Blue Mountains Low Mountains

Terrain Class: Mountains - No one process responsible for construction of mountains. They can be uplifted, tectonic, subduction of plates, folding, uplift, up and down warping of the mantle, inflation of molten lower crustal (batholiths), etc. Erosion of mountain systems occurs over time. The rate of erosion is dependent on the geomorphic process, the underlying rock structure, and the climate, including both freeze thaw and the amount and intensity of precipitation and runoff. Mountains are further defined and distinguished based on morphology, including the pattern and density of drainages, depth of drainages, overall morphology of the area between the drainages, evidence of a strong imprint of a surficial process such as glaciation, and presence of visible underlying rock structure.

Mountains have simple to very complex forms that have arisen due to inherited rock structure, rock history, and are the net result of local to regional spatial scales of competing rates of upbuilding/uplift and downgrading/erosion. Mountains will have an inherited history from weathering and degradation of the underlying stack of earth materials that forms them. Vegetation, habitat, water interception, collection and transport will share a similar history in the same type of uplift and rock.

Landform Association: Low Mountains

Low Mountains are mountains with a low relief class where specific geomorphic development processes are not apparent. These are the "catch-all" landscapes that do not fit into another category. Ridge systems are broad, slope gradients are moderate and slope lengths are short in this landscape. Broad valleys may be present. Residual soils store moisture on the low slope angles and weather to deep and moderately deep soils.

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°)**
Low Mountains	**0.6%**	**16**	**926**	**1181**	**1041**	**71%**	**29%**
Low Mountains, Developed	2.3%	5	794	855	826	93%	7%
Low Mountains, Grasslands / Meadows	1.8%	6	854	938	892	90%	10%
Low Mountains, Ponderosa Pine	0.8%	17	1074	1285	1180	91%	9%
Low Mountains, Shrub-Steppe	8.7%	14	903	1096	969	54%	46%
Low Mountains, Shrub-Steppe - Ponderosa Pine	2.2%	34	994	1438	1247	69%	31%
Low Mountains, Shrub-Steppe - Western Juniper	0.5%	10	811	863	841	73%	27%
Low Mountains, Western Juniper	83.7%	18	979	1415	1163	78%	22%

Climate:

Landform Association/Landtype Association	**Mean Annual Precipitation (mm)**	**Mean Annual Temperature °C**	**AET/PET Ratio July, Aug, Sept**
Low Mountains	**301**	**8**	**0.10**
Low Mountains, Developed	285	9	0.22
Low Mountains, Grasslands / Meadows	290	9	0.06
Low Mountains, Ponderosa Pine	319	8	0.08
Low Mountains, Shrub-Steppe	292	9	0.10
Low Mountains, Shrub-Steppe - Ponderosa Pine	317	8	0.07
Low Mountains, Shrub-Steppe - Western Juniper	283	9	0.14
Low Mountains, Western Juniper	314	8	0.07

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).