

## **CATALOG OF AVAILABLE DIGITAL SPATIAL DATA**

The following describes the data available through the GIS Office for dissemination to the public:

### A. Parcels

This is a county-wide representation of all property lines. It was constructed from the State of Maryland “tax maps”, subdivision plats recorded since 1973, and City of Hagerstown parcel data. It has been aligned to best fit aerial photographs flown in 2007. The accuracy varies according to the source material, and is a significant improvement over the tax maps, but is not survey grade. Available in AutoCAD DWG format or ESRI geodatabase format. Attributes from the Maryland Department of Assessment and Taxation are included. The update cycle is approximately every month.

This product covers the entire county and cannot be divided into smaller areas. The same data is available for viewing on the GIS Office web map for free, without the need for CAD or GIS software.

### B. 2012 LiDAR and DEMs

Light Detection and Ranging (LiDAR) is an optical remote-sensing technology used to collect a wide range of topographic data. LiDAR is similar to radar technology, which uses radio waves, except that the range to an object is determined by measuring the time delay between transmission of a pulse and detection of the reflected signal. LiDAR data can be used for a number of applications, including measuring distance, elevation, and intensity, as well as creating 3D surfaces, such as a Digital Elevation Model (DEM), for use in map displays and analysis.

A Digital Elevation Model (DEM) represents ground surface topography data or terrain data. A DEM is a 3D model of the bare ground, without features like trees or buildings. A DEM is used for 3D analysis as well as producing digital relief maps. Working with LiDAR data requires special 3D software such as ESRI’s ArcGIS 3D Analyst extension, while DEM’s will work with both 2D and 3D software.

The purpose of this LiDAR data was to produce high accuracy 3D elevation products, including tiled LiDAR in LAS 1.2 format and a 1 m cell size hydro flattened Digital Elevation Models (DEM). This data has been released into the public domain. It is available from the United States Geologic Survey (USGS).

1. LAS 1.2 files: Dewberry collected LiDAR for Washington County, MD. The acquisition was performed by Geodigital. The nominal pulse spacing for this project is 1.6 ft (0.5 meters). This project was collected with a sensor which collects intensity values for each discrete pulse extracted from the waveform. GPS Week Time, Intensity, Flightline and echo number attributes were provided

for each LiDAR point. Dewberry used proprietary procedures to classify the LAS according to contract specifications: 1-Unclassified, 2-Ground, 7-Noise, 9-Water, 10-Ignored Ground due to breakline proximity, and 11-Withheld.

2. Digital Elevation Model (DEM): Dewberry produced 3D breaklines and combined these with the final LiDAR data to produce seamless hydro flattened DEMs for the 644 tiles that cover this deliverable.

Formats: Individual tiles: LAS or DEM

Tile size: 4920' x 4920' (1500 m x 1500 m) = 555 acres = 0.87 sq. mi.  
Total number of tiles covering the whole county: 644

Projection: UTM Zone 18N

Units: Meters

Datum: NAD83, NAVD88

Tile file size: LAS (106-504 MB) ; DEM (3-9 MB)

### C. 2011 and 2014 Orthophoto

This is comprised of orthographically corrected aerial photographs for the entire county. This dataset contains imagery in MrSID and TIFF format and is supported through the Maryland State Imagery Acquisition Partnership to provide digital orthoimagery of Maryland west of the Chesapeake Bay. The primary goal of this project for was to acquire 4-band OrthoImage Tiles with a 6" pixel resolution. This data has been released into the public domain. It is available from the Maryland Department of Planning, 301 West Preston Street, Baltimore, MD 21201.

The orthophotos are divided into 763 individual tiles to cover Washington County in a TIFF and MrSID image format. A digital file of the grid layout is available free of charge. A hardcopy map of the grid is available for \$8.00. The following is a summary of the orthophoto specifications:

Natural Color, mid-spring flight, leaf-off

Formats: Individual tiles: TIFF or MrSID  
All tiles covering county: MrSID only

Tile size: 4000' x 6000' = 551 acres = 0.86 sq. mi.  
Total number of tiles covering the whole county: 763

Scale: 1" = 200' (1 : 2400)

Projection: Maryland State Plane

Units: Feet

Datum: NAD83, NAVD88

Pixel Size: 6"

Tile file size: 13.7 MB +/- MrSID

Whole county MrSID file size: 13.7 GB

#### D. 2007 Orthophoto

This is comprised of orthographically corrected aerial photographs for the entire county. It was produced by contract vendor for the State of Maryland from an over-flight in the spring of 2007. This data has been released into the public domain. It is available from the United States Geologic Survey (USGS) and available for download on their web site:

<http://nationalmap.gov/viewer.html> The USGS places restrictions on the amount of data which can be downloaded at one time. Washington County is providing this channel of distribution to assist those who may not have broad-band internet access or those who need the entire county on disk in the MrSID format.

The orthophotos are divided into 2396 individual tiles to cover Washington County in a TIFF and MrSID image format. A digital file of the grid layout is available free of charge. A hardcopy map of the grid is available for \$8.00. The following is a summary of the orthophoto specifications:

Natural Color, mid-spring flight, partial leaf-on

Formats: Individual tiles: TIFF or MrSID  
All tiles covering county: MrSID only

Tile size: 2000' x 3000' = 138 acres = 0.22 sq. mi.  
Total number of tiles covering the whole county: 2396

Scale: 1" = 100' (1 : 1200)

Projection: Maryland State Plane

Units: Feet

Datum: NAD83, NAVD88

Pixel Size: 6"

Tile file size: 70 MB +/- TIFF, 3.5 MB +/- MrSID  
Whole county MrSID file size: 8.4 GB +/-

E. 2005 Ortho-Topo

This is comprised of orthographically corrected aerial photographs and planimetric-topographic data for the entire county. It was produced by contract vendor from an over-flight in the spring of 2005. The orthophotos are divided into about 1700 individual tiles to cover Washington County in a TIFF and MrSID image format. The planimetric-topographic data is also tiled in the same manner and is available in GIS or CAD format. A digital file of the grid layout is available free of charge. A hardcopy map of the grid is available for \$8.00. The following is a summary of the ortho-photo and planimetric-topographic data:

Formats: Orthophoto: TIFF or MrSID natural color  
Plan-Topo: DWG or ESRI Geodatabase

Photo MrSID county-wide  
Composites: MrSID county-wide highly compressed  
MrSID county-wide 3' pixel  
MrSID by planning region: Hancock, Clear Spring, Hagerstown, Smithsburg, Boonsboro, Gapland

Tile size: 2500' x 3500' = 200 acres = 0.3 sq. mi.  
Total number of tiles covering the whole county: 1700+/-

Scale: 1" = 100' (1 : 1200)

Projection: Maryland State Plane

Units: Feet

Datum: NAD83, NAVD88

Pixel Size: 6"

Contour: 2'

Tile file size: Orthophoto: 102 MB +/- TIFF, 6 MB +/- MrSID  
Plan-topo: 1 MB +/- DWG, 2-4 +/- GDB

Topo Features: contours, building footprint (>100 sq. ft.), edge of road, driveways, parking areas, railroads, forest, streams, ponds, swamp, ditches, fences, retaining walls, and bridges.

F. 2000 Ortho-Topo

This is comprised of orthographically corrected aerial photographs and planimetric-topographic data for the entire county, except for central Hagerstown. It was produced by contract vendor from an over-flight on March 18, 2000. The ortho-photos are divided into 470 individual tiles to cover Washington County in a TIF image format. The planimetric-topographic data is also tiled in the same manner and is in a CAD format. A digital file of the grid layout is available free of charge. A hardcopy map of the grid is available for \$8.00. The following is a summary of the ortho-photo and planimetric-topographic data:

Formats:	Orthophoto:	TIFF v6.0 (.TIF) gray scale	by tile
	Plan-Topo:	AutoCAD (.DWG)	by tile

Tile size: 4400' x 6800' = 687 acres = 1.07 sq. mi.  
Total number of tiles covering the whole county: 470

Scale: 1" = 200' (1: 2400)

Projection: Maryland State Plane

Units: Feet

Datum: NAD83, NAVD88

Pixel Size: 1'

Contour: 4'

File size:	Orthophoto:	30 MB +/-
	AutoCAD:	1 MB +/-

Topo Features: contours, building footprint (>200 sq. ft.), edge of road, centerline of road, tree line, streams, and bridges.

G. Other digital spatial data:

The GIS Office maintains other layers available for licensing. These are updated on a delayed basis; official changes in any of these areas are not immediately reflected in these GIS layers. They are available in GIS and CAD format. The GIS format is ESRI Geodatabase. The CAD format is AutoCAD DWG.

- Zoning
- Comprehensive Plan – Land Use Plan, includes: Urban and Town Growth Area boundaries, Rural Villages, Special Planning Areas

- County-wide address points
- County-wide address attributed street centerline
- County-compiled Land Use/Land Cover (2011)
- Priority Funding Areas
- Enterprise Zones
- Rural Legacy Easements and Boundaries
- Agricultural Preservation Districts and Easements
- Fire Stations and Districts

#### H. Hardcopy plots

The photo or topo data can be purchased as a hardcopy plot at the design scale on "D" size 20# bond paper. It is copyrighted and shall not be copied, scanned, digitized or otherwise duplicated. Only whole tiles can be purchased. Other maps plotted on "E" size paper are available through special request only.

#### I. 2012 Two-foot Contours

This is comprised of elevation contours at two-foot intervals for the entire county. They are derived from the 2012 LiDAR data previously listed. The contours are seamless county-wide in the geodatabase format, and divided into about 1700 individual tiles the county in a DWG format. A complete set of DWG's for the entire county nor the geodatabase are available for download. Media such as a portable hard drive, USB drive, or DVD must be used.

Formats: DWG or ESRI Geodatabase

Tile size (DWG only): 2500' x 3500' = 200 acres = 0.3 sq. mi.  
Total number of tiles covering the whole county: 1700+/-

Scale: 1" = 100' (1 : 1200)

Projection: Maryland State Plane

Units: Feet

Datum: NAD83, NAVD88

Contour: 2'

DWG Tile file size: 1-6 MB +/- Geodatabase size: 2.25 GB

Notes:

- License agreement must be signed for all data
- Data is delivered through internet download. \$5 charge if CD or DVD is requested.
- Formats as listed, no custom conversions
- No automatic notice of updates
- Available products are subject to change without notice
- Allow 2 weeks for processing
- “Other” data layers are from a *Planning Level* GIS, and may not meet National Map Accuracy Standards

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