ENVIRONMENTAL ASSESSMENT

WENAHA BREAKS RESEARCH NATURAL AREA

Umatilla National Forest
Pomeroy Ranger District

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CHAPTER ONE

PURPOSE AND NEED FOR ACTION

Introduction

It was recommended to designate the Wenaha Breaks Research Natural Area[1] in the Umatilla National Forest Land and Resource Management Plan (Forest Plan), dated June 11, 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 area still maintains all the qualities unique for RNA designation and would contribute to the national network of ecological areas.

Description of Project Area

The location of the proposed Research Natural Area (RNA) is in Wallowa County, Oregon, on the Umatilla National Forest within the boundary of the Wenaha-Tucannon Wilderness approximately 15 air miles west of Troy, Oregon. It encompasses portions of sections 1, 2, 3, 10, 11, 12 and 14 of Township 5N, Range 40E and Sections 34 and 35 of Township 6N, Range 40E, Willamette Meridian. (Figure 1)

Elevation ranges from 2,780 feet in the northern portion of the RNA to 4,800 feet at the highest point to the south. The northern border is designated as the Wenaha Wild & Scenic River (A7) which is managed to promote river associated recreation and resources.

Current Condition

The Wenaha Breaks RNA Establishment Record (2008) describes the current condition of the area in detail. It has been identified as a cell need (or elements) in the Blue Mountains for several vegetation types: 1) mid-elevation ponds with aquatic beds and marshy shore; 2) grand-fir/twinflower; 3) grand fir/ big huckleberry; and 4) grand fir-Pacific yew. In addition to the mesic grand fir plant associations, this complex also contains, Douglas-fir/ pinegrass, Douglas-fir/ ninebark, ninebark-snowberry plant associations common to the mesic forests in the Blue Mountains physiographic province.

Because the proposed RNA is within designated wilderness, recreation is limited to non-motorize use. Steep slopes and the relatively inaccessible Wenaha River are the primary reasons that hiking and hunting is very limited.

No major roads exist in the area. There is at least one foot trail that runs along the boundary of the RNA but is not maintained.

[1] Wenaha Breaks was originally proposed for RNA designation by the Pacific Northwest Natural Area Committee, USDA, in 1971, as Elk Flats - Wenaha Breaks and appears in the Umatilla Forest Plan under that name. Due to confusion with another proposed RNA on the Umatilla National Forest, called Elk Flats Meadow; the name of Elk Flats -Wenaha Breaks proposed RNA was changed to Wenaha Breaks proposed RNA.

Boundary of Wenaha Breaks RNA

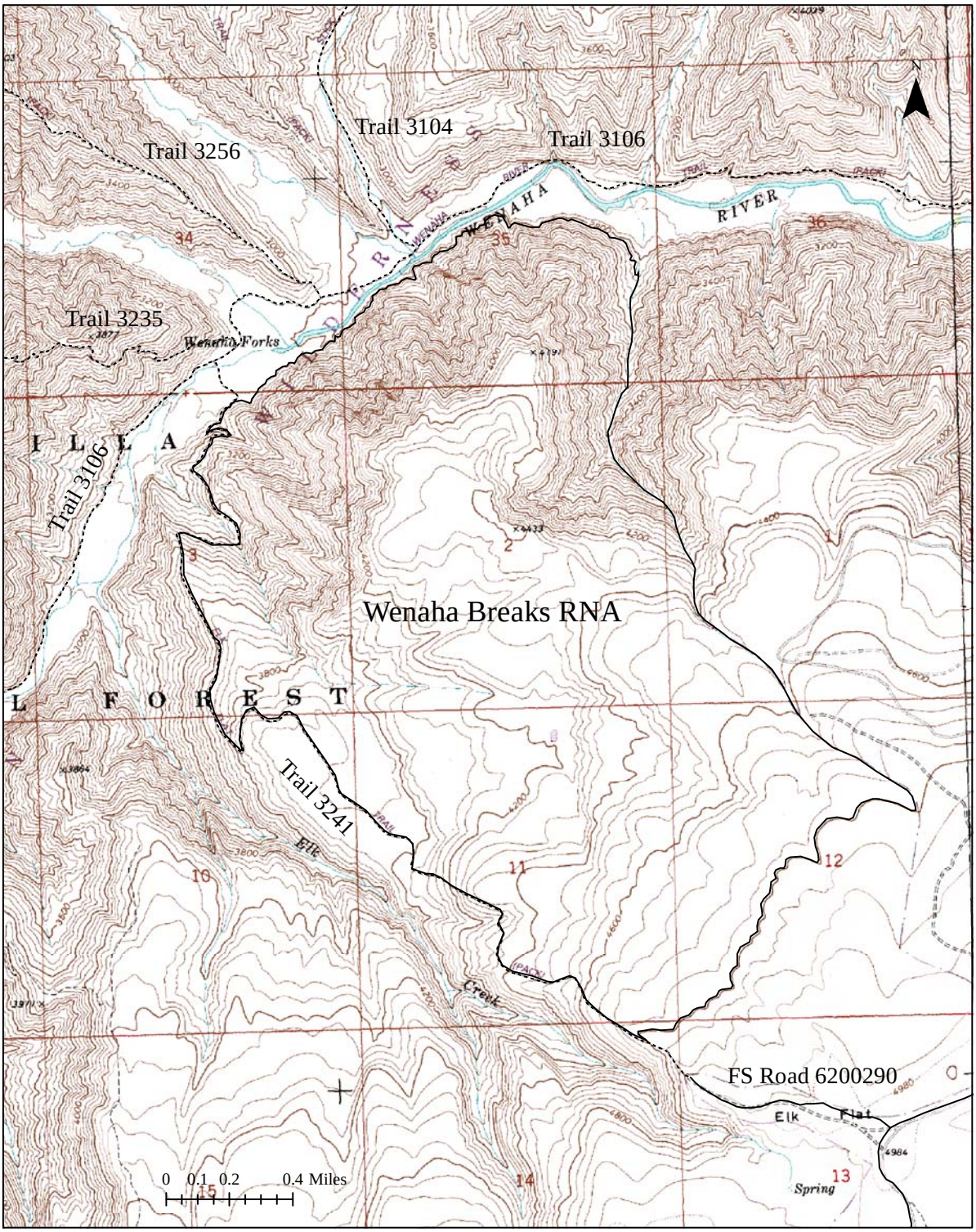

Figure 1 – Boundary of Wenaha Breaks Research Natural Area.

Purpose and Need for Action

The purpose is to formally change the status of the proposed Wenaha Breaks Research Natural Area to an established status. This change would require an amendment to the Forest Plan.

A need to designate this RNA has been identified to contribute to fill a "cell" need (or communities) in the Blue Mountains for several vegetation types: 1) mid-elevation ponds with aquatic beds and marshy shore; 2) grand-fir/twinflower; 3) grand fir/ big huckleberry; and 4) grand fir-Pacific yew.

RNA's are designated for research and educational opportunities, to maintain biological diversity on National Forest land, and are selected to complete a national network of ecological areas. Establishment of research natural areas has been sanctioned in the Code of Federal Regulations in Section 7 CFR 2.42, 36 CFR 251.23, and 36 CFR 219.25. 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. As stated in this guide, each RNA is designated based on three major objectives: 1) To preserve examples of all significant natural ecosystems for comparison with those areas influenced by humans; 2) to provide educational and research areas for ecological and environmental studies and monitoring; and 3) to preserve gene pools for typical and rare and endangered plants and animals.

The Wenaha Breaks area maintains all the qualities unique for RNA designation therefore the designation of the RNA would preserve an example of a significant natural ecosystem, would preserve gene pools for these community types, and provide an educational and research area for study of these unique ecosystems.

Proposed Action

The proposed action is to establish approximately a 1,900 acre parcel on National Forest System land as the Wenaha Breaks Research Natural Area as described in the Establishment Record (Ferriel, 2008). This parcel was proposed for establishment as a RNA in the 1990 Umatilla National Forest Land and Resource Management Plan (Forest Plan). Once established, a management plan would be developed for the Wenaha Breaks RNA to maintain or enhance the plant communities represented within this area. The proposed action and formal designation of the RNA by the Regional Forester would amend the Forest Plan.

Management Direction and Federal Laws

- **Umatilla Land and Resource Management Plan** :

  This document is tiered to the ***Umatilla Land and Resource Management Plan FEIS and Record of Decision (ROD),*** dated June 11, 1990, and all subsequent NEPA analysis for amendments, and the accompanying ***Land and Resource Management Plan (LRMP)*** **as amended (Forest Plan).** The Forest Plan guides all natural resource management activities and establishes management standards and guidelines for the Umatilla National Forest. It describes resource management practices, levels of resource production and management, and the availability and suitability of lands for resource management.

- **Management Area B1, Wilderness**

  Goal: Manage to preserve, protect, and improve the resources and values of the forest wildernesses, as directed by the Wilderness Act of 1964.

  Wilderness characteristics will be maintained in such a manner that ecosystems are unaffected by human manipulation and influences, and plants and animals develop and respond to natural forces.

  Natural ecological succession including natural fire will be allowed to occur without endangering adjacent lands. (FP, pages 4-138 to 4-143)

- **Management Area, D2, Research Natural Area**

  Goal: Preserve naturally occurring physical and biological units where natural conditions and processed are maintained.

  For an RNA(s) established in wilderness, management direction for wilderness will take precedence. (FP, pages 4-175 to 4-177).

- **National Environmental Policy Act (NEPA) of 1969 as amended**

Purposes of this Act are "*To declare a national policy which will encourage productive and enjoyable harmony between man and his environment, to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nations; and to establish a Council on Environmental Quality" (42 USC Sec. 4321).*" The law further states "*it is the continuing policy of the Federal Government, in cooperation, to use all practical means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of the present and future generation of Americans.*" This law essentially pertains to public disclosure and participation, environmental analysis, and documentation.

- **Wilderness Act of 1964**

In Sec. 2. (a) the Act states "*In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of wilderness.*" The Act further states in Sec. 4. (c) "*there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.*"

- **National Historic Preservation Act (NHPA) of 1966, as amended**

This Act requires Federal agencies to consult with American Indian Tribes, State and local groups before nonrenewable cultural resources, such as archaeological and historic structures, are damaged or destroyed. Section 106 of this Act requires Federal agencies to review the effect project proposals may have on cultural resources in the project area.

CHAPTER TWO

ALTERNATIVES

Introduction

This chapter discusses public involvement, issues and other concerns with the proposed action and how issues were addressed.

Scoping and Public Involvement

Public scoping was initiated with a letter dated February 9, 2001. The scoping letter was sent to the District mailing list of approximately 150 people. The letter announced initiation of the project and invited the public to comment on the proposed project. Letters were also sent to the Confederated Tribes of the Umatilla Indian Reservation and the Nez Perce Indian Tribe. Public comments are filed in the appendix of the Environmental Assessment. Notification of this proposed action was also published in the Pomeroy Ranger District Schedule of Proposed Actions starting with the spring 2003 edition.

Issue identification

Only one responder raised concerns during the scoping process about environmental effects to the proposed action:

- There should be no grazing in the wilderness or the RNA.
- There should be no commercial activities, including timber harvest, in the wilderness or RNA.

Alternatives

Alternative A, Proposed Action

This alternative would designate, in perpetuity, approximately 1,900 acres of National Forest land as the Wenaha Breaks Research Natural Area. Once established, a management plan specific to the Wenaha Breaks RNA would be written. The primary objective of RNA designation is to maintain the representative plant communities of the area. Because the proposed RNA is within designated wilderness, establishment impacts would be minimal. No forest products or minerals would be removed, livestock grazing patterns would not be changed, fire activity would be limited to active suppression efforts, off road vehicles would be excluded, and recreation use would be managed at a low intensity. Environment consequences disclosed in the Forest Plan Final Environmental Impact Statement, pages IV-101 through IV-104 and Appendix H, are still valid, and conditions and effects have not changed. The standards and guidelines for RNA's are described in the Forest Plan, pages 4-175 through 4-177.

Implementation of this alternative would require an amendment to the Forest Plan. The amendment for the Wenaha Breaks designation would replace the wording “candidate” with the words “have been identified and are managed as research management areas”.

Alternative B, No Action

Under this alternative, the Wenaha Breaks area proposed for RNA status would remain as a proposed RNA and continue to be protected from uses that would reduce its suitability for RNA designation. This management direction is listed in the Forest Plan, Pages 4-175 to 4-177

CHAPTER THREE

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

- ## Wilderness Values

This discussion will be limited to the concerns received during scoping.

Existing Condition

Grazing - Grazing of domestic livestock is permitted in the Wenaha-Tucannon Wilderness. Currently there are no active grazing allotments. Other allotments in the vicinity do not appear to provide any livestock use.

Timber Harvest – Timber harvest is not permitted in the wilderness area. The proposed RNA contains approximately 1600 acres of merchantable timber.

Environmental Consequences

Alternative A – Proposed Action

Grazing – Grazing of domestic livestock would not be permitted unless it is needed to establish or maintain a specific vegetation type. If livestock are found in the RNA, it may be necessary to install a protective fence if impacts are observed.

Timber Harvest – Timber harvest would not be permitted in the RNA. Because Wenaha Breaks was identified in the forest planning process as an RNA, its designation causes no withdrawal from the timber producing base.

Alternative B- No Action

Grazing – Without RNA designation, the Wenaha-Tucannon Wilderness designation remains, therefore, domestic livestock would be permitted.

Timber Harvest - Timber harvest would not permitted.

- ## Heritage Resources

Existing Condition

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

Environmental Consequences

Alternative A – Proposed Action

Because the proposed RNA is within designated wilderness, no effects to potential cultural resources are anticipated. The RNA designation complies with Section 106 of the National Historic Preservation Act.

Alternative B - No Action

Because the proposed RNA is within designated wilderness, no effects to potential cultural resources are anticipated.

- **Threatened and Endangered Species**

Existing Condition

There are no fish-bearing streams present in the proposed RNA. However, the North and South Forks of the Wenaha River join to form the main stem, which defines the northwest boundary of the proposed RNA. Flowing from the north, Beaver and Slick Ear Creeks enter the main stem Wenaha a quarter mile north along the RNA boundary. There are three threatened fish species associated with the RNA in the Wenaha River System. They are Columbia River bull trout (*Salvelinus confluentus*), Snake River Basin spring/summer Chinook salmon (*Onorhynchus tsawytscha*) and Snake River Basin steelhead (*O. mykiss*). As noted in the Establishment Record (Ferriel, 2008), the integrity of the RNA minimized soil erosion and maintains stream shade at the confluence of these four waterways.

Two threatened and endangered wildlife species potential habitat may occur in the proposed RNA: gray wolf (*Canis lupus*) and Canada lynx (*Lynx canadensis*).

There are no threatened, endangered or sensitive plant species.

Environmental Consequences

Alternative A – Proposed Action

RNA establishment would not result in any new or different consequences to the fish species associated with the proposed RNA, since a change in RNA status is not expected to change ongoing over-arching wilderness management direction, practices or goals as they are already affecting these species.

Since the Gray wolf and Canada lynx are not currently known to occur in the area and designation of the RNA would not affect the habitat, there would be a **no effect** to both species.

Alternative B- No Action

The area encompassing the proposed RNA would continue to be managed indefinitely to meet the requirements of the Wilderness Act. Wilderness management goals dictate that the Wilderness would primarily be affected by natural processes.

- **Recreation**

Existing Condition

Because the RNA is within designated wilderness, recreation is limited to non-motorized use. Although a trailhead skirts most of the RNA's west boundary, the vast majority of hikers stay on the Elk Flat Trail and do not enter the RNA. Recreation use is light and usually consists of big game hunting. There are no system roads or trails in the RNA.

Environmental Consequences

Alternative A – Proposed Action

Recreation activities and uses, including overnight camping, hunting and trapping, and pack saddle stock use would be discouraged, but permitted, unless such use threatens or interferes with the objectives of the RNA.

Alternative B- No Action

There would no change in the current recreation experience in the proposed RNA area.

Establishment Record for the Wenaha Breaks Research Natural Area within the Umatilla National Forest, Wallowa County, Oregon

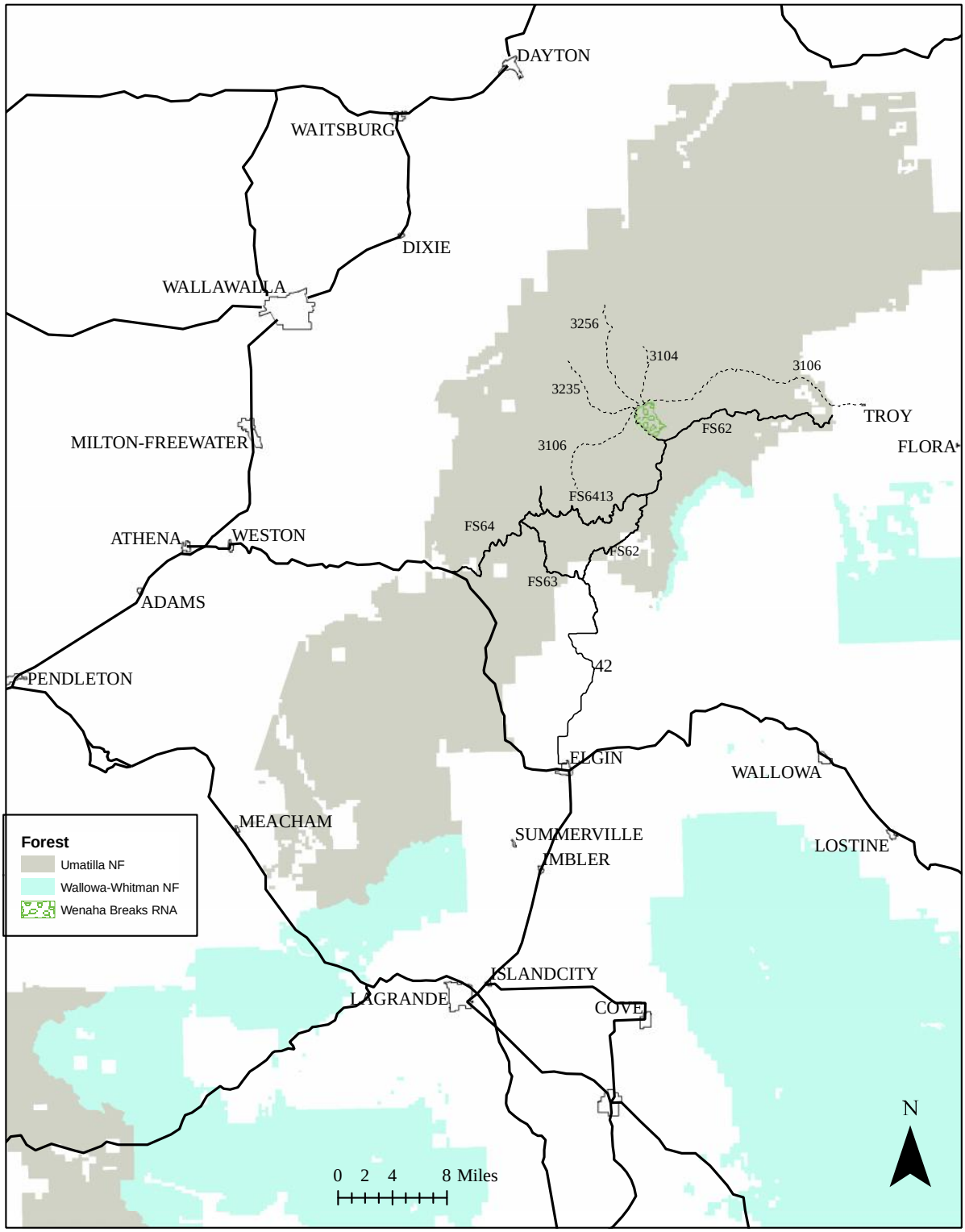

Figure 1. Location of Wenaha Breaks Research Natural Area. Map scale is 1:480,000

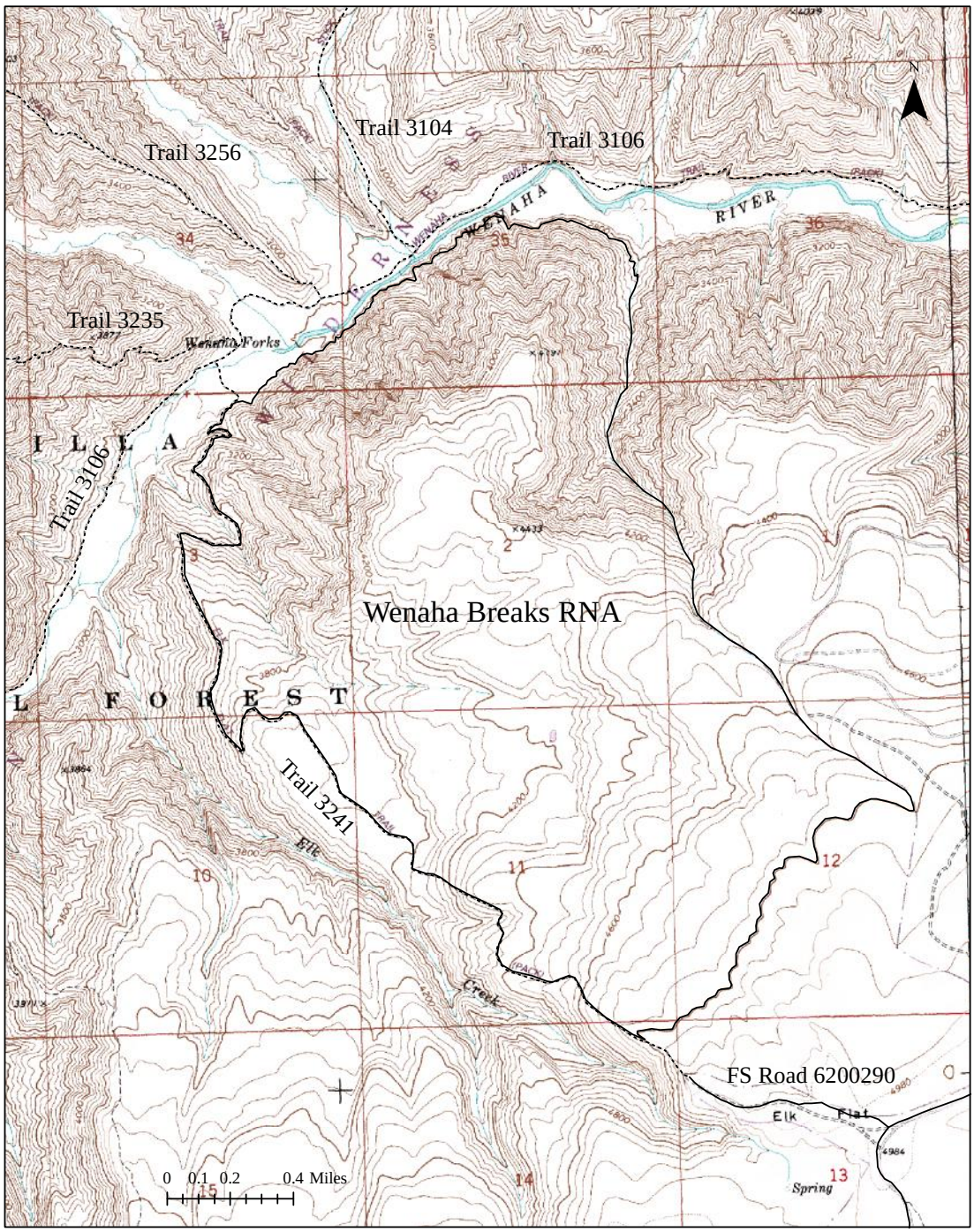

Figure 2. Boundary of Wenaha Breaks Research Natural Area. Map scale is 1:24,000

Legal Description

WENAHA BREAKS RESEARCH NATURAL AREA BOUNDARY DESCRIPTION

All bearings and distances shown in the following description are based on the Oregon State Plane coordinate grid system, North Zone, NAD 1927, and are included for descriptive purposes only. Sectional land boundaries; natural or semi-permanent features; and record bearing, distance and monuments as described in the description portion of this document will prevail.

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET (METERS)		DESCRIPTION
WENAHA FORKS MAP #1	1				A point in a small unnamed creek at elevation 2,840 feet, (NGVD 1929), within the NE1/4, SE1/4, section 35, T. 6 N., R. 40 E., W.M., Oregon. Latitude 45°57’12.87” North Longitude 117°46’14.04” West, NAD1927. Oregon grid coordinates, north zone: Y = 845,492 X = 2,694,130
		S 04°13' W	111	(33.8)	
	2	S 17°10' W	143	(43.7)	
	3	S 26°52' W	177	(53.9)	Ascend unnamed creek.
	4	S 06°03' W	97	(29.7)	
	5	S 02°30' E	178	(54.3)	
	6	S 09°37' E	117	(35.5)	
	7	S 05°57' E	159	(48.5)	
	8	S 03°31' W	184	(56.1)	
	9	S 14°04' W	186	(56.7)	
	10	S 08°28' W	152	(46.4)	
	11	S 02°29' E	198	(60.2)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	12				
		S 01°05' W	232	(70.6)	
	13				
		S 42°31' W	143	(43.6)	
	14				
		S 20°58' W	278	(84.8)	Ascend unnamed creek.
	15				
		S 16°54' W	276	(84.1)	
	16				
		S 22°08' W	127	(38.8)	
	17				
		S 05°51' E	164	(50.0)	
	18				
		S 17°55' E	145	(44.2)	
	19				
		S 16°31' E	159	(48.4)	
	20				
		S 39°22' E	169	(51.4)	
	21				
		S 46°06' E	559	(170.3)	
	22				
		S 57°33' E	370	(112.8)	
	23				
		S 41°35' E	199	(60.5)	
	24				
		S 31°06' E	121	(36.8)	
	25				
		S 09°50' E	151	(45.9)	
	26				
		S 18°48' E	206	(62.7)	
	27				
		S 21°43' E	219	(66.9)	
	28				
		S 34°06' E	221	(67.2)	
	29				
		S 22°48' E	139	(42.3)	
	30				
		S 07°41' W	191	(58.2)	
	31				
		S 01°20' W	145	(44.2)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET (METERS)		DESCRIPTION
WENAHA FORKS MAP #1	32				
		S 04°59' E	222	(67.6)	Ascend unnamed creek.
	33				
		S 19°36' E	197	(59.9)	
	34				Angle point number 79, Wenaha-Tucannon Wilderness boundary. A point in an unnamed creek at elevation 4,400 feet (NGVD 1929) monumented with a 5/8 inch iron rod with a 1 1/2 inch aluminum cap witnessed by two white fir bearing trees.
		S 43°40' E	154	(46.8)	
	35				
		S 55°15' E	151	(46.1)	Ascend unnamed creek.
	36				
		S 54°02' E	209	(63.8)	
	37				
		S 50°51' E	174	(53.0)	
	38				
		S 62°14' E	201	(61.2)	
	39				
		S 58°16' E	291	(88.8)	
	40				
		S 47°29' E	368	(112.1)	
	41				
		S 33°53' E	333	(101.5)	
	42				
		S 27°47' E	485	(147.8)	
	43				
		S 40°32' E	422	(128.7)	
	44				
		S 51°36' E	427	(130.1)	
	45				
		S 67°03' E	437	(133.3)	
	46				
		S 56°19' E	400	(121.9)	
	47				

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1		S 58°25' E	611	(186.1)	
	48	S 39°48' E	127	(38.8)	Ascend unnamed creek.
	49	S 16°31' E	179	(54.5)	
	50	S 09°27' E	64	(19.5)	
	51				A point in the unnamed creek at elevation 4,800 feet, (NGVD 1929).
		S 87°30' W	75	(22.9)	
	52	N 63°17' W	255	(77.6)	
	53	N 76°33' W	333	(101.5)	Along the 4,800 foot contour.
	54	N 86°48' W	96	(29.4)	
	55	S 69°33' W	198	(60.2)	
	56	S 42°31' W	122	(37.2)	
	57	S 20°15' W	171	(52.0)	
	58	S 62°45' W	73	(22.2)	
	59	N 79°30' W	203	(62.0)	
	60	S 80°48' W	174	(53.0)	
	61	S 44°12' W	244	(74.5)	
	62	S 15°57' W	145	(44.1)	
	63	S 08°24' E	148	(45.1)	
	64	S 21°40' E	124	(37.7)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	65				
		S 05°13' E	107	(32.5)	
	66				
		S 26°34' W	52	(15.9)	
	67				
		N 67°52' W	134	(40.9)	Along the 4,800 foot contour.
	68				
		N 72°21' W	162	(49.5)	
	69				
		S 85°52' W	178	(54.2)	
	70				
		S 60°57' W	80	(24.2)	
	71				
		S 05°38' W	108	(32.8)	
	72				
		S 29°31' W	48	(14.6)	
	73				
		N 79°57' W	47	(14.3)	
	74				
		S 68°04' W	92	(27.9)	
	75				
		S 24°06' W	57	(17.3)	
	76				
		S 15°02' E	94	(28.6)	
	77				
		S 53°00' W	99	(30.1)	
	78				
		S 06°02' W	103	(31.3)	
	79				
		S 08°08' W	83	(25.2)	
	80				
		S 44°03' W	133	(40.5)	
	81				
		S 30°25' W	103	(31.3)	
	82				
		S 07°04' E	127	(38.8)	
	83				
		S 06°53' E	66	(20.2)	
	84				
		S 42°30' W	101	(30.7)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	85				
		S 09°24' W	99	(30.1)	
	86				
		S 05°30' E	97	(29.5)	
	87				
		S 56°11' W	137	(41.7)	Along the 4,800 foot contour.
	88				
		S 13°02' W	95	(28.9)	
	89				
		S 58°47' W	180	(54.7)	
	90				
		S 25°09' W	120	(36.7)	
	91				
		S 01°01' E	198	(60.4)	
	92				
		S 57°46' W	82	(25.0)	
	93				
		S 33°46' W	94	(28.8)	
	94				
		S 04°59' E	117	(35.6)	
	95				
		S 21°56' E	92	(27.9)	
	96				
		S 24°04' W	57	(17.3)	
	97				
		S 81°48' W	153	(46.7)	
	98				
		S 65°42' W	55	(16.7)	
	99				
		S 26°53' W	93	(28.4)	
	100				
		S 65°42' W	137	(41.7)	
	101				
		S 39°48' W	76	(23.0)	
	102				
		S 18°32' W	71	(21.6)	
	103				
		S 80°23' W	123	(37.4)	
	104				
		S 62°29' W	84	(25.6)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	105				
		S 40°40' W	111	(34.0)	
	106				
		S 70°24' W	138	(42.1)	
	107				
		S 39°09' W	122	(37.3)	Along the 4,800 foot contour.
	108				
		S 25°16' W	109	(33.2)	
	109				
		S 86°07' W	208	(63.5)	
	110				
		N 82°00' W	139	(42.5)	
	111				
		S 78°03' W	154	(47.1)	
	112				
		S 84°20' W	92	(27.9)	
	113				
		S 03°52' W	46	(14.0)	
	114				
		S 54°07' E	155	(47.4)	
	115				
		S 46°13' E	18	(5.4)	
	116				A point 20 feet northerly of and perpendicular to the centerline of trail number 3241 at elevation 4,800 feet (NGVD 1929).
		N 65°56' W	236	(72.0)	
	117				
		N 58°48' W	208	(63.3)	
	118				
		N 58°27' W	321	(97.9)	Paralleling trail number 3241, 20 feet northeasterly of the centerline.
	119				
		N 50°51' W	259	(78.9)	
	120				
		N 46°09' W	194	(59.2)	
	121				
		N 22°02' W	212	(64.6)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	122				
		N 30°27' W	196	(59.8)	
	123				
		N 73°46' W	105	(32.0)	
	124				
		S 71°09' W	158	(48.1)	Paralleling trail number 3241, 20 feet northeasterly of the centerline.
	125				
		S 65°59' W	135	(41.2)	
	126				
		N 84°03' W	95	(28.9)	
	127				
		N 70°40' W	271	(82.7)	
	128				
		N 77°17' W	327	(99.8)	
	129				
		N 58°25' W	210	(63.9)	
	130				
		N 26°15' W	186	(56.8)	
	131				
		N 06°26' E	181	(55.3)	
	132				
		N 23°33' E	200	(60.9)	
	133				
		N 27°47' W	186	(56.8)	
	134				
		N 09°22' E	64	(19.4)	
	135				
		N 29°59' E	110	(33.6)	
	136				
		N 27°52' W	81	(24.7)	
	137				
		N 65°38' W	200	(61.0)	
	138				
		N 65°01' W	407	(123.9)	
	139				
		N 62°02' W	283	(86.3)	
	140				
		N 54°56' W	237	(72.4)	
	141				
		N 64°44' W	145	(44.2)	
	142				
		N 88°50' W	117	(35.6)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	143				
		N 71°00' W	250	(76.3)	
	144				
		N 06°32' E	201	(61.2)	
	145				
		N 02°49' W	211	(64.2)	Paralleling trail number 3241, 20 feet northeasterly of the centerline.
	146				
		N 43°17' W	157	(47.7)	
	147				
		N 78°40' W	278	(84.8)	
	148				
		N 60°51' W	105	(31.9)	
	149				
		N 45°54' W	186	(56.6)	
	150				
		N 41°11' W	279	(85.1)	
	151				
		N 55°16' W	266	(81.0)	
	152				
		N 56°27' W	229	(69.7)	
	153				
		N 30°55' W	83	(25.4)	
	154				
		N 14°51' W	237	(72.3)	
	155				
		N 33°38' W	324	(98.9)	
	156				
		N 34°53' W	445	(135.7)	
	157				
		N 35°25' W	145	(44.2)	
	158				
		N 27°47' W	260	(79.2)	
	159				
		N 60°28' W	148	(45.0)	
	160				
		S 87°13' W	92	(28.0)	
	161				
		S 46°42' W	144	(44.0)	
	162				
		S 82°45' W	162	(49.3)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET (METERS)		DESCRIPTION
WENAHA FORKS MAP #1	163				
		N 61°45' W	133	(40.6)	
	164				
		N 43°20' W	177	(54.0)	
	165				
		S 70°01' W	133	(40.4)	Paralleling trail number 3241, 20 feet northeasterly of the centerline.
	166				
		S 27°54' W	169	(51.7)	
	167				
		S 06°10' W	344	(104.7)	
	168				
		S 17°12' E	188	(57.3)	
	169				
		N 82°50' W	35	(10.6)	
	170				
		N 45°10' W	161	(49.0)	
	171				
		N 46°10' W	206	(62.9)	
	172				
		N 27°07' W	290	(88.4)	
	173				
		N 21°55' W	129	(39.2)	
	174				
		N 17°56' W	214	(65.4)	
	175				
		N 05°31' W	144	(43.9)	
	176				
		N 28°19' E	224	(68.3)	
	177				
		N 10°34' E	196	(59.8)	
	178				
		N 08°13' E	313	(95.5)	
	179				
		N 15°55' W	136	(41.5)	
	180				
		N 49°58' W	109	(33.3)	
	181				
		N 27°13' W	410	(125.0)	
	182				
		N 27°38' W	391	(119.0)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET (METERS)		DESCRIPTION
WENAHA FORKS MAP #1	183				
		N 23°55' W	352	(107.4)	
	184				
		N 01°15' W	345	(105.1)	
	185				
		N 11°38' W	229	(69.7)	Paralleling trail number 3241, 20 feet northeasterly of the centerline.
	186				
		N 14°12' W	125	(38.1)	
	187				
		N 83°01' E	83	(25.2)	
	188				
		S 69°34' E	237	(72.1)	
	189				
		S 63°59' E	275	(83.9)	
	190				
		N 88°43' E	467	(142.3)	
	191				
		N 01°43' E	184	(56.0)	
	192				
		N 19°36' W	183	(55.8)	
	193				
		N 53°34' W	191	(58.4)	
	194				
		N 56°36' W	193	(58.8)	
	195				
		N 31°43' W	126	(38.4)	
	196				
		N 18°38' W	286	(87.2)	
	197				
		N 32°48' W	207	(63.1)	
	198				
		N 54°37' W	171	(52.1)	
	199				
		N 09°10' W	55	(16.8)	
	200				
		N 51°04' E	147	(44.7)	
	201				
		N 39°54' E	123	(37.5)	
	202				
		N 19°54' E	133	(40.5)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	203				
		N 39°40' E	109	(33.1)	
	204				
		N 12°12' E	100	(30.4)	
	205				
		N 75°02' E	142	(43.2)	Paralleling trail number 3241, 20 feet northeasterly of the centerline.
	206				
		S 81°22' E	112	(34.1)	
	207				
		N 58°32' E	61	(18.7)	
	208				
		N 40°04' W	109	(33.3)	
	209				
		N 76°07' W	139	(42.4)	
	210				
		S 71°27' W	135	(41.2)	
	211				
		S 52°59' W	71	(21.7)	
	212				
		N 26°36' E	94	(28.6)	
	213				
		N 48°57' E	83	(25.3)	
	214				
		N 74°29' E	108	(33.0)	
	215				
		N 21°22' E	104	(31.7)	
	216				
		N 15°36' E	88	(26.7)	
	217				
		N 42°50' E	97	(29.6)	
	218				
		N 46°05' E	19	(5.7)	
	219				A point 20 feet northeasterly of and perpendicular to the centerline of trail number 3241 at elevation 2,840 feet (NGVD 1929).
		S 85°22' E	21	(6.5)	Along the 2,840 contour.

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WEHANA FORKS MAP #1	220				
		N 27°45' E	71	(21.5)	
	221				
		N 58°55' E	64	(19.4)	
	222				
		N 77°12' E	114	(34.6)	Along the 2,840 contour.
	223				
		S 69°33' E	143	(43.7)	
	224				
		N 60°54' E	23	(6.9)	
	225				
		N 14°38' E	69	(21.1)	
	226				
		N 38°31' E	155	(47.2)	
	227				
		N 10°04' E	47	(14.3)	
	228				
		N 52°49' E	80	(24.5)	
	229				
		N 56°32' E	59	(18.1)	
	230				
		N 24°05' E	68	(20.8)	
	231				
		N 53°49' E	92	(27.9)	
	232				
		N 75°24' E	73	(22.2)	
	233				
		N 08°08' E	83	(25.2)	
	234				
		N 57°46' E	123	(37.4)	
	235				
		N 76°54' E	83	(25.2)	
	236				
		N 24°05' E	57	(17.3)	
	237				
		S 88°25' E	71	(21.7)	
	238				
		S 61°31' E	30	(9.0)	
	239				
		N 26°19' E	116	(35.3)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	240				
		N 47°17' E	86	(26.4)	
	241				
		N 77°30' E	88	(26.7)	
	242				
		S 82°29' E	88	(26.7)	Along the 2,840 contour.
	243				
		N 48°13' E	72	(22.0)	
	244				
		N 80°23' E	123	(37.4)	
	245				
		N 38°07' E	94	(28.5)	
	246				
		N 44°37' E	97	(29.6)	
	247				
		S 85°21' E	82	(25.0)	
	248				
		N 03°51' E	92	(28.0)	
	249				
		S 65°56' E	45	(13.8)	
	250				
		N 73°29' E	42	(12.8)	
	251				
		N 21°28' E	100	(30.5)	
	252				
		N 49°39' E	58	(17.7)	
	253				
		N 71°07' E	90	(27.4)	
	254				
		N 46°19' E	54	(16.5)	
	255				
		N 53°50' E	55	(16.7)	
	256				
		N 2°30' W	86	(26.3)	
	257				
		N 53°49' E	92	(27.9)	
	258				
		N 62°30' E	84	(25.6)	
	259				
		N 24°04' E	68	(20.8)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	260				
		N 67°52' E	75	(23.0)	
	261				
		N 14°37' E	69	(21.1)	
	262				
		N 42°31' E	50	(15.3)	Along the 2,840 contour.
	263				
		N 06°35' W	71	(21.7)	
	264				
		N 52°48' E	80	(24.5)	
	265				
		N 45°00' E	83	(25.2)	
	266				
		N 81°48' E	102	(31.1)	
	267				
		N 35°23' E	58	(17.6)	
	268				
		N 74°42' E	115	(34.9)	
	269				
		N 79°23' E	72	(21.9)	
	270				
		N 45°32' E	68	(20.8)	
	271				
		N 62°18' E	95	(29.1)	
	272				
		S 77°25' E	137	(41.7)	
	273				
		N 42°31' E	29	(8.8)	
	274				
		N 18°12' W	169	(51.5)	
	275				
		N 28°28' E	59	(18.0)	
	276				
		N 87°30' E	76	(23.2)	
	277				
		N 51°29' E	69	(21.1)	
	278				
		N 87°31' E	71	(21.7)	
	279				
		N 83°55' E	81	(24.8)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	280				
		N 09°37' E	73	(22.2)	
	281				
		N 36°09' E	65	(19.8)	
	282				
		N 69°05' E	48	(14.7)	Along the 2,840 contour.
	283				
		N 48°50' E	65	(19.8)	
	284				
		N 80°40' E	128	(39.0)	
	285				
		N 55°30' E	48	(14.6)	
	286				
		N 64°53' E	66	(20.1)	
	287				
		N 45°53' E	61	(18.6)	
	288				
		N 00°12' W	127	(38.7)	
	289				
		N 78°32' E	98	(29.8)	
	290				
		N 02°42' E	56	(17.1)	
	291				
		N 60°58' E	45	(13.8)	
	292				
		N 86°44' E	112	(34.1)	
	293				
		N 55°01' E	48	(14.6)	
	294				
		N 84°20' E	66	(20.2)	
	295				
		N 35°05' E	60	(18.4)	
	296				
		N 75°38' E	72	(21.8)	
	297				
		N 21°29' E	73	(22.1)	
	298				
		N 48°50' E	94	(28.8)	
	299				
		N 66°08' E	91	(27.7)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET	(METERS)	DESCRIPTION
WENAHA FORKS MAP #1	300				
		S 68°52' E	64	(19.6)	
	301				
		S 85°47' E	63	(19.2)	
	302				
		S 32°02' E	127	(38.7)	Along the 2,840 contour.
	303				
		S 24°44' E	88	(26.7)	
	304				
		N 80°24' E	30	(9.1)	
	305				
		N 27°15' E	59	(18.1)	
	306				
		N 60°56' E	58	(17.6)	
	307				
		S 74°46' E	278	(84.9)	
	308				
		N 89°04' E	136	(41.6)	
	309				
		N 34°55' E	79	(24.0)	
	310				
		N 71°15' E	92	(28.1)	
	311				
		N 73°14' E	209	(63.7)	
	312				
		S 83°31' E	71	(21.6)	
	313				
		S 65°55' E	91	(27.6)	
	314				
		N 66°56' E	63	(19.2)	
	315				
		S 69°46' E	172	(52.3)	
	316				
		S 65°25' E	186	(56.7)	
	317				
		S 81°10' E	113	(34.3)	
	318				
		S 61°44' E	180	(54.9)	
	319				
		S 31°33' E	76	(23.1)	

QUAD SHEET NAME	ANGLE POINT	BEARING	DISTANCE FEET (METERS)		DESCRIPTION
WENAHA FORKS MAP #1	320				
		S 85°22' E	89	(27.2)	
	321				
		S 75°30' E	139	(42.3)	
	322				
		S 43°41' E	78	(23.9)	Along the 2,840 contour.
	323				
		S 19°28' E	139	(42.3)	
	324				
		S 33°28' E	86	(26.2)	
	325				
		S 24°05' W	66	(20.1)	
	326				
		S 47°30' E	26	(7.9)	
	327				
		N 87°30' E	55	(16.8)	
	328				
		S 38°00' E	32	(9.7)	
	329				
		S 18°32' W	51	(15.6)	
	330				
		S 24°04' W	33	(10.0)	
	331				
		S 13°47' E	56	(17.2)	
	332				
		S 07°42' E	81	(24.8)	
	333				
		S 86°45' E	37	(11.3)	
	334				
		N 29°31' E	32	(9.9)	
	1				Point of Beginning.

SIGNATURE PAGE

for

RESEARCH NATURAL AREA ESTABLISHMENT RECORD

Wenaha Breaks Research Natural Area

Umatilla 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, Establishment Record Content, in arriving at this recommendation.

Prepared by_____Date _____
Jenifer Ferriel, Associate Area Ecologist, Wallowa-Whitman National Forest

Recommended by_____ Date_____
Monte Fujishin, District Ranger, Pomeroy Ranger District

Recommended by_____ Date_____
Kevin Martin, Forest Supervisor, Umatilla National Forest

Concurrence of_____ Date_____
Bov Eav, Station Director, Pacific Northwest Research Station

DESIGNATION ORDER

By virtue of the authority vested in me by the Secretary of Agriculture under regulations 7 CFR 2.60(a) and 36 CFR 251.23, this is my Designation Order to establish the Wenaha Breaks Research Natural Area. The Wenaha Breaks Research Natural Area shall be comprised of lands described in the section of the Establishment Record entitled "Location".

Regional Forester John Butruille recommended the establishment of the Wenaha Breaks Research Natural Area in the Umatilla National Forest Land and Resource Management Plan dated May 25, 1990 which is incorporated into this document by reference. That recommendation was the result of an analysis of the factors listed in 36 CFR 219.2 and Forest Service Manual 4063.41. The results of the Regional Forester's analysis are documented in the Final Environmental Impact Statement for the Umatilla National Forest Land and Resource Management Plan and the Establishment Record for the Wenaha Breaks Research Natural Area which are available to the public.

The Wenaha Breaks Research Natural Area will be managed in compliance with all relevant laws, regulations and Manual direction regarding Research Natural Areas. The Wenaha Breaks Research Natural Area will be administered in accordance with the management direction identified in the Establishment Record. The Umatilla National Forest Land and Resource Management Plan is hereby amended to be consistent with the management direction identified in the Establishment Record and this Designation Order. This direction will remain in effect unless amended pursuant to 36 CFR 219.8. This is a non-significant amendment of the Umatilla National Forest Land and Resource Management Plan.

Based on the Environmental Analysis documented in the Umatilla National Forest Land and Resource Management Plan, the Environmental Impact Statement, and the Establishment Record, I find that designation of the Wenaha Breaks Research Natural Area is not a major Federal action significantly affecting the quality of the human environment.

The Forest Supervisor of the Umatilla 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.

_____ _____

Linda Goodman, Regional Forester Date

ESTABLISHMENT RECORD FOR
WENAHA BREAKS RESEARCH NATURAL AREA
WITHIN UMATILLA NATIONAL FOREST, WALLOWA COUNTY, OREGON

A. INTRODUCTION

Wenaha Breaks Research Natural Area (RNA) is a relatively natural and unmanipulated expanse of public land administered by the Umatilla National Forest. It consists of a variety of forests, woodlands, and wetlands including the one of the best examples of closed-canopy grand fir forest on the entire Columbia Plateau. The southern half of the RNA is a gently sloping tableland dominated by grand fir. The northern half is a steep north-facing slope complex (Wenaha Breaks) characterized by a mosaic of woodlands and shrub lands. Woodlands consist of Douglas-fir with pinegrass and ninebark common in the under story. Shrub lands support significant snowberry and ninebark. The tableland is complimented with numerous small sedge wetlands and ponds.

The RNA is entirely within the Congressionally designated Wenaha – Tucannon Wilderness Area. The Wenaha Breaks area has long been recognized for its diverse vegetation (correspondence on file with Area 3 Ecology, Baker City, OR). Wenaha Breaks was included as a proposed RNA in the 1990 Umatilla Land and Resources Management plan under the name Elk Flats-Wenaha Breaks proposed RNA. The name was changed to Wenaha Breaks RNA to avoid confusion with another proposed RNA on the Umatilla NF, named Elk Flats Meadow. The area of Wenaha Breaks RNA has been increased slightly to facilitate mapping by moving the west boundary to correspond with Elk Flat Trail #3241 (Figure 2).

B. JUSTIFICATION

STATEMENT

The Wenaha Breaks site primarily fulfills an RNA need for a mesic grand fir-dominated forest type in the Blue Mountains. It is the one of the best of known examples of closed-canopy forest on the entire Columbia Plateau. It has been identified as a cell need in the Blue Mountains for several vegetation types (Oregon Natural Heritage Program, 2003) listed here:

- Mid-elevation pond, with aquatic beds and marshy shore
- Grand fir / twinflower forest
- Grand fir / big huckleberry forest
- Grand fir / Pacific yew forest

PRINCIPAL DISTINGUISHING FEATURES

Mesic Grand Fir Forests: A diversity of grand fir (*Abies grandis*) forest types is supported in the RNA with varying age classes and under story composition. Old-growth stands with characteristic multi-storied vegetation are an important component of the

landscape. Younger stands tend to be more closed-canopied. The abundance and composition of under story species varies with stand age, density and physical factors. Common flora includes big huckleberry (*Vaccinium membranaceum*), Oregon boxwood (*Pachistima myrsinites*), queen's cup (*Clintonia uniflora*), and twinflower (*Linnaea borealis*). At very moist sites, Pacific yew (*Taxus brevifolia*) is conspicuous.

Douglas-fir Forests: Douglas-fir-dominated stands are restricted to the northern portion of the RNA in the break lands characterized by steep north-facing slopes which rise above the Wenaha River. Mallow ninebark (*Physocarpus malvaceus*) is a predominant shrub, especially along the rocky ledges and outcroppings. Pine grass (*Calamagrostis rubescens*) forms an extensive carpet at less rocky sites.

Mallow Ninebark – Common Snowberry Shrub lands: Occurring in a mosaic with Douglas-fir forests, these shrub lands cling to the steep north-facing slopes above the Wenaha River. Mallow ninebark tends to form extensive cover with lesser amounts of common snowberry (*Symphoricarpos albus*).

Lacustrine Wetlands: Numerous small ponds are scattered among the extensive grand fir forests. These sites are poorly drained small basins which support seasonally flooded margins. Bladder sedge (*Carex utriculata*) is the predominant species, usually forming extensive pure stands in the saturated muck. Patches of tall manna grass (*Glyceria elata*) and Scouler's willow (*Salix scouleriana*) are also common. Typically, mountain alder (*Alnus viridis ssp. sinuata*), black cottonwood (*Populus balsamifera ssp. trichocarpa*), and quaking aspen (*Populus tremuloides*) are found on the outer margins of these wetlands.

OBJECTIVE

The central objective of the RNA is to provide an area of undisturbed (by humans) native vegetation for study and monitoring. This RNA will provide a reference for measuring long-term ecological changes. It will also serve as a baseline (control site) for determining effects of management based on comparisons with similar sites which have been, and will continue to be modified by human use.

C. LAND MANAGEMENT PLANNING

Wenaha Breaks RNA was proposed as a candidate RNA by the Umatilla 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 Umatilla National Forest (USDA 1990a) and the Forest Plan (USDA 1990b).

D. MANAGEMENT PRESCRIPTION

Management of the Wenaha Breaks RNA will be directed towards maintaining natural ecological processes and conditions. Therefore, human activities that disturb or modify conditions, as well as interfere with natural processes, should be avoided.

Wenaha Breaks RNA is included in the Umatilla National Forest Plan for Management Area D2, Research Natural Areas (USDA Forest Service 1990b). Standards and guidelines for management of the Management Area are described in the Forest Plan.

VEGETATION MANAGEMENT

Standards and guidelines for RNAs, Management Area D2, address vegetation management under several different headings (USDA Forest Service 1990b). The overall management direction for all RNAs is to preserve the naturally occurring physical and biological processes at the site. No scheduled timber harvest will occur in the natural area and firewood cutting will be prohibited. Because Wenaha Breaks RNA is wholly within the Wenaha-Tuccanon Wilderness Area, management for the RNA must also meet Wilderness Area management standards.

The decision to treat insect and disease outbreaks will be made on a case-by-case basis with non-native pests being of highest priority. Where pest management activities are prescribed, they shall be as specific as possible and induce minimal impact to other components of the ecosystem.

TRANSPORTATION PLAN

No major roads occur in the RNA nor are any planned for this area. The RNA is located within the Wilderness Area where roads are not compatible with wilderness goals. There is at least one old foot trail within the RNA which is no longer maintained. The Elk Flat Trail (#3241) occurs immediately adjacent to, but outside the RNA's west boundary. Several trees have been cut and some litter is apparent in the RNA along this corridor, especially near the trailhead. However, these impacts are generally insignificant and unless impacts increase, there is no need to restrict access.

FENCES AND PROTECTIVE BARRIERS

Fencing for livestock does not exist along the boundaries of the RNA. Livestock use does not occur within the RNA. There are no signs at the site denoting the presence of the RNA.

E. USE OR CONTROL OF FIRE AND GRAZING

Lightning-ignited fires will be allowed to burn in the RNA when they comply with the management prescriptions set for such fires. Prescribed management-ignited fires will be used only in conjunction with approved research projects or when needed to meet RNA management goals for vegetation, natural communities and wildlife habitat. Fire suppression will use methods and equipment that will minimize site disturbance to the special features of the area. The use of prescribed fire in the RNA must also meet Wilderness Area standards as well. Livestock grazing has not been used as a technique to maintain ecological conditions in this RNA.

F. APPENDICES

Documentation for natural diversity elements discussed above can be found in FEIS Land and Resource management plan, Umatilla National Forest in Appendix H, Table H-2, and pages H-3 to H-8. Cells represented by Wenaha Breaks (called Elk Flats-Wenaha Breaks) are documented in the 2003 Oregon Natural Heritage Plan, pages 119-126.

ECOLOGICAL EVALUATION

A. PHYSICAL SITE DESCRIPTION AND CLIMATIC CONDITIONS

LOCATION

The RNA is located in the Wenaha-Tucannon Wilderness Area on the Umatilla National Forest in Wallowa County, Oregon (Figure 1). The site's center is at approximately latitude 45° 56' 15" north and longitude 117° 47' 00" west. The 1900 acre (769 ha) natural area lies within Sections 1,2,3, and 4 of Township 5N, Range 40E and also within Sections 34 and 35 of Township 6N, Range 40E. This is east of the Willamette Meridian, in Wallowa County, Oregon.

AREA

The total area for the Wenaha Breaks RNA is approximately 1900 acres (769 ha).

ELEVATION RANGE

The lowest point of the RNA is near the banks of the Wenaha River at the RNA's northern boundary which is 2780 feet (845 m). The southern boundary, near the Elk Flat Trailhead, is the highest point – 4800 feet (1459 m).

ACCESS

The RNA is accessed by Forest Service Road 62. This improved gravel road stretches from Troy, Oregon approximately 20 miles to a short spur road (6200290) which leads about 0.5 mile to the cul-de-sac at the Elk Flat Trailhead. From the trailhead, the RNA is a short walk due north several hundred feet.

Access can also be gained from Elgin, OR via County Road 42 to west of Palmer Junction, then Forest Service Road 63 for about six miles until the intersection with Forest Service Road 62, which leads to Elk Flat spur road. Alternately, from Pendleton, State Route 11 leads to the intersection with State Route 204 near Weston. This highway leads to Tollgate where Forest Service Road 64 provides a route to Jubilee Lake and Forest Service Road 6413 which intersects Forest Service Road 62 about 12 miles southwest of Elk Flat.

Access from the North is limited to several trails within the Wenaha – Tucannon Wilderness. From the north, the Sawtooth (#3256), Twin Buttes (#3104), and Indian (#3235) Trails end at the Wenaha River Trail (#3106) directly across the river from the RNA. The Wenaha River Trail is the primary route within the Wilderness and intersects the Elk Flat Trail (#3241) several hundred feet from the RNA's northwest boundary. Elk Flat Trail forms the west boundary for the RNA.

CLIMATIC DATA

Most precipitation falls as snow during the winter with significant rains often falling during the spring as well. Summers are characterized by warm. sunny weather with afternoon and evening thunderstorms, especially during July and August, which may be accompanied by light rains. Summer winds are predominantly from the northwest and are usually light to moderate. East winds may occur in the fall and spring, blowing at higher velocities and causing drying conditions that enhance the fire hazard for the season.

The recording NOAA weather station that most closely duplicates conditions in the RNA and contains complete yearly records is located at Minam, 19 miles (30 km) to the south of the RNA. Representing local conditions at 3500 feet (1067 m) elevation, Minam should be a fair approximation with slightly less snow depth / duration and higher summer temperatures than the RNA. The station receives an annual precipitation of 27.18 inches (69.00 cm) and the mean annual temperature is 41.7 ˚F (6 ˚C). The average total snowfall is 77.8 inches (197.6 cm). Summer high temperatures regularly reach into the high 80's F, while winter lows often dip into the 20's F or lower. The monthly climatic data for Minam averaged over the past 30 years is illustrated below (National Oceanographic and Atmospheric Administration 2001).

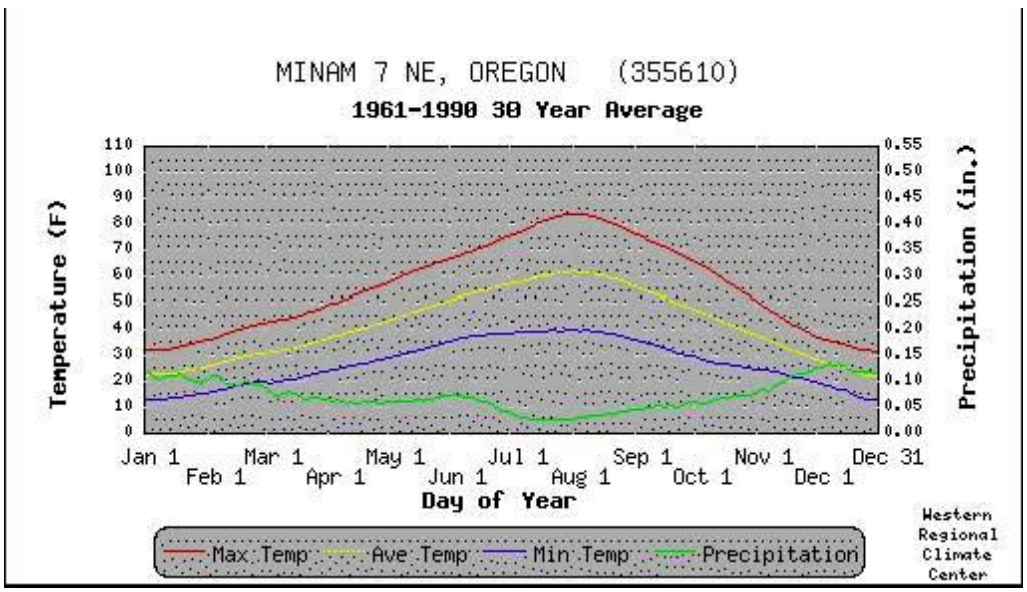

Figure 3a. Climate Summary Minam, OR during period 1961 – 1990 (NOAA 2001).

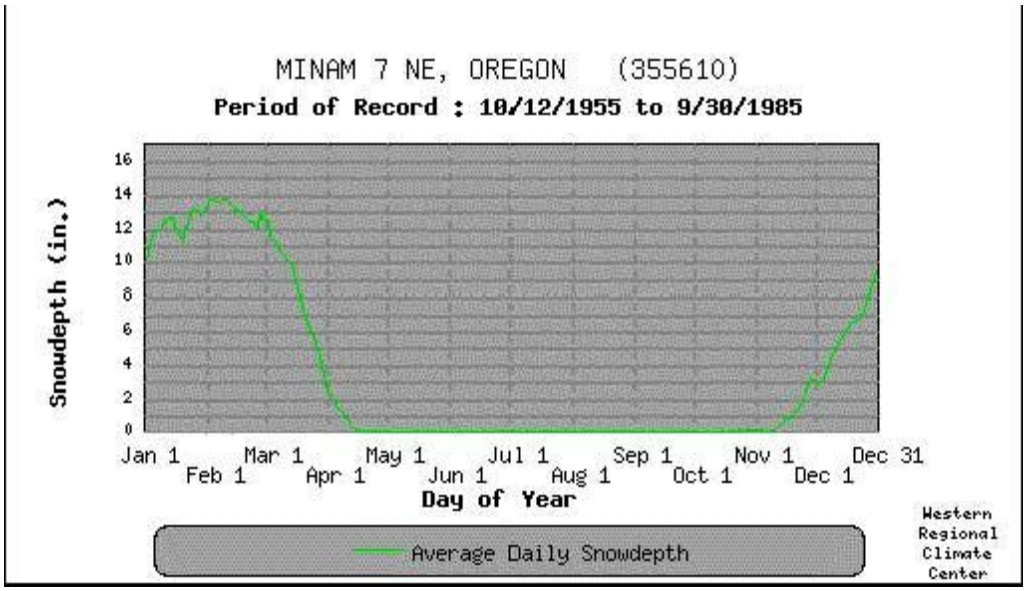

Figure 3b. Average Daily Snow depth for Minam, OR during 1955 – 1985 (NOAA 2001).

B. ECOLOGICAL DESCRIPTION

ECOREGION

Wenaha Breaks RNA is situated in the Dry Domain, Temperate Steppe Division/ Temperate Steppe Regime Mountains, Middle Rocky Mountain Steppe-Coniferous Forest-Alpine Meadow Province (M332), Blue Mountains Section (Bailey 1994).

The Blue Mountain Section corresponds to the Blue Mountain Ecoregion, where the RNA falls within the Mesic Forest Zone (Clarke and Bryce 1997).

Wenaha Breaks is within the Dry Forest/Basic Igneous Rocks/Canyons (218) and Moist Forest/ Lacustrine Interlay/ Landslide (144) Land Type Associations. This classification incorporates potential natural vegetation, geology groups and landforms (Sasich 2006).

VEGETATION TYPES

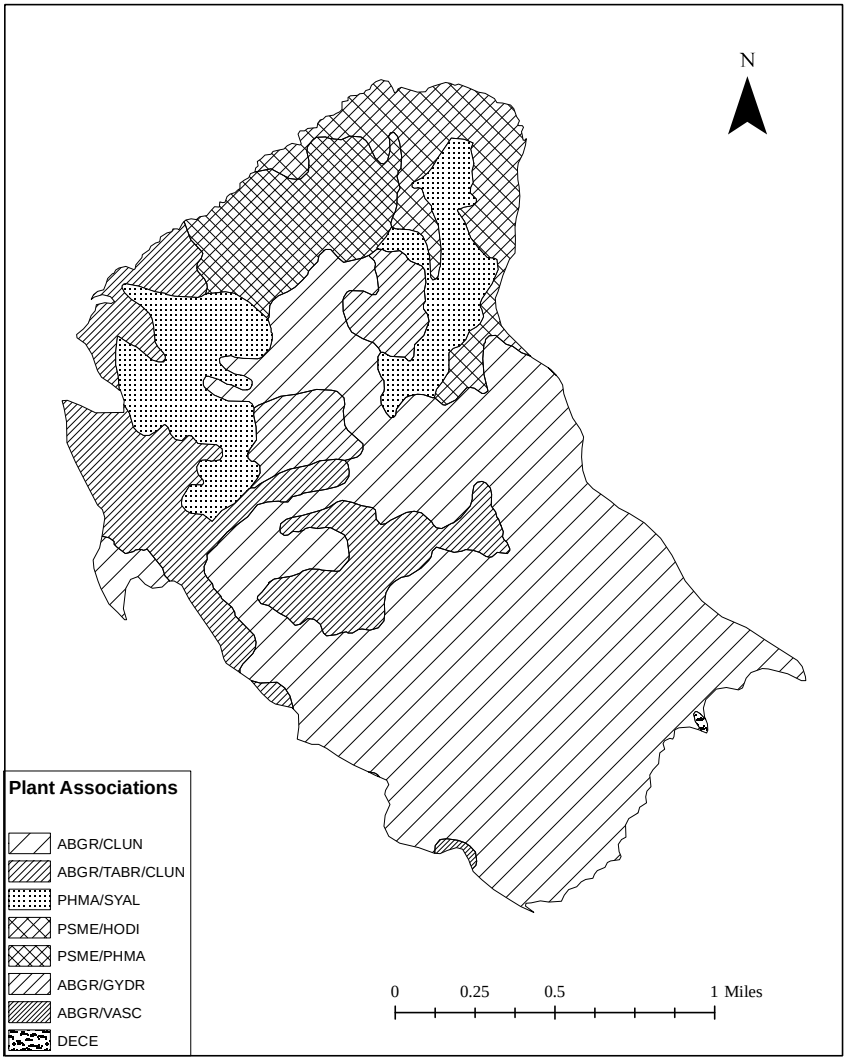

Figure 4. Plant association of Wenaha Breaks Research Natural Area. Potential natural vegetation (plant associations) within the RNA have been classified and mapped using the classification of Johnson and Simon (1987) for uplands and Crowe and Clausnitzer (1997) for wetlands and riparian areas. A map showing plant associations for Wenaha Breaks RNA and the calculation of acreage for plant associations represented in the RNA

Plant Association	**Plant Association acronym**	**Acres**
Abies Grandis/ Clintonia uniflora	ABGR/CLUN	1088
Abies grandis/ Taxus brevifolia/ Clintonia uniflora	ABGR/TABR/CLUN	294
Physocarpus malvaceus/ Symphoricarpos alba	PHMA/SYAL	215
Pseudotsuga menziesii/ Holodiscus discolor	PSME/HODI	148
Pseudotsuga menziesii/ Physocarpus malvaceus	PSME/PHMA	138
Abies grandis/ Gymnocarpium dryopteris	ABGR/GYDR	83
Abies grandis/ Vaccinium scoparum	ABGR/VASC	3
Deschampsia cespitosa	DECE	1
	Total Acres	1970

Table 1. Plant Associations (Johnson and Simon 1987), based on potential vegetation

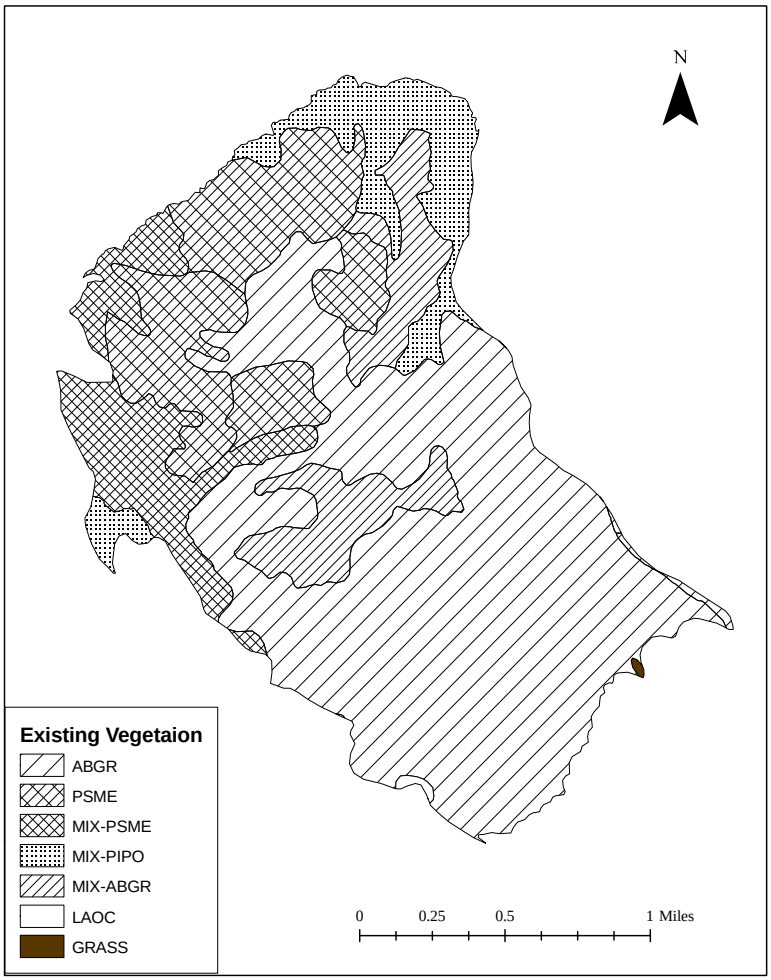

Figure 5. Existing Vegetation of Wenaha Breaks RNA. The spatial calculations of vegetation types are based on the digital Umatilla National Forest Service Existing Vegetation map coverage. Estimates are also based on field reconnaissance performed by the Oregon Natural Heritage Program as required to write this report. Altogether, the vegetation of this RNA corresponds with the National Vegetation Classification System at the floristic classification level of alliance (Grossman, et al., 1998).

Cover	Cover Acronym	Structure	Acres
Abies Grandis	ABGR	Stem exclusion, closed canopy	1064
Pseudotsuga menziesii	PSME	Stem exclusion, open canopy	266
Mixed conifer-Pseudotsuga menziesii	MIX-PSME	Under story	196
Mixed conifer-Ponderosa Pine	MIX-PIPO	Young forest multistory	167
Mixed conifer- Abies Grandis	MIX-ABGR	Young forest multistory	98
Mixed conifer- Abies Grandis	MIX-ABGR	Stem exclusion	86
Pseudotsuga menziesii	PSME	Old forest multistory	83
Abies Grandis	ABGR	Old forest multistory	6
Larix occidentalis	LAOC	Stem exclusion, closed canopy	3
Grass	GRASS	non-forest	1
		Total Acres	1971

Table 2. Existing vegetation of Wenaha Breaks RNA by cover and structure class.

DESCRIPTION OF VALUES

The area was proposed to represent a large expanse that had been mapped as grand fir/big huckleberry. In addition to big huckleberry –dominated communities, a substantial area was found with extensive seepages and ponds surrounded by fine stands of Sitka alder and Pacific yew. Mesic components in the herbaceous level were meadow rue, false Solomon's seal, bead lily, trail plant, Columbia brome, twinflower, fairy bells, and foamflower (refer to Table 3 for Latin names).

Ponds and elk wallows were found on the area as well. Grazing by domestic livestock has apparently been eliminated with the Wenaha-Tucannon Wilderness boundary fence. No evidence was seen of domestic use. Use by big game was surprisingly light. Several wallows had not been used by elk.

The flora of Wenaha Breaks RNA best represents the plant communities listed below within the Blue Mountain Ecoregion.

- Mid-elevation pond, with aquatic beds and marshy shore
- Grand fir / twinflower forest
- Grand fir / big huckleberry forest
- Grand fir / Pacific yew forest

Other cells that are represented are

- Lodgepole pine/big huckleberry
- Tufted hair grass meadow

The following flora (Table 3) and fauna (Table 4) lists illustrate the diversity represented by this RNA. Because of different habitat parameters between the communities (e.g. slope, soil, aspect, moisture availability), many species are restricted to only one or two communities.

The RNA’s flora has not been exhaustively sampled, however, surveys have been made by personnel of the Umatilla National Forest and the Oregon Natural Heritage Program. The Forest Service Area Ecologist has also documented taxa within several survey plots. These three sources provide the list of flora in Table 3.

There have been no inventories to determine the overall richness of fauna in the RNA. A list of potential wildlife species has been compiled by staff of the Umatilla National Forest and is provided here. Many of these potential species may only travel through the RNA and not stay long.

Table 3. Flora List. Species nomenclature follows the USDA Plants Database.

Scientific Name	Common Name
Trees	
Abies grandis	grand fir
Acer glabrum var. douglasii	mountain maple
Larix occidentalis	western larch
Picea engelmannii	Engelmann Spruce
Pinus contorta	lodgepole pine
Pinus monticola	western white pine
Pinus ponderosa	ponderosa pine
Populus balsamifera ssp. trichocarpa	black cottonwood
Populus tremuloides	quaking aspen
Pseudotsuga menziesii	Douglas-fir
Taxus brevifolia	Pacific yew
Shrubs	
Alnus viridis ssp. sinuata	thin-leaved alder
Amelanchier alnifolia var. alnifolia	western serviceberry
Ceanothus velutinus	snowbrush
Chimaphila menziesii	little pipsissewa
Chimaphila umbellata	prince's pine
Crataegus douglasii	black hawthorn
Holodiscus discolor	creambush ocean-spray
Linnaea borealis	twinflower
Lonicera ciliosa	orange honeysuckle
Lonicera involucrata	bearberry honeysuckle
Lonicera utahensis	Rocky Mtn. Honeysuckle
Mahonia repens	Oregon-grape
Pachistima myrsinites	Oregon boxwood
Physocarpus malvaceus	mallow ninebark
Rhamnus alnifolia	alderleaf buckthorn
Ribes hudsonianum	western black currant
Ribes lacustre	prickly currant
Rosa gymnocarpa	baldhip rose
Rosa woodsii	Wood's rose
Rubus parviflorus	thimbleberry
Salix scouleriana	Scouler's willow
Symphoricarpos albus	common snowberry
Vaccinium membranaceum	big huckleberry
Forbs	
Achillea millefolium	common yarrow
Aconitum columbianum	Columbia monkshood
Actaea rubra	wild red baneberry
Adenocaulon bicolor	pathfinder
Allium fibrillum	fringed onion
Anemone piperi	Piper's anemone
Angelica arguta	sharptooth angelica
Antennaria luzuloides	woodrush pussy-toes
Apocynum androsaemifolium	spreading dogbane
Aquilegia formosa	red columbine
Arnica cordifolia	hearleaf arnica

Asarum caudatum	longtail wildginger
Aster integrifolius	sticky aster
Athyrium filix-femina	lady fern
Camassia quamash	common camas
Camerion angustifolium var. circumvagum	fireweed
Circea alpina	enchanter's nightshade
Cirsium vulgare	bull thistle
Clintonia uniflora	queen's cup
Collomia grandiflora	large-flowered collomia
Corallorhiza maculata	coralroot
Cypripedium montanum	Mt. lady's-slipper
Disporum hookeri	drops of gold
Disporum trachycarpum	fairy-bells
Epilobium brachycarpum	tall annual willowherb
Eurybia conspicua (Aster conspicuus)	showy aster
Floerkea proserpinacoides	false mermaidweed
Fragaria vesca	woods strawberry
Fragaria virginiana	blueleaf strawberry
Galium trifidum	small bedstraw
Galium triflorum	fragrant bedstraw
Geum macrophyllum	large-leaved avens
Goodyera oblongifolia	rattlesnake plantain
Gymnocarpium dryopteris	oakfern
Hieracium albiflorum	white-flowered hawkweed
Hieracium cynoglossoides	houndstongue hawkweed
Lemna minor	duckweed
Leucanthemum vulgare	oxeye daisy
Linanthus harknessii	Harkness' Linanthes
Listera cordata	heartleaf twayblade
Lomatium bicolor var. leptocarpum	biscuitroot
Lupinus polyphyllus	lupine
Madia glomerata	cluster tarweed
Maianthemum racemosum	western false Solomon’s seal
Maianthemum stellatum	starry false Solomon’s seal
Mitella stauropetala	side-flowered mitrewort
Moehringia macrophylla	largeleaf sandwort
Monotropa uniflora	Indian pipe
Navarettia intertexta	needleleaved navarettia
Olsynium douglasii var. inflatum	purple-eyed-grass
Orthilia secunda (Pyrola secunda)	sidebells wintergreen
Osmorhiza berteroi (O. chilensis)	sweet cicily
Pedicularis racemosa	leafy lousewort
Perideridia gairdneri	Gairdner's yampah
Piperia unalascensis	slender-spire orchid
Plantago major	common plantain
Polygonum douglasii	Douglas' knotweed
Polygonum polygaloides ssp. kelloggii	white-margined knotweed
Polystichum munitum	sword fern
Potentilla glandulosa ssp. glandulosa	sticky cinquefoil
Prunella vulgaris	self heal

Pteridium aquilinum	braken fern
Pterospora andromedea	woodland pinedrops
Pyrola asarifolia	pink wintergreen
Pyrola picta	whitevein wintergreen
Ranunculus uncinatus var. uncinatus	little buttercup
Sanguisorba occidentalis	annual burnet
Scirpus microcarpus	small-flowered bulrush
Sedum stenopetalum	wormleaf stonecrop
Senecio integerrimus	western groundsel
Senecio triangularis	arrowleaf groundsel
Sidalcea oregana ssp. oregana var. procera	Oregon checker-mallow
Streptanthus amplexifolius	clasping-leaved twisted stalk
Thalictrum occidentale	western meadow rue
Thlaspi montanum var. montanum	mountain pennycress
Tiarella trifoliata var. unifoliata	coolwort foamflower
Tragopogon dubius	yellow salsify
Trillium ovatum	white trillium
Veratrum californicum	California cornlily
Viola adunca	early blue violet
Viola glabella	woodland violet
Viola orbiculata	round-leaved violet
Zigadenus venenosus var. gramineous	meadow deathcamas
Grasses	
Achnatherum nelsonii var. dorei (Stipa nelsonii var. dorei)	Nelson's needlegrass
Agrostis scabra	rough bentgrass
Agrostis stolonifera	creeping bentgrass
Alopecurus pratensis	meadow foxtail
Bromus vulgaris	Columbia brome
Calamagrostis rubescens	pinegrass
Calamagrostis stricta ssp. inexpansa	-
Cinna latifolia	drooping woodreed
Danthonia californica	California oatgrass
Dactylis glomerata	orchard grass
Deschampsia caespitosa	tufted hairgrass
Deschampsia danthonioides	annual hairgrass
Elytrigia intermedia (Agropyron intermedium)	intermediate wheatgrass
Festuca occidentalis	western fescue
Glyceria borealis	small floating mannagrass
Glyceria striata	fowl mannagrass
Glyceria grandis	American mannagrass
Melica subulata	Alaska oniongrass
Muhlenbergia filiformis	slender muhly
Phalaris arundinacea	canary reedgrass
Phleum pratense	common timothy
Poa bulbosa	bulbous bluegrass
Torreyochloa pallida var. pauciflora	weak alkali grass
Grass-like plants	
Carex aquatilis	water sedge
Carex arcta	northern cluster sedge

Carex athrostachya	Slenderbeak sedge
Carex geyeri	elk sedge
Carex laeviculmis	Smoothstem sedge
Carex microptera	small-winged sedge
Carex rossii	Ross sedge
Carex utriculata	Bladder sedge
Carex vesicaria	Inflated sedge
Juncus balticus var. montanus	arctic sedge
Juncus confusus	Colorado rush
Sparganium angustifolium	Narrowleaf bur-reed

Table 4. Fauna List

Amphibians
Columbia spotted frog*
Long-toed salamander
Pacific chorus frog
Western toad*

Reptiles
Common garter snake
Western terrestrial garter snake*
Rubber boa
Racer
Western rattlesnake
Western skink*
Western fence lizard

Breeding birds (102 species)
American crow*
American dipper*
American goldfinch
American kestrel
American robin
Bald eagle*
Barred owl
Belted kingfisher
Black-backed woodpecker
Black-billed magpie
Black-capped chickadee
Black-headed grosbeak
Blue grouse
Brewer's blackbird
Broad-tailed hummingbird
Brown creeper
Brown-headed cowbird
Bullock's oriole
Calliope hummingbird
Cassin's finch
Cassin's vireo
Cedar waxwing*
Chestnut-backed chickadee
Chipping sparrow
Clark's nutcracker
Common nighthawk
Common raven
Common yellowthroat
Cordilleran flycatcher
Dark-eyed junco
Downy woodpecker
Dusky flycatcher
Eastern kingbird
Evening grosbeak*
Flammulated owl*
Fox sparrow
Golden eagle*
Golden-crowned kinglet

Grasshopper sparrow*
Gray catbird*
Gray jay
Great blue heron*
Great gray owl
Great horned owl*
Hairy woodpecker
Hammond's flycatcher
Hermit thrush
Horned lark*
House finch
House wren
Lazuli bunting
Macgillivray's warbler
Mountain bluebird
Mountain chickadee
Mountain quail*
Mourning dove
Nashville warbler
Northern flicker
Northern goshawk
Northern harrier*
Northern rough-winged swallow*
Northern three-toed woodpecker
Olive-sided flycatcher
Orange-crowned warbler
Pileated woodpecker
Pine grosbeak*
Pine siskin
Pygmy nuthatch
Red crossbill
Red-breasted nuthatch
Red-naped sapsucker
Red-tailed hawk
Red-winged blackbird
Rock wren
Ruby-crowned kinglet
Ruffed grouse
Rufous hummingbird
Savannah sparrow*
Say's phoebe
Song sparrow
Spotted towhee
Steller's jay
Swainson's thrush
Townsend's solitaire
Townsend's warbler
Varied thrush
Veery*
Vesper sparrow
Violet-green swallow
Warbling vireo
Western bluebird
Western flycatcher
Western kingbird
Western meadowlark

Western tanager
Western wood-pewee
White-headed woodpecker
Wild turkey
Willow flycatcher
Yellow warbler
Yellow-breasted chat*
Yellow-rumped warbler

Non-breeding Birds (may occur on the forest, but are likely migratory)
American tree sparrow*
Bohemian waxwing*
Common redpoll*
Gray-crowned rosy-finch*
Northern shrike*
Red-necked phalarope*
Rough-legged hawk*

Small Mammals
Bushy-tailed woodrat
Columbia ground squirrel
Deer mouse
Golden-mantled ground squirrel
Least chipmunk (OR)
Long-tailed vole
Merriam shrew
Montane vole
Northern flying squirrel
Northern grasshopper mouse
Northern pocket gopher
Ord's kangaroo rat (OR)
Preble's shrew
Sagebrush vole (Umatilla county)
Southern red-backed vole
Townsend's ground squirrel
Vagrant shrew
Western harvest mouse
Western heather vole
Western jumping mouse
Yellow pine chipmunk

Bats
Big brown bat
California myotis*
Fringed myotis*
Hoary bat*
Little brown myotis*
Long-eared myotis*
Long-legged myotis*
Silver-haired bat*
Spotted bat*
Townsend's big-eared bat*
Western pipistrelle*
Western small-footed myotis*
Yuma myotis*

Mid-size Mammals
Common porcupine*
Snowshoe hare
Yellow-bellied marmot*

Carnivores
American badger
American marten*
Black bear
Bobcat*
Canada lynx*
Common Raccoon*
Coyote
Ermine*
Fisher (historic)*
Gray wolf*
Long-tailed weasel*
Mink*
Mountain lion
Northern river otter*
Red fox
Striped skunk
Wolverine*

Large ungulates
Moose*
Mountain goat*
Mule deer
Rocky Mountain bighorn sheep*
Rocky Mountain elk
White-tailed deer

*species not detected during Terrestrial Wildlife Inventory, done for 1990 Forest Plan

Geology

Rock type in the area is comprised of various members or flows of the Columbia River Basalts, set in the greater Blue Mountains uplift, a complex of anticlines, monoclines, and faults that make up the Blue Mountain geographic region. In order of decreasing occurrence, Columbia River Basalt (flows) consist of:

- Saddle Mountain, Umatilla member
- Wanapum
- Frenchman Springs member
- Grande Ronde, upper flows

The Saddle Mountain basalts are found on the upper, gently sloping plateau with the other rock groups found more or less in order as you head down in elevation towards the Wenaha River floodplain. These groups' flows differ primarily in chemical makeup with some slight variation in physical makeup.

Soils

Soils in the area are strongly influenced by the distinct major geomorphic surfaces. This is the broad, nearly level to gently sloping plateau that dominates the majority of the area with an abrupt drop-off into the Wenaha canyon (or Wenaha Breaks) of steep to very steep side slopes of the Wenaha River. The northern limit of the RNA is at the boundary between the canyon side slope and the floodplain adjacent to the river.

The gently sloping upland plateau has predominately deep to very deep, silt loam soils comprised of a thick mantle of (Mazama) volcanic ash over loess and buried basalt residual and gravelly colluvial soils with higher clay content. These classify primarily as medial over clayey, mixed, frigid Typic Udivitrands. The gentle drainage ways associated with this upper plateau have very deep, moderately well to somewhat poorly drained soils with some clayey subsoils and lacustrine deposits in the subsurface horizons.

The strongly sloping to very steep canyon side slopes are quite variable but are mostly shallow, very gravelly silt loams with considerable area of basalt rock outcrop. The shallow soils primarily classify as Lithic Haploxerolls, loamy skeletal, mixed, frigid (or in some cases, mesic). The timbered stringer areas of the canyons have moderately deep soil of mixed ash and colluvium.

Topography

The elevation range of the RNA is about 2000 feet (607 m). A broad, gently sloping plateau dominates the majority of the area. This is punctuated at the northern portion of the RNA by an abrupt drop-off into the canyon of the Wenaha River. Where the tableland plummets to the river, there are steep slopes with predominantly north-facing aspects. The top of this break land averages about 4200 feet (1280 m) elevation with the bottom located along the river, approximating 3000 feet (914 m) elevation.

Aquatic/ Riparian

Numerous small ponds are scattered among the extensive grand fir forests. These sites are poorly drained small basins which support seasonally flooded margins. Bladder sedge (*Carex utriculata*) is the predominant species, usually forming extensive pure stands in the saturated muck. Patches of tall mannagrass (*Glyceria elata*) and Scouler's willow (*Salix scouleriana*) are also common. Typically, mountain alder (*Alnus viridis ssp. sinuata*), black cottonwood (*Populus balsamifera ssp. trichocarpa*), and quaking aspen (*Populus tremuloides*) are found on the outer margins of these wetlands.

Rare, Threatened, Endangered, or Sensitive species

- Flora: No federal threatened, endangered plant species are known to occur within the RNA boundaries. Mountain lady's slipper (*Cypripedium montanum*), found in mesic forests, is listed by Oregon Natural Heritage Information Center is considered rare but secure.
- Fauna: There are no fish-bearing streams or listed fish present within the RNA, although there are three federally listed threatened species, bull trout (Salvelinus confluentus), Chinook salmon (Onorhynchus tsawytscha), and Snake River steelhead (O. mykiss) known to from streams and rivers near the RNA. Two federal "species of concern" which have been observed at the RNA are northern goshawk (Accipiter gentilis) and Lewis's woodpecker (Melanerpes lewis).

List of Rare Elements and Rare Plant Communities

Abies grandis/Taxus brevifolia is intrinsically rare with additional rarity due to management practices within the Blue Mountain Ecoregion and globally (Croft et al. 1997).

C. RESOURCE INFORMATION

MINERALS

Since Wenaha Breaks RNA is within the Wenaha Tucannon Wilderness it is withdrawn from mineral entry. There are no claims existing prior to the wilderness designation (conversations with Mike Hall, RDMA, Lands and Minerals, Whitman Ranger District, Wallowa-Whitman NF). The RNA has not been formerly surveyed for mineral resources. As such, there are no documented minerals of any significant value.

GRAZING

The RNA has no active grazing allotments. Other allotments in the vicinity do not appear to provide any livestock use or impacts of the RNA. If livestock begin to use the RNA, it will be necessary to install a protective fence if impacts are observed.

PLANTS and WILDLIFE

The Wenaha River and its tributaries adjacent to the RNA's boundary support three federally listed threatened fish species: steelhead, bull trout, and Chinook salmon. Two federal "species of concern" which have been observed at the RNA are northern goshawk (Accipiter gentilis) and Lewis's woodpecker (Melanerpes lewis). The establishment of this RNA is not expected to have any negative impacts on habitat used by these species.

WATERSHED VALUES

The RNA borders the Wenaha River where four tributaries enter from the north and west forming a significant intersection for fish migration. The integrity of the RNA in its ability to resist soil erosion and provide shade is important in maintaining long-term fish use at the confluence. The waterways located here are Beaver Creek and Slick Ear Creek, along with the North Fork, South Fork and Main Wenaha Rivers. The RNA has no perennial streams, but intermittent creeks drain directly into the Wenaha River and Elk Creek.

RECREATION USE

Because the RNA is within designated wilderness, recreation is limited to non-motorized use. Although a trailhead skirts most of the RNA's west boundary, the vast majority of hikers stay on the Elk Flat Trail and do not enter the RNA. Hikers along the Wenaha River Trail are separated from the RNA by the river which is usually too high to cross, except during the late summer. The RNA's steep slopes also present a formidable challenge to those crossing the river. Hunting use is insignificant in the RNA.

TRANSPORTATION/ ROAD SYSTEM

No major roads occur in the RNA nor are any planned for this area. The RNA is located within the Wilderness Area where roads are not compatible with wilderness goals. There is at least one old foot trail within the RNA which is no longer maintained. The Elk Flat Trail (#3241) occurs immediately adjacent, but outside the RNA's west boundary. Several trees have been cut and some litter is apparent in the RNA along this corridor, especially near the trailhead. However, these impacts are generally insignificant and unless impacts increase, there is no need to restrict access.

D. HISTORICAL INFORMATION

RESEARCH/ EDUCATIONAL USE AND INTEREST: HISTORY OF ESTABLISHMENT

Wenaha Breaks was first proposed as a candidate for RNA status by Jim Merzenich to Jack Ward Thomas in a letter dated October 30, 1976. The letter states that, "...the area contains a diversity of vegetative and aquatic habitats on the RNA needs lists..." In

addition Mr. Merzenich noted that the only known pair of barred owls in Oregon live in this area (in the 30 years since this report was written, barred owls have moved into most of Oregon). He also noted this area as being home to nesting Goshawks, pileated woodpeckers, and important summer range for Rocky Mountain Elk. The letter relates concern that the area was part of a timber sale (correspondence from Area Ecology Program files).

Rex Crawford of the Washington Natural Heritage Program submitted a report titled Elk Flats-Wenaha Breaks: Evaluation for designation as a National Natural Landmark, prepared for the National Park Service, December 1989. Mr. Crawford noted diverse vegetation, evidence of past fire throughout the RNA and heavy elk use in the yew stands.

Wenaha Breaks was included as a proposed RNA in the 1990 Umatilla Land and Resources Management plan under the name Elk Flats-Wenaha Breaks proposed RNA. The name was changed to Wenaha Breaks RNA in response to confusion with another RNA on the Umatilla NF, named Elk Flats Meadow proposed RNA. The area of Wenaha Breaks RNA has been increased slightly in that mapping the area was facilitated by moving the west boundary to correspond with Elk Flat Trail (#3241).

CULTURAL/ HERITAGE

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

DISTURBANCE HISTORY

Landslides

Land Types Association (Sasich 2006) for Wenaha Breaks indicates that the flat area in the southern 2/3rds of the RNA was formed by landslide activity. The landslides may be ancient or dormant. The steep slopes to the north, and hummocky mounds and depressions now forming lacustrine pools are supporting evidence of past landslide activity.

Fires

Most of the RNA falls within Fire Regime III, meaning that fires within the Abies plant associations within the RNA tend to occur every 35-200 years with mixed severity (fires where 25- 75% of the dominant over story vegetation is replaced. The steep slopes of the RNA fall within Fire Regime I, where fires occur every 0-35 years and are typically low severity (surface) fires to mixed severity fires. There have been no historic or recent fires greater than 10 acres documented within Wenaha Breaks RNA (unpublished information from US Forest Service Geographic Databases). However field reports mention evidence of fires throughout the RNA (Crawford 1989.

OCCURRENCE OF EXOTIC SPECIES

There are no noxious weeds documented within Wenaha Breaks RNA.

E. OTHER INFORMATION

PERMANENT RESEARCH PLOTS AND/OR PHOTO POINTS

There are three permanent ecology plots within Wenaha Breaks RNA. One is a historic condition and trend range monitoring plot, established in 1966. There is no record that this plot has been visited since it was established. Two plots were established by the Area Ecology Program in 1988. Neither of these plots have been revisited since establishment. All three of the plots provide information on vegetation cover and have photos documenting the plots. Plot data is available through the Area 3 Ecology Program.

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POTENTIAL RESEARCH TOPICS

Ecology of old growth grand-fir: could include any or all organisms associated with old growth grand-fir.

F. EVALUATION OF SPECIFIC MANAGEMENT RECOMMENDATIONS ON THE RESEARCH NATURAL AREA

POTENTIAL OR EXISTING CONFLICTS; PRINCIPAL MANAGEMENT ISSUES

For an RNA established in wilderness, management direction for wilderness will take precedence (LRMP, Umatilla National Forest, page 4-175).

SPECIAL MANAGEMENT AREA

The entire RNA resides within the boundaries of the Congressionally designated Wenaha-Tucannon Wilderness Area. Management standards for the Wilderness are outlined in the Forest Plan (USDA 1990a). These standards emphasize maintaining natural conditions unaffected by human manipulation and as such, the RNA and Wilderness area compliment each other.