

Web map shaded relief chart

Web Mercator projection, WGS84
Equatorial circumference = 40,075,017 meters

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| Web map reference | | | | DEM adjustments before shaded relief rendering* | | | |
|-------------------|----------------------------|----------------------|------------------------------|---|---------------------------------|----------------------------------|-------------------|
| Zoom Level | Map pixel width at equator | Map scale at equator | Arc seconds/pixel at equator | Vertical exaggeration | DEM resolution** (meters/pixel) | DEM resampling*** (meters/pixel) | DEM**** Smoothing |
| 18 | 67,108,864 | 2,257 | 0.019 | 1.0 | 0.6 | — | 1 |
| 16 | 16,777,216 | 9,028 | 0.078 | 1.0 | 2.4 | — | 1 |
| 14 | 4,194,304 | 36,112 | 0.310 | 1.1 | 9.6 | — | 1 |
| 12 | 1,048,576 | 144,448 | 1.235 | 1.3 | 38.2 | 80% (47.8) | 1 |
| 10 | 262,144 | 577,792 | 4.945 | 1.7 | 152.9 | 70% (218.4) | 1 |
| 8 | 65,536 | 2,311,167 | 19.776 | 2.7 | 611.5 | 70% (873.6) | 1 |
| 6 | 16,384 | 9,244,667 | 79.102 | 5.0 | 2,446.0 | 80% (3,058) | 1 |
| 4 | 4,096 | 36,978,669 | 316.406 | 9.5 | 9,783.9 | — | 1 |
| 2 | 1,024 | 147,914,675 | 1,265.630 | 20 | 39,135.8 | — | 1 |
| 0 | 256 | 591,658,702 | 5,062.512 | 45 | 156,543.0 | — | 1 |

* In Natural Scene Designer Pro 6, I use the default shaded relief settings (light direction=315, angle=45, ambient light=16) with a 15% gray background. The rendered shaded relief size (in pixels) equals the DEM size (in rows and columns). In NSD Pro 6, go to Terrain Info in the Terrain drop menu to get this information.

** DEM resolution = Equatorial circumference (40,075,017m) of Earth divided by Map pixel width at equator.

*** Optional generalization. The size of reliefs rendered from resampled DEMs equals their original DEM sizes. Note the original sizes (in Terrain Info) before resampling DEMs.

**** Removes noisy details from shaded relief. In NSD Pro 6, go to Terrain/Smooth Terrain/Smooth Entire Terrain. Apply once.