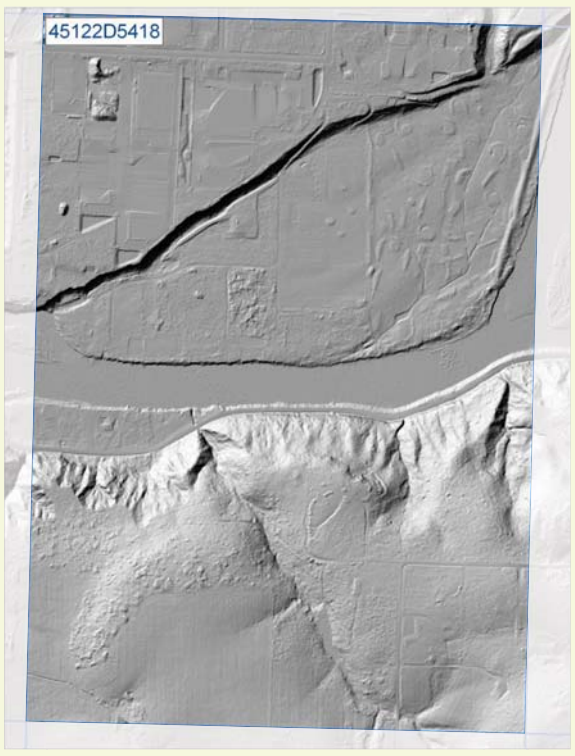
DOGAMI Lidar Data 7.5′ Quadrangle (LDQ) Series Publications

What data does each LDQ publication DVD contain?

DOGAMI Lidar Data 7.5′ Quadrangle Series publications generally contain a standard set of data files: a bare earth digital elevation model (DEM), a highest hit DEM, and intensity tiff images, all in ESRI grid format. ***Grid data must be viewed using specialty GIS software.**** Metadata, readme, shapefiles, extents, and 7.5 and 1/100th quad index files are also included. Example images are shown below for 1/100th of the Gladstone, Oregon, 7.5′ quadrangle. All grid data have been tiled to USGS 7.5′ quadrangles and referenced to Ohio Code (e.g., 45122D5 = Gladstone quadrangle). Intensity TIFFs have been tiled to 1/100th 7.5′ quads and referenced to Ohio Code (e.g., 45122D5418).



Grid data enable users to create hillshaded lidar bare earth digital elevation model (DEM)

TIN (triangulated irregular network) interpolated grids created from lidar ground returns. Vegetation and buildings have been removed from data. This image shows 1/100th of the quadrangle; the publication includes the entire quadrangle.

Grid data enable users to create hillshaded lidar highest-hit model

TIN (triangulated irregular network) interpolated grids created from the highest lidar elevation for a given cell. All vegetation and structures are visible in data. This image shows 1/100th of the quadrangle; the publication includes the entire quadrangle.

1/100th quadrangle intensity TIFFs

TIFF rasters built using returned lidar pulse intensity values gathered from highest hit returns. Intensity images look similar to a black and white digital orthophoto quad. This image shows 1/100th of the quadrangle; the publication includes the entire quadrangle.

Speciality software is required to view grid data: e.g., ESRI ArcGIS; Microstation TerraSolid; VLS LIDAR Analyst; IDL/ENVI; ERDAS IMAGINE; Intergraph GeoMedia.

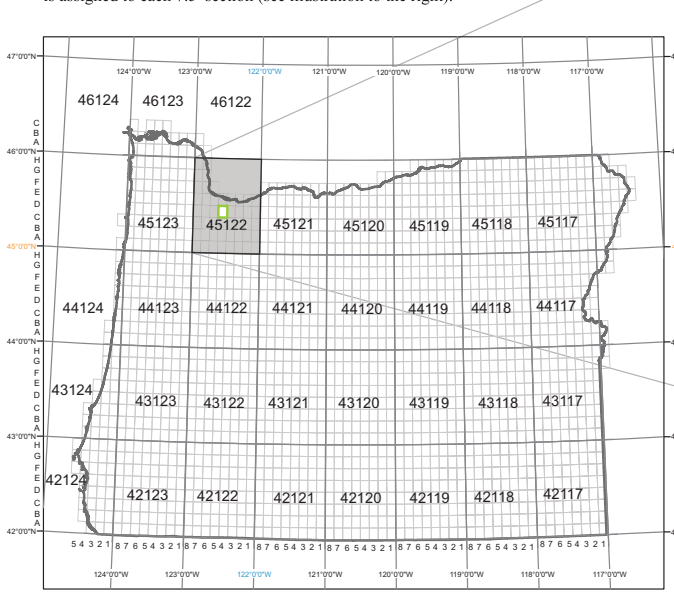
DOGAMI Lidar Data Quadrangle map file projection parameters can be found in the embedded XML metadata for each grid folder file.

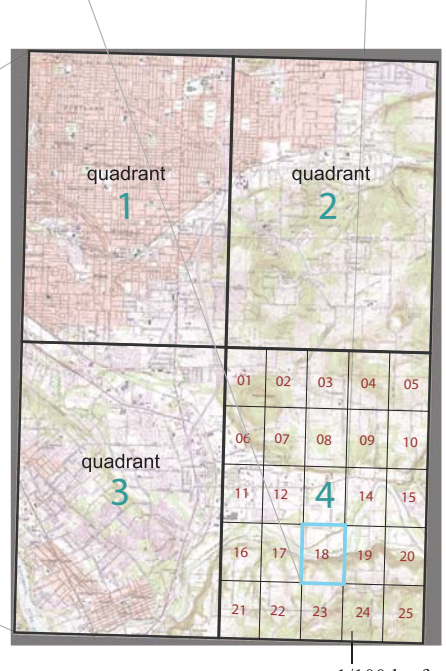
Typical DVD file size for an entire quadrangle is 2-4 GB.

Understanding the Ohio Code Grid System

The Ohio code grid system splits a 1° × 1° grid block into sixty-four 7.5′ quadrangles. The Ohio code values are derived from the latitude and longitude of the SE corner of the 1° × 1° block and an assigned grid number. The grid system starts in the lower right hand corner of each 1° grid block and uses the latitude and longitude as a prefix to a 64-grid section.

For example, the gray 1° × 1° block shown below is defined by the 45° latitude line and the 122° longitude line, which are concatenated to form the "45122" block. The 1° × 1° block is broken into eight rows of quadrangles along latitude by eight columns of quadrangles along longitude to define the sixty-four 7.5′ quadrangles. A two-character grid number that defines the row (A–H, bottom to top) and column (1–8, right to left) is assigned to each 7.5′ section (see illustration to the right).





45122D5418

For 1/100th quarter-quadrangles append

quadrangle quadrant (1-4, numbered west to east, north to south), then 100th quadrangle (25 per quarter quadrangle, labeled west to east, north to south)

Example: U.S. Geological Survey Gladstone 7.5′ topographic quadrangle, Ohio code 45122D5###

First 2 characters: latitude of SE corner of quadrangle, i.e., 45
Next 3 characters: longitude of SE corner of quadrangle, i.e., 122
Next character: A-H lettering scheme (the rows of the 1° block labeled bottom to top), i.e., D
Next character: 1-8 numbering scheme (the columns of the 1° block labeled right to left), i.e., 5

For more information about lidar and the Oregon Lidar Consortium, visit www.OregonGeology.org

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Nature of the Northwest Information Center
800 NE Oregon Street, #28, Suite 965
Portland, Oregon 97232
telephone (971) 673-2331
online www.natureNW.org