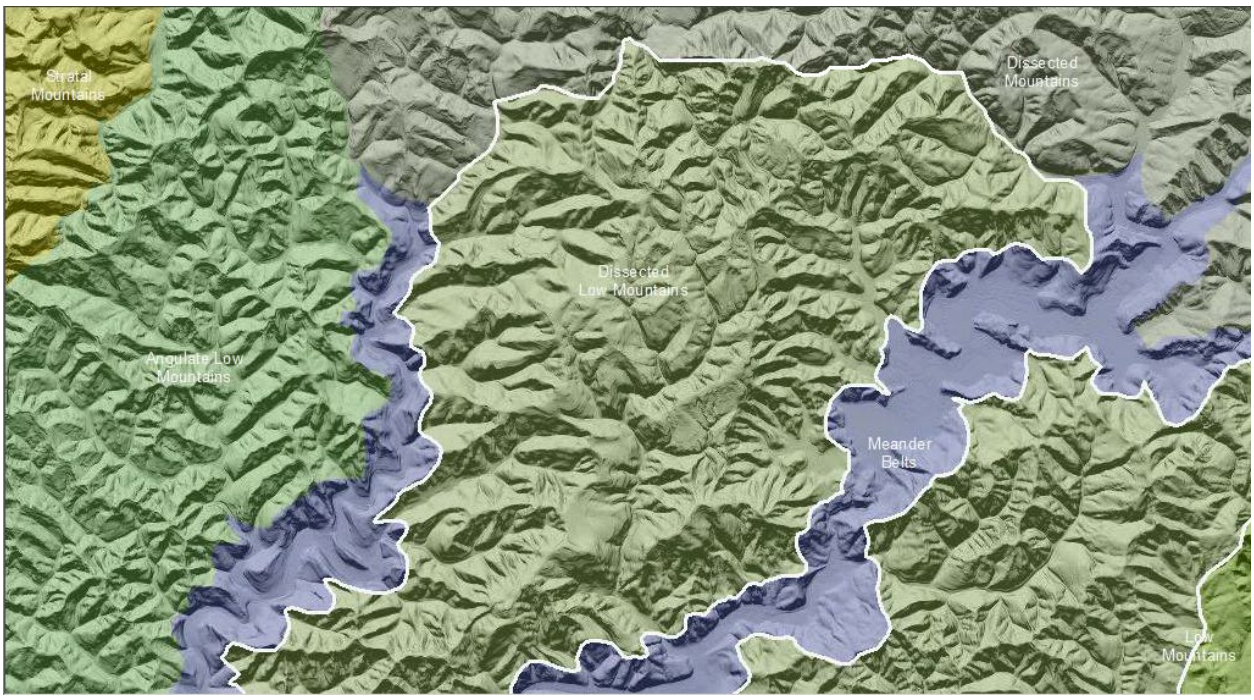
Blue Mountains Dissected Low Mountains

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: Dissected Low Mountains



Dissected Low Mountains are mountains with a high degree of dissection. These areas belong to the "low" relief class. Fluvial erosion and mass wasting over time has resulted in a highly dissected landscape with deep V-shaped valley walls, planar in form, that are contiguous from ridge-top to valley bottom. It is no longer evident what the landscape was like previously. The thickest soils gather in valley bottoms and collect in tributary gullies. Saddles along ridges in a dissected landscape can contain small well-defined protected pockets of soil as well.

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°)**
Dissected Low Mountains	**2.4%**	**25**	**1204**	**1568**	**1372**	**72%**	**28%**
Dissected Low Mountains, Developed	0.2%	14	1079	1188	1133	78%	22%
Dissected Low Mountains, Douglas-Fir	11.2%	24	1277	1573	1411	82%	18%
Dissected Low Mountains, Douglas-Fir - Grand Fir-White Fir	0.1%	14	1240	1358	1293	84%	16%
Dissected Low Mountains, Douglas-Fir - Ponderosa Pine	10.2%	28	1104	1742	1378	80%	20%
Dissected Low Mountains, Douglas-Fir - Western Juniper	0.1%	29	1138	1381	1266	91%	9%
Dissected Low Mountains, Grand Fir-White Fir	25.8%	31	1279	1824	1549	84%	16%
Dissected Low Mountains, Grand Fir-White Fir - Ponderosa	0.1%	28	1255	1455	1336	69%	31%
Dissected Low Mountains, Grasslands / Meadows - Shrub-Steppe	0.4%	38	861	1294	1083	68%	32%
Dissected Low Mountains, Ponderosa Pine	23.2%	21	1234	1546	1384	64%	36%
Dissected Low Mountains, Ponderosa Pine - Douglas-Fir	1.7%	33	1113	1620	1321	62%	38%
Dissected Low Mountains, Ponderosa Pine - Shrub-Steppe	3.9%	21	1293	1734	1489	79%	21%
Dissected Low Mountains, Ponderosa Pine - Western Juniper	3.8%	20	987	1551	1247	82%	18%
Dissected Low Mountains, Shrub-Steppe - Douglas-Fir - mix	1.4%	22	1337	1772	1501	68%	32%
Dissected Low Mountains, Shrub-Steppe - Ponderosa Pine	0.3%	19	1269	1425	1365	83%	17%
Dissected Low Mountains, Western Juniper	17.1%	27	1046	1400	1203	50%	50%
Dissected Low Mountains, Western Juniper - Douglas-Fir	0.4%	29	1145	1404	1279	50%	50%
Dissected Low Mountains, Western Juniper - Shrub-Steppe	0.4%	28	1011	1259	1109	66%	34%

Climate:

Landtype Assocation	Mean Annual Precipitation (mm)	Mean Annual Temperature °C	AET/PET Ratio July, Aug, Sept
Dissected Low Mountains	**464**	**7**	**0.15**
Dissected Low Mountains, Developed	293	8	0.00
Dissected Low Mountains, Douglas-Fir	495	6	0.19
Dissected Low Mountains, Douglas-Fir - Grand Fir-White Fir	443	8	0.12
Dissected Low Mountains, Douglas-Fir - Ponderosa Pine	454	7	0.14
Dissected Low Mountains, Douglas-Fir - Western Juniper	373	8	0.09
Dissected Low Mountains, Grand Fir-White Fir	571	6	0.20
Dissected Low Mountains, Grand Fir-White Fir - Ponderosa Pine	522	7	0.18
Dissected Low Mountains, Grasslands / Meadows - Shrub-Steppe	362	9	0.08
Dissected Low Mountains, Ponderosa Pine	447	7	0.13
Dissected Low Mountains, Ponderosa Pine - Douglas-Fir	450	8	0.12
Dissected Low Mountains, Ponderosa Pine - Shrub-Steppe	488	6	0.09
Dissected Low Mountains, Ponderosa Pine - Western Juniper	385	8	0.10
Dissected Low Mountains, Shrub-Steppe - Douglas-Fir - mix	497	6	0.10
Dissected Low Mountains, Shrub-Steppe - Ponderosa Pine	433	7	0.09
Dissected Low Mountains, Western Juniper	401	8	0.10
Dissected Low Mountains, Shrub-Steppe - Douglas-Fir - mix	497	6	0.10
Dissected Low Mountains, Shrub-Steppe - Ponderosa Pine	433	7	0.09
Dissected Low Mountains, Western Juniper	401	8	0.10
Dissected Low Mountains, Western Juniper - Douglas-Fir	386	8	0.13
Dissected Low Mountains, Western Juniper - Shrub-Steppe	338	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).