

Eagle Cap Wilderness Air Quality Report

Wilderness ID: 065

Wilderness Name: Eagle Cap Wilderness

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National Forest: Wallowa National Forest, Whitman National Forest

State: OR

Counties: Baker, Union, Wallowa

General Location: North East Oregon

Acres: 359,991



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Wilderness Categories	Information Specific to this Wilderness
Year Established	1964
Establishment Notes	92-521, Oregon Wilderness Act of 1984, The Wilderness Act of September 3, 1964
Designation	Clean Air Act Class 1
Administrative	Wallowa-Whitman National Forest
Unique Landscape Features	<p>Oregon's largest Wilderness encompasses the heart of the Wallowa Mountains, once home to the Nez Perce Indians. It also qualifies as the state's largest continuous alpine area and encompasses Legore Lake, at 8,880 feet the highest lake above sea level in the state. Approximately 534 miles of trails provide visitors with opportunities to travel throughout this area.</p> <p>This vast region has almost 60 high alpine lakes, which are surrounded by open meadows, bare granite peaks and ridges, and classical U-shaped glacial valleys thickly forested in their lower sections and rising to scattered stands of alpine timber. Elevations start at about 3,000 feet and top out at 9,845 feet on Sacajawea Peak near the center of the area. Thirty-one summits exceed 8,000 feet. Many fish species can be found in the miles of streams and rivers. Elk, deer, mountain goats, and bighorn sheep can be found in this area, as well as black bears, bobcats, and mountain lions.</p>
Lakebed Geology Sensitivity	Medium
Lakebed Geology Composition	andesite dacite diorite phyllite (37%), basalt gabbro wacke argillite undifferentiated volcanic rocks (11%), amphibolite hornfels paragneiss undifferentiated metamorphic roc (14%), Unknown buffering capacity (37%), GC 1+2 (37%), GC 1+2+3 (48%), GC 4+5+6 (52%)
Visitor Use	Not Reported
Mean Annual Precipitation	Not Reported
Elevation Range	882 - 2988 (meters)
Mean Max Aug Temp	Not Reported
Mean Min Dec Temp	Not Reported
Lake Acres	864
Pond Acres	226
Lake Count	44
Pond Count	223
TES Flora	<p>Arabis hastatula, Asplenium trichomanes-ramosum, Botrychium ascendens, Botrychium campestre, Botrychium crenulatum, Botrychium hesperium, Botrychium lineare, Botrychium lunaria, Botrychium minganense, Botrychium montanum, Botrychium paradoxum, Botrychium pedunculatum, Bupleurum americanum, Carex abrupta, Carex atosquama, Carex capillaris, Carex nardina, Carex norvegica, Carex norvegica ssp. inferalpina, Carex nova, Carex pelocarpa, Carex physocarpoides, Carex pyrenaica ssp. micropoda, Carex subnigricans, Carex vernacula, Castilleja fraterna, Castilleja rubida, Cheilanthes feei, Collema curtisporum, Juncus albescens, Kobresia myosuroides, Kobresia simpliciuscula, Lecanora pringlei, Listera borealis, Lomatium greenmanii, Packera dimorphophylla var. paysonii, Pellaea bridgesii, Platanthera obtusata, Salix farriarum, Saxifraga adscendens ssp. oregonensis, Thalictrum alpinum, Townsendia alpigena var. alpigena, Townsendia parryi</p>

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TES Wildlife	Not Reported
TES Fish	Not Reported
Ozone Sensitive Plants	Blue elderberry, Ninebark, Ponderosa pine, Quaking aspen, Red elderberry, Scoulers willow, Snowberry, Thinleaf huckleberry, Western wormwood
Air Quality Sensitive Lichens	Alectoria imshaugii, Alectoria sarmentosa, Bryoria capillaris, Bryoria fremontii, Bryoria fuscescens, Bryoria glabra, Bryoria trichodes, Cladonia fimbriata, Hypogymnia occidentalis, Kaernefeltia merrillii, Nephroma parile, Nodobryoria abbreviata, Nodobryoria oregana, Parmeliopsis ambigua, Parmeliopsis hyperopta, Peltigera didactyla, Peltigera neopolydactyla, Pseudephebe minuscula, Rhizoplaca melanophthalma, Solorina crocea, Umbilicaria hyperborea, Usnea fulvorea, Vulpicida canadensis
Cultural Resources	Not Reported
Status/Trends: Acid Deposition:	Not Reported
Status/Trends: Nutrient Enrichment:	Not Reported
Status/Trends: Ozone Impacts:	Not Reported

AQRV's

Fauna

Fauna Priority: Medium

Fauna Receptor: Fish

Fauna Indicator: Concentration of methyl mercury

Fauna Trends: Not Reported

Fauna Actions:

Baseline for mercury in fish was established in 2010-2011. Repeat sampling in 2020-2021 to evaluate trends.

Flora

Flora Priority: High

Flora Receptor: Lichens

Flora Indicator: Changes in community composition

Flora Trends: Not Reported

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

Flora Priority 3: Low

Flora Receptor 3: Ozone

Flora Indicator 3: Visible injury on ozone-sensitive plants

Flora Trends 3: Not Reported

Flora Actions:

Waiting for East-side gradient model to be developed so lichens can be scored for changes in community composition.

This model should be completed in 2012. Contact Linda Geiser for more details (lgeiser@fs.fed.us).

Visibility

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Visibility Priority: High

Visibility Receptor: Scenic Views

Visibility Indicator: Regional haze

Visibility Trends: Decrease

Visibility Actions

Visibility in the Eagle Cap Wilderness is represented by the IMPROVE monitor at the Starkey Experimental Forest. Need to evaluate the impact of Rx burning on the 20% worst case days.

Water

Water Priority: High

Water Receptor: Water Chemistry

Water Indicator: ANC

Water Trends: Not Reported

Water Priority 2: High

Water Receptor 2: Water Chemistry

Water Indicator 2: DIN: TP

Water Trends 2: Not Reported

Water Priority 3: High

Water Receptor 3: Diatoms

Water Indicator 3: Community Composition

Water Trends 3: Not Reported

Water Actions:

Repeat visits to Craig, Mirror, John Henry, Little Frazier, Long, No Name, Pocket, Razz, Swamp, and Traverse for Nutrient Ratios and ANC. Monitor for blue-green algae blooms at Craig Lake. If observed, contact the Oregon Health Authority at 971-673-0400.

Challenge Points

Fauna Challenge Points: 6

Flora Challenge Points: 6

Total Plots: 44

Desired Plots: 18

Additional Plots Needed: -26

Data Type: Trends

Round 1 Visits: 42

Round 2 Visits: 18

Baseline %: 244

Trends %: 89

Visibility Challenge Points: Not Reported

Water Challenge Points: 8