

## **William O. Douglas Wilderness Air Quality Report**

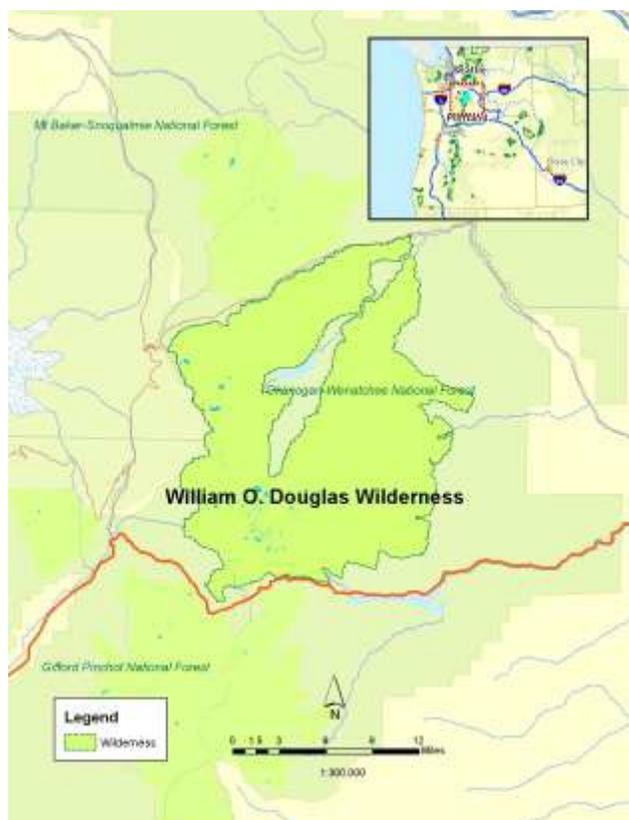
National Forest: Gifford Pinchot National Forest, Snoqualmie National Forest

State: WA

Counties: Lewis, Yakima

General Location: Southern Washington Cascade Range

Acres: 169,081



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Wilderness ID: 243

Wilderness Name: William O. Douglass Wilderness

Wilderness Categories	Information Specific to this Wilderness
Year Established	1984
Establishment Notes	Washington State Wilderness Act of 1984
Designation	Clean Air Act Class 2
Administrative	Gifford Pinchot National Forest, Okanogan-Wenatchee National Forests
Unique Landscape Features	This magnificent region pays tribute to the Wilderness-loving Supreme Court justice who often explored the area on foot. It lies bordered to the west by Mount Rainier National Park, with Norse Peak and Goat Rocks Wildernesses just to the north and south, respectively. Non- Wilderness roads drive into the area from the north, up Bumping River to a non-Wilderness central section around Bumping Lake. From the lake, the wild terrain rises west and east to high, broad ridges capped with rock summits. Subalpine meadows and thick old-growth forestland of fir, hemlock, and cedar distinguish the lower elevations. Beyond the east ridge, the land descends to open ridges and tall ponderosa pine. The southern portion of the Wilderness spreads out into a large park-like plateau, where the forest thins and 59 lakes lie among another 200 or so ponds and pools. You may see members of large herds of elk and mule deer, who reside here with fishers and foxes, mountain goats and grouse. As much as 120 inches of precipitation per year drowns the western side of the area, while the eastern side may get as little as 20 to 24 inches. Snow usually starts to fall by November, and often lingers in patches up high until midsummer.
Lakebed Geology Sensitivity	High
Lakebed Geology Composition	andesite dacite diorite phyllite (67%), basalt gabbro wacke argillite undifferentiated volcanic rocks (2%), amphibolite hornfels paragneiss undifferentiated metamorphic roc (31%), GC 1+2 (67%), GC 1+2+3 (69%), GC 4+5+6 (15%)
Visitor Use	Not reported in the database.
Mean Annual Precipitation	Not reported in the database.
Elevation Range	866 - 2359 (meters)
Mean Max Aug Temp	Not reported in the database.
Mean Min Dec Temp	Not reported in the database.
Lake Acres	440
Pond Acres	531
Lake Count	11
Pond Count	728
TES Flora	Albatrellus flettii, Buxbaumia viridis, Calicium glaucellum, Cantharellus subalbidus, Castilleja cryptantha, Chaenactis thompsonii, Chaenotheca furfuracea, Cladonia norvegica, Cypridium fasciculatum, Gyromitra californica, Gyromitra esculenta, Gyromitra infula, Gyromitra montana, Mycocalicium subtile, Nephroma parile, Phlogiotis helvelloides, Polyozellus multiplex, Ptilidium californicum, Rhizomnium nudum, Rhizopogon parksii, Sarcosphaera coronaria, Schistostega pennata, Sisyrrinchium sarmentosum, Thaxterogaster pingue, Tremiscus helvelloides
TES Wildlife	Canada Lynx, Gray Wolf, Northern Spotted Owl
TES Fish	bull trout
Ozone Sensitive Plants	Ponderosa pine, Red elderberry, Scoulers willow, Snowberry, Thinleaf huckleberry

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Air Quality Sensitive Lichens	Alectoria sarmentosa, Hypogymnia apinnata, Hypogymnia occidentalis, Nodobryoria oregana, Parmeliopsis hyperopta
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 fish for mercury from the most heavily fished lakes, including both people and wildlife. Concurrently, collect water quality samples from these waters.

### **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:***

Establish 3 more lichen plots to bring total to 8 to achieve desired spatial density of 1 plot/20,000 acres. Repeat visits to lichen plots once every ten years to monitor trends. Survey vegetation for indications of ozone injury while on site.

### **Visibility**

Visibility Priority: Medium

Visibility Receptor: Scenic Views

Visibility Indicator: Regional haze

Visibility Trends: Not reported in the database.

#### ***Visibility Actions***

Nearest IMPROVE visibility monitor is at Snoqualmie Pass (SNPA1).

**Water**

Water Priority: High  
Water Receptor: Water Chemistry  
Water Indicator: ANC  
Water Trends: Not reported in the database.  
Water Priority 2: High  
Water Receptor 2: Water Chemistry  
Water Indicator 2: DIN: TP  
Water Trends 2: Not reported in the database.  
Water Priority 3: Medium  
Water Receptor 3: Diatoms  
Water Indicator 3: Community Composition  
Water Trends 3: Not reported in the database.

***Water Actions:***

Repeat visits to American, Deer, Dumbbell, Pear, and Shellrock Lakes for ANC and nutrient ratios.

**Challenge Points**

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

***Flora Challenge Points: 5***

Total Plots: 5

Desired Plots: 8

Additional Plots Needed: 3

Data Type: Baseline

Round 1 Visits: 1

Round 2 Visits: 4

Baseline %: 59

Trends %: 0

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

***Water Challenge Points: 8***