ALASKA

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Alaska

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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 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 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 studies are interested, as well as information for the project Discovery Stage. Studies and Discovery teams can avoid wasting time with deadend 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 Service 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

There is no preference state-wide. Orthophoto data is unavailable for a majority of the state. A majority of the populated areas do have orthophoto data available, but its resolution, accuracy, scale, source, etc. all vary (see Major State Holdings section below). The State just recently reached a tentative agreement with the USDA Farm Service Agency to enter into its National Agriculture Imagery Program (NAIP) which will provide

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high-resolution imagery for strategic agricultural locations within the state over the next several years.

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: Alaska Statewide Orthoimagery Mosaic

Data currentness: 2009-2014

Accuracy/Scale: 1:24,000 (1"=2,000') Ground sample resolution: 2.5-meter

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: AlaskaMapped / Statewide Digital Mapping Initiative

Dataset contact: Dayne Ellanna, University of Alaska Fairbanks; 907.474.6182;

dayne@alaska.edu

Notes: The Alaska Statewide Digital Mapping Initiative is producing a new statewide orthomosaic, which will provide complete multispectral coverage of the state at 2.5-meter spatial resolution. This satellite image mosaic will be the first consistent, high-resolution, high-accuracy, digital orthoimagery base layer ever produced across the entire state of Alaska.

The orthoimage will be produced to 1:24,000 National Map Accuracy Standards (NMAS) with a CE90 of 12.2-meters. This means that more than 90% of the points will be within 12.2 meters or better of their true location on the Earth. This is an accuracy improvement of at least three times for most existing maps of Alaska. Three statewide mosaics will be delivered: color infrared (CIR), psuedo-natural color, and panchromatic (grayscale). The full land area of Alaska with a 1-kilometer buffer around the coastline and border.

The orthomosaic will be complete by 2014 and include data collected over five seasons, 2009-2013.

The source data is licensed for use by the US public sector and academia at no additional cost. Others can purchase licenses to use the data at a reduced cost. When available, the orthomosaices will be publicly available to all US users via Open Geospatial Consortium web services. Please see the license file EULA for details. Contact us for details.

The statewide orthoimagery contract was awarded to Aero-Metric, Inc. Subcontractor Spot Image is providing the source imagery from their SPOT 5 satellite. Subcontractor Fugro Earthdata is performing the image processing, orthorectification, and mosaicing.

As prime contractor, Aero-Metric is responsible for overall project management, provision of control and DEMs, and quality assurance. The specifications for the contract can be found in the RFP document.

Villages in the Yukon Flats area have ½-ft resolution imagery, flown in 2010. AKDOT in interior Alaska has ½-ft resolution imagery, also flown in 2010 (west half of Fairbanks/Ester area).

Dataset name: High Resolution Orthoimagery (HRO)

Data currentness: varies Accuracy/Scale: varies

Ground sample resolution: 1 meter; finer pixel resolution for Anchorage

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Dataset source: USGS Seamless Data Warehouse at http://seamless.usgs.gov

Dataset contact: EROS Data Center, USGS; 605.594.6151; custserv@edcmail.cr.usgs.gov Notes: Data will also be available through the Alaska Geographic Data Committee site

at http://agdc.usgs.gov/

Transportation (roads, railroads, and airports)

Dataset name: Differential Global Positioning System Centerline Data

Data currentness: 1997-2002

Accuracy/Scale: Horizontal 2-d RMS values for road centerline features typically range from four to eight feet. Known positional accuracy problems (as great as 35 meters) exist in places; the Department is in the process of obtaining new base station files for the files in question and hope to update the three roads as soon as possible.

Horizontal datum: NAD 27

Fee associated? No

Available for redistribution? Yes

Are road names part of the dataset? Yes

Dataset source: Alaska Department of Transportation and Public Facilities web site at http://www.dot.state.ak.us/stwdplng/mapping/dgpscenterline.shtml

Dataset contact: Alaska Department of Transportation, Division of Statewide Planning,

Statewide GIS Mapping Section; 907.465.8957; gis@dot.state.ak.us

Notes:

Hydrography (rivers, streams, lakes, and shorelines)

Dataset name: National Hydrography Dataset

Data currentness: 1999

Accuracy/Scale: 1:63,360 (1"=1 mile) for most of the state

Horizontal datum: NAD 83

Fee associated? No

Available for redistribution? Yes

Are hydrography names part of the dataset? Yes Dataset source: USGS at http://nhd.usgs.gov

Dataset contact: nhd@usgs.gov

Notes: No coverage of western Aleutians or Bering Sea islands at this point

Political boundaries (county, municipal)

Dataset name: Alaska Boroughs and Alaska Municipalities

Data currentness: 1997 Accuracy/Scale: 1:250,000 Horizontal datum: NAD 27

Fee associated? No

Available for redistribution? Yes

Dataset source: Alaska Department of Natural Resources - Land Records Information

Section. Available through the Alaska State Geo-Spatial Data Clearinghouse at

http://www.asgdc.state.ak.us/

Dataset contact: AK Department of Natural Resources - Land Records Information

Section; 907.269.8833; gis public access@dnr.state.ak.us

Notes:

Dataset name: Incorporated City Boundaries of Alaska

Data currentness: 2003 Accuracy/Scale: varies Horizontal datum: NAD 27

Fee associated? No

Available for redistribution? Yes

Dataset source: AK Department of Community and Economic Development. Available through the Alaska State Geo-Spatial Data Clearinghouse at http://www.asgdc.state.ak.us/

Dataset contact: AK Department of Natural Resources - Land Records Information

Section; 907.269.8833; gis_public_access@dnr.state.ak.us

Notes:

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

Dataset name: Spatial Data Management System Corner Layer, Surveyed Corners, Alaska

Data currentness: 2005 Accuracy/Scale: Unknown Horizontal datum: NAD 27

Fee associated? No

Available for redistribution? Yes

Dataset source: Bureau of Land Management. Available through the Alaska State Geo-

Spatial Data Clearinghouse at http://www.asgdc.state.ak.us/

Dataset contact: AK Department of Natural Resources - Land Records Information

Section; 907.269.8833; gis_public_access@dnr.state.ak.us

Notes: This dataset is a spatial representation of the Public Land Survey System (PLSS) in

Alaska, generated from land survey records.

Terrain (elevation)

Dataset name: National Elevation Dataset (NED)

Data currentness: Updated bi-monthly as budget permits

Accuracy/Scale: 2 arc-second post spacing from 1:63,360-scale maps for the majority of

the State

Vertical datum: NAVD 88

Fee associated? No

Available for redistribution? Yes

Dataset source: USGS Seamless Data Warehouse at http://seamless.usgs.gov

Dataset contact: EROS Data Center, USGS; 605.594.6151; custserv@edcmail.cr.usgs.gov Notes: The NED 1- and 1/3-arc-second data sets are updated on a nominal two month cycle to integrate newly "best available", improved elevation source data. Bi-monthly updates may be skipped due to budget or data constraints. New datasets are being released into the NED 1/9-arc-second collection on a monthly basis and in conjunction with the bi-monthly updates when possible. http://ned.usgs.gov/Ned/ned.html

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 on accessing the Discovery Data Repository are given 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	Agency	Location
Watershed boundaries	National	Discovery Data Repository
Jurisdictional boundaries	Alaska DNR	Cities - http://dnr.alaska.gov/SpatialUtility/SUC?cm d=vmd&layerid=99 Boroughs - http://dnr.alaska.gov/SpatialUtility/SUC?cm d=vmd&layerid=40
Tribal land boundaries	National	Discovery Data Repository
State lands	Alaska Department of Natural Resources	http://dnr.alaska.gov/SpatialUtility/SUC?cm d=vmd&layerid=1555
Federal lands	National	Discovery Data Repository

Data	Agency	Location
Major roads	Alaska DNR	http://dnr.alaska.gov/SpatialUtility/SUC?cm d=vmd&layerid=41
Streams	National Local	Discovery Data Repository Communities
Coastal Barrier Resource Areas	National	Discovery Data Repository
Coordinated Needs Management Strategy	National	See National Operating Procedure
Topographic/ bathymetric data	Multi	FEMA - Region X Topographic Data Inventory See National Operating Procedure
AAL data from Hazus	National	Discovery Data Repository
Coverage areas for known community and Tribal risk assessment data	Regional/State/Local	
Status of Hazard Mitigation Plans	Regional/State/Local National	Discovery Data Repository Discovery Data Repository
Flood control structure data	National	See National Operating Procedure
Locations of stream gages	National	Discovery Data Repository
Locations of past flood claims and repetitive loss properties	CIS Report	Contact the geospatial data coordination lead at your RSC referenced earlier in this document.
Locations of clusters of Letters of Map Change	National	See National Operating Procedure
Known flooding issues not represented on effective FIRMs or listed in Coordinated Needs Management Strategy database	Local	Communities
Areas of planned development	Local	Communities
Areas of land use change datasets	National Local	See National Operating Procedure Communities
Locations of ongoing projects or updated stream studies (e.g. highway improvements)	Local	Communities
Locations of wave and tide gauges	National	See National Operating Procedure
Locations of wind gauges	National	See National Operating Procedure
Proposed inland limit of the Primary Frontal Dune, if present	Local	Communities

Data	Agency	Location
2	SLOSH Zones	
Locations of any beach nourishment or dune restoration projects	SLOSH Zolles	See National Operating Procedure
Comparison of preliminary stillwater elevations with effective stillwater elevations	Local	Communities
Orthophotography	Multi	Geographic Information Network of Alaska - http://www.gina.alaska.edu/data/
		See National Operating Procedure
Proposed discussion areas, problem areas, areas of proposed mitigation projects	Local	Communities
Land use and soil	Land Use	Local - Communities
information	Soils	See National Operating Procedure
Reference points to locate areas with flooding issues	Local	Communities
Hydraulic structures	Culverts	Local - Communities
	Levees, Dams, Bridges	See National Operating Procedure
Coastal structures, including flood protection structures, shoreline structures, manmade embankments, surge conveyance pathways, and shoreline change data	Local	Communities
Local structure and topographic data from the existing hazard mitigation plans	FEMA	Hazard Mitigation Plans available at FEMA Region X POC: Kristen Meyers Kristen.Meyers@dhs.gov (425) 487-4543
Historic inundation areas and High Water Marks	Historic Riverine Inundation Areas	See National Operating Procedure
	Storm Surge Inundation Areas	See National Operating Procedure
	High Water Marks	Local - Communities
Clusters or locations of Individual Assistance/Public Assistance grants and locations of grant projects completed, planned, or underway	National Regional	See National Operating Procedure Discovery Data Repository
Other information on FEMA grants, as described in G&S Appendix I	Regional/State/Local	

Data	Agency	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 Operating Procedure
Any data deficiencies identified in hazard mitigation plans	FEMA	Hazard Mitigation Plans available at FEMA Region X POC: Kristen Meyers <u>Kristen.Meyers@dhs.gov</u> (425) 487-4543
Information from FloodSmart on market penetration	FEMA	http://www.floodsmart.gov/floodsmart/
Community Assistance Visits / Community Assistance Contacts	National	Discovery Data Repository
Community Rating System class information	National	See National Operating Procedure
Information from other Federal agencies	National Only	See National Operating Procedure
Information from State agencies, non-profit organizations, universities, etc.	Multi	Varies with watershed
Current community plans, ordinances, or programs to alleviate flooding or manage stormwater	FEMA	State Hazard Mitigation Plan – Discovery Data Repository Hazard Mitigation Plans available at FEMA Region X POC: Kristen Meyers Kristen.Meyers@dhs.gov (425) 487-4543
Other known hazards with geographical boundaries (e.g. earthquake faults)	Tsunami Landslide Volcanic Eruptions - Multi Wildfire - Multi	Discovery Data Repository Discovery Data Repository http://dnr.alaska.gov/SpatialUtility/SUC?cm

Data	Agency	Location
etc.		
Essential facilities	Local	Communities
Wetlands	USFWS	http://www.fws.gov/wetlands/Data/DataDownload.html
Mitigation planning spatial data	FEMA	POC: Kelly Stone Kelly.Stone@dhs.gov (425) 487-4636

Data Distribution Process for State Data

The state distributes geospatial data through http://www.asgdc.state.ak.us/. Another useful site is the Alaska Geographic Data Committee at http://agdc.usgs.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.

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

AK State agency online GIS data websites:

- Alaska State Geo-Spatial Data Clearinghouse: http://www.asgdc.state.ak.us/
- Alaska Mapped and the Statewide Digital Mapping Initiative: http://www.alaskamapped.org/
- Geographic Information Network of Alaska (GINA): http://www.gina.alaska.edu/
- DOT: http://www.dot.state.ak.us/stwdplng/mapping/index.shtml
- AK State, Borough, City and Regional Web Sites (links to): http://www.wowworks.com/wowcity/ak.htm

Other URL's:

- USGS AK Geospatial Data Clearinghouse: http://agdc.usgs.gov/data/index.html
- Municipality of Anchorage GIS: http://munimaps.muni.org/moagis/download.htm
- Kenai Peninsula Borough GIS: http://www2.borough.kenai.ak.us/GISDept/Downloads.html
- Geospatial One Stop federal GIS portal: http://www.geodata.gov
- National Hydrography Dataset: http://nhd.usgs.gov/data.html

- US Census Bureau TIGER/Line Shapefiles: http://www2.census.gov/cgibin/shapefiles2009/national-files
- AK BLM: http://www.blm.gov/or/gis/data.php?view=all
- AK DNR Division of Oil & Gas GIS: http://www.dog.dnr.alaska.gov/GIS/GISDataFiles.htm
- USGS EarthExplorer: http://edcsns17.cr.usgs.gov/EarthExplorer/
- USDA/NRCS Geospatial Gateway Home: http://datagateway.nrcs.usda.gov/
- EPA Land Use/Land Cover reference (statewide): http://landcover.usgs.gov/us_map.php
- Soils dataset(s) reference USDA/NRCS:
 http://soils.usda.gov/survey/printed_surveys/state.asp?state=Washington&abbr=WA;
 http://soildatamart.nrcs.usda.gov/

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 including FEMA. 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 Support Center.

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=AK

The membership of the Alaska Geographic Data Committee is listed at http://agdc.usgs.gov/info/members.html.

Involving the State's Geospatial Coordinator in Flood Studies

The Coordinator would like to participate in a conference call at the start of data discovery for each individual project. Contact Ted Cox, Alaska USDA; (907) 761-7764;

ted.cox@ak.usda.gov

This state already has a working relationship with the office in the state that is responsible for updating the multi-hazard maps, and they have access to their state's flood map modernization and Risk MAP business plans.

State Coordination Process for Building Geospatial Partnerships

Alaska Geographic Data Committee

The Alaska Geographic Data Committee (AGDC) was organized in the early 1990s to support the initiatives and goals of the Federal Geographic Data Committee (FGDC) in Alaska through the coordination of geospatial data activities and to promote data sharing among the Federal, state, Native, local, commercial, and non-governmental (NGO) member agencies. The Committee is co-chaired by the Deputy Chief, Alaska Geographic Science Office (AGSO), USGS Alaska Science Center and the Chief, Land Records Information System, State of Alaska Department of Natural Resources. There are currently more than 60 official AGDC members. See http://agdc.usgs.gov/.

Statewide Digital Mapping Initiative Program

With the support of the AGDC, there is a separate, on-going effort to increase Alaska's digital base mapping. From the Executive Summary:

"An underlying digital base map of Alaska is essential to support informed public policy and decision making on a broad scale. It is also critical to deliver competent disaster recovery and emergency services to the citizens of Alaska as well as a variety of other value added products, which would benefit both public and private users."

The Alaska Statewide Digital Mapping Initiative's primary goal is acquire new and better maps statewide for Alaska and to make existing map products more easily available.

Alaska does not have an adequate digital base map. The SDMI seeks to remedy this situation. The SDMI program will ultimately provide an accurate, current, seamless, statewide base map, made available over the internet, through open standards, free of charge to all. The target basemap is a statewide ortho-image, controlled by an appropriately scaled elevation model and ground control as required.

The SDMI's activities include: planning, public access, data acquisition and stakeholder relations. For key personnel related to this program, please see the "Finding Local Geospatial Contacts" section below.

Alaska's Geospatial Strategic and Business Plan

With the help of Dewberry, Geospatial Strategic and Business Plans are being developed for Alaska through a Federal Geographic Data Committee (FGDC) 50 States Initiative award. As a key step in implementing the National Spatial Data Infrastructure (NSDI), these plans will facilitate the collaboration, coordination of programs, policies,

technologies, and resources that support the collection and sharing of geospatial data across all business lines both public and private in the state.

The grant will support the development of a Strategic Plan based on input from the community of GIS and spatial data users in Alaska. This Plan will identify the basic needs and requirements of all stakeholders in Alaska. To ensure that those needs and requirements are fully understood we have structured an open and interactive process.

A goal of the Plan is to identify an appropriate mechanism for implementation of an enterprise-wide geospatial framework with sufficient representation from stakeholder groups. It will also identify the need and specific responsibilities associated with a state Chief Information Officer and Geospatial Information Officer.

A Business Plan will be developed to support the implementation of the Strategic Plan. A Business Plan will identify best practices for development and governance of GIS policy. Additionally, the Plan will quantify efficiencies that result from an enterprise approach to geospatial data and recommend an implementation plan to achieve long-term efficiency and stability.

Geospatial Strategic and Business Plans are being developed for Alaska through a Federal Geographic Data Committee (FGDC) 50 States Initiative award.

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 Alaska Geographic Data Committee sponsors a listsery; see http://listserv-ak.wr.usgs.gov/mailman/listinfo for more information.

The SDMI Program is also another good source for State and Federal Contacts. See http://www.alaskamapped.org/about/contact for key personnel related to this program.

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 Service 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.

The lead will use your feedback to update this Procedure.