

UNITED STATES DEPARTMENT OF AGRICULTURE

FOREST SERVICE

Copy of the Original  
Establishment Report  
for  
Olallie Ridge Research Natural Area

Willamette National Forest  
Lane County, Oregon



**ESTABLISHMENT REPORT**

for

**OLALLIE RIDGE NATURAL AREA**

**Willamette National Forest**

**Lane County, Oregon**

**U. S. Department of Agriculture  
Forest Service  
Pacific Northwest Region**

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### Introduction

The Olallie Ridge area proposed for classification as a natural area under the provisions of Regulation U-4 is within the McKenzie drainage of the Willamette National Forest in Sections 3, 4, 5, 8, 9, and 10 (Unsurveyed), T. 17S., R. 6E., W.M. This was formerly a portion of the Three Sisters Primitive Area which has been designated by the Secretary of Agriculture as a multiple-use area.

The establishment of the Olallie Ridge Natural Area will provide a needed upper-slope forest type in the Pacific Northwest Region. This locality has also served as a study area for botanists, geologists, and ecologists associated with the colleges and universities. The retention of the site in a natural condition is recommended to enable continuance of existing studies and opportunity for instituting additional studies.

This area was reviewed by Rangers Lyons and Nealey and Staff Officer Worstell in the summer of 1961. In conjunction with this study, Lamb Butte, Quaking Aspen Swamp, Lower Mountain, Yankee Mountain, and Rebel Rock territories were examined in detail. Recommendations for classification of these five regions under Regulation U-3(a) as geological, botanical and scenic areas are covered in a separate report. All tracts have been examined by Pacific Northwest Forest and Range Experiment Station personnel, whose conclusions and recommendations are similar.

The Olallie Ridge Natural Area encompasses the summits of Horsepasture and O'Leary Mountains. The timber type is representative of the upper-slope, mixed-conifer type. The plant communities of the grassy openings on the south slopes are those associated with shallow soil subject to rapid drainage and desiccation from sun and wind. The openings on the north slope are moist and support tag alder, rhododendron, and vine maple brush patches. Recreation use is limited to hunting and scientific study. The only use of the forage is by wildlife.

### General Description and Physical Condition

The area comprises 720 acres on the McKenzie and Blue River Ranger Districts of the Willamette National Forest. The elevation ranges from 4400 feet to 5660 feet, which is the summit of Horsepasture Mountain.

The climate of the area is essentially maritime with average annual precipitation of approximately 84 inches. Three-fourths of the precipitation occurs as snow during the period from November to May. Average snow depths in the area range from ten to fifteen feet. The temperatures range from 0° to 95°. There is little rainfall from early July through September.

The geology of the area is representative of the Eocene and Miocene ages, and is typical of the old or western Cascades. The structure of the range is apparent on the south side of O'Leary Mountain. Taylor Castle and Lamb Butte, located approximately one mile south, are comprised of the younger-volcanic rocks of the Pleistocene age similar to the high Cascades to the east of the area. The proximity of the two geological periods is of particular significance.

Timber and Cover Type

Timber	440 Acres
Open Grassland	280 Acres
Operable Timber	14,280,000 board feet
Nonoperable Timber	420,000 board feet

The timber on the area ranges from immature Douglas-fir with white fir understory at the lower elevations through the immature FM type and ultimately to small areas of subalpine on the mountain top. The main species of conifers are the western white pine, sugar pine, whitebark pine, western hemlock, mountain hemlock, Douglas-fir, Pacific silver fir, and Alpine fir. The upper elevations are characterized by open areas with shallow soil. These openings on the south slopes support the xeric flora which are interesting to professional and amateur botanists. These are extensive areas of deadening of the true firs, resulting from balsam woolly aphid infestation some four to five years ago.

The area was intensively used as a sheep range until the middle thirties. Remains of sheep camps are evident around the grassy openings. The small plant associations represent communities which have been altered by heavy grazing.

Forest types within the area are as follows:

<u>Type</u>	<u>Acres</u>
D3 = / wf	82
FM2 = / mh	56
FM3 = / mh, v	38
FM3 = / mh, nf	126
FM2 = / mh, v	61
FM2 = / mg, c	44
WF2 = / mh, wf	23
G	290
TOTAL	720

## Wildlife

Olympic elk, blacktail deer, black bear, cougar and small mammals such as porcupine, coyote, rabbit and bobcat inhabit the area. The O'Leary Mountain portion of the area shows evidence of heavy use as spring and early summer range for blacktail deer, with browsing apparent on almost all shrubs. There is no possibility of developing a fish resource in the area.

## Values of the Area

The primary value is for scientific study of the geology and flora of the area. Secondary values are for recreation, which includes hunting, hiking, and scenic enjoyment. Grazing of domestic livestock in the area is no longer economically feasible. There are no known mineral values.

This area contributes roughly 143,000 board feet, with an approximate valuation of \$4000, to the McKenzie Working Circle allowable cut of 138 MMFB annually. Establishment as a natural area will mean a reduction of approximately one-tenth of one percent in the allowable annual cut for the working circle.

## Recommended Management Policy

We recommend that the tract be designated as a natural area under the provisions of Regulation U-4. The area will be managed as nearly as possible in an undisturbed condition, to allow the evolution of the existing plant communities to continue. No timber will be cut for commercial purposes, and no grazing permits will be issued.

Permanent improvements will not be constructed within the area.

The existing trails within the area will be maintained to provide access for purposes of scientific study. Subject to the approval of construction and location by the Forest Supervisor, temporary instrument shelters for conduction studies are authorized.

The boundaries will be located as shown on the attached map. That portion of the boundary adjacent to access roads will be fifty feet, horizontal distance, from the cut-and-fill slopes. As soon as the area is formally recognized under Regulation U-4, a program of posting the boundaries will be initiated.

Picnicking, camping, berry-picking and other public uses which modify the natural conditions or impair the values for research will be prohibited. Big-game hunting is authorized until such time as it affects the biotic communities.

The Forest Recreation Plan will recognize the management of the natural

area. Recreational developments such as observation points, hiking trails, and hunter campsites will be developed in nearby portions of Olallie Ridge to eliminate the need for recreational use within the natural area.

10/19/62  
(Date)

R. L. Worstell  
Forester

APPROVED:

10/22/62  
(Date)

D. M. Gibney  
Forest Supervisor

10/31/62  
(Date)

R. W. Cowlin  
Director

10/29/62  
(Date)

J. Herbert Stone  
Regional Forester

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 Olallie Ridge Natural Area the lands described in the preceding report by R. L. Worstell, dated October 19, 1962; said lands shall hereafter be administered as a natural area subject to the said regulations and instructions thereunder.

1/9/63  
(Date)

Clare Bendee  
Chief  
U. S. Forest Service





N. Slope  
Horsepasture  
Mtn. from  
Olallie Trail  
on O'Leary Mtn.  
Bdy. of natural  
area approx.  
middle of  
meadows.

1



O'Leary Mtn. from  
Horsepasture Saddle

2

Three Sister  
from  
Horsepasture Mtn.

3



Horsepasture  
Saddle

4



O'Leary Mtn.  
from Summit of  
Horsepasture  
Approx. Bdy. of  
Area along  
Olallie Trail

5



English Mtn.  
from Summit  
of Horsepasture

6



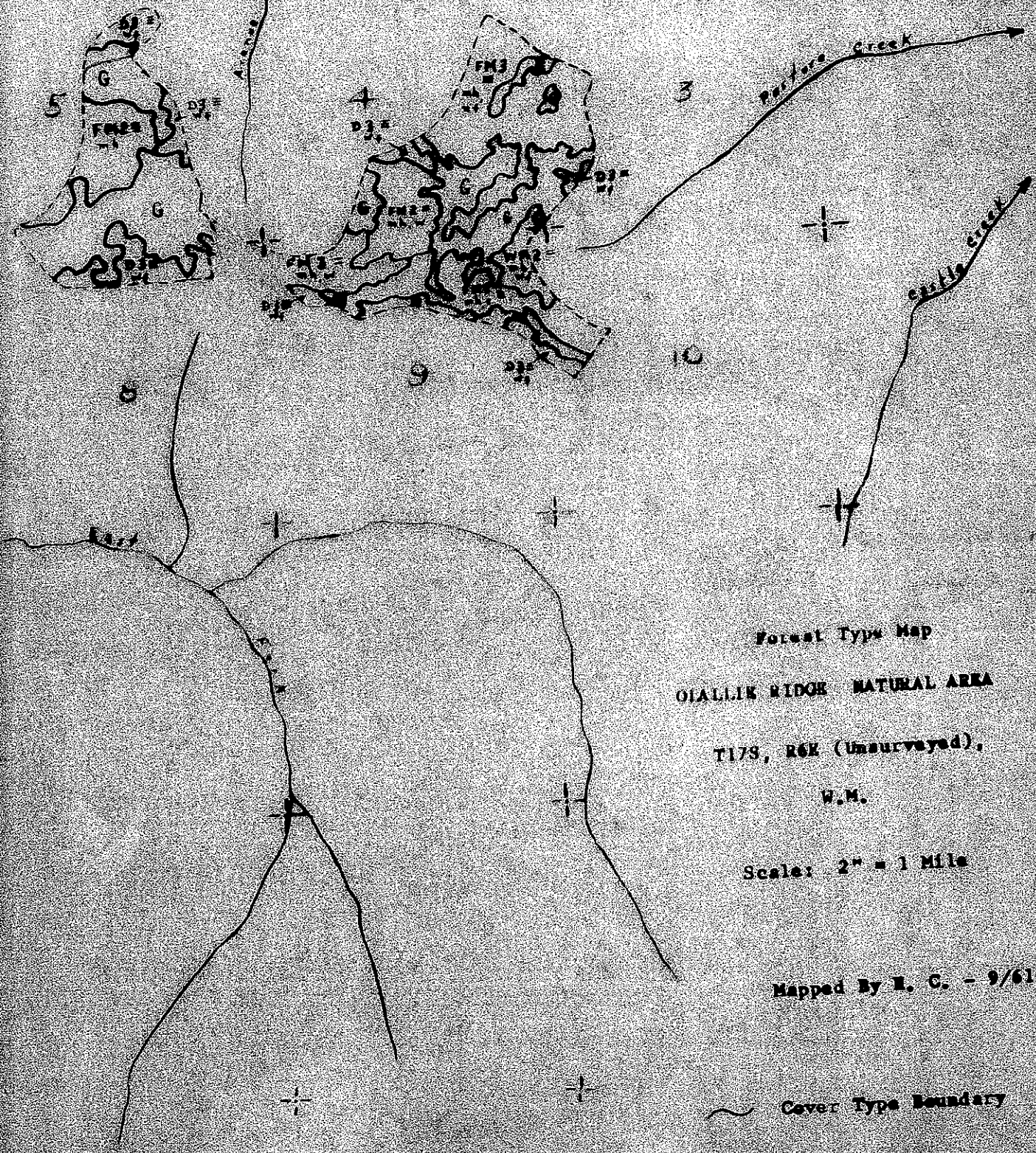
O'Leary and  
Horsepasture Mtn.  
from  
Lamb Butte

7



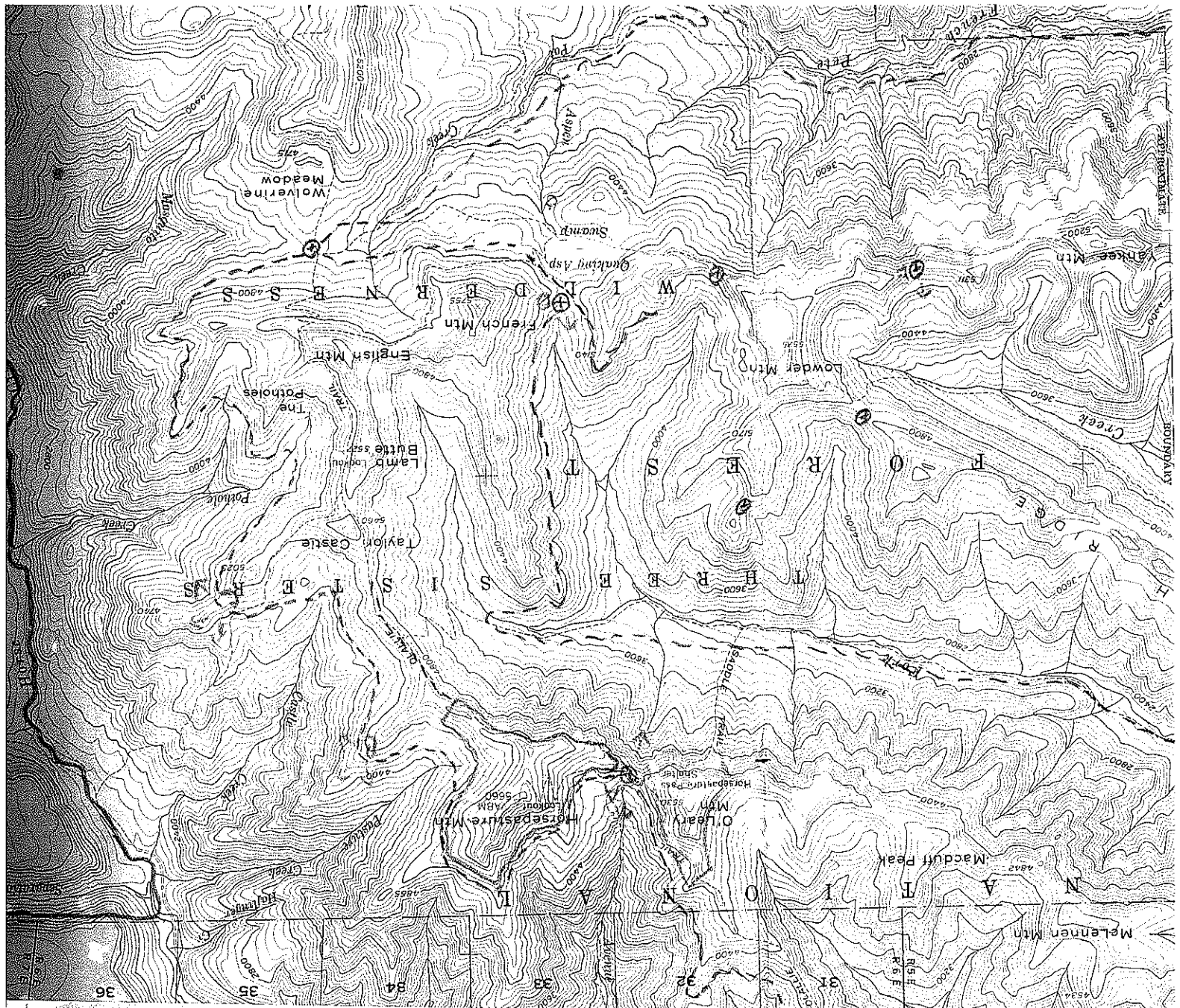


2150








Forest Type Map  
 OJALLIK RIDGE NATURAL AREA  
 T178, R6E (Unsurveyed),  
 W.M.  
 Scale: 2" = 1 Mile  
 Mapped By E. C. - 9/61

~ Cover Type Boundary  
 - - - Proposed Boundary



**OLALLIE RIDGE NATURAL AREA**

Legend

-  - Proposed Areas
-  - Proposed Roads
-  - Observation Point
-  - Transportation Control Point
-  - Wilderness Area Boundary

