

# State Geospatial Data Coordination Procedure

## South Carolina

FINAL

October 2017



**FEMA**

# State Geospatial Data Coordination Procedure

## South Carolina

### Table of Contents

Table of Contents .....	1
Purpose of the Procedure.....	2
Default Flood Hazard Base Map for the State.....	2
Geospatial Data Coverage .....	2
Orthophotos .....	3
Transportation (roads, railroads, and airports) .....	3
Hydrography (rivers, streams, lakes, and shorelines).....	3
Political boundaries (county, municipal).....	3
Notes: Official boundaries have never been officially converted to geospatial data.....	4
Publicly owned lands (national, State, and local parks, forests, etc).....	4
Cadastral (parcels).....	4
Extraterritorial jurisdiction (ETJ) boundaries.....	4
Terrain (elevation).....	4
Useful Risk MAP Discovery Data Sources .....	5
Table 1. Discovery Data Resources.....	5
Data Distribution Process for State Data.....	9
Federal Nationwide Geospatial Data Holdings .....	9
Finding and Accessing Other Existing Geospatial Data.....	9
Clearinghouses and Inventories for the State .....	10
National Digital Orthophoto Program (NDOP) and National Digital Elevation Program (NDEP) Tracking Systems .....	10
TED Query Tool.....	10
Geospatial One-Stop.....	10
Working with People.....	10
Useful State and Federal Contacts.....	10
Involving the State’s Geospatial Coordinator in Flood Studies .....	11
State Coordination Process for Building Geospatial Partnerships.....	11
Finding Local Geospatial Contacts.....	11
Provide Feedback on This Procedure .....	11

# 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 include funds that allow for 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 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 agencies 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:

Mary Wise  
COMPASS Regional Support Center 4  
1360 Peachtree Street, Suite 500  
Atlanta, GA 30309  
(404) 965-9681  
[mary.wise@aecom.com](mailto:mary.wise@aecom.com)

This document will be shared with the appropriate Regional and State geospatial leads for feedback and comments.

## Default Flood Hazard Base Map for the State

The default base map for flood hazard maps for the State is a vector base map (road centerlines).

## 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 potential 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.

# State Geospatial Data Coordination Procedure

## Major State Holdings

### *Orthophotos*

Dataset name: 2006 DOQQ

Data currentness: 2006

Accuracy/Scale: 1:12000

Ground sample resolution: 1 meter

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

Notes: Additional information is available at <http://www.dnr.sc.gov/GIS/descdoqq.html>. Complete statewide coverage is not available for 2006; statewide coverage is available from 1999.

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

Dataset name: Roads

Data currentness: From USGS topographic maps; currentness varies by quadrangle

Accuracy/Scale: 1:24000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? No

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

Notes: The State DOT maintains road names database.

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

Dataset name: Hydrography (DLG)

Data currentness: From USGS topographic maps; currentness varies by quadrangle

Accuracy/Scale: 1:24000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are hydrography names part of the dataset? No

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

Notes: The State has a joint funded project with the South Carolina Department of Health and Environmental Control to complete the high resolution hydrography data set for South Carolina in the National Hydrography Dataset (NHD). Status of available NHD data is available at <http://viewer.nationalmap.gov/viewer/>.

# State Geospatial Data Coordination Procedure

## *Political boundaries (county, municipal)*

Dataset name: Counties (DLG)

Data currentness: From USGS topographic maps; currentness varies by quadrangle

Accuracy/Scale: 1:24000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

*Notes: Official boundaries have never been officially converted to geospatial data.*

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

Dataset name: Forests (DLG)

Data currentness: From USGS topographic maps; currentness varies by quadrangle

Accuracy/Scale: 1:24000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

Dataset name: Parks (DLG)

Data currentness: From USGS topographic maps; currentness varies by quadrangle

Accuracy/Scale: 1:24000

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

## *Cadastral (parcels)*

No statewide coverage available.

## *Extraterritorial jurisdiction (ETJ) boundaries*

No statewide coverage available.

## *Terrain (elevation)*

Dataset name: 1:24,000-scale DEMs , also LAS, Terrains and DEMs from LiDAR for 36 counties

Data currentness: 1996 (From USGS topographic maps; currentness varies by quadrangle) ; LiDAR data ranges from 2007 through 2012

Accuracy/Scale: 1:24000 (DEMs from topos), 15-18cm vertical accuracy on LiDAR products

Vertical datum: NGVD 29 (Topo derived DEMs) . NAVD 88 (LiDAR derived products)

Fee associated? No

# State Geospatial Data Coordination Procedure

Available for redistribution? Yes

Dataset source: <http://www.dnr.sc.gov/GIS/gisdownload.html> and <ftp://ftpdata.dnr.sc.gov/gisdata/elev>

Dataset contact: Mr. Frank Tian, LiDAR Lead, 1000 Assembly Street, Columbia, SC 29201; Phone: (803) 734-9100; Email: [tianf@dnr.sc.gov](mailto:tianf@dnr.sc.gov)

Notes: LiDAR available for 24 counties, with 15 additional counties being processed and/or finalized and 6 additional counties planned for 2012. 1.4 meter post spacing. LAS, hydro features, and intensity images. LAS distributed through USGS CLICK site and NOAA Digital Coast site. Terrain distributed by USGS national seamless database and SC DNR GIS Data Clearinghouse.

## 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	State SOP	<a href="http://www.dnr.sc.gov/GIS/gisdownload.html">http://www.dnr.sc.gov/GIS/gisdownload.html</a>
Tribal land boundaries	National	See National Operating Procedure
State lands	N/A	
Federal lands	National	See National Operating Procedure

# State Geospatial Data Coordination Procedure

Data	Data Source	Location
Major roads	National; State SOP	See National Operating Procedure <a href="http://www.dnr.sc.gov/GIS/gisdownload.html">http://www.dnr.sc.gov/GIS/gisdownload.html</a>
Streams	State SOP	<a href="http://www.dnr.sc.gov/GIS/gisdownload.html">http://www.dnr.sc.gov/GIS/gisdownload.html</a>
Coastal Barrier Resource Areas	National	See National Operating Procedure
Coordinated Needs Management Strategy	National	CNMS data is available by request from each of FEMAs Regional Service Centers (RSC). Contact information for each RSC is available at the following website: <a href="https://hazards.fema.gov/femaportal/wps/portal/usercare_guidesAndDocs#ContactList">https://hazards.fema.gov/femaportal/wps/portal/usercare_guidesAndDocs#ContactList</a>
Topographic/ bathymetric data	National; State SOP	See National Operating Procedure <a href="http://www.dnr.sc.gov/GIS/gisdownload.html">http://www.dnr.sc.gov/GIS/gisdownload.html</a>
AAL data from HAZUS	National; FEMA Regional Office	See National Operating Procedure R4 Contact: <a href="mailto:eugene.longenecker@fema.dhs.gov">eugene.longenecker@fema.dhs.gov</a>
Coverage areas for known community and Tribal risk assessment data	FEMA Regional Office	<a href="mailto:eugene.longenecker@fema.dhs.gov">eugene.longenecker@fema.dhs.gov</a> <a href="mailto:henrietta.williams@fema.dhs.gov">henrietta.williams@fema.dhs.gov</a> (Tribal)
Status of Hazard Mitigation Plans	FEMA Regional Office	<a href="mailto:jordon.ricks@fema.dhs.gov">jordon.ricks@fema.dhs.gov</a>
Flood control structure data	National; FEMA Regional Office	See National Operating Procedure RSC4 contact for MLI Data – <a href="mailto:Mary.Wise@aecom.com">Mary.Wise@aecom.com</a>
Locations of stream gages	National – USGS	See National Operating Procedure
Locations of past flood claims and repetitive loss properties	National	See National Operating Procedure
Locations of clusters of Letters of Map Change	National Only – FEMA	See National Operating Procedure
Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database	Local	No statewide coverage
Areas of planned development	Local	No statewide coverage

# State Geospatial Data Coordination Procedure

Data	Data Source	Location
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>
Locations of ongoing projects or updated stream studies (e.g. highway improvements)	Local	No statewide coverage
Locations of wave and tide gauges	National – NOAA	See National Operating Procedure
Locations of wind gauges	National – NOAA	See National Operating Procedure
Proposed inland limit of the Primary Frontal Dune, if present	For ongoing studies contact the CTP; For completed studies contact the FEMA Map Library	Ongoing: Maria Cox Lamb – <a href="mailto:cox@dnr.sc.gov">cox@dnr.sc.gov</a>  Completed: <a href="http://msc.fema.gov/">http://msc.fema.gov/</a>
Locations of any beach nourishment or dune restoration projects	Local	No statewide coverage
Comparison of preliminary stillwater elevations with effective stillwater elevations	Local	No statewide coverage
Available effective study data	National	See National Operating Procedure
Orthophotography	State SOP	<a href="http://www.dnr.sc.gov/GIS/gisdownload.html">http://www.dnr.sc.gov/GIS/gisdownload.html</a>
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	No statewide coverage
Land use and soil information	National – NRCS	The USDA Natural Resources Conservation Service (NRCS) maintains national soil data in a GIS format. Data can be downloaded from their Data Mart at this address <a href="http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a> or from the NRCS Data Gateway listed in the Other Resources section of this document.
Reference points to locate areas with flooding issues	Local	No statewide coverage



# State Geospatial Data Coordination Procedure

Data	Data Source	Location
Hydraulic structures	National	See National Operating Procedure
Coastal structures, including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data	For ongoing studies contact the CTP;  For completed studies contact the FEMA Map Library	Ongoing: Maria Cox Lamb – <a href="mailto:cox@dnr.sc.gov">cox@dnr.sc.gov</a>  Completed: <a href="http://msc.fema.gov/">http://msc.fema.gov/</a>
Local structure and topographic data from the existing hazard mitigation plans	State Hazard Mitigation Officer (SHMO)  Local Community Mitigation Planning Lead	<a href="mailto:mpotter@emd.sc.gov">mpotter@emd.sc.gov</a> <a href="mailto:jhboettc@emd.sc.gov">jhboettc@emd.sc.gov</a>
Historic inundation areas and high water marks	FEMA Regional Office	<a href="mailto:eugene.longenecker@fema.dhs.gov">eugene.longenecker@fema.dhs.gov</a>
Clusters or locations of Individual Assistance/Public Assistance grants and locations of grant projects completed, planned, or underway	National;  FEMA Regional Office	See National Operating Procedure  R4 Contact: <a href="mailto:jean.neptune@fema.dhs.gov">jean.neptune@fema.dhs.gov</a>
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;  FEMA Regional Office	See National Operating Procedure  R4 Contact: <a href="mailto:linda.byers@fema.dhs.gov">linda.byers@fema.dhs.gov</a>
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	FEMA Regional Office	<a href="mailto:jordon.ricks@fema.dhs.gov">jordon.ricks@fema.dhs.gov</a>
Information from FloodSmart on market penetration	National	See National Operating Procedure
Community Assistance Visits / Community Assistance Contacts	National;  FEMA Regional Office	See National Operating Procedure  R4 Contact: <a href="mailto:dorothy.douglas@fema.dhs.gov">dorothy.douglas@fema.dhs.gov</a> <a href="mailto:Lynne.Keating@fema.dhs.gov">Lynne.Keating@fema.dhs.gov</a> <a href="mailto:janice.mitchell@fema.dhs.gov">janice.mitchell@fema.dhs.gov</a>

# State Geospatial Data Coordination Procedure

Data	Data Source	Location
Community Rating System class information	National; FEMA Regional Office	See National Operating Procedure R4 Contact: <a href="mailto:janice.mitchell@fema.dhs.gov">janice.mitchell@fema.dhs.gov</a>
Information from other Federal agencies	National	See National Operating Procedure
Information from State agencies, non-profit organizations, universities, etc.	Local	No statewide coverage
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	Local	No statewide coverage
Other known hazards with geographical boundaries (e.g. earthquake faults)	Local	No statewide coverage
Information on active disasters	FEMA Regional Office	<a href="mailto:harlie.clark@fema.dhs.gov">harlie.clark@fema.dhs.gov</a>
Campgrounds, recreational areas, emergency access routes, etc.	National	See National Operating Procedure
Any other data that might be appropriate	Local	No statewide coverage

## Data Distribution Process for State Data

There are several inventories at specific agencies that are available online, but there is no centralized inventory.

## Federal Nationwide Geospatial Data Holdings

Information about nationwide holdings and 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

Listed below is 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.

# State Geospatial Data Coordination Procedure

## Clearinghouses and Inventories for the State

There is no inventory for geospatial data. There are several inventories at specific agencies that are online including:

- SC DNR GIS Data Clearinghouse: <http://www.dnr.sc.gov/gis.html>
- SC DHEC GIS home page: <http://www.scdhec.gov/gis/>
- University of South Carolina GIS Data Clearinghouse: <http://artsandsciences.sc.edu/gis/dataindex.html>

## 3D Elevation Program

The U.S. Geological Survey (USGS) National Geospatial Program is developing the [3D Elevation Program \(3DEP\)](#) 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.

## 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://geo.data.gov/geoportal/>, 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=SC>

# State Geospatial Data Coordination Procedure

## Involving the State's Geospatial Coordinator in Flood Studies

Contact Frank Tian, South Carolina Department of Natural Resources, Technology Development Program, 1000 Assembly Street, Suite 134, Columbia, SC 29201, (803) 734-9100, [scurryj@dnr.sc.gov](mailto:scurryj@dnr.sc.gov).

## State Coordination Process for Building Geospatial Partnerships

The State does not have an official GIS coordination group or official. The State Mapping Advisory Committee (SMAC) has taken an interim role as a liaison and conduit for the State as South Carolina aims to become part of national efforts to build and coordinate the spatial data infrastructure of the nation. In this role, SMAC's goal is to involve more people, organizations, and businesses in an effort to make the GISciences work for South Carolina.

## 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 archives and government link portals such as <http://www.statelocalgov.net>.

The State maintains a list server that can be used to forward FEMA program information and production notices to State and county GIS contacts. The contact information for using this list server is Maria Cox, State Coordinator, South Carolina Department of Natural Resources, (803) 755-9335, [cox@dnr.sc.gov](mailto:cox@dnr.sc.gov).

## 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.