

State Geospatial Data Coordination Procedure

Arkansas

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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*

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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 Management Center (RMC).

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 studies, and other useful information for the State.

If you have questions about this procedure or other geospatial data coordination resources, contact the geospatial data coordination lead in your Regional Management Center:

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We appreciate the help of 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 a vector base map utilizing road centerlines-created/maintained locally by counties with accuracy checked by the Arkansas Geographic Information Office. Assessible through Arkansas's Online Geospatial Clearinghouse – GeoStor www.geostor.arkansas.gov.

The secondary choice, based on unavailability of road centerlines, is for an image base map (orthophoto). The State of Arkansas has procured new Aerial Imagery for the entire State at 1m resolution in both natural and CIR. There are also several areas in the State where higher

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resolution is available. All of these orthophotos are available through the States Geospatial Clearinghouse – GeoStor www.geostor.arkansas.gov.

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.

Major State Holdings

Orthophotos

Dataset name: Statewide Natural Color Orthos 2006 (also Statewide CIR Orthos 2006)

Data currentness: 2006

Accuracy/Scale: 1m Statewide with local coverages of increased resolution; 1: 12,000

Ground sample resolution: 1m

Horizontal datum: NAD 83 UTM - Zone 15N

Fee associated? No

Available for redistribution? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and
Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: Obtained leaf off winter of 2005-2006

Transportation (roads, railroads, and airports)

Dataset name: ACF (Road Centerlines), AHTD RR, BTS Airport Runways

Data currentness: (2007, roads realigned to aerials) (1999, airports)

Accuracy/Scale: 1:12,000

Horizontal datum: NAD 83 UTM – Zone 15N, NAD83 Lat/Long, NAD84 Lat/Long,
Arkansas State Plane North Feet, Arkansas State Plane South Feet

Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and
Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: Partial Coverage Available for Street Centerlines, availability will be made known to RMC/Contractors as counties as needed.

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: High Resolution: National Hydrography Dataset

Data currentness: 2006

Accuracy/Scale: These maps were compiled to meet National Map Accuracy Standards for 1:24,000-scale maps.

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Horizontal datum: NAD 83 UTM – Zone 15N, NAD83 Lat/Long, NAD84 Lat/Long, Arkansas State Plane North Feet, Arkansas State Plane South Feet

Fee associated? No

Available for redistribution? Yes

Are hydrography names part of the dataset? Yes, where available

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and
Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: The National Hydrography Dataset also is available through USGS; see
<http://nhd.usgs.gov>.

Political boundaries (county, municipal)

Dataset name: Counties 2006, City Limits

Data currentness: 2007

Accuracy/Scale: 1:12,000

Horizontal datum: NAD 83 UTM – Zone 15N, NAD83 Lat/Long, NAD84 Lat/Long, Arkansas State Plane North Feet, Arkansas State Plane South Feet

Fee associated? No

Available for redistribution? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and
Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: None

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

Dataset name: Public Land Boundaries (AHTD), Wildlife Management Areas 2005 (AGFC)

Data currentness: 2006

Accuracy/Scale: Best Available (varies)

Horizontal datum: NAD 83 UTM – Zone 15N, NAD83 Lat/Long, NAD84 Lat/Long, Arkansas State Plane North Feet, Arkansas State Plane South Feet

Fee associated? No

Available for redistribution? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and
Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: None.

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

Dataset name: Public Land Survey System Sections 1999

Data currentness: 1999

Accuracy/Scale: 1:100,000

Horizontal datum: NAD 83 UTM – Zone 15N, NAD83 Lat/Long, NAD84 Lat/Long, Arkansas State Plane North Feet, Arkansas State Plane South Feet

Fee associated? No

Available for redistribution? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

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Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: None.

Cadastral (parcels)

Dataset name: Under construction

Data currentness: Under construction

Accuracy/Scale: Under construction

Horizontal datum: NAD 83 UTM – Zone 15N, NAD83 Lat/Long, NAD84 Lat/Long, Arkansas State Plane North Feet, Arkansas State Plane South Feet

Fee associated? No

Available for redistribution? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: None

Terrain (elevation)

Dataset name: 2006 Statewide DEM, raw x,y,z ASCII files, 5 meter post spacing

Data currentness: 2006

Accuracy/Scale: 5 meter DEM/ 3.88 meter vertical RMSE, and 5 Meter Horizontal RMSE

Vertical datum: NAVD 88

Fee associated? No

Available for redistribution? Yes

Dataset source: AGIO, www.geostor.arkansas.gov

Dataset contact: Kimberly Bogart, AGIO at 501- 682-2932, kim.bogart@arkansas.gov and Learon Dalby, AGIO at 501-682-2929, Learon.dalby@arkansas.gov

Notes: See additional information under AGIO Statement Regarding 2006 Elevation Data below.

Data Distribution Process for State Data

All GIS data for FEMA's Map Modernization Program will be obtained through the Arkansas Geographic Information Office (AGIO). The AGIO serves as the State GIS Coordinating entity and any datasets that will be used will come through this office and/or the State's Spatial Data Clearinghouse GeoStor, which is maintained by the AGIO. Data available through the AGIO can be used without licensing considerations or fees.

Arkansas GIS Gateway: <http://www.gis.state.ar.us/>

GeoStor: <http://www.geostor.arkansas.gov>

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>>.

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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

Arkansas GIS Gateway: <http://www.gis.state.ar.us/>

GeoStor: <http://www.geostor.arkansas.gov>

Contact Kimberly Bogart at the AGIO Office, 501-682-2932

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.

Note: The AGIO closely coordinates with the Census Bureau Regional Geographer on updates to the MAF/MOD TIGER enhancement database.

Geospatial One-Stop

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

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Involving the State's Geospatial Coordinator in Flood Studies

The state has strong involvement with FEMA on Pre-Scoping efforts related to identifying base map and terrain data suitable for flood mapping purposes.

E-mail correspondence is requested to be sent from Region VI and the RMC to the State representative to keep them up to date on Flood Mapping activities in the State of Arkansas.

State Coordination Process for Building Geospatial Partnerships

The Arkansas State Land Information Board (ASLIB) at http://www.gis.state.ar.us/ASLIB_index.htm.

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 has regional planning commissions/councils of government. Generally, cities play a larger role in GIS development than do the counties.

The State also maintains information about local geospatial contacts:

Local contacts for each of the counties/cities that develop and or maintain spatial data is identified to the National Service Provider during the PreScoping period.

The state maintains a statewide GIS contacts list in the following formats:

- a. Web Accessible

Contact or URL information for list (if able to be obtained): <http://www.gis.state.ar.us>

The levels of government in the list are:

- a. County
- b. 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.

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The lead will use your feedback to update this Procedure.

Other Useful Information

AGIO Statement Regarding 2006 Elevation Data

(The following statement was provided by the Arkansas Geographic Information Office)

“2006 Digital Elevation Model Product Limitations and Appropriate Use

In 2005 the Arkansas State Land Information Board (ASLIB) requested the Arkansas Geographic Information Office (AGIO) prepare for an update of the digital orthoimagery of the state. Subsequently, the AGIO entered into a contract with EarthData International to conduct a 1m statewide ortho imagery acquisition utilizing a digital sensor (Leica ADS40) during the 2006 leaf off flying season. Due to the technology inherent in the ADS40 sensor a digital elevation model (DEM) was also obtained at the same time as the imagery, producing a 5m (5m post spacing xyz file) DEM. The new imagery and elevation data is planned for public release the first quarter of 2007.

The digital elevation model (DEM) being delivered as a part of the 2006 Arkansas Digital Ortho Program was generated for the purpose of increasing the horizontal accuracy of the orthoimagery product. The DEM being delivered shall meet the following specifications:

- 1: Vertical Accuracy shall meet or exceed 7.6 meters at a 95% confidence level
- 2: Horizontal Accuracy shall meet or exceed 6 meters at a 95% confidence level
- 3: Delivery Format shall be an ASCII point file containing xyz coordinates

Meeting this standard does ***not imply*** hydrologic integrity, and this data product is not suitable for detailed hydrologic analysis. For evaluation purposes the table below provides a comparison of the 5m product and other elevation data that is presently available in the state.

Product	Vertical Accuracy	Horizontal Accuracy	Resolution / Post-Spacing	Source
30 meter DEM	7 meter RMSE	None published ¹	30 meter	USGS
10 meter DEM	7 meter RMSE ²	None published ¹	10 meter	USGS

¹ The USGS does not publish a horizontal accuracy for their DEMs. This information can be tracked on a Quad by Quad basis through the USGS.

² Most 10m DEMs in the State of Arkansas are interpolated from the 30m DEMs, therefore their vertical accuracy is assumed to be equal to the accuracy of the original 30m DEMs.

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5 meter DEM	3.88 meter RMSE ³	5 meter RMSE	5 meter	AGIO Arkansas Digital Ortho Program
1 meter lidar collect	15cm RMSE	3.08 meter RMSE	1 meter	These results are general and would be determined based upon flying height and sensor used

Users may wish to conduct additional value added processing for other purposes. Derived products such as contour intervals can be generated in numerous ways. To this end the AGIO and EarthData International will refrain from speculating what contour intervals might be achieved with additional processing. DEM users should refer to the ASPRS publication *Digital Elevation Model Technologies and Applications* to learn more about the appropriate uses of this DEM product.

The ASLIB and AGIO are providing the updated elevation data product with x, y, & z values to users. However, users should be warned that value added processing to increase accuracies, or to generate derived products, will require the addition of ground control, a revised aero-triangulation, and stereo compiled 3-Dimensional break-lines. These needs should be reviewed on a case by case basis and will require cost estimates from the private sector.

Contact Information: Learon Dalby, GIS Program Manager, Arkansas Geographic Information Office learon.dalby@arkansas.gov.”

³ These specifications exceed all statewide DEM specifications currently available.