UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Establishment

of

CEDAR LOG FLAT RESEARCH NATURAL AREA

Siskiyou National Forest

Galice Ranger District

Josephine County, Oregon

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

FS-6200-7 (10/73)

11/16/95

Cover Page Info for RNA Establ. Record

Name: _Cedar Log Flat_____RNA

Region: ___R06_____ National Forest_Siskiyou_____

Station: _PNW_____

State: __Oregon_____ County: _Josephine_____

Boundary Certified on page___17_____

TMIS #: __00_____

Date Reg. Forester signed: _____

Lat.: _42 deg. 23' 46.8"____

Long.: _123 deg. 35' 51.5"__

1980 SAF	Acres	Ha	1966 Kuchler	Acres	Ha
247	388	153	CA mix evergreen	21	9
248	3	1.2	no other type	400	157
231	16	6.3			
234	14	5.5			
Total:	421	166		421	166

Abutted by non-FS land? No

SAF & Kuchler types consistent? (see page_3_____) *they often aren't!

Climate records: length of record 30 y Distance to weather sta. 19 mi

Fauna & Flora authorities: Little 1979; Munz 1968; Burt 1976; Nussbaum et al. 1983; Peterson 1961

Land use conflicts? Grazing? Trails? Recreation? Timber? Nothing major

Commercial timber acreage__145_____acres.

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Cedar Log Flat Research Natural Area

Siskiyou National Forest

Josephine 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.

Prepared by _____ Date 11/30/95
Diane E. White, Ecologist
Siskiyou National Forest

Recommended by _____ Date 2/16/96
Dan Crittenden, Acting District Ranger
Galice Ranger District

Recommended by _____ Date 2/16/96
Michael Lunn, Forest Supervisor
Siskiyou National Forest

Recommended by _____ Date 4/10/96
for Tom J. Mills, Station Director
Pacific Northwest Research Station

TITLE PAGE

Establishment Record for
Cedar Log Flat Research Natural Area
within Siskiyou National Forest, Josephine County, Oregon

ESTABLISHMENT RECORD FOR CEDAR LOG FLAT RESEARCH NATURAL AREA WITHIN SISKIYOU NATIONAL FOREST JOSEPHINE COUNTY, OREGON

INTRODUCTION

The Cedar Log Flat Research Natural Area (RNA) consists of 421 acres (170.4 hectares), and is administered by the Galice Ranger District of the Siskiyou National Forest. The proposed RNA is on serpentine and peridotite bedrock and exhibits plant associations characteristic of this unique feature. Of special interest is the meadow or "flat" which has a park-like appearance with an open stand of conifers, mostly jeffrey pine (Pinus jeffreyi[1]). Several bogs which remain wet throughout the year occur within the meadow or along the edge. The proposed RNA also contains some timbered area and some areas which support dense brush.

LAND MANAGEMENT PLANNING

The 1989 Land and Resource Managment Plan and Record of Decision for the Siskiyou National Forest recommends 421 acres (170.4 hectares) of the area to be established and included in the nationwide system of RNAs, with direction that the establishment report and management plan be completed (Land and Resource Management Plan, pages II-29; Record of Decision, page ROD-14).

Establishment of the Cedar Log Flat RNA would fill the Klamath Mountains Province representation of a Port Orford cedar/western azalea community (Chamaecyparis lawsoniana/Rhododendron occidentale), a jeffrey pine/dwarf ceanothus (Ceanothus pumilus) savanna community, and a California pitcher-plant (Darlingtonia californica) fen on serpentine-peridotite, with western azalea and camas (Camassia sp.) along the margins, as recognized in the Oregon Natural Heritage Plan (Oregon Division of State Lands, 1993).

OBJECTIVES

The primary objective of Cedar Log Flat RNA is to preserve forestland, shrubland, meadows, and bogs that occur on soils derived from serpentine bedrock. This will provide a spectrum of natural situations having special or unique characteristics of scientific interest or importance. The RNA will serve as a reference area for study of ecological succession in serpentine forestland and meadows; it will serve as a baseline for measuring long-term ecological changes; and as a monitoring area to determine effects of techniques and management practices applied to similar ecosystems.

[1]Nomenclature for vascular plants follows Munz (1968), except for trees, which follows Little (1979). Common names for plants also listed starting on page 6.

The Cedar Log Flat Research Natural Area will provide important links to the national network of RNAs, and support the need for preserving unique and characteristic natural ecological values.

JUSTIFICATION

This serpentine forest-shrubland-meadow complex is an excellent observatory of ecological change and would fill the Klamath Mountain Province cell needs cited above. Seven plant species on the Oregon State Sensitive Plant list are found within the proposed RNA; some are otherwise not known outside of the Illinois Valley area. Because of the diversity of habitats, many species of birds use the area.

PRINCIPLE DISTINGUISHING FEATURES

The vegetation composition is dictated by the ultrabasic parent rock--serpentine and peridotite. The soils derived from this rock are typically low in total and adsorbed calcium, and high in magnesium, chromium, and nickel. Serpentine areas are characterized by unusual plant communities; the vegetation is usually stunted, compared with vegetation on normal soils. The flora usually includes endemics which are restricted to serpentine species. The conifers that predominate are Port-Orford cedar in the moister areas and jeffrey pine in the drier areas. Knobcone pine (Pinus attenuata) is also present, indicating a recent fire. Sensitive species that occur in the RNA are wild onion, (Allium bolanderi var. mirabile), Oregon willow-herb (Epilobium oregonense), Siskiyou fritillaria (Fritillaria glauca), Howells microseris (Microseris howellii), Heckners stonecrop (Sedum laxum ssp. heckneri), and Groundsel (Senecio hesperius). Review species include Koshleri's rockcress (Arabis koehleri var. stipitata), California lady's slipper (Cypripedium californicum), California pitcher-plant (Darlingtonia californicum), Long-stalked buckwheat (Eriogonum pedulum), and Siskiyou pennycress (Thlaspi montanum var. siskiyouensis). Monitor species present are Waldo rockcress (Arabis aculeolata), Oregon bleedingheart (Dicentra formosa ssp. oregana), Vollmeri lily (Lilium vollmeri), and Phacelia (Phacelia corymbosa).

Fire evidence is present throughout the RNA. Knobcone pine, a typical pioneer after fire in this area, is present as a pure, small stand in the northern part of the RNA near the ridgetop. The presence of whiteleaf manzanita (Arctostaphylos viscida) is also an indicator of recent fires. There are many bole scars and fire scarred snags. Fire evidence along the creek is less evident, yet still present.

LOCATION

Cedar Log Flat RNA is located near the center of the eastern boundary of the Siskiyou National Forest (Maps 1-3). It is about 19 road miles from Grants Pass, Oregon, and is part of the Slate Creek drainage and eventually flows into the Applegate River. It includes portions of sections 35 and 36, Township 36 South, Range 8 West, Willamette Meridian. It lies at 42° 23' 46.8" latitude and 123° 35' 51.5" longitude.

Boundaries. All bearings referred to in this description are True Geodetic Bearings. Beginning at the easterly Ordinary High Water Line of Slate Creek at

its junction with Buckeye Creek. Thence southerly along the easterly ordinary high water line past the junction of Cedar Log Creek to a point opposite the junction of an unnamed creek. Thence westerly along said unamed creek to the end of the distinct drainage. Thence South 80° West to the top of the divide between Cedar Log Creek and Slate Creek. Thence northerly along said divide to Cedar Log Creek. Thence northerly to the summit and the northerly divide of Cedar Log Creek and Slate Creek. Thence southeasterly along said divide to a point due west of the point of beginning. Thence east to the point of beginning.

AREA AND ELEVATION

Cedar Log Flat RNA is 421 acres (178 hectares) in size. The elevation ranges from 1700 (518 meters) to 3300 feet (1006 meters). Total difference in elevation is 1600 feet (488 meters).

ACCESS

Access to the RNA is possible all year. Proceed west on US Highway 199 from Grants Pass, Oregon. Turn north onto road 3690. Turn north on spur road 020 which fords Slate Creek at the RNA boundary. Camping areas and overnight accommodations are available in Grants Pass, 19 miles away. Primitive camping may be done adjacent to Slate Creek along the RNA boundary.

AREA BY COVER TYPE

The following are estimates of area by plant associations and cover types. Also see Maps 4-6.

SAF Cover Types; Map 4 (Eyre 1980)

	Acres
Jeffrey Pine 247	388
Knobcone Pine 248	3
Port Orford Cedar 231	16
Douglas-fir-Tanoak-Madrone 234	14
Total	421

Kuchler Cover Types; Map 5 (Kuchler 1966)

California mixed evergreen	21
No Kuchler cover type	400
Total	421

Plant Associations and communities; Map 6 (Wheeler and Atzet 1984)

Jeffrey pine-Huckleberry oak (PIJE-QUVA)	245
Jeffrey pine/Dwarf ceanothus (PIJE/CEPU)	22
Douglas-fir-Jeffrey pine (PSME-PIJE)	115
Port Orford cedar-Bigleaf Maple (CHLA-ACMA)	5
Port Orford cedar/Box-leaved silktassel (CHLA/GABU)	16
Tanoak/California coffeeberry (LIDE3/RHCA)	10
Darlingtonia bogs	8
Total	421

PHYSICAL AND CLIMATIC CONDITIONS

The climate of the area is cool, wet, and sometimes foggy during the winter, and hot and dry during the summer. The summer climate is mediterranean, and drought between May and October is common. Temperature and precipitation averages, for the 30 year period between 1943 and 1972, for the U.S. Weather Station in Grants Pass, Oregon are shown below. The weather station is 19 air miles from Cedar Log Flat and reflects the conditions in the RNA fairly well.

Average annual temperature	54.4 F
Average annual July temperature	71.3 F
Average annual December temperature	40.0 F
Average annual precipitation	31.9 in
Average annual summer precipitation	1.4 in

DESCRIPTION OF VALUES

Flora

The RNA is made up of six plant associations plus scattered California pitcher-plant bogs.

The most common association is the Jeffrey pine-Huckleberry oak (Quercus vaccinifolia). It is located throughout the south slope, north of Cedar Log Creek and on the west slope on the southern end of the RNA. Jeffrey pine dominates the overstory with some Douglas-fir and incense cedar (Calocedrus decurrens) present. The understory is characterized by the presence of huckleberry oak with lesser amounts of California laurel (Umbellularia californica), incense cedar, Jeffrey pine, Douglas-fir, Pacific madrone (Arbutus menzeisii), and canyon live oak (Quercus chrysolepis). The dominant shrubs are whiteleaf manzanita, and California coffeeberry (Rhamnus californica), with varying amounts of box-leaved silk-tassle (Garrya buxifolia), ocean spray (Holodiscus discolor), squaw carpet (Ceanothus prostratus), and pinemat manzanita (Arctostaphylos nevadensis). The herbaceous layer is dominated by grasses and common serpentine species. A large amount of surface rock is present. This association can have small patches of the Douglas-fir-Jeffrey pine association mixed with it.

The Jeffrey pine-Dwarf ceanothus (Ceanothus pumilus) association is located on a bench on the east side of the RNA. This area has a high water table and three bogs are present above the bench. The association has a park-like appearance. The overstory is composed entirely of Jeffrey pine, while the understory is almost entirely Jeffrey pine with minor amounts of incense cedar and a trace of California laurel and Oregon oak (Quercus garryana). Near the fringes of the association Douglas-fir and huckleberry oak are found. The dominant shrub is squaw carpet which varies between 1 and 15 percent canopy cover. Whiteleaf manzanita and California coffeeberry are also found in minor amounts. The herbaceous layer is quite high, with 85 to 90 percent canopy cover. It is dominated by grasses. Other herbs that are consistently present are silky horkelia (Horkelia sericata), deadly zigadenus (Zigadenus venenosus), wooly-head clover (Trifolium eriocephalum), western buttercup (Ranunculus occidentalis), and Henderson's shootingstar (Dodecatheon hendersonii).

The Douglas-fir-Jeffrey pine association dominates the central portion of the RNA on north and northeast aspects and above the riparian zones. The overstory is dominated by Jeffrey pine and Douglas-fir with minor amounts of Port-Orford cedar, sugar pine (Pinus lambertiana), and incense cedar. The understory is dominated by huckleberry oak, with Douglas-fir, Jeffrey pine, and incense cedar consistently present. Pacific madrone, California laurel, and Port-Orford cedar may be present in varying amounts. The shrub layer is characterized by whiteleaf manzanita, California coffeeberry, and box-leaved silk-tassel. The appearance of beargrass (Xerophyllum tenax) in the herb layer is fairly consistent.

A small amount of the Port-Orford cedar/Box-leaved silk-tassle plant association is located along Cedar Log Creek. It occurs in a narrow strip and is wider on the south side of the creek (north aspect). Port-Orford cedar is the dominant regenerating species and box-leaved silk-tassle, western azalea, and California coffeeberry are consistently found. The overstory is dominated by Port-Orford cedar and Douglas-fir with Jeffrey pine and sugar pine occasionally present. The understory is dominated by huckleberry oak and California laurel with moderate amounts of Port-Orford cedar and Douglas-fir, and minor amounts of canyon live oak, Pacific madrone, and Pacific yew (Taxus brevifolia). The shrub layer is predominantly California coffeeberry, western azalea, and western ledum (Ledum glandulosum). Common herbs are swordfern (Polystichum munitum), Henderson's fawn-lily (Erythronium hendersonii), parsley-leaved licorice-root (Ligusticum apiifolium), Oregon trillium (Trillium rivale), and beargrass. Tanoak becomes more abundant further upstream. This appears to be a "contact zone" association. Fertile parent materials from upstream mix with serpentine and peridotite and create a productive association with ultrabasic indicators.

The Port-Orford cedar-Bigleaf maple plant association is a minor component of the RNA and is located on the flat alluvial plane at the junction of Cedar Log and Slate Creeks. This association is also a contact zone of parent material deposits, and the diversity of species is high. The overstory is made up of Port-Orford cedar and Douglas-fir. The understory is dominated by California laurel, with red alder (Alnus rubra), bigleaf maple (Acer macrophyllum), Port-Orford cedar, Douglas-fir, canyon live oak, tanoak (Lithocarpus densiflorus), and Pacific yew all present. The dominant shrubs are California coffeeberry, western serviceberry (Amalanchier alnifolia), trailing blackberry (Rubus ursinus), and ninebark (Physocarpus sp.). The dominant herb is western swordfern, with moderate amounts of Henderson's fawn-lily and bracken fern (Pteridium aquilinum).

The Tanoak/California coffeeberry association is also a minor component. It is located only on the upper reaches of Cedar Log Creek, and is found only on the north aspect. Tanoak is the dominant regenerating species. California laurel, Port-Orford cedar and California coffeeberry are also present.

The California pitcher-plant bogs have not been classified into plant associations. Six bogs, each below a spring, have been located. California pitcher-plant is characteristic. Associated species are sedge (Carex sp.), ledum, western azalea, and garden burnet (Sanguisorba officinalis). Some of the bogs also contain Oregon willow-herb, a sensitive species. Near the springs, Port-Orford cedar is dominant.

The following is a partial list of vascular plants that have been identified on the site:

Trees (Little 1979)

Acer macrophyllum	Bigleaf maple
Alnus rubra	Red alder
Arbutus menzeisii	Pacific madrone
Calocedrus decurrens	Incense cedar
Chamaecyparis lawsoniana	Port-Orford cedar
Lithocarpus densiflorus	Tanoak
Pinus attenuata	Knobcone pine
Pinus jeffreyi	Jeffrey pine
Pinus lambertiana	Sugar pine
Pseudotsuga menziesii	Douglas-fir
Quercus chrysolepis	Canyon liveoak
Quercus garryana	Oregon white oak
Salix sp.	Willow
Taxus brevifolia	Pacific yew
Umbellularia californica	California-laurel

Shrubs (Munz 1968)

Amelanchier alnifolia	Serviceberry
Arctostaphylos nevadensis	pinemat manzanita
Arctostaphylos patula	Greenleaf manzanita
Arctostaphylos viscida	Whiteleaf manzanita
Baccharis douglasii	Baccharis
Berberis nervosa	Dwarf Oregongrape
Ceanothus cuneatus	Wedgeleaf ceanothus
Ceanothus integerrimus	Deerbrush ceanothus
Ceanothus prostratus	Squawcarpet
Ceanothus pumilus	Dwarf ceanothus
Cercocarpus sp.	Mountain mahogany
Chrysothamnus parryi	Rabbit-brush
Clematis sp.	Virgin's bower
Cornus occidentalis	Western dogwood
Corylus cornuta var. californica	California hazel
Eriodictyon californicum	California yerbasanta
Garrya buxifolia	Box-leaved silk-tassel
Gaultheria shallon	Salal
Gaultheria ovatifolia	Slender salal
Holodiscus discolor	Creambush ocean-spray
Juniperus communis	Common juniper
Ledum glandulosum	Western ledum
Lonicera hispidula	Hairy honeysuckle
Physocarpus sp.	Ninebark
Quercus garryanna var. breweri	Oregon oak
Quercus vaccinifolia	Huckleberry oak
Rhamnus californica	California coffeeberry
Rhododendron occidentale	Western azalea
Rhus diversiloba	Poison oak
Ribes sp.	Gooseberry
Rosa gynocarpa	Baldhip rose
Rosa sp.	Rose
Rubus parviflorus	Thimbleberry

Rubus sp.	Blackberry
Vaccinium parvifolium	Red huckleberry

Herbs (Munz 1968)

Achillea millefolium	Common yarrow
Adiantum pedatum var. aleuticum	Northern maidenhair
Allium falcifolium	Sickleleaf onion
Allium bolanderi var. mirabile	Wild onion
Apocynum sp.	Dogbane
Aquilegia formosa	Sitka columbine
Arabis aculeolata	Waldo rockcress
Arabis koehleri var. stipitata	Koehleri's rockcress
Arabis sp.	Rockcress
Arabis subpinnatifida	Rockcress
Arceuthobium campylopodum	Yellow leafless mistletoe
Arnica sp.	Arnica
Asarum caudatum	Western wild ginger
Aspidotis densa	Rock fern
Balsamorhiza deltoidea	Puget balsamroot
Blepharipappus scaber	Blepharipappus
Brickellia greenei	Brickellia
Brodiaea hendersonii	Henderson's brodiaea
Calochortus tolmiei	Tolme's mariposa
Calypso bulbosa	Fairy-slipper
Camassia quamash	Common camas
Campanula prenanthoides	California harebell
Carex sp.	Sedge
Castilleja applegatei	Applegate's paintbrush
Castilleja brevilobata	Short-lobed paintbrush
Castilleja elata	Slender paintbrush
Castilleja pruinosa	Paintbrush
Cerastium sp.	Chickweed
Chimaphila umbellata	Common prince's pine
Claytonia lanceolata	Lanceleaf springbeauty
Collinsia grandiflora	Large-flowered blue-eyed Mary
Collomia tinctoria	Collomia
Convolvulus sp.	Morning glory
Cypripedium californicum	California lady's slipper
Darlingtonia californica	California pitcher-plant
Delphinium sp.	Larkspur
Dentaria tenella	Oregon toothwort
Dicentra formosa ssp. oregana	Oregon bleedingheart
Disporum hookeri	Oregon fairybell
Dodecatheon hendersonii	Hendersons shootingstar
Elymus glaucus	Blue wildrye
Epilobium minutum	Small-flowered willow-herb
Epilobium oregonense	Oregon willow-herb
Epilobium paniculatum	Autumn willow-herb
Erigeron bloomeri nudatus	Scabland fleabane
Eriogonum nudum	Barestem buckwheat
Eriogonum pendulum	Long-stalked buckwheat
Eriophyllium lanatum var. lanceolatum	Common eriophyllum
Erysimum capitatum	Coast wallflower
Erythronium citrinum	Fawn-lily
Erythronium hendersonii	Hendersons fawn-lily

Festuca rubra	Red fescue
Fritillaria glauca	Siskiyou fritillaria
Fritillaria lanceolata	Checker lily
Galium ambiguum	Obscure bedstraw
Gilia capitata	Bluefield gilia
Goodyera oblongifolia	Rattlesnake-plantain
Habenaria sparsiflora	Canyon habenaria
Haplopappus racemosus ssp. congesta	Racemed goldenweed
Hastingsia album	Rush lily
Helenium bigelovii	Bigelow sneezeweed
Hieracium bolanderi	Bolanders hawkweed
Hieracium sp.	Hawkweed
Horkelia sericata	Silky horkelia
Iris chrysophylla	Slender-tubed iris
Lathyrus nevadensis	Peavine
Ligusticum apiifolium	Parsley-leaved licorice-root
Lillium sp.	Lily
Lillium vollmeri	Vollmeri lily
Linnaea borealis	Western twinflower
Lithophragma heterophylla	Woodland star
Lithospermum californicum	Stoneseed
Lomatium howellii	Howells biscuit-root
Lomatium sp.	Biscuit-root
Lomatium triternatum	Nine-leaf biscuit-root
Lotus oblongifolis	Lotus
Madia madidides	Woodland tarweed
Melica geyeri	Geyers oniongrass
Microseris howellii	Howells microseris
Mimulus guttatus	Yellow monkey-flower
Monardella odoratissima	Mountain balm
Narthecium californicum	California bogasphodel
Orobanche bulbosa	Broomrape
Orobanche uniflora	Naked broomrape
Orthocarpus bracteosus	Owl-clover
Orthocarpus hispidus	Hairy owl-clover
Osmorhiza occidentalis	Western sweet-root
Parnassia palustris	Worldwide parnassia
Penstemon sp.	Penstemon
Perideridia oregana	Oregon yampah
Phacelia corymbosa	Phacelia
Plagiobothrys sp.	Popcorn-flower
Pityrogramma triangularis	California goldfern
Polygonum californicum	Knotweed
Polypodium hesperium	Columbia fern
Polystichum munitum	Swordfern
Poa sandbergii	Sandbergs bluegrass
Pteridium aquilinum	Brackenfern
Pyrola sp.	Pyrola
Ranunculus occidentalis	Western buttercup
Rudbeckia californica	California coneflower
Rumex occidentalis	Western dock
Sanguisorba officinalis	Garden burnet
Saxifraga integrifolia	Swamp saxifrage
Sedum laxum heckneri	Heckners stonecrop
Senecio ligulifolius	Groundsel
Senecio hesperius	Groundsel

Senecio integerrimus	Western groundsel
Silene campanulata	Slender campion
Silene hookeri	Hookers silene
Sisyrinchium idahoense	Idaho blue-eyed grass
Smilacina racemosa	Western false Solomons-seal
Smilacina stellata	Starry false Solomons-seal
Stipitata lemmoni	Lemons needlegrass
Synthyris reniformis	Snow-queen
Thlaspi montanum var. siskiyouensis	Siskiyou pennycress
Tofieldia glutinosa	Tofieldia
Trientalis latifolia	Western starflower
Trifolium eriocephalum	Wooly-head clover
Trillium ovatum	White trillium
Trillium rivale	Oregon trillium
Viola adunca	Early blue violet
Viola cuneata	Wedgeleaf violet
Whipplea modesta	Whipplevine
Wyethia sp.	Mules ears
Xerophyllum tenax	Common beargrass
Zigadenus venenosus	Deadly zigadenus

The following list of fauna is made up of species that have either been observed on the site (or their sign observed)

BIRDS. This list of birds was compiled during a multi-year bird-banding project conducted by Dennis Vroman, Galice Ranger District, Siskiyou National Forest.

Bonasa umbellua	Ruffed Grouse
Buteo jamaicensis	Red-tailed Hawk
Callipepla californica	California Quail
Caolaptes auratus	Northern Flicker, Red-shafted
Carduelis psaltria	Lesser Goldfinch
Carpodacus purpureus	Purple Finch
Cathartes aura	Turkey Vulture
Catharus guttatus	Hermit Thrush
Catherpes mexicanus	Canyon Wren
Certhis americana	Brown Creeper
Ceryle alcyon	Belted Kingfisher
Chamaea fasciata	Wrentit
Columba fasciata	Band-tailed Pigeon
Contopus borealis	Olive-sided Flycatcher
Contopus sordidulus	Western Wood-pewee
Corvus corax	Common Raven
Cyanocitta stelleri	Steller's Jay
Dendroica coronata	Yellow-rumped Warbler, Audubon's
Dendroica nigrescens	Black-throated Gray Warbler
Dryocopus pileatus	Pileated Woodpecker
Empidonax difficilis	Western Flycatcher
Falco columbarius	Merlin
Glaucidium gnoma	Pygmy Owl
Ixoreus naevius	Varied Thrush

Junco hyemalis	Dark-eyed Junco, Oregon
Melospiza lincolnii	Lincoln's Sparrow
Myadestes townsendi	Townsend's Solitaire
Oporornis tolmiei	MacGillivray's Warbler
Oreortyx pictus	Mountain Quail
Parus atricapillus	Black-capped Chickadee
Parus rufescens	Chestnut-backed Chickadee
Passerella iliaca	Fox Sparrow
Pheucticus melanocephalus	Black-headed Grosbeak
Picoides villosus	Hairy Woodpecker
Pipito erythrophthalmus	Rufous-sided Towhee
Piranga ludouiciana	Western Tanager
Psaltriparus minimus	Common Bushtit
Regulus calendula	Ruby-crowned Kinglet
Regulus satrapa	Golden-crowned Kinglet
Selasphorus rufus	Rufous Hummingbird
Sialia mexicana	Western Bluebird
Sitta canadensis	Red-breasted Nuthatch
Sitta carolinensis	White-breasted Nuthatch
Sphyrapicus ruber	Red-breasted Sapsucker
Stellula calliope	Calliope Hummingbird
Thryomanes bewickii	Bewick's Wren
Troglodytes trolodytes	Winter Wren
Turdus migratorius	American Robin
Vermivora celata	Orange-crowned Warbler
Vermivora ruficapilla	Nashville Warbler
Vireo solitarius	Solitary Vireo
Wilsonia pusilla	Wilson's Warbler
Zenaida macroura	Mourning dove
Zonotrichia atricapilla	Golden-crowned Sparrow

MAMMALS. This list is made up of species that were trapped or their sign observed by Gary Sublette, trapper, during the 1983-1984 trapping season. Bat species are those likely to be present based on data compiled from a survey site 3.75 air miles from the RNA (Student project, 1977, Southern Oregon State College, Ashland, OR, Steven Cross, faculty advisor).

Bassariscus astutus	Ringtail
Canis latrans	Coyote
Citellus beecheyi	California Ground Squirrel
Eptesicus fuscus	Big Brown Bat
Erethizon dorsatum	Porcupine (sign)
Eutamias towsendii	Townsend's Chipmunk
Felis concolor	Mountain Lion (sign)
Lasionycteris noctivagans	Silver-haired Bat
Lepus californicus	Black-tailed Jackrabbit (sign)
Lynx rufus	Bobcat
Mephitis mephitis	Striped Skunk
Microtus spp.	Vole
Myotis californicus	California Myotis
Myotis evotis	Long-eared Myotis

Neotoma fuscipes	Dusky-footed Woodrat (sign)
Odocoileus hemionus	Black Tail Deer
Procyon lotor	Raccoon
Sciurus griseus	Western Gray Squirrel
Spilogale putorius	Spotted Skunk
Sylvilagus spp.	Rabbit
Urocyon cinereoargenteus	Gray Fox
Ursus americanus	Black Bear (sign)

REPTILES AND AMPHIBIANS. This list is made up of species observed on the site by Dennis Vroman, Galice Ranger District, Siskiyou National Forest.

Crotalus viridis	Western Rattlesnake
Diadophis punctatus	Ringneck Snake
Eumeces skiltonianus	Western Skink
Gerrhonotus multicarinatus	Southern Alligator Lizard
Hyla regilla	Pacific Tree Frog
Pituphis malanoleucus catenifer	Gopher Snake (Pacific ssp.)
Rana boylei	Foothill Yellow-legged Frog
Sceloporus occidentalis	Western Fence Lizard
Thamnophis elegans elegans	Western Trerrestrial Garter Snake

BUTTERFLIES. This list is made up of species observed on the site by Dennis Vroman, Galice Ranger District, Siskiyou National Forest.

Adelpha berdowii	California Sister
Anthocharis sara flora	Sara Orange Tip
Celastrina argiolus echo	Echo Blue
Cercyonis pegala	Large Wood Nymph
Chlosyme (Charidryas) palla spp.	Northern Checkerspot
Coenonympha spp.	Ringlet
Neophasia menapia	Pine Butterfly
Nymphalis californica	California Tortoiseshell
Ochlodes sylvanoides	Woodland Skipper
Papilio spp.	Black Swallowtail
Phyciodes spp.	Crescentspot
Pterourus spp.	Yellow Swallowtail
Speyeris spp.	Fritillary

GEOLOGY

Cedar Log Flat RNA lies within the Siskiyou Mountains physiographic province, a region characterized by steeply folded and faulted pre-Tertiary rock, deeply dissected terrain, and the accordance of its ridges and peaks into a broad peneplain, formed during the Miocene and Pliocene epochs.

Bedrock in the area consists of serpentine and peridotite, and soils are shallow. Large areas exist of mostly bare parent material with little or limited amounts of soil and vegetation. Some of these areas consist of a blend of massive boulders, rocks, rock fragments and strips of parent material. On Landtype 31 (see below), bedrock ranges from green, moderately hard, highly

sheared serpentine to hard, blocky, rust-colored peridotite. On Landtype 32, bedrock consists of soft weathered serpentine and peridotite. On Landtype 15, bedrock material are variable.

SOILS AND LANDTYPES

The following land type information is obtained from the Siskiyou National Forest Soil Resource Inventory (1979) (Map 7).

Landtype 31. Landtype 31 is found on moderately steep sideslopes on the east side of the Klamath Mountains. The soil temperature class is mesic. Slopes range from 35 to 65 percent and are slightly dissected. It is moderately stable. The soil is shallow, derived from residuum and colluvium. Soil depth is generally 10 to 20 inches (25 to 50 cm). The soil materials are generally well to excessively drained. Surface soil erosion potential is severe to moderate. Litter is composed of needles, twigs, and leaves, less than 1/2 inch (1.3 cm) thick. Decomposed humus material is 0 to 1/4 inch (0 to 0.6 cm) thick. Surface layers are very gravelly and extremely gravelly loams, stony loams, and clay loams. Colors are dark brown to light gray. Structure is weak fine granular to moderate medium subangular blocky. Rock fragments range from 40 to 70 percent by volume. Consistence is soft to slightly hard, friable, slightly sticky to sticky, and slightly plastic to plastic. The pH ranges from 6.5 to 7.5. Surface thickness ranges from 4 to 11 inches (10 to 28 cm). Surface layers have a rapid permeability rate.

Subsoil layers are extremely gravelly to cobbly clay loams to clays. Colors are dark reddish brown to dark yellowish brown. Structure is moderate to fine and medium subangular and angular blocky to massive. Rock fragments range from 40 to 70 percent by volume. Consistence is slightly hard. friable to firm, sticky to very sticky, plastic to very plastic. The pH ranges from 6.7 to 7.5. Subsoil thickness ranges from 7 to 17 inches (18 to 43 cm). Subsoil layers have slow to moderate permeability rates.

Landtype 32. Landtype 32 is found on gentle ridgetops and sideslopes on the east side of the Klamath Mountains. The soil temperature class is mesic. Slopes range from 0 to 35 percent and are smooth. It is moderately stable to moderately unstable. The soils are moderately deep derived from residuum and colluvium. Soil depth is generally 20 to 40 inches (51 to 102 cm). The soil materials are generally well drained. Surface erosion potential is moderate. Litter consists of needles, leaves, and twigs, a trace to one inch (2.54 cm) thick. Decomposed humus material is also a trace to one inch thick (2.54 cm).

Surface layers are heavy loams to gravelly clay loams. Colors are dark reddish brown to dark brown. Structure is moderate fine and medium granular and subangular blocky. Rock fragments range from 10 to 35 percent by volume. Consistence is soft to hard, friable to firm, slightly sticky to sticky, and slightly plastic to plastic. The pH ranges from 6.0 to 7.0. Surface thickness ranges from 8 to 19 inches (20 to 48 cm). Surface layers have moderately slow to moderate permeability rate.

Subsoil layers are gravelly to very gravelly clay loams and clays. Colors are reddish brown and brown. Structure is moderate fine and medium subangular

blocky. Rock fragments range from 15 to 40 percent by volume. Consistence is hard to very hard, firm to very firm, sticky, and plastic. The pH ranges from 6.0 to 7.2. Subsoil thickness ranges from 12 to 30 inches (30 to 76 cm). Subsoil layers have a slow to moderate permeability rate.

Landtype 15. Landtype 15 is found on gentle valley bottoms along streams and is locally subjected to flooding. The slopes are 0 to 20 percent and are smooth. The soil temperature class is mesic. The landtype is moderately stable; failures occur locally as the stream undercuts the creek banks. The soil is very deep, derived from alluvium and colluvium. Soil depth is greater than 60 inches (152 cm). The soil materials are generally moderately to well drained. Surface soil erosion potential is moderate. Litter consists of leaves, needles, and twigs, 1/4 to one inch (0.6 to 2.5 cm) thick.

Surface layers are gravelly loamy sands through very gravelly silt loams. Colors are dark brown, very dark grayish brown, dark reddish brown, and reddish brown. Structure is weak to moderate fine granular to subangular blocky structure. Rock fragments range from 15 to 60 percent by volume. Consistence is soft to slightly hard, friable, slightly sticky and slightly plastic to plastic. The pH ranges from 5.9 to 7.0. Surface thickness ranges from 20 to 35 inches (51 to 89 cm). Surface layers have rapid permeability rates.

Subsoil layers are extremely gravelly to cobbly sand through clay loam. Colors are brown to reddish yellow. Structure is single grain to massive. Rock fragments range from 65 to 90 percent by volume. Consistence is loose to hard, loose to firm, nonsticky to slightly sticky, and nonplastic to plastic. The pH ranges from 5.9 to 7.2. Subsoil thickness is usually greater than 40 inches (102 cm). Subsoil layers have rapid permeability rates.

LANDS

Lands within and surrounding the Cedar Log Flat Research Natural Area are National Forest lands.

CULTURAL

The Cedar Log Flat RNA is located in an area transitional to Athaspaskan and Takelma aboriginal groups (Gray 1987). Both groups engaged in similar subsistence-settlement systems based on hunting and gathering. Upland resources, such as those found on the RNA, as well as riverine resources, played an important role in the yearly seasonal round. An Athapaskan village, taldaspan, is located just to the north at the mouth of Galice creek. Just to the east of the RNA are four Takelma villages located within the general area where the Applegate River enters the Rogue River (Gray 1987). While there is currently no direct evidence that native groups burned the area now contained in the RNA, it is possible to make some general inferences based on the ethnographic literature.

White settlement brought predominantly miners to this area.

OTHER

None.

IMPACTS/OTHER CONFLICTS

Mineral Resources:
Mining activity has occurred in the past outside the proposed RNA. A chromite mine, located about one-half mile to the northwest, was in operation more than 25-30 years ago. At that time the mine was operated under government subsidy. One open shaft and the road to the mine are all that remain. There are numerous placer claims (gold-located 1980) and one load claim existing within the area. One of the placer claims is located on Cedar Log Creek. None of the claims appears to have had any activity within the last several years. A professional mineral examination of the area has not been conducted. This will be necessary if a decision is made to seek mineral withdrawal.

Grazing:
The RNA has no grazing allotments.

Timber:
Timber resource values within the proposed RNA are low, existing stand volumes average approximately 6 thousand board feet (MBF) per acre. Site quality and management potential are poor, mainly due to low fertility of the serpentine and peridotite soils. Because of the rocky nature of the soils, stands with larger volumes of harvestable timber are unplantable.

The proposed RNA contains 421 acres; only 145 acres (mostly low site) is classified as tentatively suitable for timber harvest. For tentatively suitable land within the area, the Douglas-fir site index is approximately 75 and pine species is 50. Tentatively suitable for timber land within the RNA is capable of producing approximately 78 MBF per year on a long-term sustained yield basis.

Recreation Values:
The area has been used for years by local people with off road vehicles--both motorcycles and four-wheel drives. In the past, horse camping has also been popular. The area is in close proximity to homes, includes gentle slopes and has unique floral and faunal species. As a result, it offers good hiking and nature study opportunities.

Wildlife and Plant Values:
Sensitive plant species from the Oregon State list include Oregon willow-herb, Siskiyou fritillaria, Howells microseris, groundsel, Heckners stonecrop, and wild onion. Native cutthroat trout (Salmo clarki) inhabit Cedar Log Creek, and ringtails (Bassariscus astutus) have been trapped and released in the area.

Port-Orford cedar occurs in a strip along Cedar Log Creek and would be susceptable if Port-Orford cedar root rot were introduced intothe drainage upstream from the RNA.

Transportation Plan:
Forest road 020 ends at the RNA boundary. An old mining road, adjacent to road 020, is still navigable by off-road motorcycles. It is accessed by fording Slate Creek. This allows access to the meadow area and it may be necessary to close the road to prevent damage. No roads are currently planned in the RNA and future management activities in adjacent areas can be accessed without impacting the RNA.

Vegetation Management:
The Siskiyou National Forest Land and Resource Management Plan states all wildfires occurring at Forest Industrial Level (FIL) 2 or above should be controlled at 30 acres or less, 90 percent of the time. A limited range of suppression technology and equipment emphasizing indirect attack should be used. In suppressing fires, chemical fire retardants and ground disturbing activity should be avoided. Wildfires occurring at FIL 1 should be handled as outlined in the basic fire management direction for the Forest.

Management should provide for a low level of prevention activities. Prescribed fire may be utilized as a tool to return fire to its natural role in the area and return plant communities to a condition similar to that which existed prior to active fire suppression.

ADMINISTRATION RECORDS

Administration and protection of the Cedar Log Flat RNA will be the responsibility of the Siskiyou National Forest. The Galice Ranger District has the direct responsibility.

The Pacific Northwest Research Station Director will be responsible for any studies or research conducted in the area, and requests to conduct research should be directed to him/her. The Director will evaluate research proposals and coordinate all RNA studies and research with the District Ranger. 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 Director.

Records for the Cedar Log Flat RNA will be maintained in the following offices:

Forest Supervisor, Siskiyou National Forest, Grants Pass, Oregon
District Ranger, Galice Ranger District, Grants Pass, Oregon
Director, Pacific Northwest Research Station, Portland, Oregon

Archiving

The Galice Ranger District of the Siskiyou National Forest will be responsible for maintaining the Cedar Log Flat RNA data file and list of herbarium and species samples collected. The data will also be part of the Research Natural Area Database (part of Oregon State University Forest Science databank) at the Forestry Sciences Laboratory, Corvallis, OR.

REFERENCES

Burt, W.H. 1976. A field guide to mammals. Houghton Mifflen Co, Boston, MA. 289 p.

Eyre, F.H. 1980. Forest cover types of the United States and Canada. Society of American Foresters, Washington, D.C.

Gray, D.J. 1987. The Takelma and their Athapaskan kin: A new ethnographic synthesis for the upper Rogue River area of southwestern Oregon. Univ. of Oregon Anthropological Papers 37. Eugene, OR.

Kuchler, A.W. 1964. Manual to accompany the map of potential natural vegetation of the conterminous United States. Am. Geogr. Soc. Spec. Publ. 36, various paging, illus.

Little, E.L. 1978. Checklist of United States trees (Native and naturalized). Ag. Handbk. No. 541. U.S. Government Printing Office, Washington, D.C. 375 p.

Munz, P.A. 1968. A California flora. Univ. of Calif. Press, Berkeley, CA. 1681 p.

Nussbaum, R.A., E.D. Brodie, Jr., R.M. Storm. 1983. Amphibians and reptiles of the Pacific Northwest. Univ. of Idaho Press, Moscow, ID. 332 p.

Oregon Natural Heritage Plan. 1993. Oregon State Land Board, Salem, OR. 141 p.

Peterson, R.T. 1961 A field guide to western birds. Houghton Mifflin, Co., Boston, MA. 309 p.

Soil Resources Inventory, 1979, Siskiyou National Forest, Grants Pass, OR.

U.S. Department of Agriculture, Forest Service. 1989. Land and Resource Management Plan, Siskiyou National Forest.

Wheeler, D. and T. Atzet. 1982. Preliminary plant associations of the Siskiyou Mountain Province. Siskiyou National Forest, Grants Pass, OR. 315 p.

LEGAL DESCRIPTION REVIEW

Case Name/Number CEDAR LOG R.N.A.

Forest District Galice Ranger District, Siskiyou National Forest

Type of Case Research Natural Area

This documents that the attached legal descriptions for the case referenced above were reviewed by me for use in a conveyance or area designation.

X The legals are acceptable as presented, and no potential problems were noted during my review.

_____ The legals have potential problems as noted below, however the risk appears minor and conveyance or area designation may proceed.

_____ The legals have potential problems and should not be used in a conveyance or area designation. The following errors and/or concerns need to be corrected/addressed before this description may be used:

REGISTERED PROFESSIONAL LAND SURVEYOR
Thomas J Howie
OREGON
JULY 17, 1986
THOMAS J. HOWIE
2235

Other Comments:

Reviewed by: Thomas J Howie
FOREST LAND SURVEYOR

Date: 6/28/94

Professional Registration Number/State: PLS #2235 Oregon

CEDAR LOG R.N.A.

The 170.4 ha., (421 acre), tract is located in Josephine County, Oregon and is administered by the Galice Ranger District, Siskiyou National Forest. The natural area lies within sections 35 & 36, Township 36 South, Range 8 West, Willamette Meridian. And is more particularly described as follows:

All bearings referred to in this description are True Geodetic Bearings. All Latitudes and Longitudes are referred to the North American Datum 1927.

Beginning at the easterly Ordinary High Water Line of Slate Creek at its junction with Buckeye Creek;
42 24 8.5 N. Lat 123 35 27.7 W. Long

Thence southerly along the easterly ordinary high water line past the junction of Cedar Log Creek to a point opposite the junction of an unnamed creek;
42 23 20.5 N. Lat 123 35 21.7 W. Long

Thence westerly along said unnamed creek to the end of the distinct drainage;
42 23 25.8 N. Lat 123 35 56.4 W. Long

Thence South 80° West to the top of the divide between Cedar Log Creek and Slate Creek;
42 23 21.5 N. Lat 123 36 28.8 W. Long

Thence northerly along said divide to Cedar Log Creek;
42 23 57.2 N. Lat 123 36 5.5 W. Long

Thence northerly to the summit and the northerly divide of Cedar Log Creek and Slate Creek;
42 24 15.8 N. Lat 123 36 9.4 W. Long

Thence southeasterly along said divide to a point due west of the point of beginning;
42 24 8.8 N. Lat 123 35 58.8 W. Long

Thence east to the point of beginning.

REGISTERED
PROFESSIONAL
LAND SURVEYOR
Thomas J. Howie
OREGON
JULY 17, 1986
THOMAS J. HOWIE
2235

DECISION NOTICE/DESIGNATION ORDER
AND
FINDING OF NO SIGNIFICANT IMPACT

CEDAR LOG FLAT RESEARCH NATURAL AREA

USDA - Forest Service
Siskiyou National Forest
Galice Ranger District
Josephine County, Oregon

INTRODUCTION

Cedar Log Flat Research Natural Area (RNA) was recommended for establishment in the 1989 Siskiyou National Forest Land and Resource Management Plan (Forest Plan). That recommendation was the result of an analysis of the factors listed in 36 Code of Federal Regulation (CFR) 219.25 and Forest Service Manual 4063.41. The results of the Regional Forester's analyses are documented in the Final Forest Plan and Environmental Impact Statement, which are available to the public.

The Regional Forester has re-examined the proposed Cedar Log Flat RNA to ensure the environmental effects of establishing it as an RNA have not changed since 1989. The environmental analysis evaluates a proposal to amend the Siskiyou National Forest Plan and change the "proposed" Cedar Log Flat RNA to an "established" RNA. This environmental assessment documents this analysis of the proposed action and no action alternatives.

The Cedar Log Flat RNA Establishment Report (1995) describes the current condition of the RNA in detail. This 421 acre RNA is a serpentine and peridotite bedrock and plants associations characteristic of this unique feature. The RNA is located near the center of the eastern boundary of the Siskiyou National Forest. It is about 19 road miles from Grants Pass, Oregon, and is part of the Slate Creek drainage, which eventually flows into the Applegate River. Of special interest is the meadow or "flat" which has a park-like appearance with an open stand of conifers, mostly jeffrey pine (Pinus jeffreyi). Several bogs which remain wet through the year occur within the meadow or along the edge.

PUBLIC INVOLVEMENT

This RNA proposal was included in the Galice Ranger District's quarterly publication - "Schedule of Proposed Actions". This publication was sent to over 100 individuals and organizations. Such organizations involved in this environmental analysis were: Oregon Department of Fish and Wildlife; Curry and Josephine County Commissioners; Bureau of Land Management; Environmental Protection Agency; forest product industries; and environmental and outdoor advocate groups. No comments or interest was generated from the quarterly publication mailing.

DECISION

Based on the environmental analysis, it is my decision to adopt Alternative

A. By virtue of the authority delegated to me by the Chief of the Forest Service in Forest Service Manual section 4063, I establish the Cedar Log Flat as a RNA. It shall be comprised of 421 acres of land in Josephine County , Oregon, on the Galice Ranger District of the Siskiyou National Forest.

Alternative A is selected because it provides long-term protection and recognition of serpentine and perioditite bedrock-influenced plant associations. The primary objective of this RNA is to preserve forestland, shrubland, meadows, and bogs that occur on soils derived from serpentine bedrock. This will provide a spectrum of natural situations having special or unique characteristics of scientific interest or importance. The RNA will serve as a reference area for study of ecological succession in serpentine forestland and meadows; it will serve as a baseline for measuring long-term ecological changes; and as a monitoring area to determine effects of techniques and management practices applied to similar ecosystems (reference RNA Establishment Report, pp 1-2)

The Cedar Log Flat RNA 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 the Forest Plan (IV, pp 81-84).

Although Alternative A is consistent with the management direction, it is not consistent with the land allocation for the Cedar Log Flat area in the Forest Plan. The Siskiyou Forest Plan is hereby amended to change the allocation of Cedar Log Flat area from "proposed" to "established" RNA. This is consistent with the long-term resource management goals and objectives of the Forest Plan. This will be a non-significant amendment to the Forest Plan (36 CFR 219.10).

ALTERNATIVES

Other alternative considered was: Alternative B, the "No Action" alternative, which would continue management of the Cedar Log Flat RNA as a "proposed" RNA. Alternative B is consistent with the Forest Plan. Alternative B was not selected because it would only provide short-term protection of the Cedar Log Flat area until the Forest Plan is amended or revised.

FINDING OF NO SIGNIFICANT IMPACT

Based on the environmental analysis documented in the environmental assessment, it has been determined that the proposed action (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 factors (40 CFR 1508.27).

Context

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

Intensity

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

*There are know known effects on historic or cultural resources, actual or eligible National Register of Historic places, sites, park lands, prime farmlands, wetlands, wild and scenic rivers. No significant adverse effects are anticipated to any environmentally sensitive or critical areas (Establishment Report, pp. 13-15).

*Effects on the human environment are not 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 impacts to natural resources or other components of the human environment are anticipated.

*There will be not adverse effects on federally listed or proposed endangered or threatened species or associated critical habit, or regional sensitive plant or animal species (Establishment Report, pp. 2 & 14).

*There will be no adverse or irreversible environmental effects. Irretrievable effects resulting from the loss or reduction of resource outputs are expected to be insignificant.

*Action is consistent with Federal, State and local laws and requirements for the protection of the environment.

IMPLEMENTATION

Implementation of this decision shall not occur within 7 days following pulication of the legal notice of the decision in The Oregonian.

APPEAL OPPORTUNITIES

Legal notice of this decision will appear in The Oregonian. The Forest Supervisor of the Siskiyou National Forest 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. 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 Oregonian.

CONTACT PERSON

For further information regarding this decision or the Cedar Log Flat RNA environmental assessment contact: Peter Gaulke; Galice District Environmental Coordinator; 200 N.E. Greenfield Road; Grants Pass, Oregon 97526; phone: 541-471-6500.

ROBERT W. WILLIAMS
Regional Forester
Pacific Northwest region

May 6, 1996
Date

THE OREGONIAN, WEDNESDAY, MAY 8, 1996

NOTICE OF DECISION

On May 6, 1996, USDA - Forest Service, Pacific Northwest Regional Forester made a decision to establish the 421 acre **Cedar Log Flat Research Natural Area** on the Galice Ranger District of the Siskiyou National Forest in Josephine County, Oregon. This decision will be implemented after May 15, 1996.

A copy of the Decision Notice/Designation Order and Finding of No Significant Impact is available upon request from the Regional Officer, 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 Notice of Appeal) and must include the reasons for appeal. Any written appeal must be postmarked or received by the Appeal Deciding Officer, Chief Jack Ward Thomas, 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 Cedar Log Flat RNA, contact Peter Gaulke, Galice District Environmental Coordinator, Siskiyou National Forest, 200 N.E. Greenfield Road, Grants Pass, Oregon 97526, phone 541-471-6500

ENVIRONMENTAL ASSESSMENT

CEDAR LOG FLAT RESEARCH NATURAL AREA

USDA - Forest Service
Siskiyou National Forest
Galice Ranger District
Josephine County, Oregon

INTRODUCTION

This environmental assessment documents the analysis of a proposal to amend the 1989 Siskiyou National Forest Land and Resource Management Plan (Forest Plan) and change the "proposed" Cedar Log Flat Research Natural Area (RNA) on the Galice Ranger District to an "established" RNA. This assessment will document the analysis of the Proposed Action and No Action alternatives.

The Cedar Log Flat RNA Establishement Record (1995) describes the current condition of the RNA in detail. This 421 acre RNA is a serpentine and peridotite bedrock and plant associations characteristic of this unique feature. The RNA is located near the center of the eastern boundary of the Siskiyou National Forest. It is about 19 road miles from Grants Pass, Oregon, and is part of the Slate Creek drainage, which eventually flows into the Applegate River (see map 1). Of special interest is the meadow or "flat" which has a park-like appearance with an open stand of conifers, mostly jeffrey pine (Pinus jeffreyi). Several bogs which remain wet through the year occur within the meadow or along the edge.

The Siskiyou National Forest presently has three RNA's. Four additional RNA's have been proposed by Forest researchers and others for inclusion into the RNA system. See LRMP-FEIS, appendix F for more details on individual areas.

PROPOSED ACTION

The proposed action is to establish the 421 acre Cedar Log Flat RNA and to manage it according to direction provided in the 1989 Siskiyou National Forest Land and Resource Management Plan (Forest Plan) (Chapter IV, pp. 81-84, Record of Decision, p. 14, see EA appendix). The area proposed for establishment in the Forest Plan was 441 acres. More accurate mapping and boundary location have desribed the area proposed to be established as 421 acres (see map 2).

Refer to EA appendix for LRMP-FEIS, Chapter III, pp. 81-83; 109; 115-116; and 146 on discussion of "existing conditions" of RNAs relative to sensitive plants, wildlife, biological diversity, and economic/social components of the environment on the Forest.

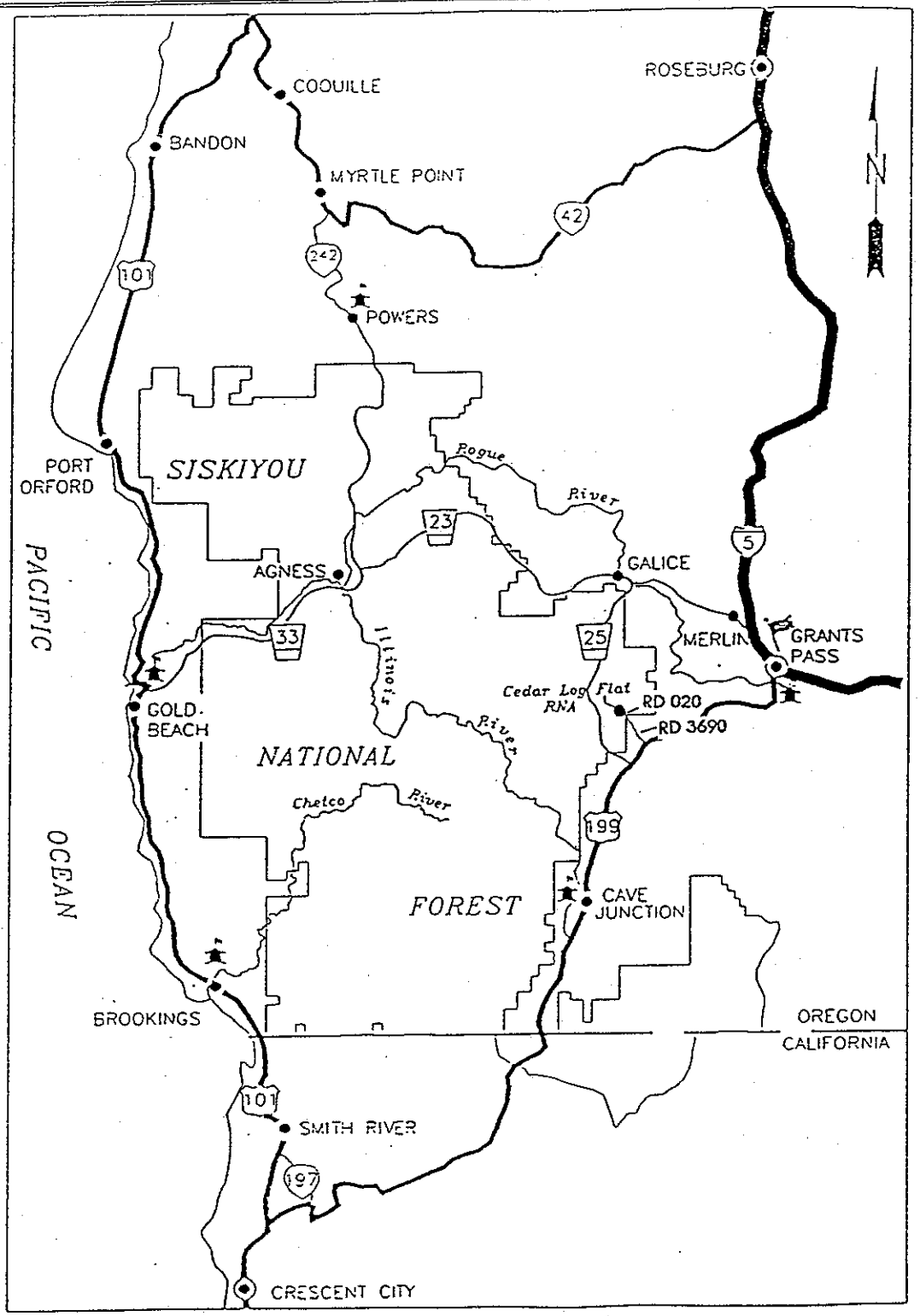
PURPOSE AND NEED FOR ACTION

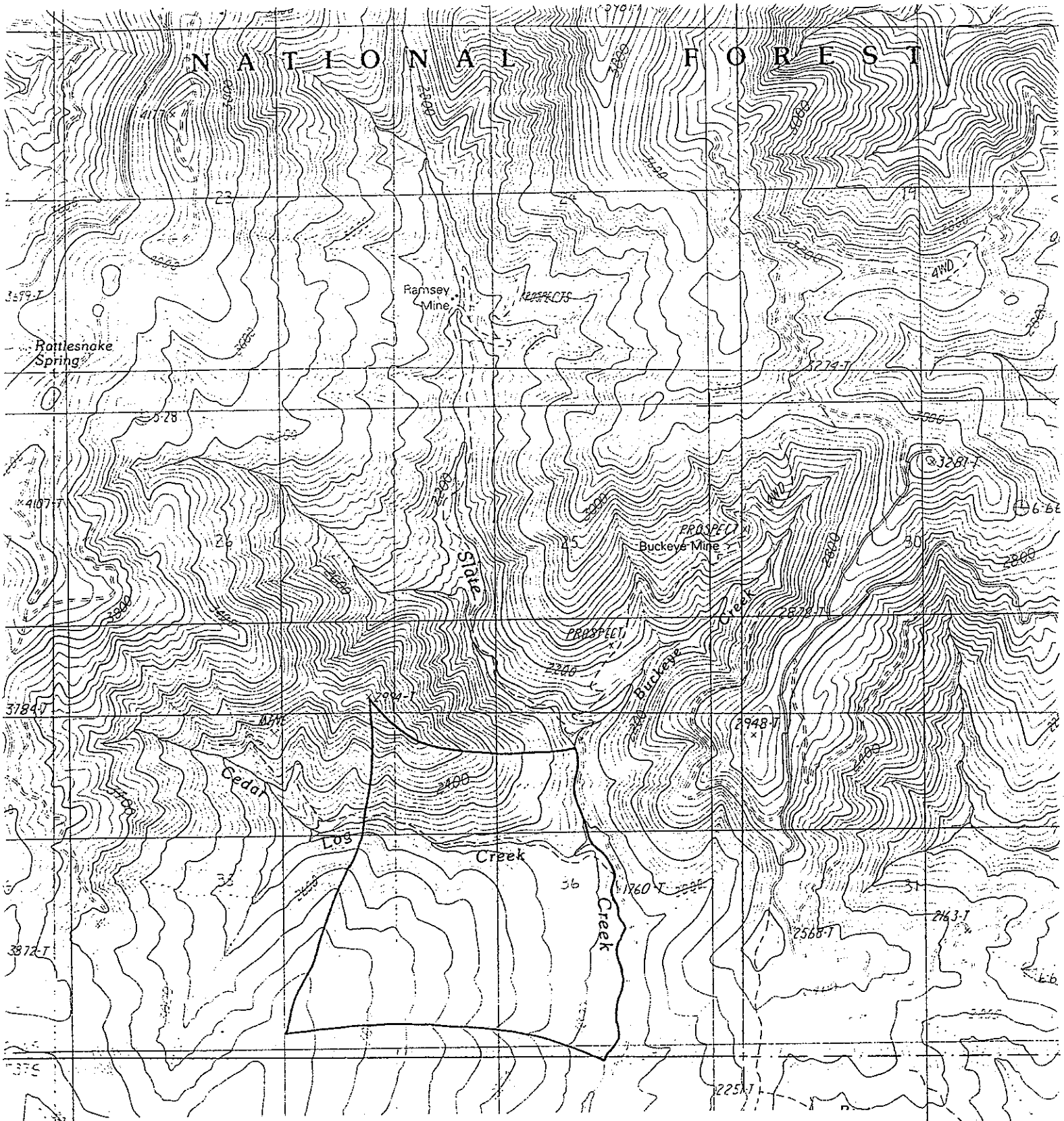
The purpose of establishing the RNA is to contribute to a series of RNA's designated to

> ...illustrate adequately or typify for research or education purposes, the important forest and range types in each forest region, as well as

Map 1

Location of Cedar Log Flat
Research Natural Area within
the Siskiyou National Forest





MAP 2
TOPOGRAPHY & BOUNDARY
CEDAR LOG FLAT RESEARCH NATURAL AREA

> other plant communities that have special or unique characteristics of scientific interest and importance (36 CFR 251.23).

Cedar Log Flat RNA contributes to this series of RNA's by providing an example of Southwest Oregon mixed conifer forest at low elevation.

> This RNA is on serpentine and peridotite bedrock and exhibits plant associations characteristic of this unique feature. ...This serpentine forest-shrubland-meadow complex is an excellent observatory of ecological change and would fill the Klamath Mountain Province cell needs. Seven plant species on the Oregon State Sensitive Plan list are found within the proposed RNA; some are otherwise not known outside of the Illinois Valley area. Because of the diversity of habitats, many species of birds use the area. (Establishement Record, pp. 1-2)

The RNA was identifed in the Forest Plan as a candidate for a RNA based on the relatively undisturbed conditions of this forest type in the area at that time. This RNA area was determined at that time to provide the most appropriate site for inclusion in the national network for protection of this forest type. Refer to EA appendix-Forest Plan and Record of Decision for discussion of proposed RNA's.

ALTERNATIVES CONSIDERED AND ENVIRONMENTAL CONSEQUENCES

Alternative A - Proposed Action

This alternative would designate a 421 acre area as the Cedar Log Flat RNA and manage the area according to direction in the LRMP-FEIS, Appendix F (pp. F-154-165 (See EA appendix-FEIS). Management prescriptions limit recreation use, motorized use, grazing, and timber harvest. See EA appendix-Forest Plan for discussion of RNA management prescriptions.

The environmental consequences of this alternative are disclosed in the LRMP-FEIS, Chapter IV. See EA appendix-FEIS for specific effects. One effect would include losses of opportunities to change vegetation conditions through management. There are no significant cumulative effects of the establishment of this RNA.

This RNA is proposed to be established to represent typical and distinctive natural ecosystems and habitat for scientific or education use in an unmodified condition. Standards and Guidelines for RNA's generally prohibit site disturbance unless consistent with the goals and objectives of the area. Site-disturbing activities beyond trail development and maintenance are not permitted in Management Area 3 (MA-3) - Research Natural Area. Special use permits may be approved by the Pacific Northwest Experiment Station when directly related to the objective of the RNA. Lands within MA-3 would have high levels of access restrictions for mineral and energy development (EA appendix-FEIS, pp. IV-20; Forest Plan, pp. IV 81-84). Site-specific effects will be disclosed at the time when mineral entry is proposed for withdrawal.

Alternative B - No Action

This alternative continues management according to direction in the Forest

Plan for a "proposed" RNA during review for inclusion in the national RNA network. Management will be the same as for Alternative A until Forest Plan is revised or replaced. The boundary will remain as currently mapped.

The environmental consequences of this alternative are disclosed in the LRMP-FEIS, Chapter IV. These effects include losses of opportunities to change vegetation conditions through management. Refer to EA appendix-FEIS, pp. 9, 20, and 77, for discussion of RNA effects on land allocations, mineral deposits, and sensitive plants.

AGENCIES AND PERSONS CONSULTED

The response of the Siskiyou Forest Plan to the "Planning Problems" developed in the scoping process are found in Chapter III of the Forest Plan. A major step in the development of the Forest Plan was the identification of issues, concerns, and opportunities (ICO's) related to management of the Siskiyou National Forest. These ICO's were identified through citizen participation. The response for each "Planning Problem" reflects the recommendations associated with Alternative S (preferred alternative) as presented in the LRMP-FEIS and as modified in the Record of Decision. The Forest is allocated to 14 Management Areas having specific requirements for each resource program. MA 3 is management area allocated to Research Natural Areas. See EA appendix for the summary table for each of the nine "Planning Problems" and how RNA's response to the problems.

This RNA proposal has been printed in the Galice Ranger District's Quarterly Schedule of Proposed Actions (SOPA) publication (Forest Service Handbook 1909.15, Section 07). The SOPA informed the public of the environmental analysis process pending to determine whether to proceed with establishment of the Cedar Log Flat RNA, as proposed in the Forest Plan.

The District SOPA mailing list includes over 100 individuals and organizations, such as, Federal agencies (i.e. Bureau of Land Management and Environmental Protection Agency); State and local (i.e. Oregon Department of Fish & Wildlife, Curry & Josephine County Commissioners); forest product industries; environmental; and other special interest groups. No comments or interest were received from the SOPA mailing.

A P P E N D I X

Siskiyou National Forest
Land & Resource Management Plan
Forest Plan

Siskiyou National Forest
Land & Resource Management Plan
Final EIS

Siskiyou Naitonal Forest
Record of Decision

United States
Department of
Agriculture

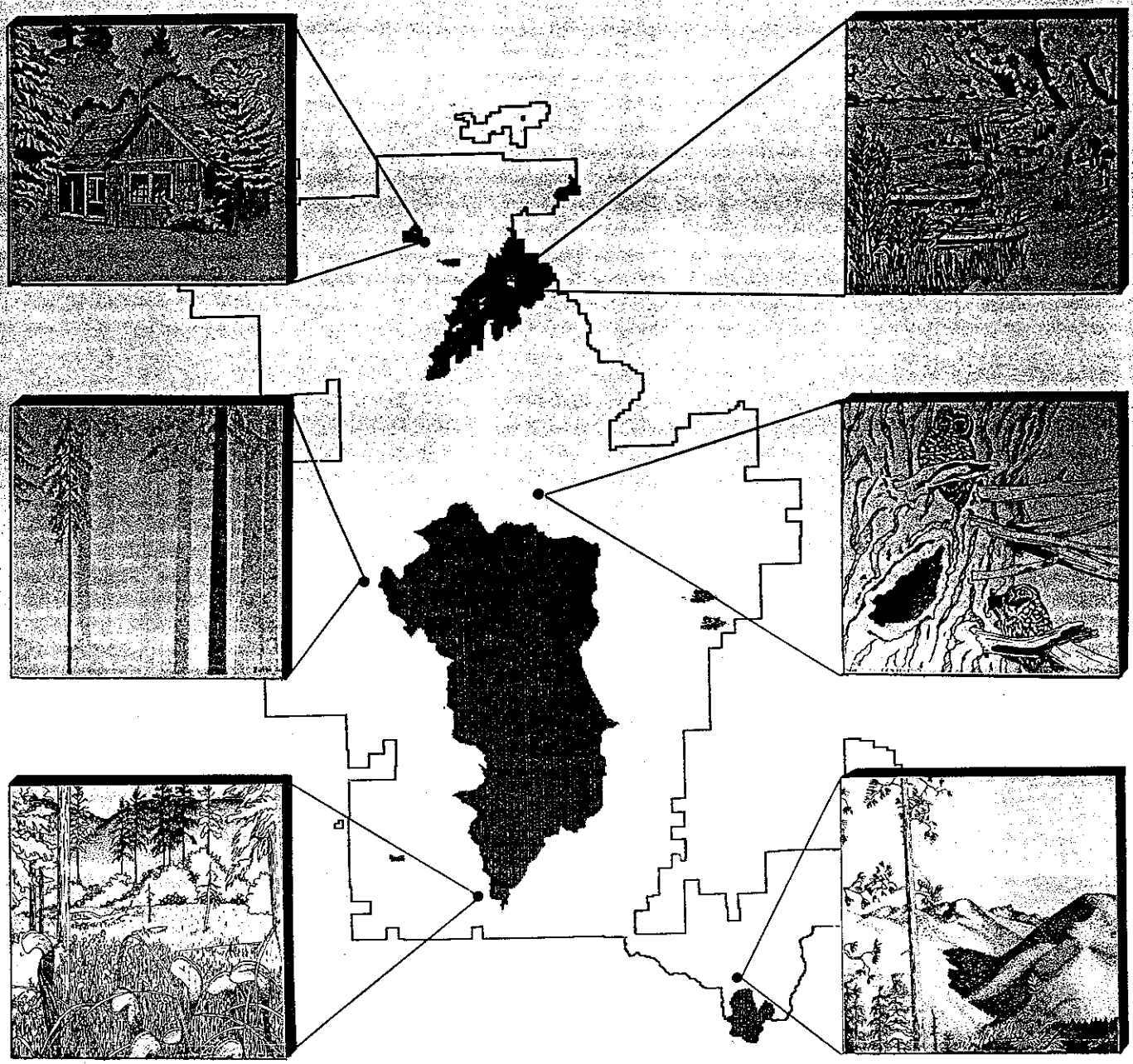
Forest Service

**Pacific
Northwest
Region**

1989

Land and Resource Management Plan

Siskiyou National Forest



RESPONSE TO PLANNING PROBLEMS

1. How Much Timber Should the Forest Produce?

The Forest will be managed to provide an average of 28.4 MMCF plus a one percent estimate of salvable dead for a total of 28.7 MMCF (160.0 MMBF) of chargeable timber volume per year during the first decade. Governed by a policy of nondeclining flow, average annual sale offerings will gradually increase in subsequent decades to reach the long-term sustained yield level of 48.8 MMCF. Harvest should generally occur when timber stands reach culmination of mean annual increment (average age of 100 years on this Forest).

Timber production is supported by a land base of 510,000 acres (selected suitable), which includes 34,624 acres of standing hardwood. Hardwood conversion is limited to no more than 7,500 acres per decade, subject to marketability. Table III-1 displays the management areas that provide timber management opportunities.

Table III-1. Acreage Selected as Suitable for Timber Production by Management Area

	Acres (1988 Inventory)	
Management Area Name	Management Area	Selected Suitable
Wilderness	232,495	0
Wild River	5,029	0
Research Natural Area	4,608	0
Botanical	16,275	0
Unique Interest	2,015	0
Backcountry Recreation	40,871	0
Supplemental Resource	26,921	0
Designated Wildlife Habitat	50,287	0
Special Wildlife Site	28,762	0
Scenic/Recreation River	10,317	8,000
Riparian	96,623	70,000
Prescription B - 11 Basins	(43,308)	
Prescription C - 7 Basins	(26,778)	
Minimum Level	(26,537)	
Retention Visual	9,861	7,000
Partial Retention Visual	133,931	105,000
General Forest	434,307	320,000
TOTAL	1,092,302	510,000

Projections from the FORPLAN model indicate that at least 212 miles of new road construction and 1,353 miles of reconstruction is needed to support the timber program in this next decade. The pattern projected by the model generally underestimates the miles of road needed in the first two or three decades and over estimates the miles needed in subsequent decades (see discussion in Appendix B of the FEIS). Actual miles of road to be constructed and reconstructed in this first decade may be greater than the projection above.

Appendix C lists the timber sales expected to occur during the first decade. Probable location, timing, harvest method, and road construction requirements are listed for each sale area, but these may change as site-specific information is collected.

2. How Much Old-Growth Forest Should be Preserved?

The Forest will be managed to reserve 179,700 acres having mature and old-growth forest characteristics. With the exception of the reserved areas, existing mature and old growth will be metered out to accommodate the harvest sale schedule. The old-growth and mature inventory updated from 1984 to include reduction due to the 1987 Fires and Silver Recovery Project is about 418,000 acres. Special groves of old growth, especially redwood, have been set aside to preserve some unique and magnificent examples for recreational and aesthetic enjoyment. These old-growth groves total 1,321 acres. The most significant of these areas are the 720 acres of redwood groves.

Anticipated harvest activity during the first decade will reduce the amount to approximately 371,000 acres. Except for isolated tracks, riparian, and other areas, most unprotected mature and old growth will be removed by the year 2089 (10th decade). Figure III-1 depicts the protected and non-protected mature and old-growth forest. Table III-2 shows the Management Areas that preserve old-growth characteristics. Management direction for land allocations beneficial to old-growth preservation is described in Chapter IV.

Table III-2. Protected Acres with Old-Growth Timber Characteristics by Management Area (Includes Mature Stands)

	Acres (1988 Inventory)	
Management Area Name	Management Area	Protected Old Growth
Wilderness	232,495	83,726
Wild River	5,029	1,915
Research Natural Area	4,608	2,757
Botanical	16,275	3,563
Unique Interest	2,015	624
Backcountry Recreation	40,871	13,141
Supplemental Resource	26,921	14,879
Designated Wildlife Habitat	50,287	41,566
Special Wildlife Site	28,762	12,122
Scenic/Recreation River	10,317	169 1/
Riparian	96,623	41 1/
Retention Visual	9,861	64 1/
Partial Retention Visual	133,931	964 1/
General Forest	434,307	4,206 1/
TOTAL	1,092,302	179,737

1/ Old-Growth Stands Unsuitable for Timber Management.

3. How Can the Forest's Fish Habitat, Water Quality and Soil Productivity be Maintained or Improved?

Protection is given to fish habitat, water quality, and soil productivity by allocating 407,263 acres (37 percent of the Forest) to Management Areas 1-9 which limit site-disturbing activity and preclude programmed timber harvest. The balance of the Forest will be managed under the Standards and Guidelines which reflect a sensitivity to the maintenance of a healthy ecosystem.

Potential impacts of timber harvest are mitigated by distributing activities through time and space. This is represented in the alternative design by limiting timber harvest in the model with constraints ranging from 7 to 17 percent per decade specific to each Planning Basin.

Salmonid fish habitat is improved through (1) land allocations that minimize soil disturbance and maintain summer water temperatures, (2) riparian prescriptions which protect streamside areas, and (3) fish habitat improvement projects. Watershed conditions are improved in areas presently degraded. Watersheds currently in good condition will be maintained in good condition.

Riparian vegetation will be managed to maintain or improve water quality and fishery habitat. Vegetative disturbance within riparian areas suitable for the production of timber are controlled by either Riparian Prescriptions B or C. Prescription C is applied on the Elk/Sixes, Lobster, Lower Rogue, Indigo, Silver, Pistol, and Lower Chetco basins, and is designed to produce a two-degree decrease in summer water temperature by the third decade. Riparian Prescription B, designed to maintain existing water temperatures, is applied in the remaining basins. Table III-3 shows how riparian habitat is affected by various Management Area designations.

A high level of capital investment is proposed. Approximately $581,000 per year will be spent on fish habitat and watershed improvement projects.

Standards and Guidelines (Forest Plan, Chapter IV) and accompanying Best Management Practices (Forest Plan, Appendix F) are specifically designed to maintain or protect water quality, site productivity, and fisheries. Areas which have active landslides or risk irreversible soil loss are designated unsuitable and have no programmed timber harvest. Many additional inner gorge areas which have high watershed sensitivity and Supplemental Resource Management Areas also have no programmed timber harvest.

Table III-3. Protected and Managed Riparian Vegetation by Management Area

Management Area Name	Acres (1988 Inventory)		
	Management Area	Riparian Protected	Vegetation Managed
Wilderness	232,495	39,271	0
Wild River	5,029	1,450	0
Research Natural Area	4,608	760	0
Botanical	16,275	2,088	0
Unique Interest	2,015	200	0
Backcountry Recreation	40,871	6,220	0
Supplemental Resource	26,921	8,690	0
Designated Wildlife Habitat	50,287	12,705	0
Special Wildlife Site	28,762	4,882	0
Scenic/Recreation River	10,317	0	2,604
Riparian	96,623	26,537	70,086
Prescription B - 11 Basins	(43,308)		
Prescription C - 7 Basin	(26,778)		
Minimum Level	(26,537)		
Retention Visual	9,861	0	0
Partial Retention Visual	133,931	0	0
General Forest	434,307	0	0
TOTAL	1,092,302	102,803	72,690

4. How, and to What Extent, Should Lands In and Adjacent to River Corridors be Managed to Protect, Preserve and Enhance Wild and Scenic River Attributes?

A variety of Management Areas are designed to protect Wild and Scenic River attributes. The existing Wild and Scenic Rivers (the Rogue, Illinois, North Fork Smith, Chetco and Elk Rivers) have their respective sections assigned to either Wild River or Recreation and Scenic Management Areas. Often these rivers corridors are overlapped by another Management Area with a more protective status, such as Wilderness. All viewsheds surrounding the rivers have a natural or near-natural appearance as lands are managed to meet their inventoried VQO's.

Both the North Fork Smith and Chetco Rivers have a 2-mile segment designated "Scenic," but these segments are carried as inventoried "Wild." In each case, the Forest reviewed classification and concluded that the areas meet "Wild" status. This Plan protects their inventoried values in the interim until further analysis or River Management Plans dictate another course of action. Table III-4 shows the number of acres within each Management Area which directly contribute to preservation and enhancement of Wild and Scenic River values.

Table III-4. Management Areas Directly Affecting Wild and Scenic River Attributes in Designated River Corridors

	Acres		
		Contributing to Wild and Scenic River Values	
Management Area Name	Management Area	Rogue/ Illinois	Chetco/Elk/ NF Smith
Wilderness	232,495	0	0
Wild River	5,029	1,894	2,379
Research Natural Area	4,608	1,291	1,153
Botanical	16,275	4,271	1,226
Unique Interest	2,015	160	53
Backcountry Recreation	40,871	16,975	4,907
Supplemental Resource	26,921	10,502	2,054
Designated Wildlife Habitat	50,287	4,230	7,706
Special Wildlife Site	28,762	5,308	3,087
Scenic/Recreation River	10,317	1,878	4,797
Riparian	96,623	7,623	14,178
Retention Visual	9,861	4,352	609
Partial Retention Visual	133,931	39,615	13,727
General Forest	434,307	7,183	53,567
TOTAL	1,092,302	105,282	109,443

5. How Should Sensitive Plant Resources be Managed?

The variety of sensitive plants on the Forest are managed through a number of land allocations designed with specific protection standards. Each Management Area has Standards and Guidelines (in addition to Forest-wide Standards and Guidelines) designed to protect sensitive plants endemic to the Forest (Forest Plan, Chapter IV). Research Natural Areas and Botanical Management Areas provide special emphasis to the preservation of ecotypes and sensitive plants. Four new Research Natural Areas, added to the three existing areas (for a total of 4,608 acres), result in the preservation of 25 ecotypes. Nineteen new Botanical areas, combined with the three existing sites, total 19,632 acres (3,357 of these acres are overlapped by Management Areas 1 through 3, for a total of 16,275 acres in Management Area 4).

Table III-5. Sensitive Plant Distributions by Management Area

	Acres	Percent
Management Area Name	Management Area	Sensitive Plant Habitat
Wilderness	232,495	65
Wild River	5,029	75
Research Natural Area	4,608	65
Botanical	16,275	95
Unique Interest	2,015	65
Backcountry Recreation	40,871	50
Supplemental Resource	26,921	20
Designated Wildlife Habitat	50,287	5
Special Wildlife Site	28,762	15
Scenic/Recreation River	10,317	75
Riparian	96,623	35
Retention Visual	9,861	35
Partial Retention Visual	133,931	35
General Forest	434,307	35
TOTAL	1,092,302	–

6. How, and to What Extent, Should Forest Scenic Values be Protected through Visual Resource Management?

Visual management objectives are achieved by designing to meet VQO's on 658,502 acres. Twelve viewsheds (of 44 total) are governed by their respective inventoried VQO's, four of which encompass heavily used recreation travel corridors. Management of Forest scenic values are designed to complement high recreation use travel corridors and viewsheds. Seven high priority viewsheds (of the 12) managed to meet or exceed their respective inventoried VQO's are: the Upper Illinois, Rogue-Illinois, Oregon Caves, Highway 199, Game Lake, Bolan Lake, and Rough and Ready.

Table III-6 shows the number of acres in each VQO category by Management Area. Approximately 433,800 acres have an unmodified appearance (Preservation). While management activities are evident but visually subordinate (Partial Retention) on 150,168 acres, another 21,373 acres are managed where activities are not evident to the casual Forest visitor (Retention). The remaining area (486,961 acres) is assigned Modification where management activities may dominate the characteristic landscape, but resemble naturally occurring patterns when viewed in the background.

Table III-6. Visual Management Objectives by Management Area

	Acres				
Management Area Name	Management Area	Preservation	Retention	Partial Retention	Moderate/ Maximum Moderate
Wilderness	232,495	232,495	0	0	0
Wild River	5,029	5,029	0	0	0
Research Natural Area	4,608	4,608	0	0	0
Botanical	16,275	16,275	0	0	0
Unique Interest	2,015	2,015	0	0	0
Backcountry Recreation	40,871	40,871	0	0	0
Supplemental Resource	26,921	26,921	0	0	0
Designated Wildlife Habitat	50,287	50,287	0	0	0
Special Wildlife Site	28,762	28,762	0	0	0
Scenic/Recreation River	10,317	0	10,317	0	0
Riparian	96,623	26,537 1/	1,195	16,237	52,654
Prescription B - 11	(43,308)				
Prescription C - 7	(26,778)				
Minimum Level - 1	(26,537)				
Retention Visual	9,861	0	9,861	0	0
Partial Retention Visual	133,931	0	0	133,931	0
General Forest	434,307	0	0	0	434,307
TOTAL	1,092,302	433,800	21,373	150,168	486,961

1/ These areas do not have Preservation VQO's. They are managed to preserve the natural character until facilities such as roads or campgrounds are constructed.

7. How Should Wildlife Habitats on the Forest be Managed?

The combination of assigned Management Areas and capital expenditures prescribed provide a wide range of effective habitat conditions capable of sustaining viable populations of all native and desired non-native vertebrate species. Designated Wildlife Habitat Management Areas meet MR's for wildlife inhabiting mature and old-growth forest. Special Wildlife Sites (Management Area 9), include approximately 15,000 acres of mature and old-growth forest habitat, which are not suitable for timber management. They do serve, however, as "stepping stones" between a number of Designated Wildlife Habitat areas. In total, 179,737 acres of mature and old-growth forest wildlife habitat are maintained through the tenth decade.

The Forest will provide habitat for the following species:

	Number of Habitat Areas (Decades)	
	2nd	5th
Spotted Owl	139	97
Pileated Woodpecker	604	384
Pine Marten	2,380	1,552

Table III-7 shows a variety of Management Areas that contribute to overall wildlife habitat diversity. Standing dead trees (snags) in areas managed for timber provide habitat capable of sustaining at least 60 percent of the maximum population of cavity-nesting birds. Approximately 53,995 acres of prime bald eagle and osprey habitat are provided along rivers and streams that have a protected status. Approximately 46 percent of the Forest provides an adequate combination of cover and forage for deer to sustain an average herd of 28,500 animals for the first five decades.

Capital investments for wildlife habitat improvements should result in higher carrying capacity for many species. Approximately $364,000 per year are prescribed to complete an average of 328 structural improvements and treat about 1614 acres.

Table III-7. Management Area Contributions to Selected Wildlife Habitat Conditions

	Acres (1988 Inventory)				Percent
Management Area Name	Management Area	Managed Deer/Elk Forage	Inventory Mature and Old-Growth Wildlife Habitat	Protect Suitable Bald Eagle /Osprey	Habitat Capability Woodpecker
Wilderness	232,495	0	83,726	34,165	100
Wild River	5,029	0	1,915	2,043	100
Research Natural Area	4,608	0	2,757	411	100
Botanical	16,275	0	3,563	1,125	100
Unique Interest	2,015	0	624	0	100
Backcountry Recreation	40,871	0	13,141	1,627	100
Supplemental Resource	26,921	0	14,879	6,191	100
Designated Wildlife Habitat	50,287	0	41,566	719	100
Special Wildlife Site	28,762	0	12,122	618	100
Scenic/Recreation River	10,317	8,000	169 1/	7,096	80
Riparian	96,623	70,000	41 1/	0	70
Retention Visual	9,861	7,000	64 1/	0	80
Partial Retention	133,931	105,000	964 1/	0	70
General Forest	434,307	320,000	4,206 1/	0	60
TOTAL	1,092,302	510,000	179,737	53,995	77

1/ Old-Growth Stands Unsuitable for Timber Management.

8. How Will Management Direction Affect Recreation Opportunities in the Wilderness and Unroaded Areas?

Non-motorized Primitive and Semi-primitive recreation opportunities are provided principally through Backcountry Recreation and Wilderness Management Areas. Backcountry Recreation includes (1) Primitive and Semi-primitive recreation opportunities in non-motorized areas, and (2) Semi-primitive recreation opportunities in areas with some designated motorized use (4-wheel drive roads and motorbike trails).

Primitive and Semi-primitive recreational capacity are increased in the Backcountry Recreation and Wilderness by constructing 70 miles ($484,000) and reconstructing 24 miles ($110,000) of trail during the first decade. Overall, 293,500 acres of unroaded Primitive and Semi-primitive recreation opportunities are provided. Table III-8 shows the number of acres in each Management Area that provide unroaded Primitive and Semi-primitive recreational opportunities.

Table III-8. Acres of Primitive and Semi-primitive Unroaded Recreation Opportunities by Management Area

	Acres	
Management Area Name	Management Management Area	Unroaded Primitive/Semi-Primitive
Wilderness	232,495	232,495
Wild River	5,029	1,956
Research Natural Area	4,608	869
Botanical	16,275	0
Unique Interest	2,015	0
Backcountry Recreation	40,871	25,960
Supplemental Resource	26,921	3,700
Designated Wildlife Habitat	50,267	0
Special Wildlife Site	28,762	0
Scenic/Recreation River	10,317	0
Riparian	96,623	0
Retention Visual	9,861	0
Partial Retention Visual	133,931	0
General Forest	434,307	28,520
TOTAL	1,092,302	293,500

9. How Should Mineral Resources of the Forest be Developed in Coordination With Management of Other Resources?

Mineral exploration and development are facilitated by retaining 75 percent of the Forest (822,994 acres) in an accessible category. Approximately 91 percent of accessible acres (747,843 acres) have low to moderate restrictions which do not limit mining activities. Approximately 9 percent (75,151 acres) have access restrictions in the high category that make many types of mining activity uneconomical. Appendix I, Table I-87 (S) displays the level of restriction affecting acres within each Management Area. Specific Standards and Guidelines affecting mineral exploration and development are defined in Chapter IV of the Forest Plan for each Management Area.

Table III-9. Level of Mineral Exploration/Development Restriction by Management Area

	Level of Restriction (Acres/1988 Inventory)				
Management Area Name	Management Area	Withdrawn	High	Moderate	Low
Wilderness	232,495	232,495	0	0	0
Wild River	5,029	5,029	0	0	0
Research Natural Area	4,608	2,000	2,608	0	0
Botanical	16,275	3,009	13,266	0	0
Unique Interest	2,015	128	1,887	0	0
Backcountry Recreation	40,871	4,312	0	26,421	10,138
Supplemental Resource	26,921	4,590	22,331	0	0
Designated Wildlife Habitat	50,287	2,127	0	48,160	0
Special Wildlife Site	28,762	1,378	27,384	0	0
Scenic/Recreation River	10,317	2,642	7,675	0	0
Riparian	96,623	0	0	96,623	0
Retention Visual	9,861	1,858	0	8,003	0
Partial Retention Visual	133,931	2,573	0	0	131,358
General Forest	434,307	7,167	0	0	427,140
TOTAL	1,092,302	269,308	75,151	179,207	568,636

MANAGEMENT AREA 3 - RESEARCH NATURAL AREA

DESCRIPTION

This prescription is applicable to existing or recommended Research Natural Areas (RNA) (FSM 4063 Research Natural Areas).

Research Natural Areas are part of a national network of field ecological areas designated for research and/or to maintain biological diversity on National Forest System lands. Research Natural Areas are for non-manipulative research, observation, and study. They also may assist in carrying out provisions of special acts, such as the Endangered Species Act and the monitoring provisions of the National Forest Management Act.

This Forest Plan provides overall direction and standards and guidelines for management of RNA's. The Regional Forester and Pacific Northwest Station Director shall prepare an Establishment Record for each recommended area; this document will describe features, objective for establishment, and management direction. The Establishment Record will be submitted to the Chief of the Forest Service for signature (Designation Order). Once approved by the Chief, an RNA will not be re-evaluated in subsequent rounds of Forest Planning . Refer to Figure IV-6 for a map displaying allocated acres within the management area.

Table IV-16. Acres Allocated to Research Natural Areas

	Acres		
Name	Management Area 3	Overlap by Management Areas 1-2	Total Area
Cedar Log Flat	441	0	441
Coquille River Falls	501	0	501
Craggy Peak	100	0	100
Hoover Gulch	1,292	0	1,292
Lemmingsworth Gulch	818	0	818
Port Orford Cedar	1,120	0	1,120
Wheeler Creek	336	0	336
Total	4,608	0	4,608

MANAGEMENT GOAL

Preservation of naturally occurring physical and biological units where natural conditions are maintained insofar as possible for the purposes of: (1) comparison with those lands influenced by man; (2) provision of educational and research areas for ecological and environmental studies; and (3) preservation of gene pools for typical and rare and endangered plants and animals.

DESIRED FUTURE CONDITION

Areas in condition to provide for naturally occurring physical and biological processes without undue human intervention. Areas containing naturally functioning and evolving plant and animal populations that may serve as a source for gene pools and for education and research on plant and animal communities.

STANDARDS AND GUIDELINES

Wild and Scenic Rivers

MA3-1 Wild and Scenic Rivers shall take precedence where they overlap with RNA's. Land use regulations are generally more restrictive in Wild portions of Wild and Scenic Rivers than in RNA's, and less restrictive in Scenic portions. Management plans for Wild and Scenic Rivers shall address overlaps with RNA's.

Recreation

MA3-2 Recreation activities and uses within an RNA shall be discouraged if they threaten the values for which the RNA is established; this includes overnight camping, recreation use within 200 feet of lakes, ponds and streams, and pack and saddle stock use. All recreation ORV use shall be prohibited. If other recreation uses threaten research or education values, closures or permits should be instituted.

Education use of an RNA should generally be directed toward the graduate level, but may be approved for any group or purpose. On-site interpretive or demonstrative facilities should be prohibited. Publicity that would attract the general public to the area shall be avoided.

Existing trails may be allowed to remain as long as the RNA objectives are not compromised. See MA3-10 for direction on new trails.

Visuals

MA3-3 Visual management shall meet or exceed the inventoried VQO's of the specific areas.

Wildlife and Fish

MA3-4 Introduction of exotic plant, animal, and fish species shall not be permitted. Reintroduction of former native species may be permitted as long as the objectives of the RNA are met. Control of excessive animal populations may be considered where such populations threaten the RNA objectives. Hunting and trapping shall not be encouraged. Habitat improvement projects may be approved if they meet the objectives of the RNA.

Range

MA3-5 No grazing of domestic livestock shall be permitted.

Timber

MA3-6 Cutting and removal of all vegetation, including firewood, shall be prohibited, except as part of approved scientific investigation.

No action shall be taken against insects or diseases unless the outbreak drastically alters the natural ecological processes within the RNA.

Soil and Water

MA3-7 In cooperation with the PNW Research Station, rehabilitation plans shall be developed and implemented in the event of soil disturbing activities such as fire suppression. Soil stabilization of naturally occurring soil loss or movement should not be permitted unless part of an authorized study.

Minerals

MA3-8 Valid claims existing prior to Research Natural Area designation may be developed. Valid claims existing prior to any withdrawal from mineral entry shall be required to have an operating plan providing the least amount of impact. Research Natural Areas may be recommended for withdrawal from mineral entry in situations where mitigation measures do not adequately protect management area values. The mineral potential of the area shall be assessed before withdrawal is recommended.

Lands

MA3-9 An Establishment Record shall be written for each RNA recommended in the preferred alternative of the Forest Plan (joint responsibility of the PNW Station Director and Regional Forester - procedures described in Forest Service Manual 4063).

A management plan should be written for each established RNA. The management plan should include analysis of surrounding lands as related to the integrity of the RNA.

All new special uses shall be denied except for permits for research approved by the PNW Experiment Station and directly related to the objective for the particular Research Natural Area (as determined in the Establishment Record). Noncompatible existing special uses shall be terminated.

Rights-of-way easements existing before RNA establishment shall be honored. Upgrading that would compromise the objectives of the RNA shall be discouraged. The Forest Service should recommend against FERC licenses or permits that compromise the objectives of the RNA.

Facilities

MA3-10 New facilities shall not be built except on valid existing mining claims with approved operating plans or as required as part of an authorized study. New roads, fences, or signs shall not be permitted on RNA's unless they contribute to the objectives or to the protection of the area. New trails may be allowed only if compatible with the objectives for the area and if approved by appropriate PNW Research officers and National Forest System line officers.

Future utility corridor siting should avoid this Management Area. This Management Area may only be entered following environmental analysis in which all other alternatives have been rejected by the Forest Service.

Hazard tree felling for safety reasons is permitted along trails or roads. Felled trees shall remain in place, unless lying across a trail or road. Trees shall not be removed.

Development of rock sources shall not be permitted; stockpiling of rock materials should not occur. Waste material from road construction, reconstruction, or maintenance shall not be left in RNA's.

Fire Management

MA3-11 All wildfires occurring at FIL 2 or above should be controlled at 30 acres or less, 90 percent of the time. A limited range of suppression technology and equipment emphasizing indirect attack should be used. In suppressing fires, chemical fire retardants and ground disturbing activity should be avoided. Wildfires occurring at FIL 1 should be handled as outlined in the basic fire management direction for the Forest.

Management should provide for a low level of prevention activities. Prevention public contacts should be limited to those which are made incidental to normal fire management activities, with most of the effort concentrated on techniques that accomplish the fire prevention mission prior to the user entering the area.

If authorized by appropriate PNW Research officers and National Forest System officers, prescribed fire may be utilized as a tool to return fire to its natural role in the area and return plant communities to a condition similar to that which existed prior to active fire suppression. Managed or naturally occurring fire may be use to perpetuate the sere and thus the cell(s) that the RNA is meant to represent. If fire is used to perpetuate a sere, it should mimic a natural fire, but with prudent measures to avoid catastrophe.

Fuels normally should be allowed to accumulate at natural rates unless they threaten the objectives of the RNA.

Research

MA3-12 All research proposals shall be approved by the PNW Station Director and any applicable permits obtained from the appropriate NFS line officer. Research should be limited to non-consumptive, non-destructive, and essentially observational activities. Some collecting of soil, plants, or animal specimens (State coordination needed) may be permitted on a case by case basis.

United States
Department of
Agriculture

Forest Service

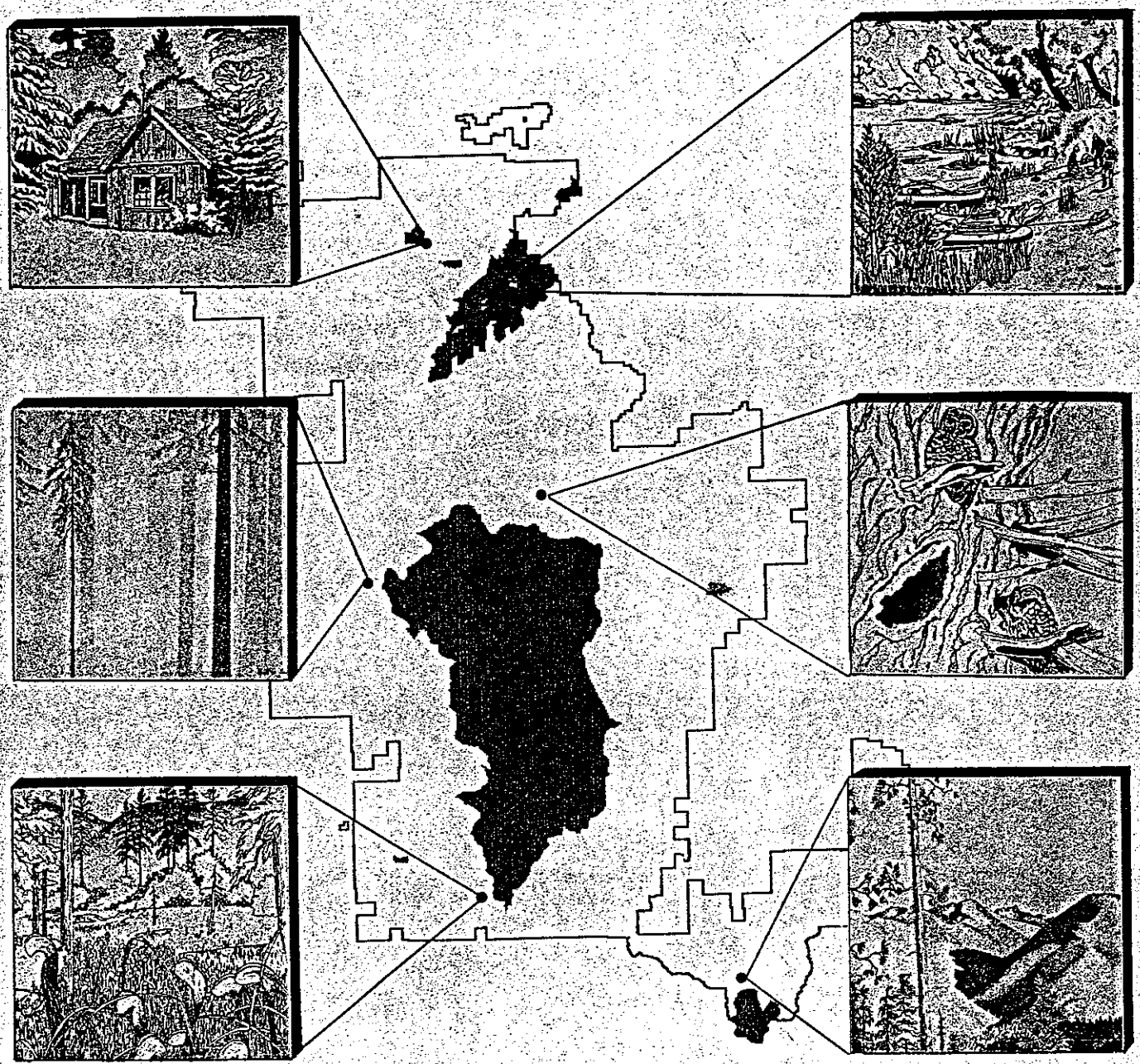
**Pacific
Northwest
Region**

1989

Final Environmental Impact Statement

Land and Resource Management Plan

Siskiyou National Forest



SENSITIVE PLANTS

EXISTING CONDITION

The unique geologic and climatic history of the Siskiyou Mountains of southwestern Oregon and northwestern California is responsible for the evolution of a number of rare plants not found elsewhere. The ranges of some of these plants are almost entirely within the Forest.

Two categories of rare plants receive special consideration from Siskiyou National Forest land managers:

1. Federally listed or proposed endangered or threatened species must be protected from adverse impact (presently, none known on the Forest).

2. Regional Forester identified Sensitive species are those plant species for which viability is a concern, as evidenced by (a) significant current or predicted downward trends in population numbers or density, or (b) significant current or predicted downward trends in habitat capability that could reduce a species' existing distribution. The Forest harbors 64 sensitive species, and an additional 30 may occur here.

Ten other species are potential candidates for the Regional Forester's list of sensitive plants (nine are known to occur on the Forest). Management of sensitive species is closely coordinated with the Oregon Natural Heritage Data Base (ONHDB 1985) and the California Native Plant Society (Smith and York 1984).

The Forest also manages endangered, threatened, or sensitive plants in accordance with Oregon's Endangered Species Act of 1987 (ORS 496.004, 498.026, and 564.040), and California's Endangered Species Act (1984 amendments) and Plant Protection Act (1977).

Common and scientific names of all rare plants are listed in the current *Status List of Endangered, Threatened, Sensitive and Rare Plants on the Siskiyou National Forest* (USDA 1988a). Various plant lists are described in Appendix F. *A Guide to Sensitive Plants of the Siskiyou National Forest* (Webb 1988a) and the *Guide to Common Forest Plants: Rogue River, Siskiyou, and Umpqua National Forests* (Wheeler and Atzet 1985) are used by Forest Service employees and volunteers to identify sensitive plants in the field.

Four indicator habitats for sensitive plants are designated in the Forest Plan: (a) open slopes, fields, meadows; (b) dry rocky places, serpentine/nonserpentine; (c) moist rocky places; and (d) bog and wet/moist places, with serpentine and non-serpentine subgroups. Indicator habitats will be monitored during the life of the Plan to document any changes in sensitive plant populations. See Appendix F and the **MONITORING AND EVALUATION PLAN** in Chapter V (LRMP) for more detail.

BOTANICAL AREAS

Concentration areas of rare plants occur frequently on the Forest. Botanical areas are allocated to provide protected habitat for a species or a combination of species, including rare and sensitive plants. An area's ability to support a diversity of species is directly dependent on the variability of their environment. The likelihood of variation is somewhat dependent on size. Generally, the larger the area, the greater the diversity until a point of diminishing returns occurs, where more area does not "mean" more diversity.

One strategy to maximize diversity and capture the integrity of specific sites is through land allocations. Generally, many small scattered areas are more efficient than a few large areas. To include the widest variation in environments, sites should be selected from both sides of the coastal crest, from low and high elevations, and include a variety of parent rock. Existing and potential Botanical areas represent a variety of environments, but many are restricted to serpentine soils. Figure II-6 shows the location of these areas on the Forest. Each of the existing and proposed Botanical Areas is detailed in Appendix F.

Existing Botanical Areas

The Forest contains three existing Botanical areas totalling 4,475 acres. Of these acres, 3,401 acres (or 76 percent) are within the Kalmiopsis Wilderness. Sensitive plant species are present in all three areas. The 352-acre Babyfoot Unusual Interest Area (Botanical) was established in 1966 to protect Brewer spruce and other rare plant species. The 3,803-acre Big Craggies Botanical Area was established in 1964, primarily to protect Brewer spruce and *Kalmiopsis leachiana*. The 320-acre York Creek Unusual Interest Area (Botanical) was established in 1966 primarily to protect an extensive patch of *K. leachiana*.

Potential Botanical Areas

Two types of potential Botanical areas have been identified: (1) those designed to protect sensitive plants, and (2) those designed to preserve outstanding examples of old-growth stands (very large, old trees).

1. **Sensitive Plant Botanical Areas.** There are 19 potential Sensitive Plant Botanical areas (35,596 acres) identified throughout the Forest. Eight Dollar Mountain is probably the best known site. Over 20 sensitive plants are present (almost one-third of those known to be on the Forest); this same assemblage is not known to be present elsewhere (as a group). Sensitive species are located on both bog and dry sites at a variety of locations; the largest Darlingtonia bogs on the Forest are within the Eight Dollar Mountain site. This site has been continually botanized since the 1880's, and is of much historical interest in regard to early-day botanists. A number of species were first collected in this area. Another outstanding example is the Bigelow Lakes site. A large variety of sensitive species are present. Some plant species are at their most northern or western limits. This concentration of plants is not known elsewhere on the Siskiyou or adjacent National Forests.

2. **Old-growth Botanical Areas.** There are five potential Old-growth Botanical Areas (1,321 acres) on the Forest. The best example is the Lobster Grove site which is dominated by very large Douglas-fir *(Picea breweriana)* and Port-Orford-cedar, some approaching 8 feet in diameter. There are also outstanding examples of large tanoak, Pacific madrone, and Oregon myrtle (the world's largest myrtle tree is located within the Grove).

RESEARCH NATURAL AREAS

Research Natural Areas (RNA's) are allocated for research and education. These ecosystems are unaffected by man and are intended to be baseline representatives for the study of natural processes and the maintenance of gene pools. Representatives of both rare and common ecosystems are included. A system of RNA's has been set up throughout the Pacific states to preserve representatives of plant communities. Many plant communities are not yet represented by RNA's. The present representation of cells (ecosystems, species, or special areas earmarked for inclusion by the RNA Committee) falls short of the Committee's recommendations for this Forest. The Siskiyou presently has three RNA's. Four additional RNA's have been proposed by Forest Service researchers and others for inclusion into the RNA system (Dyrness and others 1975). See Appendix F for more detail on individual areas.

Existing Research Natural Areas

Three RNA's (1,957 acres) exist on the Forest. The Port Orford Cedar RNA (1,120 acres) was established in 1937, it contains six plant communities (cells) not represented in other RNA's. Most of the RNA is covered with old-growth Port-Orford-cedar and Douglas-fir. Although ages are not accurately known, many of the dominant specimens are undoubtedly 400 to 500 years old. The Coquille River Falls RNA (501 acres), established in 1945, contains two plant communities. It was established primarily to provide examples of virgin old-growth Port-Orford-cedar. Both RNA's with Port-Orford-cedar have been infected since about 1967 with Port-Orford-cedar root disease, an introduced pathogen. The ability of the RNA's to retain Port-Orford-cedar is receiving much attention. The Wheeler Creek RNA (336 acres) was established in

1972 to preserve an example of redwood forest near the northern limits of its range. This RNA contains three plant communities.

Potential Research Natural Areas

Ecologists have identified four sites on the Forest suitable for establishment of new RNA's: Hoover Gulch, Lemmingsworth Gulch, Cedar Log Flat, and Craggy Peak (Figure II-5). See Appendix F for detailed descriptions. Hoover Gulch (1,292 acres) contains three plant communities (cells) not represented in other RNA's. Lemmingsworth Gulch contains eight plant communities on 965 acres. It is marked by a sharp contrast between geologic substratum which results in a dramatic contrast in vegetation types, including seven sensitive plant species. Cedar Log Flat (441 acres) contains 10 sensitive plants and one plant community type (Jeffrey Pine-Grass at low elevations). The Craggy Peak site contains six plant communities. Two plant communities on 100 acres occur in the Siskiyou portion. Another 1,100 acres, containing the remaining four plant communities, are located on the adjoining Rogue River National Forest.

CURRENT DEMANDS, WANTS, AND DESIRES

Three Planning Problems, which reflect current demands, pertain to management of sensitive or unique plant resources.

2. "How Much Old-Growth Forest Should Be Preserved?"

Some people have expressed a desire to preserve unique stands of old growth in various locations in the general forest. They feel these areas should be set aside for purposes of study, and aesthetic and biological diversity values.

5. "How Should Sensitive Plant Resources Be Managed?"

Approximately 40 percent of the Forest is habitat for sensitive and rare plants. The large variety of plants present has generated considerable local, state, and national notoriety. Citizens interested in the botanical resources of the Siskiyou National Forest (including RNA's) feel that unique concentrations of rare plants should be protected from detrimental change. There is concern that some sensitive plant areas could be overused. A decision can be made to either ignore sensitive plants and their habitats, or manage these resources to protect their inherent values.

9. "How Should Mineral Resources of the Forest Be Developed in Coordination With Management of Other Resources?"

Some citizens are concerned that protection of botanical resources may have a detrimental effect on mining operations (and to a lesser extent, timber).

ABILITY TO SATISFY DEMAND

2. "How Much Old-Growth Forest Should Be Preserved?"

Five sites (total acreage 1,321) have been identified which contain outstanding examples of old-growth stands (very large, old trees). Some or all of these sites can be excluded from timber harvest through land allocations such as Botanical Management Areas, or they can remain as areas which will eventually be harvested.

NONCONSUMPTIVE USE

Of the over 250 wildlife species inhabiting the Siskiyou, only 22 are classified as game animals or furbearers; and even these animals frequently serve the public in nonconsumptive ways. Nongame wildlife are recognized as an important natural resource by the ODFW (Marshall 1986).

Although no accurate figures for nonconsumptive use are available for the Forest, the 1975 National Survey of Fishing and Hunting showed that for every day a hunter spent in the field, three other individuals were bird-watching, photographing, or observing wildlife (USDI Fish and Wildlife Service 1977). During 1980, 2.2 million Oregon residents participated in some kind of nonconsumptive wildlife use activity (USDI Fish and Wildlife Service/USDC Bureau of the Census 1982).

Thousands of people boat or hike along the Rogue and Illinois Rivers every year; "watchable wildlife" are an important part of their recreation experience. On the Siskiyou, recreation-days attributable to nonconsumptive use of wildlife resources are at least as high as recreation-days attributable to hunting.

Most people enjoy seeing wildlife in their natural habitat. Most people agree that all wildlife species presently existing on the Forest should continue to be part of the Forest ecosystem. People differ on how much of each vegetative type should be maintained to achieve the most desirable mix of habitats.

ABILITY TO SATISFY DEMAND

Three Planning Problems pertain to management of wildlife resources and the ability of the Forest and the Forest Service to satisfy demand:

1. "How Much Timber Should the Forest Produce?"

The Forest could adjust the allowable cut to meet a wide range of wildlife objectives. Specifically, in areas managed for timber the Forest is physically able to meet ODFW criteria for elk and deer cover/forage requirements (ODFW 1985a).

2. "How Much Old-Growth Forest Should Be Preserved?"

There is a wide range of options. Old growth can be reserved for wildlife that need this type of habitat; land allocations to meet MR's for wildlife can be expanded (increased from 159,949 acres; a minor portion is mature forest). If no more old growth is cut, the Forest could maintain approximately 393,000 acres of old-growth forest indefinitely (including dedicated areas). If present mature stands (50,000 acres) are allowed to progress into old growth, and if lands cut over in the last 40 years (138,000 acres) are allowed to grow back into old growth, an additional 188,000 acres could be managed as old growth.

7. "How Should Wildlife Habitats on the Forest Be Managed?"

Wildlife and their habitats are an important part of the Siskiyou ecosystem. If all wildlife species presently occurring on the Siskiyou are to remain as viable components of the Forest ecosystem, then this entails preservation of at least minimum amounts of the various habitats. Examples of the most essential habitats are meadows, riparian areas, snags, early successional stages, mature and old-growth forest, and hardwood stands.

Primary land allocations can be made to protect the various habitats supporting specific wildlife populations on the Forest, such as Designated Wildlife Habitat, Special Wildlife Sites, and Supplemental Resource Management Areas. Wildlife objectives can be furthered through secondary allocations such as Research Natural Areas and Botanical areas. Standards and Guidelines can be used to establish

In addition to fire, timber harvest also has a major effect on ecosystem function and productivity. Timber harvest generally occurs in the late seral stages of coniferous forest. These forests are complex ecosystems which have complex functions. The late seral stage coniferous forest consists of large long-lived trees forming a broken canopy with a variable distribution of dominants and codominants. A vertical foliage distribution is present with a patchy understory which provides niches for vertebrates and invertebrates (Harris 1984).

These forests also contain snags and broken topped trees that provide roosting and nesting sites for birds and mammals. Underground mychorrhizal fungi provide food for many mammal species and assist trees in the uptake of nutrients for growth and survival. Fallen logs support insects, which serve as food for many vertebrates. Vertebrates, such as amphibians, also live in the decaying logs. The decaying logs, also provide sites of nutrient cycling and contribute to the maintenance of long-term site productivity (Harris 1984).

Patterns of timber harvest have consequences to diversity at the landscape level. The contiguous nature of late seral stages is replaced by a patchwork interspersed with early seral stages. This condition has been referred to as "forest fragmentation." The degree of fragmentation may influence the abundance of forest interior species.

On the Siskiyou National Forest, much of the timber harvested has been on productive lower elevation sites, where vertebrate species density is generally higher. The amount of late seral stage forest has also been reduced nearly 26 percent since 1940. The existing acres of late seral stage (mature and old growth) are displayed in Table III-30.

CURRENT DEMANDS, WANTS, AND DESIRES

The National Forest Management Act requires that Forest plans "preserve and enhance the diversity of plant and animal communities...so that it is at least as great as that which would be expected in the natural forest" (36 CFR 219.27). Additional direction states, "Management prescriptions, where appropriate and to the extent practicable, shall preserve and enhance the diversity of plant and animal communities, including endemic and desirable naturalized plant and animal species, so that it is at least as great as that which would be expected in a natural forest and the diversity of tree species similar to that existing in the planning area."

Several respondents to the DEIS mentioned the need to maintain the species diversity of the Forest; especially botanical resources. Many comments mention establishment of Research Natural Area, Botanical, and Riparian Management Areas. Several species were mentioned specifically, including redwood, Brewer spruce, and Port-Orford-cedar.

Perpetuation of old-growth forest ecosystems and the need to consider old growth preservation at the landscape scale were common themes. Some respondents emphasized uneven-aged management. Other public desires includes meadow maintenance, maintaining species viability, and retaining hardwood components in forest stands. Some respondents recognized that much is to be learned about providing biological diversity in the forest. They recommended inventories, monitoring, and research to develop future guidelines and practices.

ABILITY TO SATISFY DEMAND

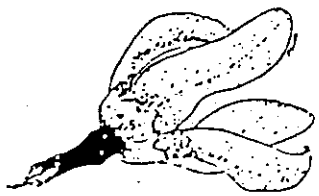
Biologically, the Forest is capable of maintaining the present complement of species, barring an extensive catastrophe. Land allocations are one tool to maintaining viable populations of some plants and animals. Other tools, such as management plans and Forest-wide Standards and Guidelines, may be appropriate for some species. Redwood, Port-Orford-cedar, and Brewer spruce are examples of plant species that can be maintained by using more than one approach. Table III-31 relates biological diversity to management issues and strategies.

Botanical, Research Natural Areas, Special Wildlife Sites, Designated Wildlife Habitat, and selected Supplemental Resource Management Areas are all designated, in part, to maintain plant and animal diversity. There are plants and animals which also occupy land allocated to General Forest, Retention, and Partial Retention Visual Management Areas. In these areas, sensitive plants and animals that thrive on infrequent disturbance will be considered on a case-by-case basis during project planning. Emphasis is placed on the development of Species Management Guides for all of these species to allow evaluation, protection, and maintenance at the landscape scale. If plants requiring frequent disturbance are found in areas other than General Forest and Partial Retention Visual, a method of introducing disturbance in the proper frequency and intensity to assure species viability will be considered.

Remarkable groves of old-growth forest and unique plant habitats can be allocated to Botanical Management Areas. In addition to these allocations, late seral stage forest would be provided in areas allocated to no harvest prescriptions (Management Areas 1-9). Mature and old-growth forest is also present on lands unsuitable for timber management within Management Areas 10-14.

The combination of mature and old-growth forest on unsuitable lands and Management Areas 1-9 can be evaluated for each alternative to determine if late seral stages will likely be present in Planning Basins through the planning period. The potential pattern of late seral stages over the forest landscape can also be compared for each alternative.

The ability of the Siskiyou National Forest to provide significant quantities of old-growth forest in some plant associations may be impaired by the natural fire frequency in some areas of the Forest. Fire frequencies are also affected by human activity. High fire frequencies on the lower slopes of the inland valleys were maintained by the Indians and are perpetuated by today's culture. Many of these lower slopes have reburned as many as three times in the last two decades. Several plant associations of the Douglas-fir Series and the drier associations of the White Fir Series are not likely to persist in an old-growth condition for long periods of time.



RECREATION

The recreational capacity of the Forest varies depending on land allocation. The Primitive and Semi-primitive recreational opportunities are the main concern. The maximum amount of land that can be allocated, including existing Wilderness areas, to a condition suitable for Primitive or Semi-primitive recreational use is 547,000 acres.

The Forest's ability to provide this type of experience outside of designated Wilderness has costs associated with foregoing timber harvest and the actual implementation costs (Figure III-26). These opportunity costs are also associated with the protection of old-growth. When areas are allocated to unroaded status, the protection of old-growth forests also occurs. Only implementation costs are associated with the lowest land allocation for Primitive recreation, while opportunity costs of foregoing timber harvest are associated with the maximum supply of Primitive recreation opportunities.

SENSITIVE PLANTS

The maximum acreage of land that may be allocated to Botanical and Research Natural Areas is 46,148 acres. The Forest capacity to provide adequate resources of sensitive plants is often associated with the opportunity costs of foregoing mineral extractions on selected Botanical and Research Natural Areas. These "costs" are presently not quantified due to uncertain markets and inadequate mineral surveys. However, the acres of mineral accessibility and restrictions to activity vary with the options of preserving sensitive plant habitat.

VISUALS

The maximum amount of area that may be allocated to Retention and Partial Retention Visual Management Areas is 88,000 and 300,000 acres, respectively. The supply of scenic vistas is directly related to the opportunity costs of timber harvest. Slower rates of harvest on areas managed for scenic values are these opportunity costs. Increased amounts of pristine views are correlated with increased opportunity costs. These opportunity costs, therefore, may also be associated with the old-growth character of longer rotations. In other words, scenic vistas associated with a longer timber rotation also provide some old-growth characteristics.

WILDLIFE HABITAT

Wildlife habitat measurements are varied depending on the objectives desired. Big-game habitat supply is more a result of Standards and Guidelines than major land allocations, assuming adequate openings are present. Dead and defective tree habitat for species dependent on such habitat also varies with Standards and Guidelines. There are few opportunity costs associated with such supplies, though higher logging costs, layout costs, and snag enhancement costs, such as tree topping, increase as one manages for an increased supply of dead and defective tree habitat.

MINERAL RESOURCES

Any change in Forest capacity to limit access for mineral extraction is primarily associated with areas allocated to an unroaded condition, conflicting resource values, and restrictive Standards and Guidelines. Such restraints and requirements can affect the economic feasibility of mineral extraction.

Land assigned to the last five Management Areas provides a much broader range of uses. A greater degree of site disturbance is allowed. The visual emphasis in three of the five areas, however, does limit the methods, scheduling, and locations of some site disturbing activities. Motorized access is prevalent in these Management Areas in support of the timber harvest program, some forms of recreation, and hunting use. Overall, energy and mineral development opportunities are not encumbered by overly-restrictive requirements and mitigations for access and development. Land assigned to Management Areas 10-14 ranges from 422,185 acres (39 percent of the Forest) in Alternative M to 811,439 acres (72 percent) in Alternative NC.

No indirect or cumulative effects on land status have been identified.

Wilderness Management Area (1)

These areas were established by Congress to provide opportunities for solitude and recreation in a natural state. Standards and Guidelines for Wilderness limit site disturbance to that which can be accomplished with hand tools. With the exception of mining activity on valid claims established prior to December 31, 1984, no motorized access is permitted. Land within the Wildernesses is not available for energy and mineral development, except as previously noted. Total acreage within the Wilderness Management Area (232,495 acres) remains fixed by alternative. Where two or more Management Area allocations overlap (e.g., Big Craggies Botanical Area in the Kalmiopsis Wilderness), the Wilderness effects and constraints on land status take precedence.

Levels of agency activity that vary by alternative are generally limited to trail construction/reconstruction and activities related to resource protection. Natural fuels treatment within Wilderness is permitted to varying degrees in all alternatives, except Alternatives NC, A, and A-Departure.

Wild River Management Area (2)

With the exception of permits, structures, and practices that were established prior to legislative designation, site disturbance within the Wild River Management Area is generally limited to that which would preserve the river in a natural, wild, and primitive condition. No motorized access is permitted unless provided for in the legislation (e.g., Rogue River as cited in P.L. 90-542). Subject to valid existing claims, lands in Wild River are withdrawn from mineral and energy development.

Trail development, fish and wildlife habitat improvement projects, and primitive campsites illustrate the extent of agency activities permitted in the Wild River Management Area. Treatment of natural fuels through prescribed burning is also permitted in all alternatives except NC, A, and A-Departure.

Research Natural Area Management Area (3)

RNA's are established (or recommended to be established) to represent typical and distinctive natural ecosystems and habitats for scientific or educational use in an unmodified condition. Standards and Guidelines for RNA's generally prohibit site disturbance unless consistent with the objectives of the area. Site-disturbing activities beyond trail development and maintenance are not permitted in this Management Area. Special use permits may be approved by the Pacific Northwest Experiment Station when directly related to the objective of the RNA. Lands within this Management Area would have high levels of access restrictions for mineral and energy development. However, withdrawals from mineral and energy development can only be considered through the NEPA process.

Three existing RNA's total 1,957 acres. Recommended additions to this Management Area of approximately 1,300 acres occur under Alternatives E, G, K, M, and S.

activities that conflict with wilderness values. Public demand for removal of the activity from Wilderness could result.

Wild and Scenic/Recreation Rivers

Allocations to or designations of Wild, Scenic, or Recreation Rivers could have significant direct effects on mineral activities due to high or withdrawn access restrictions. The Illinois and Rogue River are partially withdrawn from mineral entry under the current situation. Allocations to Wild segments will generally result in the withdrawal of land from mineral activities within 1/4 mile either side of the river. In some cases, withdrawal may be recommended in Scenic segments. Access restrictions on Recreation segments are generally high. Protection of visuals on lands adjacent to the 1/4 mile corridor (i.e., within the viewshed) may impact mineral activities on a much larger area due to public demand for protection of those areas. Development of reservoirs and powerlines, and other types of intensive use, are generally not permitted on Wild and Scenic Rivers. Removal of sand and gravel will usually be prohibited.

Botanical, Unique Interest, and Research Natural Areas

The potential for major direct effects on minerals can occur in these areas. Because of the potential conflict with sensitive plants and unique plant communities, all three allocations impose high restrictions relative to access and development. If protection cannot be assured during mining, the need for withdrawal will be considered through environmental analysis of specific operating plans. Known deposits of strategic minerals such as nickel, laterites, and chromite could be significantly affected.

Existing Research Natural Areas (RNA's) and Botanical Areas are withdrawn (or are in the process of being withdrawn) from mineral entry. Impact will vary by alternative and by individual area depending on the mineral potential (see Appendix F for site specific information for RNA's and Botanical Areas). Unique Interest Areas are quite limited in number and area.

Backcountry Recreation

This Management Area assignment could lead to significant direct effects on mineral activities. The level of access restrictions is low to moderate, depending on whether the individual area is motorized or non-motorized. In general, though, areas of higher mineral potential have existing primitive jeep roads and motorized trails. Where these occur, the established use would likely continue under either the Management Area prescription or an approved operating plan.

Designated Wildlife Habitat and Special Wildlife Habitat Areas

Allocations to Wildlife Management Areas could have moderate or high restrictions on mineral access and development depending on the sensitivity of the species affected. While not prohibitive, some of the more sensitive wildlife habitats and species may carry restrictions on mineral activities that could make mining uneconomical.

Riparian and Supplemental Resource Management Areas

Assignments to these areas could have a significant direct effect on mineral activities. A moderate access restriction has been applied to the acreage of Riparian areas. A high restriction will apply to Supplemental Resource areas, depending largely on the proposal and sensitivity of the area and its related resource values. The potential for major conflict exists between placer mining and fish habitat, water quality, recreation use, and other values and uses. This could lead to more severe access restrictions; however, to date, this has not been the Forest's experience.

undoubtedly be found on the Forest. Also, much remains to be discovered about the range and abundance of individual plant species. Known plant communities needing representation in the RNA system are included in the proposed RNA's. Research in progress on the plant associations of the Siskiyou Mountain Province (Atzet and Wheeler 1984) will undoubtedly result in the identification of additional plant communities needing representation in RNA's.

Over the short term, there is a low risk that sites not designated will be precluded from receiving future consideration as RNA's or Botanical areas. For most sites, a decision to withhold RNA or Botanical status can be reversed at the end of the first planning period (10-15 years). This would not be true of the old-growth sites, which might be harvested (at least partially) before the Forest Plan is revised. Over the long term (by the fifth decade), grazing, road building, timber harvesting, and mining activities will have taken their toll and many sites will no longer retain the qualities necessary to meet the criteria for designation as RNA or Botanical areas. The Forest's rare plant resources would be best managed by assigning Botanical areas status to high priority sites. Plant resources in sites with lower priorities would be intensively inventoried before this Forest Plan is revised in 10-15 years. For a description of the RNA's and Botanical areas (existing and proposed) refer to Appendix F (FEIS).

Alternatives NC, A, and A-Departure

DIRECT EFFECTS. No potential Botanical areas are established with these alternatives. In areas with a significant amount of land allocated to General Forest (see Table II-3), site conditions will change from natural to managed over the long term as road building and logging take place. This means most of these sites will eventually be unsuitable for designation as Botanical areas. This is especially true for old-growth sites; all of these sites are allocated in whole or in part to General Forest. Individual sensitive plant populations within potential Botanical areas (and elsewhere) will be managed through application of Standards and Guidelines; however, the natural features of individual areas may not be protected in the long term.

Existing RNA's and the proposed Hoover Gulch RNA (3,249 acres) are allocated (14 plant communities protected). Present cell needs (Dyrness and others 1975) will not be met. Thus, future needs will have to be found in Wilderness or in other compatible management areas. If they are not found, cells will not be represented and baseline information will be unavailable.

Lemmingsworth Gulch and Cedar Log Flat contain both mineral resources and land allocated to General Forest. Up until the next revision of the Forest Plan in 10-15 years, these two sites may not be heavily impacted by mining, road building, and timber harvesting activities. In the long term, logging and road building will inevitably make the sites unsuitable for designation as RNA's. The portion of the proposed Craggy Peak RNA on the Siskiyou National Forest has no known mineral resources and no timber available for harvesting; the option to designate this site as an RNA would probably be available indefinitely.

Many sensitive species are present in existing Wilderness, RNA's, and Riparian areas. Without specific information on environmental requirements of sensitive species, the effects of this alternative on specific sensitive plants is unknown over the long term. Refer to Appendix F (FEIS) for additional information.

Alternative A-Departure is the same as Alternative NC and A, except that accelerated timber harvest activities may change the character of individual areas sooner.

INDIRECT EFFECTS. The public will still be able to visit potential Botanical and RNA's; however, at some sites inherent natural values may be lost over time because of grazing, road building, timber harvesting, and mining activities. Although few allocations were made in this alternative for Botanical or RNA's, some of the areas will still be relatively unchanged and available for designation during the next one or two decades.

APPENDIX F - RNA

3. *Page Mountain Grove*. This is an old growth grove of large Douglas-fir and Port-Orford-cedar in the southeastern portion of the Illinois Valley Ranger District. The grove is along the Happy Camp Road near the divide between the Siskiyou and Klamath National Forests. The area is quite accessible to the public and has high potential for recreation and environmental education use. Part of the site (not the Addition) is within a 300 acre MMR site for pileated woodpeckers, (Management Area 8, Designated Wildlife Habitat, see the Forest Plan).

4. *Redwood Groves*. This proposed Botanical area was created between the draft and final plans; in response to public comments. The area contains a number of separate stands, which represent some of the best remaining old-growth redwood forest on the Siskiyou (and in Oregon). Several stands are near the existing Wheeler Creek RNA.

5. *Snaketooth Redwood*. This 21 acre site is the northern-most coastal redwood grove. Half of the original 40 acre site was harvested in the early 1960's. It is located on the Chetco Ranger District, in the Little Redwood Creek drainage.

RESEARCH NATURAL AREAS

EXISTING

1. *Coquille River Falls*. The Coquille River Falls RNA contains two plant communities (cells) not represented in other RNA's: (a) mixed forest of Douglas-fir, tanoak, and Port-Orford-cedar; and (b) red alder/swordfern.

2. *Port Orford Cedar*. The Port Orford Cedar RNA contains six plant communities (cells) not represented in other RNA's: (a) mixed stand of grand fir, bigleaf maple, and western hemlock, with understory dominated by swordfern; (b) open vegetational mosaic on serpentine ridge with stunted Douglas-fir, canyon live oak, and coffeeberry; (c) swale dominated by red alder and slough sedge (*Carex obnuta*); (d) swale dominated by Oregon ash and slough sedge (*Carex obnuta*); (e) mixed-forest stand located on serpentine and dominated by Douglas-fir, with minor amounts of Port-Orford-cedar and Pacific madrone in the overstory, and tanoak and beargrass in the understory; and (f) mixed upland forest dominated by Douglas-fir, Port-Orford-cedar, and western hemlock, with understory of tanoak and swordfern.

3. *Wheeler Creek*. The Wheeler Creek Research Natural Area was established to preserve (a) a redwood stand near the northern limit of its range. Two additional cells in this RNA are: (b) forested riparian zone with a major hardwood component of bigleaf and vine maple, and abundant herbaceous cover; and (c) mesic forest with understory of tanoak, Evergreen huckleberry, and Pacific rhododendron.

PROPOSED

Forest ecologists have identified four sites on the Forest suitable for establishment of new RNA's. They are listed by priority order.

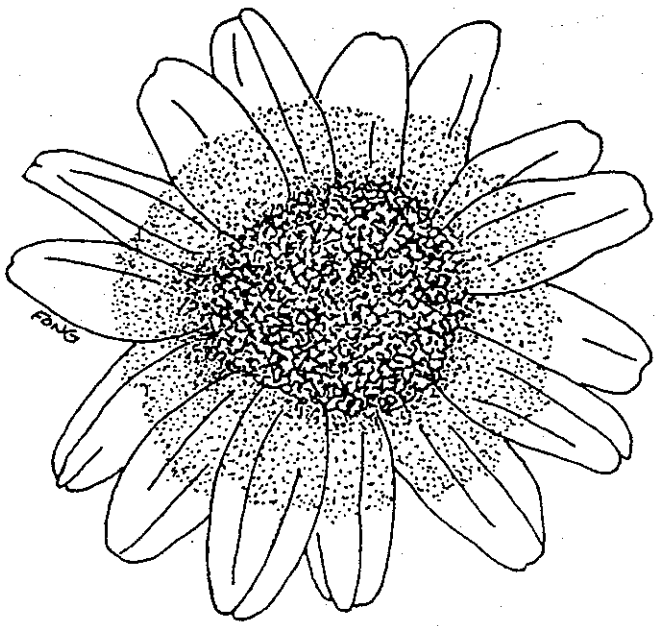
1. *Lemmingsworth Gulch*. Lemmingsworth Gulch (Chetco Ranger District) contains eight cells: (a) mixed-evergreen forest (Douglas-fir and evergreen hardwoods--minor component), (b) tanoak/madrone forest, (c) knobcone pine, (d) Jeffrey pine/grass on serpentine at high elevation, (e) serpentine vegetation matrix and normal soil island with good representation of contacts, (f) stream drainage in serpentine at mid- to high-elevation, and (g) mountain bog in serpentine area with *Darlingtonia*. This site also contains a variety of sensitive and rare plant species.

2. *Hoover Gulch*. Hoover Gulch (Illinois Valley Ranger District) contains three plant communities (cells) not represented in other existing or proposed Research Natural Areas: (a) canyon live oak, (b) mixed evergreen forest (Douglas-fir and evergreen hardwoods), and (c) a major drainage in mixed-evergreen forest. These plant communities are common in southwest Oregon and northwest California, but suitable

locations for RNA's are not. The lower portion of the area is within the Wild and Scenic Illinois River corridor. This site is also part of a spotted owl habitat area (SOHA) (see Management Area 8, Forest Plan). There are no existing mining claims in the area.

3. *Cedar Log Flat*. Cedar Log Flat (Galice Ranger District) contains an important plant community not represented in other existing or proposed Research Natural Areas: Jeffrey pine-grass at low elevation. This is an uncommon plant community. There are no other sites available to represent this plant community in the RNA system. This site has not been grazed. In 1984 Dennis Vroman (Galice Ranger District) discovered six sensitive plant species at the site, most of which are otherwise confined to the Illinois Valley area.

4. *Craggy Peak*. The Craggy Peak site (Illinois Valley Ranger District) contains six cells: (a) vernal pond at mid- to high-elevation, (b) cold springs, (c) Shasta red fir - white fir forest, (d) Brewer spruce showing maximum development, (e) Baker cypress in the eastern Siskiyou Mountains, and (f) mountain herblands at high elevation. The largest portion of the proposed Craggy Peak RNA is located on the Rogue River National Forest (the portion on the Rogue River is called Oliver Matthews RNA). Cells b and f are on the Siskiyou portion of area; the cold springs cell is especially important.



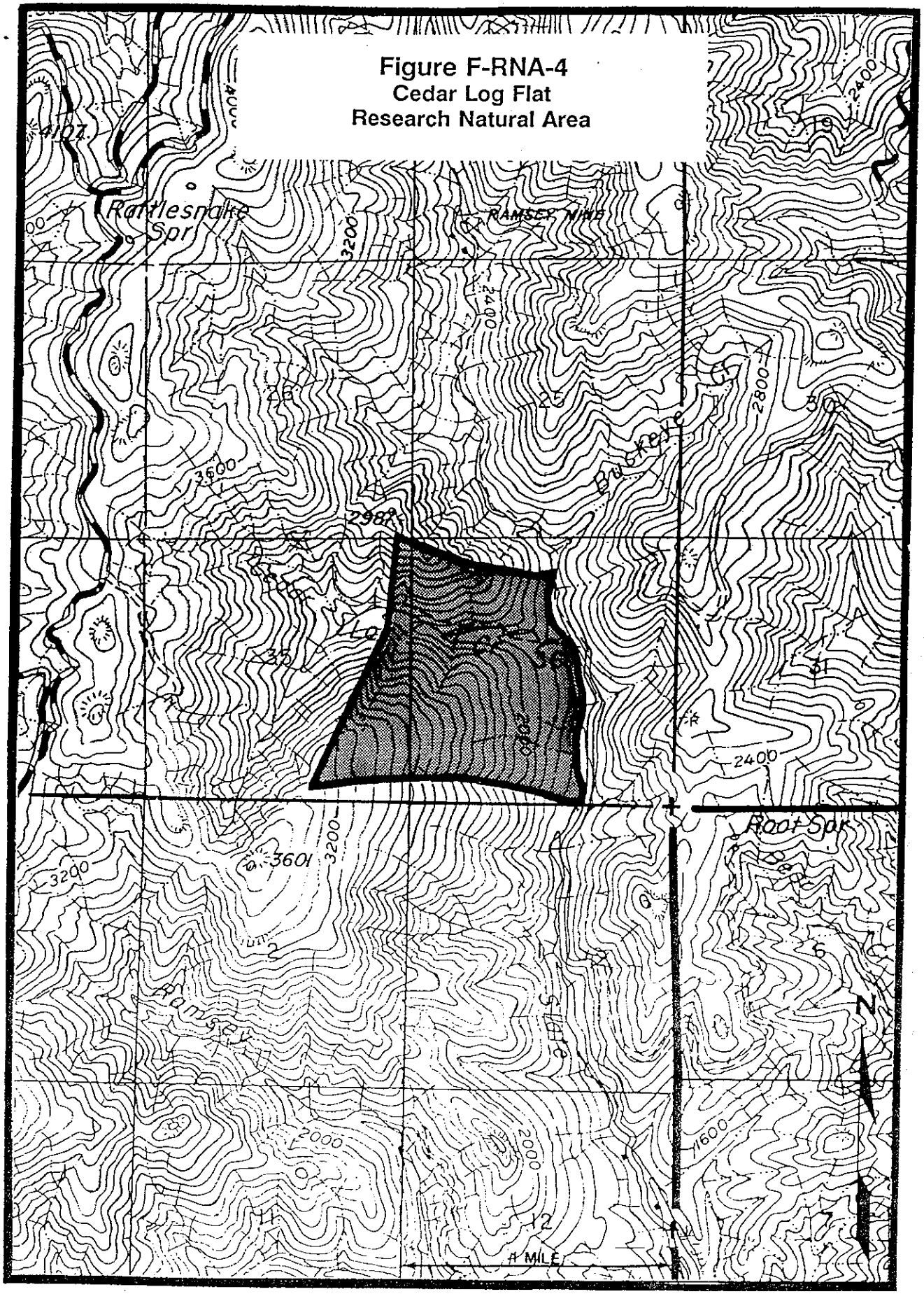


Figure F-RNA-4
Cedar Log Flat
Research Natural Area

RESEARCH NATURAL AREAS PROPOSED

CEDAR LOG FLAT - F-RNA-4

The following report was written by Dennis Vroman (Galice Ranger District) in 1985. He gathered the data in 1984-1985. Cedar Log Flat has been recommended as an RNA in the Preferred Alternative (S).

The proposed Cedar Log Flat Research Natural Area covers 441 acres and is located near the center of the eastern boundary of the Siskiyou National Forest (T.36S., R.8W., Sections 35, 36, (Figure F-RNA-4). About 19 road miles from Grants Pass, the area is part of the Slate Creek drainage and flows into the Applegate River. Cedar Log Creek, a permanent stream, flows easterly through the area and is flanked by north and south aspects. Located within the area is a large, grassy meadow on a gentle east-facing slope which is bound on the north by Cedar Log Creek and to the east by Slate Creek. The rest of the proposed RNA has easterly aspects and slopes are steeper. Elevation ranges from 1,700 to 3,300 feet within the area.

Bedrock in the area consists of serpentine and peridotite; soils are shallow. Large areas exist of mostly bare parent material, with little or limited amounts of soil and vegetation. Some of these barren areas consist of a blend of massive boulders, rocks, rock fragments and strips of parent material. The deepest soils appear to be located on the gentle-sloping meadow area. See Ramp and Peterson (1979) for more information on geology and mineral resources of the general area.

Vegetation of the area varies in type and amounts, depending upon the soil depth, slope, aspect and other site variables. Average rainfall within the proposed RNA is approximately 55 inches per year (Isohyetal Map, Oregon State University Extension Service). The older conifers are approximately 180 to 215 years. The larger conifers are approximately 40 inches Diameter Breast Height (DBH) and 130 feet in height. Among the more than 160 woody or herbaceous plants in the area are many sensitive plant species. Other sensitive species may exist; more inventory work is needed.

Past evidence of wildfire is present throughout the entire area. Fire-caused basal scars are present on many of the older trees, even on the more barren south slopes. Along Cedar Log Creek are many blackened snags, some burned a great distance above the ground.

Ten sensitive plant species (USDA Forest Service designation) are found within the proposed RNA; some are otherwise not known outside of the Illinois Valley area. Five plants designated as watch or review species by the Forest Service are also present. Sensitive and Watch/Review list plants are included in the attached species list.

Cedar Log Flat Research Natural Area fills the following forest-type cell need in the Siskiyou Mountains Province (Dyrness and others 1975):

from Table 53

15. Jeffrey Pine-Grass on serpentine at low elevation

North of Cedar Log Creek. The area north of Cedar Log Creek has the most open ground, although dense brush can be found in the several side draws. The area has an average aspect and slope of 187 degrees and 48 percent respectively. The area averages 15 conifer trees/acre (50 percent *Pinus jeffreyi*, 33.3 percent *Calocedrus decurrens*, and 16.7 percent *Pseudotsuga menziesii* with a trace of *Pinus attenuata*). Hardwood trees average approximately three per acre and are 100 percent *Arbutus menziesii*. There are 5 conifer snags per acre (50 percent *P. jeffreyi*, 25 percent each of *C. decurrens* and *P. menziesii*). Lineal footage of downed conifer boles averages 201 feet per acre. Brush species cover 25.8 percent per acre on the average, with 36.5 percent *Arctostaphylos viscida*, 28.1 percent *Quercus vaccinifolia*, 14.1 percent *Quercus chrysolepis*, 7.8 percent *Garrya buxifolia*, 7 percent *Umbelluaria californica*, 3.5 percent

Ceanothus pumilus, 1.3 percent *Eriodictyon californicum*, 1 percent *Ceanothus cuneatus* and less than 1 percent of other species.

Four sensitive and two "watch or review list" species (USDA Forest Service designation), are known from the area. Sensitive species present are *Thlaspi montanum* var. *siskiyouensis*, *Arabis koehleri var. stipitata*, *Fritillaria glauca* and *Eriogonum pendulum* (the last was confirmed by Dr. Kenton Chambers, Curator of the Oregon State University Herbarium, who noted that the discovery "is a very nice range extension from its known area"). Watch/review species are *Arabis aculeolata* and *Phacelia corymbosa*.

Two distinct surface terrain types occur north of Cedar Log Creek. The eastern part has soils somewhat deeper, with more grass cover. Also, fewer rocks and boulders are present; *Arabis aculeolata* populates the higher areas. The western part has soils somewhat shallower, with little grass cover. Also present are large amounts of rocks, boulders and long stretches of barren outcrops. Here *A. koehleri* var. *stipitata* and *E. pendulum* are found. *F. glauca* is found in the ravel at the base of the rock outcrops.

Interesting birds and animals inhabiting this area include the canyon wren (*Catherpes mexicanus*), which appears to nest here. Mountain lion (*Felis concolor*) and black bear (*Ursus americanus*) sign has been found in this area.

Along Cedar Log Creek. Average estimated data for the 200 foot wide strip each side of Cedar Log Creek includes the following:

Direction of stream flow is 98 degrees with slope of 7 percent. Conifer trees average 268 per acre (66 percent *Chamaecyparis lawsoniana*, 27.2 percent *P. menziesii*, 3.4 percent *Pinus lambertiana* and 1.7 percent each of *C. decurrens* and *Taxus brevifolia*). There are 36 conifer snags per acre (83.3 percent *C. lawsoniana* and 16.7 percent *P. meniziesii*). Lineal footage of downed conifer boles averages 1859 feet per acre. Hardwoods per acre average 68 (46.6 percent *Q. chrysolepis*, 26.8 percent *Lithocarpus densiflorus*, 19.9 percent *A. menziesii*, 6.7 percent others). Brush species cover averages 39.7 percent per acre: 33.5 percent *Rhodódendron occidentale*, 16.1 percent *Q. vaccinifolia*, 15.1 percent *U. californica*, 10.7 percent *L. densiflorus*, 9.3 percent *Ledum columbianum*, 7.7 percent *Q. chrysolepis*, 5.9 percent *Rhamnus californica*, and others of less than 0.5 percent each.

Two sensitive species found here are also in the meadow area: *Cypripedium californicum* and *Epilobium oreganum*. Two watch/review species occur here. *Lilium vollmeri* occurs here and in the boggy areas within the meadow; *Dicentra formosa ssp. oregana* occurs only here within the proposed RNA.

Native cutthroat trout (*Salmo clarki*) inhabit Cedar Log Creek. According to Don King (Fisheries Biologist, Siskiyou National Forest,) Pacific salmon species are impeded from reaching the upper regions of Slate Creek, and therefore Cedar Log Creek. Adult steelhead (*Salmo gairdnerii*) were seen at the mouth of Cedar Log Creek in April 1985.

Ringtails (*Bassariscus astutus*), secretive nocturnal mammals, frequent the Slate Creek area near the mouth of Cedar Log Creek. During the 1983-1984 trapping season, two of these animals were trapped here and released by a local fur trapper (G. Sublette, personal communication, November 20, 1985). Ringtails may den near or within the proposed RNA.

Dense thickets of brush and trees, located both along Cedar Log Creek and at edges of bogs, provide nesting sites for numerous bird species requiring this habitat type. Such bird species include: Lincoln's sparrow (*Melospiza lincolnii*), MacGillivray's warbler (*Oporornis tolmiei*), black-headed grosbeak (*Pheucticus melanocephalus*) and western wood peewee (*Contopus sordidulus*).

South of Cedar Log Creek. The area south of Cedar Log Creek contains the densest amounts of brushy ground cover. Some massive boulders and large rocks are located here, interspersed with more open

areas of moss and herb cover. The species present reflect the cooler microclimate of the area, as illustrated by *Polypodium hesperium* growing from thick moss mats formed on the surface layer of rock. *Darlingtonia californica* is found here, on slopes ranging to 60 percent in some places. In the western section is a cool, northeast-facing side draw that has close to 100 percent brushy ground cover, with *Darlingtonia* dispersed throughout. Sensitive species which occur here (and within the meadow area) are *C. californicum* and *E. oreganum*.

Average aspect and slope are 44 degrees and 45 percent respectively. Conifer trees average 279 to the acre (50 percent *C. decurrens*, 24.4 percent *P. menziesii*, 19.2 percent *P. jeffreyi*, 5.1 percent *P. lambertiana*, 1.3 percent *C. lawsoniana*). Conifer snags average 22 per acre (33.4 percent each of *P. menziesii* and *C. decurrens*, 16.6 percent each of *C. lawsoniana* and *P. lambertiana*). Hardwoods average 25 per acre and are 100 percent *A. menziesii*. Lineal footage of downed conifer boles per acre averages 597 feet. Brush species cover an average of 50 percent of each acre, with 47.4 percent *Q. vaccinifolia*, 15,3 percent *G. buxifolia*, 11.1 percent *U. californica*, 9.3 percent *Q. chrysolepis*, 4.6 percent *R. californica*, 3.6 percent each of *L. columbianum* and *L. densiflorus*, 2.1 percent *Quercus breweri*, 1.4 percent *R. occidentale*, and others with less than 0.5 percent each.

Meadow or "Flat". The meadow appears park-like with its open stand of conifers, dominated by *P. jeffreyi*. The major ground cover is made up of grasses (*Festuca* and *Poa*). A large variety of herbs occur; however, due to seasonal dominance, different species stand out when they are in bloom. Several bogs which remain wet throughout the year occur within the meadow or along the edge. Two sensitive species inhabit the bogs: *Cypripedium californicum* and *Epilobium oreganum*. The discovery of *E. oreganum* "is an important find" (Dr. Kenton Chambers). *L. vollmeri*, a watch/review species, also occurs here. Large populations of *Darlingtonia californica* inhabit the bogs. One bog along the southern edge runs through the entire length of the meadow. Two sensitive species occur on the meadow: *Microseris howellii* and *Senecio hesperius*. Prior to their recent discovery here, neither species had been found outside of the Illinois Valley area.

Many cavity nesting birds rear their broods in the meadow area. Species included are: western bluebird (*Sialia mexicana*), hairy woodpecker (*Picoides villosus*), northern flicker (red-shafted) (*Caolaptes auratus*) and red-breasted nuthatch (*Sitta canadensis*).

The meadow has an average aspect of 93 degrees and slope of 17 percent. Conifers average 50 per acre (100 percent *P. jeffreyi*, with traces of *C. decurrens*, *C. lawsoniana*, and *P. menizesii* near the edges. Conifer snags average 13 per acre (75 percent *P. jeffreyi* with 25 percent other species). Downed conifer boles average 334 feet per acre. Brush cover averages 7.1 percent per acre (71.5 percent *C. chrysolepis*, 19.6 percent *R. californica*, 4.2 percent *A. viscida*, 3.7 percent *C. pumilus* and small percentage of others).

Timber Resources. Timber resource values within the proposed RNA are low; existing stand volumes average approximately 6 thousand board feet (MBF) per acre. Site quality and management potential are poor, mainly due to low fertility of the serpentine and peridotite soils. Because of the rocky nature of the soils, stands with the larger volumes of harvestable timber are unplantable.

The Proposed RNA contains 441 acres; only 145 acres (mostly low site) is classified as tentatively suitable for timber harvest. For tentatively suitable land within the area, the Douglas-fir site index is approximately 75 and pine species is 50. Tentatively suitable for timber land within the RNA is capable of producing approximately 78 MBF per year on a long-term sustained yield (LTSY) basis (Table F-3).

Mineral Resources. Mining activity has occurred in the past outside the proposed RNA. A chromite mine, located about one-half mile to the northwest, was in operation more than 25-30 years ago. At that time the mine was operated under a government subsidy. One open shaft and the road to the mine are all that remain.

There are numerous placer claims (gold-located 1980) and one lode claim (chrome-Del Norte Chrome-located 1980) existing within the area (Ramp and Peterson 1979). One of the placer claims is located on Cedar Log Creek. None of the claims appear to have had any activity within the last one or two years.

A professional mineral examination of the area has not been conducted. This will be necessary if a decision is made to seek mineral withdrawal.

The old mining road through the proposed RNA is still navigable by four-wheel drive vehicles; Slate Creek must first be forded. This path allows vehicle access to the meadow area; it may be necessary to control access in the future to prevent damage to the meadow.

Research Project of Interest (within the proposed RNA). A bird banding project was conducted by Dennis Vroman during the 1985-1986 field seasons. Although smaller songbirds made up the bulk of species banded, records were kept of all bird species observed. This project provided the following information: species occurrence, abundance, and seasonal trends. The study also provided basic information for long-term population trends.

The following data (Tables F-RNA-4(a) and F-RNA-4(b) was compiled by Dennis Vroman During 1984-1985 (some data from Tom Atzet):

Table F-RNA-4(a). List of Plant Species in the Proposed Cedar Log Flat Research Natural Area

Scientific Name	Documented Flowering Dates
Herbaceous Species:	
Achillea millefolium	6-2-80 (Atzet), 6-19-85
Adiantum pedatum var. *aleuticum*	
Allium falcifolium	5-20-84
Allium spp.	
Apocynum spp.	
Aquilegia spp. (*formosa* ?)	
Arabis aculeolata 2/	4-7-84, 4-17-84
Arabis koehleri var. *stipitata* 1/ 3/	2-12-84, 3-16-84, 3-20-84
Arabis subpinnatifida	3-20-84
Arabis spp. (4th spp.)	
Arceuthobium campylopodum	
Arnica spp. (*discoidea* ?)	5-20-84
Asarum caudatum	5-20-84
Aspidotis densa	
Aster spp.	8-24-84, 8-13-85
Balsamorhiza deltoidea	5-20-84
Blepharipappus scaber	7-27-84, 6-19-85
Boschniakia strobilaceae (spp.)	
Brickellia greenei	9-23-84
Brodiaea hendersonii	
Calochortus tolmiei	6-2-80 (Atzet), 5-20-84
Calypso bulbosa	4-17-84
Camassia quamash	5-2-84
Campanula prenanthoides	
Carex spp.	

Table F-RNA-4(a). List of Plant Species in the Proposed Cedar Log Flat Research Natural Area (Cont'd)

Scientific Name	Documented Flowering Date
Castilleja applegatei	6-2-80 (Atzet)
Castilleja brevilobata	5-2-84, 5-20-84, 5-29-84
Castilleja elata	7-27-84, 6-19-85
Castilleja pruinosa	5-20-84
Cerastium spp.	4-27-85
Chimaphila umbellata	
Claytonia lanceolata	3-16-84
Collinsia grandiflora	6-2-80 (Atzet)
Collomia tinctoria	5-29-84
Convolvulus spp. (*polymorphus* ?)	6-19-85
Cypripedium californicum 1/ 3/	5-20-84
Darlingtonia californica 2/	4-27-85 (few)
Delphinium spp. (*sonnei* or *decorum*?)	
Dentaria tenella	3-15-85
Dicentra formosa ssp. *oregana* 2/	4-17-84
Disporum hookeri	5-20-84
Dodecatheon hendersonii	3-16-84, 4-7-84
Elymus glaucus	6-2-80 (Atzet)
Epilobium minutum	5-29-84
Epilobium oreganum 1/	8-24-84
Epilobium paniculatum	8-24-84
Erigeron bloomeri var. (*nudatus*?)	5-22-85
Eriogonum nudum	
Eriogonum pendulum 1/	7-27-84
Eriophyllum lanatum var. *lanceolatum*	5-20-84
Erysimum capitatum	5-20-84
Erythronium citrinum (Slate Creek)	
Erythronium hendersonii	3-16-84, 4-7-84
Festuca rubra	6-2-80 (Atzet)
Fritillaria glauca 1/	3-20-84, 4-7-84
Fritillaria lanceolata	3-16-84, 4-17-84
Galium ambigum	4-17-84
Gilia capitata	5-30-85
Goodyera oblongifolia	
Habenaria sparsiflora	5-20-84
Haplopappus racemosus spp. *congestus*	7-27-84, 8-24-84, 9-23-84
Hastingsia (*Schoenolirion*) *album*	6-2-80 (Atzet), 5-20-84
Helenium bigelovii	7-27-84, 6-19-85
Hieracium spp. (*bolanderi* ?) 1/	
Hieracium spp. (*greenei* ?)	
Hieracium gracile	6-19-85
Horkelia sericata	6-2-80 (Atzet),7-27-84,8-24-84
Iris chrysophylla	5-2-84, 5-20-84
Lathyrus nevadensis	5-2-84, 5-20-84
Ligusticum spp. (*apiifolium* ?)	
Lillium spp. (Second)	
Lillium vollmeri 2/	6-19-85

Table F-RNA-4(a). List of Plant Species in the Proposed Cedar Log Flat Research Natural Area (Cont'd)

Scientific Name	Documented Flowering Date
Linnaea borealis	
Lithophragma heterophylla	
Lithospermum spp. (*californicum* ?)	
Lomatium howellii	
Lomatium macrocarpum	
Lomatium triternatum	5-20-84
Lotus oblongifolius	5-29-84, 6-19-85
Madia madiodes	6-2-80 (Atzet)
Melica geyeri	6-2-80 (Atzet)
Microseris howellii 1/	5-20-84
Mimulus guttatus	5-2-84, 5-20-84
Monardella odoratissima	7-27-84
Montia (*parvifolia* ?)	
Narthecium californicum	7-27-84, 6-19-85
Orobanche uniflora	
Orthocarpus bracteosus	9-23-84, 6-19-85
Orthocarpus hispidus	6-2-80 (Atzet),5-20-84,5-29-84
Osmorhiza occidentalis	
Parnassia palustris	8-24-84, 9-23-84
Penstemon spp.	6-9-84
Perideridia oregana	7-27-84, 8-24-84
Phacelia corymbosa 2/	5-20-84
Plagiobothrys spp.	4-27-85
Pityrogramma triangularis	
Polygonum californicum	9-23-84
Polypodium hesperium	
Polystichum munitum	
Poa sandbergii	6-2-80 (Atzet)
Pteridium aquilinum	
Pyrola spp.	
Ranunculus occidentalis	4-7-84
Rudbeckia californica	7-27-84
Rumex occidentalis	6-2-80 (Atzet)
Sanguisorba officinalis (*microcephala* ?)	
Saxifraga spp. (*integrifolia* ?)	3-20-84, 4-7-84
Sedum laxum (spp. *heckneri* ?) 1/ 3/	
Senecio canus	
Senecio hesperius 1/	5-20-84, 5-29-84
Senecio integerrimus	6-2-80 (Atzet)
Silene campanulata	5-29-84
Silene hookeri	5-29-84, 6-2-80 (Atzet)
Sisyrinchium idahoense	5-29-84, 6-19-85
Smilacina racemosa	5-20-84
Smilacina stellata	5-20-84
Stipa lemmonii	6-2-80 (Atzet)
Synthyris reniformis	2-25-84, 3-16-84, 4-7-84
Thlaspi montanum var. *siskiyouensis* 1/	3-20-84, 4-27-85

Table F-RNA-4(a). List of Plant Species in the Proposed Cedar Log Flat Research Natural Area (Cont'd)

Scientific Name	Documented Flowering Date
Tofieldia glutinosa	7-27-84
Trientalis latifolia	
Trifolium eriocephalum	6-2-80 (Atzet), 5-20-84
Trillium rivale	3-16&20-84, 4-7-84, 4-17-84
Viola adunca	5-2-84, 5-20-84
Viola cuneata	5-2-84, 5-20-84
Whipplea modesta	5-2-84
Wyethia spp.	6-19-85
Xerophyllum tenax	
Zigadenus venenosus	5-2-84
Shrub Species:	
Amelanchier spp.	
Arctostaphylos patula (near Slate Creek)	
Arctostaphylos viscida	
Berberis nervosa	
Berberis pumilus	
Ceanothus cuneatus	
Ceanothus integerrimus (Slate Creek)	
Ceanothus pumilus	
Cercocarpus spp. (*betuloides* ?)	
Chrysothamnus parryi	
Clematis spp. (*ligusticifolia* ?) (Slate Creek)	
Cornus nuttallii (Slate Creek)	
Cornus occidentalis (Slate Creek)	
Corylus cornuta var. *californica* (Slate Creek)	
Eriodictyon californicum	
Garrya buxifolia	
Gaultheria shallon	
Gaultheria ovatifolia	
Holodiscus discolor	
Ledum spp. (*columbianum* ?)	
Lonicera spp.	
Physocarpus spp. (*malvaceus* ?) (Slate Creek)	
Quercus breweri	
Quercus vaccinifolia	
Rhamnus californica	
Rhododendron occidentale	
Rhus diversiloba	
Ribes spp.	
Rosa gymnocarpa	
Rosa spp. (2nd spp?)	
Rubus parviflorus	
Rubus spp. (2nd spp.)	
Vaccinium parvifolium	

Table F-RNA-4(a). List of Plant Species in the Proposed Cedar Log Flat Research Natural Area (Cont'd)

Scientific Name
Tree Species:
Acer macrophyllum
Alnus rubra
Arbutus menzeisii
Calocedrus decurrens
Chamaecyparis lawsoniana
Lithocarpus densiflorus
Pinus attenuata
Pinus jeffreyi
Pinus lambertiana
Pinus ponderosa (small number)
Pseudotsuga menziesii
Quercus chrysolepis
Quercus kelloggii
Salix spp.
Taxus brevifolia
Umbelluaria californica

1/ Sensitive Plant Species (USDA Forest Service Designation)
2/ Watch List (USDA Forest Service Designation)
3/ Potential candidate for the Regional Forester's sensitive list.

Table F-RNA-4(b). Wildlife Species Identified or Known to be Present in the Proposed Cedar Log Flat Research Natural Area

Scientific Name	Common Name
Birds:	
Bonasa umbellus	ruffed grouse
Buteo jamaicensis	red-tailed hawk
Callipepla californica	California quail
Caolaptes auratus	northern flicker, red-shafted
Carduelis psaltria	lesser goldfinch
Carpodacus purpureus	purple finch
Cathartes aura	turkey vulture
Catharus guttatus	hermit thrush
Catherpes mexicanus	canyon wren
Certhis americana	brown creeper
Ceryle alcyon	belted kingfisher
Chamaea fasciata	wrentit
Columba fasciata	band-tailed pigeon
Contopus borealis	olive-sided flycatcher
Contopus sordidulus	western wood-pewee
Corvus corax	common raven
Cyanocitta stelleri	Steller's jay
Dendroica coronata	Yellow-rumped warbler, Audubon's
Dendroica nigrescens	black-throated gray warbler
Dryocopus pileatus	pileated woodpecker
Empidonax difficilis	western flycatcher
Falco columbarius	merlin
Glaucidium gnoma	pygmy owl
Ixoreus naevius	varied thrush
Junco hyemalis	dark-eyed junco, Oregon
Melospiza lincolnii	Lincoln's sparrow
Myadestes townsendi	Townsend's solitaire
Oporornis tolmiei	MacGillivray's warbler
Oreortyx pictus	mountain quail
Parus atricapillus	black-capped chickadee
Parus rufescens	chestnut-backed chickadee
Passerella iliaca	fox sparrow
Pheucticus melanocephalus	black-headed grosbeak
Picoides villosus	hairy woodpecker
Pipito erythrophthalmus	rufous-sided towhee
Piranga ludouiciana	western tanager
Psaltriparus minimus	common bushtit
Regulus calendula	ruby-crowned kinglet
Regulus satrapa	golden-crowned kinglet

Table F-RNA-4A(b). Wildlife Species Identified or Known to be Present in the Proposed Cedar Log Flat Research Natural Area (Cont'd)

Scientific Name	Common Name
Selasphorus rufus	rufous hummingbird
Sialia mexicana	western bluebird
Sitta canadensis	red-breasted nuthatch
Sitta carolinensis	white-breasted nuthatch
Sphyrapicus ruber	red-breasted sapsucker
Stellula calliope	calliope hummingbird
Thryomanes bewickii	Bewick's wren
Troglodytes trolodytes	winter wren
Turdus migratorius	American robin
Vermivora celata	orange-crowned warbler
Vermivora ruficapilla	Nashville warbler
Vireo solitarius	solitary vireo
Wilsonia pusilla	Wilson's warbler
Zenaida macroura	mourning dove
Zonotrichia atricapilla	golden-crowned sparrow
Mammals:	
Bassariscus astutus 2/	ringtail
Canis latrans 2/	coyote
Citellus beecheyi	California ground squirrel
Eptesicus fuscus 1/	big brown bat
Erethizon dorsatum	porcupine (sign)
Eutamias towsendii	Townsend's chipmunk
Felis concolor	mountain lion (sign)
Lasionycteris noctivagans 1/	silver-haired bat
Lepus californicus	black-tailed jackrabbit (sign)
Lynx rufus	bobcat
Mephitis mephitis 2/	striped skunk
Microtus spp.	vole spp.
Myotis californicus 1/	California myotis
Myotis evotis 1/	long-eared myotis
Neotoma fuscipes (spp?)	dusky-footed woodrat (sign)
Odocoileus hemionus	black-tailed deer
Procyon lotor	raccoon
Sciurus griseus	western gray squirrel
Spilogale putorius 2/	spotted skunk
Sylvilagus idahoensis	brush rabbit
Urocyon cinereoargenteus 2/	gray fox
Ursus americanus	black bear (sign)

Table F-RNA-4(b). Wildlife Species Identified or Known to be Present in the Proposed Cedar Log Flat Research Natural Area (Cont'd)

Scientific Name	Common Name
Reptiles:	
Crotalus viridis	western rattlesnake
Eumeces skiltonianus	western skink
Gerrhonotus multicarinatus	southern alligator lizard
Pituphis malanoleucus catenifer	gopher snake (Pacific ssp.)
Sceloporus occidentalis	western fence lizard
Thamnophis elegans elegans	western terrestrial garter snake
Amphibians:	
Hyla regilla	Pacific tree frog
Rana boylei	foothill yellow-legged frog
Butterflies:	
Adelpha berdowii	California sister
Anthocharis sara flora	Sara orange tip
Celastrina argiolus echo	echo blue
Cercyonis pegala	large wood nymph
Chlosyme (Charidryas) palla spp.	northern checkerspot
Coenonympha spp.	ringlet spp.
Neophasia menapia	pine butterfly
Nymphalis californica	California tortoiseshell
Ochlodes sylvanoides	woodland skipper
Papilio spp.	black swallowtail spp.
Phyciodes spp.	crescentspot spp.
Pterourus spp.	yellow swallowtail spp.
Speyeria spp.	fritillary spp.

1/ Bat species likely present in proposed RNA. This assumption based on data collected from a survey site approximately 3.75 air miles south of the center of the RNA. Site is described in: *A Survey of Bat Populations and their Habitat Preferences in Southern Oregon.* 1977. Southern Oregon State College. Student Originated Study Project (S. Cross, Faculty Advisor).

2/ Mammals trapped, or their sign seen (1983-1984 trapping season) within proposed RNA. Data compiled from conversation with trapper, Gary Sublette, on November 20, 1985.

United States
Department of
Agriculture

Forest Service

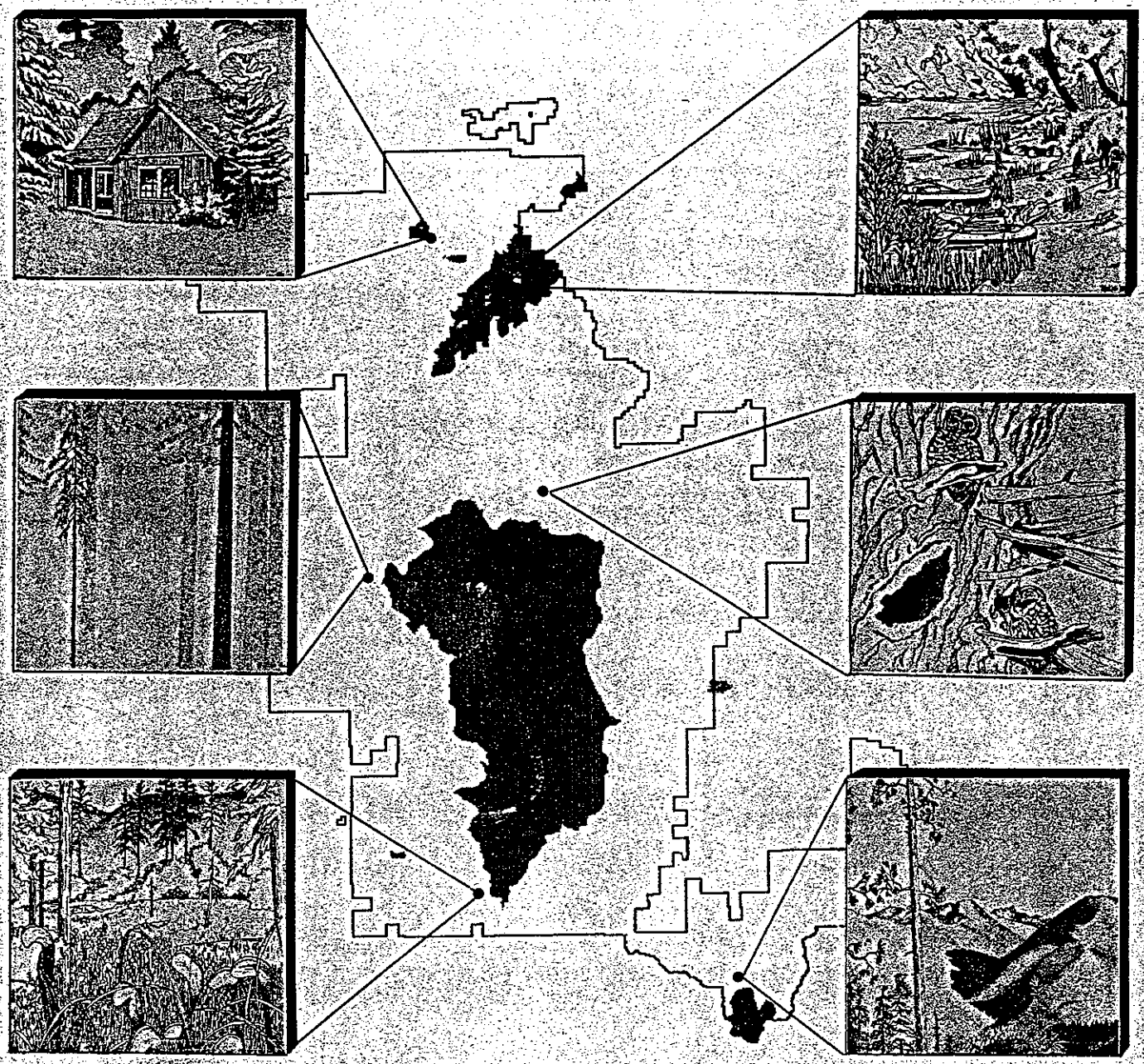
**Pacific
Northwest
Region**

1989

Record of Decision

Land and Resource Management Plan

Siskiyou National Forest



Two additional sections have been inventoried as Wild but were not included in the Oregon Omnibus Act of 1988: (1) the two-mile section of the North Fork Smith River from Baldface Creek to the California Border and (2) the two-mile section of the Chetco River from Boulder Creek to Mislatnah Creek. I intend to carry these two sections of rivers as Wild until a determination is made in future River Management Plans.

Management Area acreage in Wild River is 5,029 acres (27,128 total, but many acres are overlapped by Wilderness). Those rivers with Wild River segments are listed below:

Chetco
Elk
Illinois
Rogue
North Fork Smith

MANAGEMENT AREA 3 - RESEARCH NATURAL AREA

The objective of this allocation is to provide opportunities for research, observation, and study of ecosystems influenced only by natural processes.

There are three existing Research Natural Areas on the Forest. My decision is to recommend the addition of four new areas. Their establishment is subject to approval by the Chief of the Forest Service. Recommended for inclusion as Research Natural Areas are 2,651 acres (See FEIS, Appendix F). In the interim, these four additional areas will be managed as Research Natural Areas. The total Management Area will be 4,608 acres. The areas are listed below:

Cedar Log Flat
Craggy Peak
Lemmingsworth Gulch
Wheeler Creek (Existing)
Coquille River Falls (Existing)
Hoover Gulch
Port Orford Cedar (Existing)

MANAGEMENT AREA 4 - BOTANICAL

The objective of this allocation is to provide exhibits of plants, plant groups, and communities with exceptional botanical and ecological value.

There are three existing Botanical areas on the Forest. I am allocating an additional 19 Botanical areas comprising 15,157 inventoried acres (See FEIS, Appendix F). This will bring the acres of Botanical Areas to 19,632 with 16,275 acres in the Management Area (other acres are overlapped by higher order Management Areas). The Botanical areas are listed below:

Babyfoot (Existing)
Bear Camp
Big Craggies (Existing)
Big Tree
Bigelow Lakes
Bolan Lake
Chrome Ridge
Days Gulch
Eight Dollar Mountain
Grayback Mountain
Iron Mountain
Lobster Grove
Redwood Groves
Oregon Mountain
Page Mountain
Red Flat
Rough and Ready Flat
Snaketooth Redwood
Snow Camp
Sourgame
Vulcan
York Creek (Existing)

5. How Should Sensitive Plant Resources be Managed?

The Siskiyou National Forest is one of the most floristically diverse areas in the Nation. The wide range of geology and climate, coupled with the unique pattern of development throughout time, have resulted in large numbers of species inhabiting a relatively small area, many of which are endemic to the Forest and surrounding area. Habitat for many of these species is protected in allocations such as Wilderness. Numerous habitat areas are distributed across many other parts of Forest. The Interdisciplinary Team has carefully evaluated each area in light of the timber, mineral, and plant resources, as well as consideration of public comments. A number of areas with unique plant habitat or outstanding examples of plant communities exist where their intrinsic values exceed that which could be derived by developing these areas for commodity goods. The Selected Alternative allocates these special places as Botanical Areas. Nineteen new Botanical Areas are allocated which add 15,157 acres to the inventory of 4,475 acres in the three existing Botanical Areas.

The Selected Alternative also recommends that four new Research Natural Areas (RNA's) totalling 2,651 acres be added to the three existing RNA's. These areas are needed to fill cells in a National network oriented to research and educational purposes. It is important to preserve physical and biological units where natural processes are maintained to provide a base for comparison with lands under different types of management. The benefits for education and research, and the preservation of gene pools for typical as well as rare plants and animals, has greater value than that which might be derived from development of these areas.

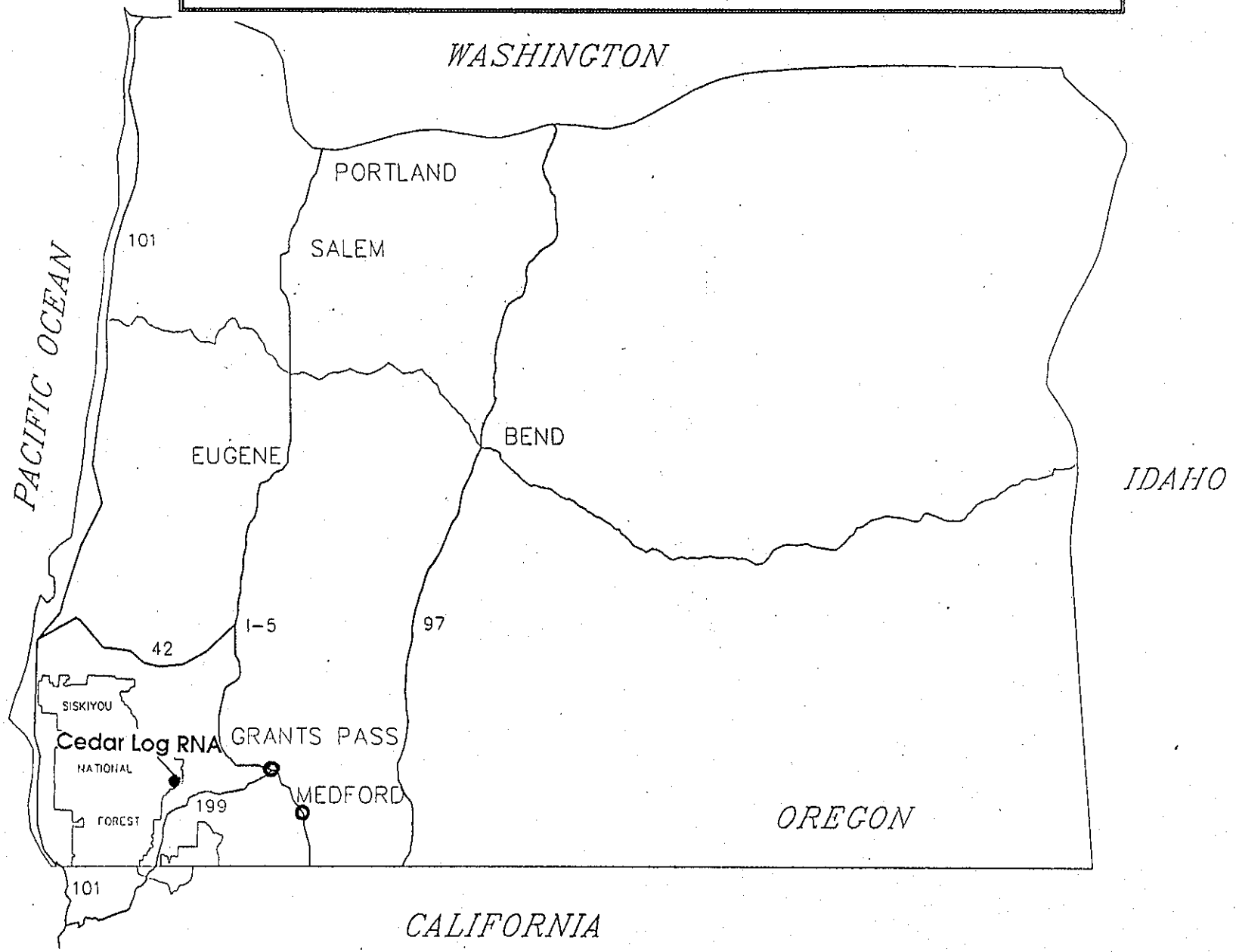
The distribution of RNA's and Botanical Areas across the Forest also significantly contributes to maintenance of biological diversity. Coupled with the Standards and Guidelines designed to protect the unique plant communities and habitats, these allocations serve to perpetuate the species and types across the range of natural variability, particularly those near the ends of the range which may be most sensitive to change. This is particularly important in its contribution to the resiliency of the forest, or the capacity of the forest to withstand and adapt to changing conditions.

There are many areas of sensitive plant habitat not included on the special allocations that preclude development activities. The sensitive plant resources in these areas will be managed under the Standards and Guidelines which require that an evaluation be done for any project where sensitive species are found, and that habitat be managed to maintain viable populations throughout their existing range. In most cases, projects can be designed or successfully mitigated to be compatible with perpetuating sensitive species and their habitat.

In my view, the Selected Alternative contains the best balance of allocations to preserve special habitats and emphasize protection of sensitive plants and their habitat throughout the Forest during project planning. The best examples and most unique habitats are allocated to Botanical Areas and RNA's. In other areas where plant resource values are lower and the opportunity costs in terms of timber would be higher, the sensitive plant resources will fully considered and managed according to the Standards and Guidelines in project planning, implementation, and monitoring.

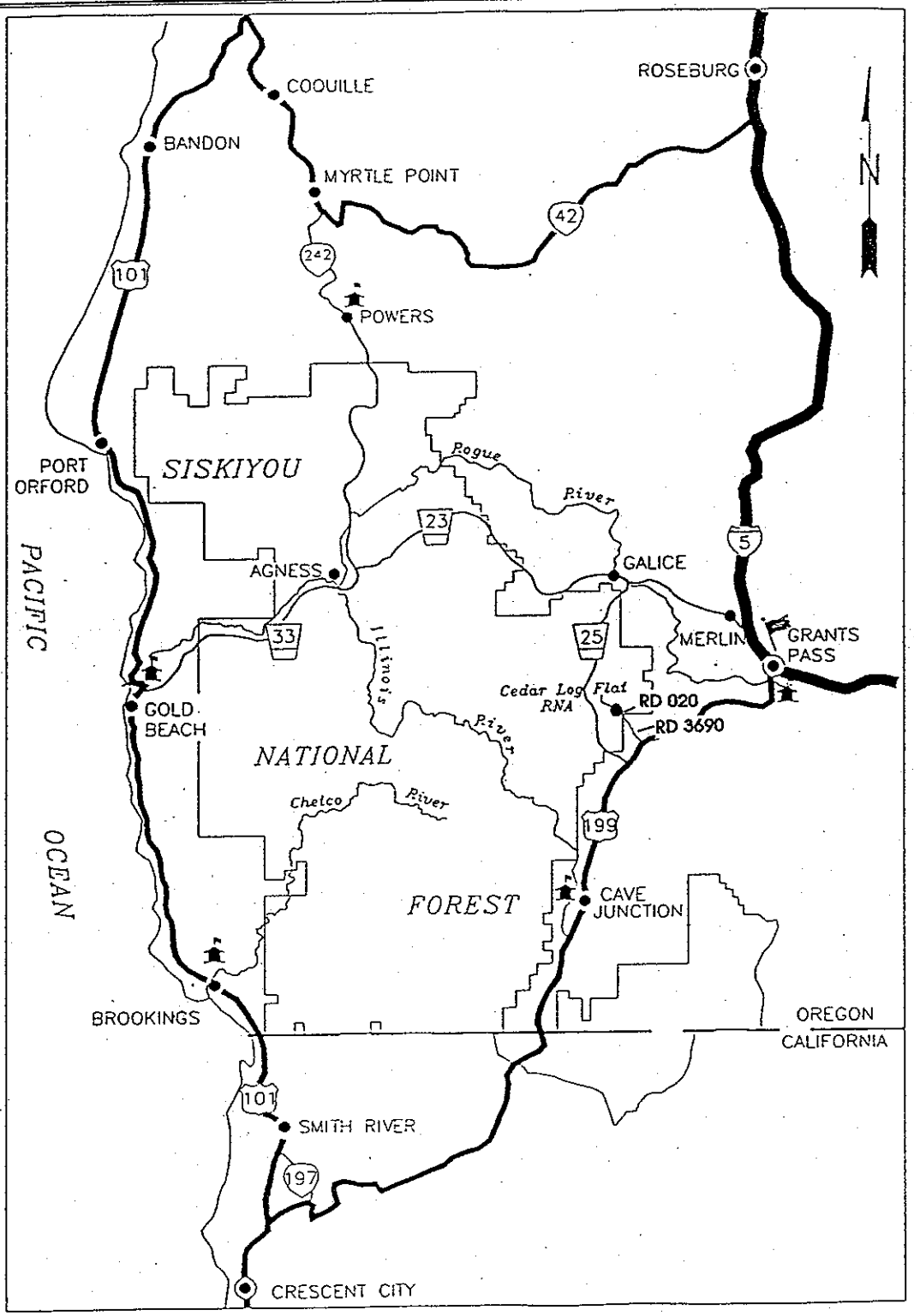
MAP 1

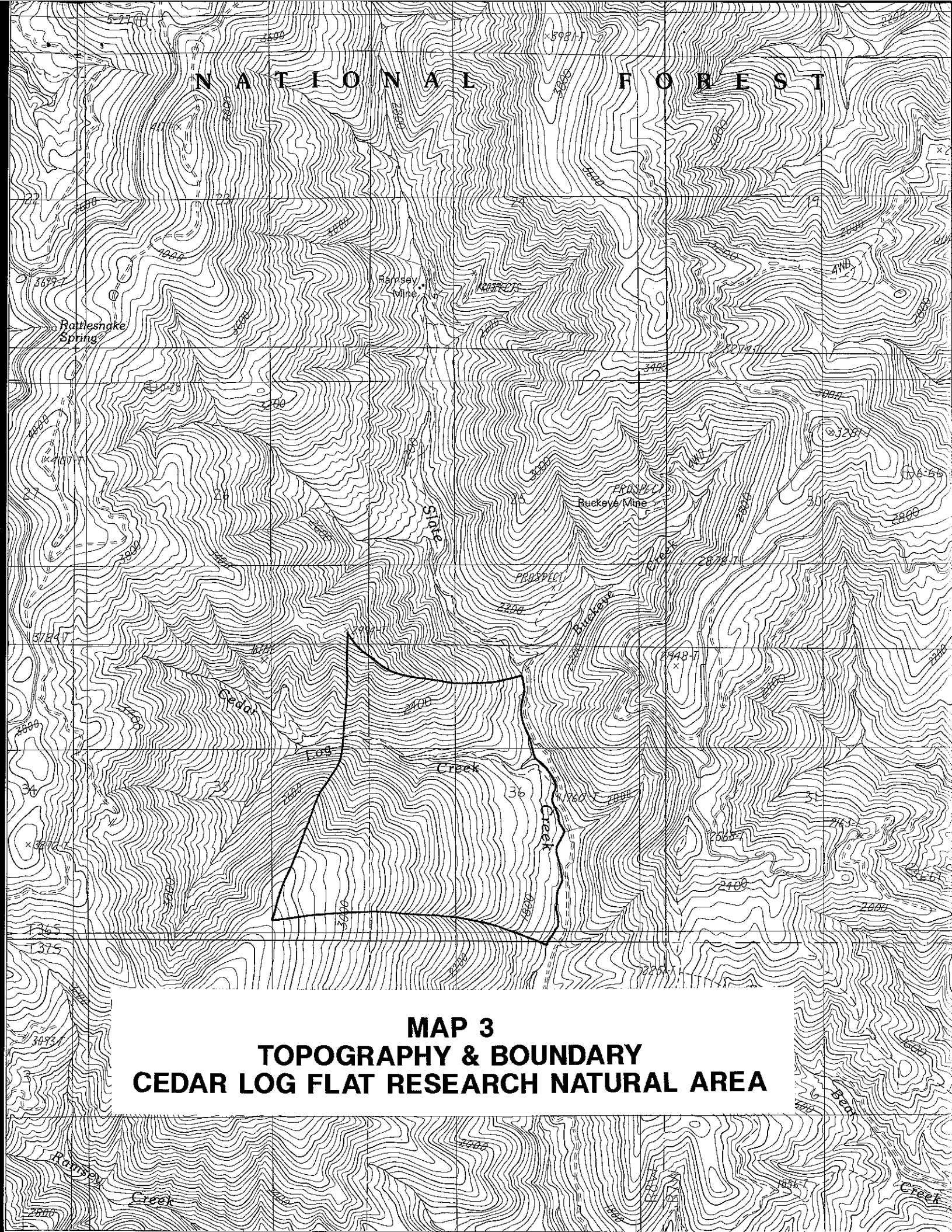
General location in Oregon of Siskiyou National Forest and Cedar Log Flat Research Natural Area



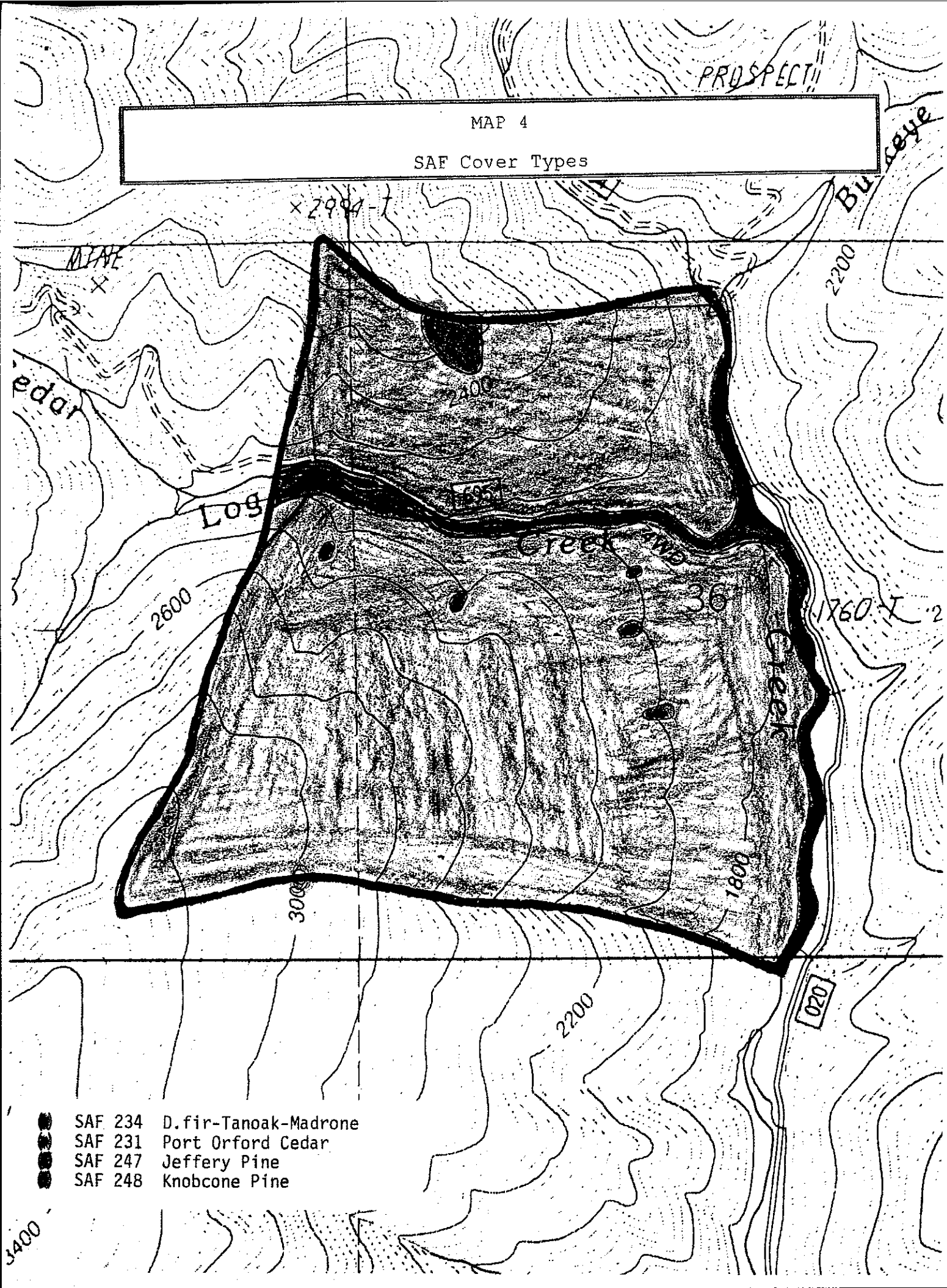
MAP 2

Location of Cedar Log Flat
Research Natural Area within
the Siskiyou National Forest



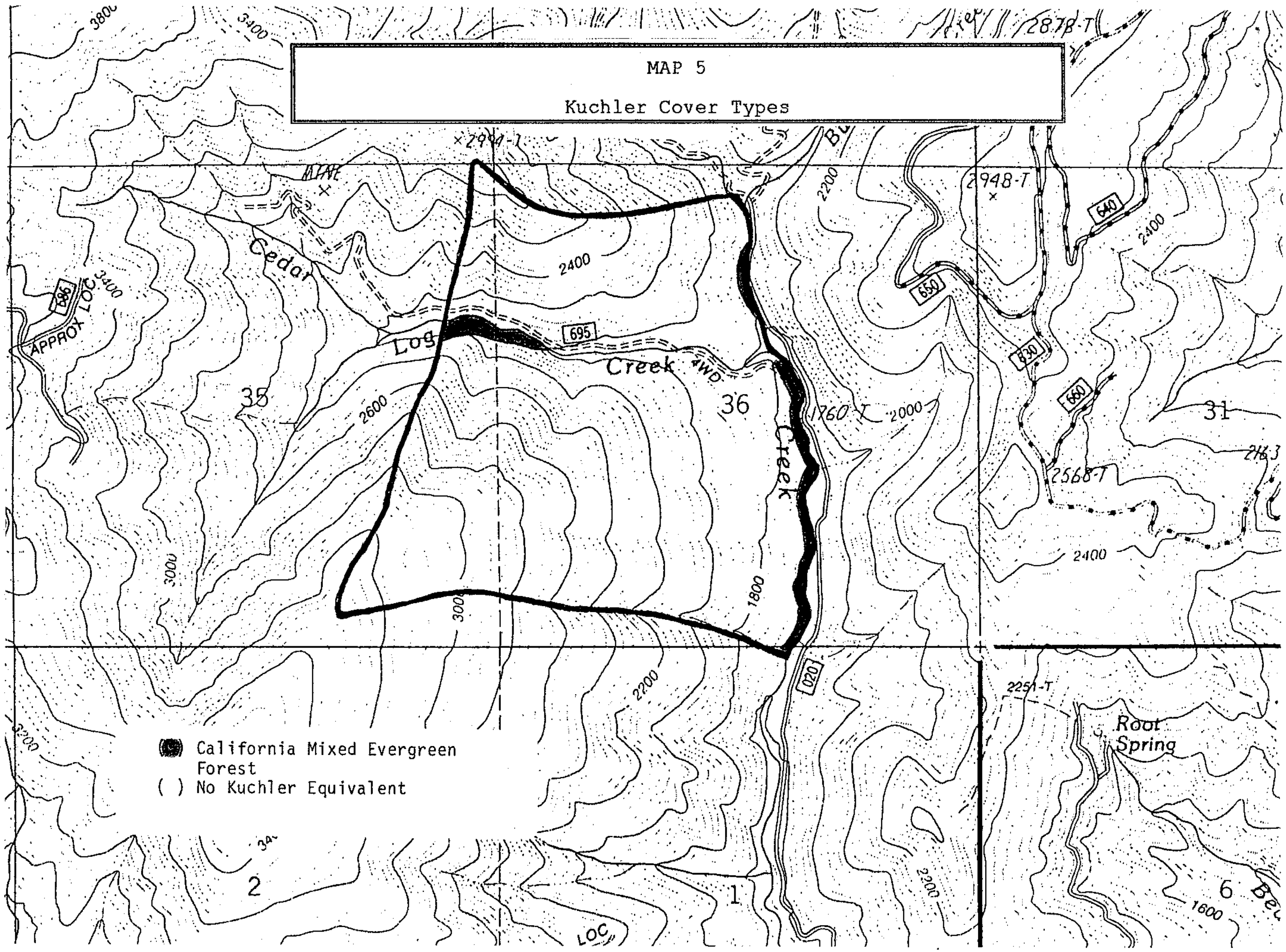


MAP 3
TOPOGRAPHY & BOUNDARY
CEDAR LOG FLAT RESEARCH NATURAL AREA


MAP 4
SAF Cover Types
PROSPECT
Log
Creek
SAF 234 D.fir-Tanoak-Madrone
SAF 231 Port Orford Cedar
SAF 247 Jeffery Pine
SAF 248 Knobcone Pine

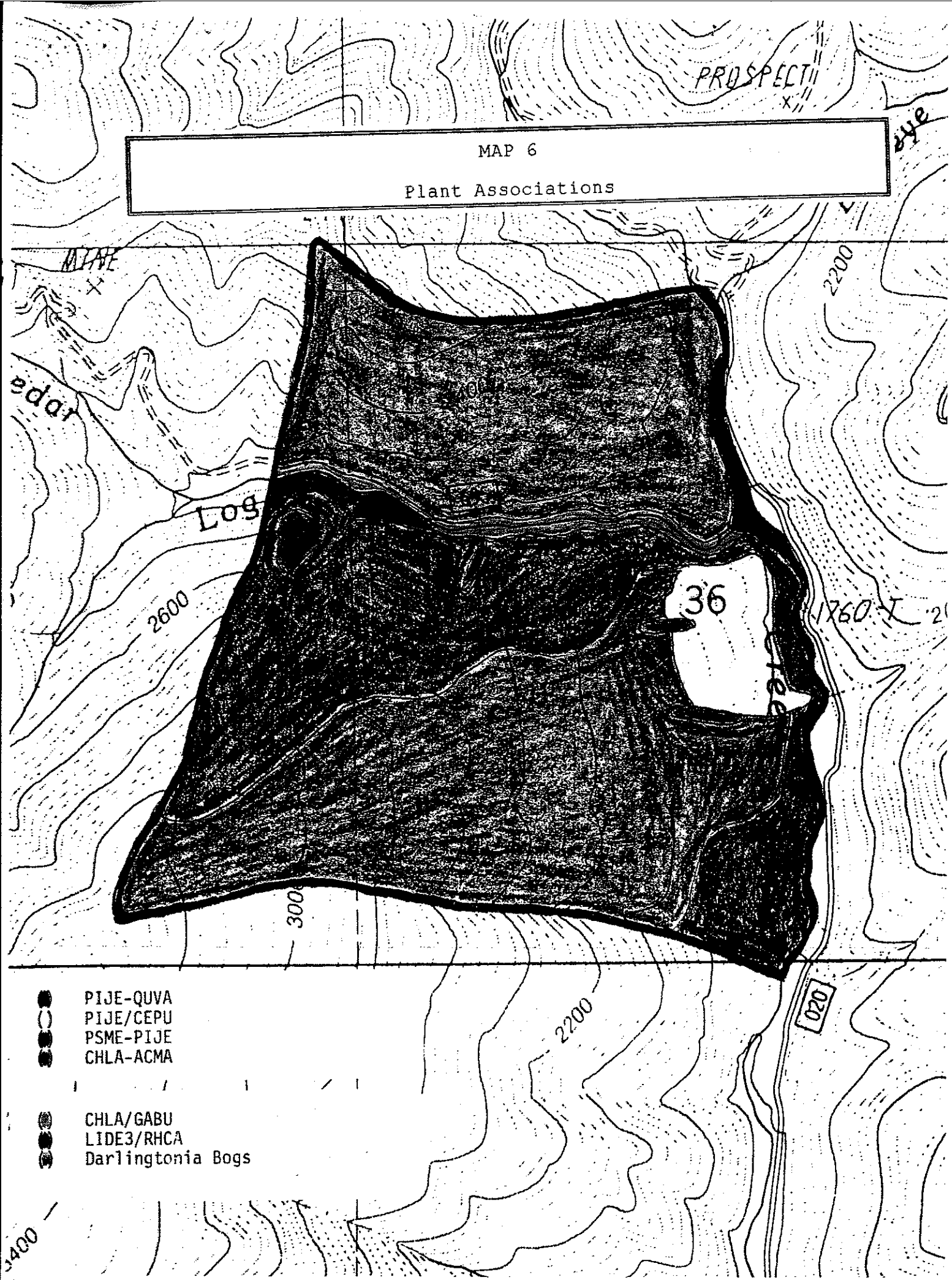
MAP 5

Kuchler Cover Types

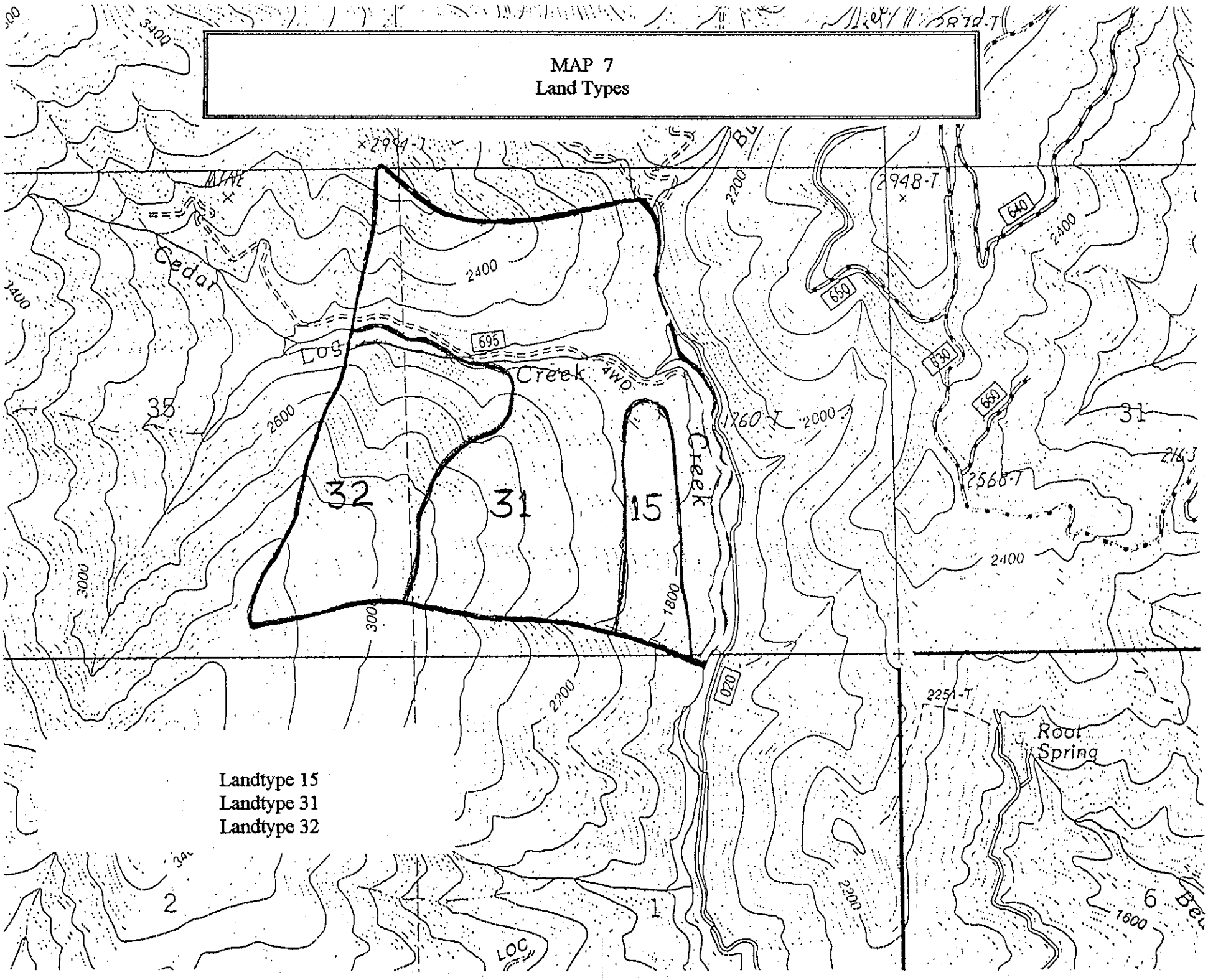


MAP 6

Plant Associations



MAP 7
Land Types



Landtype 15
Landtype 31
Landtype 32