

**Opal Creek Wilderness Air Quality Report**

National Forest: Willamette National Forest

State: OR

Counties: Clackamas, Marion

General Location: Central Oregon Cascade Range

Acres: 20,454



# Opal Creek Wilderness Air Quality Report

Wilderness ID: 422

Wilderness Name: Opal Creek Wilderness

Wilderness Categories	Information Specific to this Wilderness
Year Established	1997
Establishment Notes	104-333, 105-76
Designation	Clean Air Act Class 2
Administrative	Willamette National Forest
Unique Landscape Features	Opal Creek Wilderness features steep and rugged forested hillsides. The eastern portion of the area encompasses the headwaters of two major creeks (Battle Axe Creek and Opal Creek) which join to become the Little North Santiam River. The western portion of the area is dominated by two prominent peaks; Whetstone and Henline Mountains, which offer scenic vantage points and were once used as fire lookout sites.
Lakebed Geology Sensitivity	N/A
Lakebed Geology Composition	Not reported in the database.
Visitor Use	Not reported in the database.
Mean Annual Precipitation	Not reported in the database.
Elevation Range	474 - 1584 (meters)
Mean Max Aug Temp	Not reported in the database.
Mean Min Dec Temp	Not reported in the database.
Lake Acres	Not reported in the database.
Pond Acres	19
Lake Count	Not reported in the database.
Pond Count	24
TES Flora	Chaenotheca furfuracea, Eucephalus gormanii, Fuscopannaria saubinetii, Galerina atkinsoniana, Hypogymnia oceanica, Leptogium rivale, Peltigera pacifica, Polyozellus multiplex, RAAR7, Sarcodon imbricatus
TES Wildlife	Northern Spotted Owl
TES Fish	Not reported in the database.
Ozone Sensitive Plants	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.

### **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: Medium

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 plot once every 10 years. While on-site, consider surveying sensitive vegetation for injury due to ozone.

### **Visibility**

Visibility Priority: Low

Visibility Receptor: Scenic Views

Visibility Indicator: Regional haze

Visibility Trends: Not reported in the database.

### ***Visibility Actions***

None.

### **Water**

Water Priority: Medium

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:***

Collect water samples from Opal creek. Analyze for anions, cations, and nutrients, and perhaps metals.

**Challenge Points**

***Fauna Challenge Points: Not reported in the database.***

***Flora Challenge Points: 6***

Total Plots: 2

Desired Plots: 1

Additional Plots Needed: -1

Data Type: Baseline

Round 1 Visits: 1

Round 2 Visits: 1

Baseline %: 196

Trends %: 0

***Visibility Challenge Points: Not reported in the database.***

***Water Challenge Points: Not reported in the database.***