

State Geospatial Data Coordination Procedure

Maryland

FINAL

October 31, 2015



FEMA

State Geospatial Data Coordination Procedure

Maryland

Table of Contents

| | |
|---|----|
| Purpose of the Procedure | 1 |
| Default Flood Hazard Base Map for the State..... | 1 |
| Geospatial Data Coverage | 1 |
| Major State Holdings | 2 |
| Orthophotos | 2 |
| Transportation (roads, railroads, and airports) | 2 |
| Hydrography (rivers, streams, lakes, and shorelines) | 2 |
| Political boundaries (county, municipal) | 3 |
| Publicly owned lands (national, state, and local parks, forests, etc)..... | 3 |
| Cadastral (parcels) | 3 |
| Terrain (elevation) | 4 |
| Data Distribution Process for State Data | 4 |
| Useful Risk MAP Discovery Data Sources | 4 |
| Federal Nationwide Geospatial Data Holdings | 10 |
| Finding and Accessing Other Existing Geospatial Data..... | 10 |
| Clearinghouses and Inventories for the State | 10 |
| National Digital Orthophoto Program (NDOP) and National Digital Elevation Program (NDEP) Tracking Systems..... | 10 |
| Geospatial One-Stop | 10 |
| Working with People | 10 |
| Useful State and Federal Contacts | 10 |
| Involving the State’s Geospatial Coordinator in Flood Studies | 11 |
| State Coordination Process for Building Geospatial Partnerships | 11 |
| Finding Local Geospatial Contacts | 11 |
| Provide Feedback on This Procedure..... | 11 |
| Other Useful Information | 11 |
| FEMA Region III Elevation Data Updates..... | 11 |

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):

Cody Gierhart, Geospatial Data Coordination Lead
Compass Regional Support Center 3
(614) 408-1555
cgierhart@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.

State Geospatial Data Coordination Procedure

Major State Holdings

Orthophotos

Dataset name: 6 Inch Resolution Aerial Imagery for the State of Maryland

Data currentness: 2011 and 2013

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

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: National Hydrography Dataset (NHD)

Data currentness: Varies

Accuracy/Scale: Unknown

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: U.S. Geological Survey online at <http://nhd.usgs.gov>

Dataset contact: Dave Arnold, USGS, (573) 308-3533, darnold@usgs.gov or

Roger Barlow, Maryland Geospatial Liaison, (703) 648-5189, rbarlow@usgs.gov

State Geospatial Data Coordination Procedure

Political boundaries (county, municipal)

Dataset name: Modified County Boundaries; Modified Town Boundaries

Data currentness: 10/2015

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, 2014

Accuracy/Scale: 1:63,360

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

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

State Geospatial Data Coordination Procedure

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 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.

State Geospatial Data Coordination Procedure

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 | <i>See National Discovery Data Coordination Procedure</i> |
| 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 | <i>See National Discovery Data Coordination Procedure</i> |
| Tribal land boundaries | National | <i>See National Discovery Data Coordination Procedure</i> |
| 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 |

State Geospatial Data Coordination Procedure

| Data | Agency | Location |
|--|---------------------------------------|---|
| Federal lands | MD DNR | http://www.dnr.maryland.gov/gis/ |
| | MD iMap | http://imap.maryland.gov/Pages/default.aspx |
| | National | See <i>National Discovery Data Coordination Procedure</i> |
| Major roads | Maryland State Highway Administration | http://www.sha.maryland.gov/ |
| | MD iMap | http://imap.maryland.gov/Pages/default.aspx |
| | National | See <i>National Discovery Data Coordination Procedure</i> |
| Streams | MD DNR | http://www.dnr.maryland.gov/gis/ |
| | MD iMap | http://imap.maryland.gov/Pages/default.aspx |
| | National | See <i>National Discovery Data Coordination Procedure</i> |
| Coastal Barrier Resource Areas | National | See <i>National Discovery Data Coordination Procedure</i> |
| Coordinated Needs Management Strategy | National | See <i>National Discovery Data Coordination Procedure</i> |
| 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 |
| AAL data from HAZUS | National | See <i>National Discovery Data Coordination Procedure</i> |
| | RSC | Use of AAL data from Hazus should be coordinated with RSC 3. |
| Coverage areas for known community and Tribal risk assessment data | National | See <i>National Discovery Data Coordination Procedure</i> |
| | Maryland Emergency Management Agency | http://memm.maryland.gov/Pages/default.aspx |

State Geospatial Data Coordination Procedure

| Data | Agency | Location |
|--|--|--|
| Status of Hazard Mitigation Plans | Maryland Emergency Management Agency National | http://mems.maryland.gov/Pages/default.aspx <i>See National Discovery Data Coordination Procedure</i> |
| Flood control structure data | National | <i>See National Discovery Data Coordination Procedure</i> |
| Locations of stream gages | National | <i>See National Discovery Data Coordination Procedure</i> |
| Locations of past flood claims and repetitive loss properties | National | <i>See National Discovery Data Coordination Procedure</i> |
| Locations of clusters of Letters of Map Change | National | <i>See National Discovery Data Coordination Procedure</i> |
| Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database | Local | Local |
| 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 | <i>See National Discovery Data Coordination Procedure</i> |
| Locations of wind gages | National | <i>See National Discovery Data Coordination Procedure</i> |
| 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 |

State Geospatial Data Coordination Procedure

| Data | Agency | Location |
|--|--------------------------------------|---|
| Available effective study data | National | See <i>National Discovery Data Coordination Procedure</i> |
| Orthophotography | MD DNR | http://www.dnr.maryland.gov/gis/ |
| | MD iMap | http://imap.maryland.gov/Pages/default.aspx |
| | National | See <i>National Discovery Data Coordination Procedure</i> |
| Proposed discussion areas, problem areas, areas of proposed mitigation projects | Local | Local |
| Land use and soil information | National | See <i>National Discovery Data Coordination Procedure</i> |
| Reference points to locate areas with flooding issues | Maryland Emergency Management Agency | http://mema.maryland.gov/Pages/default.aspx |
| Hydraulic structures | National | See <i>National Discovery Data Coordination Procedure</i> |
| Coastal structures, including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data | National | See <i>National Discovery Data Coordination Procedure</i> |
| 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 <i>National Discovery Data Coordination Procedure</i> |

State Geospatial Data Coordination Procedure

| Data | Agency | Location |
|---|----------|---|
| 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 <i>National Discovery Data Coordination Procedure</i> |
| 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 <i>National Discovery Data Coordination Procedure</i> |
| Community Assistance Visits / Community Assistance Contacts | National | See <i>National Discovery Data Coordination Procedure</i> |
| Community Rating System class information | National | See <i>National Discovery Data Coordination Procedure</i> |
| Information from other Federal agencies | National | See <i>National Discovery Data Coordination Procedure</i> |
| 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 <i>National Discovery Data Coordination Procedure</i> |
| Other known hazards with geographical boundaries (e.g., earthquake faults) | National | See <i>National Discovery Data Coordination Procedure</i> |
| Information on active disasters | National | See <i>National Discovery Data Coordination Procedure</i> |
| Campgrounds, recreational areas, emergency access routes, etc. | National | See <i>National Discovery Data Coordination Procedure</i> |

State Geospatial Data Coordination Procedure

| Data | Agency | Location |
|--|--------|----------|
| 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>.

National Digital Orthophoto Program (NDOP) and National Digital Elevation Program (NDEP) Tracking Systems

These systems allow the search of orthophoto and elevation project information entered by Federal and other organizations. To access the NDOP system, go to the NDOP web site at <http://www.ndop.gov> and follow the link “Project Tracking.” For the NDEP system, go to the NDEP web site at <http://www.ndep.gov> and follow the link “Project Tracking.”

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>

State Geospatial Data Coordination Procedure

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>.

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.