

# State Geospatial Data Coordination Procedure

Arizona

FINAL

October 2017



**FEMA**



# State Geospatial Data Coordination Procedure

## Arizona

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# State Geospatial Data Coordination Procedure

## Purpose of the Procedure

Flood Insurance Studies involve searching for geospatial data during Discovery (formerly pre-scoping and scoping) tasks. If needed data are not available, studies might fund the collection of new data and, where applicable, encourage cost sharing among existing organizations. 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\\_V3.pdf](https://hazards.fema.gov/femaportal/docs/GeoDataImplem_V3.pdf), and in *Scoping Guidelines: Pre-scoping and the Scoping Meeting*, which is available through the Regional Support 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. Dead-end searches and cold calls can be avoided 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 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 RSC:

Kevin Gabelman, Geospatial Data Coordination Lead  
Regional Service Center IX  
(415) 671-7188  
[Kevin.Gabelman@atkinglobal.com](mailto:Kevin.Gabelman@atkinglobal.com)

## Default Flood Hazard Base Map for the State

The default base map for flood hazard maps for the State is USGS Digital Orthophoto Quarter Quad imagery. Also encouraged for use is recent, black and white, countywide orthophotography data provided by local government to FEMA as public domain data. The resolution must be 1-meter resolution or better.

## Geospatial Data Coverage

Below, you will find links to statewide (and Federal agencies' national) geospatial datasets and information about them. The list is provided to save time when building a list of candidate geospatial datasets available for the study during Discovery activities; it is not a prescription of datasets that must be used in a Flood Insurance Study.

### Major State Holdings

#### *Orthophotos*

Dataset name: National Agriculture Imagery Program (NAIP) Image  
Data currentness: 2010  
Accuracy/Scale: 1:12,000  
Ground sample resolution: 1 meter  
Horizontal datum: NAD 83  
Fee associated? No

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Available for redistribution? Yes

Dataset source: <http://datagateway.nrcs.usda.gov/>

Dataset contact: [gateway@ftc.usda.gov](mailto:gateway@ftc.usda.gov)

Notes: NAIP imagery has many uses, and many States participate in NAIP. NAIP is leaf-on imagery and is not cloud-free, so the ground might be obscured. While NAIP (and other such imagery) can be used as base maps, 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.

## *Transportation (roads, railroads, and airports)*

Dataset name: Streets from Arizona State Land Department

Data currentness: 2008

Accuracy/Scale: 1:100K

Horizontal datum: NAD 83 HARN

Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? Yes

Dataset source: <http://agic.az.gov/portal>

Dataset contact: N/A

Notes: The Arizona State Land Department (ASLD) obtained the 2008 TIGER/Line data from the Census Bureau and extracted the roads network from the Census Bureau's MAF/TIGER county-based files.

## *Hydrography (rivers, streams, lakes, and shorelines)*

Dataset name: Streams from Arizona State Land Department

Data currentness: 2010

Accuracy/Scale: 1:100K

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are hydrography names part of the dataset? Yes

Dataset source: <http://agic.az.gov/portal>

Dataset contact: N/A

Notes: The Arizona State Land Department (ASLD) downloaded the NHD data from the USGS NHD website (<http://nhd.usgs.gov/>) in 2008. Since then, ASLD have made minor modifications to the dataset (See Process Steps for details). Please note: this is a modified version of the NHD.

## *Political boundaries (county, municipal)*

Dataset name: Counties and cities from Arizona State Land Department

Data currentness: 2010

Accuracy/Scale: Unknown

Horizontal datum: NAD 83 harn

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://agic.az.gov/portal>;

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Dataset contact: Arizona State Land Department, 1616 West Adams Street, Phoenix, Arizona 85007

Notes: This data set consists of all incorporated city boundaries throughout Arizona. The data is updated continually throughout the year and published approximately quarterly. The most recent publication occurred in June 2010.

## *Publicly owned lands (national, State, and local parks, forests, etc)*

Dataset name: Land ownership from Arizona State Land Department

Data currentness: Federal Lands updated 1-2 times a year. State Trust lands updated quarterly.

Accuracy/Scale: Unknown

Horizontal datum: NAD 83 HARN

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://agis.az.gov/portal>

Dataset contact: Arizona State Land Department, 1616 West Adams Street, Phoenix, Arizona 85007

Notes: The LAND data set was first started in 1984 and updated in spring 1988 by the State Land Department Forestry Division and ALRIS. The PLSS data originated from the Department of Transportation (ADOT) and USGS Quad sheets. The data was then projected into ARC/INFO format and edited using the procedures from the ASLD "Land Status Map Digitizing Procedure" guide. The data set covers the entire State of Arizona. Federal boundaries are updated by the Bureau of Land Management, and State land and other boundaries are updated by the Arizona State Land Department

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

Dataset name: Township, Range, and Section Grid Lines from Arizona State Land Department

Data currentness: 1988

Accuracy/Scale: Unknown

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: [http://www.geocommunicator.gov/geocomm/lsis\\_home/home/index.shtm](http://www.geocommunicator.gov/geocomm/lsis_home/home/index.shtm)

Dataset contact: N/A

## *Cadastral (parcels)*

No coverage available.

Notes: Compilation of statewide cadastral dataset has been proposed. Currently, some individual counties maintain cadastral data in GIS format.

## *Extraterritorial jurisdiction (ETJ) boundaries*

No coverage available.

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## *Terrain (elevation)*

Dataset name: USGS DEM

Data currentness: Varies

Accuracy/Scale: 1:24K

Vertical datum: NGVD 29

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://data.geocomm.com/dem/demdownload.html>

Dataset contact: N/A

## 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 for accessing the Discovery Data Repository are provided 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	See National Operating Procedure
Jurisdictional boundaries	Arizona State Land Department	Jurisdictional boundaries available at Arizona Geographic Information Council GIS portal: <a href="http://agic.az.gov/portal/">http://agic.az.gov/portal/</a>
Tribal land boundaries	National	See National Operating Procedure
State lands	Arizona State Land Department	Land ownership info available at Arizona Geographic Information Council GIS portal: <a href="http://agic.az.gov/portal/">http://agic.az.gov/portal/</a>
Federal lands	Arizona State Land Department	Land ownership info available at Arizona Geographic Information Council GIS portal: <a href="http://agic.az.gov/portal/">http://agic.az.gov/portal/</a>
Major roads	National	See National Operating Procedure
Streams	National	See National Operating Procedure

# State Geospatial Data Coordination Procedure

Data	Data Source	Location
Coastal Barrier Resource Areas	National	See National Operating Procedure
Coordinated Needs Management Strategy	National	CNMS data is available by request from each of FEMA's Regional Service Centers (RSC). Contact information for each RSC is available at the following website: <a href="https://hazards.fema.gov/femaportal/docs/RSC%20Contact%20Information.pdf">https://hazards.fema.gov/femaportal/docs/RSC%20Contact%20Information.pdf</a>
Topographic/bathymetric data	FEMA Regional Office	FEMA Region IX Geo-index See RSC9 Geospatial Data Coordination Lead
AAL data from HAZUS	National	See National Operating Procedure
Coverage areas for known community and Tribal risk assessment data	FEMA Regional Office	Arizona Department of Emergency Management has partnered with Arizona Geological Survey and entered a CTP agreement with FEMA Region IX to bring a customized version of the California MyPlan tool to Arizona. Once implemented, the Arizona MyPlan will be a risk assessment and communication tool that can be used for LHMPs, General Plans, and hazard mitigation projects. The POC for the Arizona MyPlan is Juliette Hayes at juliette.hayes@dhs.gov
Status of Hazard Mitigation Plans	Arizona Division of Emergency Management	Statewide hazard mitigation plans can be found at the following ADEM site: <a href="http://www.dem.azdema.gov/operations/mitigation/hazmitplan/hazmitplan.html">http://www.dem.azdema.gov/operations/mitigation/hazmitplan/hazmitplan.html</a>
Flood control data	National	See National Operating Procedure
Locations of stream gages	National – USGS	See National Operating Procedure
Past flood claims and repetitive loss properties	National	See National Operating Procedure
Locations of clusters of Letters of Map Change	National – FEMA	See National Operating Procedure
Known flooding issues beyond effective FIRMs and the Coordinated Needs Management Strategy database	FEMA Regional Office	Region IX keeps track of known flooding issues beyond FIRMs and CNMS through a "flood issue ad hoc requests" list maintained by the RSC9 Geospatial Data Coordination Lead
Areas of planned development, high growth, or other natural land changes	County Planning Departments	A statewide layer for planned areas of development does not exist for the State of Arizona. However, counties such as Gila and Pinal have their own land use planning databases that describe areas of planned development and rapid growth. The link to the data description is: <a href="http://www.caagcentral.org/GIS/databases.html">http://www.caagcentral.org/GIS/databases.html</a>
Areas of land use change datasets	National – USGS	The USGS Land Cover Institute (LCI) provides access to a wide variety of land use change and land cover data sets including the National Land Cover Dataset (NLCD). Data sets can be downloaded from the USGS at <a href="http://landcover.usgs.gov/">http://landcover.usgs.gov/</a>

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Data	Data Source	Location
Locations of ongoing or updated stream studies	FEMA Regional Office	RSC9 Geospatial Data Coordination Lead
Locations of wave and tide gauges	National – NOAA	See National Operating Procedure
Locations of wind gauges	National – NOAA	See National Operating Procedure
Primary frontal dune	N/A	Not applicable in the State of Arizona
Beach nourishment or dune restoration projects	N/A	Not applicable in the State of Arizona
Comparison of stillwater elevations	Local	No statewide coverage
Available effective study data	National – FEMA	See National Operating Procedure
Orthophotography	National	See National Operating Procedure
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	RSC9 geospatial lead maintains records of problem areas based on Region's communications with local communities and logs them as CNMS "ad hoc" requests; Maricopa County Flood Control District also maintains an inventory of problem areas and areas of proposed mitigation projects within the county and can be contacted for such information at: Eric Feldman, emf@mail.maricopa.gov
Land use and soil information	Local	Soil data for Arizona can be downloaded from the Soil Information for Environmental Modeling and Ecosystem Management at the following location: <a href="http://www.soilinfo.psu.edu/index.cgi?soil_data&amp;index.html">http://www.soilinfo.psu.edu/index.cgi?soil_data&amp;index.html</a>
Reference points to locate areas with flooding issues	FEMA Regional Office	RSC9 Geospatial Data Coordination Lead maintains records of known flooding issues on Region's communications with local communities and logs them as CNMS "ad hoc" requests
Hydraulic structures: bridges	National	See National Operating Procedure or links to National Inventory of Bridges; Arizona Department of Transportation also maintains a separate state historic bridge inventory which can be accessed here: <a href="http://www.azdot.gov/highways/EPG/EPG_Common/Documents/Technical/Historic/BridgeInventory.asp">http://www.azdot.gov/highways/EPG/EPG_Common/Documents/Technical/Historic/BridgeInventory.asp</a>
Hydraulic structures: culverts	Local	No statewide coverage
Hydraulic structures: dams	Arizona Department of Water Resources	ADWR maintains a state inventory of dams that is separate but related to the National Inventory of Dams. Information requests can be made to: Nicole Spence Gibson, nsgibson@azwater.gov
Coastal structures , shoreline structures, manmade embankments, surge	N/A	Not applicable in the State of Arizona

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Data	Data Source	Location
conveyance pathways, and shoreline change data		
Local structure and topographic data from the existing hazard mitigation plans	Arizona Division of Emergency Management	Once implemented, MyPlan for Arizona should contain information about local structure from existing hazard mitigation plans.
Historic inundation areas and High Water Marks	Local	No statewide coverage
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	National	See National Operating Procedure
Any data deficiencies identified in hazard mitigation plans	Local	No statewide coverage
Information from FloodSmart on market penetration	National	See National Operating Procedure
Community Assistance Visits / Community Assistance Contacts	National	See National Operating Procedure
Community Rating System class information	National	See National Operating Procedure
Information from other Federal agencies	National	See National Operating Procedure
Information from State agencies	N/A	No statewide coverage
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	Local	No statewide coverage

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Data	Data Source	Location
Other known hazards	Local	No statewide coverage
Information on active disasters	FEMA Regional Office	<a href="http://www.fema.gov/about/regions/regionix/">http://www.fema.gov/about/regions/regionix/</a>
Campgrounds, recreational areas, emergency access routes, etc.	National	See National Operating Procedure
Other data	Local	No statewide coverage

## Data Distribution Process for State Data

The Arizona Geodata Portal is a cooperative project sponsored by the Arizona Geographic Information Council (AGIC). The data and services available on the Portal are provided by a variety of public agencies in Arizona who are contributing members of the Arizona Geodata Portal. Contributing members agree to provide the Portal with data, metadata, and services in agreed upon formats, which are standardized for user convenience. The Portal is hosted by the Arizona State Land Department and staffed by the Arizona State Cartographer’s Office (SCO) and the Arizona Land Resources Information System (ALRIS). Links to the Arizona Geodata Portal is given in the section titled “Clearinghouses and Inventories for the State”.

## Federal Nationwide Geospatial Data Holdings

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

## Finding and Accessing Other Existing Geospatial Data

Below, you will find 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

*Arizona Geographic Information Council (AGIC)*

<http://agic.az.gov/portal>

The AGIC was established by Executive Order 89-24 as Arizona’s primary forum and oversight group for geographic information and geographic information technology issues and coordination efforts. Through cooperation and partnerships, AGIC facilitates the acquisition, exchange, and management of geographic information and technology for the State of Arizona, to benefit State agencies and the Arizona GIS community. To facilitate data exchange, AGIC, along with the Arizona State Cartographer’s Office and the Arizona Land Resource Information System, created the AGIC Geodata Portal. The Portal provides downloadable geospatial data for non-commercial uses.

*Arizona Land Resource Information System (ALRIS)*

<http://www.land.state.az.us/alris/>

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The ALRIS was established by the Arizona State Legislature in 1982. The goal of ALRIS is to provide a geographic information system for public agencies in the State, and provide training and consultation in the use of the system, related technical services, and limited production services to system users. Since its initiation, the ALRIS program has provided a wide variety of support services for Arizona's GIS community. The ALRIS program goals are approached by conducting five major types of program activities, which include:

- Database Development & Maintenance
- GIS Hardware and Software Support
- Education, Consulting, and Information
- GIS Software Development
- ALRIS: GIS Clearinghouse. The Clearinghouse data is also available online via the AGIC Geodata Portal.

## *Arizona State Cartographer's Office (SCO)*

<http://sco.az.gov/>

The Arizona State Cartographer's Office (SCO) was established by the Arizona State Legislature in 1987. The goal of the SCO is to improve access to GIS information and geospatial data. The SCO website has links to other major GIS sites in Arizona and throughout the nation. Many of the listed sites are links to downloadable geospatial data, GIS services, internet map services, and information about GIS. The Arizona State Cartographer's Office serves the Arizona GIS community by:

- establishing a clearinghouse of information about data resources
- developing web-based information services
- improving access to GIS databases
- preparing GIS policies and standards
- coordinating the development of common projects
- providing support for the [Arizona Geographic Information Council](#)

## *Arizona GIS Data Survey*

<http://agic.az.gov/survey03/>

The AGIC Homeland Security Committee produced the Arizona GIS Data Survey, entitled "Arizona Geospatial Resources to Support Critical Infrastructure and Homeland Security," with the assistance of a grant from FEMA. The purpose of this survey was to build the foundation for GIS data and knowledge sharing for homeland security and other emergency response purposes in Arizona. The intention of this survey was to identify producers and users of geospatial data in Arizona, the resources that are available for sharing, the level of data documentation through metadata (data about data), and individuals who can serve as a point of contact for your department or organization. The results of the survey are a compilation of the contact information provided by respondents, and data layer information for the queried organizations. This information is posted at <http://agic.az.gov/survey03/>

## *RangeView, University of Arizona*

<http://rangeview.arizona.edu/>

The RangeView website provides applications for viewing, animating, and analyzing satellite imagery, in order to monitor vegetation dynamics through time and across landscapes. RangeView is simple to use and valuable for natural resource managers, land owners, educators, and researchers.

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## 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. The NDOP system can be accessed at <http://www.ndop.gov>, and follow the link “Project Tracking.” The NDEP system can be accessed 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 RSC.

## Geospatial One-Stop

Geospatial One-Stop, available at <http://gos2.geodata.gov/wps/portal/gos>, 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 progress, 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 website at <https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=AZ>

### Involving State’s Geospatial Coordinator in Flood Studies

The RSC has established periodic communications with the Arizona NSGIC representative. In the context of Geospatial Data Coordination, the RSC has worked with Arizona State Cartographer’s Office to obtain information on upcoming imagery acquisition.

### State Coordination Process for Building Geospatial Partnerships

Through cooperation and partnerships AGIC facilitates the acquisition, exchange and management of geographic information and technology for the State of Arizona to benefit State agencies and the Arizona GIS community.

Arizona Geographic Information Council  
1616 West Adams Street  
Phoenix, Arizona 85007  
(602) 542-4060  
[agic@land.az.gov](mailto:agic@land.az.gov)

### 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

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data that can help a Flood Insurance Study. Contact information is available from the FEMA archives and government link portals such as <http://www.statelocalgov.net>.

### Provide Feedback on This Procedure

If you find information in this Procedure or in other FEMA or State resources that are outdated, please contact the geospatial data coordination lead in the RSC. Please provide 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 and redistribute this Procedure.