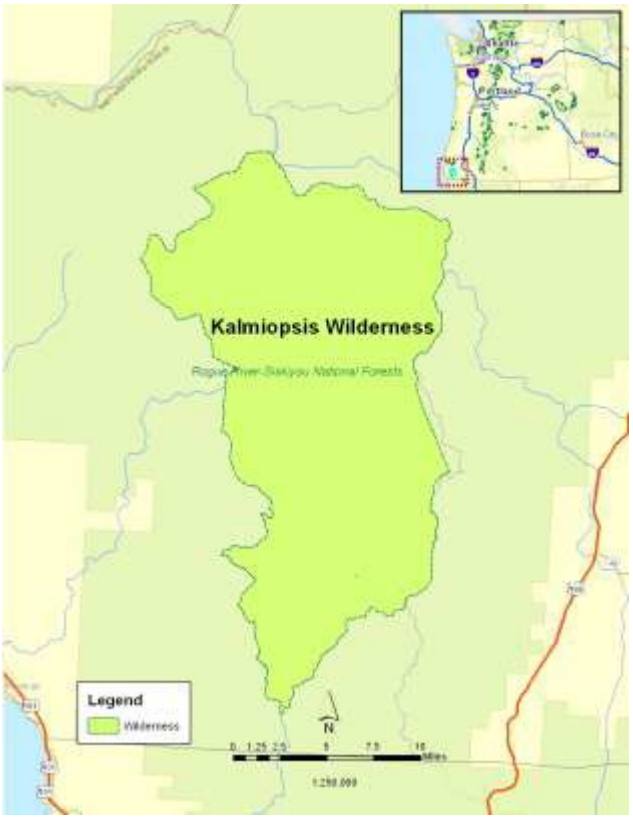
Kalmiopsis Wilderness Air Quality Report

National Forest: Siskiyou National Forest
State: OR
Counties: Curry, Josephine
General Location: Southern Oregon Coast Range
Acres: 180,095



Wilderness Categories	Information Specific to this Wilderness
Year Established	1964
Establishment Notes	Endangered American Wilderness Act of 1978, The Wilderness Act of September 3,1964
Designation	Clean Air Act Class 1
Administrative	Rogue River-Siskiyou National Forest
Unique Landscape Features	This nearly 180,000 acre Wilderness includes the headwater basin of the Chetco and North Fork Smith Rivers and a portion of the Illinois River canyon. This is a harsh, rugged area with a unique character. Elevations range from 500 to 5,098 feet (Pearsoll Peak). The area is characterized by deep, rough canyons, sharp rock ridges and clear rushing mountain streams and rivers. Diversity of topography and geology provide excellent habitat for a wide variety of botanical species. The Kalmiopsis Wilderness is well known for its diversity of plant life. Much of this diversity results from plant species adapting to life in harsh soils derived from peridotite and serpentinite rocks. Both are rich in heavy metals such as magnesium, iron, chromium and nickel, which in high amounts, can be toxic to most plants. The diversity of plant habitat has been the result of a combination of geologic forces (uplift, folding and faulting), erosional and depositional forces (glaciation, weather, climate and the action of rivers), and periodic fires. The Kalmiopsis leachiana plant was discovered in 1930 by Lilla Leech in the Gold Basin area. The plant is a relic of the pre-ice age and the oldest member of the Health (Ericaceae) Family. The Kalmiopsis Wilderness was named after this unique endemic shrub. Besides being a place of great botanical interest, the Kalmiopsis Wilderness is also one of the most unusual and complex geological areas of our country. The Kalmiopsis is part of the Klamath Mountain geologic province of northwestern California and southwestern Oregon. The eastern half is part of the Josephine "ultramafic" sheet. Ultramafic denotes being very high in iron and magnesium. The western half is underlain by the contorted sedimentary rocks of the Dothan formation and by the igneous intrusive rocks of the Big Craggies. Most of the rocks in this province were formerly parts of the oceanic crust and included serpentine, submarine volcanic flow rocks, intrusive granite-like rocks, and sedimentary rocks such as shale and sandstone. The Wild segments of the Illinois, Chetco and North Fork Smith Rivers flow through the Kalmiopsis Wilderness, providing clear water, fish habitat and water-based recreation in a remote and primitive setting. Lake environments are limited, primarily to Babyfoot Lake on the eastern boundary and Vulcan Lake on the west. Since these areas are readily accessible from nearby trailheads, they do receive a greater amount of day-use visitation. The nearly 500,000 acre Biscuit Fire of 2002 included the entire wilderness area. The environment has changed dramatically and provides a unique opportunity to observe a natural response to fire disturbance through plant succession, erosional and depositional occurrences and changed habitat for flora and fauna. While the lightning caused fire was a natural event for the wilderness it did provide damage to the nearly 160 miles of trails and trailhead facilities. Large areas of high fire severity occurred, killing much of the overstory trees in these areas, which will result in continued damaged to the trail system over time. The trails have always been challenging due to their steepness and narrow rocky surface. The impact from the fire includes added challenges, such as large numbers of downed trees, missing trail signs, holes and lose rock on the tread etc. For now and in the foreseeable future, wilderness users should recognize the need for increased safety awareness when traveling and camping.
Lakebed Geology Sensitivity	N/A
Lakebed Geology Composition	Not Reported

Wilderness Categories	Information Specific to this Wilderness
Visitor Use	Not Reported
Mean Annual Precipitation	Not Reported
Elevation Range	65 - 1546 (meters)
Mean Max Aug Temp	Not Reported
Mean Min Dec Temp	Not Reported
Lake Acres	10
Pond Acres	8
Lake Count	4
Pond Count	9
TES Flora	Arabis aculeolata, Arabis koehleri var. stipitata, Arabis macdonaldiana, Arctostaphylos hispidula, Cardamine nuttallii var. gemmata, Carex scabriuscula, Cypripedium californicum, Cypripedium fasciculatum, Darlingtonia californica, Dicentra formosa ssp. oregona, Draba howellii, Epilobium rigidum, Ericameria arborescens, Erigeron cervinus, Eriogonum lobbii, Fritillaria glauca, Gentiana setigera, Hieracium bolanderi, Kalmiopsis leachiana, Leucothoe davisiae, Lewisia cotyledon var. cotyledon, Lilium pardalinum ssp. vollmeri, Lomatium martindalei, Lupinus tracyi, Minuartia howellii, Monardella purpurea, Packera hesperia, Rhizopogon truncatus, Salix delnortensis, Silene grayi, Smilax californica, Sophora leachiana, Streptanthus howellii, Thermopsis robusta
TES Wildlife	Bald Eagle
TES Fish	Not Reported
Ozone Sensitive Plants	Not Reported
Air Quality Sensitive Lichens	Not Reported
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:

Sample fish in high visitor use lakes for mercury.

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: Medium
Flora Receptor 3: Ozone
Flora Indicator 3: Visible injury on ozone-sensitive plants
Flora Trends 3: Not Reported

Flora Actions:

Increase number of lichen plots from 4 to 9, to obtain the desired plot density of 1 plot/20,000 acres. Conduct surveys of sensitive vegetation to ozone injury while at plots. Repeat visits once every 10 years to monitor trends.

Visibility

Visibility Priority: High
Visibility Receptor: Scenic Views
Visibility Indicator: Regional haze
Visibility Trends: Not Reported

Visibility Actions

Visibility is monitored by the IMPROVE monitor (KALM1). See Oregon Regional Haze Plan and IMPROVE monitoring reports for details.

Water

Water Priority: Low
Water Receptor: Water Chemistry
Water Indicator: ANC
Water Trends: Not Reported
Water Priority 2: Low
Water Receptor 2: Water Chemistry
Water Indicator 2: DIN: TP
Water Trends 2: Not Reported
Water Priority 3: Low
Water Receptor 3: Diatoms
Water Indicator 3: Community Composition
Water Trends 3: Not Reported

Water Actions:

Sample lakes for anions, cations, and nutrients.

Challenge Points

Fauna Challenge Points: 0
Flora Challenge Points: 5
Total Plots: 4
Desired Plots: 9
Additional Plots Needed: 5
Data Type: Baseline
Round 1 Visits: 0
Round 2 Visits: 4

Baseline %: 44
Trends %: 0
Visibility Challenge Points: Not Reported
Water Challenge Points: 0