State Geospatial Data Coordination Procedure

Nebraska

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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 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 VII
(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 and links to statewide (and Federal agencies' national) geospatial datasets. 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: Nebraska Farm Service Agency (FSA) 2012 Imagery
Data currentness: 2012
Accuracy/Scale: 2 Day /1:12000
Ground sample resolution: 1 meter
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: USDA-FSA-APFO
Dataset contact: USDA-FSA Aerial Photography Field Office
2222 West 2300 South
Salt Lake City, UT 84119-2020
(801) 973-3500, digital@apfo.usda.gov
Notes: This data set contains imagery from the National Agriculture Imagery Program (NAIP). The NAIP acquires 4-band digital ortho imagery from airbourne and/or space based platforms during the agricultural growing seasons in the U.S.. A primary goal of the NAIP program is to enable availability of ortho imagery within sixty days of acquisition. The NAIP provides 1 meter GSD ortho imagery rectified within +/- 6 meters to true ground at a 95% confidence level. The tiling format of NAIP imagery is based on a 3.75' x 3.75' quarter quadrangle with a 300 (plus or minus 30) pixel buffer on all four sides. The NAIP imagery is formatted to the UTM coordinate system using the North American Datum of 1983 (NAD83). The NAIP imagery may contain as much as 10% cloud cover per tile. This file was generated by compressing NAIP imagery that cover the county extent. Two types of compression may be used for NAIP imagery: MrSID and JPEG 2000. Target value for the compression ratio for 1 meter GSD is (15:1).
http://dnr.nebraska.gov/digital-imagery-1993-through-2012-1-2-meter

Transportation (roads, railroads, and airports)

Dataset name: All Roads/All Railroad - TIGER 2010
Data currentness: 2010
Accuracy/Scale: The entire State has been processed through MAF/TIGER Accuracy Improvement Project (MTAIP), which uses sources with a horizontal spatial accuracy of circular error 95 (CE95) at 7.6 meters or better. Information about the source and the horizontal positional accuracy of that source appears in the county-based metadata included as part of each compressed TIGER/Line file.
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Are road names part of the dataset? Yes
Dataset source: U.S. Department of Commerce, U.S. Census Bureau, Geography Division
Dataset contact: U.S. Department of Commerce
U.S. Census Bureau
Geography Division

Geographic Products Management Branch
4600 Silver Hill Road
Stop 7400
Washington, DC 20233-7400
(301) 763-1128, tiger@census.gov
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 MTDB represents a seamless national file with no overlaps or gaps between parts, however, each TIGER/Line File is designed to stand alone as an independent data set, or they can be combined to cover the entire nation. Edge refers to the linear topological primitives that make up MTDB. The All Lines Shapefile contains linear features such as roads, railroads, and hydrography. Additional attribute data associated with the linear features found in the All Lines Shapefile are available in relationship (.dbf) files that users must download separately. The All Lines Shapefile contains the geometry and attributes of each topological primitive edge. Each edge has a unique TIGER/Line identifier (TLID) value.
http://dnr.nebraska.gov/transportation-data

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: National Hydrography Dataset - NHD - High Resolution
Data currentness: Updated Continuously
Accuracy/Scale: National Map Accuracy Standards. For horizontal accuracy, this standard is met if at least 90 percent of points tested are within 0.02 inch (at map scale) of the true position.
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 and the Nebraska Department of Natural Resources
Dataset contact: GIS Coordinator
Nebraska Department of Natural Resources
301 Centennial Mall South
Lincoln, Nebraska 68509-4676
(402) 471-2363, dnr.gis@nebraska.gov
Notes: The high resolution National Hydrography Dataset (NHD) is a feature-based database that interconnects and uniquely identifies the stream segments or reaches that make up the nations surface water drainage system. High resolution NHD adds detail to the original 1:100,000-scale NHD. (Data for Alaska, Puerto Rico and the Virgin Islands was developed at high-resolution, not 1:100,000 scale.) Like the 1:100,000-scale NHD, high resolution NHD 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://nhd.usgs.gov/

Political boundaries (county, municipal)

Dataset name: County/City Boundaries - TIGER 2010
Data currentness: 2010
Accuracy/Scale: The entire State has been processed through MAF/TIGER Accuracy Improvement Project (MTAIP), which uses sources with a horizontal spatial accuracy of circular error 95 (CE95) at 7.6 meters or better. Information about the source and the horizontal positional accuracy of that source appears in the county-based metadata included as part of each compressed TIGER/Line file. Boundaries are aligned to roads that they follow.
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: U.S. Department of Commerce
Dataset contact: U.S. Census Bureau
Geography Division
Geographic Products Management Branch
4600 Silver Hill Road
Stop 7400
Washington, DC 20233-7400
(301) 763-1128, tiger@census.gov
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 MTDB represents a seamless national file with no overlaps or gaps between parts, however, each TIGER/Line File is designed to stand alone as an independent data set, or they can be combined to cover the entire nation. The primary legal divisions of most States are termed counties. In Louisiana, these divisions are known as parishes. In Alaska, which has no counties, the equivalent entities are the organized boroughs, city and boroughs, and municipalities, and for the unorganized area, census areas. The latter are delineated cooperatively for statistical purposes by the State of Alaska and the Census Bureau. In four States (Maryland, Missouri, Nevada, and Virginia), there are one or more incorporated places that are independent of any county organization and thus constitute primary divisions of their States. These incorporated places are known as independent cities and are treated as equivalent entities for purposes of data presentation. The District of Columbia and Guam have no primary divisions, and each area is considered an equivalent entity for purposes of data presentation. The Census Bureau treats the following entities as equivalents of counties for purposes of data presentation: Municipios in Puerto Rico, Districts and Islands in American Samoa, Municipalities in the Commonwealth of the Northern Mariana Islands, and Islands in the U.S. Virgin Islands. The entire area of the United States, Puerto Rico, and the Island Areas is covered by counties or equivalent entities. The 2010 Census boundaries for counties and equivalent entities are as of January 1, 2010,

primarily as reported through the Census Bureau's Boundary and Annexation Survey (BAS). http://dnr.nebraska.gov/boundaries-plss

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

Dataset name: Nebraska Sections Corner and Township/Range Boundary Polygons - State Plane
Data currentness: 1995
Accuracy/Scale: medium to low - this data does not meet any standards
Horizontal datum: NAD 83
Fee associated? No
Available for redistribution? Yes
Dataset source: Nebraska Department of Natural Resources (DNR)
Dataset contact: GIS Coordinator
Nebraska Department of Natural Resources
301 Centennial Mall South
Lincoln, Nebraska 68509-4676
(402) 471-2363, dnr.gis@nebraska.gov
Notes: The DNR digitized the SE corner of each section in Nebraska and identified the corner by that section number. Other corners were also digitized as necessary. Using these points, a polygon was constructed to represent the four corners of each section. They have been integrated into the DNR's computer data systems so they are available to all with the facilities to access the Natural Resources Data Bank.
http://dnr.nebraska.gov/boundaries-plss

Terrain (elevation)

Dataset name: NRCS Nebraska LIDAR
Data currentness: 2012
Accuracy/Scale: 0.6m RMSE
Vertical datum: NAVD 88
Fee associated? No
Available for redistribution? Yes
Dataset source: USDA-NRCS
Dataset contact: Shandy Bittle
USDA-NRCS
100 Centennial Mall N
Ste 152
Lincoln, NE 68508
(402) 437-4020, shandy.bittle@ne.usda.gov
Notes: One-meter cell size ESRI grids created from the ground classified (class = 2) lidar points which results in the Digital Elevation Model (DEM). These are delivered in both 5000m by 5000m tiles and also by a countywide DEM raster. Nebraska Department of Natural Resources produced 2 meter resolution ESRI rasters by resampling 1 meter ESRI rasters (provided by NRCS). http://dnr.nebraska.gov/lidar-2-meter-2009-2012

Dataset name: 7.5 Digital Elevation Models – DEM – 10 Meter – Index for the State of Nebraska

Data currentness: 1998
Accuracy/Scale: RMSE of the DEM. Digital elevation models meet horizontal National Map Accuracy Standards (NMAS) accuracy requirements. 1:24000
Vertical datum: NGVD 29
Fee associated? No
Available for redistribution? Yes
Dataset source: Nebraska Department of Natural Resources in work-share agreement with the U.S. Geological Survey
Dataset contact: GIS Coordinator
Nebraska Department of Natural Resources
301Centennial Mall South
Lincoln, Nebraska 68509-4676
(402) 471-2363, dnr.gis@nebraska.gov
Notes: The state also has tagged vector contours (TVC) (contours digitized from USGS topographic maps) available through http://dnr.nebraska.gov/elevation-data. The USGS makes the National Elevation Dataset available; see http://ned.usgs.gov.

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

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Data	Data Source	Location
Tribal land boundaries	National	Discovery Data Repository
State lands	Regional/State/Local	
Federal lands	National	Discovery Data Repository
Major roads	Regional/State/Local 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	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	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	

Data	Data Source	Location
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
Orthophotography	National	See National Operating Procedure
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	Communities
Land use and soil information	University of Nebraska-Lincoln, School of Natural Resources National	http://snr.unl.edu/data/geographygis/NebrGISSoils.asp See National Operating Procedure
Reference points to locate areas with flooding issues	Local	Communities
Hydraulic structures	Culverts Levees, Dams, Bridges	Regional/State/or Local 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 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

Data	Data Source	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 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)	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

Data Distribution Process for State Data

The Nebraska Geographic Information Systems Council explores recommendations for facilitating geospatial data sharing in Nebraska. Information is available from http://www.nitc.ne.gov/gisc/

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 Nebraska Geospatial Data Center: The Nebraska Geospatial Data Center provides internet access to a wide variety of geospatial databases developed and/or maintained by various state, federal and local government agencies, academic institutions, and private entities. It is a one-stop enterprise portal for on-line searching, accessing, displaying and mapping available geo-data relating to the geographic area of Nebraska. The Center has created a unified enterprise-wide metadata clearinghouse and developed a web-based metadata submission site for the State. The online entry of metadata facilitates ongoing publication of metadata into the clearinghouse. The metadata entry contains descriptive information about the specific geo-data and is structured in a standardized format. This facilitates direct access to metadata information, and as well provides links to geo-databases across multiple participating sites. Such hypertext links are embedded in the metadata text.

Currently, the Nebraska Geo-Spatial Data Center, including the Metadata Clearinghouse, is operated and hosted by the Nebraska Department of Natural Resources (Data Bank), with oversight from the Nebraska GIS Steering Committee. http://dnr.nebraska.gov/data

University of Nebraska – Conservation and Survey Division (GIS Datasets): The Conservation and Survey Division (CSD), and the Center for Advanced Land Management Information Technologies (CALMIT) of the School of Natural Resources (SNR) are actively engaged in assembling statewide digital databases. All GIS databases are made available in both State Plane and UTM map projections. The download files are zipped (.zip) shapefiles. All databases are complete, edge-matched (where warranted) and edited to remove obvious errors. For additional information, contact: Les Howard, phone 402-472-9192. http://snr.unl.edu/data/geographygis/NebrGISdata.asp

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 Management 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=NE

Additional useful contacts for the State can be found at http://www.nitc.ne.gov/gis_council/members.html

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

Nebraska Geographic Information Systems Council: Originally established by the Legislature in 1991 in an effort to coordinate the implementation of GIS technology by state and local government in Nebraska. The GIS Council was originally called the Nebraska GIS Steering Committee. In 2008, the Nebraska Legislature modified the statutes relating to state GIS coordination and renamed the GIS Steering Committee as the GIS Council and made it an advisory committee to Nebraska Information Technology Commission (NITC). The NITC is the overarching IT policy body for Nebraska information technology coordination.

The Nebraska GIS Council, as defined by statutes, consists of eleven representatives of specific state government level agencies; two representatives of the Nebraska Association of County Officials; one representative each from the League of Nebraska Municipalities, the Natural Resources Districts, and from public power districts; one representative of federal agencies, and two at-large representatives. Beyond the nineteen GIS Council

members defined by statute, the statutes also allows the NITC to expand the GIS Council to include additional members to provide for needed representation.
The mission of the Nebraska Geographic Information System Steering Committee is to encourage the appropriate utilization of GIS technology and to assist organizations to make public investments in GIS technology and geospatial data in an effective, efficient, and coordinated manner. http://nitc.nebraska.gov/gisc/about/about.html

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 in the following formats:

a. Web Accessible: http://www.calmit.unl.edu/index.php

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.