

State Geospatial Data Coordination Procedure

Maryland

FINAL

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FEMA

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State Geospatial Data Coordination Procedure

Purpose of the Procedure

Flood Insurance Studies search for geospatial data during Discovery tasks. If needed data are not available, studies might fund the collection of new data and would like to know about other organizations that might share in these costs. Detailed information about the role geospatial data coordination plays in studies is in the Geospatial Data Coordination portal, which is available at http://pm.riskmapcds.com/riskmap_usergroups/GeoCoord/default.aspx (password required).

Resources developed through FEMA's geospatial data coordination activities provide information about data and contacts for organizations that have geospatial data that cover large areas (like states) in which many studies are interested. Studies can avoid wasting time with dead-end searches and cold calls by starting with these proven sources of information.

One resource is this Geospatial Data Coordination Procedure. It outlines sources of geospatial data and contact information, preferences for base map data and state geospatial participation in flood insurance studies, information for the project Discovery stage, and other useful information for the State.

If you have questions about this procedure or other geospatial data coordination resources, contact the geospatial data coordination lead in your Regional Support Center (RSC):

Christine Bell, Geospatial Data Coordination Lead
Compass Regional Support Center 3
(732)865-9559
cbell@tandmassociates.com

Default Flood Hazard Base Map for the State

The default base map for flood hazard maps for the State is either an image (orthophoto) or vector (road centerline) base map. Orthophotography is the preferred base map. The choice of orthophotography depends on the individual county being studied, and is selected on a case-by-case basis.

Geospatial Data Coverage

Below, you will find links to statewide and federal agencies' national geospatial datasets and information about them. The list is provided to save time during Discovery activities when building a list of candidate geospatial datasets available for the study; it is not a prescription of datasets that must be used in a Flood Insurance Study.

Major State Holdings

Orthophotos

Dataset name: 6 Inch Resolution Aerial Imagery for the State of Maryland Data currentness: 2011 and 2013

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Accuracy/Scale: 1: 200; 6 inches; 0.5 ft

Horizontal datum: NAD 83 (HARN 2007 High Accuracy Network Adjustment) Fee associated? No

Available for redistribution? Yes

Dataset source: Maryland Geographic Information Office, MD GIO

Dataset contact: Kenny Miller, GIO, (410) 260-4044, ken.miller@maryland.gov Available for download at <http://dnrweb.dnr.state.md.us/gis/data/> MD GIO.

Hosted service is found at this URL:

http://geodata.md.gov/imap/rest/services/Imagery/MD_SixInchImagery/MapServer/0

Transportation (roads, railroads, and airports)

Dataset name: SHA Centerline NAD83 Data currentness: 10/16/2015 Accuracy/Scale: Unknown

Horizontal datum: NAD83 Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? Yes

Are road names in TIGER format? No, this dataset cannot be used for FIRMs that are using the 2013 FIRM Database schema without authorization by the FEMA Project Officer and conversion of its attributes to the 2013 FEMA schema.

Dataset source: Maryland Department of Transportation State Highway Administration (SHA). Data are in line shapefile format.

Dataset contact: Michel Sheffer, SHA, (410) 545-5537, GIS@sha.state.md.us

Available for download at <http://roads.maryland.gov/Index.aspx?PageId=282> or mapping service at http://geodata.md.gov/imap/rest/services/Transportation/MD_RoadCenterlines/MapServer

Political boundaries (county, municipal)

Dataset name: Modified County Boundaries; Modified Town Boundaries Data currentness: 10/6/2015

Accuracy/Scale: Unknown Horizontal datum: NAD 83 Fee associated? No

Available for redistribution? Yes

Dataset source: Maryland State Highway Administration (SHA)

Dataset contact: Michel Sheffer, GIS Coordinator, SHA, (410) 545-5537, GIS@sha.state.md.us.

Available for download at <http://roads.maryland.gov/Index.aspx?PageId=282>

Notes: Some counties also have municipal boundary shapefiles available through their county website.

Publicly owned lands (national, state, and local parks, forests, etc)

Dataset name: Recreation Data currentness: 1/2008

Accuracy/Scale: Accurate to +/- 1 to 3 meters; 3 meter deviations due to forest canopy cover and terrain changes

Horizontal datum: NAD 83 Fee associated? No

Available for redistribution? Yes Dataset source: Maryland DNR

<http://dnrweb.dnr.state.md.us/gis/data/data.asp>

Dataset contact: Dave Foreman, DNR, (410) 260-8761, dforeman@dnr.state.md.us

Dataset name: Protected Lands – County Lands, Federal Lands, Data currentness: 2013 - 2016

Accuracy/Scale: Varies Horizontal datum: NAD 83 Fee associated? No

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Available for redistribution? Yes

Dataset source: Maryland DNR <http://dnrweb.dnr.state.md.us/gis/data/data.asp> Dataset contact: Dave Foreman, DNR, (410) 260-8761, dforeman@dnr.state.md.us

Cadastral (parcels)

Dataset name: Maryland PropertyView DVD (except for Baltimore City) Data currentness: Updated annually

Accuracy/Scale: Unknown Horizontal datum: Unknown Fee associated? Yes

Available for redistribution? No

Dataset source: Maryland Department of Planning, Planning Data Services Division

Dataset contact: Angela Butler, Department of Planning, abutler@mdp.state.md.us and download and map service at <http://imap.maryland.gov>.

Terrain (elevation)

Dataset name: LiDAR

Data currentness: Varies by county Accuracy/Scale: Varies with location Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: Maryland DNR / Maryland GIO / Eastern Shore Regional GIS Cooperative <http://dnrweb.dnr.state.md.us/gis/data/data.asp> ; <http://imap.maryland.gov/Pages/lidar.aspx> ; <http://www.esrgc.org/>

Dataset contact: Dave Foreman, DNR, (410) 260-8761, dforeman@dnr.state.md.us. MD GIO, gio.doit@maryland.gov. Eastern Shore Regional GIS Cooperative, esrgc@salisbury.edu

Notes: See figure at end of document for status of high resolution topographic data acquisition in FEMA Region III.

The United States Interagency Elevation (USGS and NOAA) Inventory maintains a website that provides other information related to LiDAR metadata and data availability.

(www.csc.noaa.gov/inventory/)

Data Distribution Process for State Data

The Maryland State Geographic Information Committee (MSGIC) acts to promote coordinated development and efficient use of resources amongst all entities involved in the collection and/or use of spatial data and GIS technologies in Maryland. Links to State agencies housing data repositories are identified at

<http://msa.maryland.gov/msa/mdmanual/26excom/html/17geo.html>.

Useful Risk MAP Discovery Data Sources

Preliminary information on Discovery data sources is provided in this document to reduce the level of effort needed on each subsequent Discovery data collection effort.

Coordination with local community sponsors for additional local data still remains an integral part of Discovery and local data should be used where appropriate.

The *National Discovery Data Coordination Procedure* document contains information on data

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resources available from other Federal agencies (OFAs), including those that FEMA maintains at the national level, and should be used in conjunction with this *State Geospatial Data Coordination Procedure* document. In addition, FEMA and its contractors have created a geospatial Discovery Data Repository to host data that are not readily accessible through direct sources such as Web sites or subscription services and/or are not updated on a frequent basis. Instructions on accessing the Discovery Data Repository are given in the *National Discovery Data Coordination Procedure* document.

Table 1 identifies data resources that are available at the regional and State levels, and also if there are no data available other than the national datasets. Resources in this table have been identified as appropriate for Discovery projects and may not represent the best data sources for FIRM production (please see the Major State Holdings section of this document for geospatial data that meet FIRM production requirements).

Table 1. Discovery Data Resources

Data	Agency	Location
Watershed boundaries	MD iMap	http://imap.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure
Jurisdictional boundaries	Maryland Department of Planning State Data Center	http://planning.maryland.gov/msdc/S5_Map_GIS.Shtml
	MD iMap	http://imap.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure
Tribal land boundaries	National	See National Discovery Data Coordination Procedure
State lands	Maryland Department of Planning State Data Center	http://planning.maryland.gov/msdc/S5_Map_GIS.Shtml
	MD iMap	http://imap.maryland.gov/Pages/default.aspx
Federal lands	MD DNR	http://www.dnr.maryland.gov/gis/
	MD iMap	http://imap.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure
Major roads	Maryland State Highway Administration	http://www.sha.maryland.gov/
	MD iMap	http://imap.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure

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Streams	MD DNR	http://www.dnr.maryland.gov/gis/
	MD iMap	http://imap.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure
Coastal Barrier Resource Areas	National	See National Discovery Data Coordination Procedure
Coordinated Needs Management Strategy	National	See National Discovery Data Coordination Procedure
Topographic/ bathymetric data	MD DNR	http://www.dnr.maryland.gov/gis/
	Maryland Geological Survey	http://www.mgs.md.gov
	MD iMap	http://imap.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure
AAL data from HAZUS	RSC	Use of AAL data from Hazus should be coordinated with RSC 3.
	National	See National Discovery Data Coordination Procedure
Coverage areas for known community and Tribal risk assessment data	Maryland Emergency Management Agency	http://mema.maryland.gov/Pages/default.aspx
Status of Hazard Mitigation Plans	Maryland Emergency Management Agency	http://mema.maryland.gov/Pages/default.aspx
	National	See National Discovery Data Coordination Procedure
Flood control structure data	National	See National Discovery Data Coordination Procedure
Locations of stream gages	National	See National Discovery Data Coordination Procedure
Locations of past flood claims and repetitive loss properties	National	See National Discovery Data Coordination Procedure
Locations of clusters of Letters of Map Change	National	See National Discovery Data Coordination Procedure
Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database	Local	Local

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Data	Agency	Location
Areas of planned development	Local	Local
Areas of land use change datasets	Local	Local
Locations of ongoing projects or updated stream studies (e.g., highway improvements)	Local	Local
Locations of wave and tide gages	National	See National Discovery Data Coordination Procedure
Locations of wind gages	National	See National Discovery Data Coordination Procedure
Proposed inland limit of the Primary Frontal Dune, if present	Local	Local
Locations of any beach nourishment or dune restoration projects Required	Local	Local
Comparison of preliminary stillwater elevations with effective stillwater elevations	Local	Local
Available effective study data	National	See National Discovery Data Coordination Procedure
Orthophotography	MD DNR MD iMap National	http://www.dnr.maryland.gov/gis/ http://imap.maryland.gov/Pages/default.aspx See National Discovery Data Coordination Procedure
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	Local
Land use and soil information	National	See National Discovery Data Coordination Procedure
Reference points to locate areas with flooding issues	Maryland Emergency Management Agency	http://mema.maryland.gov/Pages/default.aspx
Hydraulic structures	National	See National Discovery Data Coordination Procedure

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Data	Agency	Location
Coastal structures, including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data	National	See National Discovery Data Coordination Procedure
Local structure and topographic data from the existing hazard mitigation plans	Local	Local
Historic inundation areas and High Water Marks	Regional	Discovery Data Repository
Clusters or locations of Individual Assistance/Public Assistance grants and locations of grant projects completed, planned, or underway	National	See National Discovery Data Coordination Procedure
Locations of projects and structures completed or planned for FEMA Hazard Mitigation Assistance grant programs or mitigation funds from other agencies or entities, such as the Small Business Administration	National	See National Discovery Data Coordination Procedure
Other information on FEMA grants	Local	Local
Any data deficiencies identified in hazard mitigation plans	Local	Local
Information from FloodSmart on market penetration	National	See National Discovery Data Coordination Procedure
Community Assistance Visits / Community Assistance Contacts	National	See National Discovery Data Coordination Procedure
Community Rating System class information	National	See National Discovery Data Coordination Procedure
Information from other Federal agencies	National	See National Discovery Data Coordination Procedure

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Data	Agency	Location
Information from State agencies, non-profit organizations, universities, etc.	Local	Local
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	National	See National Discovery Data Coordination Procedure
Other known hazards with geographical boundaries (e.g., earthquake faults)	National	See National Discovery Data Coordination Procedure
Information on active disasters	National	See National Discovery Data Coordination Procedure
Campgrounds, recreational areas, emergency access routes, etc.	National	See National Discovery Data Coordination Procedure
Any other data that might be appropriate	Local	Local

Federal Nationwide Geospatial Data Holdings

Information about nationwide holdings and programs of Federal agencies is available from the Mapping Information Platform web site at <https://hazards.fema.gov/femaportal/docs/ProgFacts1.pdf>.

Finding and Accessing Other Existing Geospatial Data

Find below information about and links to ways of searching for additional geospatial data available for the State. These capabilities can be useful for finding geospatial data other than the statewide and Federal data listed above, including those of special governments, counties and parishes, municipalities, tribes, universities, and other organizations.

Clearinghouses and Inventories for the State

Links to data repositories hosted by State agencies, including the state Department of Planning, DNR, and the State Highway Administration, as well as links to county datasets and data available through the iMap Portal are available on the MSGIC's website at <http://imap.maryland.gov/Pages/default.aspx>.

3D Elevation Program

The U.S. Geological Survey (USGS) National Geospatial Program is developing the [3D Elevation Program \(3DEP\)](#) to respond to growing needs for high-quality topographic data and

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for a wide range of other three-dimensional (3D) representations of the Nation's natural and constructed features. The primary goal of 3DEP is to systematically collect 3D elevation data in the form of light detection and ranging (lidar) data over the conterminous United States, Hawaii, and the U.S. territories, with data acquired over an 8-year period. Interferometric synthetic aperture radar (IfSAR) data will be acquired for Alaska, where cloud cover and remote locations preclude the use of lidar in much of the State. The 3DEP initiative is based on the results of the National Enhanced Elevation Assessment that documented more than 600 business uses across 34 Federal agencies, all 50 States, selected local government and Tribal offices, and private and nonprofit organizations.

Geospatial One-Stop

Geospatial One-Stop, available at <http://www.data.gov>, provides access to geospatial data from many sources. Two parts of the site that should be investigated are the “data categories” for existing data and the “marketplace” for data that are planned or in-work and for potential partners for new data collection activities.

Working with People

Useful State and Federal Contacts

The main contacts for the State’s geospatial activities and Federal agencies’ representatives in the State are available on the Mapping Information Platform web site at <https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=MD>

These include representatives from MSGIC, the Maryland State Office of Planning’s State Data Center, and the DNR.

Involving the State’s Geospatial Coordinator in Flood Studies

FEMA is in contact with partners from the Maryland DNR on a frequent basis regarding flood map studies.

State Coordination Process for Building Geospatial Partnerships

Members of MSGIC represent all levels of government, academia, regional organizations, and private industry. MSGIC’s goals are to coordinate GIS activities statewide, support development of datasets that are useful for multiple purposes, and to implement standards and guidelines for GIS in Maryland.

Finding Local Geospatial Contacts

Local contacts, including those from special government districts (for example, a regional planning commission); counties, parishes, or equivalent governments; tribes, municipal governments; and other organizations (for example, local universities) also have geospatial data that can help a Flood Insurance Study. Contact information is available from the FEMA archive and web searches at government link portals such as <http://www.statelocalgov.net>.

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Provide Feedback on This Procedure

When you find information in this Procedure or in other FEMA or State resources that are outdated, please tell the geospatial data coordination lead in the RSC what was wrong and the correct information (if you know it). Use the contact information for the lead listed in the section Purpose of Procedure.

The lead will use your feedback to update this Procedure.

Other Useful Information

FEMA Region III Elevation Data Updates

The RSC maintains an inventory of best available topographic datasets throughout FEMA Region III. These datasets may be of significantly higher resolution than the aforementioned statewide elevation datasets that are available.