UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

ESTABLISHMENT RECORD

FOR

ROUND TOP MOUNTAIN RESEARCH NATURAL AREA

WITHIN

THE COLVILLE NATIONAL FOREST AND

THE IDAHO PANHANDLE NATIONAL FORESTS

PEND OREILLE COUNTY

WASHINGTON

☆ U.S. GOVERNMENT PRINTING OFFICE: 1983 - 425-976 - 415/6115

FS-6200-7 (10/73)

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Round Top Mountain Research Natural Area

Colville National Forest and Idaho Panhandle National Forests

Pend Oreille County, Washington

The undersigned certify that all applicable land management planning and environmental analysis requirements have been met and that boundaries are clearly identified in accordance with FSM 4063.41 5.e(3) in arriving at this recommendation.

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Kathy Ahlenslager, Forest Botanist — Date
Colville National Forest

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Priest Lake Ranger District

Recommended by Fred C. Gonzalez — 5-26-97
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Jerry L. Coleman, Acting Forest Supervisor — Date
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Thomas J. Mills, Station Director — Date
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Kent Dunstan, District Ranger — Date
Priest Lake Ranger District

Recommended by David J. Wright — 11/20/97
David J. Wright, Forest Supervisor — Date
Idaho Panhandle National Forests

ESTABLISHMENT RECORD

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PEND OREILLE COUNTY, WASHINGTON

INTRODUCTION

The Round Top Mountain Research Natural Area (RNA) straddles a western spur of the Selkirk Mountains in northeastern Washington. It is National Forest System land, administered jointly by the Sullivan Lake Ranger District, Colville National Forest, and the Priest Lake Ranger District, Idaho Panhandle National Forests. It is entirely within the Salmo-Priest Wilderness Area (USDA Forest Service 1992).

Round Top Mountain RNA is also within the recovery area of the mountain caribou, an endangered species, (US Fish and Wildlife Service 1994) and the grizzly bear, a threatened species (US Fish and Wildlife Service 1993). In addition, it provides habitat for other rare wildlife: lynx, wolf, boreal owl, wolverine and fisher.

Charles Wellner, Idaho Natural Areas Coordinating Committee, visited Round Top Mountain in 1974 and found it to be an excellent example of a green fescue grassland (Wellner 1993). In a letter recommending it as an RNA, he states that Round Top Mountain "includes a south slope bald in good condition of several communities, but especially green fescue and beargrass. It also contains whitebark pine badly damaged by white pine blister rust and some resistant trees. The boundary could be drawn to include subalpine fir habitat types also. I hope this area will be given early examination and consideration as it is one of the best south slope 'bald' areas" (Wellner 1974).

In 1980 Sarah Greene and Wellner visited the area. Later in the year the Pacific Northwest Region Natural Areas Committee selected it to represent a subalpine green fescue community type (Greene 1980). The Idaho Natural Areas Coordinating Committee recommended it as a Kaniksu National Forest RNA in 1981 (Idaho Natural Areas Coordinating Committee, 1981). It was then identified as such in The Northern Regional Guide (USDA Forest Service 1983). Rexford Daubenmire (1981) included Round Top Mountain as a research site in his study of snow transfer in subalpine parks.

Land Management Planning

Round Top Mountain RNA was recommended for establishment in the Land and Resource Management Plan (LRMP) for the Colville National Forest (USDA Forest Service 1988), and the Idaho Panhandle National Forests Plan (USDA Forest Service 1987). The Final Environmental Impact Statements for the Colville LRMP and the Idaho Panhandle Forests Plan call for the establishment of proposed RNA's, such as Round Top Mountain, which fulfill types assigned by the Regional Committees.

Round Top Mountain, as originally proposed included 30 acres (12 hectares) on the Colville LRMP and 34 acres (14 hectares) on the Idaho Panhandle Forests Plan for a total of 64 acres (26 ha). However, as directed in the Forest Service Manual 4063.1 (USDA Forest Service 1994), the boundaries of the RNA

were enlarged in order to protect the integrity of the green fescue grassland. The revised boundaries increase the RNA area to 212 acres (84 ha) with 109 acres (44 hectares) on the Colville National Forest and 103 acres (42 hectares) on the Idaho Panhandle National Forests. The expanded boundary adds important subalpine fir forest types and allows conditions within the interior of the RNA to remain largely unmodified.

OBJECTIVES

The Forest Service Manual (1994) outlines the following objectives for the establishment of RNAs, such as Round Top Mountain:

1. Preserve a wide spectrum of pristine representative areas that typify important forest, shrubland, grassland, alpine, aquatic, geological, and similar natural situations that have special or unique characteristics of scientific interest and importance that, in combination, form a national network of ecological areas for research, education, and maintenance of biological diversity.

2. Preserve and maintain genetic diversity.

3. Protect against serious environmental disruptions.

4. Serve as reference areas for the study of succession.

5. Provide onsite and extension educational activities.

6. Serve as baseline areas for measuring long-term ecological changes.

7. Serve as control areas for comparing results from manipulative research.

8. Monitor effects of resource management techniques and practices.

9. Maintain the excellent condition of this RNA, as an example of a green fescue bald with associated subalpine fir and whitebark pine forest, influenced by the natural, dynamic processes of that ecosystem.

JUSTIFICATION STATEMENT FOR ESTABLISHMENT OF AREA

A number of strong justifications exist for the establishment of the Round Top Mountain RNA. Round Top Mountain was selected to represent a green fescue subalpine grassland, in northeastern Washington. Currently, there are no RNA's which represent this type in the Washington Natural Areas Preserve System. Mountain grasslands, also known as subalpine parks or balds, have long been recognized as unique components of the Selkirk Ecosystem in eastern Washington and northern Idaho (Leiberg 1899, Daubenmire 1944, Layser 1980, Daubenmire 1981). Unlike the majority of balds, Round Top Mountain was not grazed and

remains largely undisturbed. Daubenmire (1981) described his parkland study sites, including Round Top Mountain, as "essentially in pristine condition." Research Natural Area establishment represents an important opportunity to retain an intact example of this unique community.

A primary consideration in the selection of RNAs is the presence of multiple elements. In addition to the grassland flora, Round Top Mountain RNA includes old growth subalpine fir forest, whitebark pine krummholz and habitat for a variety of rare plant and animal species.

The following elements are found within the Round Top Mountain RNA:

I. Terrestrial Ecosystems (Washington Department of Natural Resources 1995, Idaho Natural Areas Coordinating Committee 1981)
   - Green fescue community
   - Subalpine fir/beargrass community
   - Subalpine fir/Cascades azalea community

II. Threatened, Endangered and Sensitive Animal Species - Potential Habitat (Layser 1995)
   - Woodland caribou (endangered)
   - Wolf (endangered)
   - Grizzly bear (threatened)
   - Lynx (threatened on Washington state list, sensitive on Forest Service list)
   - Boreal owl (sensitive in US Forest Service Region 1)
   - Fisher (sensitive in US Forest Service Region 1)
   - Wolverine (sensitive in US Forest Service Regions 1 and 6)

PRINCIPAL DISTINGUISHING FEATURES

The presence of open, grassy parklands within the otherwise forested Selkirks has interested botanists and forest researchers since the turn of the century. In a pioneering report on the Priest River Forest Reserve, J.B. Leiberg (1899) describes wide expanses of mountain grasses, which may be found on the south-facing slopes of subalpine ridges. Leiberg theorized such parklands were the result of catastrophic fire.

A. J. Larson (1926) also attributed the presence of south-slope parklands to the effects of fire (Photo 1). However, subsequent studies (Daubenmire 1944, 1968, 1981) saw no evidence of fire history. Instead, Daubenmire found that prevailing winter winds transfer snow from the slope faces, removing the primary source of soil moisture. This combination of topography, wind, snow transfer and soil drouth maintains the uniquely treeless subalpine parkland.

This RNA encompasses the open slopes of Round Top Mountain, dominated by green fescue (Festuca viridula) (Photos 2 and 3). This productive grassland also includes bluebunch wheatgrass (Elymus spicatus, formerly Agropyron spicatum),

Columbia brome (Bromus vulgaris), and spike trisetum (Trisetum spicatum). Typical of many green fescue balds, the lower southeastern margin of the parkland is bordered by a belt of bittercherry (Prunus emarginata) (Daubenmire 1981).

Whitebark pine (Pinus albicaulis) is scattered on the summit of Round Top Mountain and along the southwest ridge (Photo 4). Several of the older trees appear free of blister rust and may prove to be sources of resistant seed.

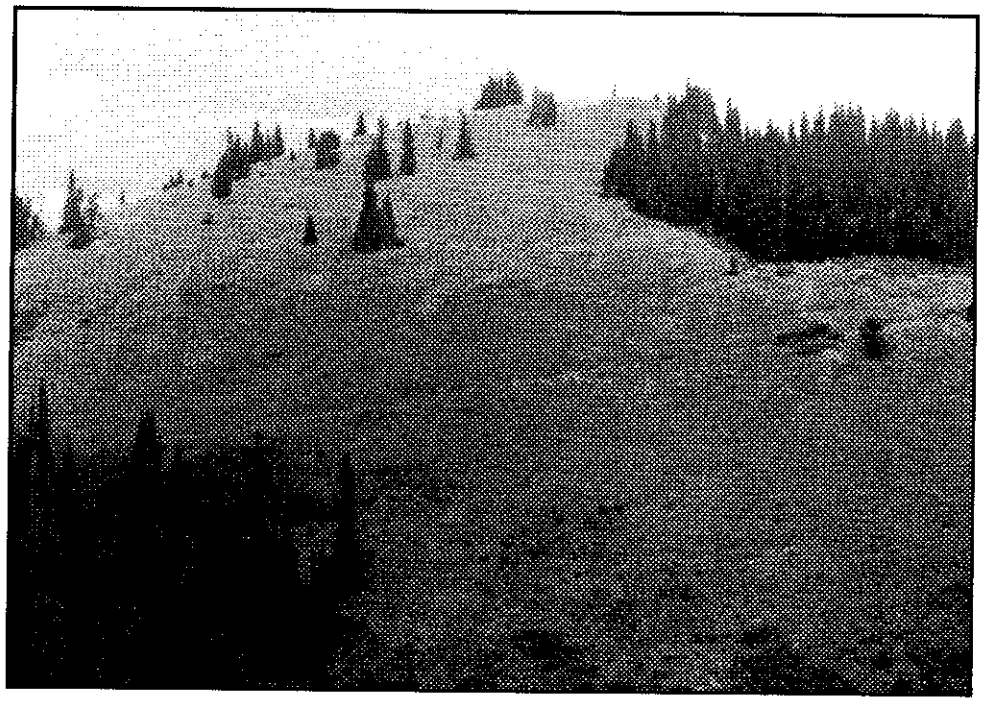
At its northern and eastern margins, the meadow grades into mature and old-growth subalpine fir forest, with rhododendron (Rhododendron albiflorum), fool's huckleberry (Menziesia ferruginea), beargrass (Xeraphyllum tenax), and woodrush (Luzula hitchcockii) plant communities (Kovalchik 1993). These leeward slopes collect snow, which provides the moisture needed to support subalpine fir (Abies lasiocarpa) and Engelmann spruce (Picea engelmannii) trees. Snowmelt patterns create a mosaic of tree "islands" and diverse plant communities (Photos 5 through 7).

Much of the flora found in the dry parkland is more common to the lower steppes of southeastern Washington and adjacent Oregon. Similarly, certain plant species and communities occuring on the leeward side of the ridge, where snow drifts may persist well into early summer, are associated with colder, higher mountain habitats. Grasslands in the Selkirk Mountains are floristically distinct from mountain grasslands of the eastern side of the Cascade Range in Washington and the mountains of western Montana. To the west, grasslands typically include mountain big sagebrush (Artemisia tridentata ssp. vaseyana) and needlegrasses (Stipa sp.). In mountain parks to the east, green fescue is conspicuously absent, as are mountain sandwort (Arenaria capillaris var. americana) and western groundsel (Senecio integerrimus), plants commonly found in Selkirk grasslands (Layser 1980, Daubenmire 1981).

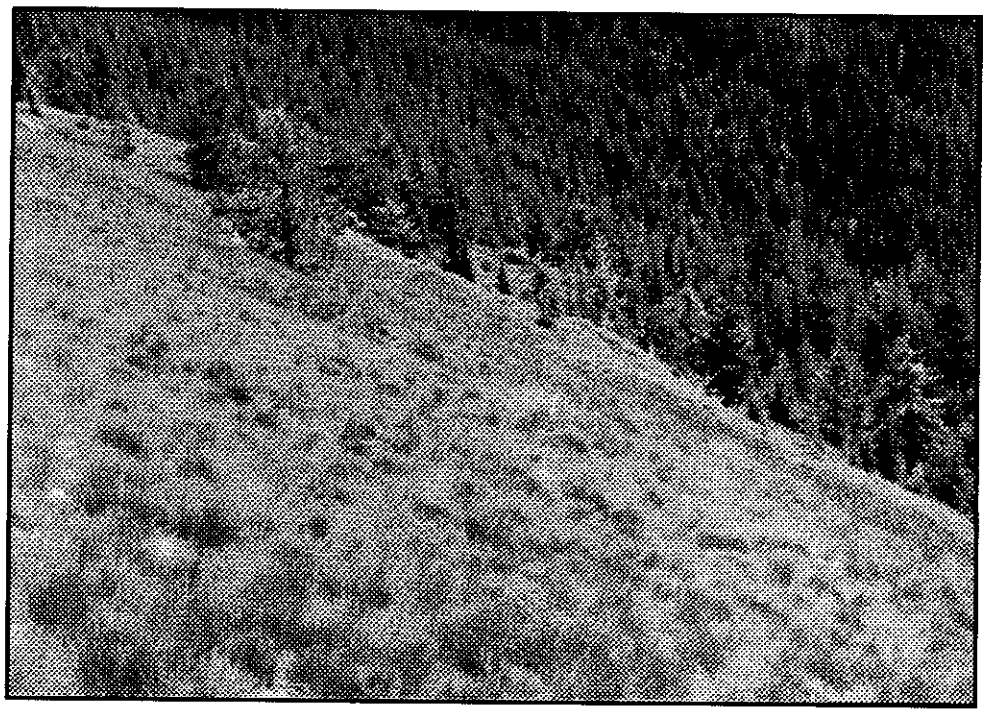
Some glacially derived, odd-shaped soil mounds, known as solifluction lobes are unique features identified by Daubenmire (1981): "A long irregular chain of such mounds follows roughly along a contour on Roundtop. The vegetation of the lobes tends to be distinctive in supporting dense clones of a rhizomatous ecotype of Agropyron spicatum [Elymus spicatum]."

Round Top RNA has habitat for the rare plant species dryland sedge (Carex xerantica) and California sedge (Carex californica) (USDA Forest Service 1994a). Both plants occur in green fescue-subalpine fir communities in the Coeur d'Alene Mountains of nearby northern Idaho (Moseley 1993).

Habitat for several threatened, endangered and sensitive wildlife species is found within Round Top Mountain RNA. It is important late winter, spring and summer range for the endangered woodland caribou (Rangifer tarandus spp. caribou). The RNA is located within the Selkirk Mountain Woodland Caribou Recovery Area (US Fish and Wildlife Service 1994). In 1970, between 15 and 20 caribou were sighted on Round Top Mountain (Layser 1995).

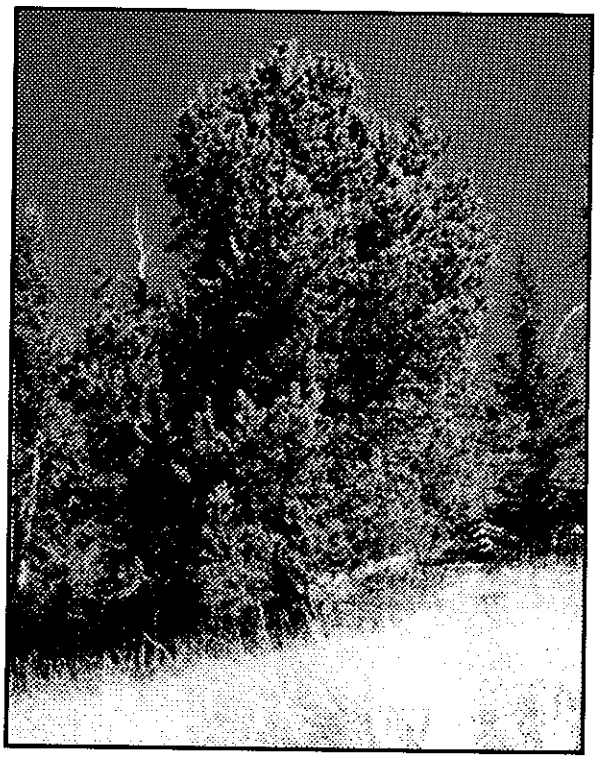


Photograph 1. Southeastern slope of Round Top Mountain.
Photo attribute: Diane Penny.

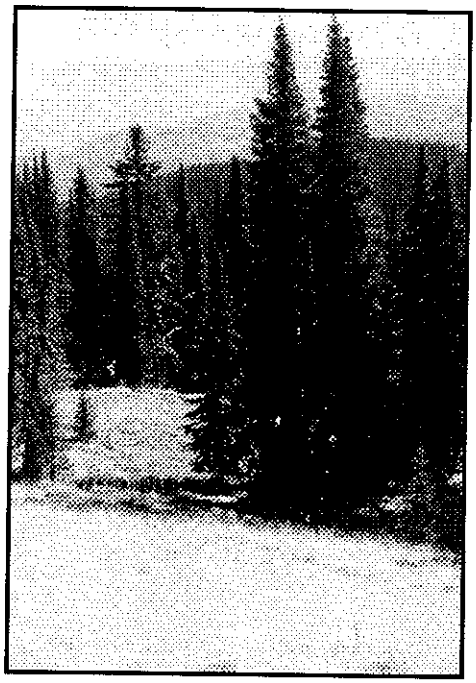


Photograph 2. South slope "bald" dominated by green fescue (*Festuca viridula*).
Photo attribute: Diane Penny.

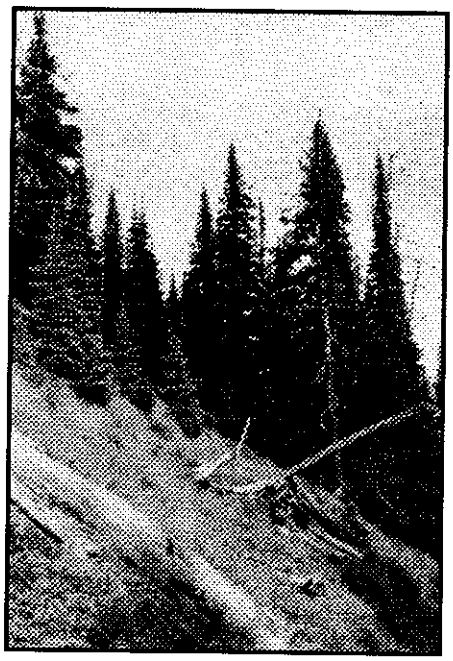
Photograph 3. Grassland community, Round Top Mountain.
Photo attribute: Diane Penny.



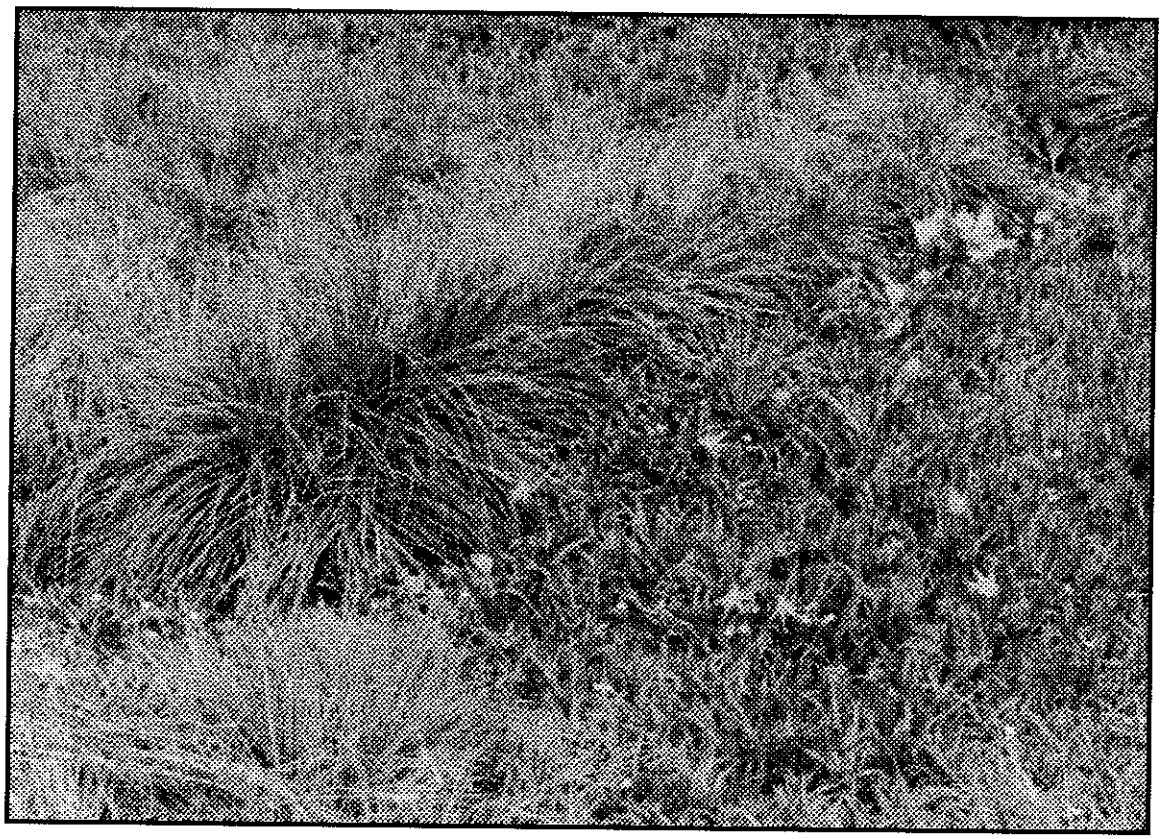
Photograph 4. Whitebark pine (*Pinus albicaulis*) at the summit of Round Top Mountain.
Photo attribute: Diane Penny.



Photograph 5. Snowmelt patterns create mosaic of tree "islands" and forb communities on leeward slopes, Round Top Mountain.
Photo attribute: Diane Penny.



Photograph 6. Mature subalpine fir (*Abies lasiocarpa*) forest on northeastern margin of parkland, Round Top Mountain.
Photo attribute: Diane Penny.



Photograph 7. Beargrass (*Xerophyllum tenax*) and woodrush (*Luzula hitchcockii*) plant communities, with blooming glacier lily (*Erythronium grandiflorum*).
Photo attribute: Diane Penny.

Round Top Mountain RNA is within the Selkirk Grizzly Bear Recovery Area and the Sullivan Hughes Bear Management Unit (US Fish and Wildlife Service 1993). It includes important feeding and resting habitat for the threatened grizzly bear (Ursus arctos spp. horribilis). Sightings, sign and radio locations, show that grizzly bears use the open parkland, shrubfields and mature forests of Round Top Mountain. Radio-collared bear #867 used the area frequently, accompanied by her young cubs.

Wolves (Canis lupus), an endangered species, are frequently reported from the shared boundary of the Colville and Idaho Panhandle National Forests, including the vicinity of the RNA (Hansen 1986). In October 1994, wolf tracks were verified three miles north of Round Top Mountain (Layser 1995).

Round Top Mountain RNA is also within one of the six primary lynx (Felis lynx) habitat zones in the State of Washington (Washington Department of Wildlife 1993). This zone, the Salmo-Priest, supports the state's second most viable lynx population. The lynx is listed by the State of Washington as a threatened species, and is a Forest Service sensitive species.

Habitat for the sensitive boreal owl (Aegolius funereus), fisher (Martes pennanti), and wolverine (Gulo gulo) is also found within Round Top Mountain RNA. These species are associated with boreal forests, and large undisturbed tracts, such as wilderness areas (Groves 1987, Layser 1995).

LOCATION

Round Top Mountain RNA is located within the Sullivan Lake Ranger District of the Colville National Forest and the Priest Lake Ranger District of the Idaho Panhandle National Forests, Pend Oreille County, of northeastern Washington (Map 1).

The RNA includes parts of this legal description: Township 38 North, Range 45 East, Willamette Meridian, Section 8 and Section 9 (Map 2).

Latitude and Longitude

The approximate center of the RNA is at latitude 48°47'and longitude 117°08'.

Description of Boundary

The boundary of the RNA was originally established and plotted on the USDA, Forest Service Primary Base Series Maps, 7.5 minute series (topographic), Scale 1:24,000, Pass Creek and Helmer Mountain quadrangle maps. These are on file at the Supervisor's Office, Idaho Panhandle National Forests, Coeur d'Alene, Idaho and the Supervisor's Office, Colville National Forest, Colville, Washington.

The geographical positions contained in the boundary description are expressed in latitude and longitude on the 1927 North American Datum (NAD27), State Plane Coordinate System, Washington North Zone 4601, mean elevation 5800 feet (1768 m). These geographic positions were measured from the preceding maps using a Numonics Digitizer and converted to latitude and longitude through JELLY USDA-FS software. The electronic record of this digitization is on file at the U.S. Forest Service, Northern Regional Office in the Cadastral Survey Section.

By use of this procedure, the precision of the geographic position correlates to National Map Accuracy Standard. The boundary of the Round Top Mountain RNA is described as follows (Makinson 1994) (Map 3):

Beginning at Point 1 northeast of the summit of Round Top Mountain at the 5800 foot (1768 m) elevation line having latitude 48°48'53.7 and longitude 117° 07'33.4.

Thence southeasterly, 1145 feet on a line crossing the boundary between the Colville and the Kaniksu National Forests to Point 2 at the 5800 foot (1768 m) elevation line, having the latitude 48°48'45.3 and longitude 117°07'22.0.

Thence southeasterly, following the 5800 foot (1768 m) elevation line to Point 3, having the latitude 48°48'28.8 and longitude 117°07'06.9.

Thence southwesterly, 471 feet (144 m) on a line crossing the ridgetop to Point 4, on the 5800 foot (1768 m) elevation line, having the Latitude 48°48'25.0 and Longitude 117°07'11.0

Thence southwesterly, following the 5800 foot (1768 m) elevation line to Point 5, having the latitude 48°48'15.8 and longitude 117°07'43.1.

Thence northwesterly, 663 feet (202 m) on a line crossing the boundary between the Colville and the Kaniksu National Forests to Point 6 at the 5800 foot (1768 m) elevation line, having the latitude 48°48'17.0 and longitude 117°07'52.3.

Thence northwesterly, following the 5800 foot (1768 m) elevation line to Point 7, having the latitude 48°48'42.6 and longitude 117°08'10.9.

Thence northeasterly, 1678.7 feet (512 m) on a line crossing the ridgetop to Point 8, on the 5800 foot (1768 m) elevation line, having the latitude 48°48'54.7 and longitude 117°07'53.9.

Thence northeasterly, following the 5800 foot (1768 m) elevation line to Point 1, and the true point of beginning.

Area

The total area of the Round Top Mountain RNA is 212 acres (84 ha).

Elevation

Elevations range from 5800 to 6466 feet (1740 to 1940 m), encompassing a relief of 666 feet (200 m) in elevation. The basis for elevation is mean sea level as shown on the Pass Creek Pass and Helmer Mountain 7.5 minute topographic quadrangle maps of 1967, photorevised 1986.

Access

Access to the RNA is shown on USDA Forest Service maps of Colville and Idaho Panhandle National Forests. The RNA is accessible on foot or horseback from late May through October and by skis or snowshoes the rest of the year. For access routes from Ione, Washington and Priest River, Idaho (Map 1). Directions are as follows:

> To access Pass Creek Pass and the RNA from Ione, Washington, take State Highway 31 south one mile (1.6 km) to County Road 9345. Travel east about 13 miles (21 km) to the Sullivan Lake Ranger Station, then follow Forest Service Road 22 for about 12 miles (19 km) east and south to Pass Creek Pass.
>
> From Priest River, Idaho, on Highway U.S. 2, turn north on State Highway 57 for 36 miles (58 km) to Nordman, Idaho. From Nordman continue northward on Forest Road 302 (Granite Creek Road) for 15 miles (24 km) to Granite Pass. Continue west on Forest Road 302 for five miles (8 km) to Pass Creek Pass. Follow Forest Trail 512 north for about 1.5 miles (2.4 km) to the southern boundary of the RNA. Trail 512 continues through the RNA about 1 mile (1.6 km) to the northern boundary of the RNA. The trail traverses the RNA about 200 vertical feet (60 m) below the summit of Round Top Mountain.

Maps

Round Top Mountain is on Forest Service Primary Base Series Maps, 7.5 minute series (topographic), Scale 1:24,000, Pass Creek and Helmer Mountain quadrangle maps.

Photos

The following color aerial photos at the Priest Lake Ranger District office and the Sullivan Lake Ranger District office cover the RNA:

	Photo Date	Flight Line Numbers
Priest Lake Ranger District	8-4-83	611040 583-083
	8-4-83	611040 583-084
	8-4-83	611040 583-085
	9-11-91	611040 3291-023
	9-11-91	611040 3291-024
	9-11-91	611040 3291-025
Sullivan Lake Ranger District		1783-055
		1783-056
		1783-057
		1783-058
		1783-023
		1783-024
		1783-025
		1783-026

AREA BY COVER TYPES

Vegetation of the RNA has not been studied or type-mapped in any detail. The following are estimates by cover types (Coles 1994) (Map 4).

	Acres	Hectares
Society of American Foresters Cover Types (Eyre 1980)		
206 Engelmann Spruce-Subalpine Fir	166	66
Non-forested	46	18
TOTAL	212	84
Kuchler Types (Kuchler 1964)		
15 Western Spruce-Fir Forest	166	66
Non-forested	46	18
TOTAL	212	84

	Acres	Hectares
Habitat Types (Daubenmire & Daubenmire 1968; Cooper, et al. 1991)		
Subalpine fir/fool's huckleberry (Abies lasiocarpa/Menziesia ferruginea) -smooth woodrush phase (Luzula hitchcockii)	72	29
Subalpine fir/fool's huckleberry (Abies lasiocarpa/Menziesia ferruginea)	67	27
Subalpine fir/beargrass (Abies lasiocarpa/Xerophyllum tenax) -smooth woodrush phase (Luzula hitchcockii)	27	10
Non-forested		
Green fescue (Festuca viridula) grassland	46	18
TOTAL	212	84

Forested Plant Associations (Williams, Lillybridge and Smith 1990)		
Subalpine fir/rhododendron (Abies lasiocarpa/Rhododendron albifolorum) -beargrass phase (Xerophyllum tenax)	72	29
Subalpine fir/rhododendron (Abies lasiocarpa/Rhododendron albiflorum)	67	27
Subalpine fir/beargrass (Abies lasiocarpa/Xerophyllum tenax) -smooth woodrush phase (Luzula hitchcockii)	27	10
Non-forested Types		
Green fescue (Festuca viridula) grassland	46	18
TOTAL	212	84

PHYSICAL AND CLIMATIC CONDITIONS

The Round Top Mountain RNA encircles Round Top Mountain in the Selkirk Mountain Range, about five miles (8 km) west of the Washington and Idaho state line. Elevation at the peak is 6466 feet (1940 m) MSL. Round Top Mountain and the series of peaks running northward to the Canadian border are known as the

Shedroof Divide. These mountains form a drainage divide between the Priest Lake-Priest River system to the east, and the Pend Oreille River to the west. Steep and rugged in the north, the Shedroof Range becomes more forested and gently sloped to the south, such as at Round Top Mountain.

The climate for northeastern Washington is influenced by air masses from the continent and the Pacific Ocean that cross the area. Winters are long and occasional outbreaks of cold air from the Canadian arctic result in low temperatures. Air from over the ocean has a moderating influence throughout the year. Summers are warm with light rainfall (Phillips and Durkee 1972).

The primary factors influencing the climate are latitude, topography, distance from the ocean, the prevailing westerly winds, and the development and movement of weather systems over the North Pacific. The Rocky Mountains protect eastern Washington from outbreaks of cold air, although some enter each winter. Cooling and condensation occur as moist air from the ocean rises over the 5,000 to 7,000 foot (1524 to 2134 m) peaks of the Selkirk Range. This serves to increase the amount of cloudiness, precipitation, and the number of lightning storms as compared to other areas east of the Cascade Range. Throughout the year, maritime air from the Pacific has a moderating influence, while extreme temperatures are observed with drier air from the interior (Phillips and Durkee 1972).

Average monthly precipitation for Round Top Mountain RNA may be estimated by using data from the Natural Resources Conservation Service SNOTEL site at Bunchgrass Meadows, about eight miles (5 km) south of Round Top Mountain RNA, and slightly lower in elevation at 5000 feet (1515 m). These data indicate the average annual precipitation for the period 1984 to 1995 varied from 41 to 60 inches (1.0 to 1.5 m) with 70 percent of the precipitation in the form of snow. (USDA Natural Resources Conservation Service 1996).

Month	Precipitation (in. / cm)
January	5.69 / 14.45
February	3.76 / 9.55
March	4.69 / 11.91
April	4.25 / 10.80
May	4.56 / 11.58
June	4.30 / 10.92
July	2.25 / 5.72
August	1.61 / 4.09
September	1.96 / 4.98
October	3.08 / 7.82
November	7.66 / 19.46
December	5.44 / 13.82
TOTAL	49.25 /125.10

DESCRIPTION OF VALUES

Flora

No systematic study has been made of the flora of the RNA, although several botanists have visited Round Top Mountain. The first documented collections from the area date from 1925 (Layser 1980). Currently, 137 vascular plants are known from the RNA. Scientific nomenclature for trees follows Little (1979); nomenclature follows Hitchcock and Cronquist (1973) for shrubs, forbs and graminoids. Further botanical inventory of the area is highly recommended, as it will likely lead to new discoveries.

The RNA contains no federally listed or proposed for listing as endangered or threatened plant species (Washington Natural Heritage Program 1996, Idaho Conservation Data Center 1996). No Forest Service sensitive species are known from the RNA (Butruille 1991; USDA Forest Service 1994a).

Round Top Mountain RNA contains habitat for two rare plant species: California sedge (Carex californica) and dryland sedge (C. xerantica). California sedge is a Forest Service Northern Region sensitive species (USDA Forest Service 1994a). Dryland sedge was recently discovered in northern Idaho and was recommended to the Idaho Native Plant Society, as a Review Species (taxa needing additional information to determine rarity). Both species occur in green fescue parkland-subalpine fir habitats in northern Idaho (Moseley 1993).

The following plant list is compiled from observations and collections made at Round Top Mountain RNA:

Scientific Name	Common Name	Sighted By
Trees		
Abies lasiocarpa	subalpine fir	2,3,4,5,6,7
Picea engelmanni	Engelmann spruce	2,3,4,5,6,7,8
Pinus albicaulis	whitebark pine	2,3,4,5,6,7
Pinus contorta	lodgepole pine	2,3,4,5,6
Pinus monticola	western white pine	5
Pseudotsuga menziesii	Douglas-fir	2,3,4,5,6
Shrubs and Subshrubs		
Acer glabrum	rocky mountain maple	4,6
Alnus sinuata	Sitka alder	4,6
Artemisia ludoviciana	western mugwort	7
Chimaphila umbellata	prince's pine	4,6
Eriogonum umbellatum	sulfur buckwheat	3,5
Juniperis communis	common juniper	6
Lonicera involucrata	bearberry honeysuckle	4,6
Lonicera utahensis	Utah honeysuckle	2,3,4,5,6
Menziesia ferruginea	fool's huckleberry	4,5,6

Scientific Name	Common Name	Sighted By
Shrubs and Subshrubs		
Pachistima myrsinites	mountain box	3,4,5
Prunus emarginata	bittercherry	4
Prunus virginiana	chokecherry	4,6
Rhododendron albiflorum	white rhododendron	3,4,5,6
Rubus parviflorus	thimbleberry	3,4,5,6
Ribes lacustre	prickly currant	2,3,4,5,6
Salix drummondiana	Drummond willow	2
Sambucus racemosa	elderberry	3,5,6
Sorbus scopulina	mountain-ash	1,4,5,6
Sorbus sitchensis	Sitka mountain-ash	2,5
Spiraea betulifolia	spiraea	4
Vaccinium caespitosum	dwarf huckleberry	4
Vaccinium membranaceum	thinleaf huckleberry	2,3,4,5,6,7
Vaccinium myrtillus	dwarf bilberry	4,5
Vaccinium scoparium	grouse whortleberry	1,3,5,6
Forbs		
Achillea millefolium	yarrow	3,5,6,7
Aconitum columbianum	monkshood	4,6
Actaea rubra	baneberry	4,6
Agastache urticifolia	horsemint	1,3,4,6,7,8
Agoseris aurantiaca	orange agoseris	7
Anaphalis margaritacea	pearly everlasting	3,4,7
Antennaria microphylla	rosy pussy-toes	3,4,5
Antennaria racemosa	pussy-toes	2,3,4,6
Aquilegia flavescens	yellow columbine	4
Arabis divaricarpa	spreadingpod rockcress	2
Arabis holboeli	Holboel's rockcress	2,4
Arenaria capillaris	thread-leaved sandwort	2,3,4,6,7
Arnica latifolia	mountain arnica	2,3
Artemisia ludoviciana	western mugwort	5,6
Artemisia michauxiana	Michaux mugwort	1,2,3,8
Aster engelmannii	Engelmann's aster	7
Aster foliaceous	leafy aster	3
Aster modestus	few-flowered aster	5
Besseya rubra	red besseya	3
Campanula rotundifolia	harebell	5,7
Castilleja miniata	common paintbrush	4
Castilleja rhexifolia	rhexia leaved paintbrush	3
Circaea alpina	alpine circaea	5
Claytonia lanceolata var. lanceolata	spring beauty	2
Clematis columbiana var. occidentalis	Columbia clematis	4
Clintonia uniflora	queen's cup	4
Collinsia parviflora	blue-eyed Mary	2,3,4,6

Scientific Name	Common Name	Sighted By
Forbs		
Crepis atrabarba spp. atrabarba	slender hawksbeard	6
Delphimum nuttallianium var. fulvum	upland larkspur	4
Descurainia sophia	flixweed	3
Draba crassifolia	thickleaved draba	2
Epilobium angustifolium	fireweed	4,5,6,7
Erigeron acris var. debilis	bitter fleabane	2
Erigeron peregrinis ssp. callianthemus var. eucallianthemus	wandering fleabane	2,4,5
Erythronium grandiflorum	glacier lily	2,3,4,6,8
Fragaria vesca	woods strawberry	3,4
Fragaria virginiana var. platypetala	Virginia strawberry	2,3,4,6
Galium bifolium	thinleaf bedstraw	1,8
Goodyera oblongifolia	rattlesnake plantain	5
Gymnocarpium dryopteris	oak fern	5
Heuchera cylindrica var. glabella	roundleaf alumroot	1,2,3,4,5,6
Hieracium albertinum	western hawkweed	4,5,6,7
Hieracium scouleri	woolyweed	3
Ligusticum canbyi	Canby's licorice root	4,5,6
Lilium columbianum	Columbia lily	4,6
Listera sp.	twayblade	4
Lithophragma parviflora	prairiestar	4,6
Lomatium dissectum	desert parsley	2,3,5
Lupinus argenteus	silvery lupine	3
Lupinus leucophyllus	velvet lupine	2
Lupinus sericeus	silky lupine	5
Lupinus sulphureus var. subsaccatus	sulfur lupine	4
Mertensia paniculata	bluebells	2,3,4,5,6
Mitella stauropetala	side-flowered mitrewort	4
Osmorhiza occidentalis	western sweet-cicely	1,3,4,6,8
Parnassia fimbriata	grass-of-Parnassus	4,6
Pedicularis bracteosa	bracted lousewort	3,4,5,6
Pedicularis contorta	coiled-beak lousewort	1,2,3,4,7,8
Pedicularis racemosa	leafy lousewort	5
Penstemon ellipticus	ellipse-leaved beardtongue	2,4
Penstemon fruticosus	bush penstemon	4
Phacelia hastata	silverleaf phacelia	4,7
Pyrola asarifolia	common pink wintergreen	7
Pyrola secunda	one-sided wintergreen	2,3,4,5,7
Ranunculus uncinatus	little buttercup	4

Scientific Name	Common Name	Sighted By
Forbs		
Rumex acetosella	sheep sorrel	4
Rumex salicifolius ssp. triangularis	willow dock	1,3
Saxifraga occidentalis	western saxifrage	2
Sedum lanceolatum	lanceleaf stonecrop	3,4,5
Sedum stenopetalum	wormleaf stonecrop	4
Senecio integerrimus	western groundsel	2,3,4,5,7
Senecio triangularis	arrowleaf groundsel	4
Silene parryi	Parry's silene	7
Silene scouleri	Scouler's silene	5
Stenanthium occidentale	bronze bells	4,7
Thalictrum occidentale	western meadowrue	4,6
Tiarella trifoliata	coolwort foamflower	4
Trillium ovatum	white trillium	4
Valeriana sitchensis	sitka valerian	2,3,4,5,6
Veratrum viride	American false hellebore	7
Veronica sp.	speedwell	4
Viola glabella	pioneer violet	4
Viola orbiculata	round-leafed violet	2,3,5
Xerophyllum tenax	beargrass	2,3,4,5,6
Graminoids		
Agropyron spicatum	bluebunch wheatgrass	7
Agrostis scrabra	winter bentgrass	7
Bromus carinatus	mountain brome	6
Bromus vulgaris	Columbia brome	5
Calamagrostis purpurascens	purple reedgrass	2
Carex hoodii	Hood's sedge	4,6
Carex pachystachya	thickheaded sedge	5,8
Carex petasata	Liddon's sedge	4
Carex rossii	Ross's sedge	1,6,8
Elymus glaucus	blue wildrye	6,7
Elymus spicatus	bluebunch wheatgrass	5,6
Festuca viridula	green fescue	1,2,3,4,5,7,8
Juncus parryi	Parry's rush	4,6,7
Koeleria cristata	prairie Junegrass	7
Luzula hitchcockii	smooth woodrush	2,5,6,8
Phleum alpinum	alpine timothy	7
Phleum pratense	common timothy	6
Trisetum spicatum	spike trisetum	6
Ferns and Fern Allies		
Athyrium felix-femina	ladyfern	5
Polystichum lonchitis	mountain hollyfern	2,3,4
Woodsia oregana	Oregon woodsia	5
Woodsia scopulina	Rocky Mountain woodsia	2

Sources of the Sightings

1 Layser, Jr. Earle. 1980. Flora of Pend Oreille County, Washington. Washington State University Cooperative Extension, Pullman, WA. 146 pp.

2 Wellner, Chuck. 1988. Collected or sighted by Chuck Wellner on June 24, 1988. Collections deposited in the University of Idaho Herbarium.

3 Ahlenslager, Kathy and Linda Swartz. 1992. Sighted in the proposed Round Top Mountain RNA on June 21, 1992.

4 Fries, Mary, Karen Hinman and Clay Antieau. 1993. Plants sighted from Pass Creek Pass to the top of Round Top on a Washington Native Plant Society field trip on July 10, 1993.

5 Kovalchik, Bud. 1993. Ecology plots established within the proposed Round Top Research Natural Area on August 17, 18 and 23, 1993.

6 Penny, Diane. 1994. Sighted in the proposed Round Top RNA on June 10 and September 22, 1994 by Diane Penny, Biological Technician, Idaho Panhandle NF.

7 Schuller, Reid and Shelley Evans. 1980. A partial floristic checklist for Roundtop Mountain RNA - Pend Oreille Co., Washington. On file at the Colville National Forest Supervisor's Office, Colville, WA. 2 pp.

8 St. John, Harold and Fred Warren. 1925. Preliminary list of the plants of the Kaniksu National Forest, Idaho and Washington. Contributions of the Botany Department, State Collection, Washington 2. 36 pp.

Fauna

Round Top Mountain RNA is within the range of federally listed endangered and threatened animal species. An endangered species is in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. Round Top Mountain RNA is within the recovery areas for woodland caribou (US Fish and Wildlife Service 1993) and grizzly bear (US Fish and Wildlife Service 1994). It also provides specific habitat components important to the woodland caribou and grizzly bear.

Regional Foresters identify sensitive species, as those for which population viability is a concern as evidenced by: 1) a significant current or downward trend in population numbers or density; 2) a significant current or predicted downward trend in habitat capacity that would reduce the existing distribution of a species (Reel, et al. 1989). Sensitive species lists are reviewed by the Regional Forester periodically as information on species distribution, population and viability become available.

Listed below are endangered, threatened, or sensitive wildlife species which occur within or use habitat of Round Top Mountain RNA (US Fish and Wildlife Service 1994a, Layser 1995).

Scientific Name	Common Name	Status
Canis lupus	gray wolf	Endangered
Rangifer tarandus spp. caribou	woodland caribou	Endangered
Ursus arctos	grizzly bear	Threatened
Felis lynx canadensis	North American lynx	Sensitive
Gulo gulo luteus	wolverine	Sensitive
Aegolius funereus	boreal owl	Sensitive
Martes pennanti	fisher	Sensitive

These additional wildlife species are suspected or known to occur within the Round Top Mountain RNA (Layser 1995, USDA Forest Service 1978).

Scientific Name	Common Name
Falcomiformes (hawks and falcons)	
Accipiter striatus	sharp-shinned hawk
Accipiter gentilis	goshawk
Buteo jamaicensis	red-tailed hawk
Aquila chrysaetos	golden eagle
Strididae (owls)	
Strix varia	barred owl
Strix nebulosa	great grey owl
Bubo virginianus	great horned owl
Aegolius funereus	boreal owl
Aegolius acadicus	northern saw-whet owl
Galliformes (grouse)	
Dendragapus obscurus	blue grouse
Dendragapus canadensis	spruce grouse
Bonasa umbellus	ruffed grouse
Apodiformes (swifts)	
Cypseloides niger	Vaux's swift
Selasphorus rufus	rufous hummingbird
Stellula calliope	calliope hummingbird
Piciformes (woodpeckers)	
Colaptes cafe	red-shafted flicker
Dryocopus pileatus	pileated woodpecker
Dendrocopos pubescens	downy woodpecker
Dendrocopos villosus	hairy woodpecker
Picoides arcticus	black-backed woodpecker
Picoides tridactylus	northern three-toed woodpecker
Sphyrapicus varius	yellow-bellied sapsucker

Scientific Name	Common Name
Passeriformes (perching birds)	
Nuttallornis borealis	olive-sided flycatcher
Iridoprocne bicolor	tree swallow
Tachycineta thalassina	violet-green swallow
Nucifraga columbiana	Clark's nutcracker
Perisoreus canadensis	grey jay
Corvus corax	common raven
Parus atricapillus	black-capped chickadee
Parus gambeli	mountain chickadee
Sitta canadensis	red-breasted nuthatch
Troglodytes troglodytes	winter wren
Turdus migratorius	robin
Ixoreus naevius	varied thrush
Hylocichla ustulata	Swainson's thrush
Sialia currucoides	mountain bluebird
Regulus calendula	ruby-crowned kinglet
Dendrocia auduboni	Audubon's warbler
Dendrocia townsendi	Townsend's warbler
Oporornis tolmiei	MacGillivary's warbler
Piranga ludoviciana	western tanager
Hesperiphona vespertina	evening grosbeak
Carpodacus cassinii	Cassin's finch
Spinus pinus	pine siskin
Loxia curvirostra	red crossbill
Junco oreganus	Oregon junco
Spizella arborea	tree sparrow
Zonotrichia albicollis	white-throated sparrow
Zonotrichia leucophrys	white-crowned sparrow
Insectivora (insect-eaters)	
Sorex cinereus	masked shrew
Carnifora (flesh-eaters)	
Ursus americanus	black bear
Martes americana	marten
Mustela frenata	longtail weasel
Taxidea taxus	badger
Canis latrans	coyote
Felis concolor	mountain lion
Lynx rufus	bobcat

Scientific Name	Common Name
Rodentia (gnawing animals)	
Eutamias amoenus	yellow pine chipmunk
Eutamias ruficaudus	redtail chipmunk
Tamiasciurus hudsonicus	red squirrel
Glaucomys sabrinus	northern flying squirrel
Neotoma cinerea	bushytail woodrat
Erethizon dorsatum	porcupine
Lagomorpha (pikas and hares)	
Ochotona princeps	pica
Lepus americanus	snowshoe hare
Artiodactyla (even-toed hoofed mammals)	
Cervus canadensis	elk
Odocoileus hemionus	mule deer
Odocoileus virginianus	whitetail deer
Alces alces	moose

Geology

Stoffel and others (1991) compiled a 1:250,00 scale geology map of northeastern Washington. Those authors included the most recent published mapping of the subject area by Miller (1983) and earlier work by Park and Cannon (1943).

Rodney Lentz (1995), Area Mining Geologist for the U.S. Forest Service, describes the geology of Round Top Mountain RNA as follows:

Round Top RNA lies within a relatively undeformed series of Precambrian marine sediments. The rocks are part of the Windermer Group and Belt Supergroup, and form a west-dipping, northeast-striking homocline. A strong west-northwest trending fault system cuts this series immediately south of the RNA. Across this fault, formations are more intensely folded, faulted and intruded (Miller 1983).

Underlying the RNA are metamorphosed marine sediments and intrusive rocks (greenstone) of the Shedroof Conglomerate and Leola Volcanics (Miller 1983). Shedroof rocks in the Round Top Mountain area consist mainly of boulder and pebble conglomerate and diamictite. Underlying Round Top Mountain itself and to the northwest is grey green phyllite and sandy phyllite. A concordant greenstone intrusive body (altered, mafic sill) runs northeastward across the east flank of the mountain.

Soils and Landtypes

Soils of the RNA generally formed in volcanic ash overlying glacial till. The ash is 7 to 14 inches (17.8 to 35.6 cm) thick. Soils are silt-loam in texture with a few rock fragments. However, in places the soil mantle is very thin and stony. Many soils have a layer of dense till at a depth of 24 to 36 inches (61 to 91 cm) that restricts root growth and impedes water movement (Map 5).

The last Cordilleran glacial ice sheet retreated from the area 10,000 to 12,000 years ago, and volcanic ash fell approximately 6,700 years ago. The relatively young geology and cool climate have produced weakly weathered soils that lack well defined horizonation (Layser 1980).

Six Landtype Map Units characterize the portion of the RNA on the Idaho Panhandle National Forests (USDA Forest Service 1992a).

Map Units 212 - occur on gently sloping, high elevation, mountain sideslopes and ridges underlain by hard metasedimentary rock. Aspects are mainly south and west. Soils form in volcanic ash influenced loess overlying thin glacial till.

Map Unit 213 - are found on moderately steep, high elevation, mountain sideslopes. Aspects are generally south and west. Soils form in ash influenced loess over thin glacial till or residuum.

Map Unit 214 - occurs on steep, high elevation mountain sideslopes. Aspects are generally south and west, and soils form in ash influenced loess overlying thin glacial till. Although most areas are undissected, small draws may be found. Talus occurs in some areas also.

Map Unit 223 - consists of steep, high elevation, glaciated mountain sideslopes. Dominant slopes are on north and east aspects. Soils form in volcanic ash overlying thin glacial till.

Map Unit 231 - consists of gently sloping, high elevation draws. Draws occur on glaciated mountain sideslopes and are underlain by hard, metasedimentary rocks. Soils form in volcanic ash influenced loess overlying glacial till. Aspects are generally north and east, and draws usually contain first order, headwater streams.

Map Unit 232 - consists of steep, high elevation moderately incised draws. Draws occur on glaciated mountain sideslopes and usually contain first order, headwater streams. Soils form in volcanic ash overlying glacial till. Aspects are generally north and east. Occasionally an avalanche occurs.

The area of the RNA on the Colville National Forest is not mapped to the detail of the Idaho Panhandle National Forests. It is represented by two landtypes. Seventy percent of the area is in Map Unit 44 and 30 percent is in Map Unit 76

(Klink 1977).

Map Unit 44 - consists of deep and very deep soils on steep mountain slopes in restrictive mixed glacial drift, well-drained, medium subsoils texture.

Map Unit 76 - consists of shallow well-drained soil on slightly fractured quartzite and hard granite, steep mountain slopes.

Lands

The RNA occurs on land administered by the Colville and Idaho Panhandle National Forests and is surrounded by such land. Round Top Mountain is in the Salmo-Priest Wilderness Area.

Cultural

Daniel Mattson (1995), archeologist for the Colville National Forest, evaluated the cultural resources of the RNA and reports:

Ethnographic information specific to the project area is scarce. Unlike many areas of the Pacific Northwest, early anthropological researchers did not work among the local Kalispel peoples. It was not until the late 1930s (nearly 130 years after EuroAmerican contact) that descriptions of traditional Kalispel activities were collected by Dr. Allen Smith at Washington State University. As a result, what we lack in geographic use descriptions can only be implied by comparing with those of neighboring peoples with whom more information survives. Although this is generalizing, there are numerous use patterns and activities shared, at least historically, by most of the surrounding traditional groups.

The information scarcity extends to physical evidence of Indian use in the area. This is due to lack of adequate professional archaeological survey of the area, as much as to the erosion of time and recent land disturbances. Finally, the gulf in worldview and experience which separates us from traditional users of this land adds to the problem of recognizing and interpreting cultural evidence.

Round Top Mountain RNA is within Kalispel traditional use area, but probably overlapped with that of the Lakes and Kutenai. An ancient trail along the north-south divide accessed resources in the area, as well as the traditional Kalispel salmon fishery on the lower Salmo River. An east-west trail crossed the divide just south of Round Top Mountain, and provided access from Priest Lake to Sullivan Lake areas (and areas east and west from those points).

Over 200 species of plants (for food, medicines, and technological uses) were collected in high elevation areas by local Indian groups (Turner, Bouchard &

Kennedy 1980). Hunting large mammals was probably a predominant occupation. Traps, corrals and blinds (naturally occurring or constructed) were employed in game exploitation. Lithics and minerals (for tools or ceremony) were likely mined or collected along the ridges in the area.

We can say with some certainty that collection and processing camps for whitebark pine nuts and huckleberries (the primary plant foods here), along with caribou, sheep, elk and deer, were located in saddles and openings below ridgelines, as well as adjacent springs and creeks. Processing of foods occurred close to where they were obtained, to preserve their freshness and ease their transportation down to more permanent camps and villages below. Slow-burning fires were used to split open cones for nut extraction and to dehydrate huckleberries. Packaging containers were manufactured from bark peeled from cedar and other trees. A description of an early 20th century Sahaptin hunting camp provides a timeless glimpse of what no doubt also occurred in this vicinity:

> "During fall deer hunts in the mountains, fires underneath the drying racks were kept going constantly. Meat was processed as soon as it was brought into camp. Flies and hornets were everywhere! Cutting meat and tanning hides sometimes kept us busy all through the night in order to keep up with what the hunters brought in to camp. All choice cuts of meat were dried for winter use only entrails, heads, etc., were eaten fresh in camp. The dried meat was pounded flat and packed into sacks to be transported back to the villages. Even the leftover powder from meat pounding was sacked up for lukameen' [stew] and gravy. Bones were also brought back for their marrow. Nothing was wasted (personal communication, Verbena Greene 1987).

It is well documented with the Kalispel and other neighboring peoples that high elevation areas were places used for obtaining power and medicine. This included puberty power quests at certain high ridge points and mountain lakes. Medicinal plants collected in high elevations were often more powerful than those same specie collected further down (personal communication, Viola Kalama and Bernice Mitchell 1987). Again, a Sahaptin quote (from an elder medicine woman) describes the situation:

> "Going out there with our took'ush [medicine sticks]: that's the culture of the mountain areas. Certain shrines, places where water comes up, these are the places where people went for their tomau'wish [spirit power]" (personnel communication, Pruny Williams 1988).

While we will never understand or even fully recognize all the cultural uses of the higher elevation zones, we can gain much knowledge from adequate inventory of this area. No doubt there is much physical evidence on this landscape which documents thousands of years of human exploitation of the land and resources, including those discussed above.

There is no comprehensive archeological survey for Round Top Mountain. Although no sites are documented, it is likely that evidence of native cultural use exists within the area.

A Forest Service lookout was constructed on Round Top Mountain in 1927. During the early years of operation, the lookout hosted firefighters "guard school" (Photos 8 and 9). The cupola cabin lookout was destroyed in 1956, but the remains of two outbuildings, which accompanied the lookout, are still found within the area (Krese 1985).

IMPACTS AND POSSIBLE CONFLICTS

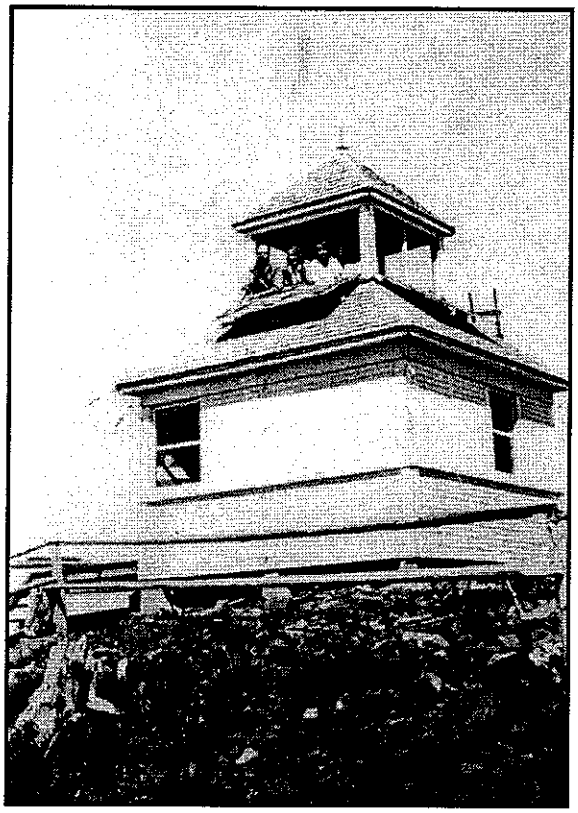
Mineral Resources

Exploration and mine development in northeastern Washington began about the turn of the century. Soon the region's mining districts became significant producers of precious and base metals and some non-metals such as limestone, dolomite, magnesite and quartzite. Sand and gravel or quarry rock became important locally as communities and roadways were established. Many mines in the region closed before or during the depression years of the 1930's, never to reopen. Important exception are the Republic gold district, Metalline zinc-lead and limestone district, Addy dolomite and quartzite district and Spokane uranium district. All of these districts include, or until recently, included producing mines (Bolenus 1980; Castor, et al. 1982).

Rodney T. Lentz (1995), Area Mining Geologist for the US Forest Service evaluated the mineral resources of this RNA. Round Top Mountain RNA lies entirely within the Salmo-Priest Wilderness, established by the Washington State Wilderness Act of 1984. The wilderness lands were withdrawn from mineral entry on July 3, 1984, except for valid existing rights, under the authority of the Wilderness Act of 1964. No valid existing mining claims or other mineral rights are known within the RNA boundary.

No known mineral prospects, mines, or occurrences are known within the RNA (Hunttin 1956), and the area has low potential for mineral activities (Grant 1982, USDA Forest Service 1988). Bureau of Land Management records show no current or past claims in the vicinity, from 1976 to present. However, Miller (1983) noted "sparsely disseminated copper (silver?) sulfide mineral" in quartzite faces of the Shedroof Conglomerate on Pass Creek Road, immediately south of the RNA.

Although no significant alluvial deposits are mapped in the area, it is likely that glacial drift mantles some parts. Area bedrock is probably suitable for quarrying and crushing for road aggregate. However, demand is minimal and utilization would be restricted by wilderness status.



Photograph 8. Former Forest Service Lookout on Round Top Mountain.
Photo attribute: Henry Peterson.

Photograph 9. Round Top Mountain Lookout hosted fire fighter's "guard school" during the early years of operation..
Photo attribute: Merlie Morrow.

Grazing

The RNA is not within a grazing allotment. Livestock grazing is not a tool to protect and preserve the natural environment of this RNA, and grazing allotments an permits would not be appropriate (USDA Forest Service 1988, USDA Forest Service 1987).

Timber

Lands within the RNA are not part of the commercial timber base of either the Idaho Panhandle or Colville National Forests (USDA Forest Service 1987, USDA Forest Service 1988). RNA establishment will not withdraw any commercial timber.

Watershed Values

The RNA includes the headwaters tributary and feeder streams for the Gold and Granite Creek drainages to the east, and the Stony creek drainage to the west. Thes values will be protected by RNA establishment.

Recreation Values

The Shedroof Divide Trail 512 is a popular hiking and horseback riding route. In addition, a non-maintained foot path leads to the summit of Round Top Mountain. Although trail use is moderate to high, impacts to the grassland have been minimal. Establishment of the RNA will not affect maintainence of the trail. However, no ne trails will be constructed within the RNA.

To protect and preserve the natural environment in the RNA, recreation may either b curtailed, if degradation occurred, or guided with interpretive signing. Existing facilities might be closed (USDA Forest Service 1988, USDA Forest Service 1987).

Wildlife and Plant Values

Establishment of Round Top Mountain RNA will maintain habitat for a variety of wildlife species, including grizzly bear, caribou, and lynx. Conflicts with plant values occur where species are either protected from natural disturbance pressures or subjected to artificial ones. Whitebark pine (Pinus albicaulis), for example, i declining over the majority of its range due to suppression of wildfires and infection by an exotic rust (personal communication, Jay Berube 1996).

Special Management Area Values

The RNA is within the Salmo-Priest Wilderness Area (USDA Forest Service 1992). Establishment of the RNA is compatible with wilderness values and the goals of

wilderness management, Forest Service Manual 2320.1 and 2320.2 (USDA Forest Service 1994). The RNA is also within the woodland caribou (US Fish and Wildlife Service 1994) and grizzly bear recovery areas (US Fish and Wildlife Service 1993). Management of the RNA is compatible with the recovery plans.

Transportation Plans

Establishment of this RNA will have no impact on the transportation system within the Colville National Forest or the Idaho Panhandle National Forests. No additiona trails are planned within the RNA, but the existing trail will be maintained. Although Round Top Mountain is a known helispot, it is not maintained.

MANAGEMENT PRESCRIPTION

Round Top Mountain RNA is within the Salmo-Priest Wilderness, and is therefore administered as Management Area 11 of the Idaho Panhandle National Forests Plan (USDA Forest Service 1987) and Management Area 9 of the LRMP for Colville National Forest (USDA Forest Service 1988). Research Natural Area's and proposed RNA's are otherwise included in Management Areas 14 for the Idaho Panhandle Forests Plan (Appendix A) and 4 in the Colville LRMP (Appendix B).

Wilderness resource management guidelines, which focus on maintaining natural processes, are compatible with management objectives for RNA's. Activities such a timber harvest, mining and livestock grazing are restricted within Wilderness Areas. No motorized use is permitted, and no roads will be constructed in the area. The Shedroof Divide Trail (#512), will be maintained, but no new trails will be constructed within the RNA. High impact or resource damaging recreation use wil be discouraged.

FIRE AND VEGETATION MANAGEMENT

Fire

Management and protection of the Round Top Mountain RNA will be directed toward maintaining natural features and natural ecological processes. Fire is increasingl recognized as an important natural process in Northern Rocky Mountain Forest Ecosystems (Arno and Davis 1980; Cooper, et al. 1991; Larson 1926; Leiberg 1898). Priest Lake Ranger District fire history maps show lightning-caused fires burned portions of the RNA in 1919, 1927, 1944, and 1974. Typically, fires within the subalpine forest zone are low to medium intensity and less than 10 acres in size. Much less frequently (greater than 150 year periods), stand replacing burns spread over many acres, on wind exposed ridges (Arno and Davis 1980). Most recently, in 1994, two fires (Mankato Mountain and Pass Creek) burned a total of 1130 acres alon the Shedroof Divide, just north and south of the RNA.

Natural fire shapes the biological diversity of landscapes and communities over

time. In the absence of fire, subalpine forests become climax communities dominate by subalpine fir and Engelmann spruce. These forests are prone to catastrophic fires as a result of accumulated fuels. Prior to 1900, and fire suppression policy mountain forests were a mosaic of western larch, lodgepole pine, subalpine fir, Engelmann spruce and whitebark pine (Arno and Davis 1980). In habitats where whitebark pine is seral, such as the moist subalpine forests within the RNA, fire i the key influence on whitebark pine establishment and persistence (Arno and Davis 1980; Arno and Weaver 1989).

Daubenmire (1981) asserted that fire is not responsible for the tree-less parks of the Selkirks, such as Round Top. However, he recognized the importance of cyclic fires across this landscape, and noted that "such fires would certainly spread across at least the drier types of parks." The objectives for establishment of Round Top Mountain as a Research Natural Area require the maintenance of its natura ecological processes, including fire.

The Forest Service Manual (FSM) 4063.32 states "in protecting research natural area within congressionally designated areas (4063.5) the management direction for the research natural area must meet statutory mandates (FSM 1920)" (USDA Forest Service 1994). Fire management within the RNA therefore should be consistent with overall fire management guidelines developed for the Salmo-Priest Wilderness. These guidelines are currently being developed within the context of the larger Selkirk Mountain Ecosystem; and will most likely be a combination of prescribed natural ignition (allowing natural-caused fires) and minimum impact suppression (personal communication, Steerman 1995).

Round Top Mountain RNA also occurs within the Selkirk Mountain Woodland Caribou Recovery Area. The woodland caribou is listed as an endangered species and managed under provisions of the federal Endangered Species Act (36 U.S.C. 1531-1544). The RNA and adjacent areas are considered late winter, summer and spring caribou habitat. Old-growth and mature subalpine fir and spruce forests are key elements o these habitats. During the winter months, woodland caribou feed almost exclusively on the lichens of these forests (Freddy 1974). Therefore, the fire management strategy for the RNA must also meet the objectives of the Caribou Habitat Recovery Area. Fire suppression may be necessary during periods of severe fire danger, in order to protect/maintain critical caribou habitat areas (personal communication, Layser 1996).

Human or non-natural caused fires will be suppressed according to minimum-impact methods appropriate for a Wilderness and Research Natural Area. Any suppression of natural ignition fires will also be conducted according to minimum impact standards

Vegetation

As directed in the Forest Plans, insects, disease and non-native plants will be monitored and evaluated. If conditions pose a significant threat to the RNA ecosystem, caribou habitat or adjacent non-wilderness lands, management measures ma be taken, with a preference given to biological controls.

Plant collecting within the RNA will be prohibited, unless expressly authorized in an approved research project.

ADMINISTRATION RECORDS AND PROTECTION

Administration and protection of Round Top Mountain RNA will be the responsibility of the Colville National Forest and Idaho Panhandle National Forests. The District Rangers at Sullivan Lake Ranger District and Priest Lake Ranger District have direc responsibility.

Since this RNA is within a wilderness area, requests to conduct research in the RNA can be made to the Regional Foresters, who are responsible for research or studies conducted in the area. They will evaluate research proposals and coordinate all RN studies and research with the District Rangers. All plant and animal specimens collected in the course of RNA research will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Directors

Records for the Round Top Mountain RNA will be maintained in the following offices:

- -Pacific Northwest Regional Forester, Portland, Oregon
- -Forest Supervisor, Colville National Forest, Colville, Washington
- -District Ranger, Sullivan Lake Ranger District, Metaline Falls, Washington
- -Pacific Northwest Research Station, Portland, Oregon
- -Northern Regional Forester, Missoula, Montana
- -Forest Supervisor, Idaho Panhandle National Forests, Coeur d'Alene, Idaho
- -District Ranger, Priest Lake Ranger District, Priest Lake, Idaho
- -Intermountain Research Station, Ogden, Utah
- -Forestry Sciences Laboratory, Intermountain Research Station, Moscow, Idaho

ARCHIVING

The Pacific Northwest Research Station and the Forestry Sciences Laboratory of the US Forest Service will be responsible for maintaining the Round Top Mountain RNA research data file and list of herbarium and species samples collected. All data will also be submitted to the Research Natural Area monitoring database located in the office of the Northern Region, Missoula, Montana, and the Forestry Sciences Laboratory, Corvallis, Oregon.

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Boundary Description

Round Top RNA is located in Township 38 North, Range 45 East, Willimatte Meridian, Section 8 and Section 9, occupying Federal forest lands within the Salmo-Priest Wilderness Area, Sullivan Lake Ranger District, Colville National Forest, and the Priest Lake Ranger District, Kaniksu National Forest, Pend Oreille County, Washington. (Figures 1-2)

The boundary of the RNA was originally established and plotted on the USDA, Forest Service Primary Base Series Maps, 7.5 minute series (topographic), Scale 1:24,000, Pass Creek and Helmer Mountian Quadrangle. These maps are on file with the Supervisor's Office, Idaho Panhandle National Forests, Coeur d'Alene, Idaho and the Supervisor's Office, Colville National Forest, Newport, Washington.

The geographical positions contained in the boundary description are expressed in Latitude and Longitude on the 1927 North American Datum (NAD27), State Plane Coordinate System, Washington North Zone 4601, mean elevation 5800 feet. These geographic positions were measured from the preceding maps using a Numonics Digitizer and converted to Latitude and Longitude through JELLY USDA-FS software. The electronic record of this digitization is on file at the U.S. Forest Service, Northern Regional Office in the Cadastral Survey Section.

By use of this procedure, the precision of the geographic position correlates to National Map Accuracy Standards. Any subsequent field location of this boundary should be designed to meet these accuracy standards.

The boundary of the Round Top RNA is described as follows:

Beginning at Point 1 northeast of the summit of Round Top Mountain at the 5800 foot elevation line having the Latitude 48°48'53.7 and Longitude 117°07 33.4.

Thence southeasterly, 1145 feet on a line crossing the boundary between the Colville and the Kaniksu National Forests to Point 2 at the 5800 foot elevation line, having the Latitude 48°48'45.3 and Longitude 117°07'22.0.

Thence southeasterly, following the 5800 foot elevation line to Point 3, having the Latitude 48°48'28.8 and Longitude 117°07'06.9.

Thence southwesterly, 471 feet on a line crossing the ridgetop to Point 4, on the 5800 foot elevation line, having the Latitude 48°48'25.0 and Longitude 117°07'11.0.

Thence southwesterly, following the 5800 foot elevation line to Point 5, having the Latitude 48°48'15.8 and Longitude 117°07'43.1.

Thence northwesterly, 663 feet on a line crossing the boundary between the Colville and the Kaniksu National Forests to Point 6 at the 5800 foot elevation line, having the Latitude 48°48'17.0 and Longitude 117°07'52.3.

Thence northwesterly, following the 5800 foot elevation line to Point 7, having the Latitude 48°48'42.6 and Longitude 117°08'10.9.

Thence northeasterly, 1678.7 feet on a line crossing the ridgetop to Point 8, on the 5800 foot elevation line, having the Latitude 48°48'54.7 and Longitude 117°07'53.9.

Thence northeasterly, following the 5800 foot elevation line to Point 1, and the true point of beginning.

Area

The area of Round Top Mountain Research Natural Area is 212.4 acres, more or less.

I certify that the above boundary description of the Round Top Mountain RNA was prepared under my direct supervision.

Forest Land Surveyor, Idaho Panhandle National Forests

4/19/94
Date

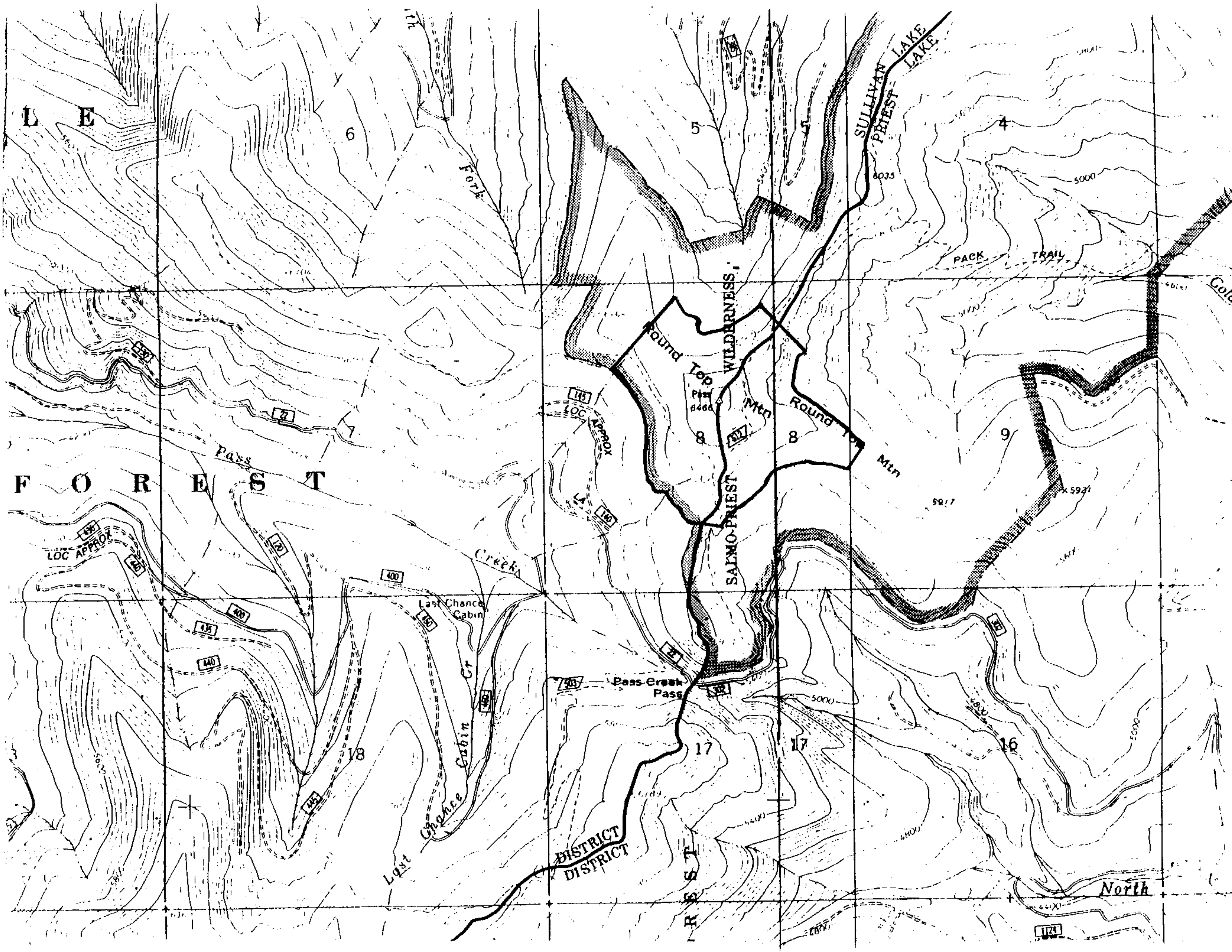

FOREST
SALMO-PRIEST WILDERNESS
Round Top Mtn
Round Top Pass 6466
SULLIVAN LAKE
PRIEST LAKE
DISTRICT
DISTRICT
Pass Creek Pass
Last Chance Cabin
Last Chance Cabin Cr
Pass Creek
Fork
PACK TRAIL
LOC APPROX
Cold
North

FIGURE 1

ROUND TOP MOUNTAIN
RESEARCH NATURAL AREA

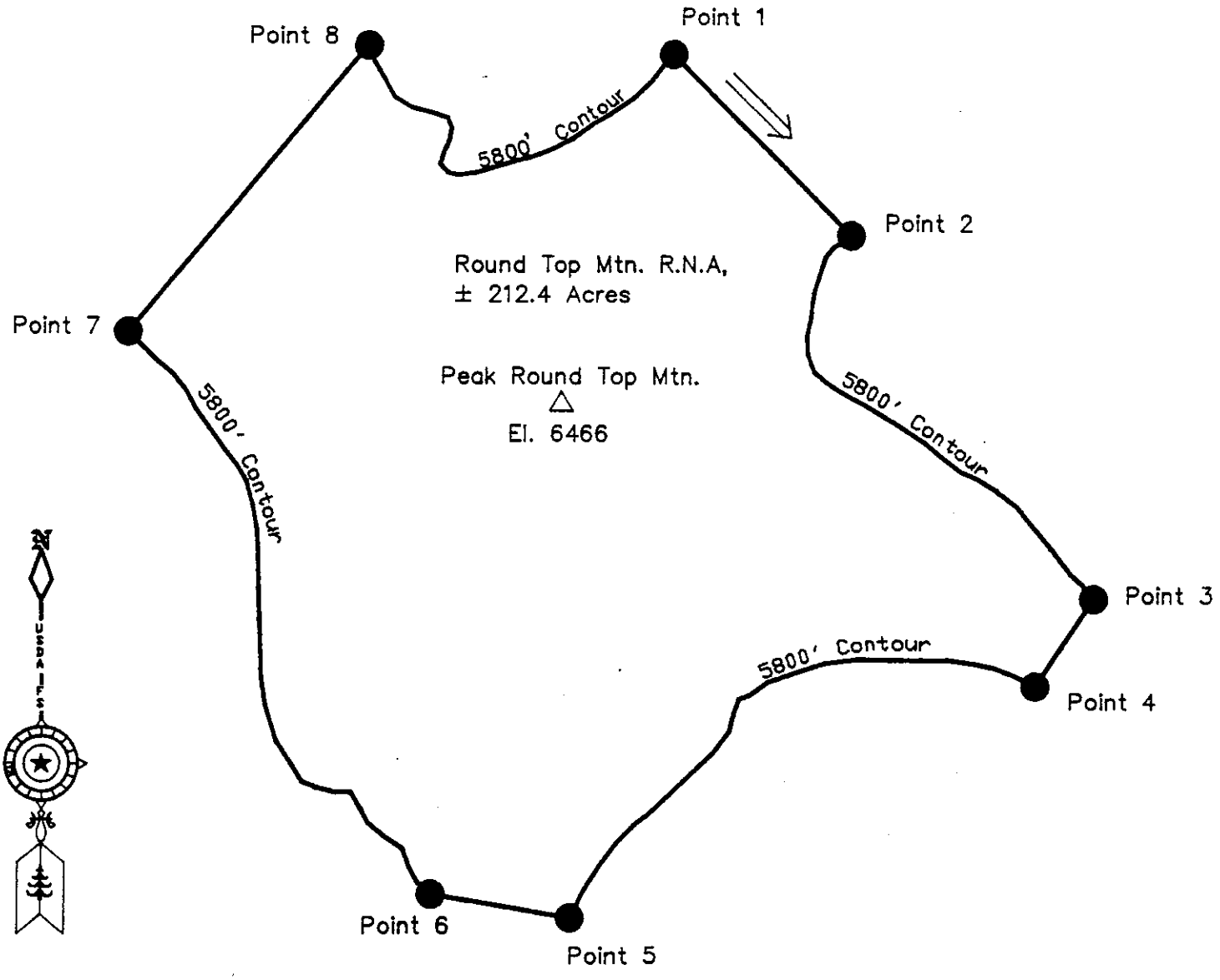


Figure 2

APPENDIX A. Idaho Panhandle National Forests Plan, RNA Management Prescription

Description:

Management Area 14 consists of areas to be utilized for scientific research and includes the existing and candidate Research Natural Areas (RNA's) and experimental forests.

Research Natural Area designations are based upon the goals within the Regional Guide as identified in Chapter II. Existing RNA's include:

1. Tepee Creek
2. Upper Fishook Creek
3. Hunt Girl Creek
4. Montford Creek
5. Canyon Creek
6. Kaniksu March
7. Bottle Lake

Candidate RNA's include:

1. Roundtop
2. Binarch Creek
3. Upper Shoshone Creek
4. Potholes
5. Upper Priest River
6. Smith Creek
7. Pond Peak
8. Theriault Lake
9. Spion Kop
10. Scotchman No. 2 1/
11. Snowy Top
12. Section 14 Lakes 1/
13. Five Lakes Butte 1/

The management area contains the Priest River and Deception Creek Experimental Forests.

Management Goals:

Research Natural Areas: Provide areas for non-manipulative research, observation, and study of undisturbed ecosystems which typify forest, shrubland, grassland, alpine, aquatic, and geologic types.

Experimental Forests: Provide areas for manipulative research. Specific exceptions to forest standards included in Chapter II are to be identified in the research project plan and approved by the Station Director.

1/ These RNA's are included within proposed wilderness areas (MA 11) and not included in this management area (MA 14).

Management Area 14 cont.

Standards:

Resource Element	Standards
RESEARCH	
Area Management	Specific management direction, including research activities, for individual areas will be incorporated into this plan as amendments.
RECREATION	
Dispersed Recreation Management	Experimental Forests: Manage for roaded natural ROS experience subject to research needs.
Visual Management	RNA: Manage for a visual quality objective of preservation.
	Experimental Forest: Manage for adopted VQO, subject to research needs.
Trail Management	RNA: Existing trails can be maintained; no new trails are permitted.
WILDLIFE AND FISH	
Habitat Improvement	RNA: No habitat improvement permitted.
	Experimental Forests: Practices to be identified in research project plan.
TIMBER	
Timber Management (RNA: unavailable) (Experimental Forest: Unregulated)	No timber management practices except as identified in research project plans. Firewood permits and salvage sale permitted through consultation with Research Director on Experimental Forests. Forest land is classed as unsuitable for timber production.
WATER AND SOIL	
Soil and Water Protection	Experimental Forests: Exceptions to General Standards and Guidelines may occur for research purposes.

Management Area 14 cont.

Resource Element	Standards
FACILITIES	
Road Construction and Reconstruction	RNA: No new road construction or reconstruction. Experimental Forests: Maintenance and closure as agreed upon with Station Director.
MINERALS	
Minerals Management	RNA: Common variety minerals will not be sold. No surface occupancy will be used for leasing activities. Areas recommended for withdrawal as needed. Experimental Forests: Areas withdrawn from entry.
LANDS	
Landownership Adjustment	Not available for disposal.
Special Uses	RNA: Non-occupancy permits compatible with area objectives will be allowed. Experimental Forests: Permits compatible with research needs permitted.
PROTECTION	
Insects and Disease	RNA: Generally no control measures will be undertaken unless epidemic populations exist and adjacent lands are threatened. Control generally on adjacent lands only. Experimental Forests: Control may be used when compatible with research needs.
Prescribed Fire	Experimental Forests: Practices are to be identified in the research project plans.
Fire Protection	Confine, contain and control fires to prevent fire loss of trees. Coordinate fire protection with research.

Schedule of Management Practices:

Unregulated timber harvesting for research purposes may occur periodically.

Monitoring and Evaluation Requirements:

The monitoring requirements from Chapter IV that are applicable to the management area are: A-1, A-2, E-1, F-1, F-2, F-3, H-1, I-1, J-1, and K-1. The procedures outlined in Chapter IV will be followed to evaluate the data gathered during monitoring.

MANAGEMENT PRESCRIPTION: 4

EMPHASIS: Research Natural Area

MANAGEMENT GOAL: Provide opportunities for research in ecosystems influenced only by natural processes.

DESCRIPTION: Research Natural Areas (RNAs) contain examples of typical natural ecosystems or unique kinds of vegetation, animals and land which are reserved for scientific and educational purposes. RNA's are dedicated to non-manipulative and non-destructive research. Specific resource values and management activities will be prescribed in individual establishment reports.

Resource Element	Resource/Activity Standards and Guidelines
RECREATION	
Visual Management	Research facilities installed within RNA's will blend with the natural surroundings.
Developed Recreation	No new physical improvements for recreation purposes are permitted, unless needed to protect the values for which the RNA was established.
Off-Road Vehicles	Off-road vehicle use is prohibited.

WILDLIFE AND FISH	
Habitat Improvement	Habitat improvement is generally not appropriate. Protection and maintenance of unique values of the RNA is appropriate. Use appropriate RNA guidelines when studying wildlife, fish and plants.
RANGE	
Range Management	Conditions of grazing will be followed as defined in the establishment report.
TIMBER	
Timber Harvesting	No scheduled timber harvest is permitted. Salvage and/or firewood harvest is not appropriate.
MINERALS	
Minerals Management	Recommend withdrawal from mineral entry. If withdrawn, validity examinations may be conducted on existing mining claims. Decisions to lease oil and gas, or other leasable minerals will be made through NEPA analysis. Saleable mineral disposal and stockpile sites are not appropriate.
LANDS	
Land Ownership Adjustment	Retain National Forest System lands; acquire private lands needed to support the RNA program.
Special Uses	Rights-of-way grants are not appropriate. Special use permits will not be issued.

FACILITIES	
Roads	Construction of new roads is not appropriate.
Trails	Maintenance and reconstruction of existing trails is permitted. Construction of new trails not allowed.
Utility Corridors	Avoid locating utility corridors in this management area.
PROTECTION	
Wildfire	Unless plans approved by the Station Director provide for letting natural fires burn, aggressive containment using low impact methods should be used. High impact methods will be used only to prevent a total loss of the Research Natural Area. Mop-up should be minimized with natural burnout being the preferred method. Initial attack and suppression methods will be designed to maintain RNA characteristics.
Prescribed Fire	Planned ignitions may be used as a means of achieving RNA objectives.
Insect & Disease Control	Insect and disease control is appropriate to protect the uniqueness of the Research Natural Area.
Plant Collection	Plant collection will be prohibited in existing or proposed RNAs, unless expressly authorized in an approved research project.

DECISION NOTICE/DESIGNATION ORDER
AND
FINDING OF NO SIGNIFICANT IMPACT

Round Top Mountain Research Natural Area
Establishment and Forest Plan Amendments
(Pend Oreille County, Washington)

Colville National Forest.....Idaho Panhandle National Forests
Sullivan Lake Ranger District.....Priest Lake Ranger District

Introduction

The purpose of establishing the Round Top Mountain RNA is to contribute to a series of RNAs designed to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance" (36 CFR 251.23).

An evaluation by the Regional RNA Committee, pursuant to direction in Forest Service Manual (FSM) 4063.04b, identified these types as suitable and desirable for inclusion in the national RNA network. Round Top Mountain RNA was selected to represent a green fescue subalpine grassland, in northeastern Washington. Currently, there are no RNAs representing the green fescue grassland type within the Washington Natural Areas Reserve system.

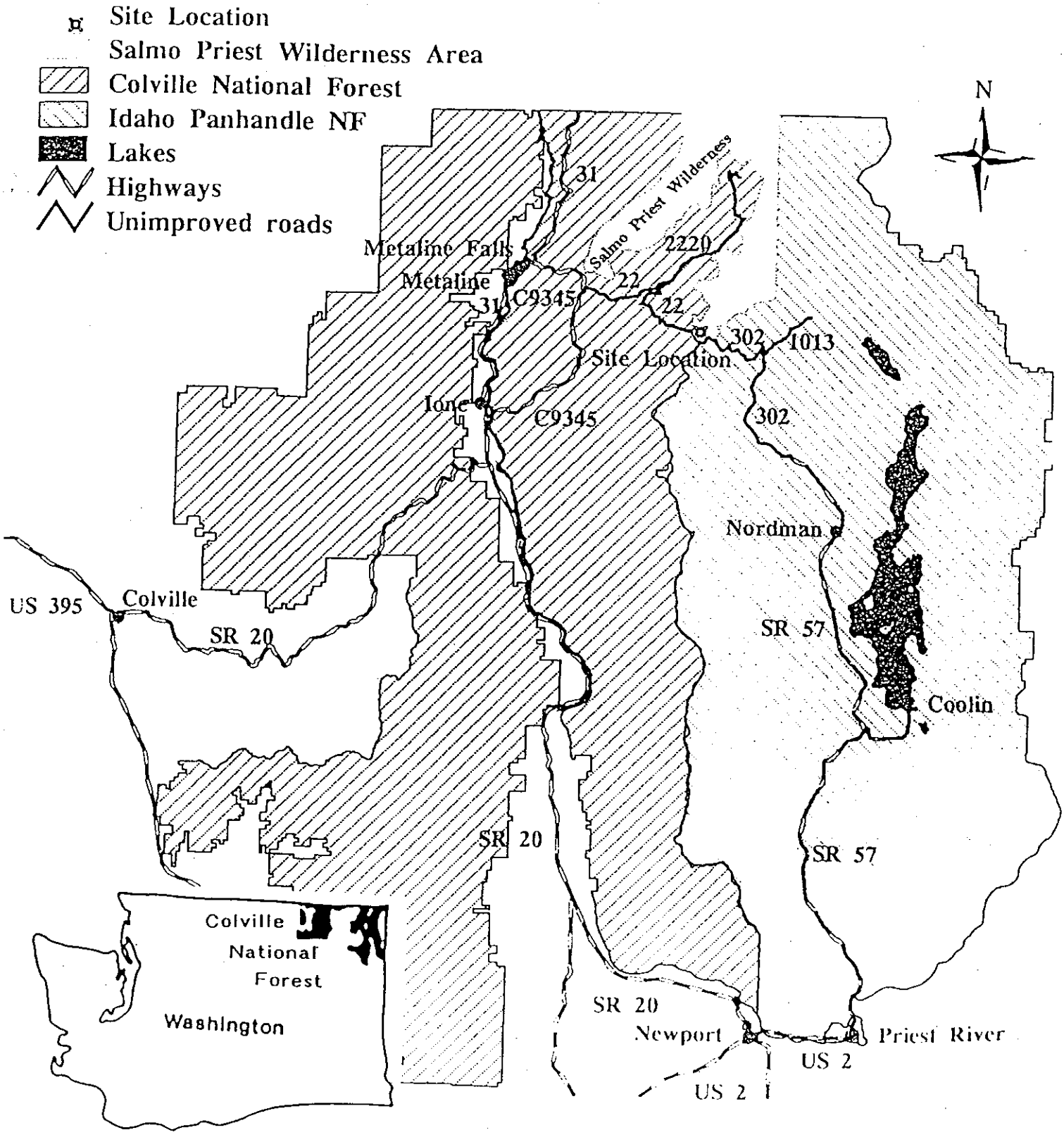
In addition to the green fescue grassland, Round Top Mountain RNA includes old growth subalpine fir forest, whitebark pine krummholz and habitat for a variety of rare plants and animal species. Establishment of Round Top Mountain RNA provides long-term protection and recognition of these community types. How the proposed Round Top Mountain RNA contributes to the RNA network by providing examples of these three community types is discussed in the Land and Resource Management Plan (L&RMP) final EIS for the Colville National Forest (pp. III-133-135) and Idaho Panhandles National Forests (p. II-15), the State of Washington Natural Heritage Plan--1993/1995 Update (WNHP)(pp. 66-67), and the Recommended RNAs within the Idaho Panhandle National Forests and Adjacent Area (p. 3).

The Round Top Mountain area was reexamined from 1992 to 1994 to determine whether the environmental effects of establishing it as an RNA had changed since 1987 and 1988. Issues raised in this reexamination included: providing necessary protection of the key elements within the RNA; and effects of RNA establishment with a designated wilderness area. This analysis was documented as an environmental assessment.

Decision

By virtue of the authority delegated to me by the Chief of the Forest Service in FSM 4063, I hereby select Alternative A and establish the 212 acre (86-hectare) Round Top Mountain RNA. It shall comprise 212 acres of land in Pend Oreille County, Washington, with 109 acres (43 hectares) on the Colville National Forest (Sullivan Lake Ranger District) and 103 acres (43 hectares) on the Idaho Panhandle National Forests (Priest Lake Ranger District). See Establishment Record "Location" (pp. 9-12) and location map on next page. The

Map 1 - Site Location
Round Top Mountain Research Natural Area



RNA lies entirely within the existing Salmo-Priest Wilderness Area. These lands were withdrawn from mineral entry on July 3, 1984, so no additional mineral withdrawals are proposed or necessary.

This decision establishes a 212 acres Round Top Mountain RNA which is to be managed according to direction provided in the L&RMP (Forest Plans) for the Colville National Forest (pp. 4-89-91) and the Idaho Panhandle National Forests (pp. III-61-64). Reference should also be made to the L&RMP final EIS for Colville National Forest (pp. III-131-136) and Idaho Panhandle National Forests (p. II-102). Alternative A was selected because it provided the best long-term protection and recognition of green fescue and subalpine fir community types (Alternative A, EA pp. 3-4).

A 64 acre (26 hectares) Round Top Mountain RNA (Alternative B) was identified in the Forest Plans with 30 acres on the Colville National Forest and 34 acres on the Idaho Panhandle National Forests and was to be managed according to direction provided in respective Forest Plans. As directed in FSM 4063.1, the boundaries of the RNA were enlarged to 212 acres to better protect the integrity of the green fescue grassland.

The added acres in Township 38 North, Range 45 East, Sections 8 and 9 will increase the original RNA area (Alternative B) by 148 acres (60 hectares)--79 acres on the Colville National Forest and 69 acres on the Idaho Panhandle National Forests. These additional acres add important subalpine fir forest types and allow conditions within the interior of the RNA to remain largely un-modified.

This formal designation of the 212 acre RNA will amend the respective Forest Plans. The decision is consistent with the management direction, but not consistent with the land allocation for Round Top Mountain in the Forest Plans. The Colville and Idaho Panhandle Forests Plans are hereby amended to change the allocation of the 212 acre Round Top Mountain RNA from "proposed" to "established"

109 acres (44 hectares) Management Area 4 on the Colville National Forest

103 acres (43 hectares) Management Area 14 on the Idaho Panhandle National Forests

This is a non-significant amendment of the respective Forest Plans (36 CFR 219.10(f)). Adoption of this amendment will not significantly change the forest wide impacts disclosed in the final EIS for each respective forest.

Public Involvement

Round Top Mountain was identified in the Forest Plans as a proposed RNA based on the relatively undisturbed conditions in the area in 1987 and 1988. Comments received from interested and affected members of the public supported establishment of an RNA in the area. At that time, a proposed Round Top Mountain RNA provided the most appropriate site--a green fescue subalpine grassland in northeastern Washington--for inclusion in the national RNA network.

Designation of proposed RNAs was considered during development of the Forest Plans (Colville L&RMP, Final EIS, p. II-117; Idaho Panhandle National Forests, L&RMP, Final EIS, Planning Record no. 25). Site conditions and public concerns were reviewed. General conditions and environmental effects of designation are much the same as described on pages II-117, III-131-136 of the Colville National Forest L&RMP, Final EIS and page II-102 of the Idaho Panhandle National Forests Plan.

Scoping began with the 1987 and 1988 Forest Plans. A scoping letter on issues was mailed to the public in 1995. The Round Top Mountain RNA proposal has been listed in the quarterly publication, "Schedule of Proposed Actions" since fall of 1994 for the Idaho Panhandle National Forests and winter of 1995 for the Colville National Forest.

Other Alternatives Considered

Alternative B (Forest Plan Boundary) would establish a 64 acre Round Top Mountain RNA, which was identified in the Colville Forest Plan (p. III-133) and the Panhandle National Forests Plan (p. II-15). The area would be managed according to direction in the Colville Forest Plan (pp. 4-89-91) and the Idaho Panhandle National Forests Plan (pp. III-61-64) for RNAs. The RNA boundaries would follow the edge of the green fescue grassland. Interior conditions of the RNA would be vulnerable to activities occurring adjacent to the area.

Alternative C (No Action) continues management of proposed RNA according to direction in the respective Forest Plans. This alternative does not meet guidelines in the Forest Plans for formal establishment of proposed RNAs.

Finding of No Significant Impact

Based on an environmental analysis documented in an environmental assessment, it has been determined that this decision (Alternative A) is not a major federal action that would significantly affect the quality of the human environment. Therefore, an environmental impact statement is not required. This determination is based on the following actors (40 CFR 1508.27).

Context

Although this is an addition to the National network of RNAs, both short-term and long-term physical and biological effects are limited to the local area (Establishment Record, pp. 26-31).

Intensity

*There are no known effects on public health and safety.

*There are no known effects on historic or cultural resources, actual or eligible National Register of Historic Places, sites, park lands, prime farm lands, wetlands, or wild and scenic rivers. No significant adverse effects are anticipated to any environmentally sensitive or critical area (see EA pp. 3-4, Establishment Record pp. 24-25, 28-29).

*Effects on the human environment are uncertain, do not involve unique or unknown risks, and are not likely to be highly controversial.

*The action is not likely to establish a precedent for future actions with significant effects.

*No significant direct, indirect, or cumulative impact to the natural resources or other components of the human environment are anticipated (EA pp.3-4, Establishment Record pp. 26-31).

*The decision will not adversely affect any federally listed or proposed endangered or threatened species or regionally sensitive species of plants or animals or their critical habitat (see EA p. 4, Establishment Record pp. 15-22, 28).

*The proposed action is consistent with Federal, State, and local laws and requirements for the protection of the environment. The Round Top Mountain RNA lies entirely with the existing Salmo-Priest Wilderness Area.

Implementation

Implementation of this decision shall not occur within 7 days following publication of the legal notice of the decision in the respective newspapers of record:

Pacific Northwest Region (in Washington state)
The Seattle Post-Intelligencer

Northern Region (in Northern Idaho and Eastern Washington states)
The Spokesman Review

Appeal Opportunities

This decision is subject to appeal pursuant to 36 CFR Part 217. A copy of the Notice of Appeal must be in writing and submitted to:

Chief, USDA - Forest Service
ATTN: NFS Appeals
14th and Independence Avenue, S.W.
P.O. Box 96090
Washington, D.C. 20090-6090

Any written Notice of Appeal of this decision must be fully consistent with 36 CFR 217.9 (Content of a Notice of Appeal) and must include the reasons for appeal and be submitted within 45 days from the date of legal notice of this decision in The Seattle Post-Intelligencer for Pacific Northwest Region and The Spokesman Review for Northern Region.

The Forest Supervisors of the Colville and Idaho Panhandles National Forests will notify the public of this decision and mail a copy of the Decision

Notice/Designation Order to all persons interested in or affected by the decision.

Contact Person

For information on Round Top Mountain RNA, contact Kathy Ahlenslager, botanist, Colville National Forest at 509-684-7178 or Diane Penny, Biological Technician, Idaho Panhandle National Forests, Priest Lake Ranger District at 208-443-2512.

Kathleen A. McAllister for
DALE N. BOSWORTH
Regional Forester
Northern Region (R1)

1-31-98
Date

ROBERT W. WILLIAMS
Regional Forester
Pacific Nortwest Region (R6)

February 4, 1998
Date

Seattle Post-Intelligencer

Friday, February 13, 1998 C19

PUBLIC NOTICES

380 Legal Notices

NOTICE OF DECISION

Forest Service, USDA, Regional Foresters for the Pacific Northwest Region (Portland, Oregon) and Northern Region (Missoula, Montana) made a decision to establish a 212 acre Round Top Mountain Research Natural Area. It comprises 212 acres of land in Pend Oreille County, Washington, with 109 acres on the Colville National Forest (Sullivan Lake Ranger District) in the Pacific Northwest Region, and 103 acres on the Idaho Panhandle National Forests (Priest Lake Ranger District) in the Northern Region. The RNA lies entirely within the existing Salmo-Priest Wilderness Area. This decision will be implemented after February 20, 1998.

A copy of the Decision Notice/ Designation Order and Finding of No Significant Impact is available upon request from the Regional Office, Environmental Coordination, P.O. Box 3623, Portland, Oregon 97208.

This decision is subject to appeal pursuant to Forest Service regulation 36 Code of Federal Regulation (CFR) Part 217. Any written Notice of Appeal must be fully consistent with 36 CFR 217.9 (Content of a Notice of Appeal) and must include the reasons for appeal. Any written appeal must be postmarked or received by the Appeal Deciding Officer, Chief Mike Dombeck, USDA - Forest Service, ATTN: NFS Appeals, P.O. Box 96090, Washington, D.C. 20090-6090 within 45 days of the date of this legal notice.

For further information about Round Top Mountain RNA, contact Kathy Ahlenslager, Botanist, Colville National Forest (509-684-7178) or Diane Penny, Biological Technician, Idaho Panhandle National Forests, Priest Lake Ranger District (208-443-2512).

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ENVIRONMENTAL ASSESSMENT

For

Round Top Mountain Research Natural Area

Establishment and Forest Plan Amendments
(Pend Oreille County, Washington)

Colville National Forest.....Idaho Panhandle National Forests
Sullivan Lake Ranger District.....Priest Lake Ranger District

Proposed Action

The proposed action is to establish a 212-acre (86-hectare) Round Top Mountain Research Natural Area (RNA) and to manage it according to direction provided in the Land and Resource Management Plans (Forest Plans) for the Colville National Forest (pages 4-89 to 4-91) and the Idaho Panhandle National Forests (pages III-61 to III-64). Also refer to the Final Environmental Impact Statement (FEIS) for the Colville Forest Plan (pages III-131-136), and the FEIS for the Idaho Panhandle Forests Plan (page II-102).

A 64-acre (26-hectare) Round Top Mountain proposed RNA was identified in the Forest Plans with 30 acres (12 hectares) on the Colville National Forest and 34 acres (14 hectares) on the Idaho Panhandle National Forests, to be managed according to direction provided in the Forest Plans. The FEIS for the Forest Plans called for establishment of all proposed RNAs. However, as directed in Forest Service Manual 4063.1, the boundaries of the RNA were enlarged in order to protect the integrity of the green fescue grassland.

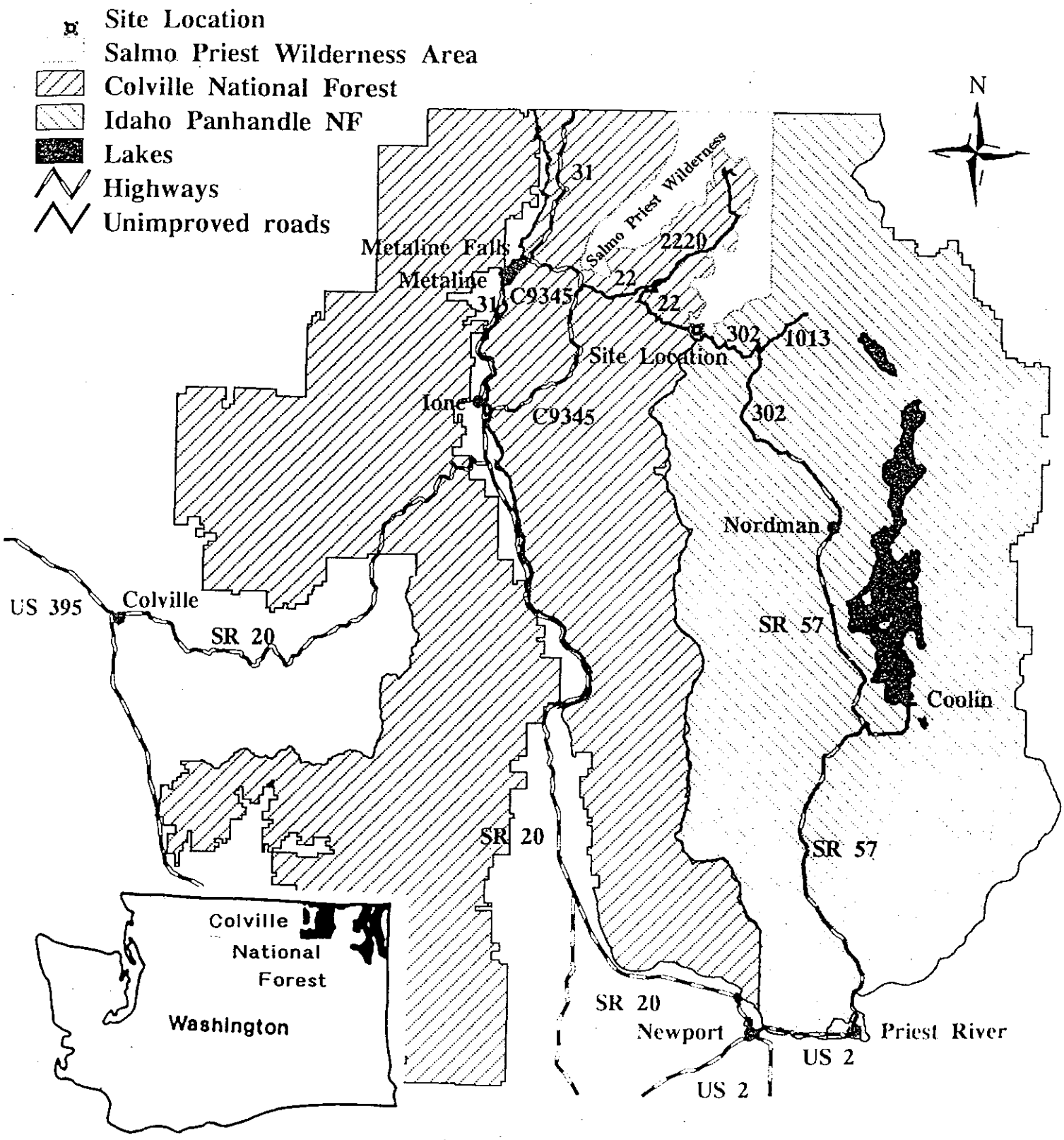
The revised boundaries in Township 38 North, Range 45 East, Sections 8 and 9, increase the original RNA area by 148 acres (60 hectares), 79 acres (32 hectares) on the Colville National Forest, and 69 acres (28 hectares) on the Idaho Panhandle National Forests. This adds important subalpine fir forest types and allows conditions within the interior of the RNA to remain largely unmodified.

The proposed action, formal designation of the 212-acre (86-hectare) RNA by the Regional Foresters, will amend the Forest Plans. The RNA lies entirely within the existing Salmo-Priest Wilderness Area. These lands were withdrawn from mineral entry on July 3, 1984, so no additional mineral withdrawals are proposed or are necessary. (see site location map next page)

Purpose and Need for Action

The purpose of establishing the Round Top Mountain RNA is to contribute to a series of RNAs designed to "illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance" (36 CFR 251.23). Round Top Mountain RNA contributes to this series of RNA's by providing examples of three community types discussed in the Colville FEIS (pages III-133 and III-135), the Idaho Panhandle National Forests Plan (page II-15), the State of Washington Natural Heritage Plan--1993/1995 Update (WNHP) (pages 66-67) and the Recommended Research Natural Areas within the Idaho Panhandle National Forests and Adjacent Areas (page 3).

Map 1 - Site Location
Round Top Mountain Research Natural Area



These types are as follows:

Green fescue community (Colville FEIS, Idaho Panhandle National Forests Plan, WNHP)
Subalpine fir/beargrass community (Colville FEIS, WNHP)
Subalpine fir/Cascades azalea community (WNHP)

An evaluation by the Regional RNA Committees, pursuant to direction in Forest Service Manual 4063.04b, identified these types as suitable and desirable for inclusion in the national network. Round Top Mountain was selected to represent a green fescue subalpine grassland, in northeastern Washington. Currently, there are no RNAs representing the green fescue grassland type within the Washington Natural Areas Preserve system.

Mountain grasslands, also known as subalpine parks or balds, have long been recognized as unique components of the Selkirk ecosystem in eastern Washington and northern Idaho (Leiberg 1899, Daubenmire 1944, Layser 1980, Daubenmire 1981). Unlike the majority of balds, Round Top Mountain was not grazed by domestic livestock in the past, and remains largely undisturbed. Daubenmire (1981) described his parkland study sites, including Round Top Mountain, as "essentially in pristine condition."

A primary consideration in the selection of RNAs is the presence of multiple elements. In addition to the green fescue grassland, Round Top Mountain RNA includes old growth subalpine fir forest, whitebark pine krummholz and habitat for a variety of rare plant and animal species. Establishment of Round Top Mountain RNA provides long-term protection and recognition of these community types. The Establishment Record for Round Top Mountain RNA (USDA Forest Service 1996) describes its objectives, principal distinguishing features and values, location, physical and climatic conditions, impacts and possible conflicts, and management prescription.

The objectives for establishment of Round Top Mountain RNA are listed below, as outlined in the Forest Service Manual (1994):

1. Preserve a wide spectrum of pristine representative areas that typify important forest, shrubland, grassland, alpine, aquatic, geological, and similar natural situations that have special or unique characteristics of scientific interest and importance that, in combination, form a national network of ecological areas for research, education, and maintenance of biological diversity.

2. Preserve and maintain genetic diversity.

3. Protect against serious environmental disruptions.

4. Serve as reference areas for the study of succession.

5. Provide onsite and extension educational activities.

6. Serve a baseline areas for measuring long-term ecological changes.

7. Serve as control areas for comparing results from manipulative research.

8. Monitor effects of resource management techniques and practices.

9. Maintain the excellent condition of this RNA, as an example of a green fescue bald with associated subalpine fir and whitebark pine forest, influenced by the natural, dynamic processes of that ecosystem.

Round Top Mountain was identified in the Forest Plans as a proposed RNA based on the relatively undisturbed conditions in the area in 1987 and 1988. Comments received from interested and affected members of the public supported establishment of an RNA in the area. Round Top Mountain was determined at that time to provide the most appropriate site for inclusion in the national network for protection of the types identified above.

Designation of future RNAs was considered during development of the Forest Plans (Colville Forest Plan FEIS, page II-117, and Idaho Panhandle Forests Plan FEIS, Planning Record Number 25). Site conditions and public concerns were reviewed. General conditions and environmental effects of designation are much the same as described on pages II-117, III-131-136 of the FEIS for the Colville Forest Plan and page II-102 of the FEIS for the Idaho Panhandle Forests Plan.

Alternatives and Environmental Consequences

Alternative A, Proposed Action [Expanded Boundary]

Under Alternative A, the Forest Plans would be amended to formally establish the 212-acre (86-hectare) Round Top Mountain RNA, and manage the area according to direction in the Colville Forest Plan (pages 4-89 to 4-91) for RNAs, the Idaho Panhandle Forests Plan (pages II-61 to II-64) for RNA's, and in the Forest Service Manual 4063.3. This will increase the acreage for designated RNAs under the Colville Forest Plan from 4997 to 5076 acres (2023 to 2055 hectares), and the total acreage withdrawn under the Idaho Panhandle Forests Plan from 9200 acres to 9269 acres (3725 to 3753 hectares).

The expanded boundary will better protect the integrity of the green fescue grassland, as directed in Forest Service Manual 4063.1, Size Standards: "Research Natural Areas must be large enough to provide essentially unmodified conditions within their interiors...Incorporate enough acres to ensure unmodified conditions within their interiors and to protect the features and/or qualities for which the research natural area is to be established."

Management and protection of Round Top Mountain RNA would be directed toward maintaining natural features and ecological processes. Under this alternative, fire management direction favors allowing natural fires to burn within the RNA, when this is consistent with guidelines developed for the Salmo-Priest Wilderness and the Selkirk Mountain Woodland Caribou Habitat Recovery Area. Fire is increasingly recognized as an important natural process, shaping the biological diversity of the Northern Rocky Mountain forest ecosystems (Cooper, et al. 1991; Arno and Davis 1980; Larson 1926; Leiberg 1899).

During his studies of subalpine parklands, Daubenmire (1981) asserted that fire is not responsible for the tree-less parks of the Selkirks, such as Round Top Mountain. However, he recognized the importance of cyclic fires across this landscape, and noted that "such fires would certainly spread across at least the drier types of parks."

The RNA is located entirely within the Selkirk Mountain Woodland Caribou Habitat Recovery Area (US Fish and Wildlife Service 1994). Woodland caribou are listed as an endangered species, and managed under the Endangered Species Act (36 U.S.C. 1531-1544) and National Forest Management Act (16 U.S.C. 1600-1614). The RNA is located within late winter caribou habitat. During winter months caribou subsist nearly exclusively on the lichens of mature subalpine fir and spruce forest (Freddy 1974). Therefore, during periods of severe fire danger, fire suppression may be necessary within the RNA in order to maintain existing habitat and meet objectives of the Recovery Area (personal communication, Layser 1996).

Round Top Mountain RNA is entirely within the Selkirk Grizzly Bear Recovery Area (US Fish and Wildlife Service 1993). The grizzly bear is listed as a threatened species. It is managed under the Endangered Species and National Forest Management Acts. Research Natural Areas provide a high level of protection for existing habitat conditions and the limited human use of RNA's provides improved security for grizzly bears. Therefore, although Round Top Mountain RNA is a small fraction of a grizzly bear's home range, establishment of the RNA is expected to provide improved management conditions (Layser 1995).

There are no existing outfitter-guide special use permits for the Salmo-Priest Wilderness, which encompasses Round Top Mountain RNA. Additional non-occupancy special use permits may be issued under this alternative, if they are compatible with RNA objectives. Current

recreational use of the Round Top Mountain area is not significantly impacting the green fescue grassland or surrounding forests. However, use of the RNA may be limited, if significant resource damage occurs, or if such use threatens or interferes with objectives for the area.

Establishing this RNA will not affect maintenance of the existing Shedroof Divide Trail #512. However, no new trails will be constructed within the RNA. The Salmo-Priest Wilderness and associated trails are identified as a priority area for the prevention and treatment of noxious weeds (USDA Forest Service 1996). There are no noxious weed infestations known from the RNA. Vegetation management guidelines, as directed in the Establishment Record for Round Top Mountain RNA (USDA Forest Service 1996), require that insects, disease and non-native plants within the area be monitored and evaluated. If conditions pose a significant threat to the RNA, caribou habitat or adjacent lands, control measures may be taken, with a preference given to manual and biological controls.

Grazing is not a tool to maintain the vegetative communities at Round Top Mountain. There are no grazing allotments and no plans to graze cattle in this area. The expanded RNA boundary is entirely within the Salmo-Priest Wilderness, so the area is withdrawn from mineral entry. Round Top Mountain RNA does not include lands managed for commercial timber harvest, including salvage/firewood harvest. Habitat improvement is generally not appropriate within a RNA and research facilities must blend with the natural surroundings.

There are no adverse or irreversible effects of establishing the RNA under Alternative A. Irretrievable environmental effects result from resource outputs either reduced or lost, as a result of special area designation. No significant cumulative effects of establishing the RNA are evident.

Alternative B [Forest Plan Boundary]

Alternative B would establish a 64-acre (26-hectare) Round Top Mountain RNA, which was identified as the Round Top Mountain proposed RNA in the Colville Forest Plan (page III-133) and the Idaho Panhandle Forests Plan (page II-15). The area will be managed according to direction in the Colville Forest Plan (pages 4-89 to 4-91) for RNA's, the Idaho Panhandle Forests Plan (pages III-61 to III-64) for RNA's, and in the Forest Service Manual 4063.3. Management of the area will be the same as in Alternative A, except that all natural fires will be suppressed. Under this alternative, the Forest Plans would be amended to formally establish the 64-acre (26-hectare) Round Top Mountain RNA.

Under Alternative B, the RNA boundaries would follow the edge of the green fescue grassland. Interior conditions of the RNA would be vulnerable to activities occurring adjacent to the area. This alternative does not meet the guidelines of Forest Service Manual 4063.1.

The environmental consequences of Alternative B, are described in the FEIS for the Colville National Forest (pages II-117, III-136 and IV-135) and the FEIS for the Idaho Panhandle Forests Plan (pages II-102). There are no adverse or irreversible environmental effects expected under this alternative. There are no significant cumulative effects of establishing the RNA.

Alternative C, No Action

Alternative C continues management according to direction in the Colville Forest Plan (pages 4-89 to 4-91), the Idaho Panhandle Forests Plan (pages III-61 to III-64) for proposed RNA's, and the Forest Service Manual 4063.3. Under this alternative, protection of Round Top Mountain RNA is short-term only, dependent upon the life of the Forest Plans. This alternative does not meet guidelines in the Forest Plans for formal establishment of proposed RNAs. Management would be the same as under Alternative B.

The environmental consequences of Alternative C are described in the FEIS for the Colville National Forest Plan (pages II-117, III-136 and IV-135) and the FEIS for the Idaho Panhandle Forests Plan (page II-102). No adverse or irreversible environmental effects are anticipated. There are no significant cumulative effects of establishing the RNA.

Agencies and Persons Consulted

Agency personnel consulted in designing and analyzing of this proposal include:

Colville National Forest

Kathy Ahlenslager, Forest Botanist
Tim Bertram, Sullivan Lake Ranger District Wildlife Biologist
Bud Kovalchik, Area Ecologist
Rod Lentz, Area Geologist
Daniel Mattson, Forest Archaeologist
Jim McGowan, Forest Wildlife Biologist
Connie Smith, Forest Environmental Coordinator
Dert Wasson, Forest Hydrologist

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Debbie Butler, Priest Lake Ranger District, Forester-Special Uses
Barry Coles, Priest Lake Ranger District, Forester
Tim Layer, Priest Lake Ranger District, Wildlife Biologist
Dwight Makinson, Forest Land Surveyor
Diane Penny, Priest Lake Ranger District, Biological Technician
Roger Steerman, Priest Lake Ranger District, Fire Management Officer
Mark Mousseaux Idaho Panhandle Supervisor's Office
Gary Weber, Priest Lake Ranger District, Assistant Fire Management Officer

U. S. Fish and Wildlife Service (USDI)

Michele Eames

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US Fish and Wildlife Service. 1993. Grizzly bear recovery plan. Missoula, MT. 181 pp.

_____. 1994. Recovery plan Selkirk mountain woodland caribou. Portland, OR. 77 pp.