OpenTopography

The USGS 3D Elevation Program (3DEP) Datasets from The National Map are the primary elevation data product produced and distributed by the USGS. The 3DEP program provides a variety of resolution raster elevation data of the conterminous United States, Alaska, Hawaii, and the island territories. Some of the data sets such as the 1/3rd arc-second and 1 arc-second data set are derived from diverse source data sets that are processed to a specification with a consistent resolution, coordinate system, elevation units, and horizontal and vertical datums. These seamless DEMs were referred to as the National Elevation Dataset (NED) from about 2000 through 2015 at which time they became the seamless DEM layers under the 3DEP program and the NED name and system were retired. Other 3DEP products include one-meter DEMs produced exclusively from high resolution lidar source data.

USGS Standard DEMs represent the topographic surface of the earth and contain flattened water surfaces. Each DEM dataset is identified by its horizontal resolution and is produced to a consistent set of specifications. The elevations in these DEMs represent the topographic bare-earth surface. Standard DEMs are characterized either as *project-based* or *seamless*. Project-based DEMs (e.g. 1-meter) are available for the full areal extents of projects when produced from lidar. Seamless DEMs (e.g. 1/3 arc-second and 1 arc second) are produced by blending only the highest quality project data into a continuous terrain surface for the U.S., and are updated continuously to integrate newly available, improved elevation source data.

Project-based DEMs:

- **1-meter**. This dataset was introduced in 2015 with limited coverage of the U.S., but will be expanding as new DEMs from 3DEP quality level 2 or better lidar data are acquired.

Seamless DEMs

- **1/3 arc-second**. This is the highest resolution seamless DEM dataset for the U.S. with full coverage of the 48 conterminous states, Hawaii, and U.S. territories. Alaska coverage is partially available and is being expanded to statewide coverage as part of the Alaska Mapping Initiative. Ground spacing is approximately 10 meters north/south, but variable east/west due to convergence of meridians with latitude.
- **1 arc-second**. This is a lower resolution seamless dataset providing complete coverage over the conterminous U.S. and partial coverage of Alaska. Most of Canada and Mexico are also covered by the 1 arc-second dataset. Ground spacing is approximately 30 meters north/south, but variable east/west depending on latitude.