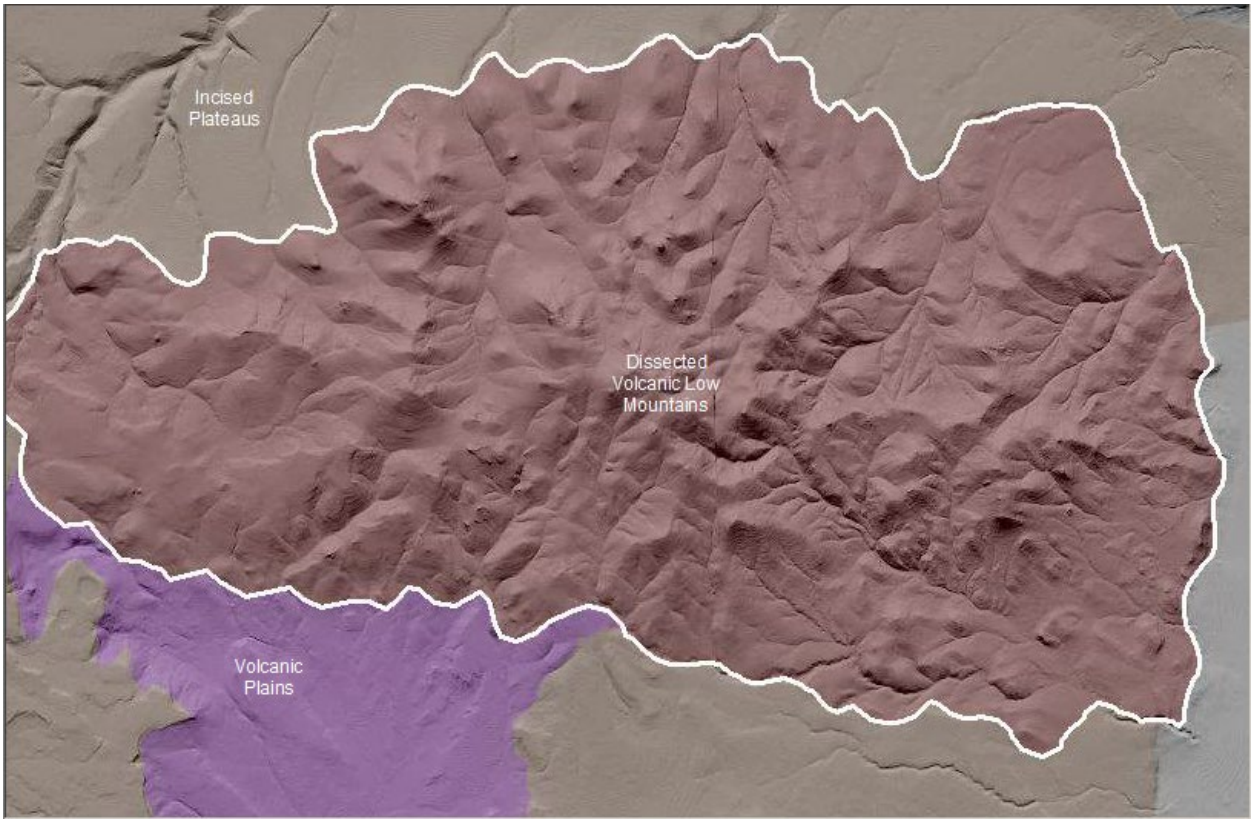
Eastern Cascades Dissected Volcanic Low Mountains

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 – Dissected Volcanic Low Mountains:



Dissected Volcanic Low Mountains are areas of where a series of volcanoes once occupied the landscape and belong to the low mountain relief class. The original volcanoes are Tertiary to Quaternary in age. Over time they have been subjected to weathering and concentration of surface runoff to result in fluvial erosion and slope mass wasting that eroded V-shaped valleys into the sides of the volcanoes and through the series of volcanic peaks. It is no longer evident what the landscape was like previously. Some slope angles are greater than repose and are bare rock or outcroppings. Thickest soils gather in valley bottoms and collect in tributary headwalls.

This Landform Association is rare 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°)
Dissected Volcanic Low Mountains	**1.3%**	**12**	**1453**	**1677**	**1548**	**74%**	**26%**
Dissected Volcanic Low Mountains, Grand Fir-White Fir	50.3%	17	1488	1818	1664	79%	21%
Dissected Volcanic Low Mountains, Ponderosa Pine	44.4%	12	1454	1706	1533	73%	27%
Dissected Volcanic Low Mountains, Ponderosa Pine - Developed	1.5%	12	1607	1913	1672	46%	54%
Dissected Volcanic Low Mountains, Ponderosa Pine - Shrub-Steppe	0.6%	5	1534	1625	1562	66%	34%
Dissected Volcanic Low Mountains, Ponderosa Pine - Western Juniper	0.6%	10	1396	1536	1477	56%	44%
Dissected Volcanic Low Mountains, Shrub-Steppe	0.3%	5	1529	1589	1569	98%	2%
Dissected Volcanic Low Mountains, Western Juniper	1.8%	9	1342	1455	1386	79%	21%
Dissected Volcanic Low Mountains, Western Juniper - Developed	0.4%	4	1328	1359	1341	77%	23%

Climate:

Landform Association/Landtype Association	Mean Annual Precipitation (mm)	Mean Annual Temperature °C	AET/PET Ratio July, Aug, Sept
Dissected Volcanic Low Mountains	**474**	**7**	**0.13**
Dissected Volcanic Low Mountains, Grand Fir-White Fir	538	7	0.16
Dissected Volcanic Low Mountains, Ponderosa Pine	462	7	0.13
Dissected Volcanic Low Mountains, Ponderosa Pine - Developed	521	7	0.15
Dissected Volcanic Low Mountains, Ponderosa Pine - Shrub-Steppe	484	7	0.10
Dissected Volcanic Low Mountains, Ponderosa Pine - Western Juniper	447	8	0.09
Dissected Volcanic Low Mountains, Shrub-Steppe	467	7	0.10
Dissected Volcanic Low Mountains, Western Juniper	396	8	0.09
Dissected Volcanic Low Mountains, Western Juniper - Developed	378	8	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.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).