

Mount Jefferson Wilderness Air Quality Report

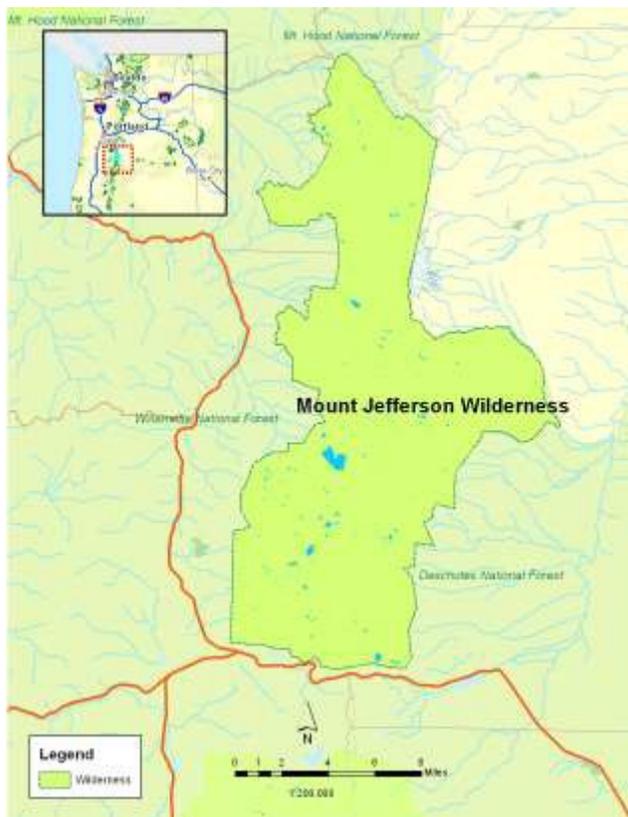
National Forest: Deschutes National Forest, Mt. Hood National Forest, Willamette National Forest

State: OR

Counties: Jefferson, Linn, Marion

General Location: Central Oregon Cascade Range

Acres: 104,523



Mount Jefferson Wilderness Air Quality Report

Wilderness ID: 069

Wilderness Name: Mount Jefferson Wilderness

Wilderness Categories	Information Specific to this Wilderness
Year Established	1968
Establishment Notes	90-548, Oregon Wilderness Act of 1984
Designation	Clean Air Act Class 1
Administrative	Deschutes National Forest, Mt. Hood National Forest, Willamette National Forest
Unique Landscape Features	Five glaciers mantle the slopes of stately Mount Jefferson, the dominant feature in this region of the High Cascades: Whitewater, Waldo, Milk Creek, Russell, and Jefferson Park. At 10,497 feet, Mount Jefferson challenges hikers with the steepest, most difficult climb of Oregon's high summits. The southern portion of the area rests beneath 7,841-foot Three Fingered Jack. Most of the high country of this Wilderness is wide open, almost like a park, with scattered tree cover, long talus slopes, rocky outcroppings, alpine meadows, and year- round patches of snow. Between 5,000 feet and 6,000 feet you'll find more than 150 small lakes, about half of them stocked with trout. A grand forest of Douglas fir, silver fir, subalpine fir, mountain hemlock, lodgepole pine, ponderosa pine, and cedar mix with vine maple, huckleberry, and rhododendron to distinguish the lower elevations. The vast Warm Springs Indian Reservation shares a long northeastern border. Hikers can wend their way through approximately 190 miles of very heavily used trails, including about 40 miles of the Pacific Crest National Scenic Trail. Jefferson Park, Marion Lake, Pamela Lake, and Jack Lake are the most impacted by human traffic.
Lakebed Geology Sensitivity	High
Lakebed Geology Composition	gneiss quartzite schist granite (2%), andesite dacite diorite phyllite (81%), amphibolite hornfels paragneiss undifferentiated metamorphic roc (18%), GC 1+2 (82%), GC 1+2+3 (81%), GC 4+5+6 (18%)
Visitor Use	Not reported in the database.
Mean Annual Precipitation	Not reported in the database.
Elevation Range	847 - 3112 (meters)
Mean Max Aug Temp	Not reported in the database.
Mean Min Dec Temp	Not reported in the database.
Lake Acres	721
Pond Acres	456
Lake Count	27
Pond Count	509
TES Flora	Allotropa virgata, Alpova alexsmithii, Calamagrostis breweri, Calicium glaucellum, Cantharellus subalbidus, Chromosera cyanophylla, Collema nigrescens, Cudonia monticola, Eucephalus gormanii, Gastroboletus ruber, Gelatinodiscus flavidus, Gymnomyces abietis, Gyromitra esculenta, Helvella crassitunicata, Hydnotrya inordinata, Hydrothyria venosa, Lobaria hallii, Mycena monticola, Mycocalicium subtile, Nephroma resupinatum, Otidea onotica, Preissia quadrata, Ptilidium californicum, Rhizomnium nudum, Rhizopogon bacillisporus, Sarcodon imbricatus, Thaxterogaster pingue
TES Wildlife	Bald Eagle, Northern Spotted Owl
TES Fish	bull trout

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Ozone Sensitive Plants	Blue elderberry, California black oak, Evening primrose, Jeffery pine, Mugwort, Ninebark, Ponderosa pine, Quaking aspen, Red alder, Red elderberry, Scoulers willow, Skunkbush, Snowberry, Thinleaf huckleberry
Air Quality Sensitive Lichens	Alectoria imshaugii, Alectoria sarmentosa, Bryoria capillaris, Bryoria fremontii, Bryoria fuscescens, Bryoria glabra, Bryoria trichodes, Cavernularia hultenii, Cladonia chlorophaea, Cladonia ochrochlora, Hypogymnia apinnata, Hypogymnia occidentalis, Kaernefeltia merrillii, Nephroma helveticum subsp. sipeanum, Nephroma parile, Nodobryoria abbreviata, Nodobryoria oregana, Parmeliopsis ambigua, Parmeliopsis hyperopta, Solorina crocea, Sticta fuliginosa, Vulpicida canadensis
Cultural Resources	Not reported in the database.
Status/Trends: Acid Deposition:	Not reported in the database.
Status/Trends: Nutrient Enrichment:	Not reported in the database.
Status/Trends: Ozone Impacts:	Not reported in the database.

AQRV's

Fauna

Fauna Priority: Medium

Fauna Receptor: Fish

Fauna Indicator: Concentration of methyl mercury

Fauna Trends: Not reported in the database.

Fauna Actions:

Sample resident fish for mercury from the most heavily fished lakes.

Flora

Flora Priority: High

Flora Receptor: Lichens

Flora Indicator: Changes in community composition

Flora Trends: Not reported in the database.

Flora Priority 2: High

Flora Receptor 2: Lichens

Flora Indicator 2: Concentrations of N, S, P, Cd, Cr, Pb, Hg, Ni, Ti, V and Zn

Flora Trends 2: Not reported in the database.

Flora Priority 3: Low

Flora Receptor 3: Ozone

Flora Indicator 3: Visible injury on ozone-sensitive plants

Flora Trends 3: Not reported in the database.

Flora Actions:

Conduct repeat visits to lichen plots once every 10 years.

Visibility

Visibility Priority: High

Visibility Receptor: Scenic Views

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Wilderness Name: Mount Jefferson Wilderness

Visibility Indicator: Regional haze

Visibility Trends: Decrease

Visibility Actions

The Three Sisters IMPROVE site (THSI1) monitors visibility representative of the Mt. Jefferson Wilderness. Refer to the Oregon Regional Haze Plan and the IMPROVE monitoring reports for more details.

Water

Water Priority: High

Water Receptor: Water Chemistry

Water Indicator: ANC

Water Trends: Not reported in the database.

Water Priority 2: Medium

Water Receptor 2: Water Chemistry

Water Indicator 2: DIN: TP

Water Trends 2: Not reported in the database.

Water Priority 3: Low

Water Receptor 3: Diatoms

Water Indicator 3: Community Composition

Water Trends 3: Not reported in the database.

Water Actions:

Repeat visit to Scout, Bear, and Martin Lakes for ANC and nutrient ratios.

Challenge Points

Fauna Challenge Points: Not reported in the database.

Flora Challenge Points: 8

Total Plots: 16

Desired Plots: 5

Additional Plots Needed: -11

Data Type: Trends

Round 1 Visits: 15

Round 2 Visits: 9

Baseline %: 306

Trends %: 153

Visibility Challenge Points: Not reported in the database.

Water Challenge Points: 6