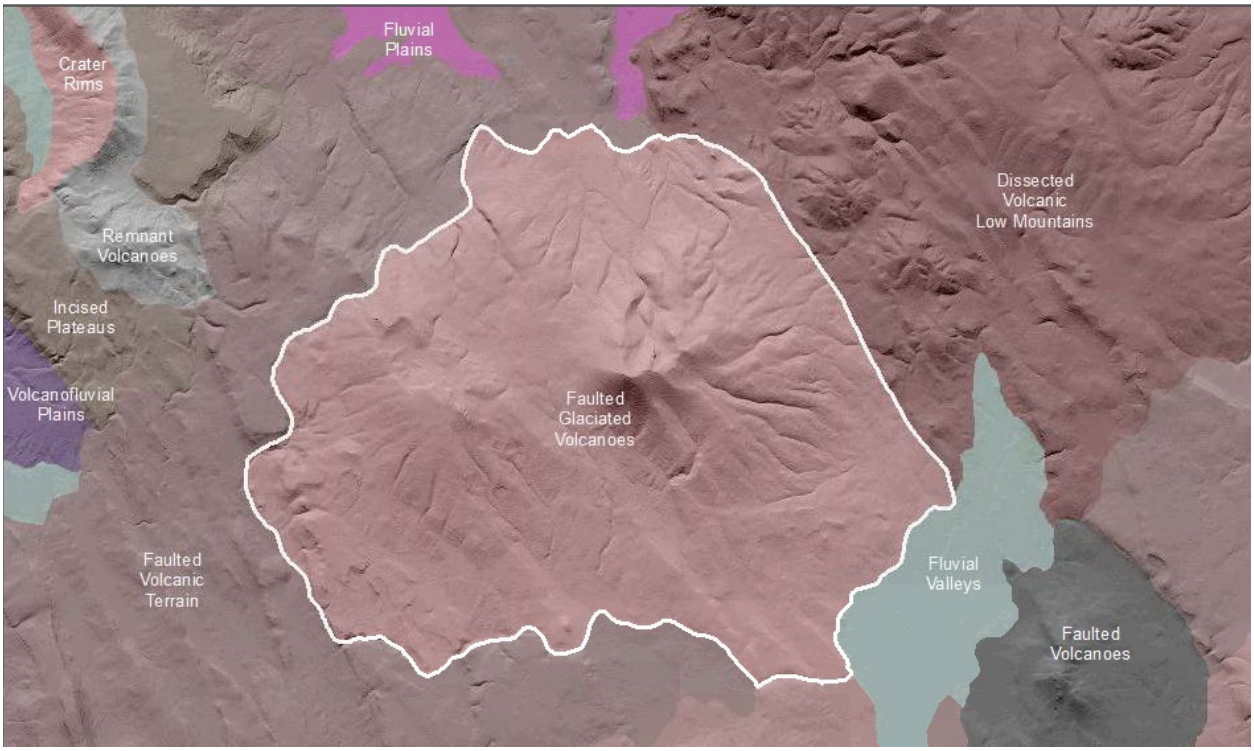
Eastern Cascades Faulted Glaciated Volcanoes

Volcanoes are edifies, typically conical in shape, with a central summit vent that erupts effusive magmatic material as ash, cinder, blocks and or lava that accumulates and build up the landform.

Landform Association – Faulted Glaciated Volcanoes:



Faulted Glaciated Volcanoes are volcanoes with evidence of past glaciation and faulting. Along the volcanic peaks and ridges there are indicators of past glacial action. Though marred by degradation, the terrain appears glacially scoured with cirque basins, icefields, and U-shaped valleys. Since the cessation of glaciation in these areas, however, surface, mass wasting (shallow rapid or deep seated earthflow, rockfall, etc.) or fluvial erosion processes have dominated and masked much of the glacial signature of the mid to lower slopes. These volcanoes are cut by faults leaving a series of fault scarps that displace bedrock blocks and divert former stream channels to zig-zag courses. Soils are thin to absent om the rocky slopes and thick and rocky along lower (footslope, toeslope) slope positions. Soil taxa are typically Andisols, Alfisos and Mollisols.

This Landform Association has a limited spatial extent on National Forest System Lands.

Landtype Associations: Landtype Associations are formed by intersecting vegetation series or groups of vegetation series with Landform Associations.

Topography:
The following tables represent the average conditions for the Landform Association. Only lands within and adjacent to National Forest System Lands were mapped by this project. The entire EPA Level III Ecoregion is not covered by this mapping.

The percent of Landform Association (% of LfA) in bold in the table below refers to the percent of the Ecoregion represented by that Landform Association. The (% of LfA) numbers not in bold in the table below refer to the percent of each Landtype Association within the Landform Associations.

Landform Association/Landtype Association	**% of LfA**	**Mean % Slope**	**Minimum Elevation (m)**	**Maximum Elevation (m)**	**Mean Elevation (m)**	**% Northerly Aspect (226° - 134°)**	**% Southerly Aspect (135° - 225°)**
Faulted Glaciated Volcanoes	**2.6%**	**11**	**1561**	**1812**	**1669**	**72%**	**28%**
Faulted Glaciated Volcanoes, Grand Fir-White Fir	79.2%	17	1533	2274	1853	75%	25%
Faulted Glaciated Volcanoes, Grand Fir-White Fir - Ponderosa Pine	0.3%	10	1591	1700	1634	98%	2%
Faulted Glaciated Volcanoes, Grand Fir-White Fir - Shrub-Steppe	0.2%	7	1500	1563	1516	82%	18%
Faulted Glaciated Volcanoes, Grasslands / Meadows - Shrub-Steppe	0.2%	4	1410	1520	1454	81%	19%
Faulted Glaciated Volcanoes, Parkland	4.2%	22	2112	2515	2328	82%	18%
Faulted Glaciated Volcanoes, Ponderosa Pine	13.2%	10	1558	1748	1641	63%	37%
Faulted Glaciated Volcanoes, Shrub-Steppe	0.2%	8	1383	1502	1432	100%	0%
Faulted Glaciated Volcanoes, Shrub-Steppe - Grand Fir-White Fir	0.4%	5	1482	1550	1505	59%	41%
Faulted Glaciated Volcanoes, Shrub-Steppe - Ponderosa Pine	0.8%	6	1489	1601	1515	74%	26%
Faulted Glaciated Volcanoes, Western Juniper	0.2%	9	1508	1586	1535	90%	10%
Faulted Glaciated Volcanoes, Western Juniper - Ponderosa Pine	0.3%	7	1601	1658	1627	84%	16%
Faulted Glaciated Volcanoes, Western Juniper - Shrub-Steppe	0.8%	7	1447	1562	1480	77%	23%

Climate:

Landform Association/Landtype Association	**Mean Annual Precipitation (mm)**	**Mean Annual Temperature °C**	**AET/PET Ratio July, Aug, Sept**
Faulted Glaciated Volcanoes	**565**	**7**	**0.13**
Faulted Glaciated Volcanoes, Grand Fir-White Fir	702	6	0.17
Faulted Glaciated Volcanoes, Grand Fir-White Fir - Ponderosa Pine	648	7	0.13
Faulted Glaciated Volcanoes, Grand Fir-White Fir - Shrub-Steppe	448	8	0.10
Faulted Glaciated Volcanoes, Grasslands / Meadows - Shrub-Steppe	437	8	0.10
Faulted Glaciated Volcanoes, Parkland	991	4	0.16
Faulted Glaciated Volcanoes, Ponderosa Pine	548	7	0.14
Faulted Glaciated Volcanoes, Shrub-Steppe	415	7	0.13
Faulted Glaciated Volcanoes, Shrub-Steppe - Grand Fir-White Fir	447	8	0.10
Faulted Glaciated Volcanoes, Shrub-Steppe - Ponderosa Pine	431	7	0.09
Faulted Glaciated Volcanoes, Western Juniper	377	7	0.08
Faulted Glaciated Volcanoes, Western Juniper - Ponderosa Pine	545	7	0.10
Faulted Glaciated Volcanoes, Western Juniper - Shrub-Steppe	446	8	0.10

The ratio of Actual Evapotranspiration to Potential Evapotranspiration (AET/PET) is used as a broad-scale indicator of potential drought stress. We obtained modeled actual and potential evapotranspiration datasets from the Numerical Terradynamic Simulation Group at the University of Montana (http://www.ntsg.umt.edu/project/mod16) for a 30 year climate average. AET/PET ratio in the table above is based on a scale of zero to one. A value closer to 1 means the vegetation is transpiring close to its potential. A value farther from 1means that the Actual Evapotranspiration is below potential based on this climatic zone (Ringo, et. al. 2016 in draft).