UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE



Establishment Record for

Haystack Rock Research Natural Area

Wallowa-Whitman National Forest

Wallowa County, Oregon

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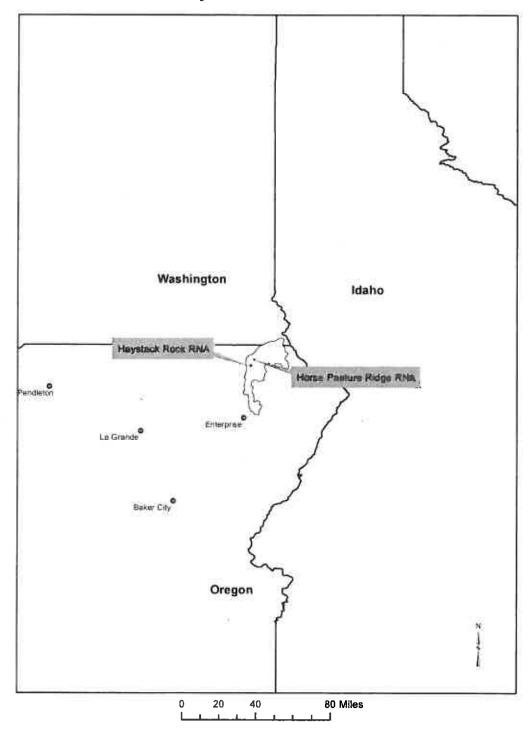
Minerals	27
At present, there are no active mining claims in the Lower Joseph River Watershed geology (basalt lava flows) limits the mineral potential within the RNA	
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SECTION 1-IDENTIFICATION

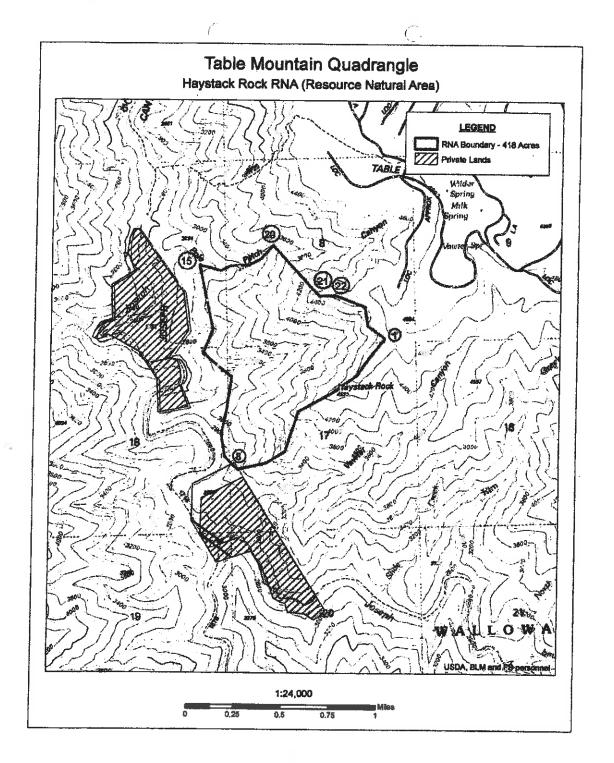
Establishment Record for
Haystack Rock Research Natural Area
Wallowa-Whitman National Forest
Wallowa County, Oregon

Location

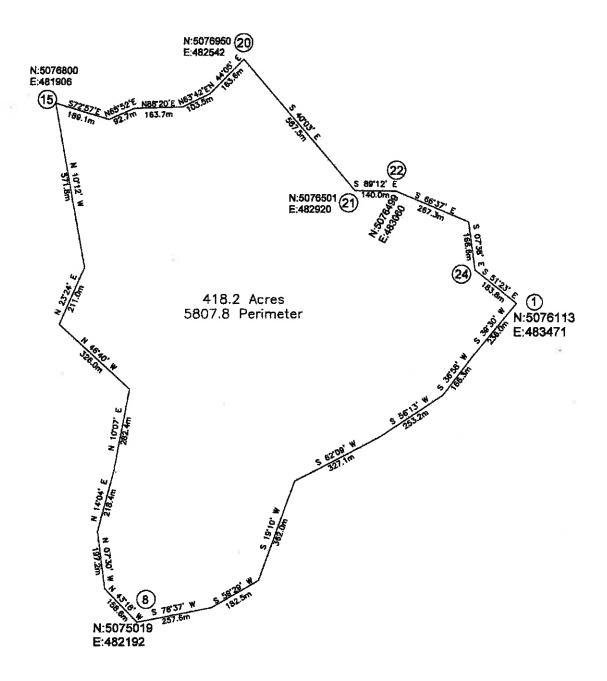
Lower Joseph Research Natural Areas



Boundary Map for Haystack Rock RNA



Boundary Map 2



HAYSTACK ROCK RESEARCH NATURAL AREA BOUNDARY DESCRIPTION

All bearings, distances, and coordinates shown in the following description are based on the Universal Transverse Mercator (UTM) Projection, Zone 11, NAD 1983.

Quad Name	Angle Point	Bearing	Distance Meters	Description
Table Mounta	in			
8	1		**************************************	Being located in T5N, R45 E, sections 7, 8, 17, 18 Willamette Meridian Wallowa County, Oregon Beginning at point on a ridge with approximate coordinates of: N 5076113m, E 483471m
74762F9962644Cqvp64765P8	2	2 39-30, M	236.0	Descending along ridge top
	3	S 36°58' W	166.3	
	4	5 56°13' W	253.2	
	5	S 62°09' W	327.1	
	6	S 19*10' W	362.0	
	7	S 59°29' W	182.5	
		5 78"37" W	257.6	
	8	**************************************	<u> </u>	Approximate ridge top with coordinates of: N 5075019m, E 482192m Leave ridge top and
				descend.
		N 43°18' W	158.6	Pot at an advantage of the state of the stat
	9			Point is at the top of a small spur ridge bears N 53° W and S 66° E, descend 59 meters to small draw bears N 70° W and S 53° E, ascend 88 meters top small ridge, descend 41 meters small draw, ascend
<u> </u>	10	N 7°30' W	197.2	Dalas is suppositioned at the same of the
	70			Point is approximately 8 meters out of small draw, ascend

Quad Name	Angle Point	Bearing	Distance Meters	Description
	11	N 14°04' E	218.4	Point is at the top of a spur ridge bears N 86° E and West
***************************************	***************************************	N 10°07' E	282.4	Descend 84± meters, ascend 41± meters, Descend 87± meters small draw bears S 82° E and S 74° W, ascend
	12	freit ref. n. g. presid a pr. 17 d down n. is i pou gegory	***************************************	Point is at the top of small spur ridge bears N 84° E and S 78° W, descend
	68 auguing a núa a 5 a 19	N 45°40′ W	326.0	Descend 57± meters to a small draw bears N 70° E and S 53° W, ascend 115± meters, Descend
POPTACO II I ANTI PRE IL PRE LAMBO	13	N 23°24' E	211.0	Point is at the top spur ridge bears N 80° E and N 80° W, Descend
A	14	N 10°12' W	571.8	Point is in the bottom of a small draw bears N 58° E and 5 56° W, Ascend 224 ± meters, descend
***************************************	15	***************************************		Point is in the bottom of Pole Patch Canyon with approximate coordinates of: N 5076800m and E 481906m
	*****************	S 72°57' E	189.1	Ascending along the centerline of Pole Patch Canyon
	16	N 65*52' E	92.7	
	17	N 88°20' E	163.7	
	18	N 63°42' E	103.5	
	13	N 44°05' E	163.6	

Quad Name	Angle Point	Bearing	Distance Meters	Description
	20			Leaving the centerline of Pole Patch Canyon with approximate coordinates of: N 5076950m, E 482542m
**************************************		S 40°03' E	587.5	Ascending a steep Ridge along the timber line
	21	12797711197474b4b4	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	To the top of a rocky spur ridge. Approximate Coordinates of N 5076501m, E 482920m
	22	S 89°12' E	140.0	Ascending Ridge to a point that intersects with 4600 foot contour, with approximate Coordinates of: N 5076499m, E483060m
(481-61-494	23	S 66°37' E	267.3	Along contour 4600 foot easterly
		\$ 7°38' E	166.6	
7m0 >	24	\$ 51°23' E	183.8	Leaving the 4600 foot contour
	1	#B >>+ & + + + + + + + + + + + + + + + + +	88 6 8 April 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	To the Point of Beginning

Total Length of traverse: 5808 meters

Total Area: 312 more or less acres

Definition of Intent

The boundary description of the Haystack Rock Research Natural Area is as shown on the maps and descriptive text enclosed in this document.

Where the boundary is described as following a topographical feature, the actual location of the feature will control the described courses identifying that part of the said boundary. Unless specified in the description, calls to a stream will be to the thread, calls to a ridge shall be to the crest, calls to roads and trails will be to the centerline. Sections subdivision lines and original General Land Office corners will be established under the rules of the United States Public Land Survey System.

The boundary determined in the planning process was plotted on U.S.G.S 7 *Yi* minute quadrangles which were used as the base maps for creating manuscripts. Quadrangle Table Mountain was used.

Manuscripts at 1:24,000 were digitized using an Altek AC40 digitizer and Arc/Info software. UTM Zone 11 projection was used with NAO 1927, and since, converted into NAO 83 Oregon Washington Albers projection (Region 6 Forest Service standard).

Nodes were placed at each reference point. Extraneous vertices (over 250 feet) were removed manually using National Agriculture Imagery Program (NAIP) digital orthophotography (1-meter 4-band flown in 2012) and 20 foot contour elevation map of the state of Oregon and Washington derived from the National Elevation Dataset (NED) for reference. Reference point coordinates were generated using ArcGIS 10.3.1 software, "Feature vertices to point" tool. Bearings and distances between vertices were created when reference point coordinates were exported into AutoCad. Bearings, distances, and coordinates in the enclosed descriptions are based on NAO 83 Oregon Washington Albers.

Certification

Boundary Description of the Haystack Rock Research natural Area

I hereby certify that the enclosed boundary description accurately depicts, to the best of my knowledge and ability, the parcel of land intended for use as the Haystack Rock Research natural Area and that it was prepared under my direct supervision.

Mark A. Lichtenthaler

Land Surveyor

Northeast Oregon Land Zone

3/30/2016 Date

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON JAN 18, 1994 JARK A. LICHTENTHALI

FIR 13.21-2 A//.

SECTION 2-ADMINISTRATIVE

SIGNATURE PAGE

For RESEARCH NATURAL AREA ESTABLISHMENT RECORD Haystack Rock Research Natural Area Wallowa-Whitman National Forest Wallowa 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.

TEXT

Introduction

Haystack Rock RNA is a grassland and forest ecosystem located in Wallowa County and administered by the Wallowa Valley Ranger District of the Wallowa-Whitman National Forest. Haystack Rock RNA contains high quality examples of bunchgrass communities found within the Blue Mountains ecoregion. The 425 acre (172 hectares) RNA is dominated by Idaho fescue (Festuca idahoensis)-bluebunch wheatgrass (Agropyron spicatum)-arrowleaf balsamroot (Balsamorhiza sagittata) and bluebunch wheatgrass-Sandberg's bluegrass (Poa sandbergii)-narrow-leaved skullcap (Scutellaria angustifolia) plant associations. The RNA is lightly forested on steep north aspects by Douglas-fir (Pseudotsuga menziesii)-mallow ninebark (Physocarpus malvaceus) communities.

Justification Section

Justification Statement

Haystack Rock fulfills a natural areas representation need for Idaho fescue-bluebunch wheatgrass-arrowleaf balsamroot and bluebunch wheatgrass-Sandberg's bluegrass-narrow-leaved skullcap plant associations in the Blue Mountains (Oregon Natural Heritage Advisory Council, 2010). In addition, this RNA contains other intact native bunchgrass communities, including Idaho fescue-prairie junegrass (*Koeleria cristata*) and Idaho fescue-bluebunch wheatgrass plant associations.

Principal Distinguishing Features

Haystack Rock RNA is dominated by three shrub steppe communities: bluebunch wheatgrass/ldaho fescue/arrowleaf balsamroot; bluebunch wheatgrass/Sandberg's bluegrass/narrow-leaved skullcap; and Talus garland types. Weedy species known to occur at the site include cheatgrass brome (*Bromus tectorum*), rattlesnake brome (*B. brizaformis*), soft chess brome (*B. mollis*) and at least one small patch of ventenata grass (*Ventenata dubia*) mixed in with the weedy *Bromus* sites. Engelmann's daisy (*Erigeron engelmanni var. davisii*), a Region 6 sensitive plant, was found during field reconnaissance in 2014, pending verification.

Objectives

Research Natural Areas are tracts of wildlands designated for research, education, and to maintain biological diversity on National Forest System lands. (Forest Service Manual [FSM] 4063; Wilson et al. 2009). Objectives for establishing RNAs include (1) maintaining representative areas of high quality ecosystem; (2) preserving and maintaining genetic diversity, including threatened, endangered, and sensitive species; (3) protecting areas against human-caused environmental disruptions; (4) serving as reference areas for study of ecological processes; (5) providing onsite and extension educational activities; (6) serving as baseline areas for measuring long-term ecological change; (7) serving as control areas for comparing

results from manipulative research; and (8) monitoring effects of resource management techniques and practices (FSM 4063.02)

Land Management Planning

Haystack Rock RNA was proposed as a candidate RNA by the Wallowa-Whitman National Forest to include notable vegetation communities occurring in the northern Blue Mountains. It was included as a candidate RNA in the Final Environmental Impact Statement for the Wallowa-Whitman National Forest (USDA 1990a) and the Forest Plan (USDA 1990b).

Management Prescription

Standards and guidelines for RNAs, Management Area 12, address vegetation management under several different headings (USDA Forest Service 1990b). The prime consideration in managing Research Natural Areas is maintenance of natural conditions and processes. RNAs are protected against human activities that directly or indirectly modify the integrity of the ecological processes to the extent practicable (FSM 4063.3.1). No scheduled timber harvest will occur in the RNA and firewood cutting will be prohibited.

The decision to manage for insect and disease outbreaks or invasive plants will be made on a case-by-case basis with removal of non-native species being of highest priority. Where management activities are prescribed, they shall be as specific as possible and have minimal impact to other components of the ecosystem.

Use or Control of Fire and Grazing

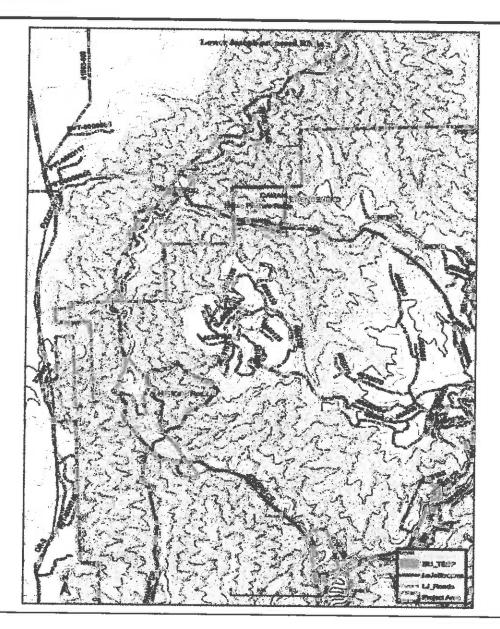
Lightning-ignited fires will be allowed to burn in this RNA. Prescribed fire will be used only in conjunction with approved research projects or when needed to meet RNA management goals for vegetation, wildlife, and natural processes. Fire suppression will use methods and equipment that minimize site disturbance to the special features for which this area is being designated. Livestock grazing has not been used as a technique to maintain ecological processes in this RNA.

APPENDIX 1. ECOLOGICAL EVALUATION

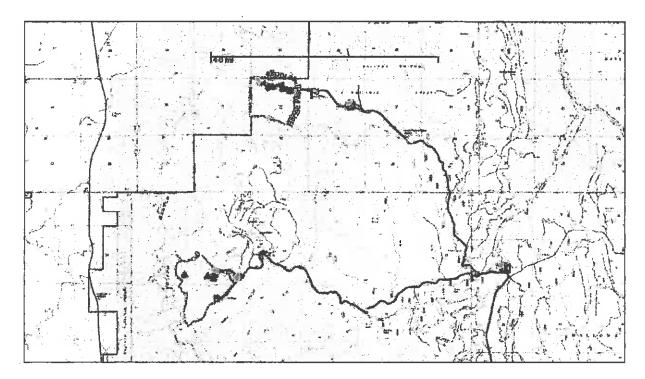
Physical Site Description and Climatic Conditions

Location

Maps 1 and 2 show the location of Haystack Rock RNA. The RNA is located in Wallowa County, Oregon and is administered by the Wallowa Valley Ranger District of the Wallowa-Whitman National Forest.



Location of Haystack Rock



Route to Haystack Rock.

Size

Total area for Haystack Rock RNA is 425 acres.

Elevation Range

Elevations range from 4637 feet (1414 m) to 2763 feet (843 m).

Access

Vehicle access is by way of Oregon State Highway 3 north of Enterprise Oregon approximately 14 miles to Forest Road 46; Turn right on Forest Road 46 and go approximately 26.5 miles to the junction of Forest Road 46 and Forest Road 4650. Turn left (west) on to Forest Road 4650 and drive (approximately 6.2 miles total) to junction of FS road 150 and then on an unnamed spur to ridge viewpoint/parking area.

Climatic Data

Eastern Oregon has a temperate continental climate, characterized by arid summers with occasional evening convection thunderstorms and cold winters with the majority of the annual precipitation falling as snow. The closest weather station is in Enterprise, Oregon and should be a fair approximation for Haystack Rock with differences attributed to Enterprise being under greater influence of the Wallowa Mountains. The station receives 17.6 inches (44.7 cm) annual precipitation with a mean annual temperature of 43.4 F (6.33 C). Summer high temperatures range into the upper 90's F while winter temperatures can drop to the -20's F.

Ecological Description

Ecoregion

Haystack Rock RNA is located in the Northwestern portion of the Blue Mountains ecoregion (ONHAC 2010).

Map and Description of Plant Community Types

The Joseph Creek Range Analysis (USDA Forest Service 2005) notes the Haystack RNA is dominated by shrub-steppe communities such as bluebunch wheatgrass/ldaho fescue/arrowleaf balsamroot; bluebunch wheatgrass/Sandberg's bluegrass/narrow-leaved skullcap; and Talus garland types. Forest vegetation is generally composed of dry Douglas-fir-Ninebark on steep north aspects.

This area has high quality stands of Idaho fescue-bluebunch wheatgrass-arrowleaf balsamroot and bluebunch wheatgrass-Sandberg's bluegrass-narrow-leaved skullcap plant associations. The area is located high above the old Vawter Homestead and hayfields. The upper portion of the southerly exposed slope of Table Mountain and Joseph Creek canyon is surmounted by the prominent outcrop of Haystack Rock.

Flora List

Scientific Name	Common Name
Achillea millefolium	yarrow
Agropyron spicatum	bluebunch wheatgrass
Alyssum alyssoides	pale alyssum
Amelanchier alnifolia	western serviceberry
Antennaria stenophylla	narrow leaved pussytoes
Arnica cordifolia	heart leaf arnica
Aster conspicuus	showy aster
Balsamorhiza sagittata	arrowleaf balsamroot
Besseya rubra	kitten-tails
Blepharipappus scaber	blepharipappus
Brickellia grandiflora	large flowered brickellia
Brodiaea douglasii	Douglas' brodiaea
Bromus brizaeformis	rattlesnake brome
Bromus commutatus	meadow bromw
Bromus japonicus	Japanese brome
Bromus mollis	soft brome
Bromus tectorum	cheatgrass
Calamagrostis rubescens	pinegrass
Calochortus elegans	northwestern mariposa lily
Calochortus macrocarpus	sagebrush mariposa lily
Camassia quamash	camas

Castilleja spp. yellow paintbrush Cisilum spp. thistite Collomia linearis narrow leaf collomia Corepis acuminata long leaved hawksbeard Epilobium paniculatum tall annual willow-herb Erigeron engelmannii v. davisii Engelmann's daisy Eriogonum heracleoides Wyeth's creamy buckwheat Eriophyllum lanatum Oregon sunshine Festuca idahoensis Idaho fescue giant frasera Geum triflorum red avens Gilia aggregata sky-rocket gilia Helianthella uniflora Douglas' helianthella Heuchera grossulariifolia gooseberry leaved alumroot Hieracium albertinum Scouler's hawkweed Holodiscus discolor ocean-spray Juniperus occidentalis western juniper Koeleria cristata prairie junegrass Lactuca serriola prickly lettuce Lepidium densiflorum Wyeth biscuitroot Lomatium cous cous biscuitroot Lomatium cous cous biscuitroot Lomatium triternatum inne leaf desert parsiey Mirosteris gracilis slender phlox Mimulus nanus dwarf monkey-flower Myosotis micrantha strict forget-me-not Myosotis micrantha Pensternon furticosus Pensternon furticosus Phacelia linearis thread-leaf phacelia Phacelia linearis thread-leaf phacelia Phiox longifolia long-leaved phlox Milous ponderosa Poa nevadensis Nevada bluegrass Poa sandbergii Sandberg's bluegrass	Castilleja hispida	harsh paintbrush
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Poa sandbergii ; Sandberg's bluegrass	Poa nevadensis	Nevada bluegrass
	Poa sandbergii	; Sandberg's bluegrass

Polygonum douglasii	Douglas' knotweed
Polygonum majus	wiry knotweed
Potentilla glandulosa	glandular cinquefoil
Prunus virginiana	common chokecherry
Pseudotsuga menziesii	Douglas-fir
Ribes cereum	wax currant
Ribes inerme	white stem gooseberry
Rosa woodsii	pear-hip rose
Scutellaria angustifolia	narrow-leaved skullcap
Sedum lanceolatum	lance-leaf stonecrop
Sisymbrium altissimum	tumble mustard
Symphoricarpos albus	common snowberry
Symphoricarpos oreophilus	mountain snowberry
Tragopogon dubius	yellow salsify
Zigadenus venenosus	meadow death-camas

Fauna List Scientific Name

Scientific Name	Common Name
Reptiles	
Charina bottae	Rubber Boa
Coluber constrictor	Racer
Masticophis taeniatus	Striped Whipsnake
Pituophis catenifer	Gopher Snake
Thamnophis elegans	Western Terrestrial Garter Snake
Thamnophis sirtalis	Common Garter Snake
Sceloporus occidentalis	Western Fence Lizard
Eumeces skiltonianus	Western Skink
Crotalus oreganus	Western Rattlesnake
Birds	
Aeronautes saxatalis	White-throated swift
Archilochus alexandri	Black-chinned hummingbird
Selasphorus rufus	Rufous hummingbird
Stellula calliope	Calliope hummingbird
Chordeiles minor	Common nighthawk
Phalaenoptilus nuttallii	Common poorwill
Charadrius vociferus	Killdeer
Gallinago delicata	Wison's snipe
Cathartes aura	Turkey vulture
Columba livia	Rock pigeon
Zenaida macroura	Mourning dove
Aquila chrysaetos	Golden eagle
Buteo jamaicensis	Red-tailed hawk
Buteo regalis	Ferruginous hawk
Buteo swainsoni	Swainson's hawk

Falco mexicanus	Prairie falcon
Falco sparverius	American kestrel
Callipepla californica	California quail
Alectoris chukar	Chukar
Bonasa umbellus	Ruffed grouse
Dendragapus obscurus	Blue grouse
Meleagris gallopavo	Wild turkey
Perdix	Gray partridge
Eremophila alpestris	Horned lark
Bombycilla cedrorum	Cedar waxwing
Passerina amoena	Lazuli bunting
Corvus brachyrhynchos	! American crow
Corvus corax	Common raven
Cyanocitta stelleri	Steller's jay
Pica hudsonia	Black-billed magpie
Chondestes grammacus	Lark sparrow
Junco hyemalis	Dark-eyed junco
Melospiza lincolnii	Lincoln's sparrow
Melospiza melodia	Song sparrow
Passerculus sandwichensis	Savannah sparrow
Passerella iliaca	Fox sparrow
Pooecetes gramineus	Vesper sparrow
Spizella breweri	Brewer's sparrow
Spizella passerina	Chipping sparrow
Carduelis tristis	American goldfinch
Carpodacus cassinii	! Cassin's finch
Carpodacus mexicanus	House finch
Coccothraustes vespertinus	Evening grosbeak
Loxia curvirostra	Red crossbill
Petrochelidon pyrrhonota	Cliff swallow
Riparia	Bank swallow
Stelgidopteryx serripennis	Northern rough-winged swallow
Tachycineta thalassina	Violet-green swallow
Agelaius phoeniceus	Red-winged blackbird
Euphagus cyanocephalus	Brewer's blackbird
Molothrus ater	Brown-headed cowbird
Stumella neglecta	Western meadowlark
Xanthocephalus	Yellow-headed blackbird
Dumetella carolinensis	AND THE RESIDENCE OF A STREET OF THE PARTY O
- Continue and the Continue of	Gray cathird
Poecile atricapillus Poecile rufescens	Black-capped chickadee
hiteline this field with the contract of the c	Chestnut-backed chickadee
Dendroica coronata	Yellow-rumped warbler
Dendroica petechia	Yellow warbler
Dendroica townsendi	Townsend's warbler
Geothlypis trichas	Common yellowthroat
Icteria virens	Yellow-breasted chat
Oporomis tolmiei	Macgillivray's warbler
Setophaga ruticilla	American redstart
Wilsonia pusilla	Wilson's warbler

Pogulus colondulo	and appear of the factor of the second of th
Regulus calendula	Ruby-crowned kinglet
Regulus satrapa	Golden-crowned kinglet
Sturnus vulgaris	European starling
Piranga ludoviciana	Western tanager
Catherpes mexicanus	Canyon wren
Cistothorus palustris	Marsh wren
Salpinctes obsoletus	Rock wren
Troglodytes aedon	House wren
Troglodytes	Winter wren
Catharus guttatus	Hermit thrush
Catharus ustulatus	Swainson's thrush
Ixoreus naevius	Varied thrush
Myadestes townsendi	Townsend's solitaire
Sialia currucoides	Mountain bluebird
Sialia mexicana	Western bluebird
Turdus migratorius	American robin
Contopus cooperi	Olive-sided flycatcher
Contopus sordidulus	Western wood-peewee
Empidonax difficilis	Pacific slope flycatcher
Empidonax hammondii	Hammond's flycatcher
Empidonax oberholseri	Dusky flycatcher
Empidonax occidentalis	Cordilleran flycatcher
Sayornis saya	Say's phoebe
Tyrannus verticalis	Western kingbird
Vireo cassinii	Cassin's vireo
Vireo gilvus	Warbling vireo
Colaptes auratus	Northern flicker
Melanerpes lewis	Lewis's woodpecker
Picoides albolarvatus	White-headed woodpecker
Picoides arcticus	Black-backed woodpecker
Picoides dorsalis	American three-toed woodpecker
Picoides pubescens	Downy woodpecker
Picoides villosus	Hairy woodpecker
Sphyrapicus nuchalis	Red-naped sapsucker
Sphyrapicus thyroideus	Williamson's sapsucker
Aegolius acadicus	Northern saw-whet owl
Asio otus	Long-eared owl
Bubo virginianus	Great horned owl
Glaucidium gnoma	Northern pygmy-owl
Megascops kennicottii	Western screech-owl
Otus flammeolus	Flammulated owl
Strix nebulosa	Great gray owl
Mammais	The same of the sa
Ovis canadensis	Bighorn Sheep
Cervus elaphus	¹ Elk
Odocoileus hemionus	Mule Deer
Canis latrans	Coyote
Canis lupus	Gray Wolf
Vulpes	Red Fox
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Puma concolor	Cougar/Mountain Lion
Mustela frenata	Long-tailed Weasel
Taxidea taxus	American Badger
Antrozous pallidus	Pallid Bat
Myotis californicus	California Myotis
Myotis ciliolabrum	Western Small-footed Myotis
Myotis yumanensis	Yuma Myotis
Sylvilagus nuttallii	Mountain Cottontail
Peromyscus maniculatus	North American Deermouse
Erethizon dorsatum	North American Porcupine
Marmota flaviventris	Yellow-bellied Marmot

Geology

Plateau uplift, lava flows, and canyon down cutting have sculpted the Lower Joseph Watershed into its present landscape. Columbia River basalt is the dominant geologic unit (USGS 1979). Stream cut canyons dissect moderately thick lava flows interspersed with flow breccia and older plagioclase-phyric basalt. A key geologic feature in Horse Pasture Ridge RNA is a large outcropping of welded tuff (unique in the Columbia River basalts of northeast Oregon).

Soils

Soils were formed in loess and ash mixed with residuum and colluvium from basalt, andesite or welded tuff. Most of the soils in the area are shallow and well drained, combined with small areas of deeper soil, also well drained.

Topography

Haystack Rock RNA is comprised of two main west-facing ridges with smaller finger ridges also descending to the west toward Joseph Creek. Pole Patch Canyon forms the north edge of the RNA. The slopes of the ridges are steep and human foot access is difficult in many areas due to steep slopes, loose rocks and banded cliff faces of basalt andesite. Haystack Rock is a visible landmark on the ridge that makes up the boundary of the RNA.

Aquatic and Riparian Features

Pole Patch Canyon and the unnamed canyon to the south below Haystack Rock ridge both appear to be dry with no visible springs. No springs were noted on existing topographic USGS maps or FS maps.

Rare, threatened, endangered, or sensitive species

Spalding's catchfly (*Silene spaldingii*) is a United States Fish and Wildlife Service Threatened Species and potential habitat may occur in the Table Mountain Allotment (Lower Joseph Creek Restoration Project, Wallowa-Whitman National Forest, Ongoing 2014). No populations of Spalding's catchfly have been found on either the Table Mountain Allotment or the RNA. However, 2014 field surveys were likely too early to find this species, if they occur (Greg Lind, 2014).

Rare Elements and Rare Plant Communities

Forest Service sensitive plant species with potential to occur within the RNA include Engelmann's Daisy (*Erigeron engelmanni* var. *davisii*), and Hazel's Prickly Phlox (*Leptodactylon pungens* ssp. *hazeliae*). There are known sites for Engelmann's daisy in the Horse Pasture Ridge RNA, but none confirmed for Haystack RNA. Plants were collected in Haystack RNA that may be Erigeron engelmanni var. davisii, but specimens need to be confirmed. Preferred habitat for Engelmann's daisy appears to be shallow soil rocky areas on ridgelines or rocky side slopes.

Resource Information

Minerals

At present, there are no active mining claims in the Lower Joseph River Watershed. The general geology (basalt lava flows) limits the mineral potential within the RNA.

Grazing

Haystack RNA receives light grazing, primarily along the old farm fields on the western border of the RNA. Grazing levels alternate between 90 and 164 cow/calf pairs April to mid-May and 100 cow/calf pairs November to December. Utilization allowed is 10% (Lower Joseph Creek Range Analysis 2005). Light livestock use was noted during the 2014 survey by G. Lind. Most livestock use appears to be on the top ridgeline and the less steep upper portions of the Haystack Rock ridge and the ridge east of Pole Patch Canyon.

Timber Values

The RNA is primarily bunchgrass grassland on steep west and south-facing slopes. Stands of Douglas-fir with some ponderosa pine and are found in the two north-facing draws and a third north-facing draw at the northeast boundary of the RNA.

Watershed Values

Haystack Rock RNA is located in the Lower Joseph Creek Watershed. Steep and deep canyons create a large variety of habitats for plants and animals.

Recreational Use

Light recreational use has been observed along upper ridgeline, and the parking area to access the RNA is a dispersed camping area used most likely during hunting season. The closest campground is approximately six miles to the east outside of the RNA at Coyote Campground. There is a pack trail delineated outside of the RNA to the northwest of Pole Patch Canyon on the FS 2013 topographic map (Trail #1725) but no trail or signs were found.

Plant and Wildlife Values

Potential Engelmann's daisy habitat was noted during 2014 surveys. Plants were collected that may be Erigeron engelmanni var. davisii, but specimens need to be confirmed.

Adjacent Lands

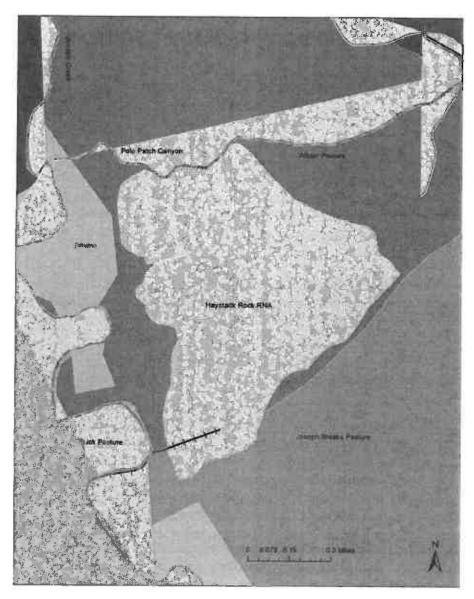
Private lands occur along the northwest border and near the southern tip of the RNA. The private lands contain old agricultural fields which likely contain many exotic grasses.

Transportation and Road System

There are no designated roads or trails within the RNA.

Fences and Protective Barriers

Haystack Rock has a 0.25 mile drift fence extending into the south part of the RNA. This fence starts at the boundary of the Wilder Pasture of the Table Mountain Allotment to the north, the Buck Pasture of the Swamp Creek Allotment to the west, and the Joseph Breaks Pasture of the Table Mountain Allotment to the south. This fence is called the Vawter fence, and is maintained by the permittee using the Table Mountain allotment.



Allotment fences near and within Haystack Rock RNA

Historical Information

History of Establishment

Regional Forester John Butruille recommended the establishment of the Haystack Rock Research Natural Area in the Wallowa-Whitman National Forest Land and Resource Management Plan dated April 1990. That recommendation was the result of an analysis of the factors listed in 36 CFR 219.25 and Forest Service Manual 4063.41. The results of the Regional Forester's analysis are documented in the Final Environmental Impact Statement for the Wallowa-Whitman National Forest Land and Resource Management Plan and the Establishment Record for the Haystack Rock Research Natural Area which are available to the public.

Research and Educational Use and Interest

Ecology plots the Wallowa Whitman National Forest Ecology group are noted in map 4 below. These plots were re-photographed during the 2014 survey by G. Lind. See photos below (all photos taken June 12, 2014 by G. Lind). The ecology plots monitor vegetation changes over time. Data is housed at the Area Ecology office at the Wallowa Whitman Supervisor's office in Baker City, Oregon.

Cultural and Heritage

There are no documented cultural resources within the Haystack Rock RNA. A cultural resource inventory has not been conducted in the RNA.

Disturbance History

The Joseph Creek Range Analysis (2005) did note that the area had been affected by the 1986 Joseph Creek Fire. Livestock grazing is occurring but is considered to be light.

Occurrence of Exotic Species

The Lower Joseph Creek Restoration Project, Wallowa-Whitman National Forest (ongoing 2014) notes the presence of scotch thistle and diffuse knapweed for the Table Mt allotment and indicates that the scotch thistle infestation is associated with private pasture lands and is declining in the allotment. The diffuse knapweed is noted as "no change/stable" status in the allotment. The June 2014 reconnaissance survey (G. Lind) did not note any scotch thistle or diffuse knapweed in the Haystack RNA or adjacent areas. Weedy bromes (BRTE, BRMO, and BRBR) and one small area of ventenata grass was noted within a patch of brome, are present in many spots just outside of the RNA. It is very likely that more populations of ventenata grass are present outside and within the RNA, as habitat is abundant. Private land near the lower elevation southern tip of the RNA along Joseph Creek. The private lands contain old agricultural fields which likely contain many exotic grasses. Weedy species noted are cheatgrass brome (*Bromus tectorum*), rattlesnake brome (*Bromus brizaformis*), and soft chess brome (*Bromus mollis*). Ventenata (*Ventenata dubia*) is found adjacent to Haystack Rock RNA, and is suspected but not confirmed within the RNA (Lind, 2014).

Evaluation of Specific Management Recommendations on the RNA

Principal Management Issues and Potential or Existing Conflicts

Haystack Rock RNA is steep and remote. There is light cattle use at the bottom of the RNA, and there is probably some occasional use by hunters.

Special Management Area

Haystack Rock RNA is designated management area 12, or Research Natural Area in the current forest plan and is managed as a RNA. The western side of the RNA is within the Joseph Wild and Scenic River Corridor. On USFS lands to the northeast and southeast, the RNA is surrounded by management area 3, big game habitat. There is a small portion of general forest management area 1 that abuts the central east part of the RNA.

Other Information

Permanent Research Plots/Photo Points

Ecology plots by the WWNF Ecology group are noted in map 3 below. These plots were <u>not</u> relocated during the 2014 survey by G. Lind. No photos are available of these plots in 2014. See location info below in table.



Haystack Rock RNA with established photo points/ecology Plots

Plot #	GPS WGS 84*	<u>UTM *</u>
#113	45.884073, -117.22011	4 82904E, 50 76368N
#114	45.84051, -117.22274	4 82703E, 50 76340N
#115	45.83981, -117.22058	4 82874E, 50 76267N
#169	45.84074, -117.23104	4 82058E, 50 76375N

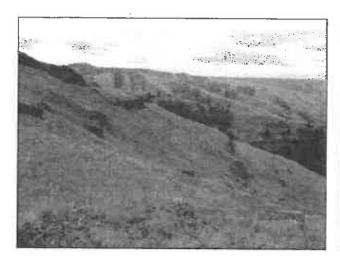
Photographs





Haystack Rock feature

FEID-AGSP bunchgrass site upper ridges

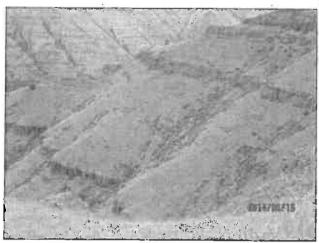


FEID-AGSP bunchgrass sites mid slopes



FEID-AGSP bunchgrass with shrub talus areas





FEID-AGSP bunchgrass with shrub talus draws

Forested PSME/PHMA types on north slopes on steep south slopes

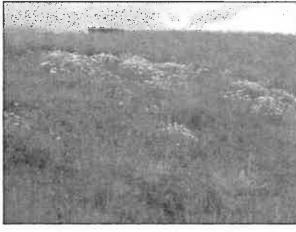


homestead pasture along Joseph Creek.

Shallow soil rigid sage/POSE types

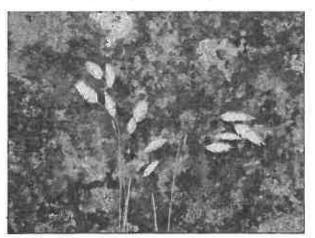
Old



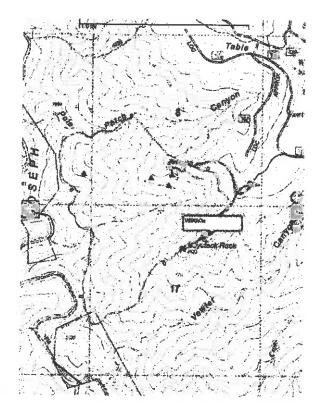


Weedy bromegrass spots in FEID type's

Weedy bromegrass spots in FEID



Bromus brizaeformis showing "rattlesnake rattle" heads.



Map of Ventenata dubia site



Photo of *Ventenata dubia* 45.835858° N, 117.215463° W



Erigeron engelmanni var. davisii

45.841815° N, 117.219250° W

Photographs: A larger album of all photos taken by G. Lind in

2014 for both RNAs can be found at this link: https://picasaweb.google.com/117725403025106999373/WWNFRNAProject02?authuser=0&

authkey=Gv1sRgCP-l3trN5sLv7wE&feat=directlink

Potential Research Topics

Horse Pasture Ridge and Haystack Rock were chosen by Charlie Johnson, former Area Ecologist for northeast Oregon as a paired research opportunity. Some possible research topics include:

Ecology of bunchgrass ecosystems
Disturbance ecology of bunchgrass ecosystems
Grassland pollinators
Grassland predators and prey
Geology of Joseph Canyon
Soil depth and plant distribution

Administration Records and Protection

The District Ranger at the Wallowa Mountain District is responsible for direct administration, and, in accordance with approved forest plans and/or project prescriptions, management of established RNAs (FSM 4063.04b.5). The Forest Supervisor of the Wallowa-Whitman National Forest is responsible for executing approved management plants for the RNA; administering, managing, and protecting the RNA; and coordinating with the Station Director or Director's designee to implement needed changes in management or protection (FSM 4063.04b.4).

In consultation with the Forest Supervisor and District Ranger, Station Directors have authority to approve all management plans and to oversee and coordinate approved research for RNAs outside congressionally designated areas (FSM 4063.04b.1b). The RNA Coordinator in the Research Station is designated as the lead contact person for all such requests. All plant and animal specimens collected in the course of research will be properly preserved and maintained within university, state, or federal agency herbaria and museums, approved the Pacific Northwest Research Station.

Records for the Horse Pasture Ridge RNA will be maintained in the following offices:

Forest Supervisor, Wallowa-Whitman National Forest, Baker City, OR

District Ranger, Wallowa Mountain District, Enterprise, OR

Station Director, Pacific Northwest Research Station, Portland, OR

Forestry Sciences Laboratory, Pacific Northwest Research Station, Corvallis, OR

Archiving

The Pacific Northwest Research Station will be responsible for maintaining the RNA research data file and list of herbarium and species samples collected. The Forestry Sciences Laboratory in Corvallis, Oregon maintains a research database and lists of species for all RNAs in the region. Computerized files for the RNA will also be maintained at the Forestry Sciences Laboratory.

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APPENDIX 2. NEPA Environmental Impact Statement

The establishment of Haystack Rock RNA and Horse Pasture Ridge RNA was proposed under an Environmental Impact Statement (EIS) as part of the Lower Joseph Restoration Project. The establishment of the RNAs required a separate Record of Decision because the establishment of the RNAs is a permanent amendment to the Wallowa Whitman Forest Plan.

The Lower Joseph Restoration Project EIS can be accessed using the following link:

http://www.fs.usda.gov/wps/portal/fsinternet/!ut/p/c5/04 SB8K8xLLM9MSSzPy8xBz9CP0os3gDfxMDT8MwRydLA1cj72BTUwMTAwgAykeaxRtBeY4WBv4eHmF-YT4GMHkidBvgAl6EdleDXIvfdrAJuM3388jPTdUvyA2NMMgyUQQAyrgQmg!!/dl3/d3/L2dJQSEvUUt3QS9ZQnZ3LzZfS000MjZOMDcxT1RVODBJN0o2MTJQRDMwODQ!/?project=43379

Or in more simple language, from the internet website for the Wallowa-Whitman National Forest, select Land Management, select Projects, select Lower Joseph Restoration Project.

APPENDIX 3. COPY OF RELEVANT SECTIONS OF FOREST PLAN REFERENCING RNA

Chapter 4, page 83

MANAGEMENT AREA 12 (1 5,160 ACRES) (RESEARCH NATURAL AREAS)

Description

The objectives for establishing RNA's are to preserve examples of all significant natural ecosystems for comparison with those influenced by humans, to provide educational and research areas for ecological and environmental studies, and to preserve gene pools for typical and rare and endangered plants and animals.

RNA's typify important forest, shrubland, grassland, alpine, aquatic, and geologic types and other natural situations that have special and unique characteristics of scientific interest and importance Activities in RNAs are limited to research, study, observations, monitoring, and kinds of educational activities that are nondestructive and nonmanipulative.

A research natural area establishment report will be prepared for each recommended area These studies will determine the boundaries of the areas. Until the establishment reports are signed by the Chief of the Forest Service, the areas designated by this plan are recommendations. Proposed RNA's will be protected from uses which would reduce their suitability for RNA designation The Indian Creek RNA has been established by the Chief Following establishment, a management plan (approved by the District Ranger) will be developed for each RNA. Additional RNAs may be proposed during the life of this Plan to fill RNA needs identified in Appendix H to the EIS.

Direction

- Watershed. Apply Forest-wide standards and guidelines.
- Wildlife. Prevent the introduction of non-native species.
- Timber. Timber harvest will not occur unless for research purposes
- Range. Objectives for grazing will be defined in situations where grazing is needed to establish or maintain vegetative communities in research natural areas were livestock grazing is not part of the management prescription.
- the Regional Forester and Station Director shall, as appropriate, establish a level of acceptable casual or incidental livestock use that can be tolerated and is consistent with the management prescription for the research natural area.
- Transportation. Roads and trails will normally be the minimum necessary to provide access for research and education objectives. Off-road vehicle use will be prohibited.
- Research Prepare establishment reports and management plans for each proposed RNA. In addition to the one existing research natural area, 18 areas are recommended for addition to the Research Natural Area System:

Lightning Creek Government Draw Mt. Joseph Alum Beds Indian Creek (existing RNA) Vance Knoli Bob Creek Horse Pasture Ridge Pt Prominence West Razz Pond Lake Fork **Basin Creek** Razz Lake Pleasant Valley Haystack Rock Bills Creek Little Granite Cougar Meadow Duck Lake Craig Mountain Lake

- Recreation Manage these areas to accommodate recreational use similar to the
 management areas surrounding them. Discourage public recreation use if levels become so
 high as to be incompatible with the primary objective. Where special orders are needed to
 limit, restrict, or control specific activities such as camping, seasons of use, or other uses,
 that are not compatible with the objectives of the research natural area, the Forest
 Supervisor shall issue orders pursuant to 36 CFR 261, subpart B, to protect an area's
 features Any such orders shall incorporate the special closure provisions of 36 CFR 261.53
- Landscape Management. Apply Forest-wide standards and guidelines.
- Landownership. Retain these lands in Federal ownership and acquire private lands as opportunity or need occurs.
- Minerals. Recommend formally classified RNA's for withdrawal from mineral entry.
- Fire. Design suppression activities to minimize site disturbance. Prescribed fires will be used
- only in conjunction with approved research projects The minimum acceptable suppression response will be "confine" at all FILS.
- Insects and Diseases The decision on treatment of Forest pests will be made on a case-by case basis Where pest management activities are prescribed, they shall be as specific as possible against target organisms and induce minimal impact to other components of the ecosystem.
- Other. Prohibit the gathering of fuelwood for commercial or home use.

Planning Assumptions

<u>Timber</u>: There will be no timber harvest

<u>Watershed</u>: Watershed condition and water quality and quantity will approximate pristine conditions <u>Wildlife</u>: Timber stands which are currently in an old-growth condition will continue to provide old growth habitat. Natural tree mortality will provide snag habitat for snag-dependent species at 100 percent of potential.

<u>Fire</u>: No fuel treatment activity will occur unless compatible with RNA objectives. Fuel will be allowed to accumulate at natural rates. Prescribed fires from unplanned ignitions will be used consistent with the management plans for specific RNA's.

Record of Decision and Establishment Order

Establishment of Haystack Rock and Horse Pasture Ridge Research Natural Areas (Lower Joseph Creek Restoration Project)

Wallowa-Whitman National Forest Land and Resource Management Plan Amendment Number 47

USDA Forest Service Pacific Northwest Region

Wallowa Valley Ranger District, Wallowa-Whitman National Forest Wallowa County, Oregon

Haystack Rock proposed Research Natural Area: T4N R45E sections 7, 8, 17, and 18 Horse Pasture Ridge proposed Research Natural Area: T5N R45E section 28

Decision and Reason for the Decision

Background

In the interest of landscape learning and streamlining NEPA, establishment of two Research Natural Areas (RNAs) was analyzed as part of the Lower Joseph Creek Restoration Project (LJCRP) Final Environmental Impact Statement (FEIS). Research Natural Areas are designated for research and educational opportunities, to maintain biological diversity on National Forest System lands, and are selected to complete a national network of ecological areas. The Horse Pasture Ridge (338 acres) and Haystack Rock (425 acres) RNAs were proposed for establishment in the 1990 Wallowa-Whitman National Forest (WWNF) Land and Resource Management Plan (Forest Plan). Both are within the Lower Joseph Creek Restoration Project area and each still maintains all the qualities unique for RNA designation. The establishment of the two RNAs requires a forest plan amendment, as described below. Research Natural Area establishment was proposed under both action alternatives of the LJCRP FEIS. The LJCRP FEIS also documents the analysis of effects of a no action alternative which did not include establishment of the two RNAs.

Decision and Rationale

Based upon my review of all alternatives, I have decided to establish the Horse Pasture Ridge and Haystack Rock RNAs, as considered in Alternatives 2 and 3 of the LJCRP FEIS (FEIS page 141). I am also approving a forest plan amendment, which is required to establish RNAs. The objective is to maintain the natural condition of the areas; therefore no forest products or minerals would be removed, livestock grazing patterns would not be changed, fire activity would be limited to suppression only (unless fire is part of an approved research project), off road vehicles would be excluded, and recreation use would be managed at a low intensity level. Environmental consequences disclosed in the WWNF Forest Plan FEIS are still valid, and conditions and effects have not changed. Management strategies would not change under the establishment, and no adverse or irreversible environmental consequences are expected.

WWNF Forest Plan objectives for establishing RNAs are to preserve examples of all significant natural ecosystems for comparison with those influenced by humans, to provide educational and research areas for ecological and environmental studies; and to preserve gene pools for typical and rare and endangered plants and animals (Forest Plan page 4-83). RNAs typify important forest, shrubland, grassland, alpine, aquatic, and geologic types and other natural situations that have special and unique characteristics of scientific interest and importance. The Horse Pasture Ridge RNA will contribute to the national network of RNAs by providing an example of Idaho fescue-prairie Junegrass, and Idaho fescue –blue bunch wheatgrass plant associations in ridge top communities. The Haystack Rock RNA will contribute to the national network of RNAs by providing an example of Idaho fescue-blue bunch wheatgrass-arrow leaf balsamroot and blue bunch wheatgrass-Sandberg's bluegrass-narrow-leaved skullcap plant associations. Both Haystack Rock and Horse Pasture Ridge RNAs will serve as untreated baseline study areas with respect to prescribed fire and other management activities (FEIS page 67).

In addition to meeting Forest Plan objectives, establishing these RNAs meets agency objectives including (1) maintaining representative areas of high quality ecosystem; (2) preserving and maintaining genetic diversity, including threatened, endangered, and sensitive species; (3) protecting areas against human-caused environmental disruptions; (4) serving as reference areas for study of ecological processes; (5) providing onsite and extension educational activities; (6) serving as baseline areas for measuring long-term ecological change; (7) serving as control areas for comparing results from manipulative research; and (8) monitoring effects of resource management techniques and practices (FSM 4063.02).

Under the Forest Plan, activities in RNAs are limited to research, study, observations, monitoring, and educational activities that are nondestructive and non-manipulative. Proposed RNAs are protected from uses which would reduce their suitability for RNA designation. Since both Horse Pasture Ridge and Haystack Rock were proposed under the Forest Plan (page 4-84) there will be no changes in management as a result of establishment.

This decision requires a forest plan amendment (FSM 4063.03). This decision amends the WWNF Forest Plan in conformance with the 1982 Planning Rule process¹, following Forest Service Manual direction (FSM 1926.51 - January 31, 2006), changing the designation of the Horse Pasture Ridge and Haystack Rock RNAs from "proposed" to "established" (Forest Plan page 4-82). The significance of the amendment was evaluated in accordance with FSM 1926.51 and FSM 1926.52, and found to be non-

¹ Forest Service Handbook 1909.12 – Land Management Planning Handbook Chapter 20 – Land Management Plan states: Plan amendments started after May 9, 2015, must conform to the 2012 Planning Rule requirements. Before that date, plan amendments may be made following the 1982 Rule process or following the 2012 Planning Rule. (36 CFR§219.17(b)(2)). This proposed action was developed and scoped prior to May 9, 2015. The Responsible Official has elected to follow the 1982 Planning Rule procedures for purposes of making this amendment.

significant according to this policy. The amendment will not alter multiple-use forest plan goals and objectives or adjust management area boundaries. The amendment will not alter the long-term relationship between levels of multiple-use goods and services originally projected for the WWNF, nor will it alter timber suitability. The amendment will not result in an important effect to the entire land management planning area. (See project record for details of evaluation). Opportunities for public participation and notification were provided as required.

In addition to my decision to amend the WWNF Forest Plan, an establishment record (see attached) has been prepared for each RNA for approval by the R6 Regional Forester with the concurrence of the PNW Station Director (FSM 4063.04b). A legal description, and land lines where Haystack Rock and Horse Pasture Ridge have boundaries in common with other landowners will be documented (FSM 4063.37) as a part of the establishment record process.

Other Alternatives Considered

In addition to the selected alternative, I also considered the no action alternative (LJCRP FEIS Alternative 1). A more detailed comparison of the effects of RNA establishment can be found on pages 73-75 in Chapter 3 of the LJCRP FEIS.

Alternative 1 - No Action

Under the no-action alternative, current management plans would continue to guide management of the project area. Under Alternative 1, the Horse Pasture Ridge and Haystack Rock proposed RNAs would remain as proposed RNAs and continue to be protected from uses that would reduce suitability for RNA designation. This management direction is listed in the WWNF Forest Plan, Pages 4-84 and 4-85, and would remain in effect until there is a revised Forest Plan or there is an amendment to this portion of the Forest Plan.

Public Involvement

The Notice of Intent to develop the LJCRP EIS was published in the Federal Register on January 9, 2014, and a legal notice of the comment period was published in the Baker City Herald. The Notice of Availability (NOA) of the DEIS for a 90 day comment period was published in the Federal Register, and Baker City Herald on November 14, 2014. The DEIS comment period ended on February 12, 2015.

Fifteen public meetings organized by the Wallowa-Whitman Forest Collaborative between August 2013 and August 2015 in-part focused on scoping results, methodologies used in alternative development, effects analyses, and collaborative consensus around RNA establishment and other project activities. Twelve meetings and conference calls, in addition to the joint public meetings in January and December 2014, were held with the Wallowa County Natural Resources Advisory Council to discuss the proposed action, public comments, planning issues and alternatives, and effects analyses, including those related to RNA establishment.

Two public field trips organized by the Wallowa-Whitman Forest Collaborative were held in the project area in August 2013 and June 2014, and two meetings with local permittees were held during development of the EIS. Public scoping did not identify RNA establishment as a significant issue. There were five comments submitted during scoping that were in favor of RNA establishment and two comments opposed to RNA establishment. Comments on the DEIS included two favorable comments regarding RNA establishment. For more information, see the analysis of public scoping in the project record.

Nez Perce Tribe Consultation and Coordination

More than 20 meetings and conference calls, and five field trips were held with the Nez Perce Tribe staff throughout the LJCRP planning process. Government-to-government meetings were held in July, 2014 and June, 2015. Detailed information on meetings and field trips with the Nez Perce Tribe is located in Appendix G of the LJCRP FEIS. The tribe strongly supported the establishment of Haystack Rock and Horse Pasture Ridge RNAs.

Findings Required by Other Laws and Regulations

This decision to establish Haystack Rock and Horse Pasture Ridge RNAs is consistent with the intent of the WWNF Forest Plan's long term goals and objectives, including forest management goals for research (Forest Plan page 4-12) and specific direction for Management Area 12 – Research Natural Areas (pages 4-84 and 4-85). Establishment of research natural areas has been sanctioned in regulations at 7 CFR §2.60(a) and 36 CFR §251.23, and 36 CFR §219.25 (1982, 1983). Direction for establishment is provided in Forest Service Manual 4063 and in "A Guide for Developing Natural Area Management and Monitoring Plans" written by the Pacific Northwest Interagency Natural Area Committee.

Environmentally Preferable Alternative

Alternative 2 (Modified Proposed Action) is the environmentally preferable alternative, because it would result in the least harm to the biological and physical environment, and best protects and preserves historic, cultural, and natural resources. This alternative provides the most long-term benefits for multiple resources.

Administrative Review or Objection Opportunities

This decision is subject to objection pursuant to procedures at 36 CFR 219 Subpart B. Public notice for the beginning of the objection period was made available following requirements at 36 CFR §219.52. A legal notice published in The Oregonian on July 15, 2016 began the 60-day objection period. The legal notice, as well as a "Dear Reader" letter circulated with the Final EIS, provided instructions for filing an objection with the reviewing officer. No objections were received. When no objection is filed, implementation may begin on, but no sooner than the fifth business day following the end of the 60-day objection filing period (§219.52).

Implementation

Implementation may begin immediately.

Contact Person

For additional information concerning this draft decision and the final environmental impact statement, please contact Dea Nelson, Environmental Coordinator & Planner, Wallowa-Whitman National Forest, by phone: 541-523-1216 or email: dnelson09@fs.fed.us.

JAMES M. PEÑA

4.17.17

Date

Regional Forester

Attached: Establishment Orders and Establishment Records for Haystack Rock and Horse Pasture Ridge RNAs

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