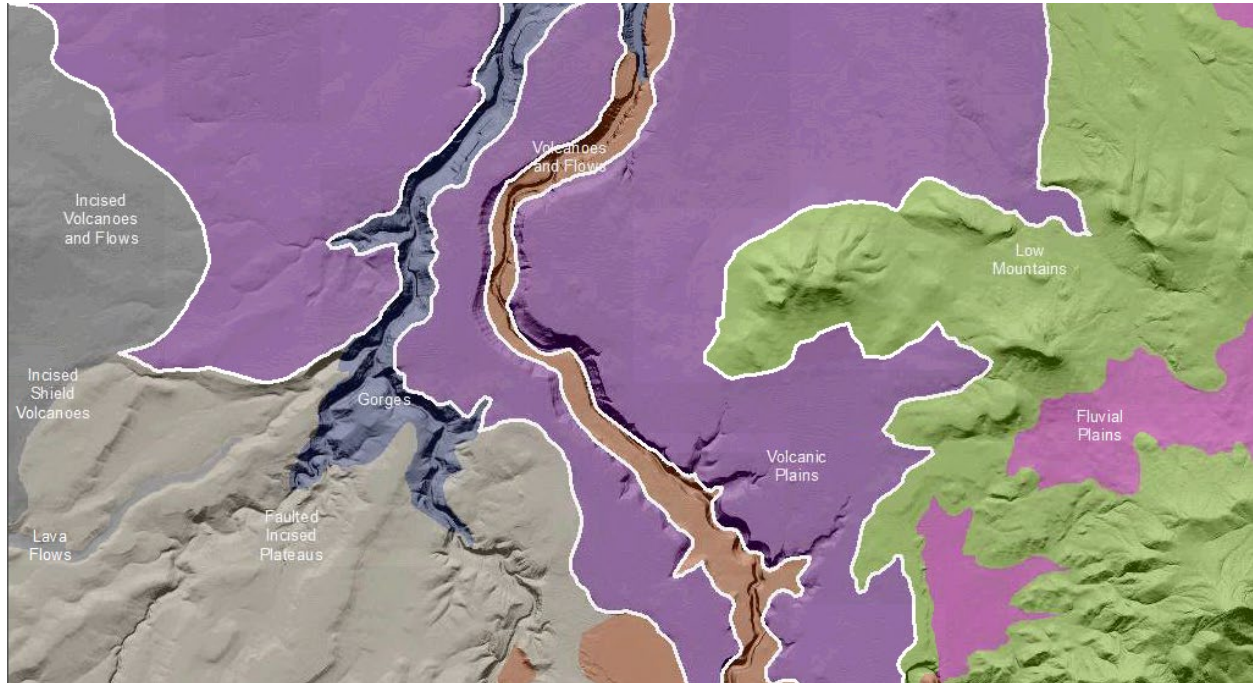


Eastern Cascade Volcanic Plains

Plain [Landscape Term] A general term referring to an extensive, lowland area that ranges from level to gently sloping or undulating. A plain has few or no prominent hills or valleys, and usually occurs at low elevation relative to surrounding areas. (Bates and Jackson, 1980)

Landform Association:

Volcanic Plains:



Volcanic Plains are broad expanses of volcanic lava flows issued from extant or now-absent volcanoes or vents. They are characterized by undulating to irregular hill-flat flow topography typical of basalt. Locally vents and small cinder cones, as well as spatter mounds and lava flow pressure ridges form topographic highs on these plains. Tephra deposits and local stream deposits provide some weatherable materials on top of the volcanic flow rock. Soils classify as Andisols.

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 Association.

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°)
Volcanic Plains	3.5%	7	1531	1680	1601	86%	14%
Volcanic Plains, Developed	0.2%	3	1369	1401	1386	86%	14%
Volcanic Plains, Grand Fir-White Fir	31.9%	11	1408	1734	1572	89%	11%
Volcanic Plains, Grand Fir-White Fir - Ponderosa Pine	1.5%	9	1548	1624	1581	91%	9%
Volcanic Plains, Grasslands / Meadows - Ponderosa Pine	0.1%	5	1561	1605	1588	82%	18%
Volcanic Plains, Mountain Hemlock - Grand Fir-White Fir	0.3%	4	1560	1646	1581	76%	24%
Volcanic Plains, Parkland	0.2%	4	2116	2195	2153	97%	3%
Volcanic Plains, Parkland - Grand Fir-White Fir	0.3%	6	2123	2247	2191	80%	20%
Volcanic Plains, Ponderosa Pine	38.5%	6	1562	1705	1628	83%	17%
Volcanic Plains, Ponderosa Pine - Grand Fir-White Fir	2.4%	6	1772	1923	1843	88%	12%
Volcanic Plains, Ponderosa Pine - Grasslands / Meadows	0.2%	5	1524	1560	1532	79%	21%
Volcanic Plains, Ponderosa Pine - Shrub-Steppe	7.8%	6	1547	1747	1630	85%	15%
Volcanic Plains, Shrub-Steppe	15.2%	4	1473	1590	1525	86%	14%
Volcanic Plains, Shrub-Steppe - Grand Fir-White Fir	0.1%	2	1578	1604	1595	100%	0%
Volcanic Plains, Shrub-Steppe - Ponderosa Pine	0.8%	5	1621	1722	1684	87%	13%
Volcanic Plains, Western Juniper	0.5%	5	1110	1155	1136	80%	20%

Climate:

Landform Association/Landtype Association	Mean Annual Precipitation (mm)	Mean Annual Temperature °C	AET/PET Ratio July, Aug, Sept
Volcanic Plains	604	7	0.13
Volcanic Plains, Developed	456	7	0.13
Volcanic Plains, Grand Fir-White Fir	725	6	0.23
Volcanic Plains, Grand Fir-White Fir - Ponderosa Pine	560	7	0.12
Volcanic Plains, Grasslands / Meadows - Ponderosa Pine	542	7	0.07
Volcanic Plains, Mountain Hemlock - Grand Fir-White Fir	1222	6	0.33
Volcanic Plains, Parkland	721	5	0.10
Volcanic Plains, Parkland - Grand Fir-White Fir	758	4	0.14
Volcanic Plains, Ponderosa Pine	608	6	0.12
Volcanic Plains, Ponderosa Pine - Grand Fir-White Fir	683	6	0.12
Volcanic Plains, Ponderosa Pine - Grasslands / Meadows	503	7	0.07
Volcanic Plains, Ponderosa Pine - Shrub-Steppe	562	7	0.09
Volcanic Plains, Shrub-Steppe	514	7	0.09
Volcanic Plains, Shrub-Steppe - Grand Fir-White Fir	563	7	0.12
Volcanic Plains, Shrub-Steppe - Ponderosa Pine	684	6	0.10
Volcanic Plains, Western Juniper	311	8	0.12

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.nts.g.umn.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).