State Geospatial Data Coordination Procedure

Kansas

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Purpose of the Procedure

Flood insurance studies search for existing 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. Resources developed through FEMA's geospatial data coordination activities provide studies information about existing 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. 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 *Scoping Guidelines: Pre-scoping and the Scoping Meeting*, which is available through your Regional Service Center (RSC).

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 Management Center:

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

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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).

Existing Geospatial Data Coverage

Find below background information and links to statewide (and Federal agencies' national) geospatial datasets. Note that this list is not a prescription of datasets that must be used in a flood insurance study. The list is provided to save time when building a list of candidate datasets available for the study.

Datasets for DFIRM Production

Orthophotos

Dataset name: : 2012 NAIP Four-Band Aerial Imagery
Data currentness: 2012
Accuracy/Scale: 1:12000; 6 meters horizontal accuracy at 95% confidence level

Ground sample resolution: 1 meter
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: State of Kansas/Sanborn
Dataset contact: Data Access and Support Center
University of Kansas
1930 Constant Ave
West Campus
Lawrence, Kansas 66047-3726
(785) 864-2000, dasc@kgs.ku.edu
Notes: The new orthophotos can be downloaded from the DASC Data Catalog - http://www.kansasgis.org/catalog/index.cfm

Transportation (roads, railroads, and airports)

Dataset name: Census Tiger Roadways
Data currentness: 2012
Accuracy/Scale: Unknown
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Are road names part of the dataset? Yes
Dataset source: US Census Bureau
Dataset contact: Information Specialist
Data Access and Support Center
Kansas Geological Survey
University of Kansas
1930 Constant Ave
Campus West
Lawrence, Kansas 66047-3726
(785) 864-2000, dasc@kgs.ku.edu
Notes: The TIGER/Line shapefiles and related database files (.dbf) are an extract of selected geographic and cartographic information from the U.S. Census Bureau's Master Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Database (MTDB). DASC joined the road features from the Census Bureau's "Edges" layer with attributes in the "featnames" table, merged identical features, and parsed address label information (see Attribute Information for details).
http://www.kansasgis.org/catalog/index.cfm

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: National Hydrography Dataset
Data currentness: 2005
Accuracy/Scale: Error less than or equal to 0.003 inch standard error at map scale. 1:24,000.

Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Are hydrography names part of the dataset? Yes
Dataset source: U.S. Geological Survey in cooperation with U.S. Environmental Protection Agency
Dataset contact: Information Specialist
Data Access and Support Center
Kansas Geological Survey
University of Kansas
1930 Constant Ave
Campus West
Lawrence, Kansas 66047-3726
(785) 864-2000, dasc@kgs.ku.edu
Note: The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that comprise the nations surface water drainage system. It is based initially on the content of the U.S. Geological Survey 1:100,000-scale Digital Line Graph (DLG) hydrography data, integrated with reach-related information from the U.S. Environmental Protection Agency Reach File Version 3.0 (RF3). More specifically, it contains reach codes for networked features and isolated lakes, flow direction, names, stream level, and centerline representations for areal water bodies. Reaches are also defined to represent water bodies and the approximate shorelines of the Great Lakes, the Atlantic and Pacific Oceans, and the Gulf of Mexico. The NHD also incorporates the National Spatial Data Infrastructure framework criteria set out by the Federal Geographic Data Committee.
http://www.kansasgis.org/catalog/index.cfm.

Political boundaries (county, municipal)

Dataset name: Census Counties, Census Incorporated Areas (Cities)
Data currentness: 2013
Accuracy/Scale: Unknown
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: US Census Bureau
Dataset contact: Information Specialist
Data Access and Support Center
Kansas Geological Survey
University of Kansas
1930 Constant Ave
Campus West
Lawrence, Kansas 66047-3726
(785) 864-2000, dasc@kgs.ku.edu
Notes: The TIGER/Line shapefiles and related database files (.dbf) are an extract of selected geographic and cartographic information from the U.S. Census Bureau's Master

Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Database (MTDB). The MTDB represents a seamless national file with no overlaps or gaps between parts, however, each TIGER/Line shapefile is designed to stand alone as an independent data set, or they can be combined to cover the entire nation. These datasets are geometry updates only and do not contain demographic statistic information. http://www.kansasgis.org/catalog/index.cfm

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

Dataset name: Public Land Survey System (PLSS)
Data currentness: 08/27/1997
Accuracy/Scale: 0.006 map inches or 12 ground feet / 1:24000
Horizontal datum: NAD 27
Fee associated? No
Available for redistribution? Yes
Dataset source: Kansas Geological Survey
Dataset contact: Information Specialist
Data Access and Support Center
Kansas Geological Survey
University of Kansas
1930 Constant Ave
Campus West
Lawrence, Kansas 66047-3726
(785) 864-2000, dasc@kgs.ku.edu
Notes: The Kansas County Databases of the U.S. Public Land Survey System (PLSS) provide, for each of the 105 counties in Kansas, high quality digital representations of basic Kansas land divisions first established by the PLSS, primarily between the years of 1854 and 1877. They are derived from data contained in PLSS databases of the USGS 24K Digital Line Graph (DLG) series and data from the Kansas Cartographic Database (KCD) developed by the Kansas Geological Survey. All of the data is derived from USGS 7.5 minute quadrangles. Only minimal edge matching was performed between DLG databases. Features represented in the county databases include the basic point, line and area features established in the original Public Land Surveys of Kansas. These features are listed below as theme keywords. Currently lacking from this collection is a complete representation of Indian land boundaries surveyed in Kansas as part of the original PLSS while those Indian lands were still excluded from the public lands. The data from the KCD was captured using in-house software, GIMMAP (Geodata Interactive Management, Mapping and Production). Using Arc Macro Language (AML) files, DLG's for individual quadrangles covering each county were imported into Arc/Info using the 'dlgarc' command. The individual DLG's were then merged and cleaned to form the county databases. This procedure was only possible after the original USGS DLG's were reformatted to establish uniform numbers and sequences of attributes for all nodes, areas, and lines in the original USGS DLG's. http://www.kansasgis.org/catalog/index.cfm

Terrain (elevation)

Dataset name: National Elevation Dataset (NED)

Data currentness: 02/01/1999
Accuracy/Scale: +/- 7 meters (varies)
Vertical datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: U.S. Geological Survey (USGS), EROS Data Center
Dataset contact: Information Specialist
Data Access and Support Center
Kansas Geological Survey
University of Kansas
1930 Constant Ave
Campus West
Lawrence, Kansas 66047-3726
(785) 864-2000, dasc@kgs.ku.edu
Notes: The U.S. Geological Survey has developed a National Elevation Database (NED). The NED is a seamless mosaic of best-available elevation data. The 7.5-minute elevation data for the conterminous United States are the primary initial source data. In addition to the availability of complete 7.5-minute data, efficient processing methods were developed to filter production artifacts in the existing data, convert to the NAD83 datum, edge-match, and fill slivers of missing data at quadrangle seams. One of the effects of the NED processing steps is a much-improved base of elevation data for calculating slope and hydrologic derivatives. http://www.kansasgis.org/catalog/index.cfm

LIDAR has been collected parts of the state. This data is available at:
http://www.kansasgis.org/catalog/index.cfm

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

Data	Data Source	Location
Watershed boundaries	National	Discovery Data Repository
Jurisdictional boundaries	National	Discovery Data Repository
Tribal land boundaries	National	Discovery Data Repository
State lands	Regional/State/Local	http://www.kansasgis.org/catalog/index.cfm
Federal lands	National	Discovery Data Repository
Major roads	National	Discovery Data Repository
Streams	National	Discovery Data Repository
Coastal Barrier Resource Areas	N/A	
Coordinated Needs Management Strategy	National	See National Operating Procedure
Topographic/ bathymetric data	National	See National Operating Procedure
AAL data from HAZUS	National	Discovery Data Repository
Coverage areas for known community and Tribal risk assessment data	Local KS Adjutant General's Office – State Hazard Mitigation Plan	Communities http://www.kansastag.gov/AdvHTML_doc_upload/CompleteKSHMP2.5.11.pdf
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

Data	Data Source	Location
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	National	See National Operating Procedure
Available effective study data	National	See National Operating Procedure
Orthophotography	National	See National Operating Procedure
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	Communities
Land use and soil information	National Multi	See National Operating Procedure http://www.kansasgis.org/catalog/index.cfm
Reference points to locate areas with flooding issues	Local	Communities
Hydraulic structures	Culverts Non-State Bridge Inventory Levees, Dams, Bridges	Local – Communities http://www.kansasgis.org/catalog/index.cfm 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 Storm Surge Inundation Areas High Water Marks	See National Operating Procedure See National Operating Procedure Local - Communities

Data	Data Source	Location
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
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)	Landslide Wildfire	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
Watershed Districts	Data Access and Support Center (DASC)	http://www.kansasgis.org/catalog/index.cfm
Critical Infrastructure – Schools, Hospitals, Correctional Facilities, Water Supply Facilities, etc…	Data Access and Support Center (DASC)	http://www.kansasgis.org/catalog/index.cfm

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Data Distribution Process for State Data

Details regarding official policy for data distribution are available via the DASC website at http://www.kansasgis.org

Federal Nationwide Geospatial Data Holdings

DASC is participating in a national effort to build and maintain statewide GIS inventories in a consistent manner. To facilitate the collection of this information, DASC is utilizing a national web application developed under the direction of the National States Geographic Information Council (NSGIC). This GIS inventory application provides user-friendly tools that allow organizations to publish information regarding existing and planned data, policies, systems, and people; as well as a simply query interface that allows users to research the inventory by data theme, coverage area, and database status (complete, in-work, or planned). A statewide GIS Inventory is an essential part of the Kansas GIS initiative.
To participate in this effort, please visit the Kansas GIS Inventory web site at: http://www.gisinventory.net/ A brochure (PDF) is available.

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 will 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

Data Access and Support Center (DASC) at http://www.kansasgis.org/
The Data Access and Support Center (DASC) was created by the State of Kansas, Geographic Information Systems (GIS) Policy Board. This board was established by the governor in 1989 to develop Kansas GIS technology management policies and direct the Kansas GIS Initiative. The GIS Policy Board consists of directors of the major State, Federal, and local agencies that are utilizing GIS technology.

Cooperation between agencies in Kansas has led to the development of a sizable core database. The GIS Policy Board has a budgeted fund allocated in the State's Water Plan to help acquire the necessary layers of information. Currently data are being acquired and developed for Kansas from various Federal, State, and educational institutions. They are stored in several computers at the Data Access and Support Center awaiting distribution.

DASC is a cooperating member of the National Spatial Data Infrastructure (NSDI) DASC's node contains Federal Geographic Data Committee (FGDC) compliant metadata, FTP access, search capabilities, and metadata submission capabilities.

The Data Access and Support Center has five basic functions associated with its task of maintaining the Kansas GeoDatabase. DASC services were intended primarily for the member agencies of the Policy Board, but are provided to all other governmental and public organizations as a State service. Below are the basic services DASC offers.

- Receive, archive, and catalog all core databases. Maintain associated documentation and information.
- Check and verify integrity of data to ensure they meet GIS Policy Board's database standards.
- Convert and transform databases to varying software formats, computer architectures.
- Distribute databases as requested and handle inquiries for DASC services.
- Promote and assist the use of the core database and GIS technologies and produce the State GIS web portal.

These are the services that are currently being offered. In years to come, DASC hopes to provide more services. If additional funding can be acquired DASC would expand its services to provide more user support as Geographic Information Systems are very complex and require dedicated qualified personnel to support their operation. Ideally, DASC would provide training for various GIS systems, assist in map production, and help trouble-shoot software deficiencies.

The Kansas Department of Water Resources is a Cooperating Technical Partner for the State of Kansas. They have an extensive store of current and historical flood hazard data for the state. http://www.ksda.gov/dwr/

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.

Geospatial One-Stop

Geospatial One-Stop has retired and has been integrated into the Data.gov website <http://geo.data.gov>. This website is built on the open source Geoportal Server < https://github.com/Esri/geoportal-server>, providing access to geospatial data from many sources.

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=KS

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. Send project list at the start of each year

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

Kansas Geographic Information Systems Policy Board: http://da.ks.gov/kito/gis/ The Kansas GIS Policy Board works to ensure a technological environment where GIS is recognized as an integral and indispensable tool for government and businesses to serve the information needs of citizens and customers. Kansas provides a broad contingency of GIS users with open access to complete and accurate framework data with appropriate guidelines to protect individual privacy and other sensitive information. The Kansas GIS Policy Board formed a cooperative relationship with the Federal Geographic Data Committee (FGDC), by becoming a Cooperating Partner of the FGDC in support of the National Spatial Data Infrastructure (NSDI), resulting in the establishment of the Kansas Data Access & Support Center, DASC.

The Kansas GIS Policy Board is responsible for the development of standards, strategies, and policies that emphasize cooperation and coordination among agencies, organizations, and government entities in order to maximize the cost effectiveness of GIS by creating public and private partnerships throughout Kansas. The board, consisting of 37 members appointed by the Governor from state and local government agencies as well as public, private, and academic interests, provides review, coordination and recommendations for GIS programs and investments. Currently partnerships, within and among levels of government and private entities, provide the basis for assigning roles and responsibilities for the development and maintenance of data themes.

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 maintains a statewide GIS contacts list that may be accessed by registering with DASC's Kansas Geoportal:

a. Web Accessible: http://www.kansasgis.org/members/index.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 how you corrected the information.

The lead will use your feedback to update this procedure on a regular basis.