

Mount Si NRCA Public Use Plan

.....
June 1997



WASHINGTON STATE DEPARTMENT OF
Natural Resources
Jennifer M. Belcher - Commissioner of Public Lands

Acknowledgments

The Mount Si Natural Resources Conservation Area Supplemental Public Use Plan 1997, was prepared by the Washington State Department of Natural Resources.

Mount Si NRCA Public Use Planning Team

Susan Combs-Bauer and Darcy McNamara, Authors
Washington State Department of Natural Resources

DNR Review Team

Representatives from:

South Puget Sound Region

Forest Resources Division

Resource Planning and Asset Management Division

Many individuals, user groups and agencies assisted with the development of this Public Use Plan. Although there were many more people that participated in this planning process, we would like to especially thank the following for their advice, constructive criticism, and general support:

Mark Boyer

Brian Burdo

Diana Carmack

Sharon Couron

Robert Degraw

Leonard Eiger

Andy Fitz

Tom Johns

Dale Johnson

Ken Konigsmark

Michael Leake

Harvey Manning

Gene Matthews

Francis North

Ana Parsons

Chris Pope

Charlie Raines

Mark Sollitto

June Stevens

C. J. Sturtevant

Ted Thomsen

Art Tuftee

Paul Wiseman

Interest Groups

Access Fund

Cloud Base Country Club

Friends of Mount Si

Friends of the Trail

Issaquah Alps Trails Club

Midforc Recreation Coalition

Mountaineers

Mountains to Sound Greenway

Sierra Club

Snoqualmie Trails Club

Washington Trails Association

Agencies and Organizations

City of North Bend

Metropolitan King County

Middle Fork Snoqualmie Steering Committee

Snoqualmie Tribe

US Forest Service

Weyerhaeuser

The Interagency Committee for Outdoor Recreation provided funding to prepare this plan.



Jennifer M. Belcher
Commissioner of Public Lands

June 1997

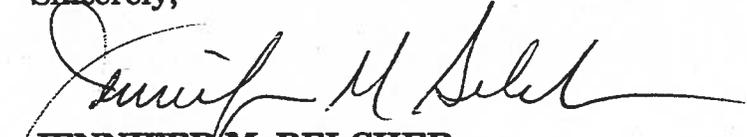
Dear Friend:

The Mount Si Natural Resources Conservation Area (NRCA) Management Plan and Public Use Plan were prepared to provide direction for the protection and management of the natural ecological systems of Mount Si. Completion and approval of these plans is the culmination of many years of work by the Citizens Advisory Committee, the public, the University of Washington, and the Department of Natural Resources.

Future generations will benefit greatly from protection of the special resources at Mount Si NRCA. The significant features to be found on Mount Si make this NRCA an excellent example of Washington's natural heritage, especially since it's so close to the state's largest urban center. The NRCA supports unique geologic features, unusual plant communities and sensitive plant species, rare wildlife habitat, and incomparable low-impact public use opportunities.

I encourage you to stay involved as the Mount Si management plan is implemented. Join us in creating a legacy of wise management and stewardship at this extraordinary place.

Sincerely,



JENNIFER M. BELCHER
Commissioner of Public Lands



Contents

1	Preface
2	Introduction
2	Location and Description
3	Surrounding Land Uses
7	Purpose of Plan
7	Planning Process
8	Plan Review and Adoption
9	Planning Guidelines
9	Plan Consistency
10	Planning Principles and Assumptions
13	Public Use Zone Recommendations
13	Public Use Zones Summary
14	Public Use Zone Descriptions
21	Specific Recommendations
21	Public Use Management
23	Trailheads, Access Points and Facilities
27	Roads and Trails
32	Public Use Activities
36	Environmental Education
37	Proposed Land Acquisitions, Easements & Access
38	Public Use Monitoring
41	Concept Map & Action Plan
41	Concept Map
45	Action Plan
51	References
	Maps
2	Map 1. Vicinity Map
5	Map 2. Surrounding Use Map
19	Map 3. Public Use Zone Map
43	Map 4. Draft Public Use Concept Map
	Tables
17	Summary of Recognized Uses in Zones
18	Distinctive Features that Define Public Use Zones
31	Trail Evaluation Chart
39	Targeted Monitoring Areas
45	Action Plan Matrix

Preface

In 1987, the Natural Resources Conservation Area Act was passed by the Washington State Legislature. Mount Si was the first designated Natural Resources Conservation Area (NRCA) and is currently one of 23 NRCAs in the state. The Washington Department of Natural Resources (DNR) was selected as the agency to manage these lands. The purpose of the NRCA is to protect ecological systems and provide low-impact public use opportunities that do not impact protected resources. The Mount Si NRCA Supplemental Public Use Plan is based on the goals in the Mount Si NRCA Management Plan. Guidelines for management are defined in the NRCA Statewide Management Plan which was adopted in 1992.

This Public Use Plan has been developed by the Washington State Department of Natural Resources (DNR) with the assistance of many citizen groups, recreation user groups and individuals who identified key public use issues and provided valuable information throughout the planning process. Additional assistance came from various federal, state, local agencies in addition to tribes and private companies.



Introduction

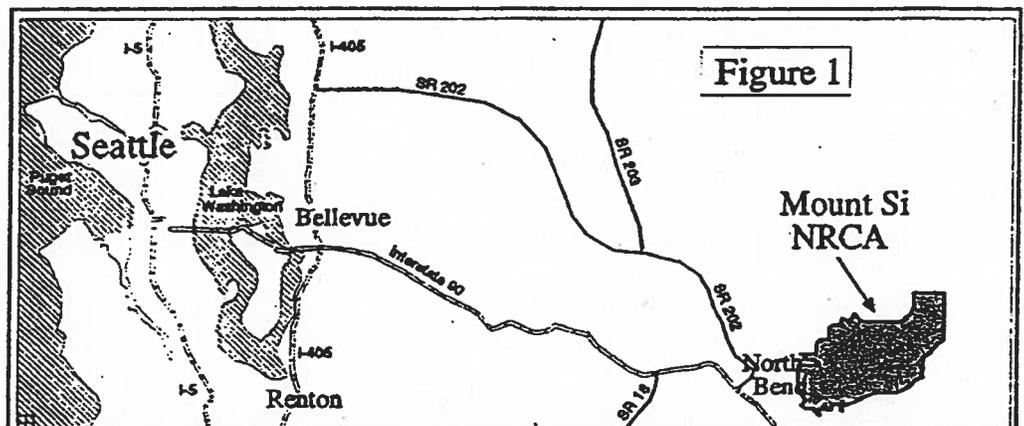
The Department of Natural Resources (DNR) manages approximately five million acres of state-owned forest, aquatic, agricultural, range and urban lands in Washington state. These lands are managed for financial and other long-term benefits to designated public beneficiaries and the general public. Statewide, more than 72,000 acres are managed for natural resource protection. These lands are called Natural Resources Conservation Areas (NRCA) and Natural Area Preserves (NAPs).

The DNR's Forest Resources Division is responsible for statewide oversight of the conservation area program, public use and recreation. The South Puget Sound Region of the DNR is responsible for on-site management of Mount Si NRCA.

Location and Description

Mount Si Natural Resources Conservation Area (NRCA) is located near the city of North Bend and is approximately 30 minutes by car or one hour by bus from Seattle. The boundary of the Mount Si NRCA planning area encompasses over 11,360 acres; 8,040 of these acres are managed by DNR as a NRCA. Many people recreate within the conservation area year around. An estimated 37,700 to 50,000 hikers use the Mount Si and Little Si trailheads. Most use is in the early spring and fall. Hiking is the most prominent use in the NRCA. Rock climbing is popular at Little Si. In addition, mountain bicyclists, equestrians, fishers, hunters and others also recreate on and in the vicinity of Mount Si.

Map 1: Vicinity Map



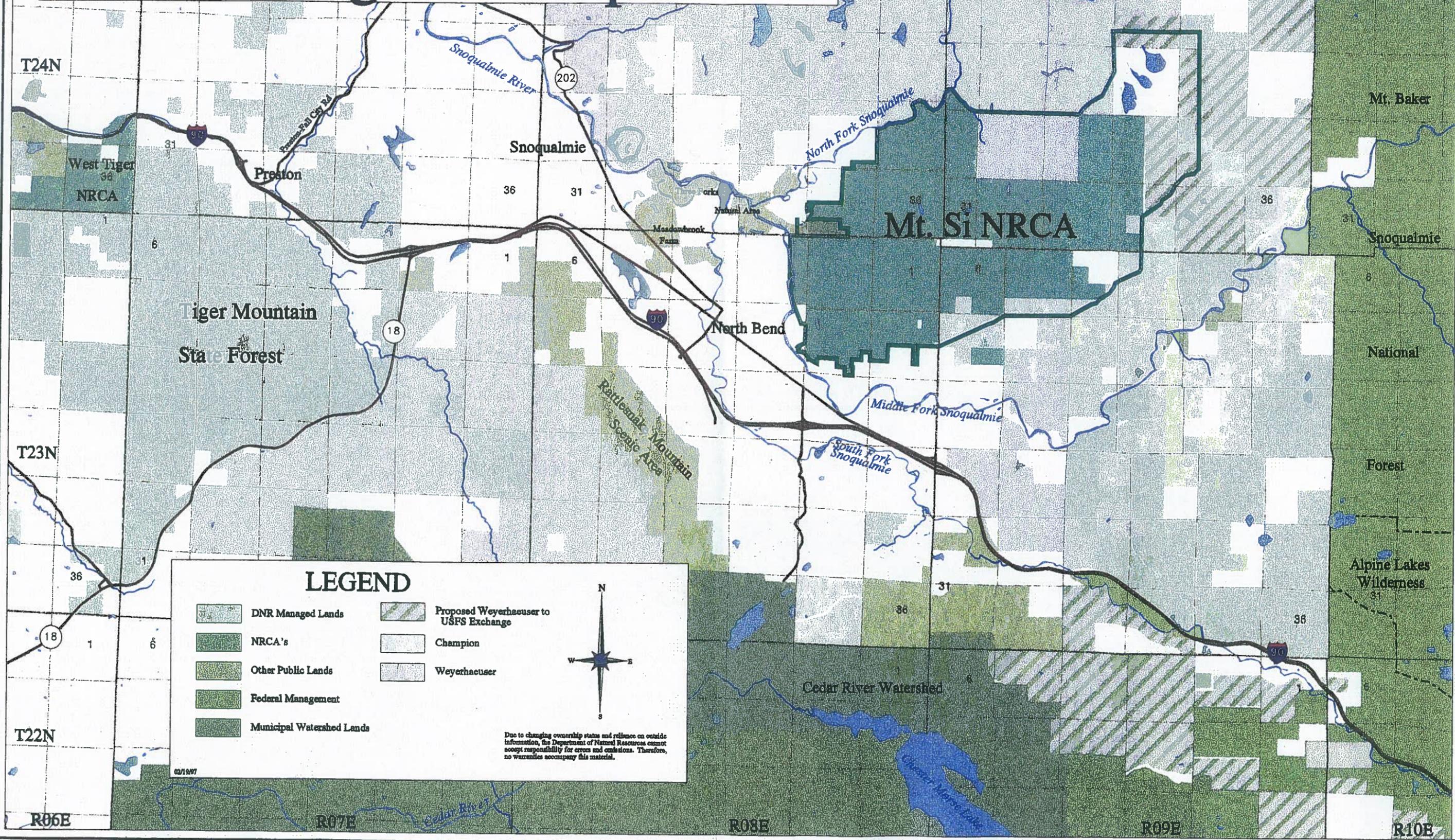
Mount Si NRCA is an outstanding scenic resource and a dominant landmark on the I-90 corridor. It is an important component in the Mountains to Sound Greenway. There are four mountain peaks in the conservation area: Mount Si, Mount Teneriffe, Green Mountain and Little Si. They range in elevation from 1,600 to 4,800 feet. The area has diverse habitat and contains unique cliffs and talus slopes, rock balds, remnant old growth forests, wetlands, lakes, and streams. There are over 300 different kinds of plants including two sensitive species. The cliffs are home to protected animals and birds including peregrine falcon and Vaux's swift. Also found in the area are native mountain goats, black bear, elk, deer, cougar, coyote and blue grouse.

Native Americans have lived for centuries within sight of Mount Si and value the area for its resources, and as a spiritual place to attain individual identity and importance within the tribe. Settlers also treasured the magnificent mountain and saw it as an area to explore. Beginning in 1907 hikes up to the top became popular.

Surrounding Land Uses

The thousands of acres of public and private lands surrounding Mount Si NRCA form a large area of interconnecting open spaces. The surrounding lands include the Cedar River Watershed and Rattlesnake Mountain Scenic Area (south of I-90); Meadowbrook Farm, King County's Three Forks Natural Area, Weyerhaeuser's Snoqualmie Tree Farm, US Forest Service lands, the Alpine Lakes Wilderness, Middle Fork Snoqualmie River valley, Champion International forest lands and DNR trust lands (north of I-90). The Cities of Snoqualmie and North Bend are located to the west of Mount Si. See Surrounding Use Map, next page.

Surrounding Use Map



LEGEND

- | | | | |
|--|---------------------------|--|--|
| | DNR Managed Lands | | Proposed Weyerhaeuser to USFS Exchange |
| | NRCA's | | Champion |
| | Other Public Lands | | Weyerhaeuser |
| | Federal Management | | |
| | Municipal Watershed Lands | | |



Due to changing ownership status and reliance on outside information, the Department of Natural Resources cannot accept responsibility for errors and omissions. Therefore, no warranties accompany this material.

02/1997

Purpose of Plan

The Mount Si NRCA Management Plan identifies the need for a detailed public use plan due to concerns about impacts of the intensity of current and future public use. The Public Use Plan allows an opportunity for responsible long range planning for public use that is compatible with the goals of the NRCA.

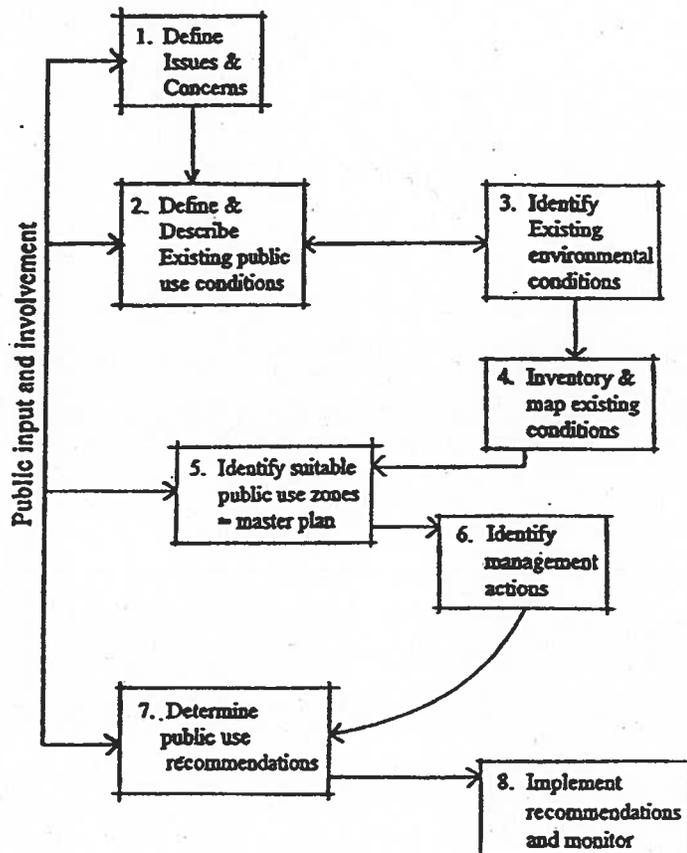
The purpose of the plan is to:

- provide planning guidelines for low-impact recreation while protecting the natural environment
- determine how the Mount Si NRCA connects to other public use areas
- establish specific recommendations for current and future public use
- provide a phased implementation plan, including resource needs for recommendations.

Planning Process

In 1995 the Department obtained funding from the Interagency Committee for Outdoor Recreation (IAC) to prepare this Public Use Plan. A DNR planning team and internal review team began work in February, 1995. The following steps were followed to develop the plan:

Planning process flow chart

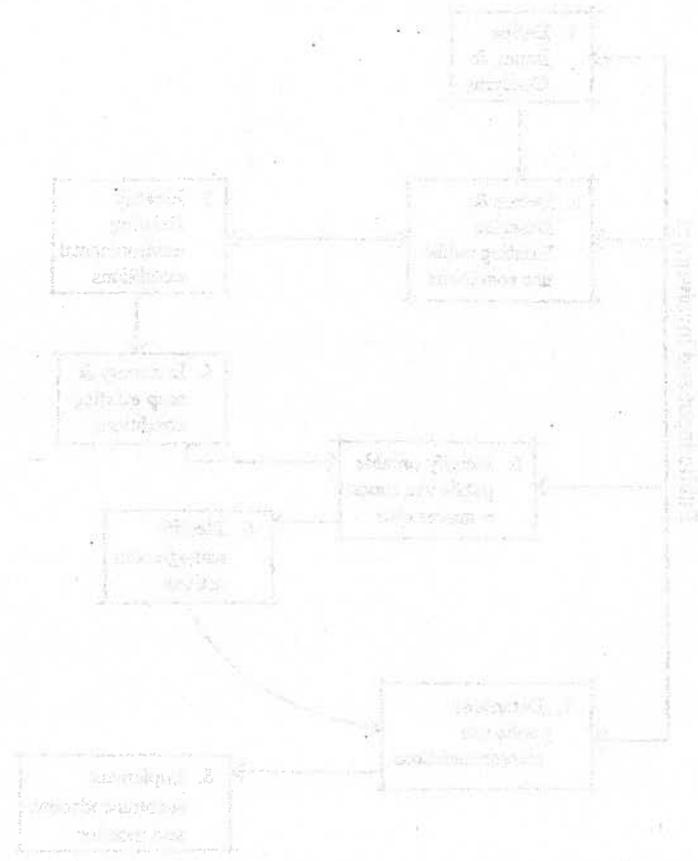


Public involvement was encouraged throughout the process. The planning process was introduced to the public in February, 1995 and a public scoping meeting was held in May 1995. The DNR planning team conducted field work, met with individuals, agencies, land owners, and interest groups. A workshop was held in May 1996 to discuss preliminary recommendations with key citizen representatives. More meetings were held with affected individuals and groups as the recommendations were developed.

Plan Review and Adoption

Upon completion of the draft plan, a public meeting was held November 21, 1996 to collect citizen comment. A public hearing was held December 9, 1996 to allow comment on the final draft plan. Written comments were accepted until December 18, 1996. The final plan was submitted to the Commissioner for Public Lands for adoption together with the Mount Si NRCA Management Plan.

The recommendations in this plan will be reviewed as necessary to ensure that they reflect the changing needs of the public and the purposes for which the NRCA was created. Public comment will be sought as major changes to the plan become necessary.





Planning Guidelines

Plan Consistency

This Public Use Plan is bound by the intent and purpose described in the NRCA Statewide Management Plan and the site specific Mount Si NRCA Management Plan. These two plans are described below.

NRCA Statewide Management Plan

The Natural Resources Conservation Areas (NRCA) Act was enacted by legislature in 1987. In 1992 a NRCA Statewide Management Plan was developed by the Department with the assistance of a nine-member citizen advisory committee. The Statewide Plan defines the primary purpose of the NRCA program:

To protect outstanding examples of native ecosystems, habitat for threatened, endangered, and sensitive plants and animals and scenic landscapes. Opportunities for environmental education and low-impact public uses will be provided where such uses do not adversely affect the resource values the area is intended to protect.

The Statewide Plan requires each NRCA to develop a site specific management plan. The NRCA Statewide Plan has policies regarding low impact public use and environmental education.

Mount Si NRCA Management Plan

A Citizens Advisory Committee was appointed by the Commissioner of Public Lands to develop the site specific plan for Mount Si. This plan was completed in 1995. This plan inventoried and analyzed the environmental condition of the area and made management recommendations. The management philosophy is:

The Mount Si Natural Resources Conservation Area (NRCA) will be managed to protect ecological systems and encourage natural successional processes while providing controlled opportunities for low-impact public use emphasizing environmental education.

Six policy goals were outlined in the management plan to support the philosophy. These goals are:

- Maintain, enhance and restore ecological systems.
- Maintain or provide habitat for threatened, endangered, and sensitive species.
- Maintain scenic landscapes.
- Protect cultural resource.
- Enhance opportunities for environmental education.
- Provide opportunities for low-impact public use.

Planning Principles and Assumptions

Public use planning principles and assumptions were developed from goals, strategies and prescriptions in the Mount Si NRCA Management Plan. These principles were applied throughout the Public Use Plan. "Principles" are a set of guidelines and/or objectives that are pre-determined prior to planning to help aid in consistency and accuracy of the plan. "Assumptions" are basic premises or conclusions that guided the planning team in moving from the principle stage into developing specific recommendations.

Principles

- A. Accommodate public recreational and educational activities where use levels and activities do not conflict with NRCA goals and do not diminish ecosystem quality and natural site characteristics.
- B. Encourage responsible stewardship of the area.
- C. Discourage motorized access.
- D. Enhance appreciation of scenic resources.
- E. Improve environmental education opportunities to create a greater understanding and appreciation of the conservation area.
- F. Rehabilitate existing damage and monitor public use levels.

Assumptions

- 1. Base public use recommendations on current facts and trends, local experience, and scientific interpretation of information and literature.
- 2. Plan for the public's well-being, safety, health and welfare. A well-managed public use program provides an opportunity to reduce or mitigate potential conflicts and impacts through information, education, and focusing users. A public use program results in a better informed public and raises awareness of the NRCA, the department, and the management of the NRCA.
- 3. Establishing public use guidelines and recommendations will require a commitment of agency direction, support and funding.
- 4. Increasing populations in the local area will result in a higher demand for recreation. Public use on Mount Si and surrounding public lands will dramatically increase over the next decade.

-
5. Increased law enforcement may be necessary to minimize adverse environmental and social impacts.
 6. Awareness of the need for coordinated public use management is increasing among adjoining land owners.
 7. Dispersal of visitors is likely to dramatically increase the frequency of wildlife disturbance and reduce the size of the secure areas to which animals can escape.
 8. Review of the Public Use Plan will be necessary to address changing needs that may differ with the concepts and recommendations that were developed. Monitoring of environmental and public use conditions will serve as a base for future changes that may be needed.

Critical Questions

After the planning team reviewed principles and assumptions, a set of questions were developed that needed to be addressed throughout the planning process. These questions helped to focus on specific recurring issues:

- The current Little Si trail parking lot is located on King County land and is not maintained as a trailhead. Access from the parking lot to the trail is causing conflict between neighbors and users. What are the possible solutions?
- The existing trailheads (Mount Si and Little Si) are at full capacity during peak seasons and times. Are additional trailheads needed?
- Are there enough trails? Are more trails needed? What are the environmental tradeoffs?
- The NRCA Management Plan identifies ecologically sensitive areas such as the ridge line, lakes, and rocky outcrops. How will public use be managed in these areas?
- In the future, there may be a regional trailhead access to King County's Three Forks Natural Area. Is there an appropriate connection? Is there an issue with elk and other wildlife?
- What is the outcome of the Middle Fork Snoqualmie planning effort? Will there be connections or public use opportunities related to Mount Si?
- Weyerhaeuser Corp. currently charges a fee for accessing their lands north of Mount Si. What implications will that have for access to the NRCA?
- What are potential funding sources to implement the plan?

Recommendations



Public Use Zone Recommendations

Recommendations in this document are divided into “Public Use Zones. Recommendations” and “Specific Recommendations.” Public use zones provide the foundation for specific recommendations discussed later in this section.

Recommendations were developed with help from review teams, public meetings and key citizens; and are compatible with the Statewide NRCA Plan, and Mount Si NRCA Management Plan.

Public Use Zones Summary

Although Mount Si NRCA is a geologic rock formation, large portions of the landscape are quite fragile. Excessive or improper public use of the land can leave ecological systems damaged for generations. This plan recognizes and accommodates this by establishing land classifications called Public Use Zones. Recommendations have been developed for designating appropriate public use activities and facilities permitted within each zone.

The zones defined here provide the infrastructure for successful management of public use on Mount Si. Each zone definition is based on environmental constraints and public use opportunities (see chart - key distinctive features). These include soil types, hydrology, topography, wildlife and vegetation as well as aesthetic, cultural and historic conditions. The environmental analysis conducted for the Mount Si NRCA Management Plan provided this information.

The public use zones support the management goals for Mount Si by allowing low impact public use while protecting resources. This is accomplished by directing low impact use into specific areas. On Mount Si, a major factor in determining public use is topography. Extremely steep cliff faces are retreat areas for wildlife. By concentrating public use away from these areas, wildlife disturbance is reduced and escape areas for animals are provided.

The NRCA is divided into the following zones with varying levels of public use concentrations:

- **Trailhead Areas:** Parking lots, facilities and trailheads = high concentrations
- **Primary Public Use Zone:** Opportunities for low impact public use = substantial amount of use
- **Passive Public Use Zone:** Buffer area - lower impact public use = low amount of use
- **Primitive Public Use Zone:** Leave no trace area = minimal amount of public use

In general, the **Primary Public Use Zone** provides many opportunities for low impact public use. This zone includes the Mount Si and Little Si trails plus opportunities for new trails. In addition, mountain bicycling, rock climbing and equestrian opportunities are available in designated areas.

The **Passive Zone** acts as a buffer between the Primitive Zone and the Primary Zone.

The **Primitive Zone** contains many steep cliff areas and is difficult to reach in a day hike. Protecting natural systems and providing safe, relatively undisturbed areas for wildlife is the focus of this zone.

Public use zones were defined to provide general guidelines for management, recommendations and implementation decisions. Each zone definition is based on environmental constraints and public use opportunities.

Public Use Zone Descriptions

Trailhead Areas

DEFINITION

Trailhead areas are suited for concentrated public use and facilities. Trailheads are highly maintained, wheelchair accessible and provide well-defined access points to enter the NRCA. The visitor will experience concentrated public use where people park and prepare for their visit.

CHARACTERISTICS

All visitors to the NRCA will enter through a designated trailhead area. These sites are located near the periphery of the planning area and are close to county roads for safety, monitoring, enforcement and maintenance efficiency. A balance between trailhead location and proximity to the trail system is also taken into account. These areas are located where environmental elements such as soils, slope, drainage and vegetation are suitable to support concentrated use. Facilities and amenities are designed to American Disabilities Act (ADA) and DNR trailhead standards.

RECOGNIZED USES

Facilities and uses that could be found in trailhead areas include parking areas, toilet facilities, host sites, information boards, telephones, picnic areas, shelters, barrier free connector trails, public information, environmental education, special events appropriate to the Conservation Area, and walking pets on leash.

Primary Public Use Zone

DEFINITION

The Primary Zone is designated for low impact public use. Upon entering the Primary Zone the visitor will find a scenic natural setting with well-maintained trails. Depending on the season, the trails in this zone may receive a significant amount of use. The visitor may experience a high amount of social interaction with other users on the trail. Areas of concentrated public use occurs at scenic viewpoints and destinations such as mountain summits.

CHARACTERISTICS

The Primary Zone is adjacent to a trailhead site. This zone is designated where environmental elements such as soils, slope, drainage, wildlife habitat and vegetation are well-suited to support low impact public use. Environmental constraints and sensitivities determine the location of trails, facilities and type of use. This zone has the potential for accommodating future increased use from adjacent recreation areas such as Alpine Lakes area and Middle Fork Snoqualmie River area. Trails within the Primary Zone are highly maintained. Toilets are provided, if necessary, for health and safety or resource protection. Where possible (usually constrained by topography), opportunities for barrier-free trails should be provided.

RECOGNIZED USES

Low impact uses include hiking, interpretive trails and environmental education. Areas within the Primary Zone may be designated for rock climbing, mountain bicycling, and horseback riding where the environment is suitable to support these specialized uses. Pets on leash are allowed.

Passive Public Use Zone

DEFINITION

The Passive Zone allows for low concentration and low impact public use. The visitor will have few encounters with other users, and social interaction will be low. Trails are few and maintenance is low with rough trail tread. Trails in the Passive Zone are primarily maintained by trained volunteers. The value of visiting the Passive Zone is in the journey rather than the destination. Access to this zone is difficult and getting there may be time-consuming due to topography and distance from the trailhead.

CHARACTERISTICS

The Passive Zone acts as a buffer to protect the Primitive Zone by absorbing or lessening the impacts from the more concentrated public use areas. This zone is primarily undeveloped for public use due to environmental and access constraints. Typically, trails found in this zone are far from the trailhead.

Trails within this zone are limited in number and maintained seasonally. Toilets are not expected to be needed. However, if they are, they should only be built for safety, health or resource protection.

RECOGNIZED USES

Uses in the Passive Zone include hiking and environmental education. Pets on leash are allowed.

Primitive Public Use Zone

DEFINITION

The Primitive Zone protects the most ecologically sensitive part of the conservation area. While protecting natural resources is the primary goal of the NRCA, this is especially important in the Primitive Zone. There will be very few visitors to this zone due to the extremely steep cliff faces and remoteness of the area. Those that visit the Primitive Zone will see a variety of different ages and types of forests, creeks, views, rocky slopes and areas recovering from past logging activity. There are a limited number of the most primitive trails resembling wildlife trails that are not maintained or signed.

CHARACTERISTICS

The Primitive Zone is the most remote part of the Conservation Area. This zone is characterized by the extremely steep slopes, cliff faces, rocky outcrops, waterbodies, unusually high elevation Sitka spruce, fragile headwaters, unique or fragile vegetation, areas recovering from past use, and wildlife and habitat requiring protection. This zone has a minimum amount of public use due to its inaccessibility. These areas are not desirable for public use concentrations because of a number of sensitive environmental areas, topography and access. To reach the Primitive Zone, a hiker must travel between 6 to 13 steep miles one way. Because the NRCA is day use only, use will be low. There will be a very limited number of primitive trails; visitors will leave no trace of their visit. This zone has no facilities and trails receive no maintenance except for restoration where necessary.

RECOGNIZED USES

Visitors to the Primitive Zone will arrive on foot only. When hiking on one of the few primitive trails or traveling cross country, visitors will leave no trace of their passage. Cross country hiking is allowed only in the Primitive Zone due to the low number of visitors expected. If overuse or damage occurs in the Primitive Zone, the land manager may temporarily restrict public use and entry into damaged areas. Pets on leash are allowed, but are discouraged due to the nature of the area. Hunting and fishing is allowed as regulated by Washington Fish and Wildlife Department.

Summary of Recognized Uses in Zones

Zone	Uses: Recognized Potential *Low Impact Public Use	Trail Standards
(These are allowed uses in the zone - they may or may not currently exist.)		
Trailhead Areas	Concentrated public use. Parking areas, toilet facilities information boards, telephones, picnic areas, shelters, host sites. barrier free connector trails, public information, environmental education, special events appropriate to the Conservation Area. Pets on leash are allowed.	ADA (barrier free) Highly maintained
Primary Public Use Zone	Substantial amount of use. Hiking, interpretive trails and environmental education. Areas may be designated for rock climbing, mountain bicycling, and horseback riding. Pets on leash are allowed.	Highly maintained
Passive Public Use Zone	Low amount of use. Hiking and environmental education. Pets on leash are allowed.	Maintained seasonally primarily by volunteers
Primitive Zone	Minimal amount of use. Hiking on trails and cross country leaving no trace of passage. Hunting & fishing is allowed as regulated by Washington Fish and Wildlife Department. Pets on leash allowed, but discouraged.	Minimal to no maintenance. Focus is on restoration.

*Definition of Low impact (from State of Washington Natural Resources Conservation Areas Statewide Management Plan, 1992:

"By definition, low-impact public use activities do not adversely affect a site's resource qualities. For example, where endangered species/raptor nesting areas exist, access will be restricted or managed to protect the species.

Specifically, activities shall not compromise a site's integrity, ecological, geological, scenic, historic and archaeological values. Such activities should leave vegetation, animal behavior, soil and water relatively unaltered. They also should minimize adverse impacts on visitor experience. Each site management plan should list resources needing protection and activities that have minimal impact on resource protection. Where possible, low-impact public use will be clustered to avoid disturbing the entire NRCA. As much land as possible will remain undisturbed to further ecosystem protection goals."

Distinctive Features that Define Public Use Zones

Distinctive Features	Trailhead Areas	Primary Zone	Passive Zone	Primitive Zone
Social Features				
Concentrated Public Use	X	X		
Trail highly maintained	X	X		
Trail maintained seasonally		X		
Trail maintained minimally			X	
No trail maintenance				X
Views / destinations		X		
Solitude			X	X
Noise	X			
Impacted areas	X			
Regulatory ease	X	X		
Maintenance ease	X	X		
Environmental Features				
Headwaters			X	X
Steep slopes			X	X
Rocky outcroppings			X	X
*Highly suited for public use	X	X		
*Medium suitability for public use			X	
*Low suitability for public use				X
Wildlife and habitat		X	X	X
Sensitive area			X	X

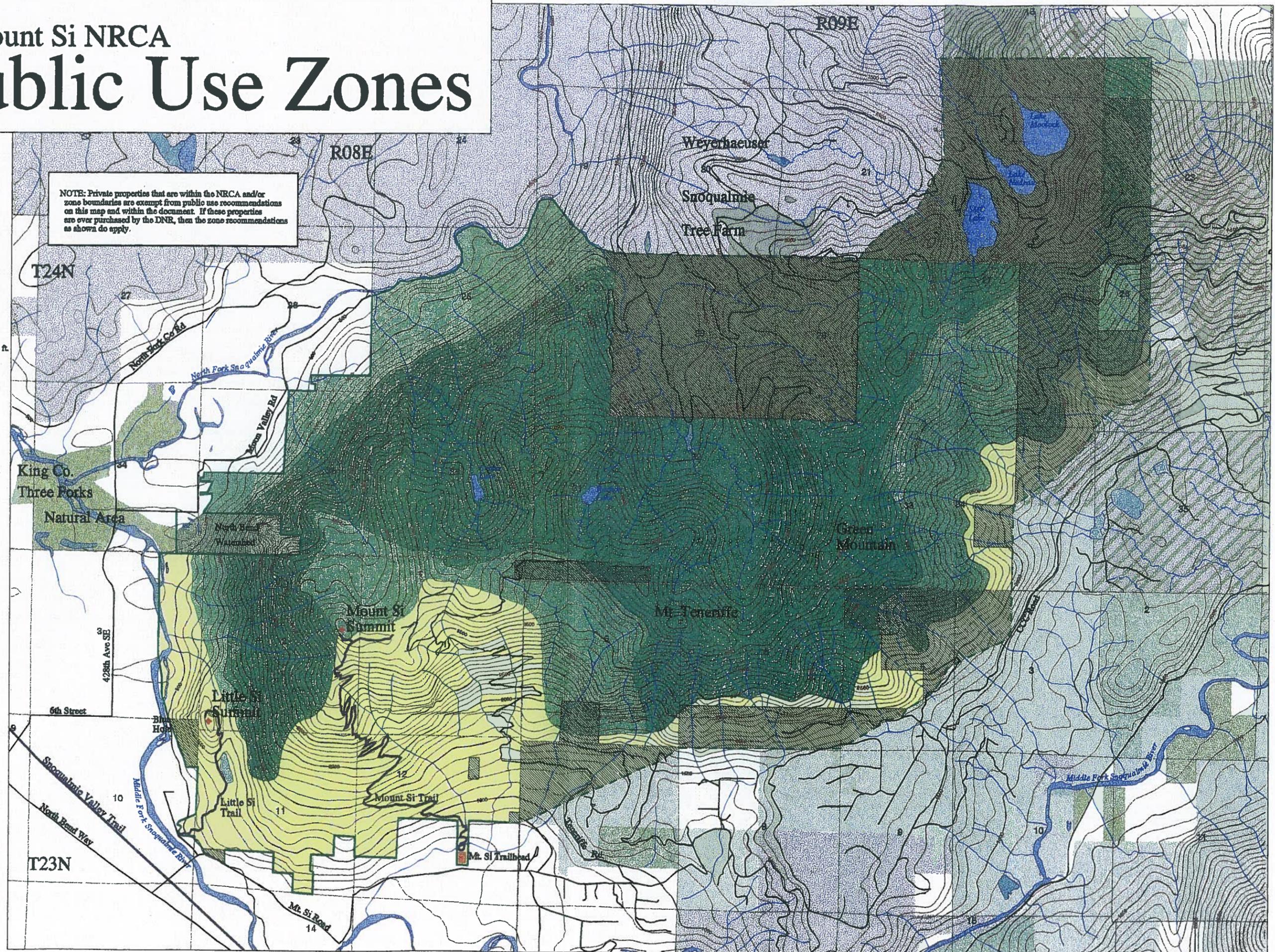
*Suitability includes environmental conditions including soils, hydrology, topography, vegetation, and aesthetic, cultural and historic factors.

Mount Si NRCA Public Use Zones

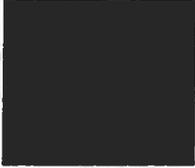
- LEGEND**
- Public Use Zones**
- Primary Zone
 - Passive Zone
 - Primitive Zone
 - Study Zone
- Private Property within NRCA
- Existing hiking trails
- Trailheads
- Boundary of Mt. Si NRCA
- Mt. Si NRCA Study Area Boundary
- Contour Lines, Interval 100 ft.

- Lands**
- DNR Managed Lands
 - NRCA's
 - Other Public Lands
 - Municipal Watershed Lands
 - Proposed Weyerhaeuser to USFS Exchange
 - Champion
 - Weyerhaeuser
- Roads

NOTE: Private properties that are within the NRCA and/or zone boundaries are exempt from public use recommendations on this map and within the document. If these properties are ever purchased by the DNR, then the zone recommendations as shown do apply.



Due to changes ownership status and reliance on outside information, the Department of Natural Resources cannot accept responsibility for errors and omissions. Therefore, no warranty is made by the state.



Specific Recommendations

Based on the public use zones, this next section focuses on specific public use recommendations which are organized into seven major categories:

- Public use management
- Trailheads, access points, and facilities
- Roads and trails
- Public use activities
- Environmental education
- Proposed land acquisitions, easements, and access
- Public use monitoring

Each category begins with recommendations, followed by a discussion of findings and why the recommendations were made.

Public Use Management

This section contains recommendations and findings to help achieve successful public use management within Mount Si NRCA. Categories are: stewardship, enforcement, and registration and fees.

Stewardship Recommendations

1. Implement the Public Use Zones as defined in this plan.
2. Work with all recreational user groups to achieve stewardship goals together.
3. Develop a volunteer program to increase stewardship.
4. Use volunteer rangers and stewards to educate the public about the NRCA.
5. Work with tribes and historical groups to gain greater understanding of cultural and historical places. Protect where necessary.

Enforcing the Public Use Zones is the first step necessary in order to carry out the remainder of the recommendations in this plan and will enhance stewardship of the NRCA.

Working closely with the user groups is the foundation for successful stewardship of Mount Si. If the user groups understand the goals of the NRCA and perform stewardship activities to reduce impacts of their activity, resources will be protected.

Many people want to volunteer their time performing trail maintenance and other duties on Mount Si. Proper management of volunteer projects is time-consuming but very rewarding and beneficial to the NRCA. Funding a volunteer coordinator will improve stewardship by allowing DNR to take advantage of the willingness of many groups and individuals who want to care for Mount Si. Once volunteers are trained and outfitted (with identification and tools) they can meet the objectives of the NRCA by working on-site with the public.

By working with tribes and historical societies, DNR's land managers will gain a better understanding of cultural resources that may be of great interest to the public or require protection.

Enforcement Recommendations

1. User education followed by enforcement is the priority.
2. Research existing laws that can be applied to NRCAs.
3. Increase user knowledge about NRCA rules by using trained on-site volunteers to provide information.
4. Focus on enforcing key rules: day use only, dogs on-leash, and visitors on-trails.
5. Increase enforcement as necessary as the Public Use Plan is implemented.

User education should occur prior to enforcement action. On-site stewardship by staff and volunteers at peak times will go a long way toward educating users. Enforcement actions should be taken after education has been offered.

Enforcement officers can use laws that pertain to public lands and laws adopted by the county where the NRCA is located. These need to be identified.

Visitor safety is of major concern in developing and enforcing rules within the NRCA. The three key focus areas for education and enforcement are dogs off-leash, visitors on-site after dark, and visitors cutting switchbacks. Each of these relates primarily to visitor safety. Land managers have received complaints in all of these areas from other users.

Dogs are required to be on leash in the NRCA for public safety, to protect wildlife and to prevent unnecessary disturbance of vegetation (see pet recommendations section for more information). This is enforceable through the King County leash law. Visitors have reported being intimidated by dogs off-leash and dog fights. Education followed by enforcement is necessary.

Public use in the NRCA is allowed only during the day. Safety of the visitor is the key concern. The trails are very steep and dangerous when users come down the mountain after dark. In addition to falling, people have become disoriented in the dark and have become lost. No camping or campfires are allowed. Camping negatively affects vegetation by trampling. Concentrating

people in one area also compacts soils. This can result in erosion and degradation of water quality. Campfires are of concern on Mount Si due to the risk of wildfire; commercial forest lands and many homes are adjacent to the NRCA. In addition, firewood collection affects small mammal and bird populations by altering food sources, and it modifies the habitat of reptiles and amphibians.

Off-trail use is of concern due to the high number of visitors on the Mount Si and Little Si trails. When people cut switchbacks or shortcuts, there are impacts to vegetation and increased erosion and maintenance requirements. (See Trails-General Recommendations). As the Public Use Plan is implemented and new trails are opened, there may be a temporary increase in the need for user education and enforcement.

The South Puget Sound Region of DNR has only one law enforcement officer serving the area with the responsibility for all DNR managed lands (i.e., state forests and aquatics in addition to NRCAs). As a result, Mount Si is only visited by an official law enforcement officer about eight times a year. Other staff and volunteers with proper training can inform and educate visitors about NRCA rules. There is a need for more trained volunteers with appropriate equipment to patrol Mount Si.

Registration and Fee Recommendations

1. Develop a protocol for accepting donations for maintenance and program implementation.
2. Explore user registration and user fees on state lands.
3. Ensure that any potential donations or fees generated at Mount Si be returned to the area to fund maintenance.

Monetary donations can legally be accepted by the DNR for the NRCA program. However, protocol is necessary in order to efficiently accept, legally process, and utilize donated funds in the area where they were generated.

During the development of the Public Use Plan, there has been public support to initiate registration and user fees in order to generate funds for maintenance activities. Any user registration program or fee collection must be coordinated with the DNR's Forest Resources Division.

Trailheads, Access Points and Facilities

This section contains recommendations for trailheads including Mount Si, Little Si and other access points. This section focuses on access points and facilities (not trails originating from them). Recommendations are for: Mount Si Trailhead, Little Si Trailhead, Teneriffe Road access, Three Forks Natural Area access, and other accesses.

Mount Si Trailhead Recommendations

- 1. Mount Si Trailhead parking capacity should remain the same.**
- 2. Work with appropriate organizations for bus stop drop-offs and connections when/if popularity and publicity increases for Mount Si and the surrounding areas.**
- 3. Develop cost/benefit analysis for improvements to the trailhead (i.e., toilets, phone, road improvements).**
- 4. Explore possibility of acquiring additional land or conservation easement to expand barrier-free trail.**

The Mount Si Trailhead, located 2.5-miles along the Mount Si Road is the major access point for the NRCA. Visitors use the trailhead to picnic, wander through the 1/5-mile long barrier-free trail, hike to Snag Flat Interpretive Area or hike the 8-mile round-trip trail to the summit of Mount Si. This trailhead has two vault toilets, seasonal drinking water, picnic tables and a gravel parking lot. Facilities at the trailhead are barrier-free.

This parking lot usually has capacity for visitors' vehicles, although on some busy days in the high season cars overflow along the street. The parking lot is designed to hold 160 cars but, more than 200 cars have been parked there. When the parking lot overflows, the trail is also very crowded and interaction between users is high. This may result in a degraded experience for the visitor. Seasonal overcrowding on the trail could be reduced by providing additional trails and loop opportunities without increasing parking lot capacity.

Currently buses do not serve the trailhead, but hikers are seen walking from bus stops in North Bend to the trailhead. There have been discussions at the city of North Bend and the Middle Fork Snoqualmie River planning team regarding a shuttle service. This could increase the number of people hiking, but would not increase the number of cars at the parking lot. This should be explored after new loop trails have been opened.

Several people have requested a public pay phone or a 911 emergency phone to be installed at the Mount Si trailhead. There is some opposition to this due to cost and the belief that many people now have cellular phones with them. This should be explored and a cost/benefit analysis conducted.

The gravel parking lot is maintained annually, but due to high use, potholes develop rather quickly on the access road. The parking lot is buffered with trees and shrubs which tempers the activity at the trailhead. However, noise is a concern to adjacent neighbors. Acquisition of additional lands around the trailhead should be explored as this would buffer the area. In addition, flat land near the trailhead could be used to lengthen the existing 1/5-mile barrier-free trail.

The vault toilets must be pumped several times per year. Disposal is becoming more difficult due to increased regulations. There have also been complaints from users regarding odor and sanitation. Composting or flush toilets are better for the environment in the long run, but are more expensive in the short term. A cost/benefit analysis should be conducted.

Little Si Trailhead Recommendations

1. Move Little Si parking area and trailhead from current location to an area with direct access to the NRCA.
2. Coordinate with King County to close current Little Si parking area and provide information about location of new trailhead.
3. Work with surrounding neighbors to ensure success of relocated Little Si Trailhead.
4. The relocated Little Si Trailhead should provide parking and other facilities such as toilets, information kiosk and benches.
5. The existing Little Si Trail access point should be closed to the general public once the new trailhead is open. Sign and enforce appropriately.

The Little Si Trailhead parking lot is located just past the Middle Fork Snoqualmie bridge on the Mount Si Road. Visitors use the trailhead to access Little Si, Mount Si and the rock climbing area. The undeveloped graveled area is owned by King County and holds about 25 cars if they are parked efficiently. Visitors must walk a quarter mile down a neighborhood street to access the trailhead. The neighbors along the road have expressed concern for a number of years about trespass, litter, safety and illegal parking. As the trailhead has grown in popularity, these concerns have escalated. This issue was identified in a scoping meeting as the top concern to solve in the Public Use Plan.

Short-term solutions have been identified and implemented. DNR is committed to find a long-term solution to the situation. The preferred solution is to move the parking to a better location and move the trailhead away from the neighborhood. If acquisition of a new site is not possible, DNR will work with the neighbors to determine other solutions.

If the parking lot and trailhead are moved, DNR will work with King County to close the existing parking lot. In addition, DNR will work with neighbors at any new trailhead location in order to ensure a successful transition and good neighborhood relations. Once a new trailhead is open, the old Little Si trailhead would be closed to the public and signed appropriately.

Teneriffe Road Access Recommendations

1. Work with Snoqualmie School District to sign school bus turn-around to avoid cars being towed.
2. Explore parking area options at the beginning of the Teneriffe Road. Work with neighbors, land owners and Middle Fork Snoqualmie River planning team.

The Teneriffe Road access is located on the Mount Si Road at the school bus turn-around. Visitors hike, bike and ride horses on the road. The road is gated and there is no motorized access unless authorized by DNR. No parking is allowed in front of the gate. School buses use the area in front of the gate to turn around. Cars may be towed if they are parked in this area. A warning sign should be posted.

There may be opportunities in the future for a trailhead at the bottom of the Teneriffe Road. There may also be opportunities for a trailhead further down the Mount Si road on the CCC road. This should be explored with neighbors, landowners, user groups and others as the Middle Fork Snoqualmie plan develops.

Three Forks Natural Area Access Recommendations

1. If King County acquires and builds a trailhead at Three Forks Natural Area, there should be a low impact trail connection to the NRCA. Access must be based on additional wildlife analysis coordinated between King County, DNR, and the Washington State Department of Fish and Wildlife.

Three Forks Natural Area is 266 acres of open space west of the Mount Si NRCA that is owned and managed by the King County Parks Division. The area is a fragile ecosystem, but it can withstand low impact public use at specific locations. King County Parks Division is pursuing additional acquisitions in the area which could provide parking and a trailhead with access to the Mount Si NRCA, Meadowbrook Farm, Preston Snoqualmie Trail, and Snoqualmie Valley Trail. Options for a trailhead with parking within the NRCA on the west side were explored, but due to wetland, wildlife, and safety concerns this is not feasible.

Other Access Recommendations

1. Maintain DNR ownership of all existing easements, access points, and properties.
2. Notify adjacent property owners of state ownership, investigate trespass and install neighborhood-friendly barriers where needed.
3. No official state signs should be posted unless warranted (i.e., on-going dumping, parking or trespass).
4. Investigate trail connection options for hikers, bicycles and equestrians from the CCC road to the lower elevations of the NRCA.

There are a number of areas on the west side of Mount Si where the NRCA boundary meets a county road. These areas are often narrow strips of DNR-managed land with private ownership on either side. Although none of the sites are gated, there are no opportunities for parking at or near these areas without impacting traffic or neighbors. These sites should be retained by DNR even though they are not sufficient for access points. These areas should be gated using neighborhood-friendly barriers where necessary. Official state signage will be used only if necessary, as it might otherwise result in dumping.

Some sites are experiencing trespass from adjacent property owners in the form of fencing and/or structures close to or over the property line. This should be addressed.

Currently, there are no public access points directly to the NRCA on the eastern boundary. There may be potential opportunities for access and trail

connections from the CCC road. Potential trails have been investigated and further exploration is necessary. Work will continue with user groups and through the Middle Fork Snoqualmie Planning process.

Roads and Trails

This section contains recommendations for roads and trails, including the Mount Si Trail, Little Si Trail and new trails.

Road Recommendations

1. Roads in the conservation area should be decommissioned. Selected roads as defined by the Public Use Zone should be converted to trails.
2. Discontinue motorized use and convert Teneriffe Road to a trail.
3. Roads in the Primitive Zone should be decommissioned and completely restored to nature.

According to the NRCA Statewide Management Plan, motorized use within the NRCA is usually not a low impact activity and conflicts with the conservation purposes of the NRCA. There are only a few roads on Mount Si that are drivable. Most are growing over or have been decommissioned. The NRCA is accessible to the public by non-motorized methods.

The gated Teneriffe Road is the only road in the NRCA that is maintained. It is relatively flat for the first few miles then becomes very steep. The north spur of the road proceeds to the top of Mount Si and ends about a quarter mile from the summit. Another road branches off the north spur and ends after one half mile. The east spur travels toward Mount Teneriffe, crosses private property and ends after approximately three miles.

Currently the Teneriffe Road is used for management, non-motorized recreation and access to private property in the interior of the site. Hang glider pilots were allowed vehicular access in July of 1996, under a limited land use agreement with DNR. Under this agreement the pilots were allowed to make up to five trips per day up to fifteen times total per month until November 1996. A new agreement is required for 1997 which is the final flying season before the Teneriffe Road is deactivated. Long range plans are to decommission the road and convert it to a trail.

Annual maintenance on the Teneriffe Road uses approximately ten percent of the NRCA management budget for the South Puget Sound Region.

Maintenance for the road includes erosion control, brushing and grading as needed. It does not include major repair, such as for serious storm damage which renders the road undrivable. This occurs approximately every three years and requires about one week to repair.

The recommendation is to eventually decommission the Teneriffe Road and convert it into a trail. As funds become available, DNR plans to decommission portions of the road where it has sole access rights. DNR will work with private landowners who currently have access to the Teneriffe Road, to acquire their land at fair market value, if they are willing sellers. In order to reduce maintenance costs, it is recommended that the road be deactivated in the fall of 1997.

There is another road that begins in the far northeast corner of the NRCA, proceeds for approximately three miles to the south and then ends. This road is heavily waterbarred and is undrivable. It is in the Primitive Zone and should be decommissioned and restored to nature.

The remaining old logging roads are either overgrown, decommissioned and restored, or used for trails.

The following are definitions of the road classifications for Mount Si:

Closed and Gated: Gate is locked as it currently is, but road is used by land managers, private land owners, and/or others (e.g., hang glider pilots) under a temporary special land use license.

Deactivated: Road is gated and locked. Drainage control structures are put in place to minimize the chance of road failure. The road is more stable, but more difficult to drive. Road is used by private land owners and land managers as little as possible. Repairs to the road will address environmental damage or safety concerns.

Decommissioned: Road is removed and either restored completely or converted to a trail. Decommissioning may be phased.

Trails – General Recommendations

1. Hiking on designated trails is allowed in the Primary and Passive Public Use Zones. Cross country hiking at minimal amounts is allowed in the Primitive Zone.
2. All existing and proposed trail locations should respect private lands and public lands.
3. Conduct monitoring before and after building or renovating trails.
4. Maintain trails to the standards assigned in the Public Use Zones.
5. Encourage volunteers to obtain training to assist in maintaining trails.

The NRCA is open from dawn to dusk as recommended in the Management Plan. Hiking is allowed on designated trails. Hiking off trail in high use areas results in increased maintenance costs, trampling of vegetation, erosion, safety concerns, trespass and harm to wildlife. Due to the low number of visitors to the Primitive Zone, cross country hiking is allowed unless damage begins to occur.

Privately owned property is adjacent to and within the NRCA boundary. All trail planning must take this into consideration. Trails must avoid leading visitors toward trespassing on private property.

Monitoring must be conducted before and after trail building in order to ensure the NRCA goals can be met (see Monitoring section). Wildlife, vegetation, water quality, and soil erosion and compaction are factors to consider in monitoring.

Trail maintenance is currently low and additional funds are necessary to maintain trails to the standards assigned in the Public Use Zones. As new trails are opened, maintenance needs will increase. DNR has offered training fee waivers to volunteers receiving trail maintenance training. If continued and expanded in conjunction with a volunteer program, this would be a successful way to increase trail maintenance. Trails in the Passive Zone are recommended to be maintained primarily by volunteers.

Mount Si Trail Recommendations

1. Maintain or enhance the visitor's experience on the Mount Si trail by dispersing use on connecting trails within the Primary Zone.
2. Develop loop-trails and family destinations of varied length and difficulty off the Mount Si trail.
3. Acquire funding for toilet facilities at the end of trail (near summit) and pursue an agreement with a volunteer group to conduct maintenance.

The Mount Si Trail originates at the trailhead on the Mount Si Road. The hiker-only trail is 8 miles round-trip, and gains 3,200 feet in elevation. The view from the top is panoramic. The trail is extremely popular, especially in early spring when many mountain climbers get in shape for the upcoming season. There are reports of over 400 people hiking the trail in a single afternoon.

People hike the trail year around and in all weather. The Mount Si trail was renovated by DNR in 1993 and is primarily maintained by users. Although the renovation repaired shortcuts, there are still numerous places where people continue to make shortcuts on the trail to shorten their hike, resulting in erosion and trail degradation. Volunteers try to repair the damage, but it is difficult to keep up. The trail is in moderate condition, although there are a few trouble spots that require attention.

There is an interpretive area at Snag Flats, about half way up the trail. There is a boardwalk and four interpretive signs describing the stages in the life of a forest. It was constructed in 1994, and installed with help from volunteers. It is a destination for visitors who do not wish to hike the entire trail to the summit and an interesting resting point for others. There are potential opportunities for trail loop connections of varied difficulty and length that would provide more trails miles to disperse visitors.

Much of the vegetation at the top of Mount Si was destroyed many years ago by unintentional trampling. The area is difficult to restore due to the thin, nutrient-poor soils. However, a few areas need restoration.

There was an outhouse at the summit tucked away in the woods. The outhouse was damaged and later removed. Because of the time it takes to reach the summit, it is desirable to provide a toilet facility at the end of the destination for health and safety reasons.

Little Si Trail Recommendations

1. Upgrade and maintain the Little Si Trail.
2. Upgrade should include benches for resting and viewing, and trail definition, and erosion control.
3. Install directional signs.
4. Provide trail connection to new Little Si trailhead, once land is acquired.

The Little Si trail currently originates on 434th Street. The trail is very popular with families with children, rock climbers and people hiking to the summit of Little Si. The trail is five miles round-trip. The summit is at 1,600 ft. elevation and has nice views. Mountain goats can occasionally be seen on Little Si or on the flank of Mount Si. A rock climbing area is found about one mile up the trail. Hikers comment that they enjoy seeing the rock climbers through the trees. However there is no good point from which to observe.

The Little Si Trail was built by users and has not been maintained by DNR. There are several places where the trail needs rerouting or improvements due to wet, muddy conditions at lower elevations and erosion concerns at higher elevations. There are numerous spur trails to rock climbing areas and other places that require closure to avoid further impacts to vegetation. The upgrade could include benches and rest areas. DNR recommends moving the trailhead to a nearby location. A short stretch of new trail will need to be built to connect with the new trailhead.

There are no directional signs along the trail. A minimal number of signs are necessary to direct visitors to their destination.

New Trail Recommendations

1. Manage, construct and maintain trails identified by DNR — see concept map. Include connections and loop trails between Little Si trail, Mount Si trail and Teneriffe Road.
2. Investigate low-elevation loop options for varied use including mountain bicycles, horses and llamas on the Teneriffe Road and NRCA land to the east connecting to the CCC Road.
3. Determine trail accessibility to the Middle Fork Snoqualmie River on the western border of the NRCA and Little Si Summit (coordinate with King County and planning teams).
4. Investigate acquisitions and agreements with the city of North Bend to develop trail options connecting King County Three Forks Natural Area and Little Si Trail.
5. Encourage trail connections from Snoqualmie Valley Trail to Mount Si NRCA trailheads and trails. (i.e. designated trail lane along county road and signage.)
6. Use Trail Evaluation Chart to evaluate new trails in the future.

There are a number of trails other than the Mount Si trail and Little Si trail within the NRCA that were built prior to the NRCA designation. These trails were evaluated to determine if they were suitable for public use using the following chart. While many of these trails are published in hiking books, most have low use due to limited parking; trail length, difficulty, and/or steepness; or difficulty of finding the trail.

Trail Evaluation Chart

Categories	Observations
Public Use Zone	Does the trail meet requirements for the Public Use Zone that it is in?
Safety	Can the trail accommodate the expected number of users in a safe manner?
Current Condition	What shape is the trail in? How much work needs to be done prior to opening the trail to the public? Are bridges, boardwalks or other features necessary?
Maintenance	How much annual maintenance is required?
Slope	How steep is the trail, does it meet trail standards for the zone?
Access	Is the trail easily accessible from a trailhead access point? Is parking available? What is the surrounding use – is access a compatible use in the neighborhood?
Feasibility within day use only	Can the trail be reasonably completed during the “day use only” time frame?
Sensitivity of vegetation	Will sensitive vegetation be impacted by the trail? (Vegetation has a low ability to recover from overuse or misuse in areas with harsh environmental conditions. Such as: areas that occur at high elevation where there is deep snowpack, low nutrients and/or little water availability; areas that are dominated by plant species that are sensitive to trampling or invasion by non-native invasive plant species that are less able to withstand or tolerate human impacts.)
Wildlife Habitat	Is there wildlife habitat that could be disturbed by the trail location (using State Dept. of Fish & Wildlife Priority Habitats & Species, Heritage data, site visits and monitoring.)
Placement	Could private property be impacted?
Connectivity	Does the trail make connections into other areas? If so, will resources be protected?
Trail history and use	Is there historic use? Are there opportunities or constraints associated with historic use?
Destination(s)	Is trail destination environmentally sensitive – what would impacts be from an increase in visitors?
Repetitive system	Do multiple trails go to same destination? Is this a plus or a minus? Are trails parallel/redundant? If so, is there a benefit due to reducing interaction among visitors or a detriment to the environment?
Facility opportunities	Are facilities needed (see Zone criteria), do any currently exist? Are they adequate?
Points of interest	Are there any? Are they environmentally sensitive?
Environmental education opportunities	Is there a feature to interpret? Is there adequate room to accommodate students/groups?

Several recommended trails are existing user-built trails or old roads. Some of the recommended or potential trails cross private property and cannot be built or used until they are acquired or the landowner allows access by the public. To do so would be trespass.

Over time, it is expected that new trails will be suggested by user groups. New trails will be evaluated using the Trail Evaluation Chart in this plan. It is expected that the trail evaluation criteria will be refined and supplemented as they are used. There are currently no proposed trails in the Passive Zone. Hiker-only trails are acceptable in this zone, but none are proposed at this time.

The fragile Mount Teneriffe summit and ridgeline did not meet the evaluation criteria due to extremely thin, fragile soils, easily disturbed vegetation and the presence of wildlife. This area is in the Primitive Zone. The Teneriffe ridge area should be protected by not advertising Teneriffe and by directing traffic to the Mount Si summit. Any trails in the area should meet the trail standards for the Primitive Area (trails should be very few, resemble game trails and receive no maintenance.)

There are a few mountain bicyclists that use the Mount Teneriffe road. If the road is decommissioned to a trail, the higher elevations will not be suitable for multiple uses. This is due to steepness and safety concerns for users. There will be more opportunities for mountain bicycling and equestrian activities at lower elevations, including loop trails and possible connections to the CCC road once additional land is acquired and studies are conducted.

Public Use Activities

This section covers a variety of public uses other than hiking. Uses include rock climbing, mountain bicycling, equestrians, haystack use, pets, hunting and fishing, harvesting, collecting, and hang gliding and paragliding.

Rock Climbing Recommendations

1. Allow recreational rock climbing only on Little Si in designated areas.
2. New climbing routes are allowed within designated areas only.
3. Continue working with the climbing community to increase stewardship of the NRCA.
4. Continue to monitor the area for environmental impacts.

Climbing has been an activity at Mount Si for about 40 years. The sport has grown significantly in recent years and Little Si has become a local and national rock climbing area. Impacts from rock climbing at Little Si are primarily compaction, erosion of soils, and disturbance to vegetation. Baseline monitoring of the climbing areas was conducted in 1995. The climbing community has been active in conducting trail work to reduce off-trail use and obtaining funding for an information kiosk.

Currently, rock climbing is focused in five areas. Three of the areas are grouped together on the Little Si trail. These three areas are known as Repo Rock, the Woods, and World Wall I, and they contain the majority of the climbing routes. New routes in these areas are not expected to create more impacts.

The other two areas, Canopy Crag and World Wall II, are isolated areas east of the trail. Impacts here are presently minimal and increased use will result in soil compaction, erosion and trampled vegetation, especially at World Wall II. These areas should be carefully monitored for damage from increased use.

In contrast to the high use at Little Si, less than a half dozen rock climbers climb the face of Mount Si. Climbing activity may have an impact on mountain goats and peregrine falcons that use this area. Due to the nature of the rock on Mount Si, extensive "cleaning" of the rock occurs. This results in the climber removing large rocks and debris to make the area safe for climbing. This is a safety concern for neighborhoods and hikers below the climbing. However, climbing is the only way to monitor and study wildlife (mountain goats, raptors) and climbing here should be allowed by permission of land owner for monitoring purposes.

Various Use: Mountain Bicycling and Equestrian Recommendations

1. Various use activities include the use of mountain bicycles, horses, and llamas. These uses are allowed on designated trails only (see conceptual map).
2. Seek trail opportunities for varied use activities that provide a connection to the Middle Fork Snoqualmie River area as funding and opportunities for acquisition arise.
3. Provide varied use opportunities at lower elevations.
4. Work with the mountain bicycling and equestrian groups to ensure riders stay in designated areas and become stewards of the area.

There is not a lot of mountain bike activity on Mount Si due to the steep terrain. Bicycling is currently allowed on the Tenerife road. If the road is converted to a hiker only trail as recommended in this plan, mountain bicycling and equestrian activities should occur only on the lower slopes (below approximately 1,600 feet) due to safety and environmental concerns.

Horses and llamas are not allowed on the Mount Si, Little Si and surrounding trails due to safety and environmental concerns. When a hiker encounters a horse or llama on the trail they often step off-trail to avoid a conflict. This can create new trails resulting in vegetation trampling, soil compaction and erosion. There are many places where the terrain is too steep to avoid the animals.

When additional trail opportunities are available, DNR should work with mountain bicycling and equestrian groups to develop safe trails that meet the goals of the NRCA.

Scrambling Recommendations

1. Discourage scrambling and hiking on the "Haystack" (top of Mount Si).
2. Install a sign at the base of the Haystack warning of high risk — "High Hazard Area, Danger Falling Rocks"

Although very hazardous, some people “scramble” up the Haystack — a large rock outcrop that is the summit of Mount Si. King County Search and Rescue has been called a number of times to assist people injured and killed during a climb on the Haystack. There have been a number of deaths from falls. Rocks accidentally dislodged by people on the Haystack are another serious safety concern. Use can be discouraged by indicating that the Mount Si trail ends at the view point through signage.

Pets in the NRCA Recommendations

1. Pets must be on leash. Educate users and post signs.
2. Pursue additional avenues for enforcement.

Dogs on leash are allowed in the NRCA and many people hike with their dogs. Dogs are required to be leashed to protect wildlife, prevent trail erosion (caused by dogs cutting switchbacks), and public safety. The safety of other trail users is a key concern. A dog on a leash is more controllable and will be less of a threat to other trail users. In addition, although many species of wildlife will leave an area with dogs present, leashed dogs that stay on the trail are predictable and some wildlife species may stay in the area.

Signs are posted stating dogs must be kept on leashes. Unfortunately, many visitors disregard the request. The DNR has received written and verbal complaints from visitors who have had a disagreeable encounter with a dog off-leash. Although this is enforceable through the King County leash law, additional regulations specific to NRCAs would aid in enforcement.

Hunting and Fishing Recommendations

1. Hunting and fishing should be allowed in the Primitive Zone.
2. If damage occurs to natural resources, the use should be restricted by site until it has recovered.

HUNTING

Due to the number of trails and proposed trails in the Primary Public Use Zone hunting should not be allowed in the interest of safety. The Management Plan directs DNR to conduct an analysis with the Department of Fish and Wildlife (which regulates hunting) to determine whether hunting has a detrimental effect on wildlife resources. The Public Use Plan allows hunting in the Primitive Zone, where off-trail use is allowed provided the user “leaves no trace.” This is for safety reasons and to avoid potential conflicts with users in the more populated Primary Zones and Passive Zones. Hunting activities are low in the conservation area, and occur primarily in the north and eastern portions of the NRCA. Hunting is quite popular north of the NRCA in the adjacent Weyerhaeuser Snoqualmie Tree Farm.

FISHING

There are two lakes that have been stocked and fished historically. Stocking has been discontinued at one lake due to the high quality of the natural ecosystem and low use. At the other lake there is very little fishing activity at

the present time (0-5 users annually). The Management Plan recommends working directly with Washington Department of Fish and Wildlife Department to manage the lake ecosystem and additional monitoring should be conducted to determine the impacts of fish stocking. It should be noted that human use around critical habitats such as rare water holes, talus slopes, and old growth can cause problems for wildlife that depend on these habitat types for all or part of their life cycle. All of these features are found at the lakes on Mount Si.

Harvesting and Collecting Recommendations

1. Harvesting small amounts of berries, mosses, mushrooms and other collection of natural materials is allowed for personal use.

Rock hounding, berry and mushroom picking, and other types of harvesting and collecting occur on Mount Si. There is a clear policy direction from both the NRCA Statewide Plan and the Management Plan on rock collecting. Both plans allow incidental mineral collection only where there is not a noticeable disturbance to the landscape. This includes collection of crystals and other rocks and minerals of interest

Common sense should be used when collecting other materials on Mount Si. "Personal use" is quantified by the amount of material (berries, etc.) that could be consumed on site or in one sitting. No commercial harvesting is allowed.

Hang Gliding and Paragliding Recommendations

1. Allow limited hang gliding and use of the Teneriffe Road by pilots until the fall of 1997.

Hang gliding has been a past use on Mount Si. It requires vehicular access to the top of the mountain, a launch area and a landing area. Vehicular access on the Teneriffe Road was restricted to the public in 1989 due to safety and management concerns.

Hang glider pilots have voiced their concern over the potential loss of a site for their sport on Mount Si since the beginning of the NRCA planning process. They presented their concerns again at a public information meeting in February 1995 and at several informal meetings between DNR staff and the pilots. As a result, a citizen focus group was formed to determine if hang gliding should be an allowed use within the NRCA.

After much discussion the majority of focus group members concluded that the issue was not so much one of hang gliding impacts but of impacts resulting from road access. They felt that the Teneriffe Road did not belong in the NRCA. Most felt that if it was not needed for fire management or emergency rescues it should be decommissioned in order to meet the goals in the Statewide NRCA Management Plan.

DNR has determined that the cost of the road, potential liability, and environmental concerns outweigh the need for road access for fire or emergencies. In addition, fire risk is lower than it was a decade ago due to limited vehicular traffic (vehicles can spark and cause fires) and changes in the forest stand (a maturing forest in Western Washington will not burn as readily as a young stand).

The cost of maintaining the road is relatively high. Average annual maintenance of the road uses ten percent of the NRCA budget for the entire South Puget Sound Region. This does not include major repair of serious damage that renders the road undrivable. This occurs approximately every three years and may require one or more weeks to repair.

In the Trails and Road section of this plan, DNR has recommended to begin decommissioning the Teneriffe Road and convert it to a trail at some point after the fall of 1997. If the road cannot be fully decommissioned in the fall of 1997, it is recommended that the road be deactivated to reduce maintenance costs. Erosion control measures that will be taken when the road is deactivated could make the road difficult to drive. Therefore private land owners and land managers should use the road as little as possible. Vehicular access for hang gliding will not be allowed when the road is decommissioned.

Environmental Education

This section contains recommendations and discussions regarding public information and environmental education.

Public Information Recommendations

1. Develop an official publication (map or brochure) for public use on Mount Si.
2. Issue information on Mount Si to appropriate distribution sites such as the US Forest Service office in North Bend and the North Bend Visitor Information Center.

Currently, information is posted at the Mount Si trailhead and Little Si trail. There is no official publication (or map) describing the public use opportunities (trails, trailheads, ownership) at Mount Si. There are numerous hiking books and materials available that are written by private individuals. Some of the information in these publications is out-of-date or inconsistent with the NRCA goals, which can confuse visitors.

Environmental Education Recommendations

1. Develop an education theme that integrates the natural, historical and cultural features of Mount Si.
2. Identify and develop environmental education focus areas (i.e., Creekside Loop Trail through Snag Flats Interpretive Area, river access areas, etc.)
3. Environmental education focus areas should complement and enhance Focus Areas and include natural, historical, and cultural information.

The Snag Flats Interpretive Area is the major educational attraction on Mount Si. It is located about 2 miles up the Mount Si trail. There is a boardwalk and four interpretive signs describing the stages of a forest. It was constructed in 1994 with help from volunteers. It is a destination for visitors who do not wish to hike the entire trail to the summit and an interesting resting point for others. There are no other education facilities or programs on Mount Si NRCA sponsored by the DNR at this time.

There are other educational opportunities on Mount Si, but due to the steepness and length of the trails, there are not many locations for classroom activities. The focus will be on interpretive signs, self guided walks, and other activities. The barrier free trail near the Mount Si trailhead is an excellent site for interpretation opportunities. There have been requests for educational opportunities (talks, walks, signage) for geology, historical and cultural interpretation, plant identification and other topics.

An educational theme that integrates the natural, historical, and cultural features of the area will ensure there will be successful educational opportunities on Mount Si.

Proposed Land Acquisitions, Easements & Access

This section contains proposals for property acquisition necessary to achieve the goals and public use recommendations in this plan. The Management Plan has information and recommendations with regard to ecological acquisitions. This plan focuses on specific acquisition criteria for public use.

Acquisition Recommendations

1. Acquire private land within the current NRCA boundary from willing sellers at fair market value.
2. Pursue opportunities to make acquisitions that connect the NRCA to the Middle Fork Snoqualmie River Area and King County Three Forks Natural Area.
3. Explore opportunities to acquire lands around trailheads and key access points.
4. Upon acquisition of any property, conduct environmental studies to determine if proposed trails are environmentally feasible.

A number of recommendations in this plan cannot occur without acquiring additional lands from willing sellers at fair market value. Many of the proposed trails cross private property and cannot be built or used until acquisitions occur or the owner allows access. To do so would be trespass. Private properties that are within the NRCA and/or boundaries are exempt from any recommendations in this plan. The recommendations made in this document only apply on DNR land.

Acquisitions for public use should provide or enhance:

- low-impact recreational activities
- adequate site access (parking, safe trail access)
- loop trails opportunities
- cultural and historic resources
- easements for trails connecting to regional trail corridors
- scenic viewsheds
- lands surrounding trailhead

Acquisitions that would benefit public use include land connections or easements along the Middle Fork of the Snoqualmie River to connect with King County's Three Forks Natural Area. Additionally, acquisitions should be made to acquire land to connect the Mount Si NRCA with US Forest Service and Middle Fork Snoqualmie River Area to the east and private timber lands to the south.

Public Use Monitoring

This section contains monitoring recommendations as they pertain to public use. Monitoring objectives were defined in the Management Plan.

Public Use Monitoring Recommendations

1. Prioritize monitoring efforts on areas that may exceed limits of acceptable change.
2. Monitor Primitive Zone areas — especially Mount Teneriffe, Crater and Racher Lakes.
3. Monitor for changes in level and type of public use.
4. Monitor areas before and after trail construction or renovation for impacts to wildlife and vegetation.
5. Use methods and tools defined in the Management Plan to conduct monitoring.

Priority monitoring areas are those that are expected to change quickly if there are changes in the type or amount of public use. Key items that should be monitored include:

- loss of vegetation
- change in native vegetation species richness, evenness or diversity
- change in richness or abundance of non-native invasive vegetation species
- changes in forest structure, amount of debris.
- evidence of humans — fire, litter
- soil compaction
- soil erosion
- water quality

The monitoring methods that will be used are outlined in the management plan and include photos, mapping, plant identification and various measurements.

Targeted Monitoring Areas

Where	When	How Often	Who
Rock climbing area	Fall	Bi-annually	Volunteers & staff
Haystack	Summer	Every 5 years	Volunteers & staff
Mount Teneriffe summit	Summer	Annually	Staff
New trails	Spring/Fall	Prior to construction. Twice a year after construction for 2 yrs., then bi-annually.	Staff & volunteers
Lakes	Summer	Annually	Staff
Mt. Si trail	Fall/Spring	Every 3 years	Staff & volunteers
Little Si trail	Fall/Spring	Bi-annually	Staff & volunteers

Action Plan



Concept Map & Action Plan

Concept Map

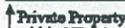
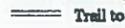
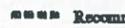
The Public Use Concept Map is used as a tool to help visualize the public use recommendations proposed in this plan. This map shows layout of the Public Use Zones and broad locations of potential trails, trail connections, trailheads and types of proposed uses. It is not a trails map.

After evaluation, trails that met the criteria and zone designations resulted in several new recommended trails. Many of the recommended trails are existing user built trails or old roads; others are potential trail connections. Some of the proposed trails cross private property and cannot be built or used until an easement is obtained or the land is acquired by DNR. See Public Use concept map, next page.

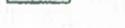
Mount Si NRCA Public Use Concept Map

LEGEND

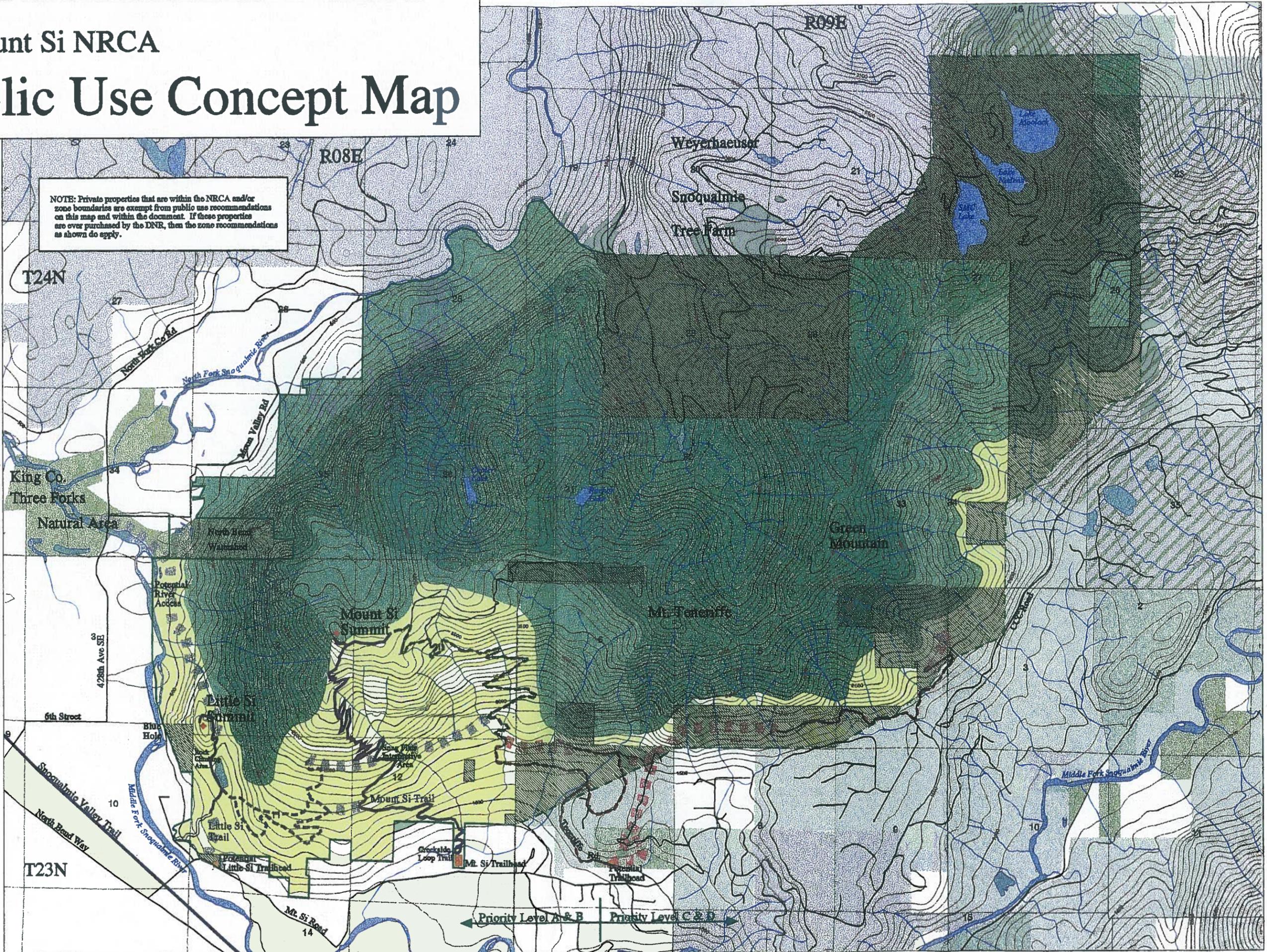
Public Use Zones

-  Primary Zone
-  Passive Zone
-  Primitive Zone
-  Study Zone
-  Private Property within NRCA
-  Existing hiking trails
-  Trail to be abandoned
-  Recommended hiking trails
-  Recommended mountain bike, equestrian or hiker trails
-  Potential hiking trail connection
-  Potential mountain bike, equestrian or hiking trail connection
-  Trailheads
-  Boundary of Mt. Si NRCA
-  Mt. Si NRCA Study Area Boundary
-  Contour Lines, Interval 100 ft.

Lands

-  DNR Managed Lands
-  NRCA's
-  Other Public Lands
-  Municipal Watershed Lands
-  Proposed Weyerhaeuser to USFS Exchange
-  Champion
-  Weyerhaeuser
-  Roads

NOTE: Private properties that are within the NRCA and/or zone boundaries are exempt from public use recommendations on this map and within the document. If these properties are ever purchased by the DNR, then the zone recommendations as shown do apply.



Due to changing ownership status and reliance on aerial photography, the Department of Natural Resources cannot accept responsibility for errors and omissions. Therefore, no warranty is made for this material.

Action Plan

To implement the recommendations within this plan, an action plan matrix was created to be used as a guide for scheduling and priorities. The action plan matrix is a compilation of the public use recommendations, plus, priorities for implementation, and resources required to help determine future budget needs.

Priority for Implementation

“Priorities” for implementation are categorized into four levels of priority or need. Level A being the most crucial to implement and Level D being the least crucial.

Level A — Identifies the most critical basic needs. Actions are targeted at addressing ongoing concerns with either resource damage or social conflicts. These action items are important foundation tasks to implement the public use plan (approximately 1 - 2 years.)

Level B — Identifies actions needed that may take more time to implement and are less crucial to time constraints than level A (approximately 2 - 4 years.)

Level C — Identifies actions that must be taken to complete the last level, Level D (approximately 5 - 6 years.)

Level D — Identifies the final actions needed to complete the Public Use Plan (approximately 6 or more years).

Action Plan Matrix

Public Use Recommendations	Priority	Resources Required
Stewardship Recommendations		
1. Implement the Public Use Zones as defined in this plan.	A	Conservation Steward, Volunteer Note: Resources required are for all recommendations within the group. Coordinator and Education Specialist.
2. Work with all recreational user groups to achieve stewardship goals together.	B	
3. Develop a volunteer program to increase stewardship.	A	
4. Use volunteer rangers and stewards to educate the public about the NRCA.	A	
5. Work with tribes and historical groups to gain greater understanding of cultural and historical places.	A	
6. Protect where necessary		
Enforcement Recommendations		
1. User education followed by enforcement in the priority.	A	Education Specialist, Volunteer Coordinator and Enforcement Officer.
2. Research existing laws that can be applied to NRCAs.	A	
3. Increase user knowledge about NRCA rules by using trained on-site volunteers to provide information.	B	
4. Focus on enforcing key rules: day use-only, dogs on-leash, and visitors on-trails.	A	
5. Increase enforcement as necessary as the Public Use Plan is implemented.	C	
Registration and Fee Recommendations		
1. Develop a protocol for accepting donations for maintenance and program implementation.	A	Natural Resources Specialist
2. Explore user registration and user fees on state lands.	B	
3. Ensure that any potential donations or fees generated at Mount Si be returned to the area to fund maintenance.	A	

Action Plan Matrix

Public Use Recommendations	Priority	Resources Required
Mount Si Trailhead		
1. Mount Si Trailhead parking capacity should remain the same.	A	Environmental Planner
2. Work with appropriate organizations for bus stop drop-offs and connections when/if popularity and publicity increases for Mount Si and the surrounding areas.	C	
3. Develop cost/benefit analysis for improvements to the trailhead (i.e., toilets, phone, road improvements).	B	
4. Explore possibility of acquiring additional land or conservation easement to expands barrier-free trail.	C	
Little Si Trailhead		
1. Move Little Si parking area and trailhead from current location to an area with direct access to the NRCA.	A	Environmental Planner and Parks Planner. Funding needed: capital WCC or IAC grant.
2. Coordinate with King County to close current Little Si parking area and provide information about location of new trailhead.	A	
3. Work with surrounding neighbors to ensure success of relocated Little Si Trailhead.	A	
4. The relocated Little Si Trailhead should provide parking and other facilities such as toilets, information kiosk and benches.	A	
5. The existing Little Si Trailhead access point should be closed to the general public once the new trailhead is open. Sign and enforce appropriately.	A	
Teneriffe Road Access		
1. Work with Snoqualmie School District to sign school bus turn-around to avoid cars being towed.	A	Environmental Planner
2. Explore parking area options at the beginning of the Teneriffe Road. Work with neighbors, land owners and Middle Fork Snoqualmie River planning team.	D	
Three Forks Natural Area Access		
1. If King County acquired and builds a trailhead at Three Forks Natural Area, there should be a low impact trail connection to the NRCA. Access must be based on additional wildlife analysis coordinated between King County, DNR, and the Washington State Department of Fish and Wildlife.	C	Environmental Planner
Other Access		
1. Maintain DNR ownership of all existing easements, access points, and properties.	B	Environmental Planner
2. Notify adjacent property owners of state ownership, investigate trespass and install neighborhood-friendly barriers where needed.	B	
3. No official state signs should be posted unless warranted (i.e., on-going dumping, parking or trespass).	B	
4. Investigate trail connection options for hikers, bicycles and equestrians from the CCC road to the lower elevations of the NRCA.	D	

Action Plan Matrix

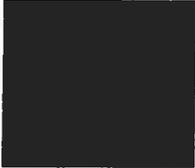
Public Use Recommendations	Priority	Resources Required
Road		
1. Roads in the conservation area should be decommissioned. Selected roads as defined by the Public Use Zone should be converted to trails.	B-C	Environmental Planner. Funding needed: capital, program, WCC, or IAC grant.
2. Discontinue motorized use and convert Teneriffe Road to a trail.	B-C	
3. Roads in the Primitive Zone should be decommissioned and completely restored to nature.	B-C	
Trails - General		
1. Hiking on designated trails is allowed in the Primary and Passive Public Use Zones. Cross country hiking at minimal amounts allowed in the Primitive Zone.	A	Environmental Planner, Recreation Specialist, WCC
2. All existing and proposed trail locations should respect private land and public lands.	A	
3. Conduct monitoring before and after building or renovating trails.	A	
4. Maintain trails to the standards assigned in the Public Use Zones.	B	
5. Encourage volunteers to obtain training to assist in maintaining trails.	A	
Mount Si Trail		
1. Maintain or enhance the visitor's experience on the Mount Si trail by dispersing use on connecting trails within the Primary Zone.	B	Environmental Planner and Recreation Specialist. Funding needed: capital, WCC or IAC grant.
2. Develop loop trails and family destinations of varied length and difficulty off the Mount Si trail.	B	
3. Acquire funding for toilet facilities at the end of trail (near summit) and pursue an agreement with a volunteer group to conduct maintenance.	B	
Little Si Trail		
1. Upgrade and maintain the Little Si Trail	B	Recreation Specialist and WCC. Funding needed: capital, program or IAC grant.
2. Upgrade should include benches for resting and viewing, trail definition, and erosion control.	B	
3. Install directional signs.	B	
4. Provide trail connection to new Little Si trailhead, once land is acquired.	A	
New Trail		
1. Manage, construct and maintain trails identified by DNR — see concept map. Include connections and loop trails between Little Si trail, Mount Si trail and Teneriffe Road.	A-D	Environmental Planner, Recreation Specialist and WCC. Funding needed: capital, program or IAC grant.
2. Investigate low-elevation loop options for varied use including mountain bicycles, horses and llamas on the Teneriffe Road and NRCA land to the east connecting to the CCC Road.	C	
3. Determine trail accessibility to the Middle Fork Snoqualmie River on the western border of the NRCA and Little Si Summit (coordinate with King County and planning teams).	B	
4. Investigate acquisitions and agreements with the city of North Bend to develop trail options connecting King Count Three Forks Natural Area and Little Si Trail.	D	
5. Encourage trail connections from Snoqualmie Valley Trail to Mount Si NRCA trailheads and trails. (i.e., designated trail lane along county road and signage.)	C	
6. Use Trail Evaluation Chart to evaluate new trails in the future.	C-D	

Action Plan Matrix

Public Use Recommendations	Priority	Resources Required
Rock Climbing		
1. Allow recreational rock climbing only on Little Si in designated areas.	A	Environmental Planner
2. New climbing routes are allowed within designated areas only.	A	
3. Continue working with the climbing community to increase stewardship of the NRCA.	A	
4. Continue to monitor the area for environmental impacts.	A	
Mountain Bicycling and Equestrian		
1. Various use activities include the use of mountain bicycles, horses and llamas. These uses are allowed on designated trails only (see conceptual map).	B	Environmental Planner
2. Seek trail opportunities for varied use activities that provide a connection to the Middle Fork Snoqualmie River area as funding and opportunities for acquisition arise.	C	
3. Provide varied use opportunities at lower elevations.	B	
4. Work with the mountain bicycling and equestrian groups ensure riders stay in designated areas and become stewards of the area.	A	
Scrambling		
1. Discourage scrambling and hiking on the "Haystack". (top of Mount Si)	A	Environmental Planner
2. Install a sign at the base of the Haystack warning of high risk — "High Hazard Area, Danger Falling Rocks"	A	
Pets in the NRCA		
1. Pets must be on leash. Educate users and post signs.	A	Environmental Planner and WCC
2. Pursue additional avenues for enforcement.	A	
Hunting and Fishing		
1. Hunting and fishing should be allowed in the Primitive Zone.	A	Environmental Planner
2. If damage occurs to natural resources the use should be restricted by site until it has recovered.	A-D	
Harvesting and Collecting		
1. Harvesting small amounts of berries, mosses, mushrooms and other collection of natural materials is allowed for personal use.	A	Environmental Planner
Hang Gliding and Paragliding		
1. Allow limited hang gliding and use of the Teneriffe Road by pilots until the fall of 1997.	A	Environmental Planner
Public Information		
1. Develop an official publication (map or brochure) for public use on Mount Si.	A	Environmental Specialist
2. Issue information on Mount Si to appropriate distribution sites such as the US Forest Service office in North Bend and the North Bend Visitor Information Center.	A	

Action Plan Matrix

Public Use Recommendations	Priority	Resources Required
Environmental Education		
1. Develop an education theme that integrates the natural, historical and cultural features of Mount Si.	A	Environmental Specialist. Funding needed: capital or IAC grant.
a) Identify and develop environmental education focus areas (i.e., — Creekside Loop Trail through Snag Flats Interpretive Area, river access areas, etc.)	A-B	
b) Environmental education focus areas should complement and enhance focus areas and include natural, historical, and cultural information.	B	
Acquisition		
1. Acquire private land within the current NRCA boundary from willing sellers at fair market value.	A-D	Environmental Planner. Funding needed: IAC grant
2. Pursue opportunities to make acquisitions that connect the NRCA to the Middle Fork Snoqualmie River Area and King County Three Forks Natural Area.	B	
3. Explore opportunities to acquire lands around trailheads and key access points.	C	
4. Upon acquisition of any property, conduct environmental studies to determine if proposed trails are environmentally feasible.	A-D	
Monitoring		
1. Prioritize monitoring efforts on areas that may exceed limits of acceptable change.	A	Environmental Planner and Recreation Specialist.
2. Monitor Primitive Zone areas — especially Mount Teneriffe, Crater and Racher Lakes.	A-D	
3. Monitor for changes in level and type of public use.	A-D	
4. Monitor areas before and after trail construction or renovation for impacts to wildlife and vegetation.	A	
5. Use methods and tools defined in the Management Plan to conduct monitoring.	A	



References

- Bradley, Gordon et al. *Mount Si Conservation Area General Development Study*. University of Washington, Seattle, WA. 1983.
- Combs-Bauer, Susan. *Draft Public Use Assessment Module*. Washington Department of Natural Resources. 1996
- Crawford, R., Kunze, L., Andelman, S., and Gamon, J. Washington Natural Heritage Program. *Mount Si Natural Resources Conservation Area, Natural Resources Inventory and Management Recommendations*. Washington Department of Natural Resources, Olympia, WA, 1992.
- Gold, Seymour M. *Recreation Planning and Design*. 1980
- Hendee, John. *Wildlife Management*. USFS, Seattle, WA, 1978.
- Hendee, Stankey and Lucas. *Wildlife Management*. 1990
- Interagency Committee for Outdoor Recreation. *Washington Outdoors: Assessment and Policy Plan 1990-1995*. Seattle, WA, 1987.
- Kelsey and Groy. *Master Plan Process for Parks and Recreation*. American Association for Leisure and Recreation. 1985
- McHarg, Ian. *Design with Nature*. 1971
- Stankey, Cole, Lucas, Petersen, Frissel. *The Limits of Acceptable Change (LAC) System for Wilderness Planning*. United States Department of Agriculture. 1985
- Vining, Joanne. *Social Science and Natural Resource Recreation Management*. Westview Press. 1990
- Washington Department of Natural Resources. *Mount Si NRCA Management Plan*. 1997