

NGA 133 US Cities Disclaimer and Explanation Readme

As part of the National Geospatial-Intelligence Agency (NGA) Homeland Security Infrastructure Program, high resolution lidar data was acquired over 133 US Cities from 2003 to 2015. In 2017, this data was unclassified and made available to the public by NGA. Most of the data prior to 2008 only contain raster digital elevation models (DEMs) while many of the projects produced after 2008 include lidar point cloud data as well as vector shapefiles depicting forest areas, tree points, and building footprints.

The United States Geological Survey (USGS) is providing public access to the data through our FTP site.. However, USGS makes no claims, no representations, and no warranties, express or implied, concerning the validity, the reliability, or the accuracy of the GIS data and GIS data products furnished by NGA, including the implied validity of any uses of such data. The burden for determining accuracy, completeness, timeliness, merchantability, and fitness for or the appropriateness for use rests solely on the user accessing this information. The user acknowledges and accepts all inherent limitations of the data. USGS has not provided any quality control/quality assurance of this data and is posting it in its original form except where noted.

The GIS data included in each project come in various geographic projections. The typical horizontal datum is World Geodetic System 1984 or North American Datum 1983 (no explicit realization). The data is projected in Universal Transverse Mercator meters. The vertical datum is in North American Vertical Datum 1988 (various Geoid models) in meters. USGS has created and included footprint shapefiles (in the matching spatial reference system) for projects that include lidar point cloud data. Many of these point clouds do not have a projection expressly defined, so you will have to define the projection in a GIS software program that has this capability. Where provided, the lidar point cloud data are typically in LAS 1.2 or LAZ format and classified to include Class 1 (Default), Class 2 (Ground), Class 5 (Vegetation), and Class 7 (Low Noise). The products generated from the lidar point cloud are at 1.0 meter resolution in IMG format, and include bare earth DEMs, first return rasters, and last return rasters. These raster DEMs are not hydro-flattened. Intensity images derived from the point cloud are also included. The typical folder structure is shown in Figure 1 below.









 BE	Bare Earth
 FR	First Return
 INT	Intensity
 LR	Last Return
 not_loaded	Not Loaded - Metadata, KMLs, and Vendor Shapefiles
 PC	Point Cloud
 VEC	Vector Data - Building Footprints, Forest Areas, and Tree Points
 PC_Footprint	Point Cloud Footprint

Figure 1: Typical Folder Structure

If a project is missing a folder listed in Figure 1, that data was not provided by NGA. The “not_loaded” folder has a large variety of potential files. These could include project reports from the vendor that collected the lidar, delivery layouts for the lidar tiles, flight lines, ground control information, and KMZ formatted building and forest/tree files. The “VEC” folder contains shapefiles for 2D or 3D building footprints, forest areas, and tree points. The “PC_Footprint” folder is the only one created by USGS and shows the lidar point cloud footprints (with large void areas removed).

In the root directory, there is an excel spreadsheet which summarizes all the NGA 133 Urban Area US Cities available on the USGS FTP site and what products are available for each project.

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