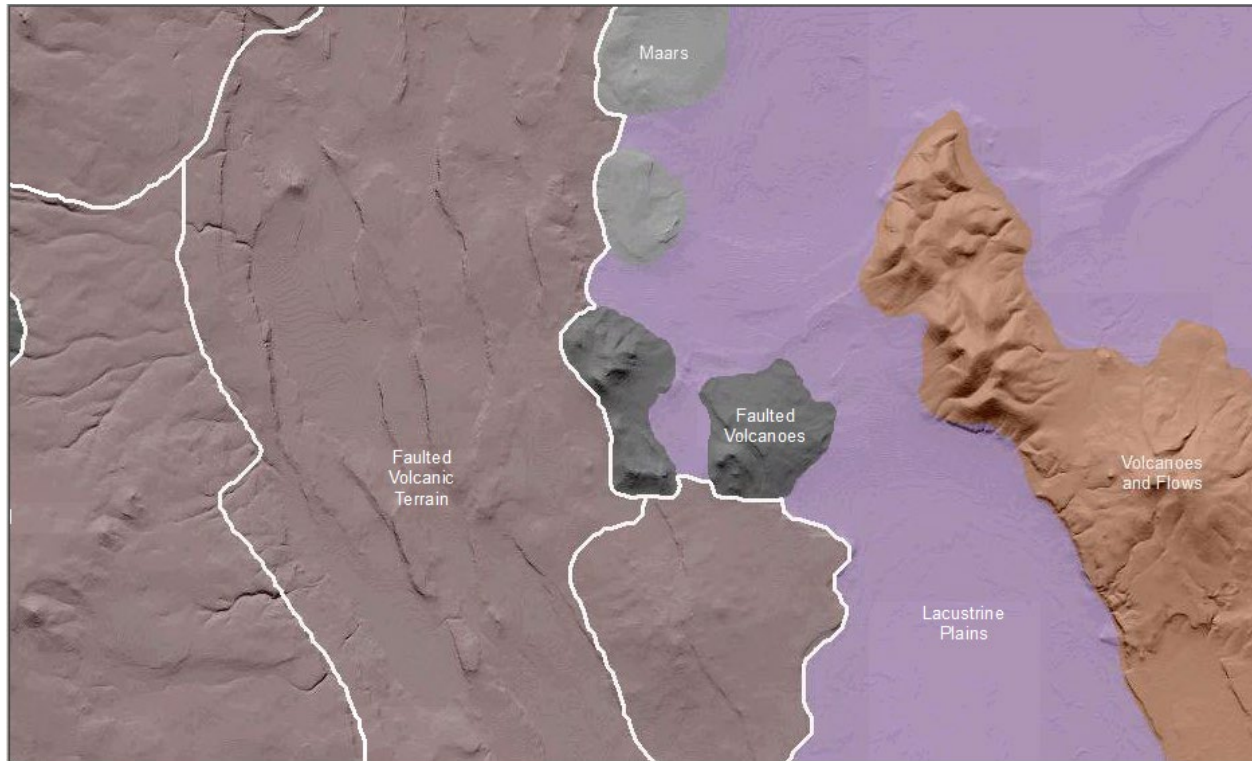


Blue Mountains Faulted Volcanic Terrain

Volcanoes are edifices, 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 Volcanic Terrain:



Faulted Volcanic Terrain is a miscellaneous map unit that includes diverse landform elements associated with the numerous volcanoes in the volcanic fields of central and eastern Oregon. This terrain is dominantly constructive topography associated with basaltic volcanoes, including cinder cones, conical volcanoes, shield volcanoes and maars. The extensive lava flows of these volcanoes are not differentiated. Tephra from local volcanic sources, pumiceous tephra from Mt. Mazama, and or andesitic tephra from the Cascade Range volcanoes blanket some or this entire map unit.

Weathering, fluvial erosion and, to a large degree, mass wasting have degraded these constructional landforms. Shed sediments are deposited in fluvial fans, plains and terraces which can represent significant extents within this map unit. This volcanic terrain is 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 on the rocky slopes and thick and rocky along lower (footslope, toeslope) slope positions. Soil taxa are typically Andisols, Alfisols 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 Volcanic Terrain	2.9%	23	1209	1647	1423	78%	22%
Faulted Volcanic Terrain, Douglas-Fir	8.4%	25	1272	1731	1526	86%	14%
Faulted Volcanic Terrain, Douglas-Fir - Ponderosa Pine	0.1%	21	1077	1406	1252	81%	19%
Faulted Volcanic Terrain, Grand Fir-White Fir	10.0%	27	1227	1737	1481	88%	12%
Faulted Volcanic Terrain, Ponderosa Pine	22.7%	22	1162	1657	1400	70%	30%
Faulted Volcanic Terrain, Ponderosa Pine - Douglas-Fir	0.2%	33	1012	1345	1211	74%	26%
Faulted Volcanic Terrain, Ponderosa Pine - Grand Fir-White Fir	0.1%	21	1289	1522	1413	62%	38%
Faulted Volcanic Terrain, Shrub-Steppe	49.4%	18	999	1411	1154	63%	37%
Faulted Volcanic Terrain, Subalpine Fir	0.5%	23	1582	1823	1733	98%	2%
Faulted Volcanic Terrain, Western Juniper	8.5%	14	1329	1917	1554	84%	16%

Climate:

Landform Association/Landtype Association	Mean Annual Precipitation (mm)	Mean Annual Temperature °C	AET/PET Ratio July, Aug, Sept
Faulted Volcanic Terrain	665	7	0.21
Faulted Volcanic Terrain, Douglas-Fir	660	6	0.19
Faulted Volcanic Terrain, Douglas-Fir - Ponderosa Pine	689	7	0.22
Faulted Volcanic Terrain, Grand Fir-White Fir	742	6	0.27
Faulted Volcanic Terrain, Ponderosa Pine	664	7	0.20
Faulted Volcanic Terrain, Ponderosa Pine - Douglas-Fir	707	7	0.25
Faulted Volcanic Terrain, Ponderosa Pine - Grand Fir-White Fir	799	6	0.26
Faulted Volcanic Terrain, Shrub-Steppe	528	8	0.15
Faulted Volcanic Terrain, Subalpine Fir	796	5	0.26
Faulted Volcanic Terrain, Western Juniper	336	6	0.09

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.ntsug.umd.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 1 means that the Actual Evapotranspiration is below potential based on this climatic zone (Ringo, et. al. 2016 in draft).