State Geospatial Data Coordination Procedure

IOWA

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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 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 at your Regional Service Center:

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Regional Service Center 7
(913) 202-6869
jason.sweet@starr-team.com

We appreciate the help of those 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).

Geospatial Data Coverage

Find below information about statewide (and Federal agencies' national) geospatial datasets including links. The list is provided to save time during pre-scoping and scoping 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: 2013 NAIP Four-Band Aerial Photography Data (By County)
Data currentness: 2013
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: Iowa Geological and Water Survey, DNR
Dataset contact: GeoSpatial DBA / NRGIS Librarian
109 Trowbridge Hall
Iowa City, IA 52242
Telephone: 319-335-1575
Notes: The new orthophotos can be downloaded from the NRGIS Library - http://www.igsb.uiowa.edu/nrgislibx/

Transportation (roads, railroads, and airports)

Dataset name: Road Centerlines of Iowa
Data currentness: 2006
Accuracy/Scale:
Horizontal datum: NAD 83
Fee associated? None
Available for redistribution? Yes
Are road names part of the dataset? Yes
Dataset source: Iowa Department of Transportation
Dataset contact: GeoSpatial DBA / NRGIS Librarian
109 Trowbridge Hall
Iowa City, IA 52242
319-335-1353, gis_library@igsb.uiowa.edu
Notes: This dataset is compiled from Iowa DOT Geographic Information Management System (GIMS) files for the year 2006. Several datasets were merged together and many fields were removed to make a layer that is to be used primarily for cartographic representation. http://www.igsb.uiowa.edu/nrgislibx/

Dataset name: Current Rail Lines in Iowa
Data currentness: Edition date 2010
Accuracy/Scale: 1:100,000
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes

Are road names part of the dataset? No
Dataset source: Federal Railroad Administration (FRA)
Dataset contact: Casey Kohrt
109 Trowbridge Hall
Iowa City, IA 52242-1319
319-335-1575
Notes: This coverage represents the rail lines in Iowa. This data was selected from the Federal Railroad Administration coverage, and corrected as necessary using aerial photography. The same schema as the FRA file was used, with additional fields added.
http://www.igsb.uiowa.edu/nrgislibx/

Dataset name: Airports: Landing facilities in the state of Iowa as supplied by the FAA
Data currentness: Publication date 1997
Accuracy/Scale: Unknown
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Are road names part of the dataset? No
Dataset source: Iowa Department of Natural Resources - Geological Survey
Dataset contact: Casey Kohrt
109 Trowbridge Hall
Iowa City, IA 52242-1319
319-335-1353, gis_library@igsb.uiowa.edu
Notes: This digital, geographically referenced data set was developed by the Iowa Department of Natural Resources to carry out agency responsibilities related to management, protection, and development of Iowa's natural resources.
http://www.igsb.uiowa.edu/nrgislibx/

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: NHD High Resolution
Data currentness: Publication date - varies
Accuracy/Scale: 1:24,000/1:12,000
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
Dataset contact: Earth Science Information Center, U.S. Geological Survey
507 National Center
Reston, VA 20192
1 888 275 8747, ask@usgs.gov
Notes: The National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nation's surface water drainage system. NHD data was originally developed at 1:100,000-scale and exists at that scale for the whole country. This high-resolution NHD, generally

developed at 1:24,000/1:12,000 scale, adds detail to the original 1:100,000-scale NHD. http://nhd.usgs.gov/index.html

Political boundaries (county, municipal)

Dataset name: Incorporated Cities of Iowa, 2010
Data currentness: 2010
Accuracy/Scale: 1:24,000
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: Iowa Geological and Water Survey, DNR
Dataset contact: GeoSpatial DBA / NRGIS Librarian
109 Trowbridge Hall
Iowa City, IA 52242-1319
(319) 335-1353, gis_library@igsb.uiowa.edu
Notes: The TIGER/Line Files are shapefiles and related database files (.dbf) that 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 TIGER/Line Files include both incorporated places (legal entities) and census designated places or CDPs (statistical entities). An incorporated place is established to provide governmental functions for a concentration of people as opposed to a minor civil division (MCD), which generally is created to provide services or administer an area without regard, necessarily, to population. Places always nest within a State, but may extend across county and county subdivision boundaries. An incorporated place usually is a city, town, village, or borough, but can have other legal descriptions. CDPs are delineated for the decennial census as the statistical counterparts of incorporated places. CDPs are delineated to provide data for settled concentrations of population that are identifiable by name, but are not legally incorporated under the laws of the State in which they are located. The boundaries for CDPs often are defined in partnership with State, local, and/or tribal officials and usually coincide with visible features or the boundary of an adjacent incorporated place or another legal entity. CDP boundaries often change from one decennial census to the next with changes in the settlement pattern and development; a CDP with the same name as in an earlier census does not necessarily have the same boundary. The only population/housing size requirement for CDPs for the 2010 Census is that they must contain some housing and population. http://www.igsb.uiowa.edu/nrgislibx/

Dataset name: State and County boundaries of the state of Iowa
Data currentness: Publication date 1991
Accuracy/Scale: 1:24,000
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes

Dataset source: Iowa Department of Natural Resources - Iowa Geological Survey
Dataset contact: Jim Giglierano
109 Trowbridge Hall
Iowa City, IA 52240
(319) 335-1575, jgiglierano@igsb.uiowa.edu
Notes: This coverage contains polygons representing the county boundaries of the state of Iowa. COUNTY was developed from a set of 99 individual coverages of the Public Land Survey System (PLSS) for each county in the state. The PLSS coverages were digitized from paper copies of 7.5' topographic quadrangle maps. River boundaries were also digitized from 7.5' maps roads. http://www.igsb.uiowa.edu/nrgislibx/

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

Dataset name: Conservation and Recreation Lands in the State of Iowa
Data currentness: 2014
Accuracy/Scale: The estimated accuracy of this coverage is +/- 50 meters.
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: Iowa Department of Natural Resources
Dataset contact: Casey Kohrt
109 Trowbridge Hall
Iowa City, IA 52242
(319) 335-1353, gis_library@igsb.uiowa.edu
Notes: This dataset represents conservation and recreation lands in the state of Iowa. Boundaries of areas represent differences in ownership and managing agency of the area. The data is derived from many different sources, mainly from the agency responsible for the area. Some of these conservation areas are under private ownership and public access is not allowed, signs and private property should be respected.
http://www.igsb.uiowa.edu/nrgislibx/

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

Dataset name: Public Land Survey System of Iowa
Data currentness: 2005
Accuracy/Scale: 22 meters / 1:24,000
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: Iowa Department of Natural Resources
Dataset contact: James D. Giglierano
109 Trowbridge Hall
Iowa City, Iowa 52242-1319
(319) 335-1353, jim.giglierano@dnr.iowa.gov

Notes: This coverage contains the section lines for the Public Land Survey System (PLSS). These lines form polygons which are labeled for PLSS township, range and section number. Coordinates were digitized from U. S. Geological Survey 7.5' topographic maps (paper copies) using a digitizing program developed in-house by the Geological Survey Bureau, Iowa DNR. The digitizing tablet accuracy was 1/50 inch. Section lines from individual quads were combined and edited using PC Arc/Info.
http://www.igsb.uiowa.edu/nrgislibx/

Terrain (elevation)

Dataset name: Three Meter Digital Elevation Model by County
Data currentness: 2013
Accuracy/Scale: 1:4800
Vertical datum: NAVD 88
Fee associated? No.
Available for redistribution? Yes
Dataset source: Iowa Geological and Water Survey, DNR
Dataset contact: Casey Kohrt
109 Trowbridge Hall
Iowa City, IA 52242-1319
319-335-1353, gis_library@igsb.uiowa.edu
Notes: This data set represents a digital elevation model (DEM) of the land surface of Iowa, in the UTM projection, Zone 15, NAD83 horizontal datum, with elevation in centimeters NAVD 88 vertical datum. The DEM has a horizontal resolution of 3 meters and was aggregated from one meter resolution elevation data from the state of Iowa's LiDAR program. The aggregation process uses a 3x3 pixel moving average window, which helps to smooth out noise in the one meter data, but also softens sharp edges of landscape features such as ditches and ridges, which may be undesirable for some purposes. The DEM was then changed to integers to shrink the size of the file, so final units are in centimeters. Water features sometimes have a triangular appearance due to lack of lidar returns over water and should be ignored.

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 2 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 2. 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	Multi	http://www.igsb.uiowa.edu/nrgislibx/
Federal lands	National	Discovery Data Repository
Major roads	National	Discovery Data Repository
Streams	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	National	Discovery Data Repository
Coverage areas for known community and Tribal risk assessment data	Multi	State Hazard Mitigation Plan: http://www.iowahomelandsecurity.org/documents/hazard_mitigation/HM_StatePlan_1-3_RiskAssessment.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

Data	Data Source	Location
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 Regional/State/Local	See National Operating Procedure http://www.igsb.uiowa.edu/nrgislibx/
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	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	See National Operating Procedure
Reference points to locate areas with flooding issues	Local	Communities

Data	Data Source	Location
Hydraulic structures	Culverts State Dams Inventory Levees, Dams, Bridges	Regional/State/or Local http://www.igsb.uiowa.edu/nrgislibx/ 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 Communities
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

Data	Data Source	Location
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	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	Regional/State/Local	Varies with time of Discovery project
Campgrounds, recreational areas, emergency access routes, etc.	National	Discovery Data Repository
Schools	Iowa DNR	http://www.igsb.uiowa.edu/nrgislibx/
Hospitals	Iowa DNR	http://www.igsb.uiowa.edu/nrgislibx/
Wastewater Outfalls	Iowa DNR	http://www.igsb.uiowa.edu/nrgislibx/
Wastewater Treatment Plants	Iowa DNR	http://www.igsb.uiowa.edu/nrgislibx/

Data Distribution Process for State Data

Policy for data distribution is determined by individual agencies, and state information access laws.

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

The Natural Resources Geographic Information System (NRGIS) Library is a Geographic Information System (GIS) repository developed and maintained by the GIS Section of the Iowa Department of Natural Resources (DNR). It is a collection of more than 20,000 geographically referenced databases. The purpose of the NRGIS Library is to improve the availability, integration, and analysis of natural resource information and improve decisions to carry out agency responsibilities related to the management, protection and development of Iowa's natural resources. The NRGIS Library is seen as a one-stop repository for all of Iowa's natural resource, geographic information. http://www.igsb.uiowa.edu/nrgislibx/

The Iowa Geospatial Data Clearinghouse (IGDC) allows GIS users looking for Iowa data to explore metadata published by Iowa data providers. Users can search by keyword, subject, data type and spatial extent to return documents describing live mapping services, mapping applications, downloadable data, offline data and other clearinghouses with Iowa data. Data publishers have the opportunity to create an account on the IGDC and publish your content using a form based entry system. Published metadata is automatically harvested by geodata.gov so you get the benefit of automatically publishing your content to two locations. For more information contact Patrick Brown (patrickb@iastate.edu) or visit the Iowa Geospatial Data Clearinghouse. http://www.iowagis.org/

Additional data can be obtained from the Iowa Department of Transportation - GIS and Spatial Technologies site. http://www.iowadot.gov/gis/default.htm

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=IA

Of special interest are:

The Natural Resources Geographic Information System (NRGIS) Library – The purpose of the NRGIS Library is to improve the availability, integration, and analysis of natural resource information and improve decisions to carry out agency responsibilities related to the management, protection and development of Iowa's natural resources.

Iowa Department of Transportation – GIS and Spatial Technologies– Iowa DOT has invested in GIS and spatial technologies and staff. Currently the Information Technology Division has three full time staff dedicated to this mission. The Office of Transportation Data, led by Peggi Knight, is a leader in using GIS technologies for transportation inventories and map creation. Transportation Data also is responsible for linear referencing system (LRS) and geographic information management systems (GIMS) funding as well as LRS business data maintenance. A statewide set of imagery and

multiple enterprise base layers ranging from road centerlines to heliport locations are available to Iowa DOT staff. Production linear referencing system can be used for location of features along roadways and soon rail lines. Multiple layers can be downloaded from the Iowa DOT's GIS Web site.

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

Iowa Geographic Information Council – The mission of the Iowa Geographic Information Council (IGIC) is to foster an efficient GIS environment through cooperation and coordination with public and private entities that access, collect, provide, and share data, metadata, applications and educational opportunities. The Council consists of representatives from federal, state, county, regional and local governments, colleges and universities, and the private sector. The IGIC consists of twenty-five Board Members that represent each of the functional sectors. As a member driven organization, IGIC relies heavily on the support of its membership in accomplishing its mission and objectives. http://www.iowagic.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.

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 Service 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.