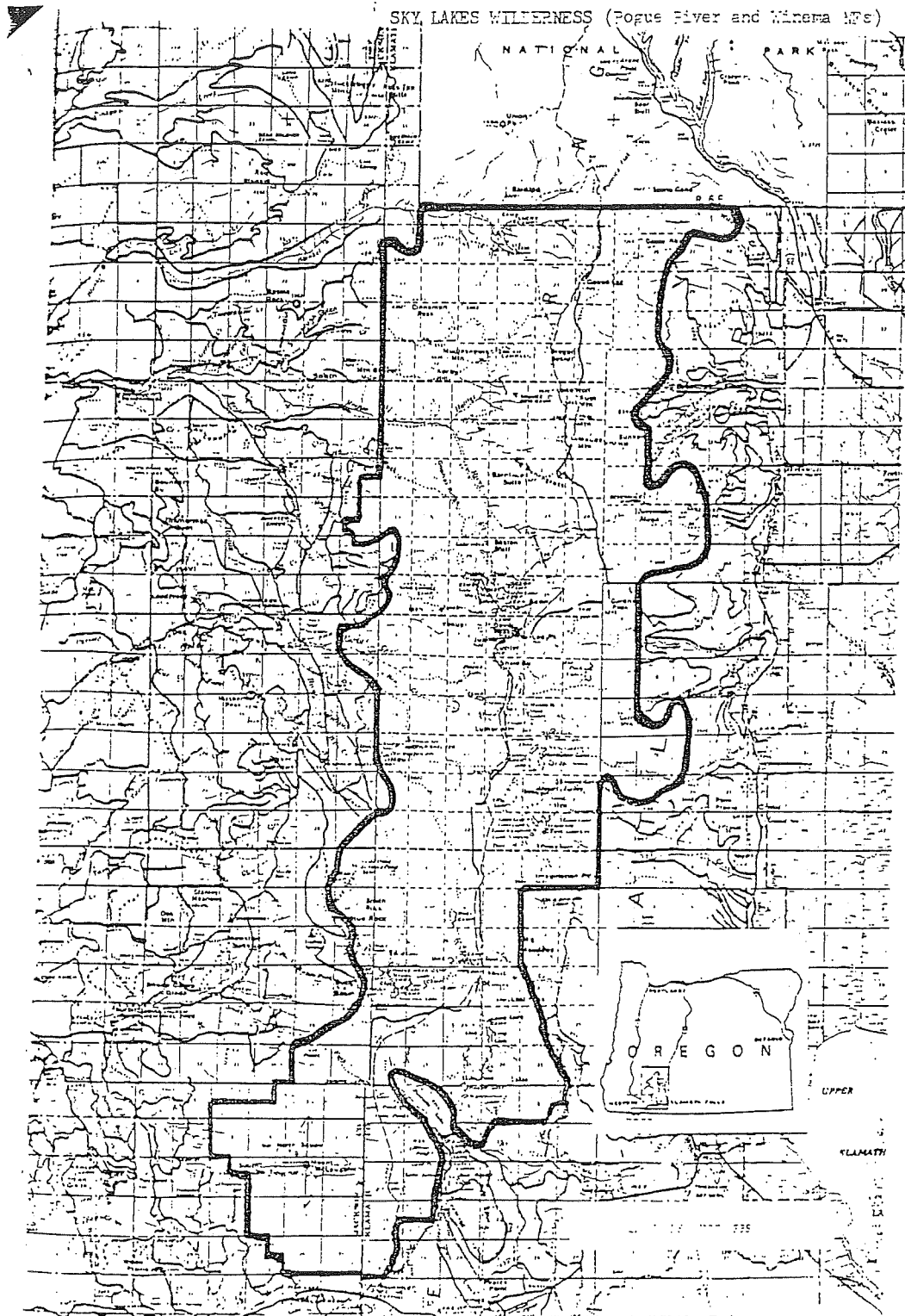
Discussion

Redesignation would add no additional constraints to forestry, geothermal or industrial emission sources but would provide additional protection provided for sensitive plants, visibility with th wilderness, integral vistas and the aquatic chemistry and biology within the Sky Lakes. As a result, the Sky Lakes Wilderness is recommended for redesignation to Class I and inclusion in the Oregon Visibility Protection Plan.



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Sky Lakes Wilderness Map



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16. Wild Rogue Wilderness

National Forest:	Siskiyou National Forest, Gold Beach & Galice Ranger Districts
Size:	36,417 acres
Access Points:	Upper Rogue River Trail
Miles of Trail:	40 miles
Elevation Range:	301 to 3100 ft

General Description

The Wild Rogue Wilderness is, in effect, a viewshed for the wild section of the Rogue Wild and Scenic River. The river receives high use during July and August. About 50,000 people per year (up to 1,000 per day) travel up the Rogue River by jet boat from Gold Beach to enjoy the river, the scenic views of the river corridor and the wildlife. The Upper Rogue River Trail accesses the length of the Wild section of the river offering views similar to those offered river users. Annual RVD visitor use within the Wilderness is about 1,500, exclusive of river use. The Bureau of Land Management portion of the Wilderness (9,400 acres) is being administered by the USDA Forest Service.

Air Quality Related Values

Visibility: The Wilderness offers a view of the Rogue Wild and Scenic River. Additional viewpoints offering more distant vistas are Mt. Bolivar, Hanging Rock and the Bald Knob lookout. Visibility within the wilderness is a major AQRV of the Rogue Wild and Scenic River but views are mostly short-range vistas of the surrounding river canyon. The longest view from the Rogue River at Clay Hill Bar southwesterly toward Lake of the Woods Mtn. is about 7 miles. Because of the importance of protecting the scenic resources of the river and the significance of the river to the tourism economy of the Southern Oregon Coast, it is very important to insure that visibility within the Rogue River corridor is protected. There are no important integral vistas from the wilderness.

Aquatic Chemistry: The Wilderness is not located in an area where surface waters are likely to be sensitive to acid deposition.

Aquatic Biology: The fishery resource on the Rogue River is very important to Southern Oregon but there are no important fisheries within the Wild Rogue Wilderness itself.

Terrestrial Plants: Sensitive plants include:

Bensoniella oregona
Dicentra formosa var. oregana
Lomatium nelsonianaum
Triteleia bendersonii var. leachiae

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Ecologist's Report (Provided by S. Logan, Region 6 Ecologist)

The Wild Rogue Wilderness contains a large portion of the Rogue River watershed. It is characterized by deep, steep canyons, rock outcrops, and open forest. The forests are primarily Ponderosa pine grasslands, Douglas-fir/poison oak communities and oak and other hardwood grasslands with a scattering of western hemlock/swordfern and red alder types on the moist sites. The rock outcrop habitats usually support verticle rock garden communities of monkeyflower, sedges and moss. Several Regional Forester's listed sensitive plants are found in the Wild Rogue Wilderness. However, the area is probably most important as habitat for several large birds including Peregrin falcon, bald eagle and osprey. A rare amphibian, the Del Norte salamander, is also fund here.

The internal vistas of this Wilderness are spectacular although short. The Wilderness also provides fine scenery for many thousands of visitors who float and jet boat the Wild and Scenic Rouge River.

Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the surrounding National Forest. Burning is normally completed by the early spring, minimizing the conflict between wilderness - river use which occurs in the June to September period. Slash smoke is often lofted over the river without impacting visibility within the river corridor. Since a number of timber sales will be held in the Shasta-Costa Creek area immediately southwest of the Wild Rogue Wilderness, there may be a greater potential for future burning restrictions if the wilderness is redesignated to Class I.

There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

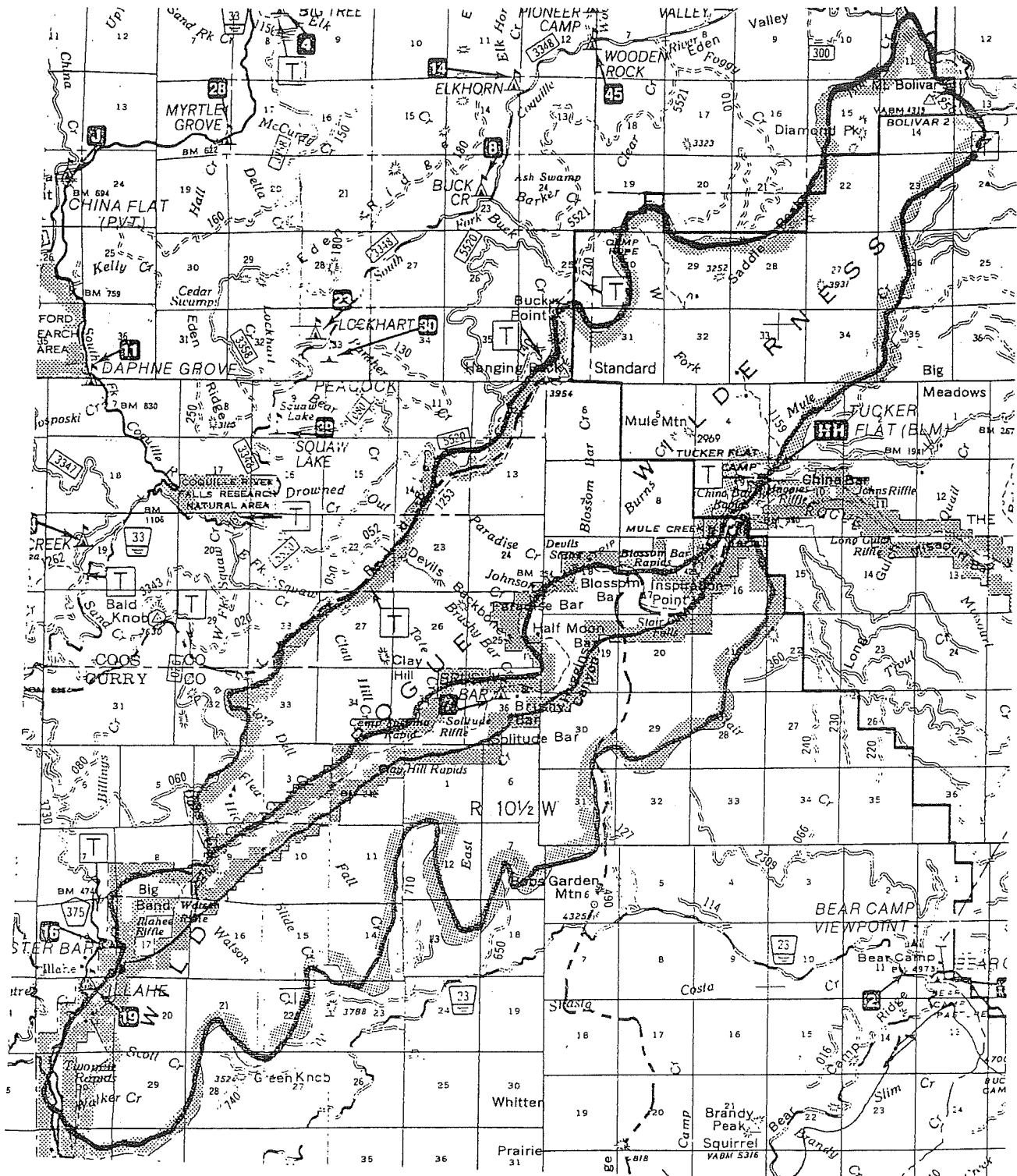
Discussion

The primary AQRV to be protected is visibility within the Wilderness and along the Rogue Wild and Scenic River corridor. Protection of endangered plant species is of secondary concern as are potential restrictions to prescribed burning activities. The importance of visibility within the wilderness\river corridor must be balanced with potential land manager prescribed burning restrictions, however. Scheduling of prescribed burning outside of the July 4 - Labor Day visibility protection period should avoid this conflict.

Because protection of visibility within the wilderness and aquatic chemistry, the Wild Rogue Wilderness is recommended for redesignation to Class I and incorporation into the Oregon Visibility Protection Plan.

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Wild Rogue Wilderness Map



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17. Gearhart Mountain Wilderness & Additions

National Forest:	Fremont National Forest, Bly Ranger District
Size:	22,809 acres
Access Points:	Bly-Dairy Creek Road; Gearhart trail # 100.
Miles of Trail:	11 miles
Elevation Range:	6200 to 8264 ft

General Description

One of the more interesting tracts on the Fremont Forest is the Gearhart Mountain Wilderness, one of the roughest and highest forested areas in this section of the State not crossed by roads. It is an ideal spot to hike, fish and enjoy the scenery and interesting geological formations. The areas, 10 miles northeast of Bly can be reached by car over Bly-Dairy Creek road. The principal trail to the wilderness, # 100, extends from Lookout Rock in the southeastern part of the area to a point near the summit of Gearhart Mountain and then down past Blue Lake to the north entrance at Nottin Creek.

The addition (4,100 acres) to the Wilderness are located along the northern and eastern boundary of the wilderness. It consists of rolling hills covered with a dense stand of lodgepole pine interspersed with mountain meadows. Vistas are lacking in the area with the only opportunity to see out being from existing meadows. The views from these meadows is mainly toward Gearhart Mountain to the south.

Recreational use is mainly during the period of June to October, the primary attraction being Blue Lake which is a one hour hike from the trailhead. The majority of use is for day use and overnite weekend camping. Current use is about 3,200 RVD's per year and static. Projected capacity is 4,400 RVD's.

Air Quality Related Values

The Gearhart Wilderness, because of its small size, is subject to external influences which seriously effect the quality of the wilderness experience in the area. Visibility and odor AQRV's are, in the judgement of the Fremont National Forest, impacted by slash burning smoke from adjacent lands during the Spring months.

Visibility: Vistas within the Wilderness are over a short path. From just below the summit, a view west to Bly and to the east to Warner Mtn.; north to Haggard Mtn. near Silver Lake. From the Palisades, a hiker can look south to Mt. Shasta in California.

Aquatic Chemistry: As noted in Section 5, lakes in this region of the state are not especially sensitive to acid deposition. Since there are no lakes within the additions, aquatic chemistry is not an important AQRV.

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Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Fremont National Forest should the visibility protection period be extended beyond the July 4 - Labor Day period. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

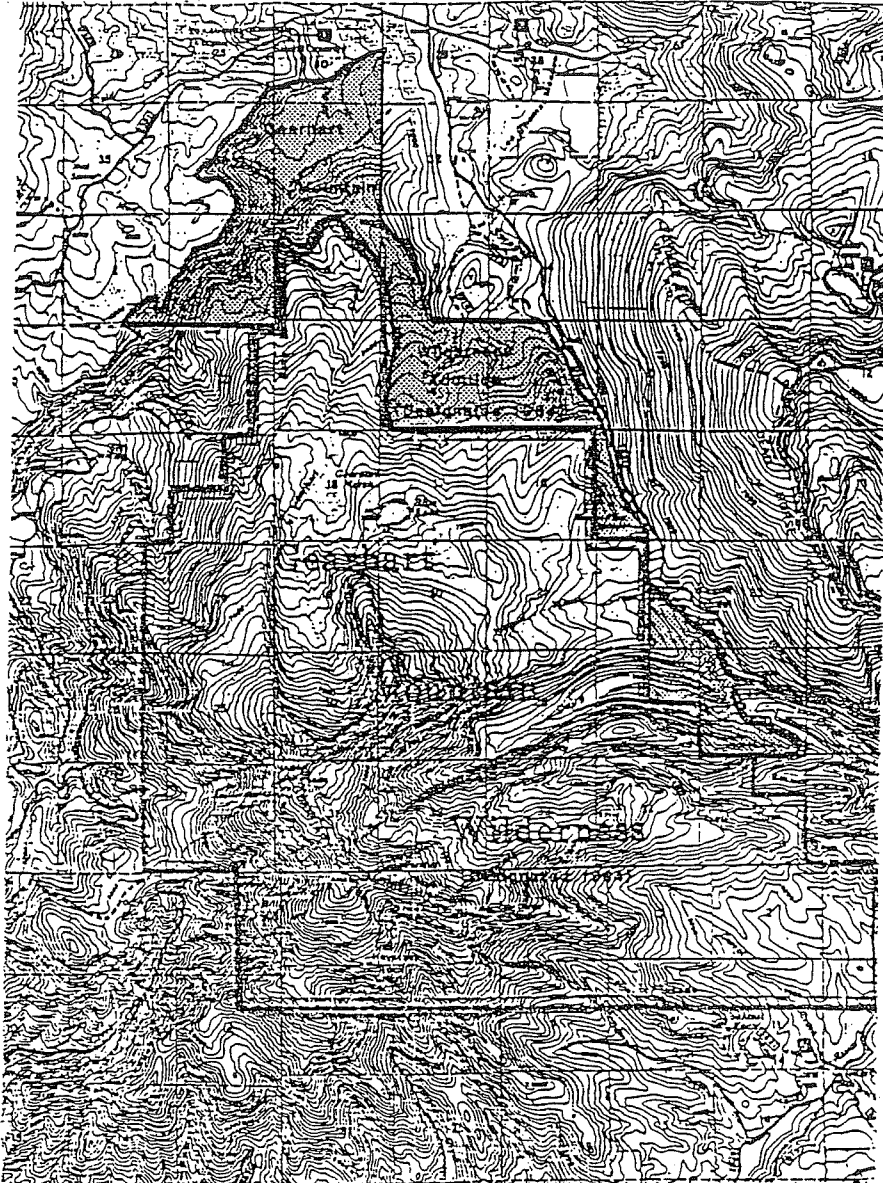
Discussion

Redesignation would add no additional constraints to forestry or industrial emission sources but would provide additional protection provided for sensitive plants and integral vistas within the Wilderness additions. As a result, the Gearhart Mountain Wilderness Additions are recommended for redesignation to Class I and incorporation into the Oregon Visibility Protection Plan.



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Gearhart Mountain Wilderness Map



GERAHART MOUNTAIN WILDERNESS ADDITION

LEGEND

- Old Wilderness Boundary - ~~Red~~
- Wilderness Addition Boundary - Green
- Class 1 Area - Red

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18. Grassy Knob Wilderness

National Forest:	Siskiyou National Forest, Powers Ranger District
Size:	17,200 acres
Access Points:	Grassy Knob Rd. #5105, China Peak Rd. #125.680
Miles of Trail:	3 miles
Elevation Range:	100 to 2600 ft

General Description

Terrain in the Grassy Knob Wilderness is extremely steep and rugged. The area drains into the Elk River and Dry Creek. Both streams are scenic coastal streams with clear water and steep gorges. Vegetation consists of old growth Douglas fir, Port Orford cedar, associated species and dense brush. Except for a few rocky bluffs, few openings exist. Some views of the Pacific Ocean are possible from these areas. Resident wildlife consists of the northern spotted owl and other old growth dependent species, as well as anadromous fish (salmon and steelhead) in the streams.

Air Quality Related Values

Visibility: The primary viewpoint associated with this Wilderness is the site of the Grassy Knob Lookout which has been torn down. Views from the lookout within the Wilderness are very short range, typically less than 2 miles. There are no significant integral vistas. Access is provided via a short hike. Recreational use is very low, estimated at 500 RVDs per year.

Aquatic Biology: The Grassy Knob Wilderness has an important anadromous fishery resource which is the prime reason the area was set aside by Congress. This resource is not believed to be an issue relative to redesignation since the wilderness is located in lands that are not believed to be sensitive to acid deposition. The fishery is exclusively found in the Elk River and Dry Creek rather than in lakes.

Aquatic Chemistry: As noted in Section 5, lakes in this region of the state are not especially sensitive to acid deposition.

Terrestrial Plants: There are no known sensitive plants or endangered animals in the wilderness.

Other AQRV's: There are no known archeological, cultural or other AQRV's within the Wilderness.

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Ecologist's Report

(Provided by S. Logan, Region 6 Ecologist)

The Grassy Knob Wilderness is a small, steeply dissected Wilderness Area near the Oregon coast at Bandon. It is dominated by old-growth Douglas-fir, Port Orford cedar and western hemlock stands with understories of rhododendron and salal. This large area of undisturbed old-growth forest in the Coast Range is unique.

The diversity of the Wilderness is provided by the few rock outcrops and bluffs. Grassy Knob Lookout has a flora similar to that of other rocky sites including dwarfed trees, rock ferns, lotus, a club moss and many varieties of lichens. This community may be the most sensitive to acid precipitation as the taller trees are already stressed by the salt spray and wind.

Due to the predominant westerly wind direction the area is only susceptible to point source air pollution from the city of Bandon. Wildlife values may be high for this Wilderness and the effects of air quality on the anadromous fisheries and spotted owl habitat should be considered.

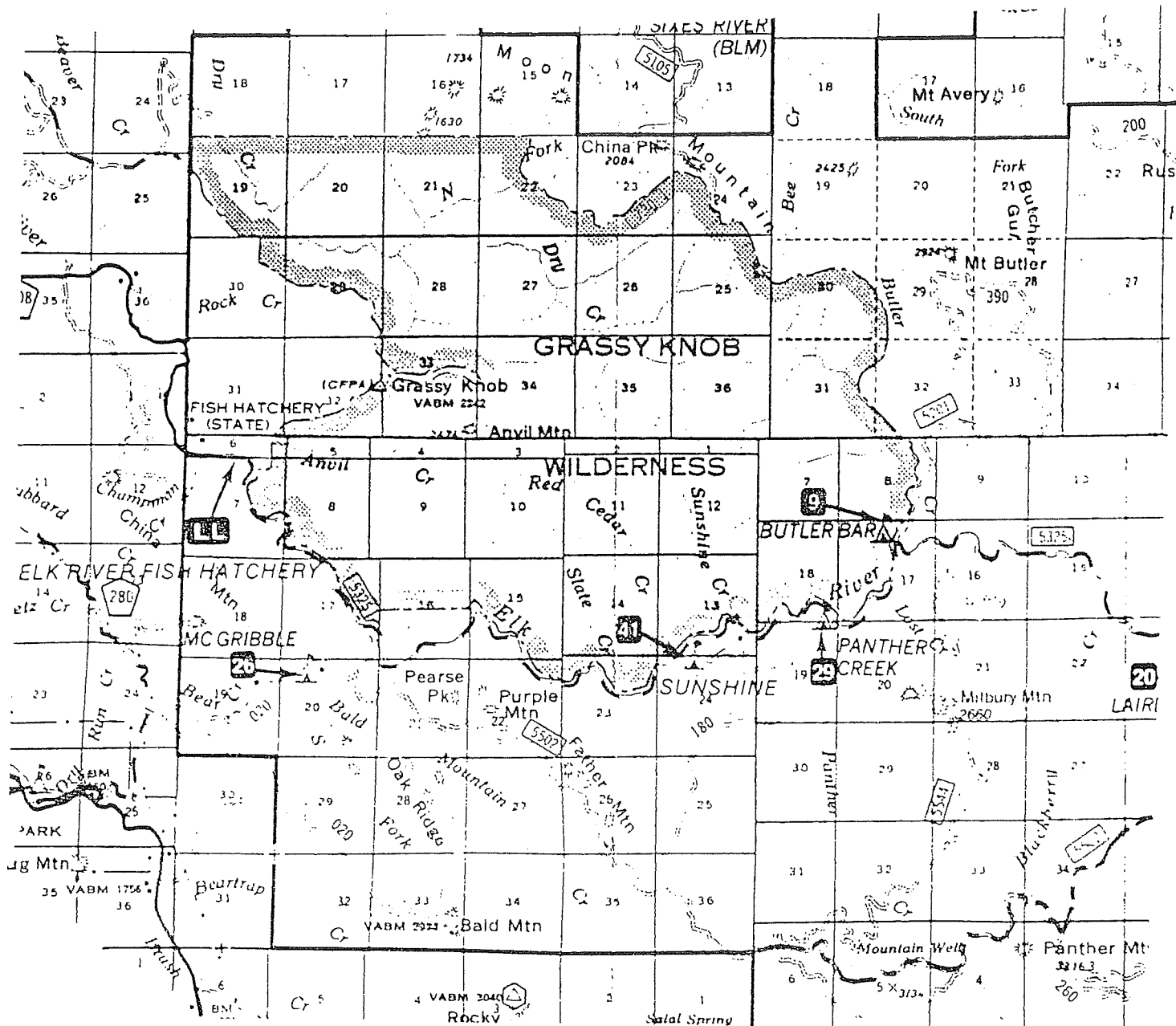
Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Siskiyou National Forest and surrounding privately owned lands. Most prescribed burning in the Siskiyou is completed by mid-April, mitigating the impacts on limited recreational use which begins in early June. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

The only AQRV of potential importance is that of visibility within the wilderness. Because the views are of such short range and visitation is so low, the current Class II increments are probably sufficient to protect visibility within the Wilderness. Because the area is not sensitive to acid deposition and there are no sensitive plant resources requiring protection, a higher level of protection than afforded by the Class II increments does not appear appropriate.

Grassy Knob Wilderness Map



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19. Kalmiopsis Wilderness Additions

National Forest:	Siskiyou National Forest; Chetco, Galice and Illinois Valley and Gold Beach Ranger District
Size:	179,700 acres
Access Points:	Upper Chetco Trail #1102 from Brookings by North Bank Rd. #1376 and #1917; Vulcan Peak Trail #1120 and Chetco Divide Trail #1210; Vulcan Lake Trail #110A and Johnson Butte Trail #1110 by North Bank Rd. via #1909 and #260. Tin Cup Trail #1117 via North Bank Rd. #1376 to #360; Pupps Camp Way Trail #1174 at Game Lake via Gold Beach; Illinois River Trail #1162 via Oak Flat (Agness Side) from Gold Beach Rd. #33 to #450 or from Hwy 199 to Selma & Rd. #4103; Kalmiopsis Rim Trail (Chetco Pass) Trail #1124 via Hwy 199 to Selma, Rd #4103 to McCaleb Ranch Via Rd. #0187; Babyfoot Lake Trail #1126 via Hwy 199 to Rd. #4201 & Rd. #864.
Miles of Trail:	140 miles
Elevation Range:	2300 to 5098 ft

General Description

This Wilderness is located on the Siskiyou National Forest in the southwestern corner of Oregon. It includes the headwater basin of the Chetco River and a portion of the Illinois River canyon. This is a harsh, rugged country with a character much different from that of most wilderness areas. It is a land of rocky, brushy low elevation canyons rather than lofty peaks and long distance views. In spite of its harshness, the area has a unique beauty and fascination. Visitation averages about 11,000 RVD's per year, mostly in the spring and fall months.

Air Quality Related Values

Visibility: The most significant scenic resource within the southern addition to the Wilderness is generally considered to be those areas associated with the wild section of the Illinois Wild and Scenic River. The Siskiyou Forest recognizes that this portion of the river as unique in the western U.S. Forest Service management is directed toward maintaining this area in a pristine condition with few, if any, man-made impacts. Open and extended views within the wilderness are offered in the vicinity of Pine Flat within the northern addition. Throughout the remainder of the river corridor, views are restricted and are focused primarily on the river itself. Distant views are offered on the trails accessing Babyfoot and Vulcan Lakes. These are popular day use areas and receive consistent use. Distant views are also offered to hikers on the Illinois River trail in the vicinity of Bald Mountain.

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Recreation use on this trail is low when compared to other areas in the Region. The use occurs primarily in the spring and fall months. Other views within the wilderness are typically limited to 8 miles or less.

Integral vistas from the Kalmiopsis south toward the Shasta-Trinity range and west toward the Pacific Ocean are probably important to the visitor's use of the wilderness (especially the southern Class II addition). Surveys have shown, however, that long range vista are not a major reason that visitors come to the Kalmiopsis. Solitude and the uniqueness of the botanical diversity of the area are the principal attraction. In comparison with integral vistas offered from other Oregon wildernesses, views from the Kalmiopsis may not be considered as spectacular as those found in other wildernesses.

Aquatic Biology: The anadromous fishery of the Chetco and Illinois Rivers are a very important resource. Although the headwaters of the Chetco are within the current Class I boundary, there are streams with valuable anadromous fisheries that are within the Class II additions. Because of the buffering capacity of the soils, these resources are not expected to be sensitive to changes in aquatic chemistry associated with acid deposition.

Aquatic Chemistry: There are very few lakes within the Class II additions and they are not especially sensitive to acid deposition (see Section 5). The aquatic chemistry of the Chetco and Illinois Rivers (and other streams) is not likely to be sensitive to acid deposition.

Terrestrial Plants: Botanically, the Kalmiopsis Wilderness and territory surrounding it is the most interesting region in the Northwestern U.S. This area is of particular interest to botanists because of the large number of plant species and the number of rare and unusual plants. The southern additions to the Wilderness are expected to have larger communities of these plants than lands within the northern addition. Some of the plants are extremely rare. One of these is the Kalmiopsis leachiana for which the Wilderness is named. This small shrub, somewhat resembling a miniature rhododendron, is a relic of the pre-ice age. It is the oldest member of the Heath family and the only plant in its genus. It was discovered in 1930. Other sensitive plants include:

Arctostaphylos hispidula
Carex scabriuscula
Cypridium californicum
Darlingtonia californica
Erigeron cervinus
Lewisia cotyledon var. purdyi
Picea breweriana
Quercus sadleriana

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Geology: This area lies in what are commonly termed the Siskiyou or Klamath Mountains. These mountains are composed of sedimentary, metamorphic and igneous rocks that are much older than the Cascade or Coast Ranges. They are of Mesozoic age or older. The most common rocks, locally known as "buckskin boulders" are peridotite. In places the peridotite has been altered to serpentine which is a slick-looking, glassy rock often of bright green color. The geology of the Kalmiopsis is not an important AQRV.

Ecologist's Report

(Provided by S. Logan, Region 6 Ecologist)

The Kalmiopsis Wilderness additions are of both botanical and geologic interest. The Wilderness was designated by Congress to protect the unique botanical sites and maintain populations of the rare Kalmiopsis leachiana and associated rare species. These rare plants are among the few that are adapted to the serpentine soils common in the Siskiyou and Klamath Mountains. The Wilderness also has hydrologic value as it contains the headwaters of several streams with anadromous fisheries.

The portions of this Wilderness Area visited had a wide range of vegetation. Forested types included old-growth Douglas-fir and sugar pine stands with tanoak and rhododendron, and Shasta red fir, western red and incense cedar stands. Less common were Incense cedar and Brewer's spruce, one of the few rare tree species in the Pacific Northwest.

The ruggedness, immense size and remoteness of this Wilderness Area are quite unique. Visitors come here to experience this exceedingly rare "true wilderness" setting. These wilderness values indicate that the Kalmiopsis Wilderness and additions should be given the highest protection from any type of unnatural disturbance.

Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Siskiyou National Forest and adjoining land owners. Most prescribed burning is on the Siskiyou is completed by May, mitigating the impacts on recreational use which begins in early June. Because the Wilderness Additions contiguous to the existing Class I area are of such large size, management of the Class II additions in a manner independent of the Class I area is possible, especially as it relates to prescribed burning.

Management implications of redesignation of the northern and southern additions need to be considered separately as the relative importance of the AQRV's and impacts of prescribed burning within each addition are different. Within the southern addition, integral vistas and terrestrial plants are more important than in the northern addition.

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Because prescribed burning activity on the Illinois Valley and Chetco Districts is completed earlier in the spring than burning to the north in the Galice District, there is less liklihood that redesignation would limit burning opportunities.

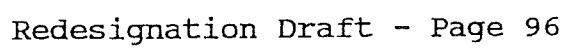
There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

Redesignation of the southern additions of the Kalmiopsis to Class I provides an opportunity to assure protection of the endangered plants within the wilderness while providing some protection of visibility values from industrial point sources without significant impacts on land manager prescribed burning programs. The southern addition is recommended for redesignation to Class I and inclusion in the Visibility Protection Program. Because of the lesser importance of AQRV's in the northern additions and greater conflict with prescribed burning, redesignation of these additions to Class I without visibility protection is recommended.



Kalmiopsis Wilderness Additions Map



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20. Mill Creek Wilderness

National Forest:	Ochoco National Forest, Prineville Ranger District
Size:	17,400 acres
Access Points:	Wildcat Campground, 11 miles north of Ochoco Reservoir on Forest Route #33
Miles of Trail:	20
Elevation Range:	3700 to 6200 ft

General Description

This area is located about 20 miles northeast of Prineville. The terrain varies from a steep broken, lattice type pattern of ridges and canyons southeast of Mill Creek to an almost flat plateau in the northwest corner. Two-thirds of the area has slopes exceeding 30% gradient. Fifteen percent of the area consists of openings, which are mostly barren ridge tops, but also includes some high elevation meadows. A mix of conifer tree species dominate the forested area (84%). The northwest corner plateau area is mostly forested with lodgepole pine. These stands have recently been attacked by the mountain pine beetle and some trees are dying. Twenty-two miles of streams drain the area. Small rainbow and brook trout are found in all of the perennial streams. Soil types on sixty percent of the area are ash soils. The abundance of riparian habitats with this area creates near optimum conditions for a variety of wildlife. The area provides summer, spring and fall range for deer and elk. There are several gemstone mining claims located in the wilderness. The claims are all small surface operations. Primitive roads provide access to all the claims. Visitation is estimated at about 1000 RVD's per year, mostly in the fall (80%) for big game hunting.

Other Features

Twin pillars, a rather unique volcanic plug, is located in the northwest portion of the area. It is not used for rock climbing.

Ecologist's Report

(Following provided by S. Logan, Region 6 Ecologist)

The Mill Creek Wilderness ranges from 3700 to 6200 feet in elevation. It has 22 miles of Class I and II streams and contains abundant riparian habitat. The terrain ranges from steep and broken, dissected ridges and canyons to a large flat plateau.

The vegetation of the Mill Creek Wilderness is typical of that of the surrounding managed forest. It is comprised of mixed conifer stands (84% of the area) intermixed with high elevation sedge meadows and barren ridge tops. The majority of the forests are old growth Ponderosa pine and Douglas fir stands with an understory of 20 to 50 year old Douglas fir, Ponderosa pine and grand fir trees.

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Mill Creek, near Wildcat Campground, appears to be a healthy stream providing high quality riparian habitat. Many intermittent streams feed Mill Creek. A kingfisher and red tailed hawk were observed in the riparian area of Mill Creek. Elk and gopher sign were also noted. However, extensive horse use was evident and it has been reported that the East Fork of Mill Creek is heavily grazed and active erosion is occurring.

Lodgepole pine forests surround the high elevation prairies such as Moccasin and Bingham on the high plateau. A mountain pine beetle infestation is evident in many of these stands. The wet sedge meadows are being encroached upon by lodgepole pine. Heavy livestock use was evident in most of the meadows. A plant on the Regional Forester's Sensitive Plant Watch List, Botrychium simplex (grape fern) has been reported from Bingham Prairie. This area provides excellent big game habitat. A population of wild turkeys also inhabits these meadows. At higher elevations, western larch becomes a dominant tree species.

There are no known major sources of air pollution near this Wilderness. Dust and smoke from prescribed burning in adjacent stands and grass field burning appear to be the only sources of air pollution.

Air Quality Related Values

The Ochoco National Forest feels that AQRV's are not important to the management of the Wilderness based on its location and size.

Visibility: The Wilderness is timbered and views from within are relatively short range. The area along the creek above Wildcat Campground provides some pleasant short open meadow views. There are no long range, integral vistas from the Wilderness.

Aquatic Chemistry: There are no important lakes within the wilderness and surface waters in this region are not especially sensitive to acid deposition.

Aquatic Biology: The Wilderness has several important riparian zones, none of which are sensitive to acid deposition.

Terrestrial Plants: Sensitive plants include Botrychium simplex.

Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Ochoco National Forest. A number of timber sales are planned for the eastern and northern boundaries of the Wilderness. Prescribed burning of the slash from these sales may impact visibility. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

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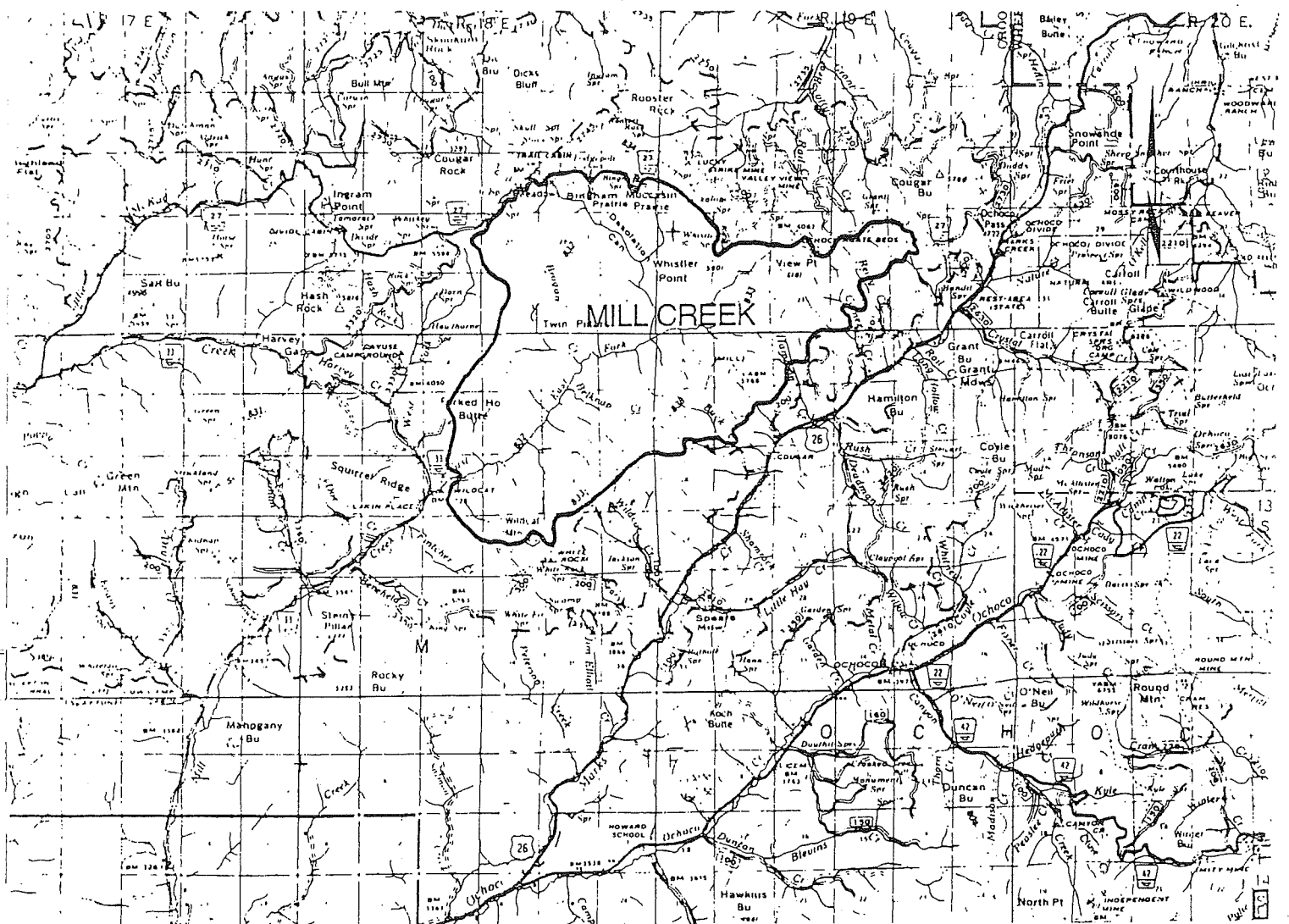
Discussion

There are no important AQRV's within the Wilderness which would require a greater degree of protection than that currently afforded by the Class II PSD increments. Because there are no important visibility AQRVs either within or external to the Wilderness, inclusion under the visibility protection plan does not appear warranted. In balance, the potential constraints on land manager prescribed burning outweigh the need to protect the wilderness's AQRV's at the Class I level. It is recommended that the Mill Creek Wilderness remain as a Class II area.



-DRAFT Redesignation of Oregon Class II Wilderness Lands-

Mill Creek Wilderness Map



-DRAFT Redesignation of Oregon Class II Wilderness Lands-

21. Black Canyon Wilderness

National Forest:	Ochoco National Forest, Paulina Ranger District
Size:	13,400 acres
Access Points:	11 miles south of Dayville, or on Forest Route #74
Miles of Trail:	17
Elevation Range:	2850 to 6483 ft

General Description

Black Canyon is located approximately 57 miles east of Prineville and 35 miles west of John Day, Oregon. The rough broken landscape of this wilderness is dominated by the steep canyons and sharp ridges formed by Black Canyon. Approximately eighty percent of the area exceeds a 30% slope gradient. Almost one-half of the area consists of openings. Most of these openings are located on ridge tops or south facing slopes. The timbered areas consist of mixed conifer and ponderosa pine old growth stands. Volcanic ash soils cover one-third of the area and are generally shallow. Approximately 10 miles of streams drain the area and eventually enter the John Day River. Small native trout are found in the perennial streams and steelhead use them for spawning. The varied and diverse vegetative conditions within the area provide excellent habitat for nearly 300 different species of wildlife common to the Ochoco National Forest. The area serves as year-long range for both deer and elk. Recreational use totals about 650 RVD's per year, 90% of which occurs during big game hunting season.

Ecologist's Report

(Following provided by S. Logan, Region 6 Ecologist)

The Black Canyon Wilderness is remote although it is surrounded by harvested land on the East, West and South sides. It is comprised of woodlands and steep canyons with open ridge tops and barren south-facing slopes. One-half of the Wilderness is forested with mixed conifer and Ponderosa pine old-growth forests. The mixed conifer stands are comprised of Douglas-fir, western larch and subalpine fir.

Black Canyon has unique basin, desert and canyon landscapes. There are numerous vistas looking both inside and outside from the Wilderness. There are 10 miles of streams within Black Canyon. Steelhead spawn in the lower reaches of the canyons. Angling for steelhead and trout is one of the most common recreational uses of this Wilderness. There is also some summer horse use as well as hunting use. This area provides excellent elk and antelope habitat. In fact, the diverse vegetation provides habitat for at least 300 wildlife species. Two sensitive plant species have been reported in Black Canyon. They are Allium madidum, an onion and Cypripedium montanum, a lady's slipper orchid. Ancient indian petroglyphs and campsites have been found in the canyon.

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Juniper/sagebrush communities are common in the open woodland portions of the Wilderness. A non-forested community at Wolf Lookout consists of gillias, asters, tarweed, rabbitbrush and currants. Mountain pine beetle infestations are common in some of the lodgepole pine stands. Signs of several animal species were evident in a superlative old growth Douglas fir stand near Wolf Lookout. They included pileated woodpecker, deer, elk, coyote, and gopher. Understory species in this stand included wyethia (mule's ear), balsam root, and lupine.

Air Quality Related Values

The Ochoco National Forest feels that AQRV's are not important to the management of the Wilderness based on its location and size.

Visibility: The Wilderness has unique open canyon scenery, generally as cross canyon views from the trails. The Black Canyon trail is generally near the canyon bottom offering views looking up and across the canyon. The South Prong Trail offers panoramic views as it winds its way down into the canyon. Views are limited to 2-3 miles. There are no long-range, integral vistas from the Wilderness.

Aquatic Chemistry and Biology: There are no lakes within the Wilderness and stream waters in this region are not especially sensitive to acid deposition. As a result, the aquatic biology resources of the Wilderness are not expected to be at risk.

Terrestrial Plants: There are no known sensitive plants or endangered animals within the Wilderness.

Management Implications

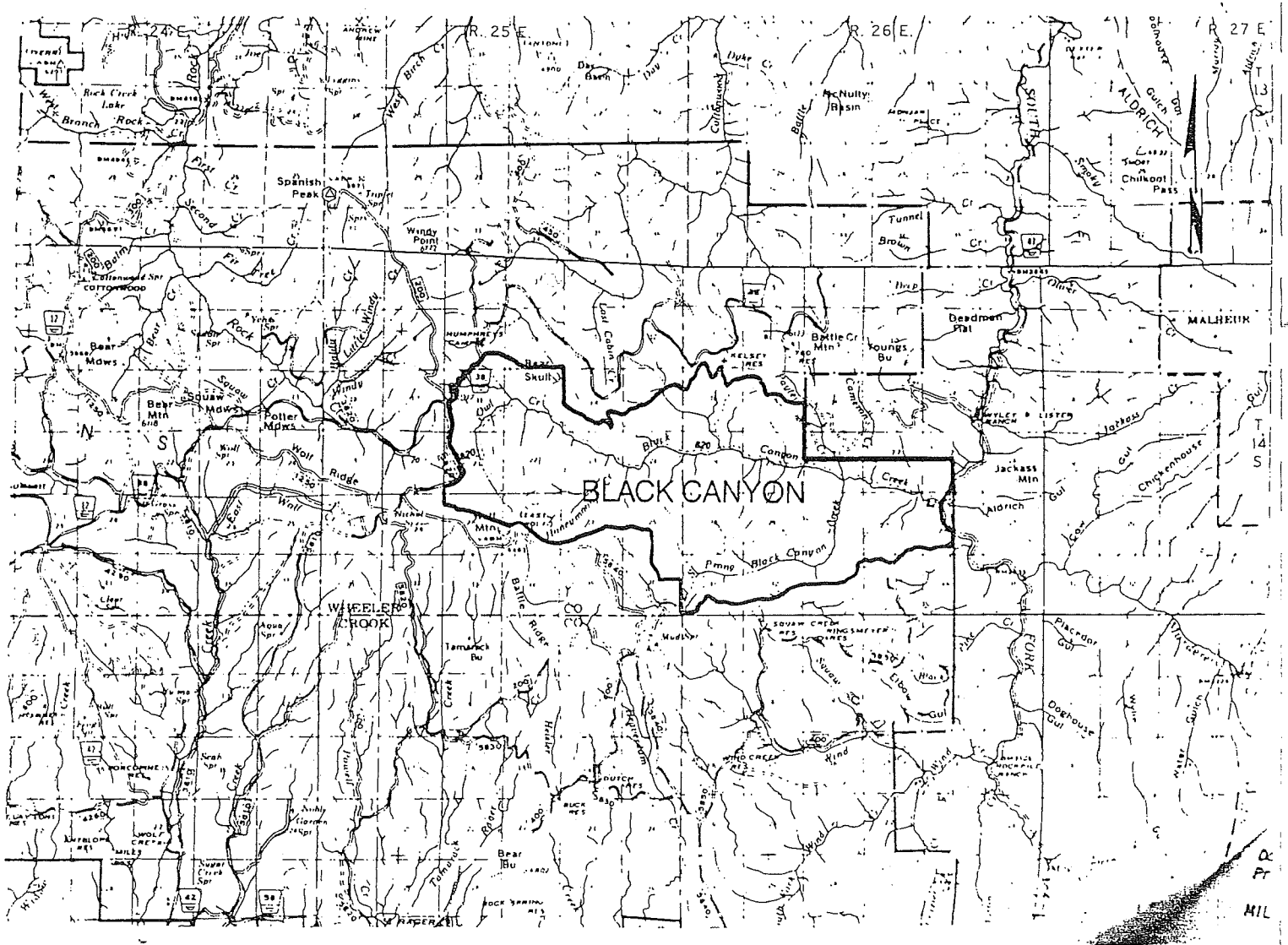
The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Ochoco National Forest. A number of timber sales are planned for the eastern and northern boundaries of the Wilderness. Prescribed burning of the slash from these sales may impact visibility. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

There are no important AQRV's within the Wilderness which would require a greater degree of protection than that currently afforded by the Class II PSD increments. Because there are no important visibility AQRVs either within or external to the Wilderness, inclusion under the visibility protection plan does not appear warranted. In balance, the potential constraints on land manager prescribed burning outweigh the need to protect the wilderness's AQRV's at the Class I level.

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Black Canyon Wilderness Map



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22. Strawberry Mountain Wilderness & Additions

National Forest:	Malheur National Forest, Bear Valley and Prairie City Ranger Districts
Size:	69,350 acres
Access Points:	From Prairie City via County Road #60 and Forest Road #6001 or from John Day via U.S. 395, County Road No. 1520 or County Road #71 and Forest Road #7101
Miles of Trail:	150
Elevation Range:	4800 to 9038 ft

General Description

The Strawberry Mountain Wilderness is located east of John Day, Oregon, in the Malheur National Forest. The area encompasses the headwaters of Pine, Indian, Strawberry Canyon, Bear, Lake, Wall, Roberts and Big Creeks. The area is dominated by the Strawberry Mountain Range with the highest point being Strawberry Mountain. This area has an extremely diverse ecological makeup. Five of the seven major life zones in North America can be found here. It also supports native population of Rocky Mountain elk. The additions including the Canyon Creek Research Natural Area have improved both the quantity and quality of the wilderness experience. Visitation was 19,000 RVD's in 1986 and the trend is slightly up. The additions to the Strawberry Mountain Wilderness are located along the southern boundry of the Class I area with smaller acreage added along the northern boundary.

Air Quality Related Values

Visibility: Scenic vistas from the Class II additions include the top of the Strawberry Mountains, High Lake Rim, the divide between Slide Lake and High Lake and the view of the Lake Creek drainage. Important external vistas include the views from the northern additions across the John Day Valley toward Dixie Butte and from the southern additions toward the Aldrich Mountains and Seneca. On a clear day, Mt. Hood and the Steen Mountain can be seen from the upper boundary of the southern Class II addition. The Malheur National Forest feels that the only AQRV that can be considered important within the Wilderness is that of visibility and sensitive plants (if they occur within the additions).

Aquatic Chemistry: There are no lakes within any of the Class II additions. Lakes located within the Class I areas are not especially sensitive to acid deposition.

Terrestrial Plants: Known sensitive plants within the Class I area include Cymopterus bipinnatus and Dryopteris filix-mas. It is not known if these plants are found within the Class II additions.

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Ecologist's Report

(Provided by S. Logan, Region 6 Ecologist)

The use of the Strawberry Mountain Wilderness Additions is primarily for hunting, backpacking cross-country skiing and fishing. There are integral vistas of the valleys to the North and the Wallowas, Elkhorns, Seven Devils, Greenhorns and the Cascades. Some internal vistas include the tuffaceous bedrock of the Wildcat basin and the granitic serpentine of Canyon Mountain. Much of the viewing in this portion of central Oregon is from areas outside of the Wilderness looking in towards it.

The main highway to the North of the area may be designated a scenic by-way. This may make the needs for pristine air quality near and inside and Wilderness Area essential. There are also vision quest cultural sites in the Wilderness that may need visibility protection. The watersheds of the Northern portion of the Wilderness feed an anadromous fishery in the John Day River system. There have been no studies to date of the flora of this area, but the sensitive plants that occur in the main Strawberry Mountain Wilderness may occur here. It is likely that some unique plants will be found on the areas of granitic serpentine parent material.

The southern addition is comprised mainly of open old-growth Ponderosa pine stands with interspersed meadows. The northern addition includes stands of mixed conifers including Ponderosa Pine, western larch, white fir, Douglas-fir, lodgepole pine and Engelmann spruce. Understory species include grouse huckleberry, big huckleberry, snowberry, wild strawberry and monkeyflower.

Management Implications

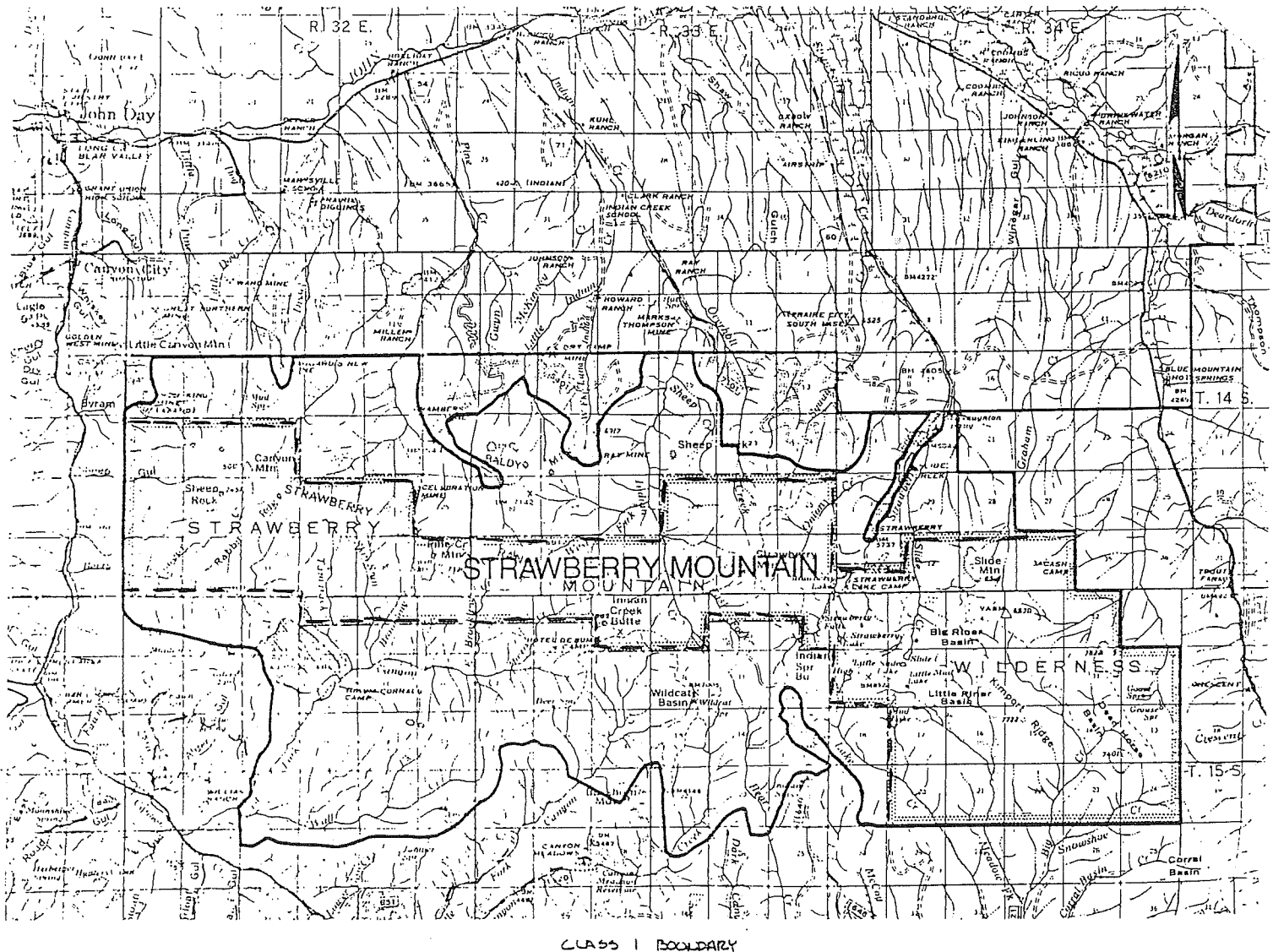
The only management implication of redesignation is that of possible constraints on forest prescribed burning programs of the Malheur National Forest. In the past, very little prescribed burning has taken place near the Strawberry Mountain Wilderness. The Malheur National Forest Plan, however, forecasts an increase in prescribed burning activity to enhance Ponderosa Pine regeneration. Most (if not all) of the burning should be completed prior to the July 4-Labor Day visibility protection period if normal Spring weather conditions prevail. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

Because the wilderness additions are contiguous to the current Class I area, management of the additions and the Class I area must be the same. In view of the very limited conflict with prescribed burning programs and the importance of visibility and sensitive plant AQRVs within the additions, redesignation to Class I\visibility status appears appropriate.

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Strawberry Mountain Wilderness Map



CLASS II BOUNDARY

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23. Monument Rock Wilderness

National Forest:	Malheur and Wallowa-Whitman National Forest; Prairie City & Unity Ranger Districts
Size:	19,650 acres
Access:	From Prairie City via County Road 20 and Forest Road No. 13 and No. 1670. From Unity via Forest Road No. 16
Miles of Trail:	12
Elevation Range:	5,120 to 7,815 ft.

General Description

The Monument Rock Wilderness is located some 30 miles east of John Day in the Malheur and Wallowa-Whitman National Forests. The area encompasses the headwaters of the Little Malheur River and the upper drainage of the South Fork of Burnt River. It has three prominent rock points. A fire lookout station is located on Table Rock, just outside the wilderness boundary. The forest types range from examples of ponderosa pine forests in the lower elevations to subalpine types along the peaks. Other tree species present include quaking aspen, Douglas-fir, white fir, and lodgepole pine. A trail system provides access within the area. The area's diverse wildlife habitat is used by bear, deer, elk, grouse, hawks, badgers and the rare wolverine. Recreational use is estimated at 2,810 RVD's per year, primarily for big game hunting. There is cattle grazing within the Wilderness.

Ecologist's Report

(Following provided by S. Logan, Region 6 Ecologist)

The Monument Rock Wilderness is densely forested except for its three rock points. It includes the headwaters of the Little Malheur River and the upper reaches of the South Fork of Burnt River.

There are four grazing allotments in the Wilderness and most of them are in fair range condition. Considerable work has been done to remove cattle from riparian areas. The Wilderness also provides good big game habitat and hunters are the biggest recreational users of the area. Little summer use has been reported. The diverse wildlife habitat provides habitat for bear, deer, elk, grouse, hawks, badgers and wolverine (a sensitive species which is threatened in the state).

The forested stands in the area of this Wilderness visited were largely lodgepole pine/grouse huckleberry or lodgepole pine/sedge communities. At the higher elevations subalpine fir/alpine sagebrush/buckwheat communities occur. At lower elevations mixed conifer stands of grand fir and lodgepole pine or pure stands of juniper or Ponderosa pine are dominant. Quaking aspen is also common in wetter areas.

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Air Quality Related Values

The Malheur National Forest feels that the Wilderness does not have any significant AQRV's.

Visibility: Monument Rock Wilderness does not have any popular or important vista. Views are short-range across the canyons.

Aquatic Chemistry: There are no lakes within the Wilderness and stream water quality within the Wilderness would not be susceptible to acid deposition.

Terrestrial Plants: There are no known populations of sensitive plants but some sensitive species may occur.

Management Implications

The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Malheur National Forest. Prescribed burning of the slash may impact visibility within the Wilderness. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

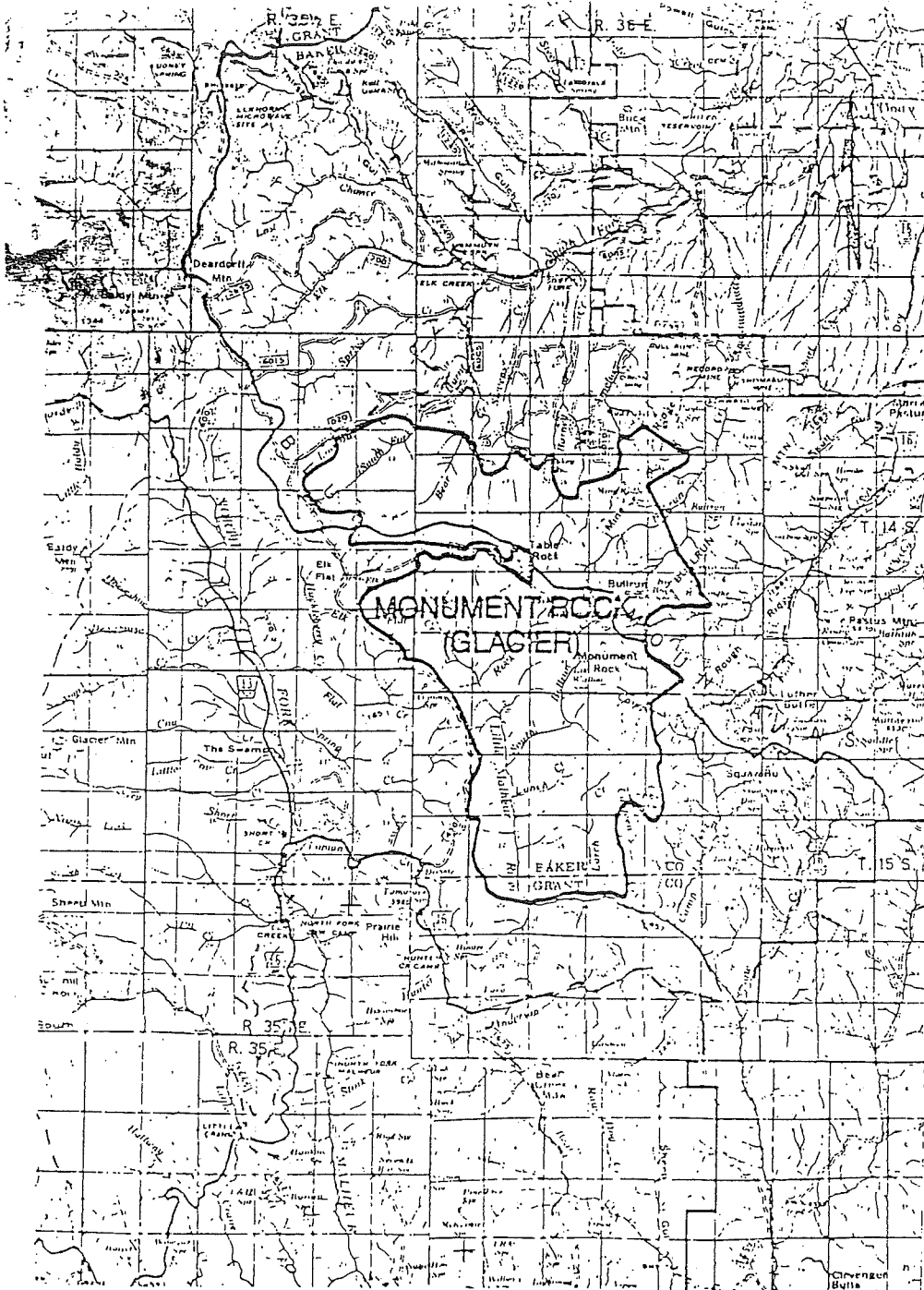
Discussion

The AQRV ratings for the Monument Rock Wilderness Additions reflect the relatively low importance of these resources to the management of the area. The Monument Rock Wilderness should be retained as a Class II wilderness.



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Monument Rock Wilderness Map



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24. North Fork John Day Wilderness

National Forest:	Wallowa-Whitman & Umatilla National Forest, North Fork John Day & Baker Ranger Districts
Size:	121,400 acres
Access Points:	North Fork John Day Campground, Big Creek Trailhead, Moon Meadow, Big Creek Meadow, and along Forest Road 73
Miles of Trail:	133
Elevation Range:	3356 to 8131 ft

General Description

Rolling benchlands, granitic outcrops of the Greenhorn Mountains, the rugged gorge of the North Fork John Day River, provides an abundance of natural diversity in the North Fork John Day Wilderness. This area is known for its big game (Rocky Mountain elk and mule deer), and its anadromous fish habitat. There are over 130 miles of perennial streams, 40 miles of which provide spawning habitat for Chinook salmon and steelhead. There are three National Recreation Trails (Elkhorn, North Fork John Day, and Winom Creek) among the more than 130 miles of trails serving the area. The North Fork John Day drainage was a bustling gold and silver mining area in the middle to late 1800's. Old mining structure, building foundations, waterworn rock, ditches, and other traces of the thousands of people who removed an estimated \$10 million in gold and silver are still visible. The area also includes about 6,000 acres of the Vinegar Hill-Indian Rock Scenic Area.

The Wilderness is in reality four distinct units which represent nearly all of the Umatilla National Forest's roadless areas within the North Fork John Day drainage and is in the heart of the most productive gold and silver mining region in Oregon. The four units are:

North Fork John Day Unit

This 85,000 acre unit bisected by 25 miles of the North Fork John Day River and is composed primarily of gentle benchlands and tablelands. The remainder is composed of steep ridge sideslopes and river canyon. The North Fork John Day River and tributaries contains the highest quality water found in the drainage and has excellent salmon and steelhead spawning grounds. Protection of these anadromous fisheries was a major reason considered in establishing the Wilderness. Aside from a long history of commercial and recreational mining, hunting, fishing, hiking and horse use are the greatest recreational assets of the unit.

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Tower Unit

The Tower Unit (8,100 acres) encompasses the headwaters of Winom Creek and Big Creek, both tributaries of the North Fork John Day River. Topography is moderate to steep sideslopes with some tablelands which are predominately covered by dense stands of conifer species such as Douglas fir, white fir, western larch and lodgepole pine. Elevations range from 5,100 to 6,850 feet. There are no mining claims in the unit, but some cattle grazing. Predominant recreation is big game hunting and fishing, with some trail hiking.

Greenhorn Unit

This 13,700 acre unit includes 5,600 acres of the eastern portion of the Greenhorn Mountain Scenic Area and has the highest elevations in the area. It is a popular deer and elk hunting area with many old mines which draw people for recreational and historical pursuits. It is the headwaters of Lake, Lost and Clear creeks, the latter of which is important to the chinook salmon production in the John Day River system. There are no grazing allotments but numerous mining claims.

Baldy Creek Unit

About 15,505 acres of scenic alpine lake basins and headwater areas of the North Fork John Day River are within this unit. Because of the high altitude, alpine nature of the topography, the AQRVs of the Baldy Creek Unit are distinctly different.

Recreational use for 1985 was estimated at 17,466 RVD's, evenly distributed between trail use (29%), fishing (31%) and hunting (22 %). The remaining use (18 %) is for other purposes.

Air Quality Related Values

Visibility: Vistas within the largest of the units (North Fork John Day) are short-range views across the canyons. Scenic resources include Desolation Butte and Tower Mountain (Tower Unit). Vistas from the Baldy Unit include the Elkhorn Mountains and the Eagle Cap Wilderness peaks to the north as well as views toward the North Fork John Day Wilderness Unit. Views within the Baldy Creek Unit Wilderness are limited to a maximum of about 12 miles.

Aquatic Chemistry: The Baldy Creek Unit is located in close proximity to the Elkhorn Mountains, an area within which lakes may be sensitive to acid deposition. The other units of the North Fork John Day Wilderness are located in areas within which surface waters are not sensitive to acid deposition.

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Aquatic Biology: In establishing the Wilderness, Congress gave "...high priority to protection of fisheries habitat. The North Fork John Day Wilderness is an extremely important native fishery habitat for Columbia River salmon."²² Fisheries are not an important asset of the Baldy Creek Unit. Because lakes within the North Fork John Day Wilderness units (excepting the Baldy Creek Unit) are not sensitive to acid deposition, aquatic biology assets are not at risk.

Terrestrial Plants: Sensitive plants species include Allium campanulatus and Lupinus burkei ssp caeruleomontanus

Ecologist's Report (Provided by S. Logan, Region 6 Ecologist)

The North Fork John Day Wilderness lands are biologically, geomorphically and hydrologically diverse. The variety of landforms from canyon bottom to more than 8000 feet in elevation provide many recreation opportunities and plant and wildlife habitats. The Wilderness Area contains benchlands, tablelands, granitic outcrops, talus slopes, steep sideslopes and river canyons.

The anadromous fisheries, hydrologic resources and cultural sites are the resources most sensitive air quality in this Wilderness Area. The vistas within the Wilderness are mostly short-range due to the steepness of the canyons. There are some important integral vistas of the Elkhorn Mountains.

The forested stands in the Wilderness Area are comprised of Douglas-fir, lodgepole pine, western larch, Englemann spruce and Ponderosa pine. There are large areas of open pine forests with interspersed meadows. The Vinegar Hill-Indian Rock Scenic Area has a subalpine sagebrush community.

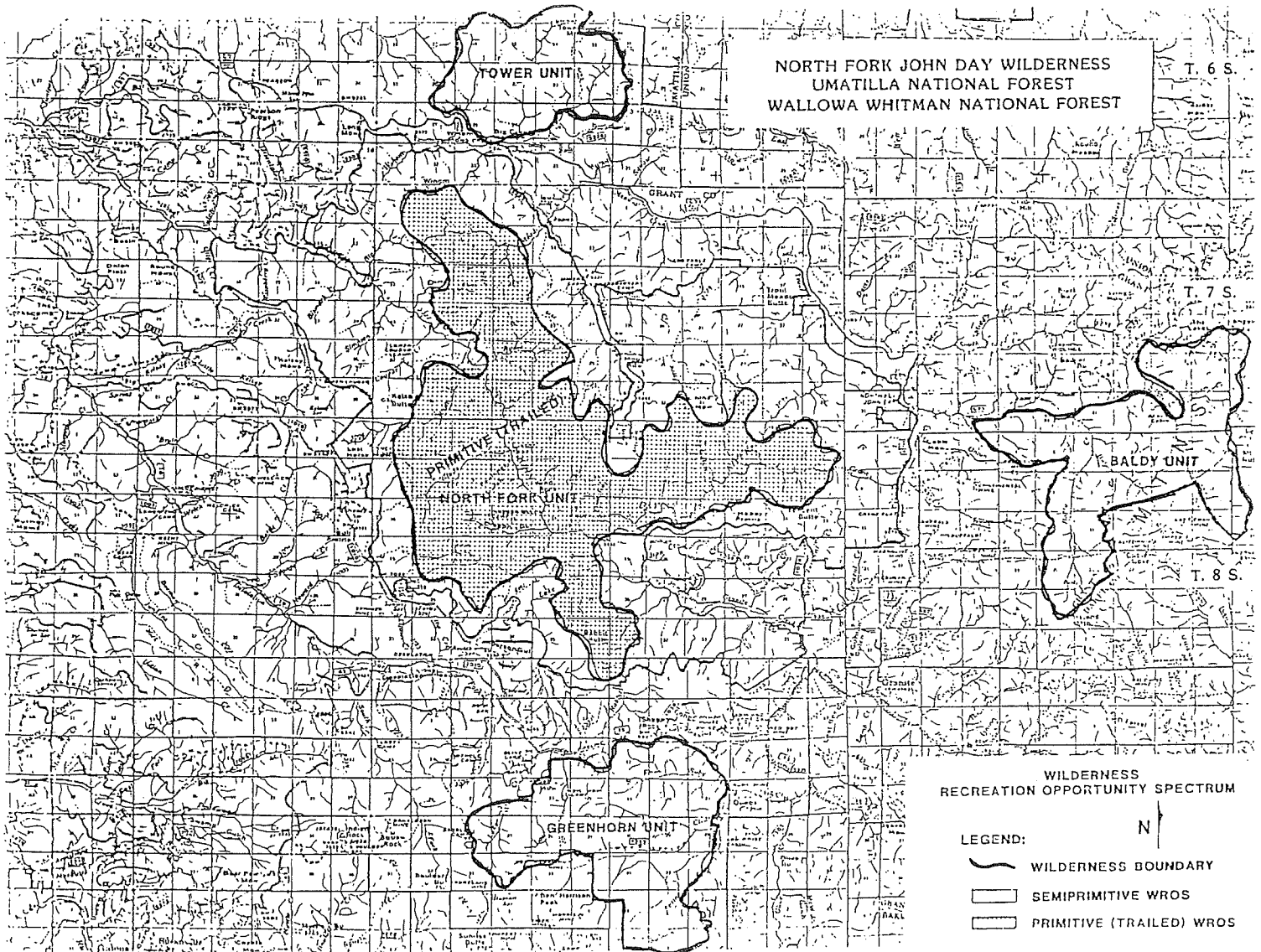
Management Implications

The only management implications of redesignation are those of constraints on forest prescribed burning programs of the Umatilla and Wallowa-Whitman National Forests. However since prescribed burning occurs primarily during the spring months when wilderness visitation is low, smoke impacts on visitor enjoyment are mitigated. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

The AQRVs of the Baldy Creek Unit are markedly different than those of the Tower, Greenhorn or North Fork John Day Units. Because visibility within the wilderness, aquatic chemistry and sensitive plant resources of the Baldy Creek Unit are important assets to protect, redesignation of the Baldy Creek Unit (only) to Class I is recommended. All other units should remain as Class II areas.

North Fork John Day Wilderness Map



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25. Eagle Cap Wilderness & Additions

National Forest:	Wallowa-Whitman National Forest, Eagle Cap Ranger District
Size:	360,275 acres
Access Points:	Wallowa Lake, Lostine River Road, Boulder Park, Indian Crossing
Miles of Trail:	534
Elevation Range:	4000 to 9839 ft

General Description

The area is characterized by high alpine lakes and meadows, bare granite peaks, glaciated valleys, thick timber in lower valleys, and scattered alpine timber on upper slopes. The difficult terrain of the Wallowa mountain range offers challenging hiking opportunities. Sacajawea is the highest mountain at 9,839 feet elevation. 31 other peaks are over 8,000 feet in elevation. Popular big game wildlife species include bighorn sheep, bear, cougar, bobcat, elk and deer. There are 58 popular lakes and 4 major rivers: Minam, Imnaha, Wallowas and Lostine. Recreational use for the entire Eagle Cap Wilderness is about 99,600 RVD's per year. During 1984, the Additions received about 16,500 RVD's during the April to November period. The majority of the use occurs during the deer and elk seasons in October and November. There is a trend to increasing use. All of the Eagle Cap Wilderness Additions are contiguous to the existing Class I\visibility area.

Other Features

Wallowa Valley and mountains were the homeland to the Nez Perce Indians (chief Joseph band) until they were forced to leave by the U.S. Government. The highest elevation lake in the State of Oregon: Legore Lake, 8880 feet above sea level is located here.

Air Quality Related Values

Visibility: The scenic resources of the Wilderness Additions include:

Lower Minam Addition

Due to the openness of the Lower Minam ridges and valleys, there are significant vistas available for many of the ridge tops and from the Minam River trail #1673 of a large portion of the Wilderness and the new addition. The most spectacular views occur in the following specific locations:

A. Rock Springs trailhead and trail #1928: Panorama of the Minam River drainage and surrounding ridges, looking west.

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B. Cougar Ridge trail #1668, Big Sheep Ridge Trail, Murphy Creek Trail #1685: panorama of the Minam River drainage and surrounding ridges, looking west.

C. Views of the surrounding ridges, drainage and Minam River occur at natural opening along the Minam River trail # 1673.

Lostine Canyon Addition

The Lostine Canyon also possesses many opportunities for significant scenic vistas from existing trails and natural openings included within the Wilderness additions. Specifically:

A. From Bowman trail # 1651, Maxwell Lake trail #1674 and Frances Lake trail #1663: panoramic views of the entire Lostine River drainage and surrounding mountains.

Imnaha River Addition

The Imnaha River Addition includes many opportunities for significant scenic vistas:

A. Views from the Imnaha River Trail #1816 of the Imnaha River drainage and surrounding countryside.

B. Panoramic views from the Twin Lakes trail #1874 of the Imnaha River drainage and surrounding countryside.

C. Burger Butte view extending 360° of the surrounding area, Elk and Catherine Creek drainage.

Visibility monitoring within the Eagle Cap Wilderness Class I area began in 1982. Results have demonstrated that visual range is generally excellent, but is occasionally obscured by wildfire smoke and smoke from agricultural burning in the Grande Ronde Valley. These impacts also occur within the Lower Minam and Lostine River additions. Campfires within the Lostine Canyon campgrounds and dispersed recreation site occasionally affect visibility and odor AQRV's and smoke from private land burning near the Lower Minam Addition occasionally affect visibility and odor AQRV's. In general, visibility within the wilderness additions is of less importance than external views from the addition either into the current Class I area or to other more distant object.

The Wallowa-Whitman National Forest feels that "the presence of air pollution obviously detracts from not only scenic resources by obscuring the views that people travel into the mountain the mountains to enjoy, but also the visitor's 'wilderness experience' by allowing outside influences to intrude on the wilderness environment."

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Aquatic Chemistry: The Wilderness Additions include segments of several rivers which support anadromous fish runs and significant recreational use. These include the Minam River, Lostine River, Imnaha River and Catherine Creek. The geology of the Eagle Cap and the additions is such that surface waters are sensitive to acid deposition (see Section 5).

Aquatic Biology: In view of the sensitivity of the aquatic chemistry to acid deposition, these resources may be at risk if deposition rates were to increase.

Terrestrial Plants: In the Wallowa Mountains is found the second greatest concentration of rare species in the State of Oregon. Some are endemic; others are circumboreal species at the extreme southern limit of their range or are disjunct populations of Rocky Mountain species in Oregon. In these mountains are some of the few areas of granitic rock and limestone found in Oregon.²³ Sensitive plant species include:

Astragalus robbinsii var. alpiniformis
Botrychium crenulatum
Botrychium lanceolatum
Botrychium lunaria
Botrychium pedunculatum
Botrychium pinnatum
Botrychium simplex
Bupleurum americanum
Chrysothamnus nauseosus var. nanus
Erigeron chrysopidis var. brevifolius
Habenaria obtusata
Penstemon payettensis
Penstemon spatulatus
Pinus flexilis
Ribes irriguum
Salix bebbiana

Cultural and Archeological Assets: Prehistoric and historic sites exist in the Wilderness Additions which may possibly be detrimentally affected by air pollution.

Geology and Soils; Odors and Other Ecosystem Effects: No anticipated effects.

Ecologist's Report (Provided by S. Logan, Region 6 Ecologist)

The three additions to the Eagle Cap Wilderness are essentially lower elevation river valleys. They support anadromous fisheries, provide habitat for some sensitive animal species such as the fisher, flammulated owl and mountain vole and contribute to the diversity of the mostly high elevation Eagle Cap Wilderness. They are for the most part forested with interspersed meadows.

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The Lower Minam addition is comprised of open ponderosa pine/grass and mixed conifer stands. This is the flattest portion of the Wilderness Area additions. Some of the sensitive plants found in this area are associated with limestone formations.

The Lostine Canyon addition is comprised of a clear, rapidly running creek and some mature stands of Douglas-fir, lodgepole pine and ponderosa pine. There are also steep granite outcrops with juniper, serviceberry, oceanspray, creeping Oregon grape and penstemon. Shrubfields and sub-alpine meadows are found at the upper elevations. This area is a popular site for river recreation. The Imnaha Addition is also largely open ponderosa and lodgepole pine stands.

Management Implications

Redesignation of the Lostine, Imnaha and Catherine Creek Additions to Class I appear to have minimal implications to forest prescribed burning. The principal implications are related to redesignation of the Lower Minam Addition and impacts of agricultural burning within the Grande Ronde Valley. Grass seed field burning in Union County occurs during the visibility protection period. Limited restrictions on prescribed burning activities on the Wallowa-Whitman National Forest may also occur if forestry burning extends into the July 4-Labor Day visibility protection period. Since the Forest's prescribed burning activity occurs in the spring months when Wilderness use is low, the impact of the smoke on visitor's enjoyment of the Wilderness Additions is expected to be minimized.

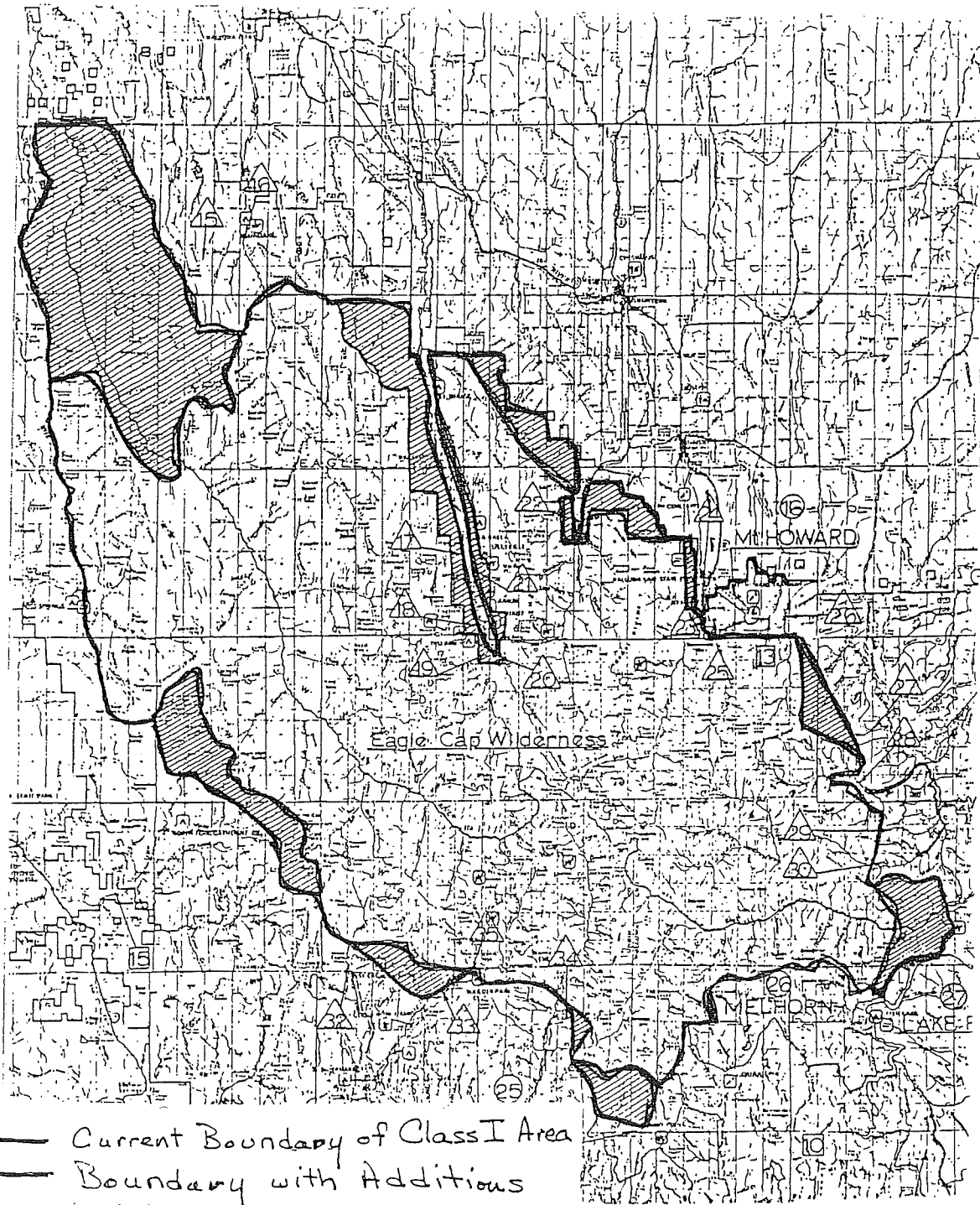
Because the Additions are contiguous to the existing Class I area, would be difficult to manage the Additions in a manner inconsistent with management of the Class I wilderness.

There are no current or proposed major emitting facilities proposed that would be affected by a decision to redesignate the Additions to Class I.

Discussion

The Eagle Cap Wilderness Addition AQRVs are important with respect to visibility within and external to the Additions; have surface waters that are sensitive to acid deposition and have a variety of sensitive plants. In addition, the Class II lands are contiguous to the existing Class I\visibility protection area permitting independent management of the Additions difficult. An exception may be the lands included within the Lower Minam Addition. In view of the importance of the above AQRVs to the Class II additions, it is recommended that additions be redesignated to Class I and afforded visibility protection. The implications of redesignation may weigh most heavily on agricultural burning practices in Union County.

Eagle Cap Wilderness Map



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26. Hells Canyon Wilderness & Additions

National Forest:	Wallowa-Whitman National Forest, Hells Canyon National Recreation Area
Size:	131,033 acres
Access Points:	Hat Point, Saulsberry Saddle, Hells Canyon Dam, Snake River
Miles of Trail:	210 (Oregon), 142 (Idaho)
Elevation Range:	1400 to 9300 ft

General Description

The Wilderness is divided by the Wild and Scenic Snake River Corridor in Idaho and Oregon State boundary. The Idaho portion is characterized by the high mountain peaks of the 7-Devils mountains while Oregon's portion is dominated by grassy benches and timbered ridges. Lakes in the 7-Devils mountains are the main attraction within the Class I Wilderness. Hunting elk, deer and chukar is also popular. The Wilderness Addition are adjacent to the current Class I area and consist of moderately steep to extremely steep breaklands that extend from the Imnaha/Snake River divide, centered near McGraw Lookout to the Hells Canyon Reservoir, a vertical drop of over 4,000 feet in a horizontal distance of 3 to 5 miles. The entire area is severely dissected by drainage cut through layers of Columbia River basalts and limestone outcrops. The north facing slopes are generally covered with Douglas fir, ponderosa pine and other conifers while the south facing slopes are generally grass covered. Brushy areas are also present.

Recreational use is largely for big game hunting (50%) and other activities associated with hunting (20 %) such as camping, hiking and horse back riding from August through November. Recreational use is estimated at 20,000 RVD's per year, about 1,000 of which is associated with the Wilderness Additions. None of the Snake River white water rafting activity is along the Class II addition.

Other Features

Historically the area has been farmed, ranched, and mined. Regulated sheep and cattle grazing still continues throughout most of the wilderness providing wool and low costs protein to the public while using forage conservatively.

Air Quality Related Values

Visibility: Visibility within the Wilderness is an important, if not overriding, factor in the visitor's enjoyment of the Hells Canyon Wilderness Addition and the adjacent non-wilderness Hells Canyon Reservoir. Scenic vistas within the Wilderness form a significant part of the visitor's enjoyment of the area. The most outstanding are along the western edge, much of which is accessible by vehicle from Forest Service Road #3965. Trail #1890 along the Hells Canyon Reservoir offers

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a different perspective, since all views are either of the water, with Idaho in the middle and/or background, or the Hells Canyon Wilderness rising abruptly to the west. Mid-elevation trails #1884 and #1789 offer views that are between the aforementioned two. Because of the winding nature of the Canyon, views within the Wilderness are limited to less than 6 miles.

Integral vistas of distant peaks outside of the Wilderness are an important asset of the Addition. Views from the upper elevations of the Addition near McGraw Rim and from the mid-slope trails toward the Seven Devils peaks in Idaho and into the Class I portion of the Canyon are an important and unique asset.

Aquatic Chemistry: There are no lakes within the Wilderness Addition and the area is not believed to be especially sensitive to acid deposition (see Section 5).

Aquatic Biology: Aquatic biology resources within the wilderness, because of the lack of acid deposition sensitivity of the aquatic chemistry, not at issue.

Terrestrial Plants: Sensitive plants may include Hackelia hispida, Pediocactus simpsonii and Rubus Bartonianum. It is not known if these species have been found within the Class II Additions.

Ecologist's Report

(Provided by S. Logan, Region 6 Ecologist)

The Hells Canyon Wilderness is bisected by the Wild and Scenic Snake River. However, the Eastern portion is in Idaho and beyond the scope of this proposed legislation. The Western portion is comprised of mixed forests and grasslands. Forested stringers run along the ridges, and in draws and other areas of soil accumulation. Most of the forested stands are comprised of Ponderosa and lodgepole pine. Douglas-fir occurs on the moister sites. There are two Region 6 currently listed sensitive plants in the Hells Canyon Wilderness. In addition peregrine falcons and bald eagles have been sighted.

Internal and integral vistas are essential to the visitor experience in this Wilderness Area. The views of the Snake River and the steep, rugged and dissected canyon walls are a major reason for recreational use of the Wilderness.

Management Implications

Mining activities in Oregon and Idaho could cause adverse impacts on the Wilderness if ore processing facilities were to be constructed. A possible management implication of redesignation is that of constraints on forest prescribed burning programs of the Wallowa-Whitman National Forest in Oregon and the Payette National Forest in Idaho however in the past there has been little burning activity in the

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area. There are no proposed major emitting facilities proposed for the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

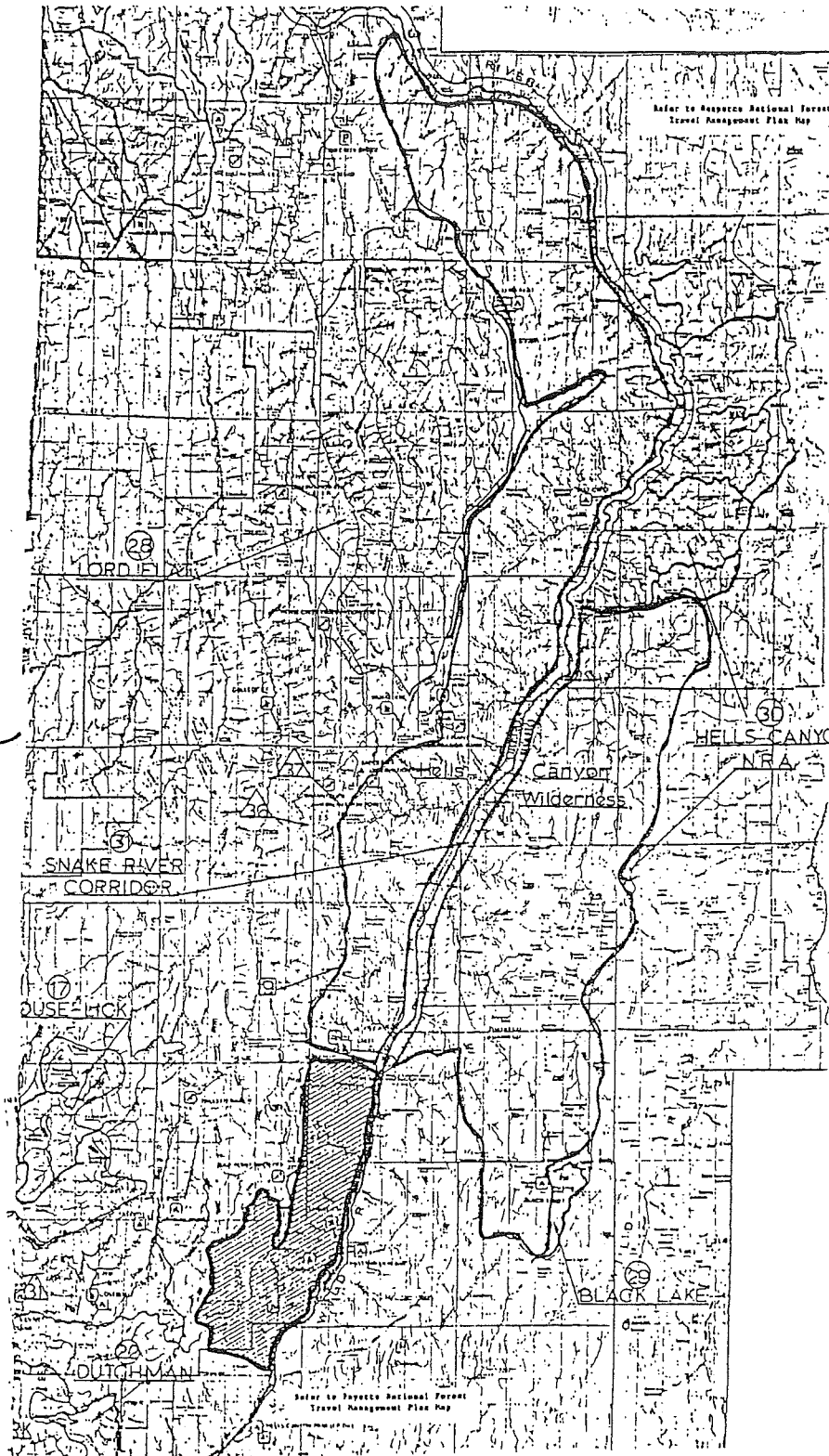
The principal AQRVs of the Hells Canyon Wilderness Addition are those of visibility within the Wilderness and external vistas. Sensitive plants are also important. Other AQRVs are relatively unimportant. Implications to redesignating the area to Class I\visibility status are minimal because the addition is adjacent to the current Class I\visibility area and land manager burning constraints are not at issue. The Hells Canyon Wilderness Additions are therefore recommended for redesignation to Class I and afforded visibility protection.



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Hells Canyon Wilderness Map

— Current Boundary of Class I Area
== Boundary with Additions



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27. North Fork Umatilla Wilderness

National Forest:	Umatilla National Forest, Walla Walla Ranger District
Size:	20,144 acres
Access Points:	Bulk Creek and Umatilla Forks
Miles of Trail:	18
Elevation Range:	2400 to 5300 ft

General Description

The area is characterized by gently sloping, native bunchgrass covered plateaus which are divided by extremely steep, timbered canyons. Typically, the north facing slopes are forested, while south facing are grassy. The production of high quality water is a major value of the area. The North Fork Umatilla river supports sizable runs of anadromous fish, and Dolly Varden trout. Recreation use by hunters, hikers, equestrians and fishing groups is heavy. The area has excellent big game habitat (deer and elk) and is summer range for big game calving, rearing, and breeding. Lower elevations also provide big game winter range.

Air Quality Related Values

In the opinion of the Umatilla National Forest, Air Quality Related Values are not seen as an important value to the Wilderness.

Visibility: Vistas within the Wilderness are limited to short-range views across the canyons. There are no long-range or integral vistas of importance.

Aquatic Chemistry: Streams within the Wilderness are not believed to be sensitive to acid deposition (see Section 5).

Aquatic Biology: Aquatic biology resources within the wilderness, because of the lack of acid deposition sensitivity of the aquatic chemistry, not at issue.

Terrestrial Plants: Sensitive plants include Lupinus sabinii and Polystichum kruckebergii.

Management Implications

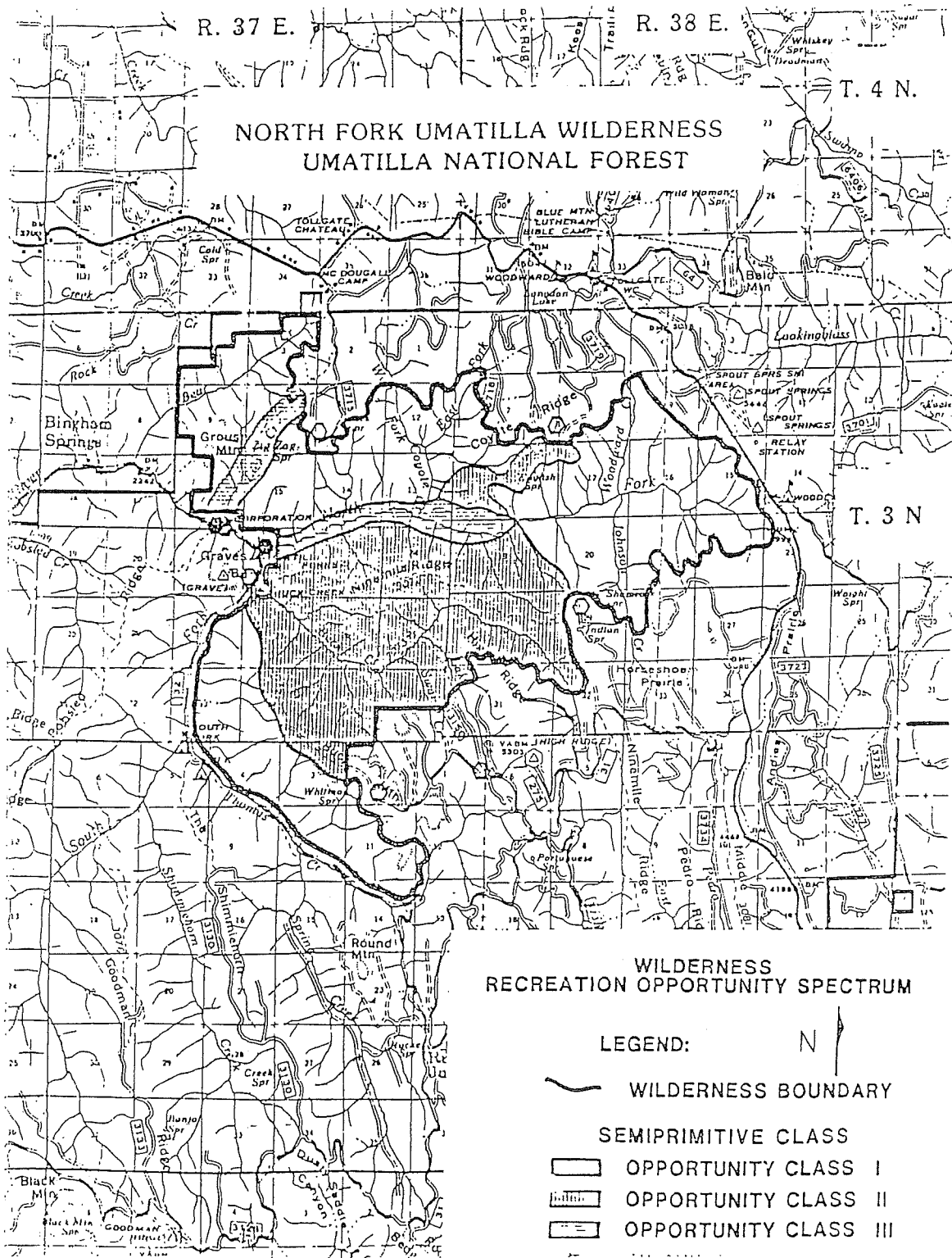
The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Umatilla National Forest. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

Because AQRVs are not considered important resources, it is recommended that the North Fork Umatilla Wilderness be retained as a Class II area.

-DRAFT Redesignation of Oregon Class II Wilderness Lands-

North Fork Umatilla Wilderness Map



-DRAFT Redesignation of Oregon Class II Wilderness Lands-

28. Wenaha-Tuscanon Wilderness (Oregon Portion)

National Forest:	Umatilla National Forest, Pomeroy Ranger District
Size:	39,200 acres in Oregon. 177,400 total acres.
Miles of trail:	177
Elevation Range:	2,000 to 6,401'

General Description

The Wenaha-Tuscanon Wilderness was established by the Endangered American Wilderness Act of 1978. It encompasses over 177,000 acres in Oregon and Washington. The area is primarily characterized by rugged basaltic ridges and outcrops separated by deep canyons with steep sideslopes. Plant communities vary from the bunchgrass slopes of the Wenaha Canyon to the windswept subalpine type communities on Oregon Butte and Table Rock. Approximately 31 % of the land is unforested. The area has outstanding opportunities for solitude with the imprint of human activity substantially unnoticed.

Annual recreational use is 92,000 RVD's with 5 commercial outfitters operating within the wilderness during the deer and elk hunting seasons. Fishing and hiking are the primary use in the summer and fall. Horses are heavily used during the hunting season and horseback riding has become popular during the summer and fall months. The 95th Congress, in establishing the Wilderness, noted the importance of hunting within the area. The Wenaha River downstream from the wilderness boundary is being considered for Wild River status.

Grazing within the Wilderness is permitted, providing about 544 cattle AUM's.

Air Quality Related Values

Visibility: Scenic resources are located at Big Hole Overlook, Elk Flat Trail # 3241 and Round Butte Trail #3235. The primary visibility AQRV's are the integral vistas of distant peaks. The view from Table Rock Lookout on a clear day include, to the west, Mt. Hood, Mt. St. Helens, Mt. Adams and Mt. Rainier; to the east the Seven Devils and to the south Eagle Cap and the Elkhorn Mountains. Many of these vistas to the west extend over a 200 mile path across much of the State. Views within the Wilderness are relatively short range views of the canyons.

Aquatic Chemistry: There are no significant lakes within the Wilderness and surface waters in this region are not especially sensitive to acid deposition (see Section 5).

Aquatic Biology: Aquatic biology resources within the area's streams are not at risk because of the buffering capacity of the soils.

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Terrestrial Plants: Sensitive plants within the Wilderness include:

Allium fibrillulm
Bolandra oregana
Calypso bulbosa
Hieracium bolanderi
Mimulus jepsonii

Management Implications

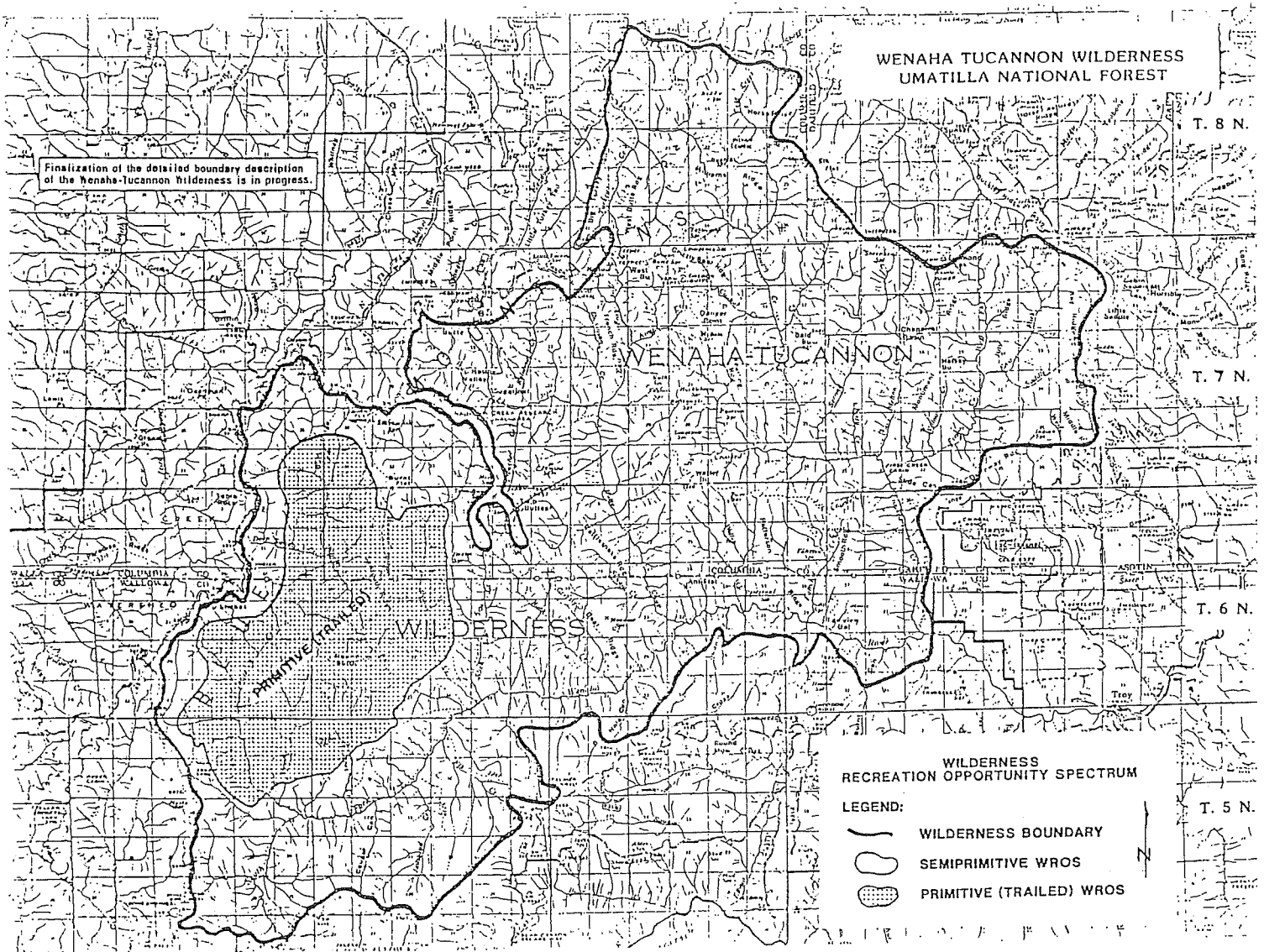
The principal management implication of redesignation is that of constraints on forest prescribed burning programs of the Umatilla National Forest. Because burning on the Forest is usually completed before the July 4-Labor Day visibility protection period, constraints on the forest burning programs are likely to be minimal. Wheat and grass field burning north of the Wilderness in the State of Washington may be effected if the smoke from this burning impairs visibility. There are no proposed facilities in the area that would be effected in the event that the Wilderness were redesignated to Class I.

Discussion

Because of the importance of assuring protection of sensitive plants, visibility within the wilderness and long range vistas, the Wenaha-Tuscannon Wilderness is recommended for redesignation to Class I status and incorporated into the Oregon Visibility Protection Program.

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Wenaha-Tucannon Wilderness Map



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29. John Day Fossil Beds National Monument

(The following text was provided by the National Park Service, Pacific Northwest Regional Office.)

Establishing Authority: P.L. 93-486
Location: North central Oregon
Size: 14,014 acres
Purpose: The purpose of the monument is to identify, interpret, and protect the geologic, paleontological, natural, and cultural resources along the central and upper John Day River and to provide facilities that will promote and assist visitor recreational enjoyment and understanding of the same.

Significance and Purpose of Monument

The national significance of the John Day Fossil Beds National Monument lies in the geological and paleontological resources of the John Day Basin. Its sedimentary strata, representing four major geological formations of the Columbia River Plateau, span the last 55 million years and five consecutive geologic epochs. These strata contain one of North America's longest continuous records of plant and animal fossils, which trace the evolution of life forms from the subtropical climate of the Eocene Epoch through the subarctic climate of the Ice Age.

Dr. J.D. Merriam, who studied the area intensively as early as 1899, stated, "Although there are other geological sections, particularly in the Western United States, which furnish as remarkable history ... there are probably none in which the relations of the various chapters to each other are more evident than they are in the record inscribed on the walls of the John Day Canyon." Another noted paleontologist, R.W. Chaney, has stated, "No region in the world shows more complete sequence of tertiary land populations, both plant and animal, than the John Day Basin."

Contributing to the significance of the monument are scenic, natural, and cultural resources. In 1967, the Advisory Board on national parks, historic sites, buildings, and monuments, in its report on the National Park Service study of John Day Fossil Beds, determined that "...it is eminently suitable for geological and paleontological exhibit and interpretive purposes as a John Day Fossil Beds National Monument." The Department of the Interior report to the Congress dated December 10, 1973, stated that "...establishment of the monument is intended to preserve, protect, and interpret the extensive Tertiary fossils found in the geologic formations of these areas."

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John Day Fossil Beds National Monument was authorized October 26, 1974, and established October 8, 1975, under the authority of Public Law 93-486, 88 Stat. 1461. Based on these cited provisions and the more general provisions of the National Park Service's 1916 Organic Act, the purpose of the monument is to identify, interpret, and protect the geologic, paleontological, natural, and cultural resources along the central and upper John Day River and to provide facilities that will promote and assist visitor recreational enjoyment and understanding of the same.

The fossil bearing formations in this basin are world famous and have international significance, having yielded thousands of petrified bones, fossil leaf imprints, and occasional pieces of petrified wood that were buried and preserved by the volcanic ash. During the approximately 100 years of fossil collecting and research in this area, more than 120 fossil mammals have been identified. They range in size from very small mice to huge rhinoceros and oreodonts.

Resource Description

John Day Fossil Beds National Monument contains three units totaling 14,014 acres (Sheep Rock, 8,796 acres; Painted Hills, 3,167 acres; and Clarno, 2,051 acres) and is located in central Oregon's Grant and Wheeler Counties. Portions of each of these units were formerly Oregon state parks. Access is via U.S. Highway 26 from points east and west of the monument, U.S. Highway 395, and State Highway 19 from the north and south. The three units are widely separated. The Sheep Rock unit, the largest and receiving the most visitor use, is 35 miles from the monument's headquarters, which is located in John Day.

The Painted Hills and Clarno units are located 80 miles and 125 miles, respectively, from John Day. Existing development within the monument is for day use. There are parking areas with spaces for 15-20 vehicles, picnic tables, and pit toilets at Clarno, Painted Hills, and at the Blue Basin and Foree sites within the Sheep Rock unit. There are also short trails at the Blue Basin, Painted Hills and Clarno sites. The Cant Ranch, which is located within the Sheep Rock unit, was acquired by the National Park Service in 1975 and is used as an interpretive facility. An overlook with a parking area and interpretive signs is also located near the Cant Ranch.

Monument headquarters is located in John Day. It is the only year around visitor service facility. The facility provides administrative offices, a receptionist/ information area, interpretive exhibits, storage facilities, and rest rooms.

The John Day River is essentially a free-flowing stream, with the only obstructions present being small diversion dams constructed and operated by local ranchers for irrigation of pasture and limited but highly important feed crops. Portions of the river which have been

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designated as components of the National Wild and Scenic Rivers System include: 47 miles of the South Fork from Nalheur National Forest to Smokey Creek, 54 miles of the North Fork from the headwaters to the confluence with Camas Creek, and 148 miles from Service Creek to Tumwater Falls.

The John Day River exhibits flow characteristics typical of rivers in semiarid regions. Extreme differences in both seasonal flows and annual yields occur. Flows are usually highest in April and May and then drop rapidly. Severe summer cloudbursts may, however, cause flash flooding. Cool, relatively damp winters and warm, dry summers with large daily temperature variation characterize the climate.

The soils found within the monument are characteristic of this semiarid region of Oregon. Typically, the soils are well drained, with a high shrink-swell potential.

Steppe and shrub-steppe plant communities are common in Oregon and are the dominant native plant communities found within the monument. According to current information obtained from the U.S. Fish and Wildlife Service's Endangered Species Program, there are no listed or proposed threatened or endangered species within the monument. However, three "candidate" species of plants have been identified. These include Castilleja xanathotricha (yellow hairy paintbrush), Astragalus misallus (pauper milkvetch), and Astragalus diaphanus Dougl. (transparent milk vetch). The State list of rare, threatened, and endangered plants includes four species found within the monument. These are: Astragalus diaphanus Dougl. (transparent milk vetch), Penstemon eriantherus Pursh var. argillosus M.E. Jones (John Day penstemon), and Pediocactus simpsonii (Engelm.) Britt. & Rose var. robustior Coult. (hedgehog cactus).

Topography of the John Day River Basin is comprised of steep mountains and narrow valleys. The Sheep Rock unit exhibits the greatest amount of relief in that the elevation gain from the John Day River to the tops of the mountains on either side of the river is between 1,000 and 2,000 feet. Terrain in the Clarno and Painted Hills units has been weathered extensively, resulting in the rounding of most hilltops. The exception here is the Palisades in the Clarno unit, which is a small area that is steeply sloped.

The most prominent wildlife species within the monument is mule deer. There is the usual rodent population and associated predators, such as coyotes, in this semiarid grassland. Bird life is abundant in the region around the monument. There are no animal species in the monument which are identified in the State list of rare, threatened, and endangered animals.

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Air Quality Related Values

The following air quality related values are important attributes to the area:

Visibility - Many of the formations are viewed from an overlook to serve either as a visitor orientation or conclusion point. Such visitor viewing requires visibility up to a mile. To appreciate the rugged and beautiful scenery of the monument, long distance viewing is also required. Because clear views of the formations are essential to visitor enjoyment of the Monument, visibility is a very important AQRV resource.

Flora - There are no listed or proposed threatened or endangered species within the monument. However, two "candidate" species of plants have been identified. The State list of rare, threatened, and endangered plants includes four species found within the monument.

Geological and Paleontological Resources - These resources can be affected by dry deposition of air pollutants and by acid precipitation. John Day Fossil Beds National Monument was established to preserve, protect, and interpret the extensive geological and paleontological resources of the John Day Basin.

Water - Both wet and dry deposition in the John Day River could affect the acidity of the water and impact fish, including salmon and steelhead, which traverse the river.

Management Implications

There are no known major emitting facilities being planned at this time which would be affected by the redesignation of John Day Fossil Beds National Monument to Class I.

Discussion

The unique features of the John Day Fossil Beds National Monument require the additional protection afforded by Class I redesignation and inclusion under the Oregon Visibility Protection Program.

John Day Fossil Beds National Monument Map

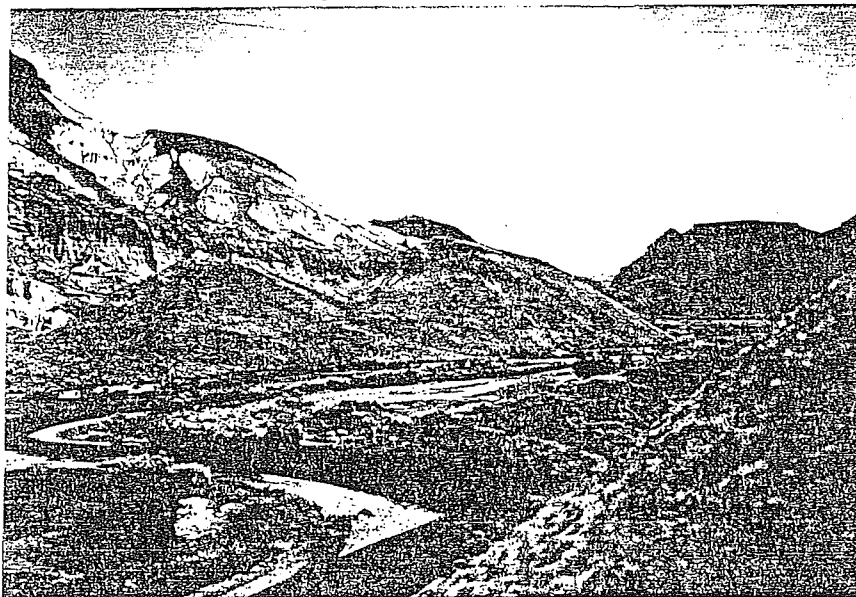


John Day Fossil Beds National Monument Photos

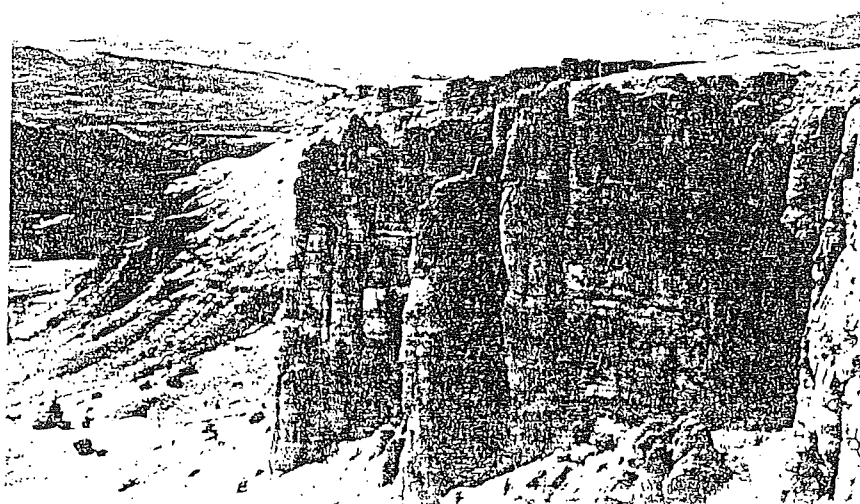
Mascall Overlook



Sheep Rock Overlook



Clarno

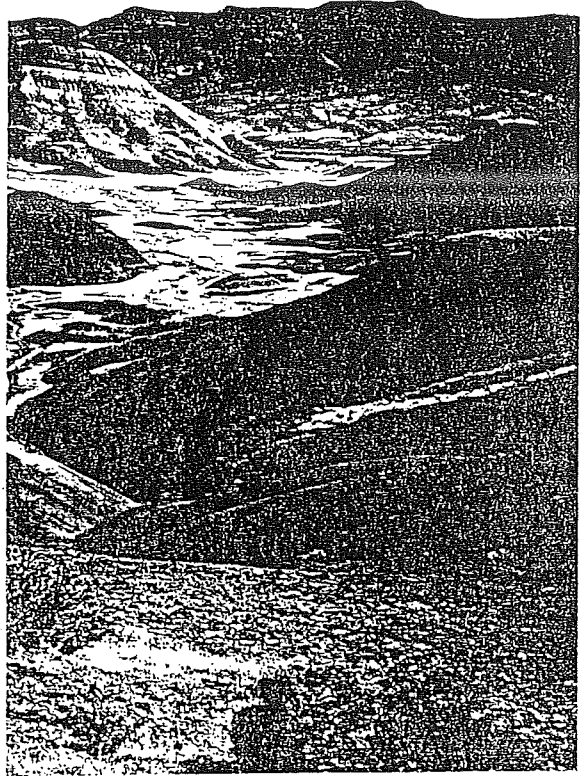


John Day Fossil Beds National Monument Photos

Blue Basin Overlook



Painted Hills



Foree



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7. Redesignation Recommendations

Table 3 of this section presents the Department's assessment of the relative importance of each AQRV of each wilderness or wilderness addition and incorporate comments provided by USDA Forest Service staff.

Recommendations for Class I redesignation are summarized in Table 4 for lands where AQRV's are important attributes and where redesignation of the lands appears to be in the public interest. A separate determination regarding visibility protection of lands recommended for redesignation is made based on the importance of the areas scenic values to visitor enjoyment and management objectives.

The following redesignation recommendations constitute the opinion of the Department of Environmental Quality, Air Quality Division staff.



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Table 3: Air Quality Related Value Inventory
(Scale: 1 = Unimportant; 5 = Very Important)

Wilderness Area	---Visibility---		----Aquatics----		Plants	Geology & Soils	Cultural & Archaeological	Other * AQRV's
	Within	Int.Vista	Chemistry	Biology				
1. Columbia Wilderness	4	5	2	1	1	2	1	1
2. Salmon-Huckleberry Wilderness	2	5	4 ¹	2	2	2	1	1
3 Mt. Hood Wilderness Additions	5	5	5	3	2	4	1	1
4. Badger Creek Wilderness	2	5	5 ²	2	1	4	1	1
5. Bull of the Woods Wilderness	4	5	5	4	2	4	1	1
6. Mt. Jefferson Wilderness Addition	5	5	5	4	2	4	1	1
7. Mt. Washington Wilderness Addition	5 ⁴	5	5 ³	4 ³	1	4	1	1
8. Three Sisters Wilderness Addition	5	5	5	5	4	4	1	1
9. Waldo Lake Wilderness	5	5	5	5 ⁴	4	4	1	1
10.Diamond Peak Wilderness	5	5	5	5	4	4	2	1
11.Boulder Creek Wilderness	3	2	2	2	2	3	2	1
12.Mt.Thielsen Wilderness	5	5	5	5	4	4	2	1
13.Crater Lake National Park Addition	4	5	4	3	3	3	3	2
14.Rogue-Umpqua Divide Wilderness	4	4	3	3	2	3	2	1
15.Sky Lakes Wilderness	4 ⁵	5	5	4	4	4	1	1
16.Wild Rogue Wilderness	5	3	3	2	2	3	1	1
17.Gearhart Mountain Wilderness Addition	4	3	3 ²	2	2	2	1	1
18.Grassy Knob Wilderness	1	1	2	2	2	2	1	1
19.Kalmiopsis Wilderness Additions	3	2	2	2	5	2	1	1
20.Mill Creek Wilderness	2	1	2	3	2	2	1	1
21.Black Canyon Wilderness	2	1	2	1	2	2	1	1
22.Strawberry Mtn. Wilderness Addition	4	4	3	2	2	2	1	1
23.Monument Rock Wilderness	3	2	3	3	2	2	1	1
24.North Fork John Day Wilderness	3	2	3	3	2	2	1	1
25.Eagle Cap Wilderness Addition	4	5	4	3	4	4	1	1
26.Hells Canyon Wilderness Addition	5	3	2	3	2	2	1	1
27.North Fork Umatilla Wilderness	2	1	1	3	2	2	1	1
28.Wenaha-Tucannon (Oregon Portion)	3 ⁵	3 ⁵	2	2	2	2	1	1
29.John Day Fossil Beds National Monument	5	4 ⁴	2	2	2	5 ³	2	1

* Other AQRV's include: Odors, ecosystem effects and other recreational resources not previously listed.

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Table 4: Redesignation Recommendations

Class II Area	Class I & Visibility	Class I	Class II
1. Columbia Wilderness	X		
2. Salmon-Huckleberry Wilderness	X		
3 Mt. Hood Wilderness Additions	X		
4. Badger Creek Wilderness	X		
5. Bull of the Woods Wilderness	X		
6. Mt. Jefferson Wilderness Addition	X		
7. Mt. Washington Wilderness Addition	X		
8. Three Sisters Wilderness Addition	X		
9. Waldo Lake Wilderness	X		
10.Diamond Peak Wilderness Additions	X		
11.Boulder Creek Wilderness		X	
12.Mt.Thielsen Wilderness	X		
13.Crater Lake National Park Addition	X		
14.Rogue-Umpqua Divide Wilderness	X		
15.Sky Lakes Wilderness	X		
16.Wild Rogue Wilderness	X		
17.Gearhart Mountain Wilderness Addition	X		
18.Grassy Knob Wilderness			X
19.Kalmiopsis Wilderness Additions-North		X	
Kalmiopsis Wilderness Additions-South	X		
20.Mill Creek Wilderness			X
21.Black Canyon Wilderness			X
22.Strawberry Mtn. Wilderness Addition	X		
23.Monument Rock Wilderness			X
24.North Fork John Day Wilderness-Baldy	X		
NFJD Wilderness-Tower,Greenhorn			X
and NFJD Units			
25.Eagle Cap Wilderness Addition	X		
26.Hells Canyon Wilderness Addition	X		
27.North Fork Umatilla Wilderness			X
28.Wenaha-Tucannon (Oregon Portion)	X		
29.John Day Fossil Beds National Monument	X		

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Appendix A
Crater Lake National Park References

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2. U.S. Environmental Protection Agency, "Visibility Protection for Federal Class I Areas," Federal Register of Tuesday, December 2, 1980; Pages 80084-80095. 40 CRF Part 51.

3. Oregon Administrative Rules, Chapter 340, Division 31, Section 120 (Restrictions on Area Classifications). Stat. Auth. ORS Ch. 468; Dec. 18, 1979.

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5. Wilderness Act of 1964. 78 Stat. 890 as amended by 92 Stat. 1650; 16 U.S.C. 1131-1136 as amended September 3, 1964; October 21, 1978.

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8 7. Oregon Wilderness Act of 1984. Public Law 98-328. Enacted by the 98th Congress June 26, 1984. 98 Stat. 272-279.

1 8. An Act to revise the boundary of Crater Lake National Park in the State of Oregon, and for other purposes. Public Law 96-553. Enacted by the 96th Congress. December 19, 1980.

9. An Act to provide for...addition to John Day Fossil Beds National Monument. Public Law 93-486. Enacted by the 93rd Congress. Authorized October 26, 1974. Established October 8, 1975. 88 Stat. 1461.

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21. Vance Carlson, Forest Archeologist, Umpqua National Forest. May 5, 1988 telcon.
22. Congressional Record, Committee Report #98-465, page 19.
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