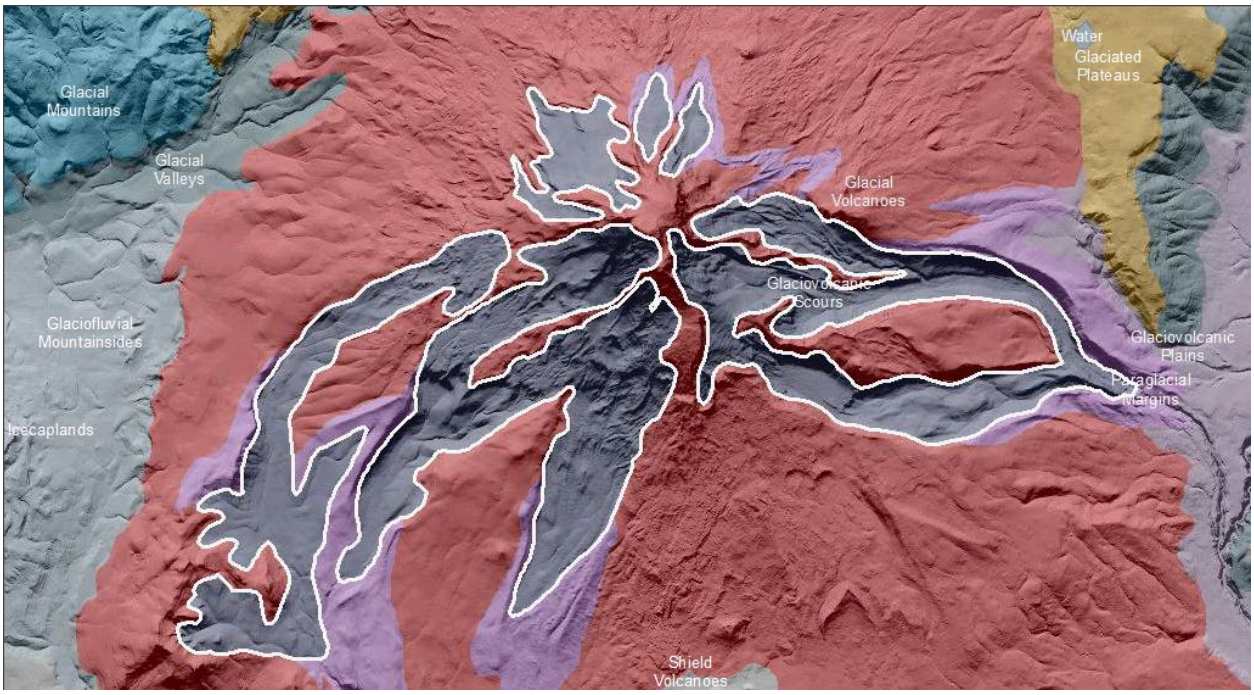
Cascades Glaciovolcanic Scours

Terrain Class: Valley [Landscape Term] (a) Any low-lying land bordered by higher ground; esp. an elongate, relatively large, gently sloping depression of the Earth's surface, commonly situated between two mountains or between ranges of hills or mountains, and often containing a stream with an outlet. It is usually developed by stream erosion, but may be formed by faulting. (b) A broad area of generally flat land extending inland for a considerable distance, drained or watered by a large river and its tributaries; a river basin. (Bates and Jackson, 1995)

Landform Association: Glaciovolcanic Scours



Glaciovolcanic Scours occur on the upper slopes of glacial volcanoes. They are deposits and/or landforms derived from mixed sources of glacial and volcanic processes, including ash-on-ice sourced deposits and subglacial eruptive vents and flows that result in lahars. Scours are the powerful and concentrated clearing and digging action of flowing air, water, or ice, esp. the downward erosion by stream water in sweeping away mud and silt on the outside curve of a bend, or during time of flood.

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 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°)**
Glaciovolcanic Scours	**0.2%**	**31**	**1556**	**2247**	**1833**	**70%**	**30%**
Glaciovolcanic Scours, Grand Fir	1.7%	21	976	1274	1096	59%	41%
Glaciovolcanic Scours, Ice and Snowfields	9.6%	43	2175	3311	2623	80%	20%
Glaciovolcanic Scours, Ice and Snowfields - Rock	6.9%	41	2114	3544	2552	100%	0%
Glaciovolcanic Scours, Mountain Hemlock	16.8%	26	1153	1656	1398	58%	42%
Glaciovolcanic Scours, Pacific Silver Fir	8.4%	28	1020	1356	1147	85%	15%
Glaciovolcanic Scours, Pacific Silver Fir - Mountain Hemlock	5.0%	23	1067	1393	1225	65%	35%
Glaciovolcanic Scours, Parkland	15.7%	26	1453	2067	1772	58%	42%
Glaciovolcanic Scours, Rock	19.9%	40	2053	3015	2442	67%	33%
Glaciovolcanic Scours, Rock - Ice and Snowfields	1.9%	45	2190	3213	2500	100%	0%
Glaciovolcanic Scours, Western Hemlock	8.7%	13	939	1317	1065	77%	23%
Glaciovolcanic Scours, Western Hemlock - Grand Fir	2.3%	10	992	1220	1032	58%	42%
Glaciovolcanic Scours, Western Hemlock - Pacific Silver Fir	3.1%	14	1255	1501	1360	62%	38%

Climate:

Landtype Assocation	**Mean Annual Precipitation (mm)**	**Mean Annual Temperature °C**	**AET/PET Ratio July, Aug, Sept**
Glaciovolcanic Scours	**2589**	**3**	**0.34**
Glaciovolcanic Scours, Grand Fir	2322	7	0.58
Glaciovolcanic Scours, Ice and Snowfields	2667	-1	0.15
Glaciovolcanic Scours, Ice and Snowfields - Rock	2935	-1	0.15
Glaciovolcanic Scours, Mountain Hemlock	2446	5	0.43
Glaciovolcanic Scours, Pacific Silver Fir	2276	6	0.55
Glaciovolcanic Scours, Pacific Silver Fir - Mountain Hemlock	2416	6	0.58
Glaciovolcanic Scours, Parkland	2902	3	0.31
Glaciovolcanic Scours, Rock	2935	0	0.15
Glaciovolcanic Scours, Rock - Ice and Snowfields	2546	-1	0.15
Glaciovolcanic Scours, Western Hemlock	2317	7	0.58
Glaciovolcanic Scours, Western Hemlock - Grand Fir	2114	7	0.60
Glaciovolcanic Scours, Western Hemlock - Pacific Silver Fir	2105	5	0.34

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).