

# State Geospatial Data Coordination Procedure

Colorado

FINAL

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**FEMA**

# State Geospatial Data Coordination Procedure

## Colorado

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# State Geospatial Data Coordination Procedure

## Purpose of the Procedure

The Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) prepared the Geospatial Data Coordination Procedures to outline 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. The Procedures provide information of common interest to the multiple flood insurance studies that occur in a State and save the studies the effort required to repeatedly discover this information independently.

If you have questions, updates, or comments about this procedure or other geospatial data coordination resources, contact the geospatial data coordination lead at your RSC:

- Ms. Mary Gilliland, Geospatial Data Coordination Lead - RSC VIII  
(303) 308-3572 / [Mary.Gilliland@aecom.com](mailto:Mary.Gilliland@aecom.com)

This document and additional information relating to geospatial coordination can be found on FEMA's Mapping Information Platform (MIP) [<https://hazards.fema.gov/>]. Navigate to the 'Tools & Links' page and then locate the 'Additional Resources' section.

## Preferred Base Map Sources

Table 1 at the end of this document identifies the preferred geospatial data sources for mapping partners to use when performing updates to Flood Insurance Rate Maps (FIRMs). Although this table is not a prescription of datasets that must be used, those listed below have been successfully leveraged during FEMA's Map Modernization and Risk MAP programs.

## Useful Risk MAP Discovery Data Sources

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 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. Details on the Discovery Data Repository can be found in the National Geospatial Data Coordination Procedure document.

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Table 2 at the end of this document identifies data resources that are available at the regional and State levels and 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).

## Geospatial Data Resources

Listed below are useful links to geospatial data resources applicable to FEMA's Risk MAP project life cycle.

- Colorado Department of Transportation (CDOT)  
[\[http://dtdapps.coloradodot.info/otis\]](http://dtdapps.coloradodot.info/otis)
- Colorado Division of Water Resources  
[\[https://dwr.colorado.gov/\]](https://dwr.colorado.gov/)
- Colorado Bureau of Land Management  
[\[https://www.blm.gov/colorado\]](https://www.blm.gov/colorado)
- BLM Navigator  
[\[https://navigator.blm.gov/home\]](https://navigator.blm.gov/home)
- USGS 3D Elevation Program  
[\[https://www.usgs.gov/core-science-systems/ngp/3dep\]](https://www.usgs.gov/core-science-systems/ngp/3dep)
- The National Map  
[\[https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/\]](https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/)
- FEMA's Map Service Center (MSC)  
[\[https://msc.fema.gov/portal\]](https://msc.fema.gov/portal)
- FEMA's Mapping Information Platform (MIP)  
[\[https://hazards.fema.gov/\]](https://hazards.fema.gov/)

## State and Federal Contacts

The main contacts for the State's geospatial activities and Federal agencies' representatives in the State are available on the MIP:

[\[https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=CO\]](https://hazards.fema.gov/contacts/statecontacts/contacts.asp?page=CO)

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## Local Geospatial Contacts

Local contacts, including those from counties, special government districts, tribes, municipal governments, and other organizations may also have useful geospatial data holdings. Contact information may be available from the state, FEMA regional office, web searches, and government link portals such as [<https://www.statelocalgov.net>].

GIS Colorado also maintains a list of local GIS contacts [<https://giscolorado.org/>]. Their contact list includes GIS personnel on the city, county, and state levels of government as well as private industry.

## State Coordination Process for Building Geospatial Partnerships

The State GIS Coordinator's duties include encouraging the development of geospatial partnerships.

GIS Colorado is a non-profit organization established to represent and foster GIS activities throughout Colorado. The object of this organization is to provide development, support, and coordination for regional GIS and related technology user groups and activities in the State of Colorado. See [<https://www.giscolorado.org>].

## Involving Shareholders in Flood Studies

FEMA Region VIII and the RSC maintain a FIRM project status map viewer, which can be accessed here: [<https://arcg.is/1qe4qO>]. Please reach out to the FEMA Region Representative for Colorado (link to contact in *State and Federal Contacts* section of this document) with any questions and/or interest for project involvement.

# State Geospatial Data Coordination Procedure

**Table 1: Base Map Sources**

<b>Table 1: Base Map Sources</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Additional</b>
<b>Orthophotos</b>	Local Community Supplied Data - check on availability	National Agriculture Imagery Program (NAIP) Imagery	Black and White Digital Orthophoto Quads (DOQ)
<i>location</i>		<a href="https://datagateway.nrcs.usda.gov">https://datagateway.nrcs.usda.gov</a>	<a href="https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/">https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/</a>
<i>notes</i>			
<b>Transportation (roads, railroads, and airports)</b>	Local Community Supplied Data - check on availability	Colorado Department of Transportation	TIGER/Line Files
<i>location</i>		<a href="https://dtdapps.coloradodot.info/otis">https://dtdapps.coloradodot.info/otis</a>	<a href="https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html">https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html</a>
<i>notes</i>			
<b>Hydrography (rivers, streams, lakes, and shorelines)</b>	Local Community Supplied Data - check on availability	Colorado Division of Water Resources	National Hydrography Datasets (NHD)
<i>location</i>		<a href="https://dwr.colorado.gov/services/data-information/gis">https://dwr.colorado.gov/services/data-information/gis</a>	<a href="https://www.usgs.gov/core-science-systems/ngp/national-hydrography">https://www.usgs.gov/core-science-systems/ngp/national-hydrography</a>
<i>notes</i>			
<b>Political Boundaries (county, municipal)</b>	Local Community Supplied Data - check on availability	Colorado Department of Transportation	TIGER/Line Files
<i>location</i>		<a href="https://dtdapps.coloradodot.info/otis">https://dtdapps.coloradodot.info/otis</a>	<a href="https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html">https://www.census.gov/geographies/mapping-files/time-series/geo/tiger-line-file.html</a>
<i>notes</i>	Reference the National Flood Hazard Layer (NFHL) to help identify possible edge-matching issues.		
<b>Public Lands (national, state, and local parks, forests, etc)</b>	Local Community Supplied Data - check on availability	Bureau of Land Management	
<i>location</i>		<a href="https://navigator.blm.gov/home">https://navigator.blm.gov/home</a>	

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<b>Table 1: Base Map Sources</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Additional</b>
<i>notes</i>			
<b>Cadastre (parcels)</b>	Local Community Supplied Data - check on availability	Bureau of Land Management	
<i>location</i>		<a href="https://navigator.blm.gov/home">https://navigator.blm.gov/home</a>	
<i>notes</i>			
<b>Extraterritorial Jurisdiction (ETJ) Boundaries</b>	Local Community Supplied Data - check on availability		
<i>location</i>			
<i>notes</i>			
<b>Terrain/Topo (elevation)</b>	Local Community Supplied Data - check on availability	National Elevation Dataset	
<i>location</i>		<a href="https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/">https://www.usgs.gov/core-science-systems/ngp/tnm-delivery/</a>	

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**Table 2: Discovery Sources**

<b>Table 2: Discovery Sources</b>	<b>Data Source</b>	<b>Location</b>
Watershed boundaries	National	See National Operating Procedure
Jurisdictional boundaries	See Table 1	See Above
Tribal land boundaries	National	See National Operating Procedure
State lands	See Table 1	See Above
Federal lands	National	See National Operating Procedure
Major roads	National	See National Operating Procedure
Streams	See Table 1	See Above
Coastal Barrier Resource Areas	N/A	Not applicable in the State of Colorado
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/resources/rsc_contacts.htm">https://hazards.fema.gov/femaportal/resources/rsc_contacts.htm</a>
Topographic/ bathymetric data	National	See National Operating Procedure
AAL data from HAZUS	National	See National Operating Procedure
Coverage areas for known community and Tribal risk assessment data	FEMA Regional Office	Contact FEMA Region VIII
Status of Hazard Mitigation Plans	FEMA Regional Office	Contact FEMA Region VIII
Flood control structure data	National	See National Operating Procedure
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 - FEMA	See National Operating Procedure
Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database	Local	Check with community



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<b>Table 2: Discovery Sources</b>	<b>Data Source</b>	<b>Location</b>
Areas of planned development	Local	Check with community
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="https://www.usgs.gov/core-science-systems/national-geospatial-program/land-cover">https://www.usgs.gov/core-science-systems/national-geospatial-program/land-cover</a> .
Locations of ongoing projects or updated stream studies (e.g. highway improvements)	Local	Check with community
Locations of wave and tide gauges	N/A	Not applicable in the State of Colorado
Locations of wind gauges	N/A	Not applicable in the State of Colorado
Proposed inland limit of the Primary Frontal Dune , if present	N/A	Not applicable in the State of Colorado
Locations of any beach nourishment or dune restoration projects	N/A	Not applicable in the State of Colorado
Available effective study data	FEMA	See National Operating Procedure
Orthophotography	See Table 1	See Above
Proposed discussion areas, problem areas, areas of proposed mitigation projects	FEMA Regional Office	Contact FEMA Region VIII
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 online Web Soil Survey ( <a href="https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm">https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm</a> ) or from the NRCS Data Gateway.
Hydraulic structures	National	See National Operating Procedure
Coastal structures , including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data	N/A	Not applicable in the State of Colorado
Local structure and topographic data from the existing hazard mitigation plans	Local	Check with community

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<b>Table 2: Discovery Sources</b>	<b>Data Source</b>	<b>Location</b>
Historic inundation areas and high water marks	Local	Check with community
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	National	See National Operating Procedure
Information from FloodSmart on market penetration	National	See National Operating Procedure
Community Assistance Visits / Community Assistance Contacts	FEMA Regional Office	Contact FEMA Region VIII See Also National Operating Procedure
Community Rating System class information	National	See National Operating Procedure
Information from other Federal agencies	National	See National Operating Procedure
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	Local	Check with community
Information on active disasters	FEMA Regional Office	<a href="https://www.fema.gov/disasters">https://www.fema.gov/disasters</a>
Campgrounds, recreational areas, emergency access routes, etc.	National	See National Operating Procedure