

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Establishment Report

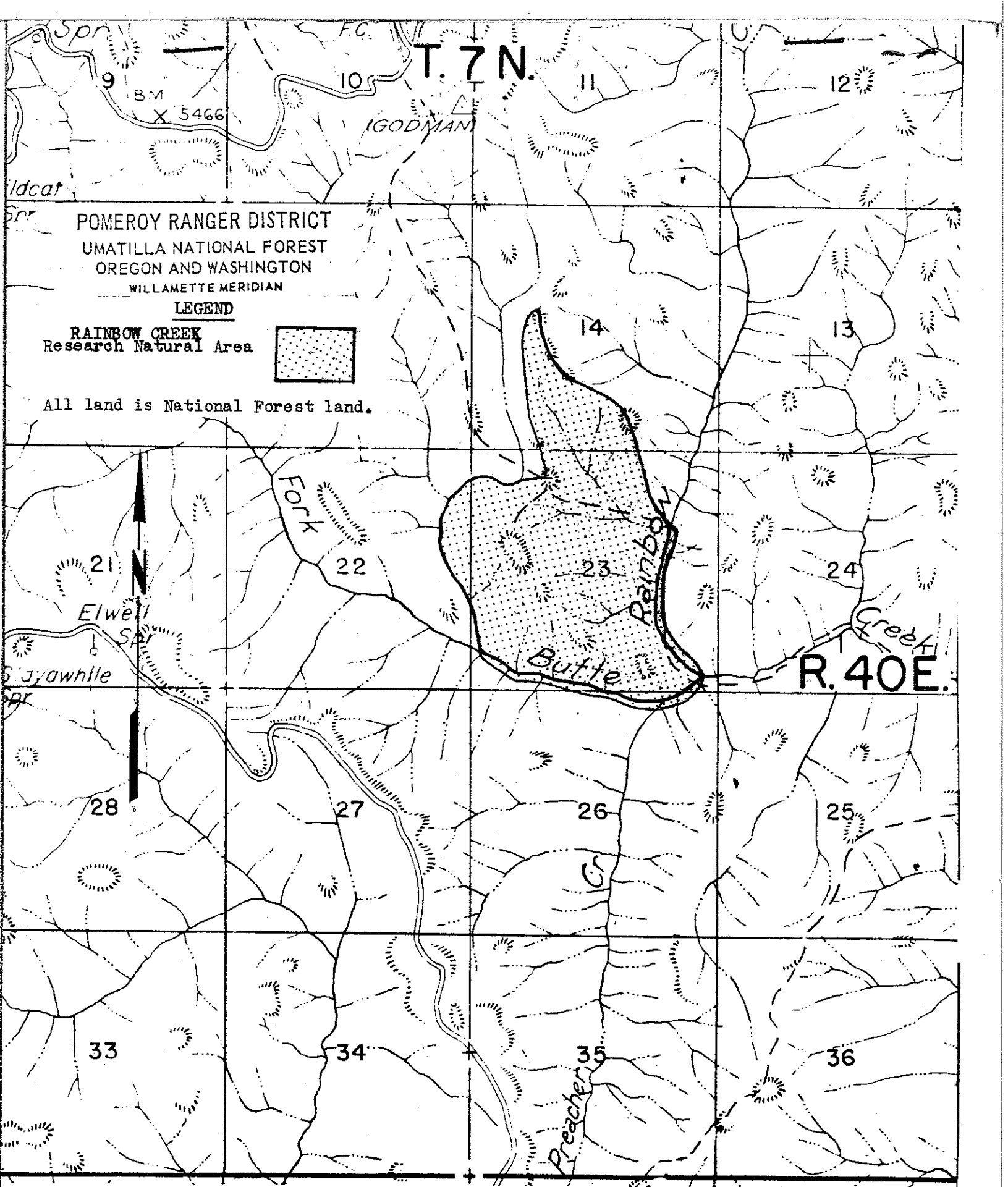
for the

RAINBOW CREEK RESEARCH NATURAL AREA

Umatilla National Forest

Columbia County, Washington





T. 7 N.

BM X 5466

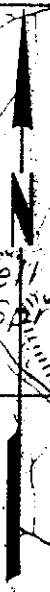
POMEROY RANGER DISTRICT  
UMATILLA NATIONAL FOREST  
OREGON AND WASHINGTON  
WILLAMETTE MERIDIAN

LEGEND

RAINBOW CREEK  
Research Natural Area



All land is National Forest land.



SCALE 2" = 1 MILE

July 1962 USFS R-6



A large western white pine  
near the mouth of Rainbow  
Creek, July 1966.

Photo by: A. Andrews,  
Lewiston Morning Tribune.

DESIGNATION ORDER

By virtue of the authority vested in me by Regulation U-4 of the Regulations of the Secretary of Agriculture, I hereby designate as the RAINBOW CREEK RESEARCH NATURAL AREA the lands described in the preceding report by James Tardif and David M. Yates, dated April 15, 1968; said lands shall hereafter be administered as a research natural area subject to said regulations and instructions thereunder.

November 6 1968  
Date

E. L. P. [Signature]  
Chief

Establishment Report  
for the  
Rainbow Creek Research Natural Area

Umatilla National Forest  
Columbia County, Washington

PRINCIPAL DISTINGUISHING FEATURES

This natural area encompasses a rather broad cross-section of Principal Forest Resource Zone timber types prevalent in the northern Blue Mountains. All aspects of slope are represented as the area surrounds a butte locally known as "Sugar Loaf". Five cover types can be delineated covering a total of about 600 acres.

The western white pine (Pinus monticola) is of particular interest. It occurs as a subordinate species in a stand of large white fir (Abies grandis) over ponderosa pine (Pinus ponderosa). Also present are minor amounts of Douglas-fir (Pseudotsuga menziesii) and western larch (Larix occidentalis). This type covers about 190 acres. It most nearly fits SAF-213 Grand Fir-Larch-Douglas-Fir.

Large ponderosa pine sawtimber over white fir comprises a second large timber type, covering approximately 230 acres. It provides an example of SAF-237 Interior Ponderosa Pine.

Scattered large Douglas-fir sawtimber over ponderosa pine occupies southern exposures, often as narrow stringers of timber in the bottoms of shallow draws separated by grassy

**stages.** This type covers about 120 acres. This mixture is SAF-214 Ponderosa Pine-Larch-Douglas-Fir.

A dense stand of small western larch sawtimber, along with minor amounts of white fir and Douglas-fir, covers about 40 acres. It is classified as SAF-<sup>212</sup>~~12~~ Larch-Douglas-Fir.

The remaining 20 acres within the Research Natural Area are in grass.

Timber type classification is according to timber type maps prepared in conjunction with the 1959 Umatilla National Forest timber inventory, supplemented by field examinations.

#### LOCATION

The area is located in the northern end of the Blue Mountains on the Pomeroy Ranger District of the Umatilla National Forest. The legal description covers portions of Sections 14, 22, 23 and 26; T. 7 N., R. 40 E., surveyed, Willamette Meridian, Columbia County, Washington. The area lies to the north and west of the confluence of Rainbow Creek and the West Fork of Butte Creek. It is bounded on the west by a creek flowing through a narrow meadow locally known as "Happy Valley", and lies entirely within the designated Wenaha Back-Country Area.

MAP

AREA BY COVER TYPES

		<u>Acres</u>
1.	WF4p (SAF-213)	<u>190</u>
2.	P4 = wf (SAF-237)	230
3.	D4-p (SAF-214)	120
4.	WL3 = (SAF-212)	40
5.	Grass	<u>20</u>
	Total	600

## PHYSICAL AND CLIMATIC CONDITIONS

Topography of the area is steep and broken. Elevations vary from about 3,600 feet at the forks of Rainbow Creek and Butte Creek to about 4,700 feet at the summit of Sugar Loaf. From the top of Sugar Loaf, the ground breaks rather abruptly as it falls into the creek bottoms.

Average climatic conditions tend toward a rather heavy winter snowpack with warm and usually dry summers. Intense spring and summer storms and occasional winter chinooks create the hazard of excessive runoff and flash floods.

## DESCRIPTION OF VALUES

### 1. Flora

The occurrence of western white pine is of key interest in the area. It is the most extensive area of white pine in the Blue Mountains. The species is subordinate in a stand of white fir and ponderosa pine, with lesser amounts of Douglas-fir and western larch. White pine occurs as scattered trees of all age and size classes and accounts for about 15% of the timber present in the type by volume and by number of trees. The extent of this type is 190 acres adjacent to Butte Creek and Rainbow Creek and on northern exposures and draws tributary to Rainbow Creek. It is typical of the occurrence of western white pine in the Blue Mountains. Field examination has not indicated the presence of any white pine blister rust.



The southwestern exposure of Sugar Loaf and the northern-most extension of the Natural Area contain the sparsely-stocked ponderosa pine stand with subordinate white fir. Douglas-fir predominates on the south face of Sugar Loaf. This is a representative occurrence of these species on steep and rather dry southern exposures in the northern Blue Mountains.

The northwest corner of the natural area is the location of the dense stand of young sawtimber larch. This stand is typical of the nearly pure larch stands on steep north slopes in the Blue Mountains.

The remaining grassland area provides an example of the many dry hillsides common in the northern Blues.

## 2. Geology

The underlying parent material is basalt of volcanic origin, deeply eroded, resulting in precipitous unstable country. The soil is primarily of a loess type.

## 3. Fauna

The principal big game species are the Rocky Mountain elk and mule deer. The area is primary summer range. The animals usually migrate down Butte Creek to winter along the Wenaha River. Cougar and black bear occur in limited numbers.

## 4. Minerals

There are no known mineral claims within or adjacent to the natural areas, or any likelihood of future claims due to the lack of any known valuable mineral deposits.

6. Water Use

The site is a critical soil area of key watershed importance. No important agricultural or municipal use is made of the water supplied until it eventually merges with the Snake River.

Butte Creek is an important tributary of the Wenaha River.

7. Other Uses

Future timber harvest is not completely prohibited in the Wenaha Back-Country Area but is very unlikely, as is any road development, power lines, or other uses. Domestic grazing is not permitted within the area, or anticipated in the future. No conflict is anticipated with any other uses in the research natural area.

8. Recommendation

I recommend that the Rainbow Creek Research Natural Area be established on the lands described in this report.

April 15, 1968  
Date

Submitted: /s/ James Tardif  
Forester

/s/ David M. Yates  
Forester

April 15, 1968  
Date

Recommended: /s/ Irving E. Smith  
District Ranger

9-23-68  
Date

Recommended:

Acting

W. J. Hughes  
Forest Supervisor

10/1/68  
Date

Recommended:

Acting

A. E. Spaulding  
Regional Forester

10-8-68  
Date

Recommended:

Philip S. Biegler  
Director

11-2-68  
Date

Approved:

Robert Costley  
Director, Division of Recreation  
and Land Use

11/6/68  
Date

Approved

George M. Jamison  
Deputy Chief, Research

November 6, 1968  
Date

Approved:

Edward P. Chief  
Chief