

State Geospatial Data Coordination Procedure

MISSOURI

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FEMA

State Geospatial Data Coordination Procedure

Missouri

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State Geospatial Data Coordination Procedure

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State Geospatial Data Coordination Procedure

Purpose of the Procedure

Flood insurance studies search for geospatial data during pre-scoping and scoping 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 Implementation Guide*, which is available at <<https://hazards.fema.gov/femaportal/docs/GeoDataImplem.pdf>>, and in *Scoping Guidelines: Pre-scoping and the Scoping Meeting*, which is available through the Regional Service Center (RSC).

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, information for the project Discovery stage, state geospatial participation in studies, 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 Service Center:

Jason Sweet Geospatial Data Coordination Lead
Regional Service Center 7
(913) 498-0500
jason.sweet@starr-team.com

We appreciate the help of those who reviewed this document, in particular

TBD

Date Procedure discussed:

Default Flood Hazard Base Map for the State

The default base map for flood hazard maps for the State is an image base map (orthophoto).

Geospatial Data Coverage

Find below information about and links to statewide (and Federal agencies' national) geospatial datasets. The list is provided to save time during pre-scoping and scoping

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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.

Datasets for DFIRM Production

Orthophotos

Dataset name: Missouri 2 Foot Resolution Aerial Photography

Data currentness: Collected 2007-2008

Accuracy/Scale: Unknown

Ground sample resolution: 2 foot

Horizontal datum: NAD 83

Fee associated? Quad Based: NO, Countywide SID: YES

Available for redistribution? Yes

Dataset source: U.S. Geological Survey

Dataset contact: Missouri Spatial Data Information Service

Department of Geography

University of Missouri

8 Stewart Hall

Columbia, Missouri 65211-6170

(573) 882-1404, msdismail@missouri.edu.

Notes: This data depicts geographic features on the surface of the earth. GeoTIFF DOQQs serve a variety of purposes, from interim base maps to field references for earth science investigations and analysis. The GeoTIFF DOQQ is useful as a layer in a geographic information system (GIS) and as a tool for performing digital map revision and reference. DOQQs form the medium-resolution image base for The National Map.

<http://www.msdis.missouri.edu/data/2foot/index.htm>

Transportation (roads, railroads, and airports)

Dataset name: All Missouri Transportation Files Combined

Data currentness: 2006

Accuracy/Scale: Unknown

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? Yes

Dataset source: Missouri Department of Transportation

Dataset contact: Jim Harlan

Program Manager

Geographic Resources Center

(573) 882-1356, harlanj@missouri.edu

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Notes: State-wide coverage of streets, roads, highways, railroads, air facilities, and river ports for Missouri.

<http://www.msdis.missouri.edu/datasearch/VectDisplayResults.jsp?currDispPageNum=1>

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: st_primriv (Primary Rivers of State of Missouri)

Data currentness: 1993

Accuracy/Scale: 120 ft.

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are hydrography names part of the dataset? Yes

Dataset source: United States Geological Survey

Dataset contact: Missouri Spatial Data Information Service

Tim Haithcoat

Program Director

008 Stewart Hall

Columbia, Missouri 65211

(573)882-1404, msdismail@missouri.edu

Notes: State Intermediate Hydrography of Missouri with some attributes

<http://www.msdis.missouri.edu/datasearch/VectDisplayResults.jsp?currDispPageNum=1>

Political boundaries (county, municipal)

Dataset name: Missouri County Boundary, Census Municipal Boundaries

Data currentness: 2003, 1994

Accuracy/Scale: +/- 5.2 meters. 1:24,000 scale , 120 ft. 1:100,000 scale.

Horizontal datum: NAD 83 (both)

Fee associated? No

Available for redistribution? Yes

Dataset source: US Census Bureau

Dataset contact: Missouri Spatial Data Information Service

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Notes: <http://msdis.missouri.edu/datasearch/ThemeList.jsp>

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

Dataset name: Missouri State Parks and State Historic Sites

Data currentness: 2009

Accuracy/Scale: Data are accurate to 1:24,000 scale or better, depending upon source material type and quality.

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Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: Missouri Department of Natural Resources, Division of State Parks, Planning and Development Program

Dataset contact: Ron Curry

Geographic Information Systems Analyst

Missouri Office of Administration, Information Technology Services Division,

Department of Natural Resources

1659 East Elm

Jefferson City, MO 65101

(573) 526-2005, ron.curry@dnr.mo.gov

Notes: This data set depicts the boundaries of parks and historic sites managed by the Missouri Department of Natural Resources, Division of State Parks. These data are derived from abstract descriptions, surveys, deeds, and sketches varying in age, content and quality.

<http://www.msdis.missouri.edu/datasearch/VectDisplayResults.jsp?currDispPageNum=1>

Public land survey system (PLSS) (township and section lines)

Dataset name: Public Land Survey System (County Specific Datasets)

Data currentness: 1990

Accuracy/Scale: 120 ft

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: United States Geological Survey

Dataset contact: Missouri Spatial Data Information Service

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Notes: Geo-dataset delineating the U.S. Public Land Survey of the state of Missouri.

<http://www.msdis.missouri.edu/datasearch/VectDisplayResults.jsp?currDispPageNum=1>

Terrain (elevation)

Dataset name: CARES Grid

Data currentness: 1998

Accuracy/Scale: Varies. A vertical RMSE of 7 meters was the target with 15 meters as the maximum permitted. / 1:24,000

Vertical datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: Center for Agricultural, Resource and Environmental Systems (CARES)

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Dataset contact: Scott Burton
 University of Missouri – Columbia
 GIS Specialist Center for Agriculture Resource and Environmental Systems (CARES)
 Columbia, MO 65211
 (573) 884-2199, burtonsc@missouri.edu

Notes: This grid of surface elevations was created from a project designed to develop DLGs of elevation contours. This grid was developed with the TOPOGRID command in ARC/INFO. It is a product of several data layers created at the 1:24000 scale, including hypsography (between 5 and 20 foot contours, then standardized to a metric interval), spot elevations, and hydrography. A small overlap is built in to facilitate mosaicing of multiple grids. Some interpolation inherent in the software's process of grid development and filling may occur and no attempt has been made to ground truth the interpretations. Some concerns have been raised about the data's accuracy.

<http://www.msdis.missouri.edu/datasearch/VectDisplayResults.jsp?currDispPageNum=1>

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 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 Geospatial 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 Preferred Base Map Sources section of this document for geospatial data that meets FIRM production requirements).

Table 1. Discovery Data Resources

<u>Data</u>	<u>Data Source</u>	<u>Location</u>
Watershed boundaries	National	Discovery Data Repository
Jurisdictional boundaries	National	Discovery Data Repository
Tribal land boundaries	National	Discovery Data Repository
State lands	Multi	http://msdis.missouri.edu/datasearch/ThemeList.jsp
Federal lands	National	Discovery Data Repository
Major roads	Regional/State/Local National	Discovery Data Repository

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<u>Data</u>	<u>Data Source</u>	<u>Location</u>
Streams	Regional/State/Local National	Discovery Data Repository
Coastal Barrier Resource Areas	National	Discovery Data Repository
Coordinated Needs Management Strategy	National	See National Operating Procedure
Topographic/ bathymetric data	National	See National Operating Procedure
AAL data from HAZUS	State	https://starrtrac.pbsjteamaccess.com/library/AAL/Forms/AllItems.aspx Contact the RSC if help is needed retrieving the data.
Coverage areas for known community and Tribal risk assessment data	Local	Communities
Status of Hazard Mitigation Plans	Local National	Communities Discovery Data Repository
Flood control structure data	National	See National Operating Procedure
Locations of stream gages	National	Discovery Data Repository
Locations of past flood claims and repetitive loss properties	CIS Report	Contact the geospatial data coordination lead at your RSC referenced earlier in this document.
Locations of clusters of Letters of Map Change	National	See National Operating Procedure
Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database	Local	Communities
Areas of planned development	Local	Communities
Areas of land use change datasets	National Local	Communities
Locations of ongoing projects or updated stream studies (e.g. highway improvements)	Local	Communities
Locations of wave and tide gauges	N/A	
Locations of wind gauges	N/A	
Proposed inland limit of the Primary Frontal Dune, if present	N/A	
Locations of any beach nourishment or dune restoration projects	N/A	
Comparison of preliminary stillwater elevations with effective stillwater elevations	Local	Communities
Available effective study data	National	See National Operating Procedure

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Data	Data Source	Location
Orthophotography	National	See National Operating Procedure
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	Communities
Land use and soil information	Multi	http://msdis.missouri.edu/datasearch/ThemeList.jsp
Reference points to locate areas with flooding issues	Local	Communities
Hydraulic structures	Culverts	Regional/State/or Local
	State Dam Inventory	http://www.msdis.missouri.edu/datasearch/ThemeList.jsp
	Levees, Dams, Bridges	See National Operating Procedure
Coastal structures, including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data	N/A	
Local structure and topographic data from the existing hazard mitigation plans	Local	Communities
Historic inundation areas and high water marks	Historic Riverine Inundation Areas	See National Operating Procedure
	Storm Surge Inundation Areas	See National Operating Procedure
	High Water Marks	Regional/State/ or Local
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	Local	Communities
Any data deficiencies identified in hazard mitigation plans	Local	Communities

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Data	Data Source	Location
Information from FloodSmart on market penetration	FEMA	http://www.floodsmart.gov/floodsmart/
Community Assistance Visits / Community Assistance Contacts	National	Discovery Data Repository
Community Rating System class information	National	See National Operating Procedure
Information from other Federal agencies	National Only	See National Operating Procedure
Information from State agencies, non-profit organizations, universities, etc.	Multi	Varies with watershed
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	Local	Communities
Other known hazards with geographical boundaries (e.g. earthquake faults)	Tsunami Landslide Volcanic Eruptions Wildfire	Discovery Data Repository Discovery Data Repository Discovery Data Repository Discovery Data Repository
Information on active disasters	Multi	Varies with time of Discovery project
Campgrounds, recreational areas, emergency access routes, etc.	National	Discovery Data Repository
Critical Infrastructure – Schools, Hospitals, etc...	Multi	http://www.msdis.missouri.edu/datasearch/ThemeList.jsp
Water Supply	Missouri Department of Natural Resources, Water Resources Center	http://drinkingwater.missouri.edu/
Water Quality	Missouri Department of Natural Resources	http://www.msdis.missouri.edu/datasearch/ThemeList.jsp
Ports	US Army Corps of Engineers – Research and innovative Technology Administrations’ Bureau of Transportation Statistics	http://www.msdis.missouri.edu/datasearch/ThemeList.jsp

Data Distribution Process for State Data

Details regarding official policy for data distribution are available via the Missouri Spatial Data Information Service (MSDIS) website at <http://msdis.missouri.edu/>

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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/ProgFacts.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

Missouri Spatial Data Information Service: MSDIS is the Missouri Spatial Data Information Service, a spatial data retrieval and archival system. GIS technology is emerging worldwide as the standard tool for integrated management of geographic information. Geographic information, often referred to as spatial information, can be defined as any piece of information that can be referenced by an x, y location. GIS technology enables managers and users of geographic information to achieve higher levels of information integration and to perform more complex analyses than are practically feasible in manual environments.

MSDIS is responsible for data storage and access, standardization of both digital and tabular data, creation of the data dictionary, compilation of metadata, and statewide GIS user information networks. <http://msdis.missouri.edu/>

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.”

TED Query Tool

This tool provides access to information about Federal, state, and local government agency and private sector data holdings gathered by the Census Bureau. It is available through the geospatial data coordination lead at the Regional Service Center.

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Geospatial One-Stop

Geospatial One-Stop, available at <<http://www.geodata.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 State are available on the Mapping Information Platform web site at <https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=MO>.

A listing of Regional GIS collaboratives and contact information is provided at <http://www.mgisac.org>

Involving the State’s Geospatial Coordinator in Flood Studies

In order to participate in the FEMA flood hazard mapping effort, this office prefers to be contacted in all of the following ways:

- a. Meeting at the start of each year for my state
- b. Send project list at the start of each year
- c. Attend each kickoff/scooping meeting

This state already has a working relationship with the office in the state that is responsible for updating the multi-hazard maps, and they have access to their state’s flood map modernization business plan.

State Coordination Process for Building Geospatial Partnerships

Missouri Geographic Information Systems Advisory Committee: MGISAC has several objectives, including providing direction and oversight to the MSDIS, developing and publishing standards, representing the state at national meetings and events, hosting an annual statewide GIS conference, coordinating database development, and providing a forum for the state’s GIS community. MGISAC by-laws, strategic plan, and work plan documents are posted on the MGISAC Web site. The work plan addresses the following four activity areas and goals:

- Maintain and expand the spatial data archive.
- Set database and related standards for the GIS user community.
- Expand the use of GIS technology in Missouri Government.

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- Plan MSDIS activities and report regularly on progress.

<http://www.mgisac.org/>

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>>.

The State also maintains information about local geospatial contacts at <http://www.nsgic.org/states/missouri.cfm>. The levels of government in the list are:

- a. Municipal
- b. County
- c. State

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 Regional Management Center what was wrong and the correct information (if you know it). Use the contact information for the lead listed in the section Purpose of the Procedure.

The lead will use your feedback to update this Procedure.