New Mexico

FINAL

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Purpose of the Procedure

Flood Insurance Studies search for geospatial data during Discovery 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 portal, which is available at

https://riskmapportal.msc.fema.gov/riskmap_usergroups/GeoCoord/default.aspx (password required).

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 and state geospatial participation in flood insurance studies, information for the project Discovery stage, 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 Support Center (RSC):

Stephanie Mercure, Geospatial Data Coordination Lead Compass Regional Support Center (RSC) 6 (512) 454-4797 <u>stephanie.mercure@aecom.com</u>

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

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Date comments were last provided: October 2014

Default Flood Hazard Base Map for the State

The default base map for flood hazard maps for the State is either an image (orthophoto) or vector (road centerline) base map.

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 Discovery 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.

Major State Holdings

Orthophotos

Dataset name: NAIP Imagery New Mexico (1m)

Data currentness: 2/25/2015

Accuracy/Scale: 1:12,000 scale maps – 10.16 meters radial error at a 90% probability. (The DOQQs have not been field checked by a third party for objective accuracy against ground features, but over 90% of permanent identifiable locations in the image have been sampled and found to adhere to within 3.0 meters of preexisting linework and imagery.) Ground sample resolution: 1-meter ground sample distance (GSD)

Horizontal datum: NAD83

Fee associated? No, the compressed data can be downloaded for free (see notes). Available for redistribution? Yes

Dataset source: http://rgis.unm.edu/

Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, clearinghouse@edac.unm.edu

<u>clearinghouse@edac.unm.edu</u>

Notes: (1) The 2009 and 2011 DOQQs are available in two formats. These metadata describe both file types. The DOQQ GeoTIFFs have been compressed at 1:15 as Enhanced Compressed Wavelet (ECW) files. The compression creates a smaller file size that can be downloaded easily from the RGIS website and is readily available.

Countywide mosaicked imagery in compressed SID format can also be downloaded. (2) The NM Statewide Orthophotography Project imagery was flown during the irrigation season, hence leaf-on for deciduous vegetation. The ground might be obscured in leaf-on imagery. While such imagery can be used as a base map, the imagery must be checked to ensure that it provides a clear view of important features on the ground for areas of significance for flooding. See the "Federal Mapping Program Factsheets" available through "Tools & Links" on the MIP web site.

Transportation (roads, railroads, and airports)

Dataset name: County E-911 Road Data Data currentness: 3/18/2016 Accuracy/Scale: unknown Horizontal datum: NAD 83 Fee associated? No Available for redistribution? Yes Are road names part of the dataset? Yes Are road names in TIGER format? Varies by county. For counties with road format not in TIGER format, this dataset cannot be used for Flood Insurance Rate Maps (FIRMs) that are using the 2013 FIRM Database schema without authorization by the FEMA Project Officer and conversion of its attributes to the 2013 FEMA schema.

Dataset source: Earth Data Analysis center RGIS at <u>http://rgis.unm.edu/</u> Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, <u>clearinghouse@edac.unm.edu</u> Notes: 2010 improved TIGER files are also available for download from RGIS.

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: NM National Hydrography Dataset and NM 2006 NHD data Data currentness: 11/2015 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: RGIS at <u>http://rgis.unm.edu/</u> Dataset contact: RGIS Clearinghouse Manager(505) 277-3622, <u>clearinghouse@edac.unm.edu</u> Notes: Statewide 2010 data and watershed based (HUC-8) 2006 files are available for download.

Political boundaries (county, municipal)

Dataset name: New Mexico 2010 Census Place Data currentness: 2010 Accuracy/Scale: 1:100,000 Horizontal datum: NAD 83 Fee associated? No Available for redistribution? Yes Dataset source: U.S. Census Bureau Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, clearinghouse@edac.unm.edu._ Available for download at http://rgis.unm.edu/.

Dataset name: New Mexico County Boundaries (2010 Census) Data currentness: 2010 Accuracy/Scale: unknown Horizontal datum: NAD 83 Fee associated? No Available for redistribution? Yes Dataset source: U.S. Census Bureau Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, <u>clearinghouse@edac.unm.edu.</u> Available for download at http://rgis.unm.edu/

Dataset name: Indian Reservation and Trust Land Boundaries (TIGER 2010) Data currentness: 2010 Accuracy/Scale: 1:100,000 Horizontal datum: NAD 83 Fee associated? No Available for redistribution? Yes

Dataset source: U.S. Census Bureau Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, <u>clearinghouse@edac.unm.edu.</u> Available for download at <u>http://rgis.unm.edu/</u> Notes: Created from combining Census data for Indian Lands, with BLM Land Status data.

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

Dataset name: Bureau of Land Management Surface Land Ownership (2008) Data currentness: 2011 Accuracy/Scale: 1: 24,000 Horizontal datum: NAD83 Fee associated? No Available for redistribution? Yes Dataset source: RGIS at <u>http://rgis.unm.edu/</u> Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, <u>clearinghouse@edac.unm.edu</u>

Dataset name: New Mexico Parks

Data currentness: 6/20/2016 Accuracy/Scale: 1:12,000 Horizontal datum: NAD83 Fee associated? No Available for redistribution? Yes Dataset source: EDAC Clearinghouse Dataset contact: Clearinghouse Manager: <u>clearinghouse@edac.unm.edu</u> Download available at <u>http://rgis.unm.edu/</u> Notes: Digitized from various sources

Dataset name: Region 3 National Forest Boundaries (NM and AZ) Data currentness: 10/16/2015 Accuracy/Scale: 1:24,000 Horizontal datum: NAD83 Fee associated? No Available for redistribution? Yes Dataset source: RGIS at <u>http://rgis.unm.edu/</u> Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, <u>clearinghouse@edac.unm.edu</u>

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

Dataset name: Public Land Survey System and Township Data currentness: 10/2/2015 Accuracy/Scale: 1:24,000 with updates from the BLM's Geographic Coordination Database Horizontal datum: NAD83 Fee associated? No Available for redistribution? Yes

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Dataset source: U.S. Bureau of Land Management-New Mexico State Office Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, clearinghouse@edac.unm.edu.

Available for download at http://rgis.unm.edu/.

Cadastral (parcels)

Dataset name: Cadastral PLSS Standardized Data Version 2 Data currentness: 8/4/2014 Accuracy/Scale: unknown Horizontal datum: NAD83 Fee associated? No Available for redistribution? Yes Dataset source: U.S. Bureau of Lands Management - State of New Mexico Dataset contact: Dennis McKay, BLM, (505) 965-2067, dennis mckay@blm.gov. Available for download at http://rgis.unm.edu/ Notes: This dataset represents the GIS Version of the Public Land Survey System including both rectangular and non-rectangular surveys. The primary source for the data is cadastral survey records housed by the BLM supplemented with local records and geographic control coordinates from states, counties as well as other Federal agencies such as the USGS and USFS. The data have been converted from source documents to digital form and transferred into a GIS format that is compliant with FGDC Cadastral Data Content Standards and Guidelines for publication. These data are optimized for data publication and sharing rather than for specific "production" or operation and maintenance. This dataset includes the following: PLSS Fully Intersected (all of the PLSS feature at the atomic or smallest polygon level), PLSS Townships, First Divisions and Second Divisions (the hierarchical break down of the PLSS Rectangular surveys), PLSS Special surveys (non-rectangular components of the PLSS), Meandered Water, Corners, and Conflicted Areas (known areas of gaps or overlaps between townships or state boundaries).

Extraterritorial jurisdiction (ETJ) boundaries

No statewide data available.

Terrain (elevation)

Dataset name: National Elevation Dataset Data currentness: 2015 Accuracy/Scale: unavailable Vertical datum: NAVD88 Fee associated? No Available for redistribution? Yes Dataset source: USGS at <u>http://nationalmap.gov/viewer.html</u> Dataset contact: Customer Service, U.S. Geological Survey, Center for Earth Resources Observation and Science (EROS), 47914 252nd Street, Sioux Falls, SD 54198-0001; phone: 800-252-4547; <u>custserv@usgs.gov</u> Notes: (1) Same as National Dataset. Currentness and accuracy vary. (2) State has individual USGS Digital Elevation Models at a 10-meter posting spacing available from RGIS at http://rgis.unm.edu

Flood Hazard Boundaries

Dataset names (FIRMs are scanned and georeferenced FIRM images, SFHAs are vector floodplain boundaries): Elephante Butte FIRM, Elephante Butte SFHA, Estancia FIRM, Estancia SFHA, Mora County FIRM, Mora County SFHA, Moriarty FIRM, Moriarty SFHA, Reserve FIRM, Reserve SFHA, Sierra County FIRM, Sierra County SFHA, Torrance County FIRM, Torrance County SFHA, Truth or Consequences FIRM, Truth or Consequences SFHA. Williamsburg FIRM, Williamsburg SFHA Data currentness: 2014 Accuracy/Scale: unknown Horizontal datum: WGS84 Fee associated? No Available for redistribution? Yes Dataset source: RGIS at <u>http://rgis.unm.edu/</u> Dataset contact: RGIS Clearinghouse Manager (505) 277-3622, <u>clearinghouse@edac.unm.edu</u>

Data Distribution Process for State Data

New Mexico Resource Geographic Information System at <u>http://rgis.unm.edu/</u>. Data are available for use by the public.

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 Discovery 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 Discovery 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 Major State Holdings section of this document for geospatial data that meet FIRM production requirements).

Table 1. Discovery Data Sources

Data	Data Source	Location
Watershed boundaries	National	See National Discovery Data Coordination Procedure
Jurisdictional boundaries	New Mexico Resource Geographic Information System Program	http://rgis.unm.edu/ <u>clearinghouse@edac.unm.edu</u> (505) 277-3622 ext. 230
	National	See National Discovery Data Coordination Procedure
Tribal land boundaries	National	See National Discovery Data Coordination Procedure
State lands	New Mexico Resource Geographic Information System Program	http://rgis.unm.edu/ clearinghouse@edac.unm.edu (505) 277-3622 ext. 230
Federal lands	National	See National Discovery Data Coordination Procedure
Major roads	New Mexico Resource Geographic Information System Program	http://rgis.unm.edu/ clearinghouse@edac.unm.edu (505) 277-3622 ext. 230
	New Mexico Department of Transportation (NMDOT)	NMDOT GIS Unit (505) 827-5100
	National	See National Discovery Data Coordination Procedure
Streams	New Mexico Resource Geographic Information System Program	http://rgis.unm.edu/ clearinghouse@edac.unm.edu (505) 277-3622 ext. 230
	National	See National Discovery Data Coordination Procedure
Coastal Barrier Resource Areas	N/A	N/A
Coordinated Needs Management Strategy	National	See National Discovery Data Coordination Procedure

Data	Data Source	Location
Topographic/bathymetric data	Mid Region Council of Governments	https://www.mrcog-nm.gov/region- a-people/orthophotography Caeri Thomas <u>cthomas@mrcog-nm.gov</u> (505) 724-3604
	New Mexico Resource Geographic Information System Program	http://rgis.unm.edu/ clearinghouse@edac.unm.edu (505) 277.3622 ext. 230
	National	See National Discovery Data Coordination Procedure
AAL data from Hazus	National	See National Discovery Data Coordination Procedure
Coverage areas for known community and Tribal risk assessment data	Local	Local
Status of Hazard Mitigation Plans	National	See National Discovery Data Coordination Procedure
Flood control structure data	Albuquerque Metropolitan Arroyo Flood Control Authority– (AMAFCA) National	http://www.amafca.org/ Jerry Lovato Executive Engineer AMAFCA (505) 884-2215 jlovato@amafca.org See National Discovery Data Coordination Procedure
Locations of stream gages	National	See National Discovery Data Coordination Procedure
Locations of past flood claims and repetitive loss properties	Region National	Available through coordination with Region 6 RSC: Jessica Baker 1201 North Bowser Road Richardson, TX 75081 <u>jBaker@halff.com</u> See National Discovery Data Coordination Procedure
Locations of clusters of Letters of Map Change	National	See National Discovery Data Coordination Procedure

Data	Data Source	Location
Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database	Local	Local
Areas of planned development	Local	Local
Areas of land use change datasets	Local	Local
Locations of ongoing projects or updated stream studies (e.g., highway improvements)	Local	Local
Locations of wave and tide gages	N/A	N/A
Locations of wind gages	N/A	N/A
Proposed inland limit of the Primary Frontal Dune, if present	N/A	N/A
Locations of any beach nourishment or dune	N/A	N/A
Comparison of preliminary stillwater elevations with effective stillwater elevations	N/A	N/A
Available effective study data	New Mexico Resource Geographic Information System Program	Laura Gleasner, RGIS Clearinghouse Manager (505) 277-3622 ext. 230 <u>clearinghouse@edac.unm.edu</u> <u>http://rgis.unm.edu/</u> (See section below for additional details)
	National	See National Discovery Data Coordination Procedure
Orthophotography	Mid Region Council of Governments	https://www.mrcog-nm.gov/region- a-people/orthophotography Caeri Thomas <u>cthomas@mrcog-nm.gov</u> (505) 724-3604
	New Mexico Resource Geographic Information System Program	http://rgis.unm.edu/ clearinghouse@edac.unm.edu (505) 277-3622 ext. 230
	National	See National Discovery Data Coordination Procedure

Data	Data Source	Location
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	Local
Land use and soil information	New Mexico Resource Geographic Information System Program National	Laura Gleasner, RGIS Clearinghouse Manager (505) 277-3622 ext. 230 <u>clearinghouse@edac.unm.edu</u> <u>http://rgis.unm.edu/</u> (Land Use, Land Cover) See National Discovery Data
Reference points to locate areas with flooding issues	New Mexico Resource Geographic Information System Program	Coordination Procedure Laura Gleasner, RGIS Clearinghouse Manager (505) 277-3622 ext. 230 <u>clearinghouse@edac.unm.edu</u> <u>http://rgis.unm.edu/</u> (Southwest NM Low Water Crossings)
	Local	Local
Hydraulic structures	NMDOT	Ted Barber Drainage Design Bureau Manager (505) 827-5449 See National Discovery Data Coordination Procedure
Coastal structures, including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data	N/A	N/A
Local structure and topographic data from the existing hazard mitigation plans	Local	Local
Historic inundation areas and high water marks	Regional	Discovery Data Repository
Clusters or locations of Individual Assistance/Public Assistance grants and locations of grant projects completed, planned, or underway	National	See National Discovery Data Coordination 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 Discovery Data Coordination Procedure
Other information on FEMA grants	Local	Local
Any data deficiencies identified in hazard mitigation plans	Local	Local
Information from FloodSmart on market penetration	National	See National Discovery Data Coordination Procedure
Community Assistance Visits / Community Assistance Contacts	National	See National Discovery Data Coordination Procedure
Community Rating System class information	National	See National Discovery Data Coordination Procedure
Information from other Federal agencies	National	See National Discovery Data Coordination Procedure
Information from State agencies, non-profit organizations, universities, etc.	New Mexico Office of State Engineer (Water Trust Board)	http://www.ose.state.nm.us/Hydrology/ hydrology.php Ghassan Musharrafieh Hydrology Bureau Chief (505) 827-6140
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	New Mexico Resource Geographic Information System Program National	Laura Gleasner, RGIS Clearinghouse Manager (505) 277-3622 ext. 230 <u>clearinghouse@edac.unm.edu</u> <u>http://rgis.unm.edu/</u> (Wildfire Boundaries dataset) See National Discovery Data
Other known hazards with geographical boundaries (e.g., earthquake faults)	New Mexico Resource Geographic Information System Program	Coordination Procedure Laura Gleasner, RGIS Clearinghouse Manager (505) 277-3622 ext. 230 <u>clearinghouse@edac.unm.edu</u> _ <u>http://rgis.unm.edu/</u> (Wildfire, Wildland Urban Interface datasets) See National Discovery Data
Information on active disasters	National	Coordination Procedure See National Discovery Data Coordination Procedure

Data	Data Source	Location
Campgrounds, recreational areas, emergency access routes, etc.	New Mexico Resource Geographic Information System Program	Laura Gleasner, RGIS Clearinghouse Manager <u>http://rgis.unm.edu/</u> <u>clearinghouse@edac.unm.edu</u> (505) 277.3622 ext. 230
	National	See National Discovery Data Coordination Procedure
Any other data that might be appropriate	Local	Local

Federal Nationwide Geospatial Data Holdings

Information about nationwide holdings and programs of Federal agencies is available from the Mapping Information Platform web site at <u>https://hazards.fema.gov/femaportal/docs/ProgFacts1.pdf</u>.

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

New Mexico RGIS Program at http://rgis.unm.edu/

Earth Data Analysis Center at http://edac.unm.edu/

New Mexico State Land Office Enterprise Data at http://landstatus.nmstatelands.org/GISDataDownLoad.aspx

3D Elevation Program

The U.S. Geological Survey (USGS) National Geospatial Program is developing the <u>3D</u> <u>Elevation Program (3DEP)</u> to respond to growing needs for high-quality topographic data and for a wide range of other three-dimensional (3D) representations of the Nation's natural and constructed features. The primary goal of 3DEP is to systematically collect 3D elevation data in the form of light detection and ranging (lidar) data over the conterminous United States, Hawaii, and the U.S. territories, with data acquired over an 8-year period. Interferometric synthetic aperture radar (IfSAR) data will be acquired for Alaska, where cloud cover and remote locations preclude the use of lidar in much of the State. The 3DEP initiative is based on the results of the National Enhanced Elevation Assessment that documented more than 600 business uses across 34 Federal agencies, all 50 States, selected local government and Tribal offices, and private and nonprofit organizations.

Geospatial One-Stop

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

Involving the State's Geospatial Coordinator in Flood Studies

The Earth Data Analysis Center and New Mexico Department of Homeland Security and Emergency Management provide updates to the New Mexico Geospatial Advisory Council at monthly meetings and to the New Mexico Chief Geographic Information Officer, Gar Clarke, as appropriate.

The Cooperating Technical Partner, Earth Data Analysis Center, coordinates all Risk MAP hazard mitigation projects with the New Mexico Department of Homeland Security and Emergency Management including the State Hazard Mitigation Officer and the State NFIP Coordinator.

The State has a strong Flood Plain Managers Association that coordinates on many issues concerning FEMA.

State Coordination Process for Building Geospatial Partnerships

The New Mexico Geospatial Advisory Committee at <u>http://www.gac.state.nm.us/</u>exists to guide and enhance the use of geospatial technologies in State government. The committee coordinates geospatial technology in New Mexico State government, develops policy recommendations and guidelines concerning geospatial technology in New Mexico State government, and shares geospatial technology among all government agencies and the public.

The New Mexico Geographic Information Council (NMGIC) at <u>http://www.nmgic.com/</u> works on issues related to developing and accessing geographic information for New Mexico.

The State's Department of Information Technology has also completed a study of recommendations on issues of geospatial development, organization, coordination, and public requirements. The State's website is <u>www.doit.state.nm.us</u>.

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.

An informal list is kept by Geospatial Advisory Committee. The NMGIC membership could be considered a contact list, although the Council usually does not release the

membership list.

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 RSC 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.