

State Geospatial Data Coordination Procedure

Montana

FINAL

October 2016



FEMA

State Geospatial Data Coordination Procedure

Montana

[Last updated 10/26/2016]

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State Geospatial Data Coordination Procedure

Purpose of the Procedure

The Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) prepared the Geospatial Data Coordination Procedures to outline sources of geospatial data and contact information, preferences for base map data and state geospatial participation in flood insurance studies, and other useful information. The Procedures provide information of common interest to the multiple flood insurance studies that occur in a State, and save the studies the effort required to repeatedly discover this information independently.

Updates to these Procedures occur biannually and involve coordination and input between FEMA Region VIII, The State of Montana, US Geological Survey Liaisons, and FEMA's Regional Service Center (RSC) VIII.

If you have questions, updates, or comments about this procedure or other geospatial data coordination resources, contact the geospatial data coordination lead at your RSC:

- Ms. Mary Gilliland, Geospatial Data Coordination Lead - RSC VIII
(303) 308-3572 / Mary.Gilliland@aecom.com

This document and additional information relating to geospatial coordination can be found on FEMA's Mapping Information Platform (MIP) [<http://www.hazards.fema.gov>]. Navigate to the 'Tools & Links' page and then locate the 'Additional Resources' section.

Preferred Base Map Sources

Table 1 at the end of this document identifies the preferred geospatial data sources for mapping partners to use when performing updates to Flood Insurance Rate Maps (FIRMs). Although this table is not a prescription of data sets that must be used, those listed below have been successfully leveraged during FEMA's Map Modernization and Risk MAP programs.

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 Geospatial 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

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accessible through direct sources such as Web sites or subscription services and/or are not updated on a frequent basis. Instructions for accessing the Discovery Data Repository are provided in the National Geospatial Data Coordination Procedure document. Details on the Discovery Data Repository can be found in the National Geospatial Data Coordination Procedure document.

Table 2 at the end of this document 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 Preferred Base Map Sources section of this document for geospatial data that meets FIRM production requirements).

Geospatial Data Resources

Listed below are useful links to geospatial data resources applicable to FEMA's Risk Map project life cycle.

- Montana Natural Resource Information System (NRIS)
[\[http://nris.mt.gov/nris/nris.asp\]](http://nris.mt.gov/nris/nris.asp)
- Montana Geographic Information Clearinghouse
[\[http://geoinfo.msl.mt.gov/\]](http://geoinfo.msl.mt.gov/)
 - Montana Base Map Service Center (BMSC)
[\[http://geoinfo.msl.mt.gov/Home/msdi/orthoimagery.aspx\]](http://geoinfo.msl.mt.gov/Home/msdi/orthoimagery.aspx)
 - Montana Spatial Data Infrastructure (MSDI)
[\[http://geoinfo.montanastatelibrary.org/data/msdi/\]](http://geoinfo.montanastatelibrary.org/data/msdi/)
- Montana GIS Portal
[\[http://apps.msl.mt.gov/Geographic_Information/Data/DataList/Default.aspx\]](http://apps.msl.mt.gov/Geographic_Information/Data/DataList/Default.aspx)
- USGS 3D Elevation Program
[\[http://nationalmap.gov/3DEP/\]](http://nationalmap.gov/3DEP/)
- Geospatial One-Stop
[\[http://catalog.data.gov/dataset\]](http://catalog.data.gov/dataset)
- The National Map
<http://nationalmap.gov/viewer.html>
- FEMA's Map Service Center (MSC)
[\[http://www.msc.fema.gov\]](http://www.msc.fema.gov)
- FEMA's Mapping Information Platform (MIP)
[\[http://www.hazards.fema.gov\]](http://www.hazards.fema.gov)

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State and Federal Contacts

The main contacts for the State's geospatial activities and Federal agencies' representatives in the State are available on the MIP:

[\[https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=MT\]](https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=MT)

Local Geospatial Contacts

Local contacts, including those from counties, special government districts, tribes, municipal governments, and other organizations may also have useful geospatial data holdings. Contact information may be available from the state, FEMA regional office, web searches, and government link portals such as [\[http://www.statelocalgov.net\]](http://www.statelocalgov.net).

The Montana Association of Geographic Information Professionals also maintains a list of local GIS contacts [\[http://www.magip.org/\]](http://www.magip.org/). Their contact list includes GIS personnel on the city, county, and state levels of government as well as private industry. In addition, the Montana Base Map Service Center may be contacted to get local GIS contact information [\[http://apps.msl.mt.gov/Geographic_Information/Data/DataList/\]](http://apps.msl.mt.gov/Geographic_Information/Data/DataList/).

State Coordination Process for Building Geospatial Partnerships

The Montana Land Information Advisory Council advises the Department of Administration on the planning and grant process established by statute, as well as providing policy level direction in the advancement of Geographic Information Technology [\[http://about.montanastatelibrary.org/\]](http://about.montanastatelibrary.org/).

The State of Montana Base Map Service Center (BMSC) [\[http://geoinfo.montanastatelibrary.org/\]](http://geoinfo.montanastatelibrary.org/) builds partnerships with local communities and a large contingent of State agencies to develop the Montana Spatial Data Infrastructure (MSDI) [\[http://geoinfo.montanastatelibrary.org/data/msdi/\]](http://geoinfo.montanastatelibrary.org/data/msdi/) framework layers.

The State of Montana is also partnering with the State of Idaho for the establishment and maintenance of the Montana Control Point database (MCPD) [\[http://ags.giscenter.isu.edu/flexviewers/mcpd/\]](http://ags.giscenter.isu.edu/flexviewers/mcpd/). This geodetic control point database and virtual reference center provides a clearinghouse of geodetic control points and is setup so that surveyors can upload information through multiple mechanisms.

Involving all Shareholders in Flood Studies

To ensure communication channels remain open between all interested parties, FEMA Region VIII will provide a FIRM project status map to all participating groups that are involved in updates to this Procedure. These maps will be distributed along with this Procedure during the regular document update process. Additionally, the MTDNRC will notify members of this group and other state agencies and organizations of topographic and survey data collection, planning, and acquisition activities in a timeframe that is

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conducive to building partnerships and leveraging data collected to meet as vast a variety of needs as is possible given the available resources. Members of this group will also be sent invitations to attend project Discovery meetings.

All State of Montana contracts for survey and topographic data collection will require that the data collected is available for public distribution and a means for making the data available to the public will be identified in coordination with the members of this group and any other relevant parties. Furthermore, surveyors contracted to acquire data for projects will be required to upload the relevant data collected to the MCPD.

Table 1: Base Map Sources

| Table 1: Base Map Sources | Option 1 | Option 2 | Additional |
|---|---|---|---|
| Orthophotos | Local Community Supplied Data - check on availability | National Agriculture Imagery Program (NAIP) Imagery | Black and White Digital Orthophoto Quads (DOQ) |
| <i>location</i> | | http://datagateway.nrcs.usda.gov | http://nationalmap.gov/viewer.html |
| <i>notes</i> | | | |
| Transportation (roads, railroads, and airports) | Local Community Supplied Data - check on availability | Montana Spatial Data Infrastructure Transportation | 2013 TIGER/Line Files |
| <i>location</i> | | http://apps.msl.mt.gov/Geographic_Information/Data/DataList/ | http://www.census.gov/cgi-bin/geo/shapefiles2013/main |
| <i>notes</i> | | | |
| Hydrography (rivers, streams, lakes, and shorelines) | Local Community Supplied Data - check on availability | National Hydrography Datasets (NHD) | |
| <i>location</i> | | http://nhd.usgs.gov/ | |
| <i>notes</i> | | | |
| Political Boundaries (county, municipal) | Local Community Supplied Data - check on availability | Montana Spatial Data Infrastructure Administrative Boundaries | 2013 TIGER/Line Files |
| <i>location</i> | | http://apps.msl.mt.gov/Geographic_Information/Data/DataList/ | http://www.census.gov/cgi-bin/geo/shapefiles2013/main |

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| Table 1: Base Map Sources | Option 1 | Option 2 | Additional |
|--|---|---|---|
| <i>notes</i> | Reference the National Flood Hazard Layer (NFHL) to help identify possible edge-matching issues. | | |
| Public Lands (national, state, and local parks, forests, etc) | Local Community Supplied Data - check on availability | Montana Spatial Data Infrastructure Administrative Boundaries | |
| <i>location</i> | | http://apps.msl.mt.gov/Geographic_Information/Data/DataList/ | |
| <i>notes</i> | | | |
| Public Land Survey System (PLSS - section, township, range) | National Integrated Land System - Land Survey Information System | | |
| <i>location</i> | http://www.geocommunicator.gov/GeoComm/Isis_home/home/ | | |
| <i>notes</i> | | | |
| Cadastre (parcels) | Montana Spatial Data Infrastructure Cadastral | | |
| <i>location</i> | http://apps.msl.mt.gov/Geographic_Information/Data/DataList/ | | |
| <i>notes</i> | | | |
| Extraterritorial Jurisdiction (ETJ) Boundaries | Local Community Supplied Data - check on availability | | |
| <i>location</i> | | | |
| <i>notes</i> | | | |
| Terrain/Topo (elevation) | Local Community Supplied Data - check on availability | National Elevation Dataset | Montana Natural Resource Information System (NRIS) |
| <i>location</i> | | http://nationalmap.gov/viewer.html | http://geoinfo.montanastatelibrary.org/ |
| <i>notes</i> | | | |

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Table 2: Discovery Sources

| Table 2: Discovery Sources | Data Source | Location |
|--|----------------------|--|
| Watershed boundaries | National | See National Operating Procedure |
| Jurisdictional boundaries | See Table 1 | See Above |
| Tribal land boundaries | National | See National Operating Procedure |
| State lands | National | See National Operating Procedure |
| Federal lands | See Table 1 | See Above |
| Major roads | National | See National Operating Procedure |
| Streams | National | See National Operating Procedure |
| Coastal Barrier Resource Areas | N/A | Not applicable in the State of Montana |
| Coordinated Needs Management Strategy | National | CNMS data is available by request from each of FEMA's Regional Service Centers (RSC). Contact information for each RSC is available at the following website: https://hazards.fema.gov/femaportal/wps/portal/usercare_guidesAndDocs#Contact List |
| Topographic/ bathymetric data | National | See National Operating Procedure |
| AAL data from HAZUS | National | See National Operating Procedure |
| Coverage areas for known community and Tribal risk assessment data | FEMA Regional Office | Contact FEMA Region VIII |
| Status of Hazard Mitigation Plans | FEMA Regional Office | Contact FEMA Region VIII See Also National Operating Procedure |
| Flood control structure data | National | See National Operating Procedure |
| Locations of stream gages | National – USGS | See National Operating Procedure |
| Locations of past flood claims and repetitive loss properties | National | See National Operating Procedure |
| Locations of clusters of Letters of Map Change | National - FEMA | See National Operating Procedure |
| Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database | Local | No Statewide Coverage |

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| Table 2: Discovery Sources | Data Source | Location |
|--|----------------------|---|
| Areas of planned development | Local | No Statewide Coverage |
| Areas of land use change datasets | National – USGS | The USGS Land Cover Institute (LCI) provides access to a wide variety of land use change and land cover data sets including the National Land Cover Dataset (NLCD). Data sets can be downloaded from the USGS at http://landcover.usgs.gov/ |
| Locations of ongoing projects or updated stream studies (e.g. highway improvements) | N/A | Not applicable in the State of Montana |
| Locations of wave and tide gauges | N/A | Not applicable in the State of Montana |
| Locations of wind gauges | N/A | Not applicable in the State of Montana |
| Proposed inland limit of the Primary Frontal Dune , if present | N/A | Not applicable in the State of Montana |
| Locations of any beach nourishment or dune restoration projects | Local | No Statewide Coverage |
| Comparison of preliminary stillwater elevations with effective stillwater elevations | Local | No Statewide Coverage |
| Available effective study data | FEMA | See National Operating Procedure |
| Orthophotography | National | See National Operating Procedure |
| Proposed discussion areas, problem areas, areas of proposed mitigation projects | FEMA Regional Office | RSC8 Geospatial Data Coordination Lead maintains records of known flooding issues on Region's communications with local communities and logs them as CNMS "ad hoc" requests |
| Land use and soil information | National –NRCS | The USDA Natural Resources Conservation Service (NRCS) maintains national soil data in a GIS format. Data can be downloaded from their online Web Soil Survey (http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm) or from the NRCS Data Gateway listed in the Other Resources section of this document. |
| Reference points to locate areas with flooding issues | FEMA Regional Office | RSC8 Geospatial Data Coordination Lead maintains records of known flooding issues on Region's communications with local communities and logs them as CNMS "ad hoc" requests |
| Hydraulic structures | National | See National Operating Procedure |

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| Table 2: Discovery Sources | Data Source | Location |
|---|----------------------|---|
| Coastal structures , including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data | N/A | Not applicable in the State of Montana |
| Local structure and topographic data from the existing hazard mitigation plans | Local | No Statewide Coverage |
| Historic inundation areas and high water marks | Local | No Statewide Coverage |
| Clusters or locations of Individual Assistance/Public Assistance grants and locations of grant projects completed, planned, or underway | National | See National Operating 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 Operating Procedure |
| Other information on FEMA grants, as described in G&S Appendix I | National | See National Operating Procedure |
| Any data deficiencies identified in hazard mitigation plans | N/A | No Statewide Coverage |
| Information from FloodSmart on market penetration | National | See National Operating Procedure |
| Community Assistance Visits / Community Assistance Contacts | FEMA Regional Office | Contact FEMA Region VIII See Also National Operating Procedure |
| Community Rating System class information | National | See National Operating Procedure |

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| Table 2: Discovery Sources | Data Source | Location |
|---|----------------------|---|
| Information from other Federal agencies | National | See National Operating Procedure |
| Information from State agencies, non-profit organizations, universities, etc. | Local | No Statewide Coverage |
| Current community plans, ordinances, or programs to alleviate flooding or manage stormwater | Local | No Statewide Coverage |
| Other known hazards with geographical boundaries (e.g. earthquake faults) | Local | No Statewide Coverage |
| Information on active disasters | FEMA Regional Office | http://www.fema.gov/disasters |
| Campgrounds, recreational areas, emergency access routes, etc. | National | See National Operating Procedure |
| Any other data that might be appropriate | Local | No Statewide Coverage |