UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Establishment Record

For

RENEKE CREEK RESEARCH NATURAL AREA

Siuslaw National Forest

Tillamook County, Oregon

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SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Reneke Creek Research Natural Area

Siuslaw National Forest

Tillamook County, Oregon

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 4063.21, Mapping and Recordation and FSM 4063.41 5.e(3) in arriving at this recommendation.

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TITLE PAGE

Establishment Record for
Reneke Creek Research Natural Area
within Siuslaw National Forest
Tillamook County, Oregon

ESTABLISHMENT RECORD FOR
RENEKE CREEK RESEARCH NATURAL AREA
WITHIN SIUSLAW NATIONAL FOREST
TILLAMOOK COUNTY, OREGON

INTRODUCTION

Reneke Creek Research Natural Area (RNA) is in the coastal strip of Oregon and consists of a forested watershed with two matched perennial streams dominated by red alder (Alnus rubra)[1]. The red alder riparian zone is surrounded by mature Douglas-fir (Pseudotsuga menziesii), Sitka spruce (Picea sitchensis) and western hemlock (Tsuga heterophylla) forest with alder remaining prominent in many stands. Reneke Creek flows for 3/4 mile through the RNA.

Land Management Planning

Reneke Creek RNA was proposed as a candidate RNA by the Siuslaw National Forest to meet an unfilled natural area cell need for a red alder stand with two perennial streams (Oregon Natural Heritage Advisory Council 1993)[2]. It was included as a candidate RNA in the FEIS for the Siuslaw National Forest (USDA Forest Service 1990a), in the Forest Plan (USDA Forest Service 1990b) and in the Record of Decision (USDA Forest Service 1990c). Reneke Creek includes the following RNA cell needs (or elements) in the Oregon Coast Range Physiographic Province: Sitka spruce/salmonberry community; red alder stand with two perennial streams; first to third order stream system not on coastal headland, in Sitka Spruce zone with alder dominated tributaries.

OBJECTIVE

The objective of the Reneke Creek RNA is to preserve in an undisturbed (by humans) condition the red alder riparian community and associated adjacent forest and aquatic types of the RNA. The RNA will serve as a reference area for study, as a baseline area to identify long-term ecological changes, and as a monitoring area to determine effects of management techniques and practices applied to similar ecosystems.

JUSTIFICATION

Reneke Creek RNA was selected originally to meet an unfilled RNA cell need for matched perennial streams with red alder riparian communities. During field surveys of the site it was determined that the entire watershed of Reneke Creek contained important functional ecological values related to the red alder riparian zone. Inclusion of the forested watershed in the RNA allows for monitoring of the interactions of the watershed and its effects on the alder riparian zone. Succession of alder dominated riparian zones in a Sitka spruce forest is also an important

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[1] Nomenclature for vascular plants follows Hitchcock and Cronquist (1973).

[2] Author's names in parentheses refer to references cited.

research opportunity provided by this site. The matched creeks in the RNA allow for comparison studies related to nutrient cycling.

Reneke Creek RNA fills two unfilled natural area cell needs in the Coast Range Physiographic Province, as described in the Oregon Natural Heritage Plan (Oregon Natural Heritage Advisory Council, 1993). These cells are as follows:

Terrestrial Ecosystems
4. Sitka Spruce/salmonberry community.

Aquatic & Wetland Ecosystems
26. First to third order stream system not on coastal headland, in Sitka spruce zone with alder dominated tributaries.

PRINCIPAL DISTINGUISHING FEATURES

Reneke Creek RNA contains the following principal features:

1. Red alder riparian community. The Reneke Creek RNA contains a high quality example of a red alder riparian community. Of particular significance at Reneke Creek is the presence of two matched perennial streams, both of which have red alder dominated riparian communities. Studies of nutrient cycling and succession can readily be carried out in such a setting. The watersheds of both streams are protected in their entirety within the bounds of the RNA.

2. Sitka spruce forest types. The surrounding forest lies within the Sitka spruce zone (Franklin and Dyrness 1973). Sitka spruce, Douglas-fir, and western hemlock dominate the overstory, with understories of salal (Gaultheria shallon), salmonberry (Rubus spectabilis), and swordfern (Polystichum munitum). Red alder is prominent in two sub-drainages on southwest facing slopes. The forest is impressive in its mature age class (> 150 years) and has developed some attributes of an old growth ecosystem.

3. Reneke Creek drainage. Reneke Creek flows for three-quarters of a mile through the RNA. The stream and its tributaries are completely contained within the RNA, thus providing a natural laboratory for the study of aquatic communities in a small coastal stream. Anadromous fish runs are no longer present in the creek but a native cutthroat trout fishery still exists. The riparian zone is dominated by red alder along Reneke Creek as well as the its major tributaries.

LOCATION

Maps 1, 2, and 3 show the location of Reneke Creek RNA. The RNA is located in the Hebo Ranger District of the Siuslaw National Forest. The center of the RNA is at latitude 45° 15' 25" north and longitude 123° 56' 15" west. The 480 acre site lies within section 32, Township 3

South, Range 10 West and sections 5 and 6, Township 4 South, Range 10 West Willamette Meridian.

Boundary

Basis of bearing is astronomic north. Basis of elevation is mean sea level as shown on the USGS 7.5 minute topographic quadrangle map Sand Lake, Oreg. 1985.

Area

Total area for the Reneke Creek Research Natural Area is approximately 480 acres (194.3 hectares).

Elevations

Elevations range from 140 feet (43m) in the western portion of Reneke Creek to an unnamed summit near Miles Mountain at 1160 feet (354m) in the southeast corner of the RNA.

Access

The Reneke Creek RNA is at the northern end of the Siuslaw National Forest (Map 2) near the Sand Lake estuary. It is accessible from Sand Lake Road which runs from Pacific City, 5 miles south of the RNA, to Tillamook, 18 miles north of the RNA. Access to the upper reaches of the Reneke Creek drainage in the RNA is via Forest Service roads #1004 and #1134.

From Pacific City, Oregon proceed north on Sand Lake Road for 5 miles to the south end of the Sand Lake estuary. Reneke Creek flows into the estuary at this point. Private land lies between the county road and the RNA, restricting legal access. Approximately 1.5 miles beyond the Reneke Creek crossing, Forest Service Road #1004 enters the county road from the east. Follow this road to the junction of Forest Road #1134, approximately 1.5 miles. The RNA begins at the junction and lies to the west of Forest Road #1134 for 1.5 miles as the road heads south along the ridge which forms the eastern boundary of the RNA.

Maps

Reneke Creek RNA is located on the USGS 7.5 minute topographic quadrangle map, Sand Lake, Oreg. 1985. The Siuslaw National Forest Recreation Map, 1982, is useful for ownership and general access information, however, this map does not delineate the RNA boundaries.

Photos

The following aerial photos of the Reneke Creek RNA site are available in the Forest Supervisor's and District Ranger's offices:

1989 USDA 189: nos. 46,47
1989 USDA 189: nos. 223-226

AREA BY TYPES

Vegetation of the RNA has been surveyed and inventory plots have been established at the site. The following determination of cover types and habitat types and their estimated acreage have been made from the survey information derived from the inventory plots and from air photo interpretation. Within the Forested Plant Associations, it was not possible to determine how many acres were actually Sitka spruce/salmonberry-salal association versus Sitka spruce/swordfern association as the two associations are intermixed. The swordfern understory is considerably less prominent in the RNA. Map 4 depicts the locations of the natural communities described below; again, the two spruce associations are not differentiated on the map.

The most current information regarding the forested portion of the RNA is described in the plant association guide of Hemstrom et al (1986). The riparian plant community type is described in unpublished information developed and maintained by the Oregon Natural Heritage Program (1991a).

Vegetation Types

	Estimated Acres	Hectares
SAF Cover Types (Eyre 1980)		
225 Sitka spruce-western hemlock	480	194.3
Kuchler Types (Kuchler 1966)		
1 Spruce-cedar-hemlock forest (Picea-Thuja-Tsuga)	480	194.3
Forested Plant Associations (Hemstrom et al 1986)		
1) Sitka spruce/salmonberry-salal (Picea sitchensis/Rubus spectabilis-Gaultheria shallon)		
2) Sitka spruce/swordfern (Picea sitchensis/Polystichum munitum)	274	110.9
Riparian Community Types (Oregon Natural Heritage Program 1991a)		
3) Red alder/salmonberry (Alnus rubra/Rubus spectabilis)	206	83.4
Total	480	194.3

PHYSICAL AND CLIMATIC CONDITIONS

Physical Conditions

Reneke Creek RNA encompasses the entire upstream watershed of Reneke Creek, a small drainage that flows into the Sand Lake estuary. The stream and its tributaries flow through steep, dissected hills that are covered by a mix of mature forest vegetation and seral stands of red alder. Above the RNA a forest road running along a ridge line separates the natural area from commercial forest land that is dominated by second growth forest and recent clearcuts. The lowest reaches of the RNA are one mile from the Pacific Ocean which provides a spectacular backdrop to the site and is occasionally glimpsed through the dense vegetation.

Climatic Conditions

The Oregon coast climate is characterized by mild temperatures year round, with wet winters and dry summers. Reneke Creek RNA lies only 1 mile from the ocean and therefore has very typical coastal weather. Summer winds are predominantly from the northwest and are usually light to moderate. East winds may occur in the fall and spring, blowing at higher velocities and causing drying conditions that enhance the usually low fire hazard for the region. During the winter, storms come in from the southwest bringing driving rain and wind. The Sitka spruce forest is susceptible to windthrow during winter storm events.

The closest recording NOAA weather station is located in Tillamook, Oregon, 18 miles to the north of the RNA. Climatic conditions at Tillamook should be a good approximation for Reneke Creek RNA. The station receives an annual precipitation of 90.90 inches and the mean annual temperature is 50.3 degrees F. (NOAA 1989). Over 90% of the precipitation falls between October and March. Summer high temperatures rarely reach into the 80's, while winter lows only occasionally dip below freezing. The monthly climatic data for Tillamook, Oregon averaged over the past 75 years is listed below (National Oceanographic and Atmospheric Administration 1989).

Climatic Records for Tillamook, Oregon
Elevation 10 feet (3 m); 1910-1988
(NOAA 1989)

Month	Mean Temperature °F	°C	Mean Precipitation inches	mm
January	42.2	5.7	14.87	377.70
February	44.6	7.0	10.11	256.79
March	44.6	7.0	10.43	264.92
April	47.5	8.6	6.13	155.70
May	51.7	10.9	4.03	102.36
June	55.6	13.1	3.04	77.22
July	58.2	14.6	1.29	32.77
August	58.8	14.9	2.00	50.80
September	57.6	14.2	3.73	94.74
October	52.8	11.5	7.64	194.06
November	46.9	8.3	12.52	318.01
December	43.7	6.5	15.07	382.78
Mean Annual	50.3	10.2		
Total Annual			90.90	2308.86

DESCRIPTION OF VALUES

Flora

The flora of Reneke Creek RNA is representative of the Oregon Coast forests and is relatively simple with few numbers of taxa present. The flora has not been systematically collected or studied other than those taxa encountered during the establishment of inventory plots. No state or federal threatened, endangered or sensitive plant species are known to occur within the RNA. Weak stemmed bluegrass (Poa laxiflora), a Watch List species of the Oregon Natural Heritage Program (1995), has been found just south of the RNA and may occur within the bounds of the designated area. Observations by Vander Schaaf (1992) have resulted in the following list of plants. The Habitat-types listed below refer to those noted previously on page 4. Species identifications were determined from Hitchcock and Cronquist (1973) and trees were determined from Little (1979).

Scientific name	Common name	Habitat 1	2	3
TREES				
Alnus rubra	red alder	X	X	X
Picea sitchensis	Sitka spruce	X	X	X
Pseudotsuga menziesii	Douglas-fir		X	
Thuja plicata	western redcedar	X	X	X
Tsuga heterophylla	western hemlock	X	X	X
SHRUBS AND SUBSHRUBS				
Acer circinatum	vine maple	X	X	
Gaultheria shallon	salal	X	X	
Menziesia ferruginea	fool's huckleberry	X	X	
Rubus spectabilis	salmonberry	X	X	X
Rubus ursinus	trailing blackberry	X	X	X
Sambucus sp.	elderberry	X	X	X
Vaccinium ovatum	evergreen huckleberry	X	X	
Vaccinium parviflorum	red huckleberry	X	X	X
FORBS				
Achillea millefolium	yarrow	X		
Blechnum spicant	deer fern	X	X	X
Disporum hookeri	Hooker fairy-bell	X	X	
Equisetum hymenale	horsetail	X	X	
Maianthemum dilatatum	false lily of the valley		X	
Montia sibirica	candyflower	X	X	
Oxalis oregana	Oregon oxalis	X		X
Polystichum munitum	sword fern	X	X	
Pteridium aquilinum	braken-fern	X	X	X
Trillium ovatum	wake robin	X	X	
Woodsia oregana	western woodsia	X	X	
GRAMINOIDS				
Festuca californica	California fescue	X	X	
Luzula parviflora	woodrush	X	X	

Reneke Creek RNA has several natural communities represented within its boundaries (Map 4). The dominant forest plant association is Sitka spruce/salmonberry-salal with small scattered occurrences of Sitka spruce/swordfern located within the dominant association. The swordfern association is typically indicative of deeper soils than the salmonberry-salal association (Hemstrom et al 1986). The map does not attempt to distinguish between the two Sitka spruce

associations because they are quite intermixed and the swordfern understory type is found in generally very small occurrences. Individual Sitka spruce in the forest may attain diameters in excess of 48 inches (121.9cm) with the associated western hemlock (Tsuga heterophylla) usually somewhat smaller in diameter. The stand apparently originated after a catastrophic fire in the mid 1800's.

The red alder/salmonberry community type occurs in narrow riparian zones along the creeks in the RNA and it covers large areas of steeply sloped terrain as well. Periodic disturbance maintains the alder/salmonberry community both along streams where flood events may remove trees and create new habitat as well on upland sites where landslide events can occur creating openings in the canopy. Red alder is seral to Sitka spruce and western hemlock in this region with the community typically being short-lived, lasting only 80-120 years. Throughout the red alder dominated zones in the RNA, spruce and hemlock seedlings and saplings are prominent indicating the successional nature of the red alder community type.

Fauna

Faunal species have not been systematically studied or inventoried in Reneke Creek RNA. The following terrestrial vertebrates are among those most likely to be found in the RNA (Oregon Natural Heritage Program 1991a):

Scientific name	Common name
Ambystomatidae	
Ambystoma gracile	Northwestern salamander
Ambystoma macrodactylum	Long-toed salamander
Plethodontidae	
Aneides ferreus	Clouded salamander
Ensatina eschscholtzii	Ensantina
Plethodon dunni	Dunn's salamander
Plethodon vehiculum	Western redback salamander
Salamandridae	
Taricha granulosa	Roughskin newt
Dicamptodontidae	
Dicamptodon ensatus	Pacific giant salamander
Rhyacotriton olympicus	Olympic salamander
Ascaphidae	
Ascaphus truei	Tailed frog

Bufonidae	
Bufo boreas	Western toad
Hylidae	
Hyla regilla	Pacific treefrog
Ranidae	
Rana aurora	Red-legged frog
Anatidae	
Aix sponsa	Wood duck
Cathartidae	
Cathartes aura	Turkey vulture
Accipitridae	
Accipiter striatus	Sharp-shinned hawk
Accipiter cooperii	Cooper's hawk
Accipiter gentilis	Northern goshawk
Buteo jamaicensis	Red-tailed hawk
Phasianidae	
Dendragapus obscurus sierrae	Blue or sooty grouse
Bonasa umbellus	Ruffed grouse
Callipepla californica	California quail
Oreortyx pictus	Mountain quail
Columbidae	
Columba fasciata	Band-tailed pigeon
Zenaida macroura	Mourning dove
Tytonidae	
Tyto alba	Barn owl
Strigidae	
Otus kennicottii	Western screech-owl
Bubo virginianus	Great horned owl
Glaucidium gnoma	Northern pygmy-owl
Strix occidentalis	Spotted owl
Asio flammeus	Short-eared owl
Aegolius acadicus	Northern saw-whet owl

Caprimulgidae	
Chordeiles minor	Common nighthawk
Apodidae	
Chaetura vauxi	Vaux's swift
Trochilidae	
Calypte anna	Anna's hummingbird
Selasphorus rufus	Rufous hummingbird
Alcedinidae	
Ceryle alcyon	Belted kingfisher
Picidae	
Sphyrapicus ruber	Red-breasted sapsucker
Picoides pubescens	Downy woodpecker
Picoides villosus	Hairy woodpecker
Colaptes auratus	Northern flicker
Dryocopus pileatus	Pileated woodpecker
Tyrannidae	
Contopus borealis	Olive-sided flycatcher
Contopus sordidulus	Western wood-pewee
Empidonax traillii	Willow flycatcher
Empidonax difficilis	Western flycatcher
Alaudidae	
Eremophila alpestris	Horned lark
Hirundinidae	
Progne subis	Purple martin
Tachycineta bicolor	Tree swallow
Tachycineta thalassina	Violet-green swallow
Stelgidopteryx serripennis	Northern rough-winged swallow
Hirundo pyrrhonota	Cliff swallow
Hirundo rustica	Barn swallow
Corvidae	
Perisoreus canadensis	Gray jay
Cyanocitta stelleri	Steller's jay
Corvus brachyrhynchos	American crow
Corvus caurinus	Northwestern crow
Corvus corax	Common raven

Paridae	
Parus atricapillus	Black-capped chickadee
Parus rufescens	Chestnut-backed chickadee
Aegithalidae	
Psaltriparus minimus	Bushtit
Sittidae	
Sitta canadensis	Red-breasted nuthatch
Certhiidae	
Certhia americana	Brown creeper
Troglodytidae	
Thryomanes bewickii atrestus	Warner valley bewick's wren
Troglodytes aedon	House wren
Troglodytes troglodytes	Winter wren
Cistothorus palustris	Marsh wren
Cinclidae	
Cinclus mexicanus	American dipper
Muscicapidae	
Regulus satrapa	Golden-crowned kinglet
Regulus calendula	Ruby-crowned kinglet
Sialia mexicana	Western bluebird
Catharus ustulatus	Swainson's thrush
Catharus guttatus	Hermit thrush
Turdus migratorius	American robin
Ixoreus naevius	Varied thrush
Chamaea fasciata	Wrentit
Motacillidae	
Anthus rubescens	Water pipit
Bombycillidae	
Bombycilla cedrorum	Cedar waxwing
Vireonidae	
Vireo solitarius	Solitary vireo
Vireo huttoni	Hutton's vireo
Vireo gilvus	Warbling vireo

Emberizidae

Vermivora celata	Orange-crowned warbler
Dendroica petechia	Yellow warbler
Dendroica coronata	Yellow-rumped warbler
Dendroica nigrescens	Black-throated gray warbler
Dendroica townsendi	Townsend's warbler
Dendroica occidentalis	Hermit warbler
Oporornis tolmiei	Macgillivray's warbler
Geothlypis trichas	Common yellowthroat
Wilsonia pusilla	Wilson's warbler
Piranga ludoviciana	Western tanager
Pheucticus melanocephalus	Black-headed grosbeak
Passerina amoena	Lazuli bunting
Pipilo erythrophthalmus	Rufous-sided towhee
Spizella passerina	Chipping sparrow
Pooecetes gramineus	Vesper sparrow
Passerculus sandwichensis	Savannah sparrow
Passerella iliaca	Fox sparrow
Melospiza melodia	Song sparrow
Zonotrichia atricapilla	Golden-crowned sparrow
Zonotrichia leucophrys	White-crowned sparrow
Junco hyemalis	Dark-eyed junco
Agelaius phoeniceus	Red-winged blackbird
Sturnella neglecta	Western meadowlark
Molothrus ater	Brown-headed cowbird
Icterus galbula	Northern oriole

Fringillidae

Carpodacus purpureus	Purple finch
Carpodacus mexicanus	House finch
Loxia curvirostra	Red crossbill
Carduelis pinus	Pine siskin
Carduelis tristis	American goldfinch
Coccothraustes vespertinus	Evening grosbeak

Petromyzontidae

Lampetra ayresi	River lamprey
Lampetra pacifica	Pacific brook lamprey
Lampetra richardsoni	Western brook lamprey
Lampetra tridentata	Pacific lamprey

Salmonidae

Oncorhynchus clarki	Cutthroat trout
Oncorhynchus mykiss	Rainbow trout
Salvelinus malma	Dolly varden

Cyprinidae	
Richardsonius balteatus	Redside shiner
Catostomidae	
Catostomus macrocheilus	Largescale sucker
Gasterosteidae	
Gasterosteus aculeatus	Threespine stickleback
Embiotocidae	
Cymatogaster aggregata	Shiner perch
Cottidae	
Clinocottus acuticeps	Sharpnose sculpin
Cottus aleuticus	Coast range sculpin
Cottus asper	Prickly sculpin
Cottus gulosus	Riffle sculpin
Cottus perplexus	Reticulate Sculpin
Cottus rhotheus	Torrent sculpin
Leptocottus armatus	Pacific staghorn sculpin
Soricidae	
Sorex vagrans	Vagrant shrew
Sorex monticolus	Dusky shrew
Sorex pacificus	Pacific shrew
Sorex bendirii	Pacific water shrew
Sorex trowbridgii	Trowbridge's shrew
Talpidae	
Neurotrichus gibbsii	Shrew-mole
Scapanus townsendii	Townsend's mole
Scapanus orarius	Coast mole
Verpertilionidae	
Myotis lucifugus	Little brown myotis
Myotis yumanensis	Yuma myotis
Myotis evotis	Long-eared myotis
Myotis thysanodes	Fringed myotis
Myotis volans	Long-legged myotis
Myotis californicus	California myotis
Lasionycteris noctivagans	Silver-haired bat
Eptesicus fuscus	Big brown bat
Lasiurus cinereus	Hoary bat
Plecotus townsendii	Townsend's big-eared bat

Leporidae	
Sylvilagus bachmani	Brush rabbit
Lepus americanus	Snowshoe hare
Aplondontiidae	
Aplodontia rufa	Mountain beaver
Sciuridae	
Tamias townsendii	Townsend's chipmunk
Spermophilus beecheyi	California ground squirrel
Sciurus griseus	Western gray squirrel
Tamiasciurus douglasii	Douglas' squirrel
Glaucomys sabrinus	Northern flying squirrel
Castoridae	
Castor canadensis	Beaver
Muridae	
Peromyscus maniculatus	Deer mouse
Neotoma fuscipes	Dusky-footed woodrat
Neotoma cinerea	Bushy-tailed woodrat
Clethrionomys californicus	Western red-backed vole
Arborimus albipes	White-footed vole
Arborimus longicaudus	Red tree vole
Microtus townsendii	Townsend's vole
Microtus longicaudus	Long-tailed vole
Microtus oregoni	Creeping vole
Ondatra zibethicus	Muskrat
Zapodidae	
Zapus trinotatus	Pacific jumping mouse
Erethizontidae	
Erethizon dorsatum	Porcupine
Canidae	
Canis latrans	Coyote
Vulpes vulpes	Red fox
Urocyon cinereoargenteus	Gray fox
Ursidae	
Ursus americanus	Black bear
Porcyonidae	
Procyon lotor	Raccoon

Mustelidae

Martes americana	Marten
Mustela erminea	Ermine
Mustela frenata	Long-tailed weasel
Mustela vison	Mink
Gulo gulo	Wolverine
Spilogale gracilis	Western spotted skunk
Mephitis mephitis	Striped skunk
Lutra canadensis	River otter

Felidae

Felis concolor	Mountain lion
Felis rufus	Bobcat

Cervidae

Cervus elaphus	Elk
Odocoileus hemionus	Black-tailed deer

Anguidae

Elgaria coerulea	Northern alligator lizard

Iguanidae

Sceloporus occidentalis	Western fence lizard

Colubridae

Contia tenuis	Sharptail snake
Thamnophis ordinoides	Northwestern garter snake
Thamnophis sirtalis	Common garter snake

One of the species listed above, the marbled murrelet, is a federally listed Threatened Species. There has been a recent sighting of marbled murrelet from the upper end of the RNA in section 32. It is not known if the bird nests in the RNA.

Aquatic

Aquatic habitat types are represented on Reneke Creek and its tributaries, a perennial second order stream that flows for less than two miles before reaching the Sand Lake estuary. Approximately 2 miles of streams are located within the boundaries of the RNA. The shallow streams flow through steep dissected drainages and have narrow riparian zones that are dominated by red alder. The stream channels are narrow and flow over small boulders, cobbles, and gravels

Geology

The geology of the Coast Range had its beginnings in the Eocene when shallow inland seas began to be uplifted in the south (Baldwin 1964). In the northern Coast Range the Astoria formation, a thick formation of sandstone and shale, covers much of northwestern Oregon. The Astoria formation dates from the mid-Oligocene to mid-Miocene. Interfingered in the Astoria formation is Columbia River basalt which consists of a series of flows that covered nearly half of the state of Oregon and originated from a number of vents in the central portion of the state. Columbia River basalt grades into submarine basalts which date from the Eocene. The basalt has been more resistant to weathering than the sandstone and shales of the Astoria formation, thus soils have been primarily derived from the Astoria formation.

Soils

Soil mapping of the Hebo Ranger district was accomplished through a Forest Service contract in 1987 and 1988. That mapping included National Forest lands in Tillamook, Lincoln, Yamhill and Polk Counties. It supersedes all previous soil mapping of Siuslaw National Forest lands in the Hebo Ranger District including the Reneke Creek RNA.

There are three Soil Series found in the Reneke Creek RNA:

Salander - Deep, well drained soils developed in mixed colluvium from basaltic and fine sedimentary rocks - usually on or near headlands in the isomesic, or "fog" zone along the coast. Soil temperatures vary little through the year. Slopes range to 75 percent. Textures range from silt loam to silty clay loam. These soils occur at elevations up to 1400 feet. Salander soils are easily compacted by heavy equipment. Where saturated or undercut by construction, small slumps may occur. The native vegetation includes Douglas-fir, western hemlock, western redcedar, Sitka spruce, and a brushy understory including vine maple, evergreen huckleberry, salmonberry, and western swordfern.

Necanicum - Deep, well drained soils developed in colluvium from basaltic rocks on coastal headlands in the isomeric, or " fog " zone along the coast. Soil temperatures vary little throughout the year. Slopes range up to 90 percent. Textures are gravely to very gravely loam. These soils occur at elevations up to 1800 feet. Necanicum soils are not easily compacted. Small debris slides may occur where these soils occupy steep, concave slope positions. Native vegetation includes western hemlock, Sitka spruce, Douglas-fir, red alder, red huckleberry, salal and western swordfern.

Neotsu - moderately deep, well drained soils developed in colluvium from basaltic rocks on coastal headlands in the isomeric, or "fog" zone along the coast. Soil temperatures vary little throughout the year. Slopes range to 90 percent. Textures are loam to silt loam. these soils occur at elevations up to 1800 feet. Neotsu soils are moderately compactable with mechanized equipment. These soils are found on convex slopes and are rarely unstable. Native vegetation includes western hemlock, Douglas-fir,

Sitkaspruce, western redcedar, red alder, cascara, vine maple, salal , eve huckleberry, red huckleberry, and western swordfern.

Lands

Reneke Creek RNA lies to the east of Sand Lake estuary and the Sand Lake Recreation Area (Map 2), in the midst of commercial timberland. The RNA is unsigned and therefore could be susceptible to indiscriminate firewood cutting or timber theft.

Lands adjacent to the RNA are owned by the Forest Service (on the north, south and east) and by private individuals (on the west). Unless timber harvest trespass occurs none of these adjacent ownership's are likely to seriously affect the natural values of the RNA.

Cultural

There are no known cultural resources located within the Reneke Creek RNA. A complete cultural inventory of the site has not been conducted to date.

IMPACTS AND POSSIBLE CONFLICTS

Mineral Resources

There are no reported mining claims on Reneke Creek RNA. The area is proposed to be withdrawn from mineral entry upon establishment of the RNA.

Timber

The RNA is primarily surrounded by Siuslaw National Forest lands whose primary goal is to produce timber and maintain and/or enhance fish and wildlife habitats (USDA Forest Service 1990b). While timber harvest will not occur on the RNA there is a potential for impact to the RNA when timber is cut adjacent to the RNA. Windthrow is common in coastal forests and sites adjacent to harvest areas are particularly susceptible to this event. Harvest areas may also act as sites for invasions of introduced noxious weeds, such as scots broom (Cytisus scoparius), tansy ragwort (Senecio jacobaea), and bull thistle (Cirsium edule).

Watershed Values

Reneke Creek, which flows through the RNA, is a small watershed that is relatively intact. Watershed values are high, because of the intact nature of the drainage and the protection afforded by the RNA. The creek formerly supported an anadramous fishery.

Recreation Values

Reneke Creek RNA receives almost no recreation use. The site is not particularly inviting to the hiking public because it is densely forested and secluded by private lands along heavily traveled Three Capes Road. There are many game trails in the RNA which likely has some use during hunting season. Casual recreation use has not shown to impact the RNA to date. Recreational use should be discouraged and identification of the site as an RNA on maps or via signs should not be undertaken in order to not draw attention to the site.

Wildlife and Plant Values

There is one listed Threatened species potentially located within the RNA to date. Marbled murrelets have been sighted at the upper reaches of the site. One sensitive plant species, weak-stemmed bluegrass (Poa laxiflora), which has no federal status but remains on the Watch List maintained by the Oregon Natural Heritage Program (1995), has been found just south of the area.

Adjacent Private Lands

Private lands abut the RNA on the west, with a common border of approximately 1/2 mile (0.8 km).

MANAGEMENT PRESCRIPTION

Management and protection of Reneke Creek RNA will be directed toward maintaining natural ecological processes. No activities of man will be permitted that will disturb or modify ecological processes.

Reneke Creek RNA is included, along with other RNA's, in the Siuslaw National Forest Plan, as amended, in Management Area 13 (USDA Forest Service 1990b). Standards and guidelines for management are noted in the Forest Plan for the management area. Also applicable are the standards and guidelines for management of sensitive species relative to the marbled murrelets which have been found in the area.

Vegetation Management

Standards and guidelines for RNA's, Management Area 13, address vegetation management under several different headings (USDA Forest Service 1990b). The overall management direction for all RNA's is to preserve the naturally occurring physical and biological processes at the site.

Wildfire is a rare occurrence in these coastal ecosystems, therefore wildfire will be actively suppressed in all cases using suppression methods and equipment that will minimize disturbance to the special features of the area (USDA Forest Service 1990b). The desired condition of the red alder stand and surrounding Sitka spruce forest dictates that fires be aggressively suppressed.

Introduced species and weedy native species are also a concern at the RNA. Exotic species introductions are most likely to occur along the forest road that runs along the ridge that surrounds the upper reaches of the Reneke Creek watershed. Coastal forest ecosystems typically are less susceptible to weedy plant infestations that other ecosystems but this should not relieve managers from vigilance for exotic species.

Transportation Plan

No roads or trails are planned for the RNA.

Fences and Protective Barriers

Fences are not required at the RNA.

ADMINISTRATION RECORDS AND PROTECTION

Administration and protection of Reneke Creek RNA will be the responsibility of the Siuslaw National Forest. The District Ranger, Hebo Ranger District, has direct responsibility.

The Director of the Pacific Northwest Research Station will be responsible for any studies or research conducted in the area, and requests to conduct research in the RNA should be referred to her/him. The RNA Scientist in the Research Station is designated as the lead contact person for all such requests. The Director will evaluate research proposals and coordinate all studies and research in the area with the District Ranger. All plant and animal specimens collected in the course of research conducted in the area will be properly preserved and maintained within university or federal agency herbaria and museums, approved by the Pacific Northwest Research Station.

Records for the Reneke Creek RNA will be maintained in the following offices:

Regional Forester, Portland, Oregon
Forest Supervisor, Siuslaw National Forest, Corvallis, Oregon
District Ranger, Hebo Ranger District, Hebo, Oregon
Director, Pacific Northwest Research Station, Portland, Oregon
Forest Sciences Laboratory, Oregon State University, Corvallis, Oregon

Archiving

The Portland office of the Pacific Northwest Research Station will be responsible for maintaining the Reneke Creek RNA research data file and list of herbarium and species samples collected. The Forest Sciences Lab is establishing a data base for maintaining research data and lists of species for all RNA's in the region. Computerized files for the RNA will be maintained at the Forest Sciences Lab

REFERENCES

Baldwin, E.M. 1964. Geology of Oregon. University of Oregon Cooperative Book Store. Eugene, Oregon. 165 pp.

Eyre, F.H. ed. 1980. Forest Cover Types of the United States and Canada. Washington, D.C. Society of American Foresters.
148 pp.

Franklin, J.F. and C.T. Dyrness. 1973. Natural Vegetation of Oregon and Washington. USDA Forest Service General Technical Report PNW-8, Pacific Northwest Forest and Range Experiment Station, Portland, Oregon. 417 pp.

Hemstrom, M.A. and S.E. Logan. 1986. Plant Association and Management Guide Siuslaw National Forest. USDA Forest Service R6-Ecol 220-1986a. 121 pp.

Hitchcock, C.L. and A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press, Seattle, Washington. 730 pp.

Kuchler, A.W. 1966. Potential Natural Vegetation. U.S. Department of Interior, Geologic Survey. Washington, D.C.

Little, Elbert L., Jr. 1979. Checklist of United States Trees (Native and Naturalized). Agriculture Handbook No. 541. Washington, D.C. U.S. Department of Agriculture. 375 pp.

National Oceanic and Atmospheric Administration. 1989. Climatological data annual summary. Oregon. Vol. 95 (13). National Climatic Data Center, Asheville, North Carolina.

Oregon Natural Heritage Advisory Council. 1993. Oregon Natural Heritage Plan. Division of State Lands, State of Oregon, Salem, Oregon. 158 pp.

Oregon Natural Heritage Program. 1991a. Natural communities of Oregon. unpublished document.

Oregon Natural Heritage Program. 1995. Rare, Threatened and Endangered Plants and Animals of Oregon. The Nature Conservancy and State of Oregon, Portland and Salem, Oregon. 64 pp.
USDA Forest Service, 1990a. Final Environmental Impact Statement, Land and Resource Management Plan. Siuslaw National Forest. Corvallis, Oregon.

USDA Forest Service, 1990b. Land and Resource Management Plan.
Siuslaw National Forest. Corvallis, Oregon.

USDA Forest Service, 1990c. Land and Resource Plan, Record of Decision. Siuslaw National Forest. Corvallis, Oregon.

Vander Schaaf, Dick. 1992. Personal Communication.

RENEKE CREEK RESEARCH NATURAL AREA

I certify the enclosed boundary description of the Reneke Creek Research Natural Area was prepared under my direct supervison

1922 - ORE		9-12-96
State Reg. No.	MICHAEL J. SCHWARTZ Forest Land Surveyor	Date

RENEKE CREEK RESEARCH NATURAL AREA

The Reneke Creek RNA boundary was created by a digitizing the boundary from the 1984 1:24000 Provisional Sand Lake and Nestucca Bay Quadrangles. A mean position for Latitude, Longitude, and Elevation was obtained from the Quads for the North Zone State Plane (NAD 1927) Coordinate System. Subsequently the Mapping Angle and a Grid Factor were computed for the area. These are shown as follows:

Latitude: 45-15-30
Longitude: 123-56-00

Mapping(Theta) Angle: -2-26-06
Grid Factor: 0.9998671

There have been two surveys that have been performed in the area.
1) CS# B-1259 which performed a section subdivision of Section 32, T.3 S., R.10 W.

2) CS# B-1282 which performed a section subdivision of Section 6, T.4 S., R.10 W.

All bearings and distances listed are Grid(State Plane).

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET (METERS	DESCRIPTION
SAND LAKE				
	1			POINT OF BEGINNING, the Corner to Sections 31 & 32, T.3 S., R.10 W., and Sections 5 & 6, T.4 S., R.10 W.
		S 86-42-55 E	1,305.88 (398.03)	Along the Township line between Sections 32 & 5 as surveyed in CS# B-1259
	2			The W 1/16 corner between Sections 32 & 5 which is an aluminum pipe and cap set in CS# B-1259

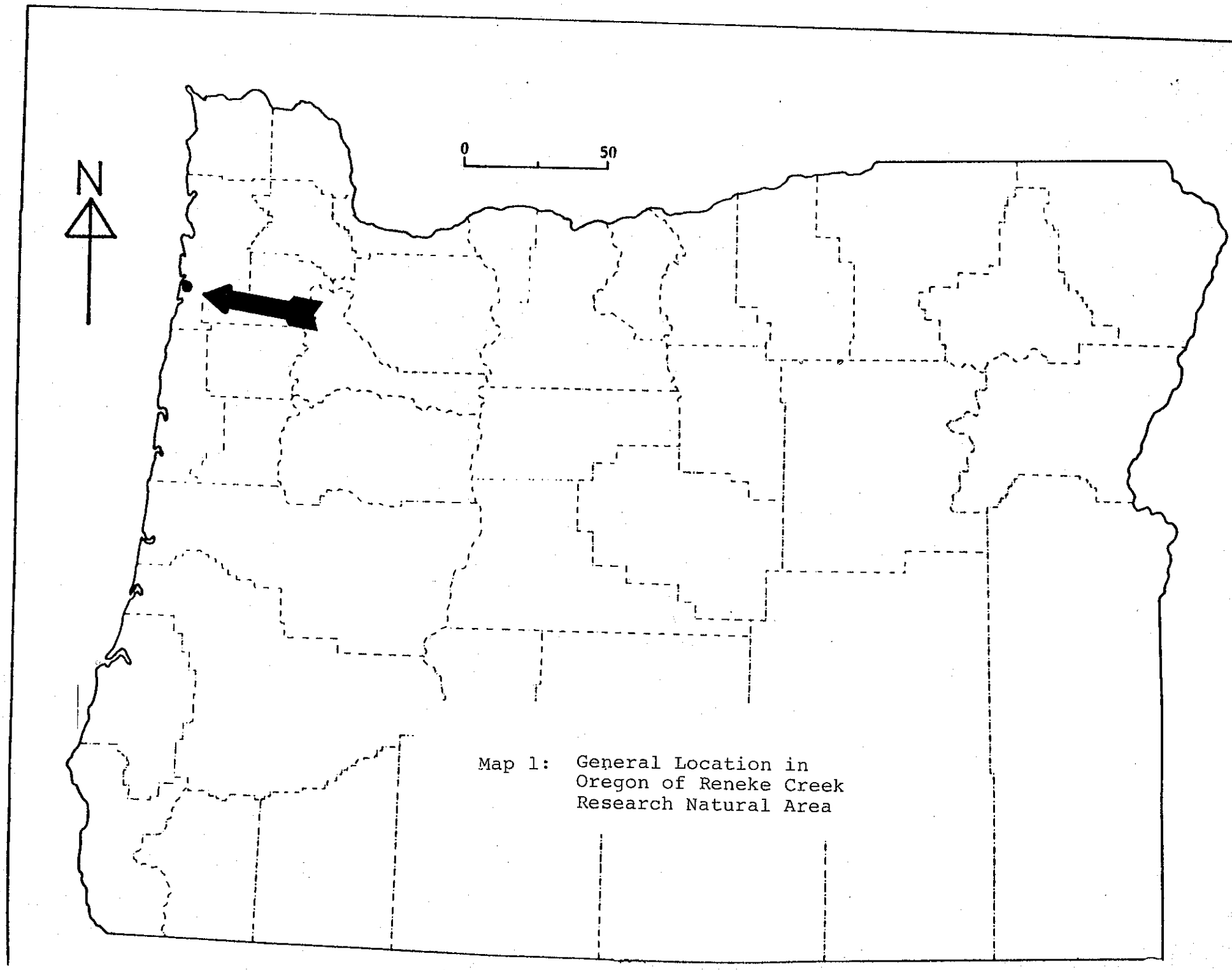
RENEKE CREEK RESEARCH NATURAL AREA

	N 3-41-53 E	918.96 (280.10)	Along the North-South centerline of the SW 1/4 of Section 32 as surveyed in CS# B-1259 to the top of the ridge.
3			Angle Point No. 1
	N 85-22-25 E	381.24 (116.20)	Ascending along the ridge top.
4			Angle Point No. 2
	N 61-20-07 E	2,076.49 (632.91)	Ascending along the ridge top.
5			Angle Point No. 3
	N 60 56-38 E	1,427.68 (435.16)	Ascending along the ridge top to the top of the knob.
6			Angle Point No. 4
	N 55-44-43 E	476.68 (145.29)	Descending from the top of the knob.
7			Angle Point No. 5
	N 40-54-09 E	372.04 (113.40)	Descending along the ridge top.
8			Angle Point No. 6 which is 100 feet parallel to the centerline of USFS Road No. 1004.
	Southeasterly	204.00 (62.18)	100 feet parallel to the centerline of Road No. 1004 to the junction with USFS Road No. 1134.
9			The Junction of USFS Roads No. 1004 & 1134.

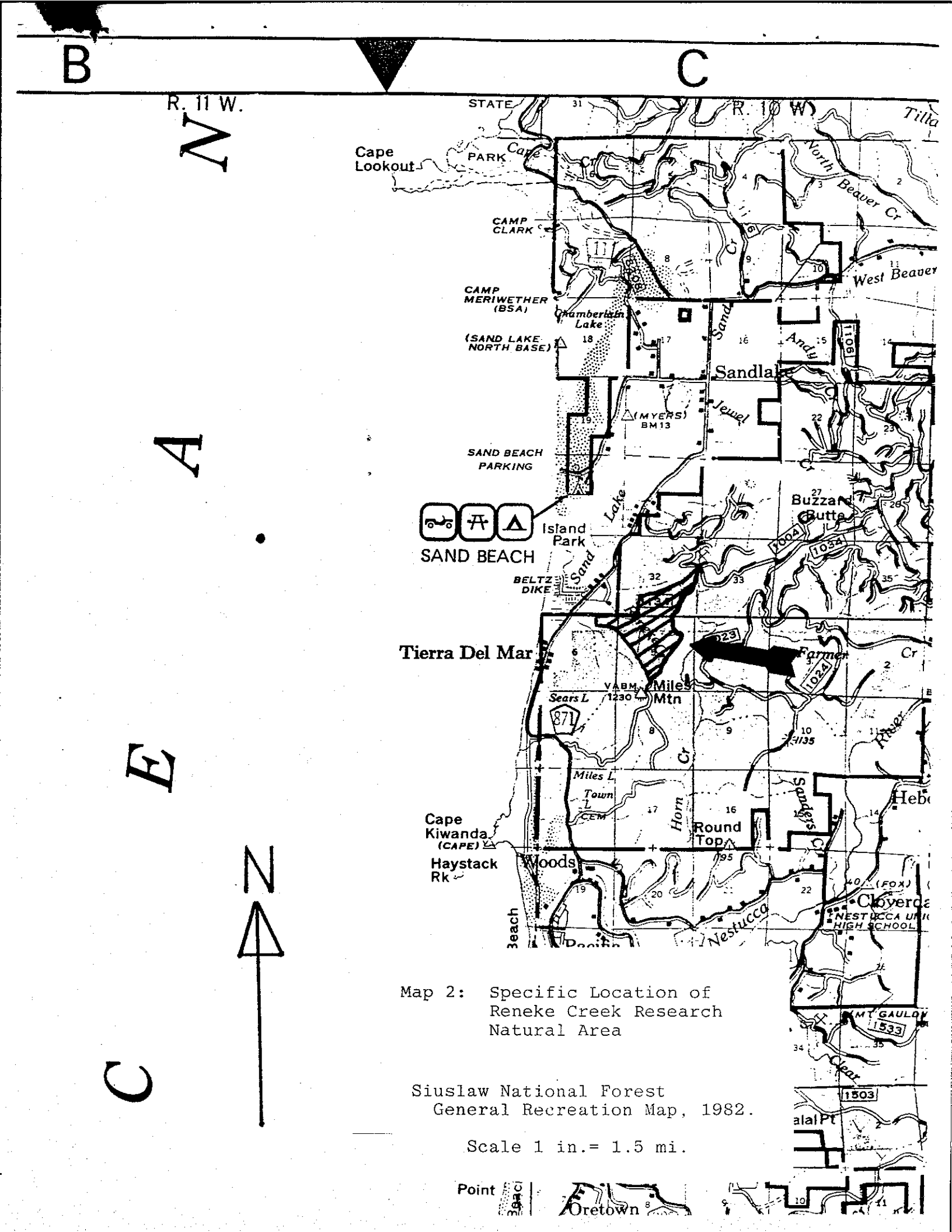
	9			The Junction of USFS Roads No. 2004 & 1134.
		Southwesterly	9,713.00 (2,960.52)	100 feet parallel to the centerline of USFS Road No. 1134.
NESTUCCA BAY	10			Angle Point No. 7 which is the major ridge that descends to the northwest. This point being 100 feet parallel to the centerline of Road No. 1134.
		N 44-32-24 W	896.94 (273.39)	Descending along ridgetop.
SAND LAKE	11			Angle Point No. 8
		N 59-39-11 W	296.65 (90.42)	Descending along ridgetop.
	12			Angle Point No. 9
		N 24-43-49 W	611.93 (186.52)	Descending along ridgetop.
	13			Angle Point No. 10
		N 29-02-29 W	760.13 (231.69)	Descending along ridgetop.
	14			Angle Point No. 11
		N 52-54-09 W	1,069.45 (325.97)	Descending along ridgetop.
	15			Angle Point No. 12
		N 37-29-15 W	307.27 (93.66)	Descending along ridgetop.
	16			Angle Point No. 13
		N 25-57-15 W	658.06 (200.58)	Descending along ridgetop.
	17			Angle Point No. 14

RENEKE CREEK RESEARCH NATURAL AREA

17			Angle Point No. 14
	N 51-59-26 W	397.25 (121.08)	Descend to saddle and then ascend.
18			Angle Point No. 15
	N 71-28-33 W	330.10 (100.61)	Ascend and intersect the North-South centerline of the NE 1/4 of Section 6.
19			To Angle Point No. 16
	N 3-59-41 E	409.16 (124.71)	Along the North-South centerline of the NE 1/4 of Section 6.
20			The E 1/16 corner between Sections 31 and 6 which is an aluminum pipe and cap as set in CS# B-1282.
	S 83-37-43 E	1,242.65 (378.76)	Along the Township line between Sections 31 & 6 as surveyed in CS# B-1282 to the Section Corner and the Point of Beginning.
1			The corner to Sections 31,32,5,& 6 and THE POINT OF BEGINNING.



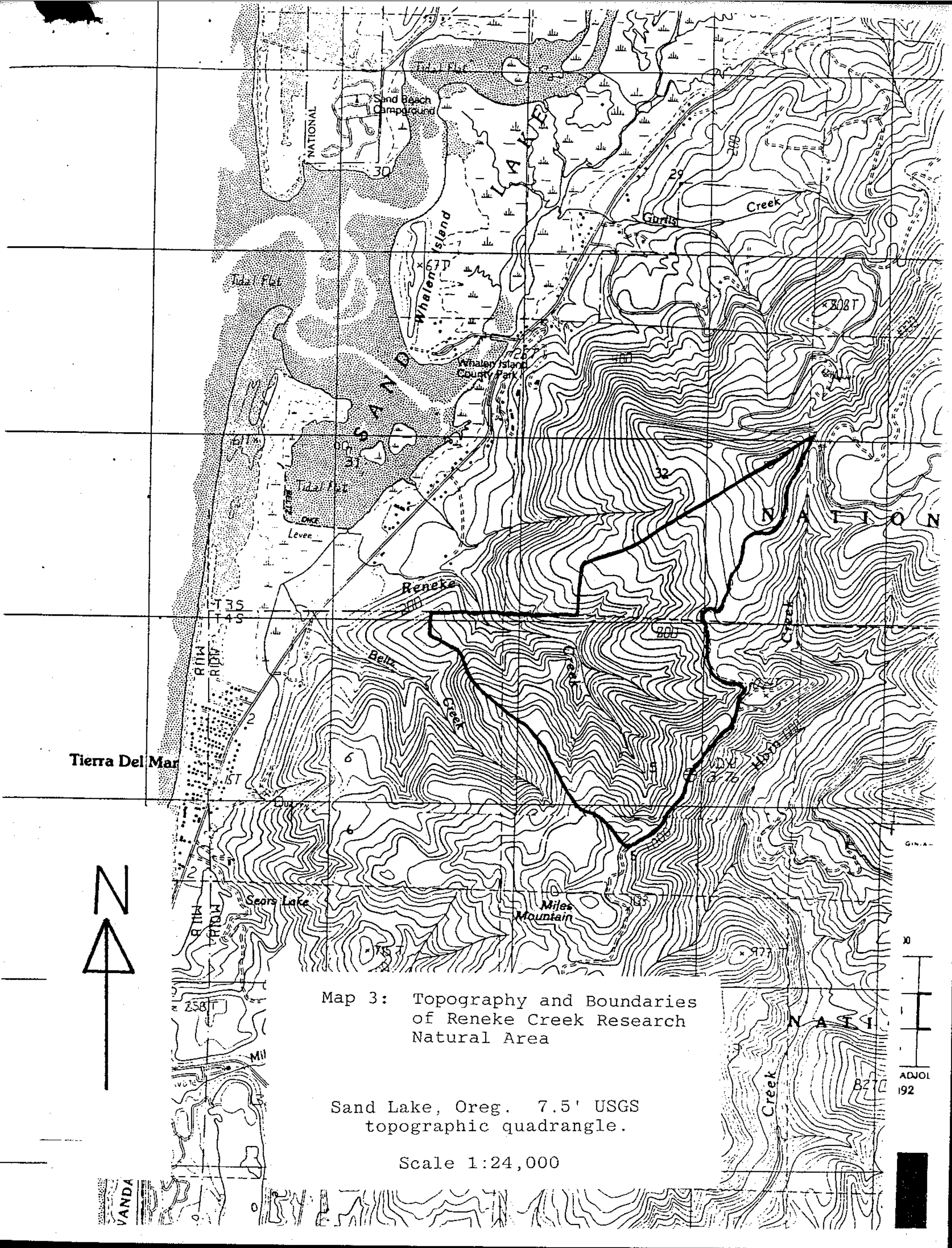
Map 1: General Location in Oregon of Reneke Creek Research Natural Area



Map 2: Specific Location of Reneke Creek Research Natural Area

Siuslaw National Forest
General Recreation Map, 1982.

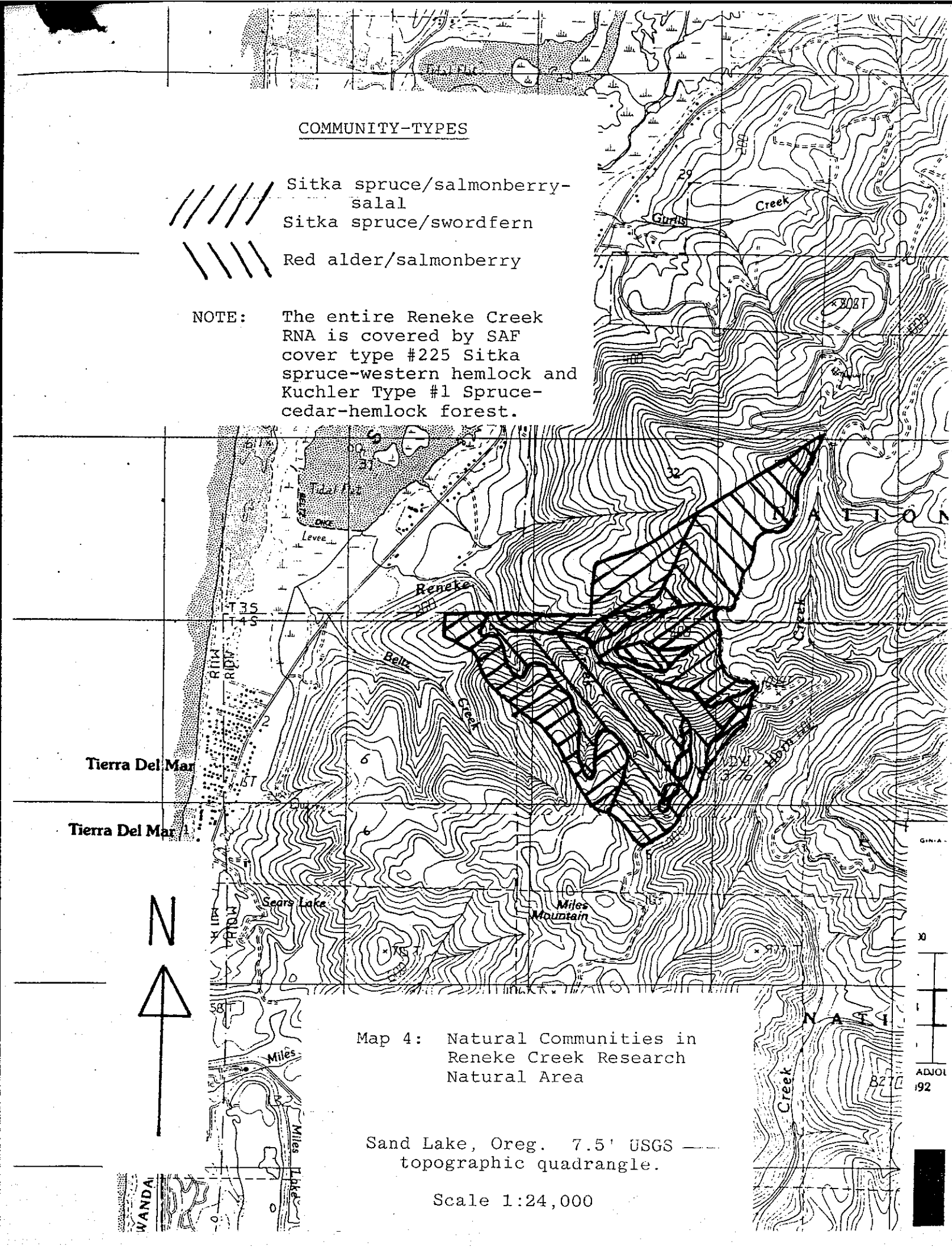
Scale 1 in.= 1.5 mi.



Map 3: Topography and Boundaries of Reneke Creek Research Natural Area

Sand Lake, Oreg. 7.5' USGS topographic quadrangle.

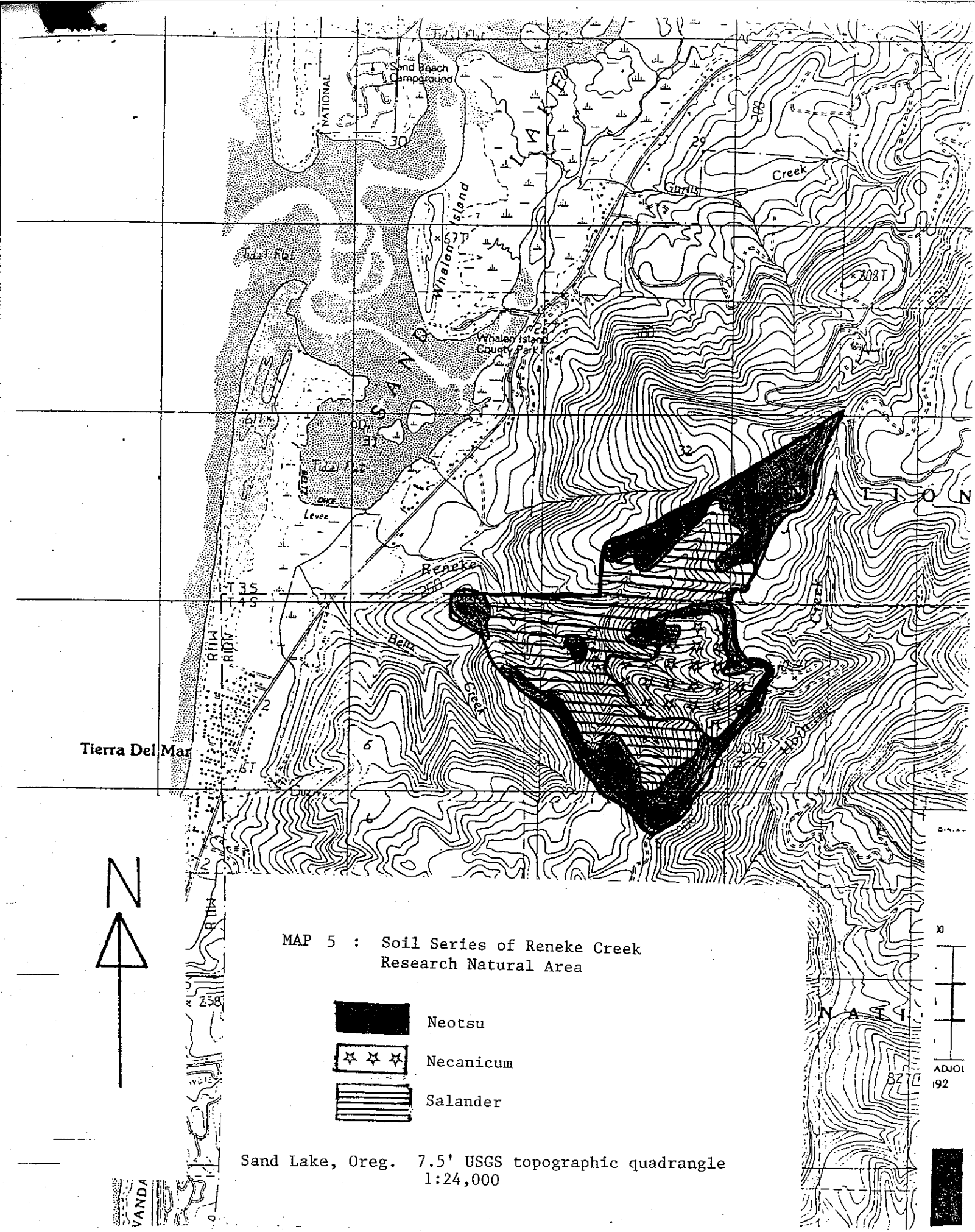
Scale 1:24,000



Map 4: Natural Communities in Reneke Creek Research Natural Area

Sand Lake, Oreg. 7.5' USGS topographic quadrangle.

Scale 1:24,000



MAP 5 : Soil Series of Reneke Creek Research Natural Area

- Neotsu
- Necanicum
- Salander

Sand Lake, Oreg. 7.5' USGS topographic quadrangle 1:24,000

Public Notices 8

HISTORIC APARTMENT BLDG.
OPEN TO THE PUBLIC
Sat., May 14th from 10am-2pm
3211 SW 10th Ave. 228-0759

NOTICE OF DECISION

On June 9, 1997, USDA, Forest Service, Pacific Northwest Regional Forester made a decision which established 11 Research Natural Areas. RNA's are part of a national network of field ecological areas designated for research and education. They also provide gene pool preserves for plant and animal species, especially rare and endangered species. RNA's also preserve a prime example of common comunities that can serve as a baseline for comparison. All eleven areas were previously allocated as "proposed" RNA's during forest planning. This decision formalizes their designation for that use. The RNA's established with this decision are:

OREGON RNA: Cache Mountain; **NATIONAL FOREST:** Deschutes; **ACRES:** 1400; Dry Mountain, Ochoco, 2205; Gumjuwac/Tolo, Mt. Hood, 3600; Hagan, Willamette, 1126; McKenzie Pass, Willamette, 1187; Moksi Butte, Deschutes, 1250; Reneke Creek, Siuslaw, 480; Tenmile Creek, Siuslaw, 1190; Vee Pasture, Fremont, 620

WASHINGTON RNA: Fish Lake Bog; **NATIONAL FOREST:** Wenatchee; **ACRES:** 206; Roger Lake, Okanogan, 436

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, OR 97208.

This decision is subject to appeal pursuant to Forest Service regulation 36 Code of Federal Regulation (CFR) Part 217. Any wirtten 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 regarding these RNAs, contact Sarah Greene, RNA Coordinator, Pacific Northwest Research Station, 3200 S.W. Jefferson Way, Corvallis, Oregon 97331, phone 541-750-7360.

DECISION NOTICE / DESIGNATION ORDER
and
FINDING OF NO SIGNIFICANT IMPACT

ESTABLISHMENT OF ELEVEN RESEARCH NATURAL AREAS

USDA Forest Service
Pacific Northwest Region
Oregon and Washington

By virtue of the authority vested in me by the Chief of the Forest Service, in Forest Service Manual Section 4063, I hereby establish the Research Natural Areas listed in Table 1 and as described in their respective Establishment Records in the section entitled "Location".

Table 1: Research Natural Area Locations

R N A	National Forest	Ranger District	County	Acres
Oregon				
Cache Mountain	Deschutes	Sisters	Deschutes	1400
Dry Mountain	Ochoco	Snow Mountain	Harney	2205
Gumjuwac/Tolo	Mt. Hood	Barlow	Hood River	3600
Hagan	Willamette	Blue River	Lane	1126
McKenzie Pass	Willamette	McKenzie	Lane	1187
Mokst Butte	Deschutes	Bend/Fort Rock	Deschutes	1250
Reneke Creek	Siuslaw	Hebo	Tillamook	480
Tenmile Creek	Siuslaw	Oregon Dunes NRA	Coos	1190
Vee Pasture	Fremont	Bly	Klamath & Lake	620
Washington				
Fish Lake Bog	Wenatchee	Lake Wenatchee	Chelan	206
Roger Lake	Okanogan	Tonasket	Okanogan	436

The Regional Forester recommended the establishment of these RNAs in the Record of Decision for their respective Land and Resource Management Plans (Forest Plans). That recommendation was the result of an analysis of the factors listed in 36 CFR 219.25 and Forest Service Manual 4063.2. Results of the Regional Forester's analysis are documented in the Forest Plans and Final Environmental Impact Statements which are available to the public.

SELECTED ALTERNATIVE

The Regional Forester has reexamined the RNAs to ensure that the environmental effects of establishing the areas as RNAs have not changed since the Forest Plans were adopted. In three cases (Cache Mountain, Dry Mountain, and Gumjuwac/Tolo) areas were recommended for addition or deletion from the proposed RNA to better accomplish the original purpose of the RNA. Proposed Tenmile Creek RNA boundary adjustments were adopted by the Record of Decision for the Oregon Dunes National Recreation Area Management Plan in 1994. For the remaining RNAs no changes were found. This analysis is documented in the attached Environmental Assessment.

Based on the analysis in the Environmental Assessment, it is my decision to adopt Alternative 2 which establishes these eleven areas as Research Natural Areas. Alternative 2 is selected because it provides long-term protection of the research and educational values of these special areas and the ecosystem elements that they represent. The RNAs will be managed in compliance with all relevant laws, regulations and Forest Service Manual direction regarding RNAs and in accordance with the management direction identified in their respective Forest Plans.

Although this alternative is consistent with the management direction in each Forest Plan it does change the allocation for these areas from "Proposed RNA" to "Established RNA". This is a non-significant amendment of the Forest Plans [36 CFR 219.10(f)].

OTHER ALTERNATIVE CONSIDERED

The other alternative considered was Alternative 1, the "No Action" alternative which would continue management of the RNAs as "Proposed RNAs". Alternative 1 was not selected because it would provide only short-term protection of the research and educational values of the areas. Alternative 1 is consistent with the Forest Plans.

FINDING OF NO SIGNIFICANT IMPACT

Based on the environmental analysis documented in the Environmental Assessment, it has been determined that the proposed action is not a major federal action that would significantly affect the quality of the human environment, therefore, an environmental impact statement is not needed. This determination is based on the following factors [40 CFR 1508.27]:

CONTEXT

Although this is an addition to the national system of RNAs, both short-term and long-term physical and biological effects are limited to the local area.

INTENSITY

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

2. No significant direct, indirect or cumulative impacts to the natural resources or other components of the human environment are anticipated.

3. Effects on the human environment are not uncertain, do not involve unique or unknown risks,

and are not likely to be highly controversial.

4. There are no known effects on historical or cultural resources, park lands, prime farmlands, wetlands, or wild and scenic rivers. Effects of establishing the RNAs is to protect ecologically sensitive areas. No significant adverse effects area anticipated to any environmentally sensitive or critical area.

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

6. The proposed action will not adversely affect any federally listed or proposed endangered or threatened species or Regionally listed sensitive species of plants or animals or their critical habitats.

7. The proposed action is consistent with the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* (USDA, USDI 1994).

8. The proposed action is consistent with Federal, State, and local laws and requirements for protection of the environment.

NOTIFICATION and IMPLEMENTATION

Legal notice of this decision will appear in The Oregonian and The Seattle Post-Intelligencer. The Forest Supervisor of each National Forest shall notify the public of this decision and mail a copy of the Decision Notice/Designation Order to all persons on their Forest Plan mailing lists.

Implementation of this decision shall not occur within seven days following publication of the legal notice of the decision in The Oregonian and The Seattle Post-Intelligencer.

APPEAL RIGHTS

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

Chief, USDA Forest Service
ATTN: NFS Appeals
14th and Independence Ave., S.W.
P.O. Box 96090
Washington, DC 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), must include the reasons for appeal, and must be submitted within 45 days from the date of legal notice of this decision in The Oregonian and The Seattle Post-Intelligencer.

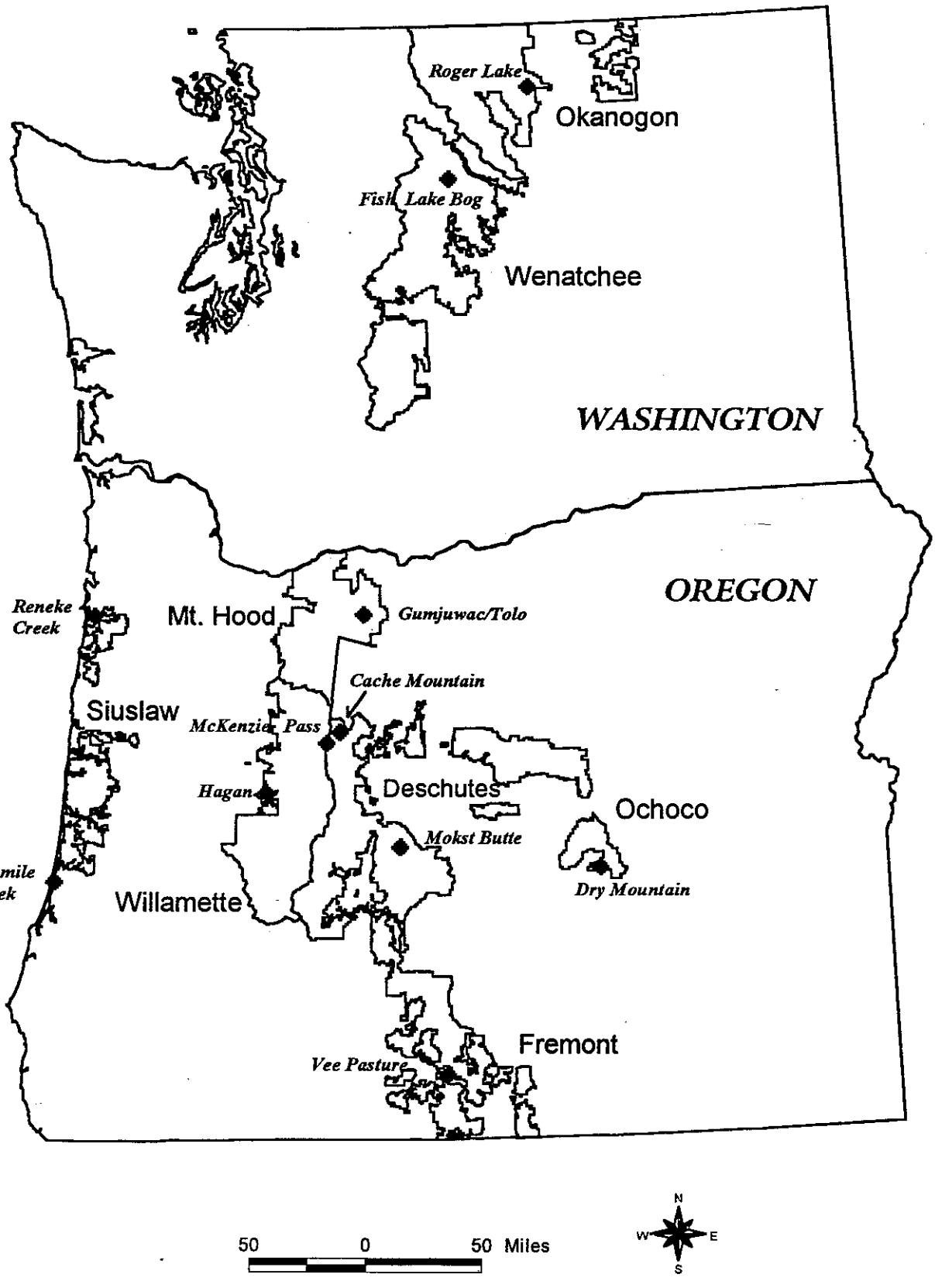
CONTACT PERSON

For further information regarding this decision contact Sarah Greene, RNA Coordinator, Pacific Northwest Research Station, 3200 S.W. Jefferson Way, Corvallis, Oregon 97331, Phone 541-750-7360.

ROBERT W. WILLIAMS
Regional Forester

6/9/97
Date

Research Natural Area Locations



ESTABLISHMENT OF ELEVEN RESEARCH NATURAL AREAS

ENVIRONMENTAL ASSESSMENT

Pacific Northwest Region
USDA Forest Service
Oregon and Washington

Lead Agency: USDA Forest Service
P.O. Box 3623
Portland, OR 97208

Responsible Official: ROBERT W. WILLIAMS, Regional Forester
Pacific Northwest Region
P.O. Box 3623
Portland, OR 97208

Prepared by: Donna Short
Sweet Home Ranger District
Willamette National Forest
3225 Highway 20
Sweet Home, OR 97386
541-367-5158

Abstract:

This Environmental Assessment identifies the need for the proposed action, describes the analysis process and the alternatives formulated during that process. It discusses the environmental effects of each of the proposed alternatives. Two alternatives were evaluated and compared and are as follows: Alternative 1 - No Action and Alternative 2 - Finalize Establishment.

ESTABLISHMENT OF ELEVEN RESEARCH NATURAL AREAS

USDA FOREST SERVICE
PACIFIC NORTHWEST REGION
OREGON AND WASHINGTON

ENVIRONMENTAL ASSESSMENT

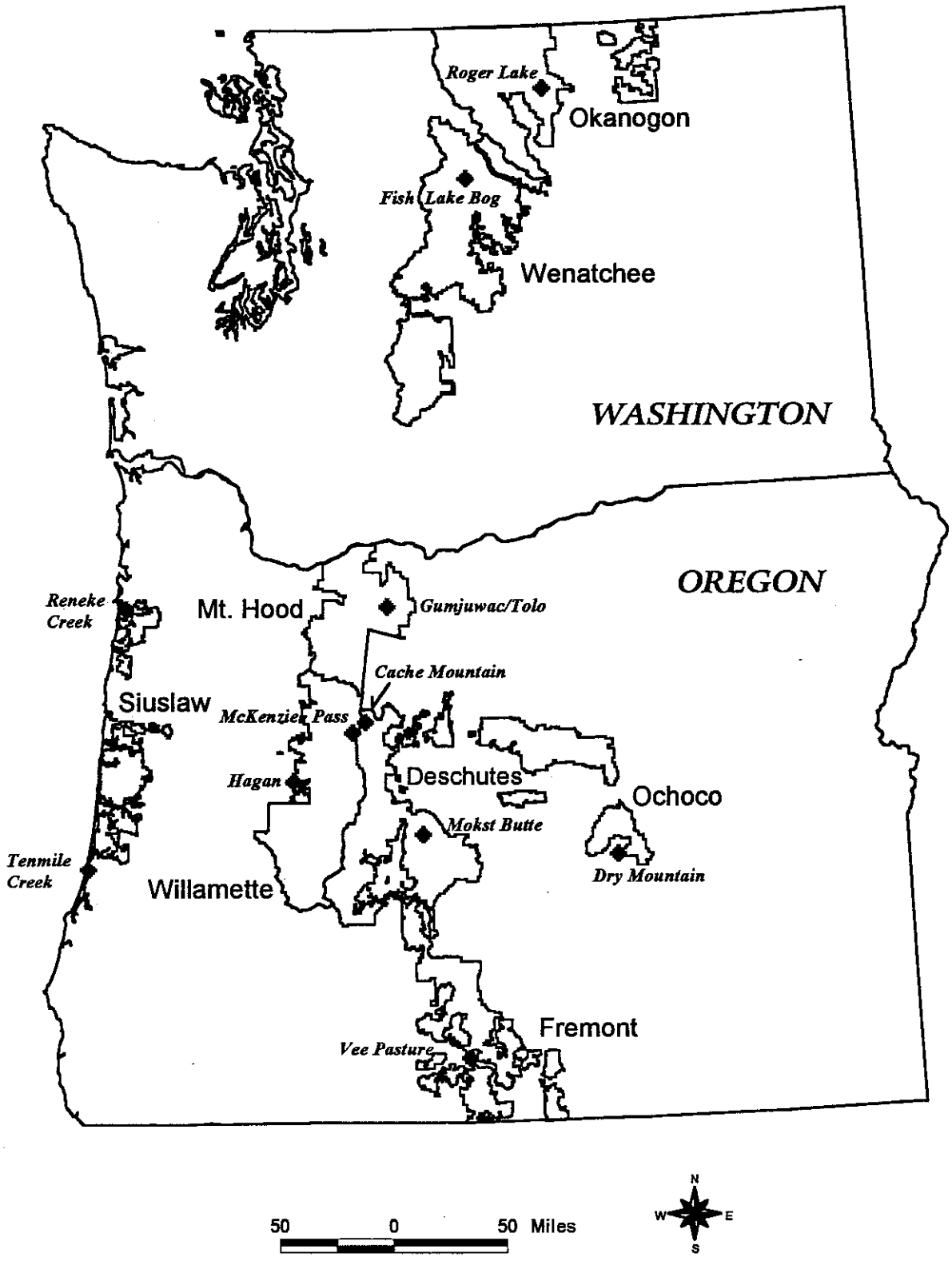
Proposed Action

The proposed action is to establish eleven Research Natural Areas (RNAs) as proposed in the Land and Resource Management Plans (Forest Plan) of each respective National Forest and the Oregon Dunes Management Plan (Tenmile Creek). These RNAs will be managed according to the direction provided in the management plans. This proposed action, formal designation of the RNAs by the Regional Forester, will amend each National Forest's Forest Plan. Table 1 lists the RNAs that are included in this environmental assessment and Figure 1 shows their locations.

Table 1: Research Natural Area Locations

R N A	National Forest	Ranger District	County	Acres
Oregon				
Cache Mountain	Deschutes	Sisters	Deschutes	1400
Dry Mountain	Ochoco	Snow Mountain	Harney	2205
Gumjuwac/Tolo	Mt. Hood	Barlow	Hood River	3600
Hagan	Willamette	Blue River	Lane	1126
McKenzie Pass	Willamette	McKenzie	Lane	1187
Mokst Butte	Deschutes	Bend/Fort Rock	Deschutes	1250
Reneke Creek	Siuslaw	Hebo	Tillamook	480
Tenmile Creek	Siuslaw	Oregon Dunes NRA	Coos	1190
Vee Pasture	Fremont	Bly	Klamath & Lake	620
Washington				
Fish Lake Bog	Wenatchee	Lake Wenatchee	Chelan	206
Roger Lake	Okanogan	Tonasket	Okanogan	436

Figure 1: Vicinity Map



Purpose and Need for Action

The purpose of establishing these RNAs is to contribute to a series of RNAs designated 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 4063.04b, identified the vegetation types represented by these RNAs as suitable and desirable for inclusion in the national network. Establishment of these RNAs will provide long-term protection and recognition of these representative vegetation types (see Table 2).

Table 2: Representative Vegetative Types

RNA	Physiographic Province	Major Vegetation Types		
Cache Mountain	East Slope Oregon Cascades	Mid-elevation lakes with marshy shores	Lodgepole pine/ beargrass and /grouse huckleberry	White fir - Pacific silver fir/snowberry
Dry Mountain	Blue Mountains	Western juniper/big sagebrush	Ponderosa pine/ mountain mahogany	Mountain mahogany/ bunchgrass
Fish Lake Bog	East slope Wash. Cascades	Low elevation wetland & sphagnum bog	Grand fir/vine maple	Western hemlock/ Oregongrape-twinflower
Gumjuwac/Tolo	East Slope Oregon Cascades	Grand fir/ Engelmann spruce/starry solomonseal	Grand fir/ skunkleaf polemonium	
Hagan	West slope Oregon Cascades	Western hemlock/salal-Oregongrape	Douglas-fir/ oceanspray/grass	
McKenzie Pass	High Cascades	Lavaflows with mountain hemlock associations		
Mokst Butte	East Slope Oregon Cascades	Cinder cones with mixed conifer/snowbrush	Ponderosa pine/ bitterbrush	Lava communities
Reneke Creek	Oregon Coast Range	Sitka spruce/ salmonberry	Red alder dominated riparian communities	
Roger Lake	East slope Wash. Cascades	Subalpine fir/ Engelmann spruce	Sedge dominated wetlands	
Tenmile Creek	Oregon Coast Range	Coastal dune mosaic with tree islands	Native stabilized dune grassland	Deflation plain marsh
Vee Pasture	East Slope Oregon Cascades	Western juniper/ low sage	Low sage/ bluegrass/fescue	Low sage/one-spike oatgrass/ junegrass

A more detailed description of the vegetation, wildlife, and physical and climatic conditions can be found in the Establishment Record for each RNA. Site conditions have been reviewed since these RNAs were proposed during the land management planning process and no significant changes have occurred.

Public Involvement

Each National Forest included this project in their quarterly publication "Schedule of Proposed Actions" (FSH 1909.15, sec. 17) or sent a letter to interested parties. No comments were received from the public on continuing with the establishment process for ten of the RNAs. The proposed RNAs were also subjected to public review and comment during the land management planning process that resulted in the Forest Plans and the Oregon Dunes Management Plan (Tenmile Creek).

Several comments were received on Cache Mountain RNA on the Deschutes National Forest. Eunice Brandt and Donald Fontin expressed support for establishment of the RNA. Comments from the Blue Ribbon Coalition addressed the area proposed to be added to the original RNA boundary, road closures, and access for off-road vehicles. Northwest Antenna Site Services had concerns about use of the communications site on Cache Mountain. Sisters Sno-Go-Fers and William Rice expressed their opposition to placing restrictions on more public lands.

Alternatives and Environmental Consequences

Alternative 1, No Action: This alternative continues management according to the direction in the each National Forest's Forest Plan for "proposed RNAs". This management generally limits recreation use to non-motorized use of existing trails and prohibits timber harvest and/or other vegetation management. There are no cumulative effects generated by this alternative. Other environmental consequences are described in the Final Environmental Impact Statement for each Forest Plan. For those RNAs with boundary changes (Cache Mountain, Dry Mountain, and Gumjuwac/Tolo) there is a possible loss of research potential in the areas that were not included in these RNAs originally.

Alternative 2, Proposed Action: This alternative will formally establish each RNA in the location described in their respective Establishment Record. The standards and guidelines listed in each respective Forest Plan will be applied to the management of these RNAs (see Table 3). Environmental consequences of this alternative have been discussed in the Final Environmental Impact Statements for each Forest Plan (Final EIS) and the Record of Decision and Final Environmental Impact Statement for the Oregon Dunes National Recreation Area (Tenmile Creek) (see Table 3). These consequences include the short-term loss of opportunities to change vegetation conditions through management. There are no significant cumulative effects from establishment of these RNAs beyond those already discussed in the Final EIS's.

The direction in the National Forest management plans for established RNAs also includes reasonably foreseeable actions such as withdrawal of the area from mineral entry. The general consequences of withdrawal are discussed in the Final EIS's. Site-specific consequences will be disclosed in more detail when the mineral entry withdrawal recommendation is implemented.

A map of each RNA follows in Figures 2 - 12. A summary of the consequences associated with a particular RNA are listed below the map for that RNA. Those with proposed boundary changes (Cache Mountain, Dry Mountain, Gumjuwac/Tolo) also discuss any additional environmental consequences not covered by the Forest Plan Final EIS for that RNA.

Table 3: Land Management Plan References

R N A	Administrative Unit	Standards and Guidelines in Land and Resource Management Plan	Environmental Consequences in Final EIS
Cache Mountain	Deschutes NF	Chapter 4 - pages 92-93	Chapter IV - pages 69-70
Dry Mountain	Ochoco NF	Pages 125-264*	Chapter IV - 9,10, 41, 51, 108
Fish Lake Bog	Wenatchee NF	Chapter IV - pages 189-197	Chapter IV - pages 83-85
Gumjuwac/Tolo	Mt. Hood NF	Chapter IV - pages 136-150	Chapter IV - pages 145-150
Hagan	Willamette NF	Chapter IV - pages 134-137	Chapter IV - pages 166-169
McKenzie Pass	Willamette NF	Chapter IV - pages 134-137	Chapter IV - pages 166-169
Mokst Butte	Deschutes NF	Chapter 4 - pages 92-93	Chapter IV - pages 69-70
Reneke Creek	Siuslaw NF	Chapter IV - pages 104-107	Chapter IV - pages 77-80
Roger Lake	Okanogan NF	Chapter 4 - pages 73-75	Chapter IV - pages 71-72
Tenmile Creek	Oregon Dunes NRA	Chapter III - pages 49-51	Chapter IV - pages 60-62
Vee Pasture	Fremont NF	Pages 126, 165-166	Chapter IV - pages 171-172

*Specific pages that refer to RNA management include 125-127, 132, 136-138, 142-143, 147, 152, 155, 160, 163-168, 172-175, 178-179, 182, 190, 192, 198, 210, 228-234, 238-239, 250 and 262-264.

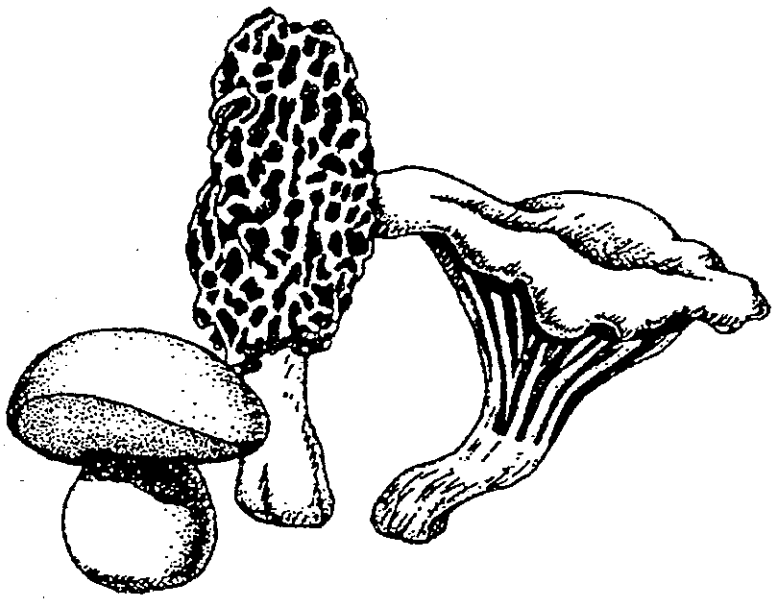
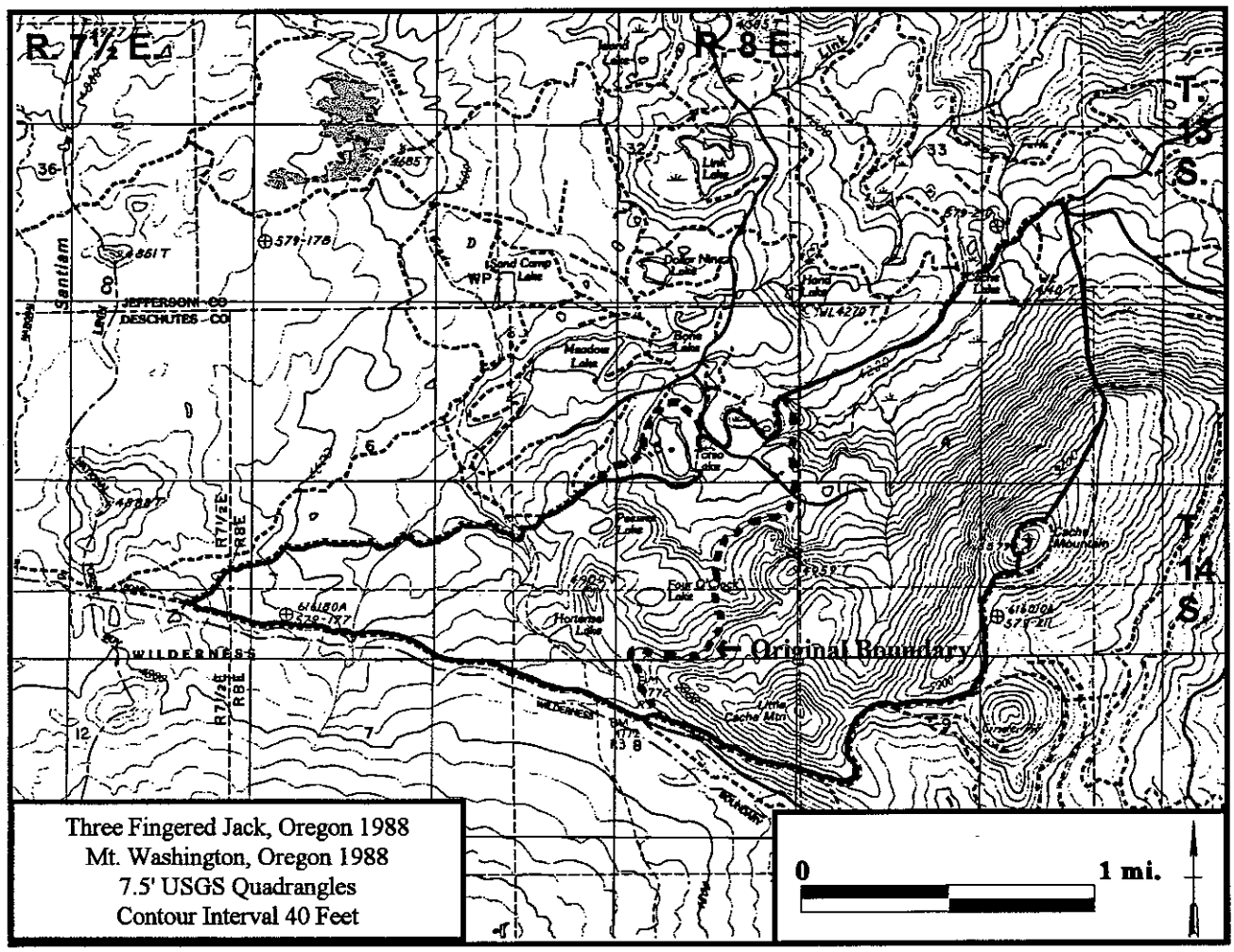


Figure 2: Cache Mountain RNA



Boundary Change: This RNA was originally proposed to include 600 acres in the Deschutes Forest Plan. Review of the area during the establishment process found that the uplands make a significant hydrologic contribution to the lakes and marshy areas that were the main objective for this RNA. To adequately maintain the hydrologic integrity of the system 800 acres were added to the RNA. Torso Lake was found to be significantly altered by previous recreational use and was therefore excluded from the final RNA boundary.

Mineral Resources: There are no known locatable or leasable mineral resources in the RNA and there is a low probability of finding them. Salable mineral resources include cinders and a potential hard rock resource. There has been no exploratory work done on the potential hard rock source.

Grazing: One quarter of an existing but inactive sheep grazing allotment will no longer be available for grazing.

Timber: Of the 1400 total acres in the RNA, 1300 are within a Late-Successional Reserve and are unavailable for timber management purposes. The other 100 acres include Riparian Reserves and Forest

Matrix allocations. The Matrix lands are all within the proposed addition to the RNA and will no longer be available for timber harvest. The effect on the probable sale quantity will be negligible.

Recreation: Most recreation use is associated with the lakes. Due to limited road and trail access, use has been low in the proposed RNA. It is not anticipated that establishment of the RNA will affect this type of dispersed use. Off-highway vehicle (OHV) use in the area surrounding the RNA is high particularly along roads and the summit of Cache Mountain on the eastern boundary of the RNA. Much of the area added to the RNA is unroaded and is already off limits to this use because of wetlands standards and guidelines. Abundant down wood and steep topography in other areas has and will continue to limit OHV use in the remainder of the area that has been added. The summit area of Cache Mountain is outside the RNA. For these reasons it is anticipated that the effect of establishment on OHV use in the area will be minimal. About one half mile of Rd. 2076-800 lies within the RNA. If closure of this road to protect RNA values becomes desirable, a separate NEPA analysis will be completed.

Communications Site: The communications site on Cache Mountain is not included in the proposed addition to the RNA and the road to the site will remain open. There should be no conflict between use of the site and establishment of the RNA.

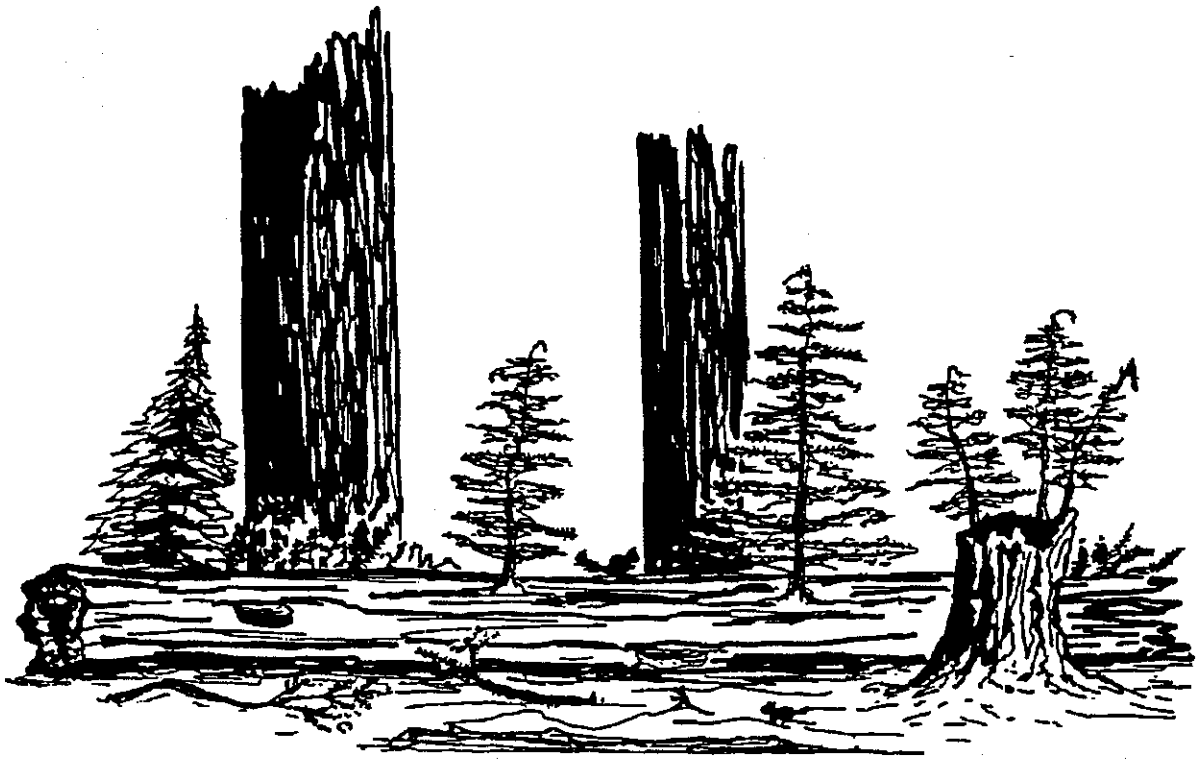
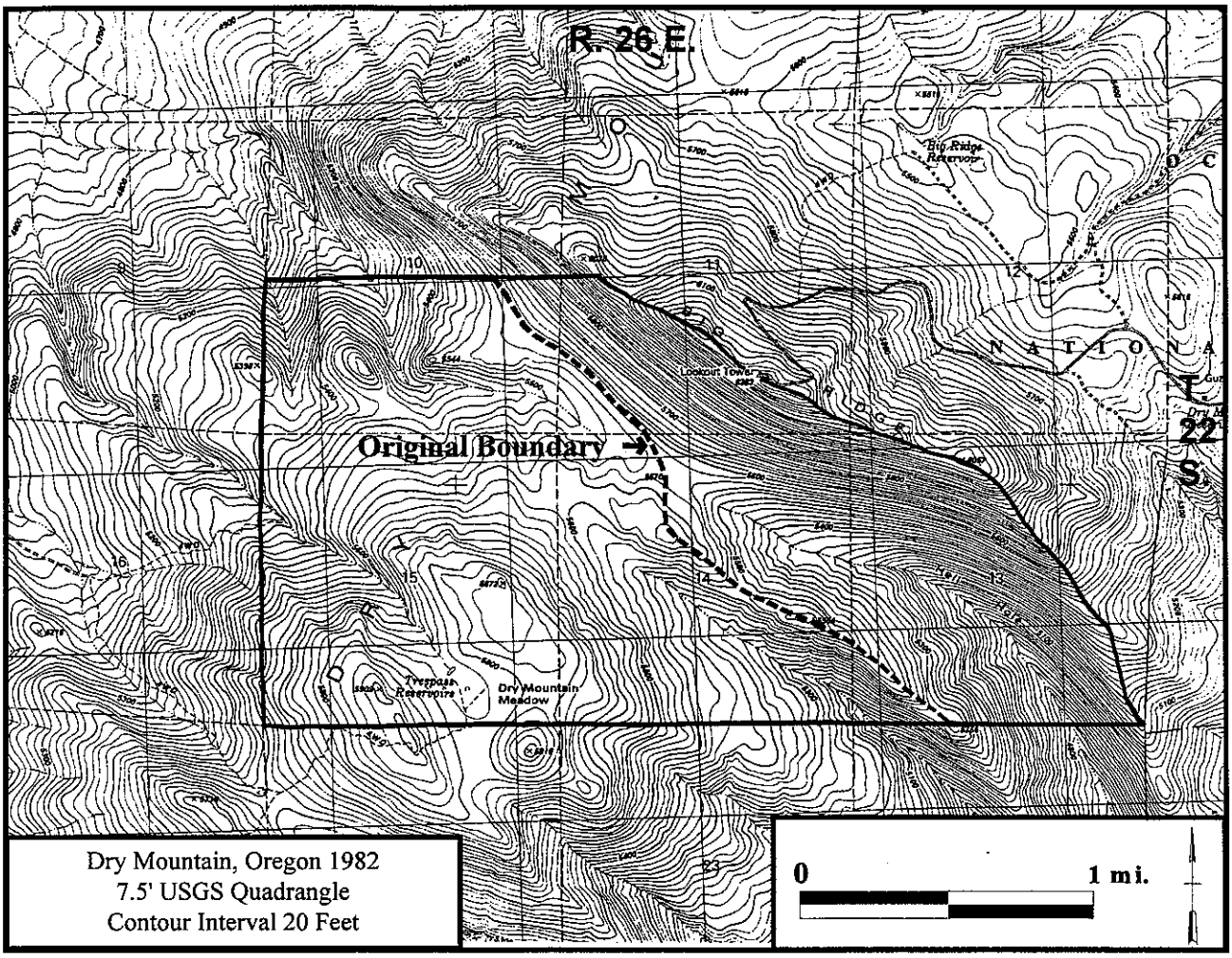


Figure 3: Dry Mountain RNA



Boundary Change: The proposed change incorporates natural watershed boundaries and is more consistent with the topography of the area. The additional acres are currently managed as big game winter range. This change will not have any measurable effect on Forest plan outputs.

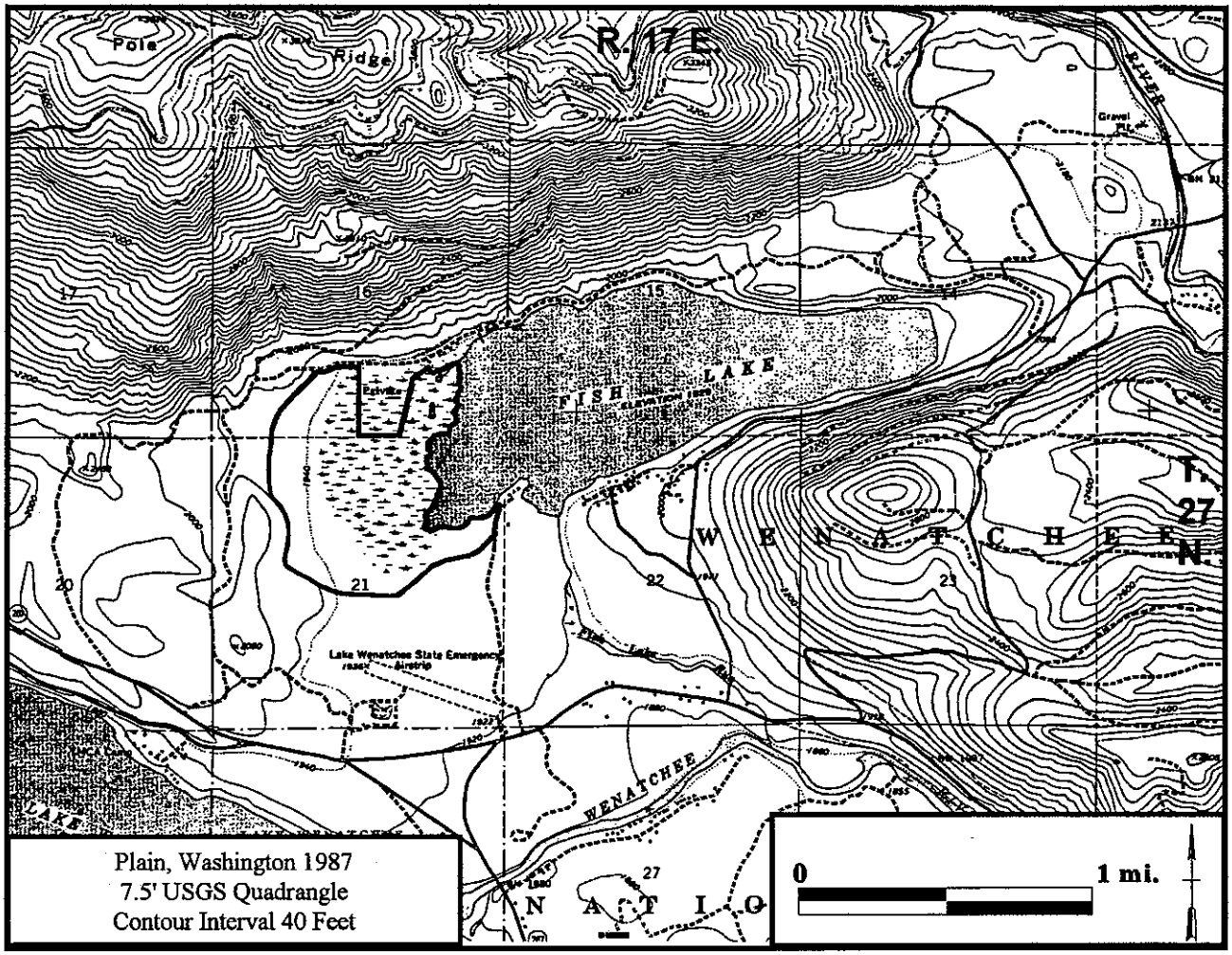
Mineral Resources: There are no reported hardrock mining claims in the RNA. The geology of the area does not lend itself to valuable mineral claims. Salable minerals, such as gravel, are potentially available on the RNA but recovery of these resources would be difficult due to the limited access to the area.

Grazing: Dry Mountain RNA is within the Green Butte grazing allotment but, because of the isolated nature of the site, there has been no recent cattle grazing on this part of the allotment.

Timber: The RNA has not been cruised to determine the volume of timber present but approximately half of the site contains 150-200 year old ponderosa pine in low to moderate densities.

Recreation: Dry Mountain RNA receives almost no recreation use therefore, establishment will have no effect on recreation.

Figure 4: Fish Lake Bog RNA



Mineral Resources: There are no known mineral resources within the RNA.

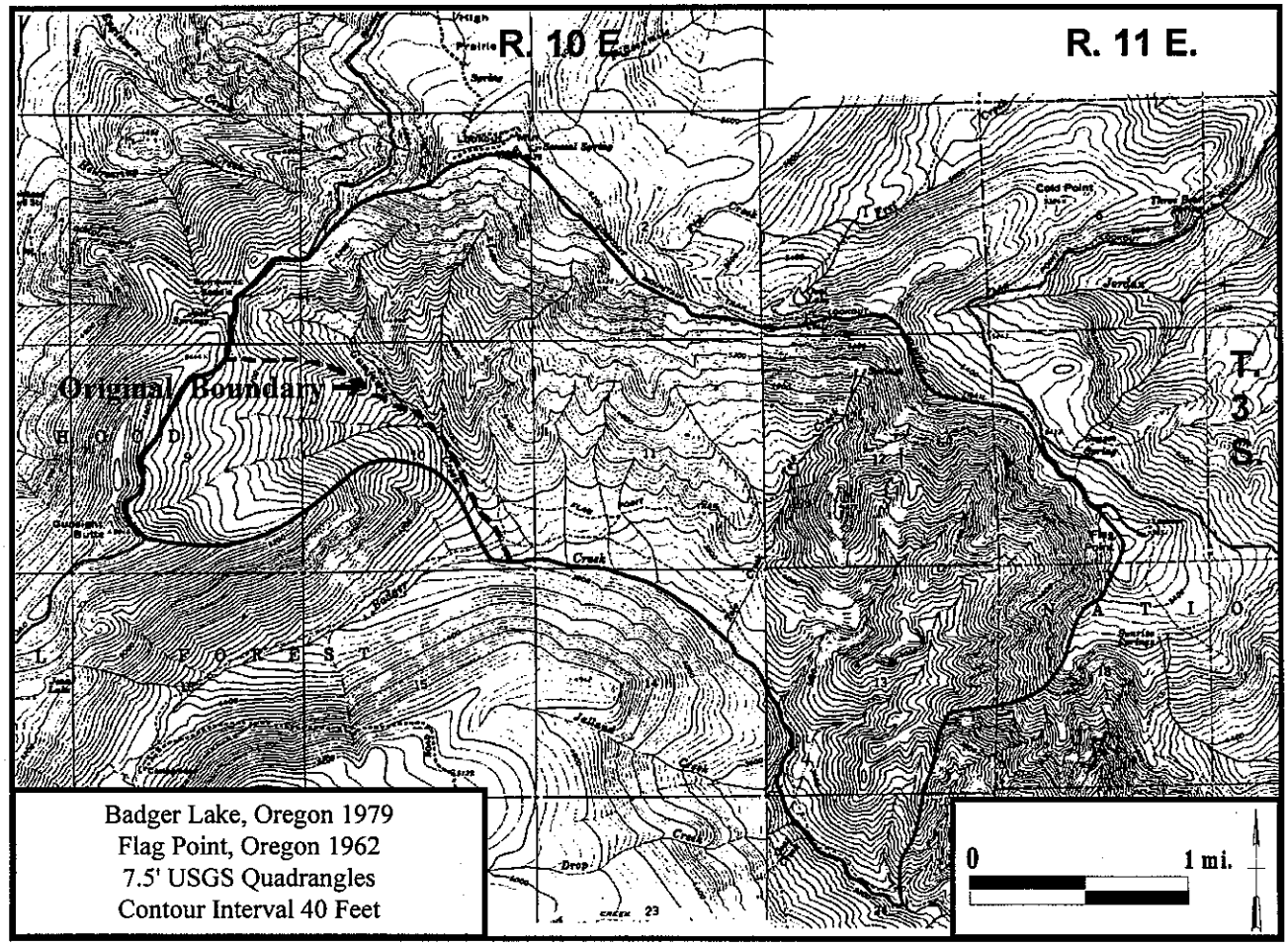
Grazing: There is no grazing allotment or potential for grazing associated with this RNA.

Timber: There about 64 acres of forest land within the RNA. This land was not included in the timber base for the Forest Plan therefore precluding timber harvest on these acres will have no effect on the probable sale quantity.

Recreation: Fish Lake which is adjacent to the RNA is a major fishing, boating, and snowmobiling area. There is a snowmobile trail along the western and northern boundaries of the RNA. This use is not expected to conflict with protection of RNA values. Because of the bog type of vegetation along the lake's boundary with the RNA there will be no impact on the water-based recreational uses of the lake.

Private Land: It is desireable to obtain the 44 acres of private land adjacent to the RNA in Section 16 in order to fully utilize the research potential of this RNA.

Figure 5: Gumjuwac/Tolo RNA



Boundary Change: The boundary was slightly modified during the establishment process to include all of Gumjuwac Creek. Since the whole RNA is within the Badger Creek Wilderness, this change is not expected to change the environmental consequences documented in the Final EIS.

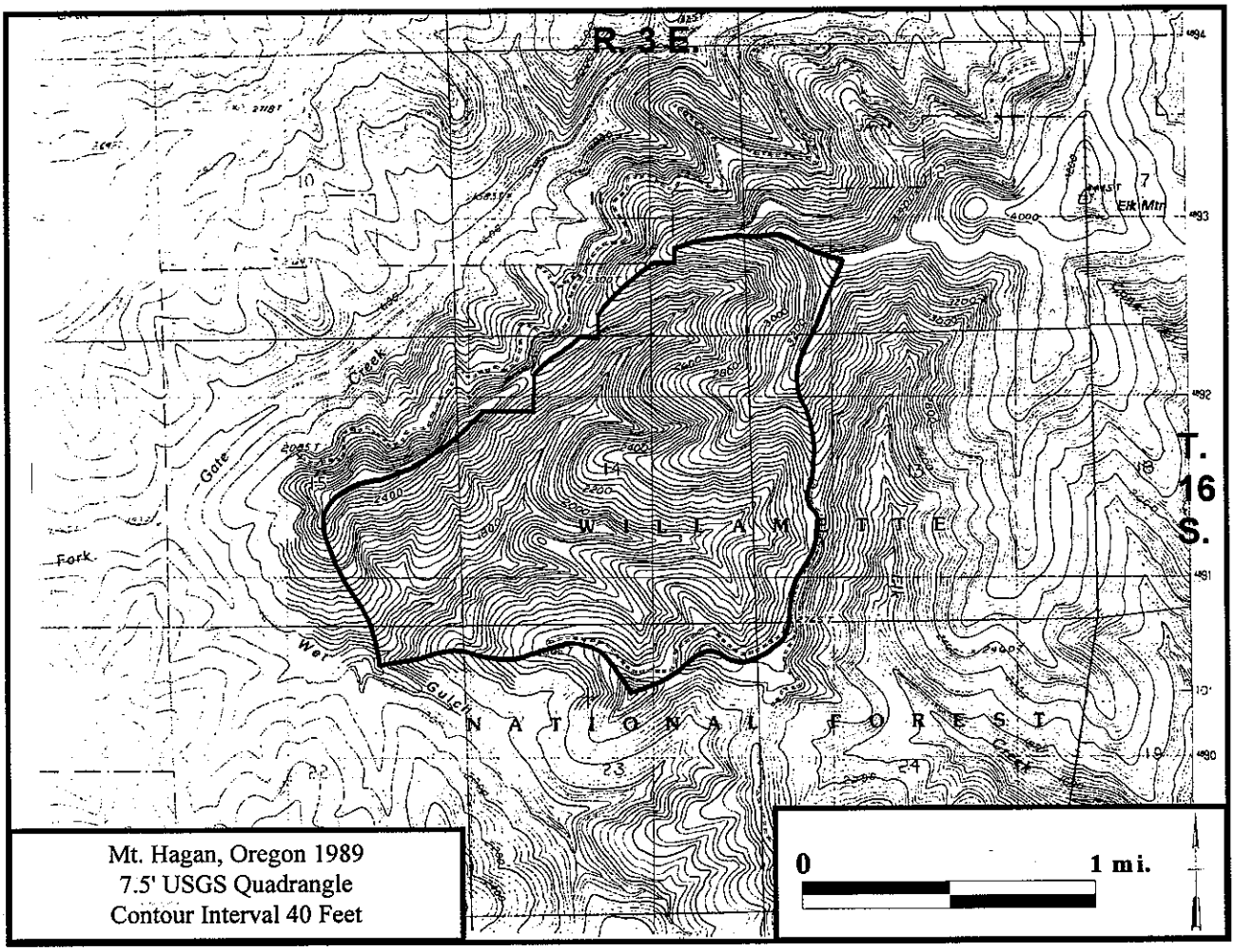
Mineral Resources: This area is considered to have low to very low potential for economic deposits of all minerals except construction rock. The RNA has already been withdrawn from future locatable mineral entry in conjunction with designation of the wilderness.

Grazing: No grazing allotments currently exist within the area.

Timber:. There will be no change in the probable sale quantity by establishment of this RNA since the RNA lies entirely within the Badger Creek Wilderness, in which timber harvest is not permitted.

Recreation: Parts of several wilderness trails lie within the proposed RNA and roughly demarcate its perimeter. These trails receive relatively light use and do not appear to detract from the natural values of this area. Therefore, recreation use should not be effected by establishment of this RNA.

Figure 6: Hagan RNA



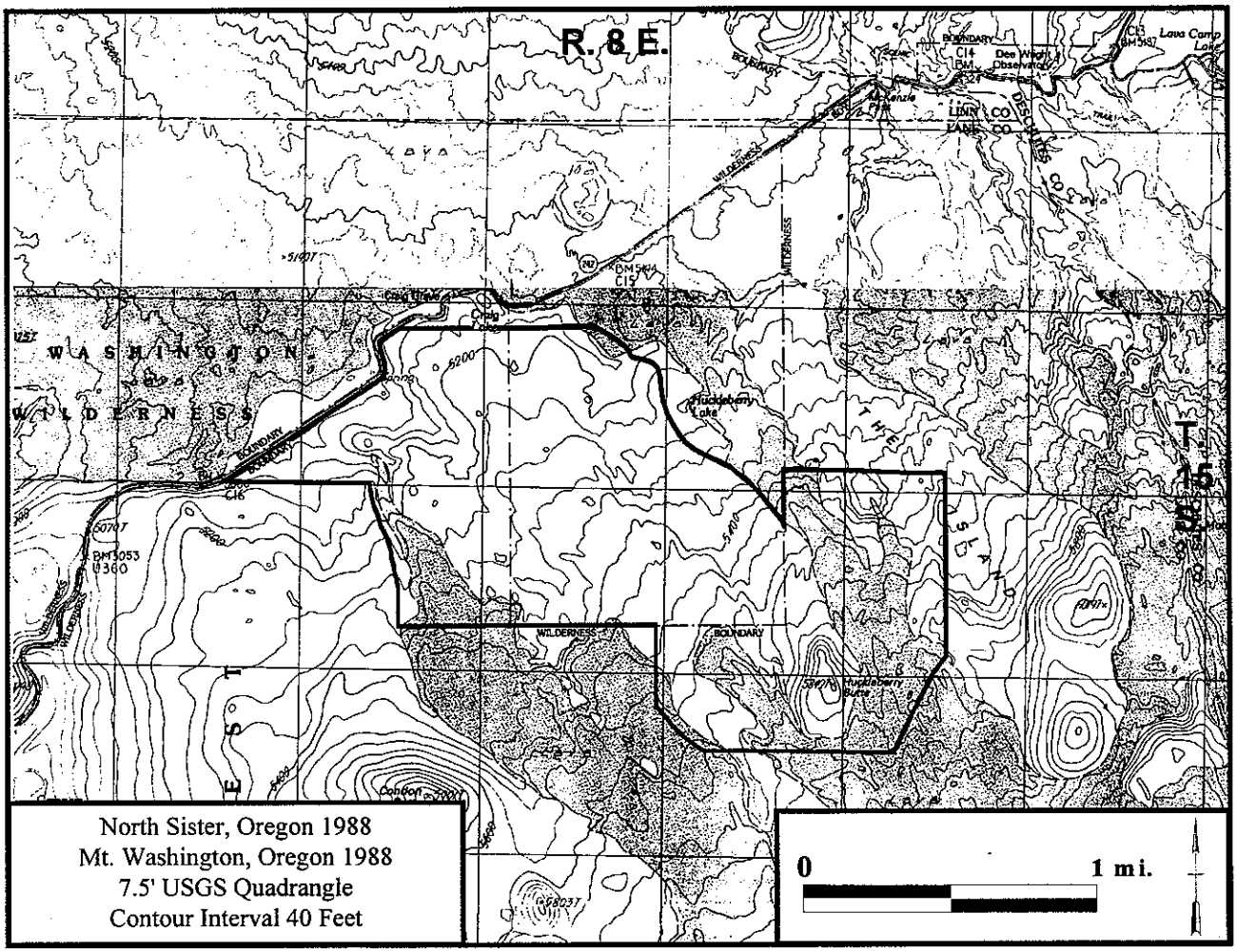
Mineral Resources: There are no known mineral resources in or adjacent to the RNA.

Grazing: There are no grazing allotments in or adjacent to the RNA.

Timber: The RNA includes 1126 acres of forested lands that meet the productivity requirements for commercial timber harvest. This land was not included in the timber base for the Forest Plan and is now within a Late-Successional Reserve. Therefore establishment will have no effect on probable sale quantity.

Recreation: Steep slopes and lack of public road access have limited recreational use of the RNA to some hunting use. Establishment is not expected to have any impact on this use.

Figure 7: McKenzie Pass RNA



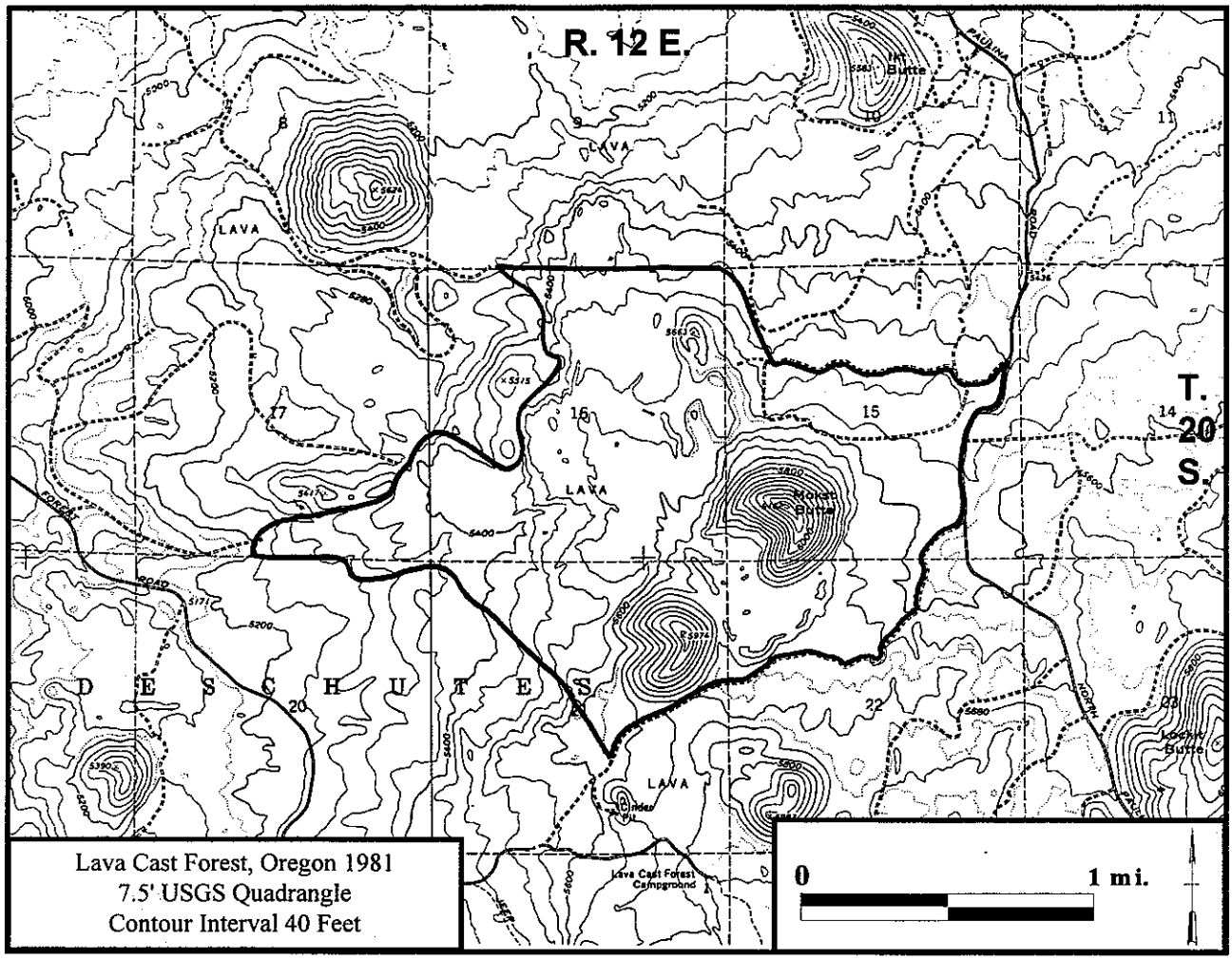
Mineral Resources: There are no known mineral resources in or adjacent to the RNA.

Grazing: There are no grazing allotments in or adjacent to the RNA because of lack of forage and inaccessibility of the area.

Timber: The RNA contains 926 acres (out of 1187 acres) of forested lands that meet the productivity requirements for commercial timber harvest. About half of these acres (471 acres) are in the Three Sisters Wilderness and are not available for harvest. The remainder were not included in the timber base for the Forest Plan. Therefore, establishment will have no effect on probable sale quantity.

Recreation: There is light to moderate use of the area by day hikers, mountain bikers, and hunters. Most of the use is concentrated around Craig Lake and Huckleberry Lake, both of which are outside the RNA boundary. The RNA includes 723 acres of the Three Sisters Wilderness. A trail in the eastern portion of the RNA that runs to Huckleberry Butte will continue to be used. No conflicts are anticipated with protection of RNA values therefore recreation use of the area will not be effected by establishment.

Figure 8: Mokst Butte RNA



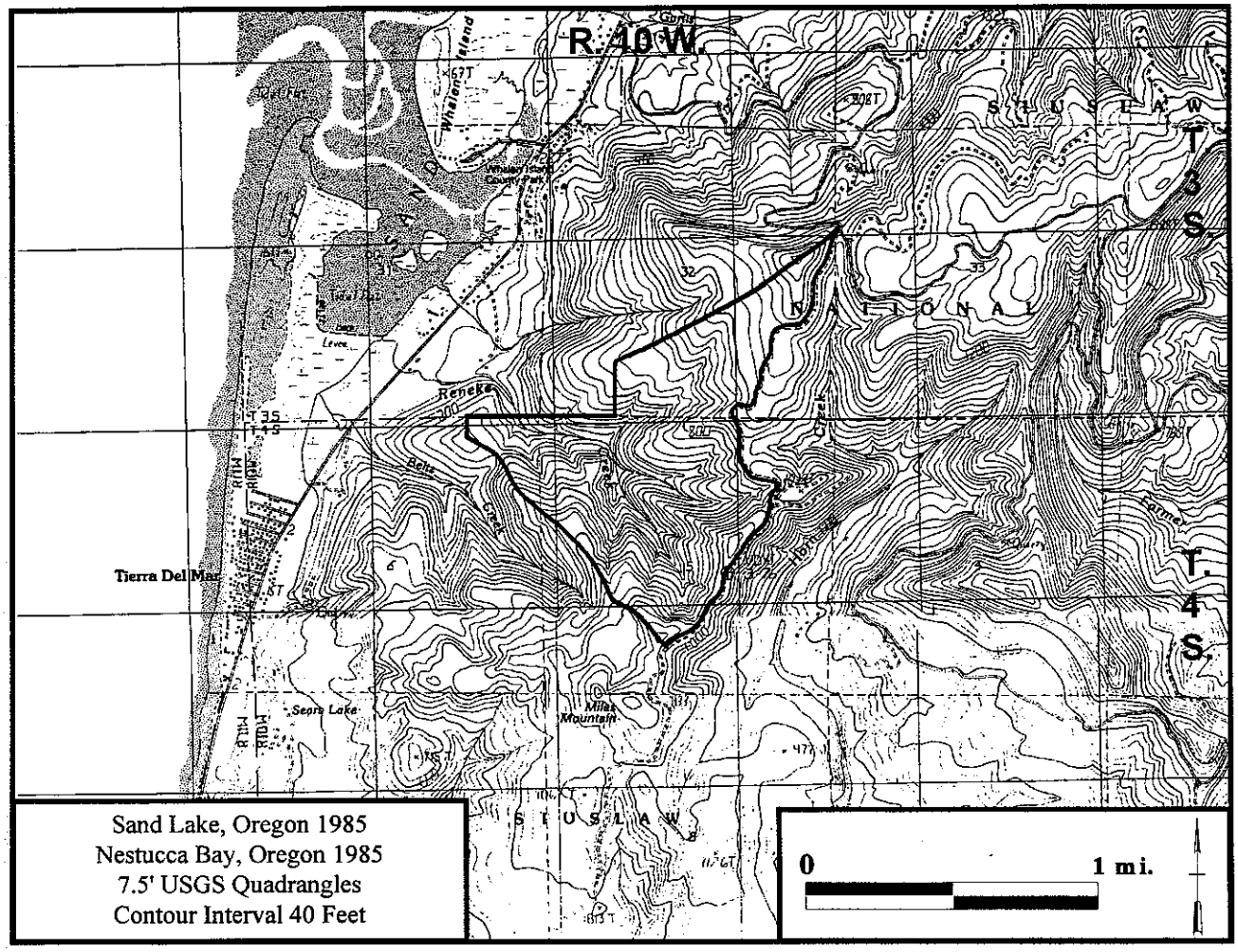
Mineral Resources: The State of Oregon has a mineral reservation covering 480 acres in section 16 of the RNA. The area is also withdrawn from mineral entry under the Newberry Crater National Volcanic Monument enabling legislation.

Grazing: There are two allotments adjacent to the RNA. Both are currently vacant and requirements for the Volcanic Monument already preclude grazing so establishment will have no effect on grazing.

Timber: The RNA contains approximately 500 acres (out of 1250 acres) of forested lands that meet the productivity requirements for commercial timber harvest. This land was not included in the timber base for the Forest Plan. Therefore, establishment will have no effect on probable sale quantity.

Recreation: The RNA receives limited recreation use, mostly hiking and dispersed camping. This use is not expected to conflict with protection of RNA values. Therefore, recreation use of the area will not be effected by establishment.

Figure 9: Reneke Creek RNA



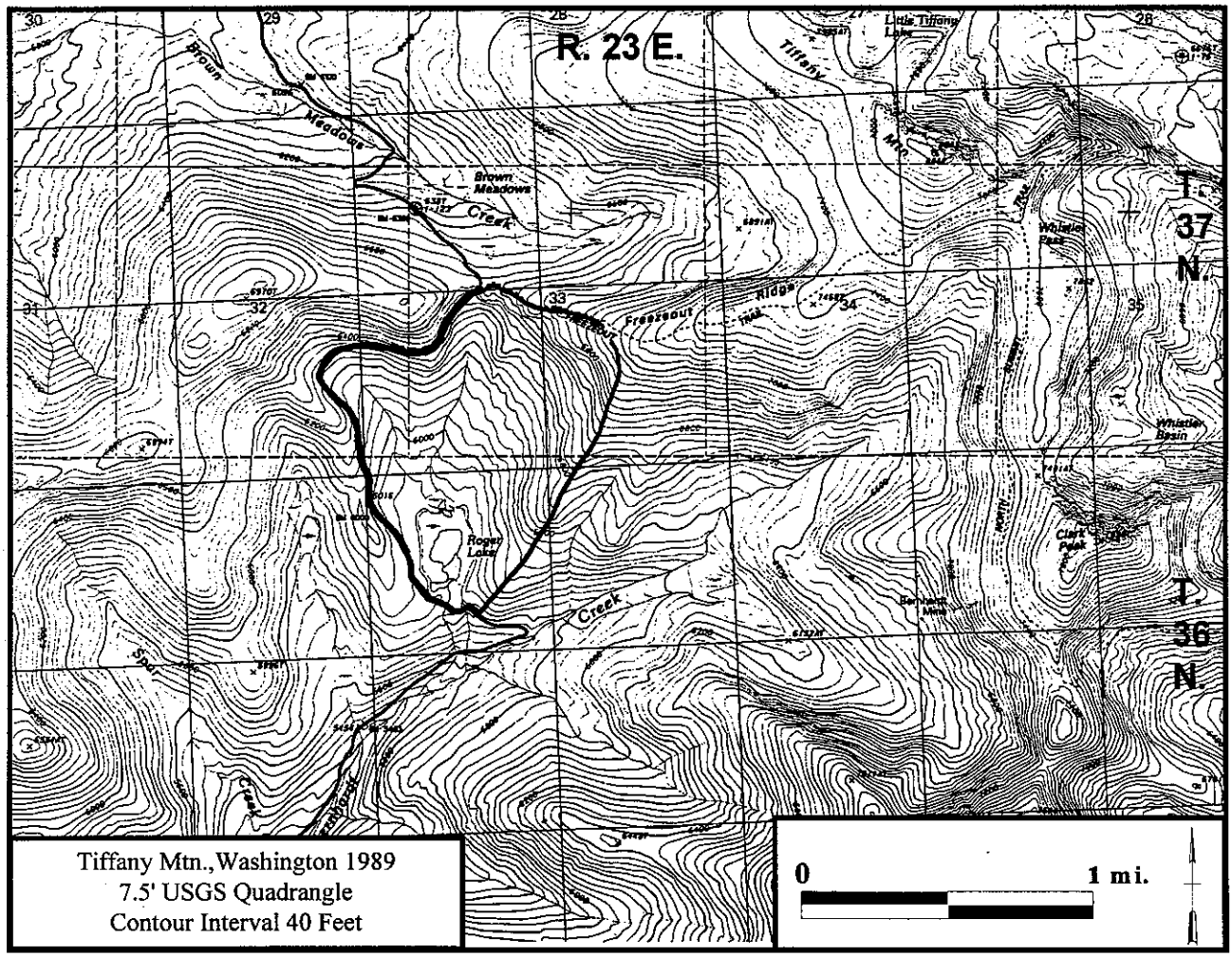
Mineral Resources: There are no known mineral resources in the RNA.

Grazing: There are no grazing allotments in or adjacent to the RNA.

Timber: The RNA is covered by forested lands that meet the productivity requirements for commercial timber harvest. This land was not included in the timber base for the Forest Plan and is within a Late-Successional Reserve. Therefore, establishment will have no effect on probable sale quantity.

Recreation: The RNA receives almost no recreation use. The site is not particularly inviting to hikers because it is densely forested and secluded by private lands. There is some use during hunting season. This use is not expected to conflict with protection of RNA values. Therefore, recreation use of the area will not be effected by establishment.

Figure 10: Roger Lake RNA



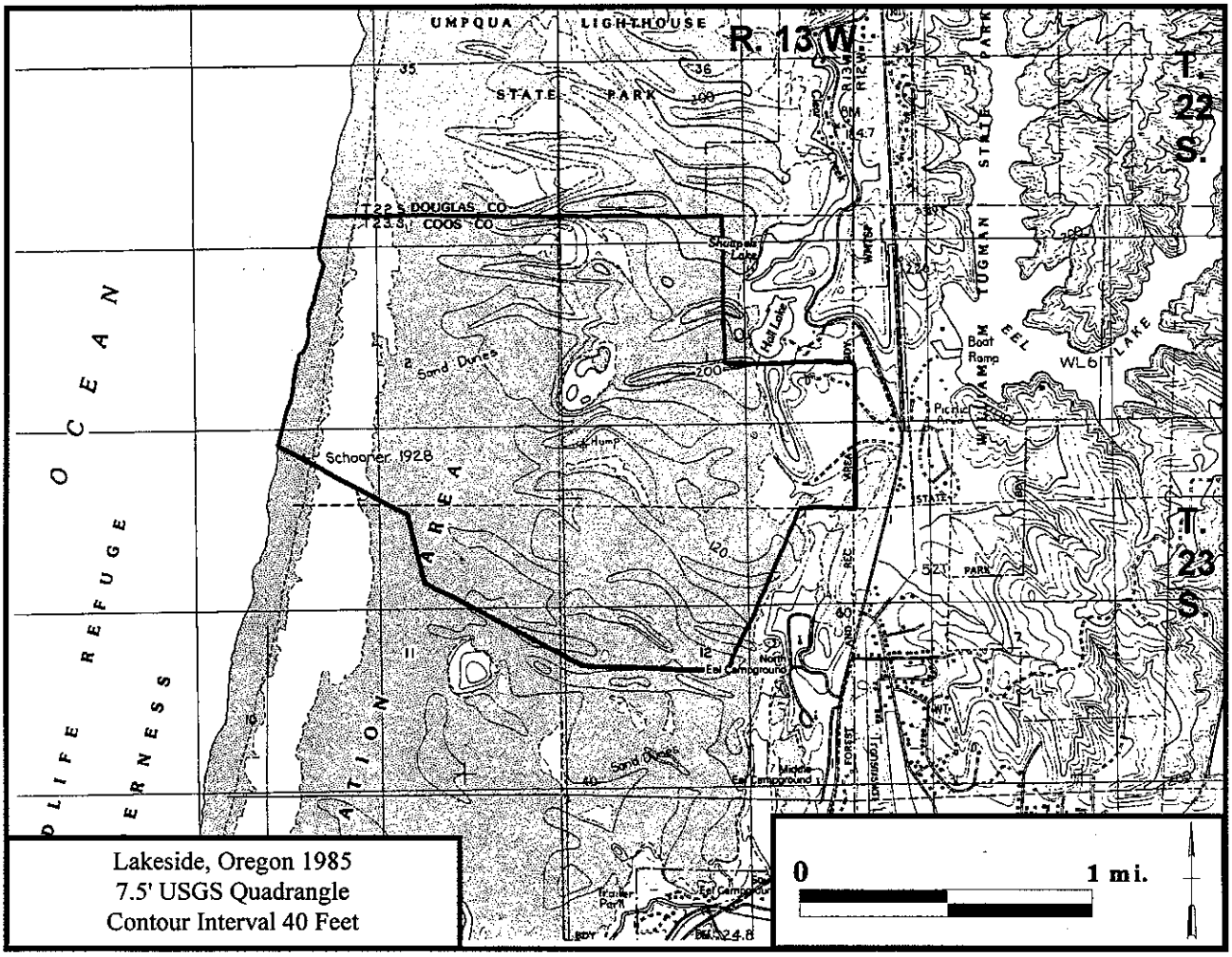
Mineral Resources: There are no known mineral resources in the RNA.

Grazing: The RNA is located within a grazing allotment that has not been grazed since 1987. If this allotment becomes active, the 436 acres in the RNA will be excluded from grazing.

Timber: Approximately 380 acres of the RNA are covered by forested lands that meet the productivity requirements for commercial timber harvest. This land was not included in the timber base for the Forest Plan. Therefore, establishment will have no effect on probable sale quantity.

Recreation: The RNA receives most of its recreation use in the area around Roger Lake where there is a parking area and two campsites. These facilities will be closed as required by the Forest Plan standards and guidelines. Dispersed recreation such as hunting and hiking will continue unless it reduces the research or educational values of the RNA.

Figure 11: Tenmile Creek RNA



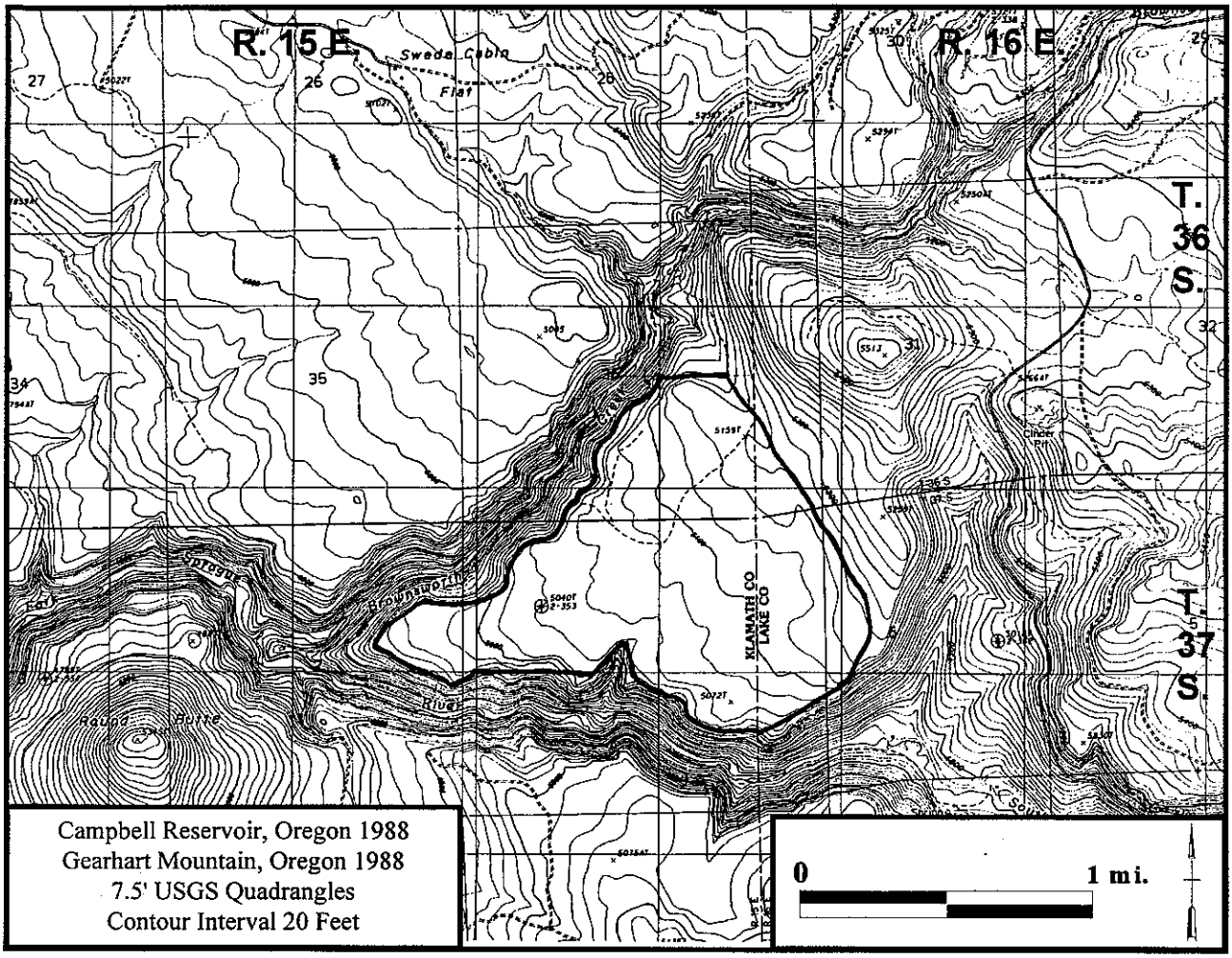
Mineral Resources: This area has been withdrawn from mineral entry as part of the Oregon Dunes National Recreation Area.

Grazing: There are no grazing allotments in or near the RNA.

Timber: A small portion of the RNA consists of timbered lands. These lands were considered unavailable for harvest during analysis for the Oregon Dunes Management Plan and EIS.

Recreation: The RNA receives some recreation use, mostly in the form of day hiking. Recreation in the RNA is a concern if use increases as expected in the Oregon Dunes National Recreation Area. It is anticipated that education of users will be used to minimize conflicts between continued recreational use of the RNA and protection of the research values of the RNA.

Figure 12: Vee Pasture RNA



Mineral Resources: There are no known mineral resources in this RNA.

Grazing: Livestock have used this area to only a limited extent due to natural barriers, rocky soil surface, and distance from water. It is not part of any grazing allotment.

Timber: This RNA is covered with grasslands therefore, establishment will have no effect on timber outputs.

Recreation: There is very limited recreational use within the RNA due to its inaccessibility. The most likely use is some hunting. This use is not expected to conflict with the research or educational values of the RNA.