



FEMA

Flood Map Modernization

Mitigation Division, FEMA

- **National Perspective – Measuring Progress**
- **Digital as Official**
- **eLOMA – Adding Efficiency**
- **Levee Assessment Nationwide**
- **Multi-Year Flood Hazard Identification Plan (MHIP)**
- **Post-Modernization**

Mid-Course Adjustment

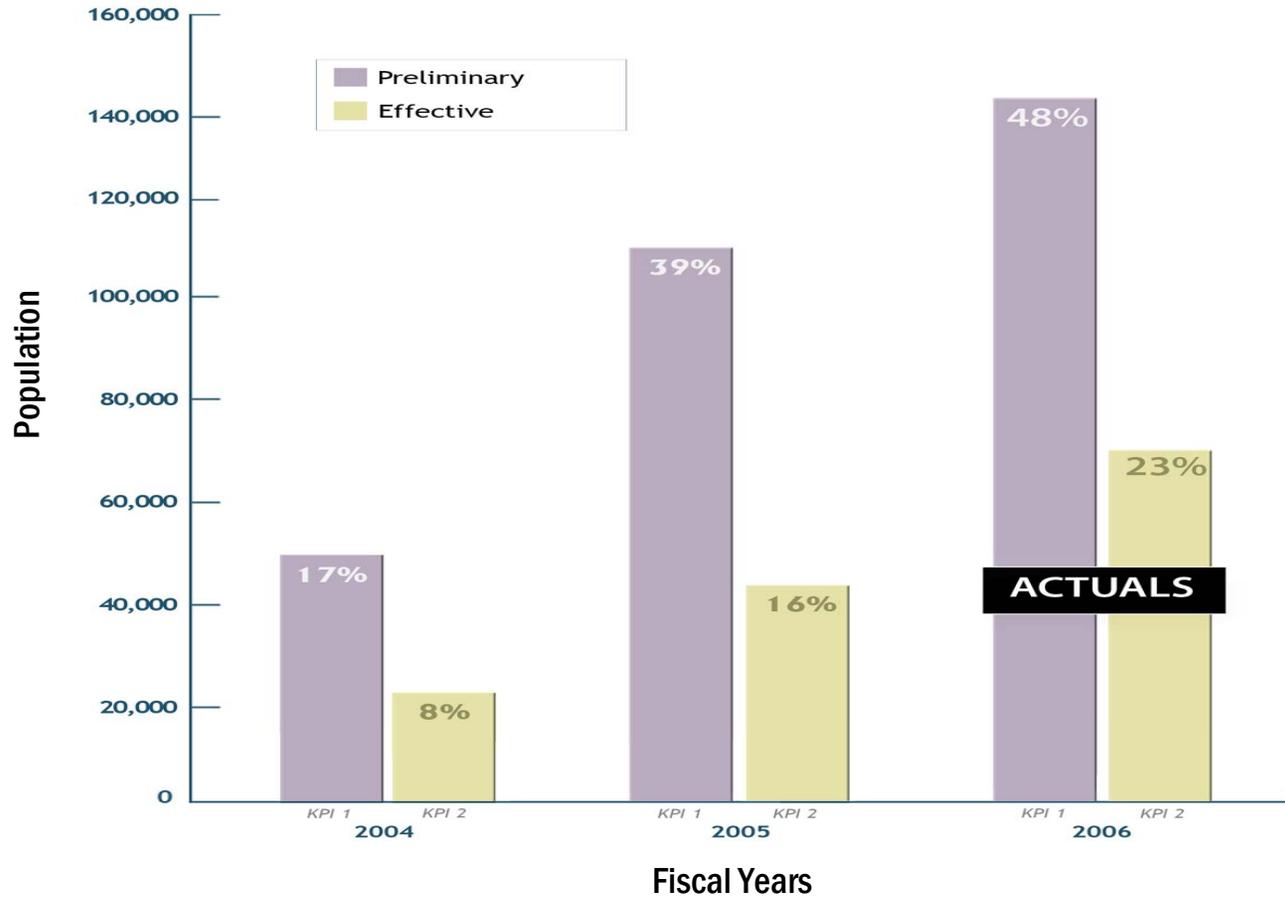
"New" Metrics

Flood Map
Modernization

	Original Course	Adjusted Course
% of land area of continental U.S. covered by digital flood maps	100%	65%
% of U.S. population covered by digital flood maps	100%	92%
% of mapped stream miles meeting 2005 Floodplain Boundary Standard	57%	75%
% of population covered by maps meeting 2005 Floodplain Boundary Standard	32%	80%
% of mapped stream and coastal miles with new, updated, or validated engineering analysis	22%	30%
% of population covered by maps with new, updated, or validated engineering analysis	15%	40%

Status Preliminary and Effective Maps

Flood Map
Modernization



■ FBS Guidance

- Draft audit procedures on FEMA's G&S Web Page in July 2006
- Final procedures (Version 1) posted in November

■ Training

- Two training sessions conducted in Alexandria (Jan) and Denver (Feb)
- Trained 27 mapping partners, 10 CTPs, over 120 people

■ Audit Status

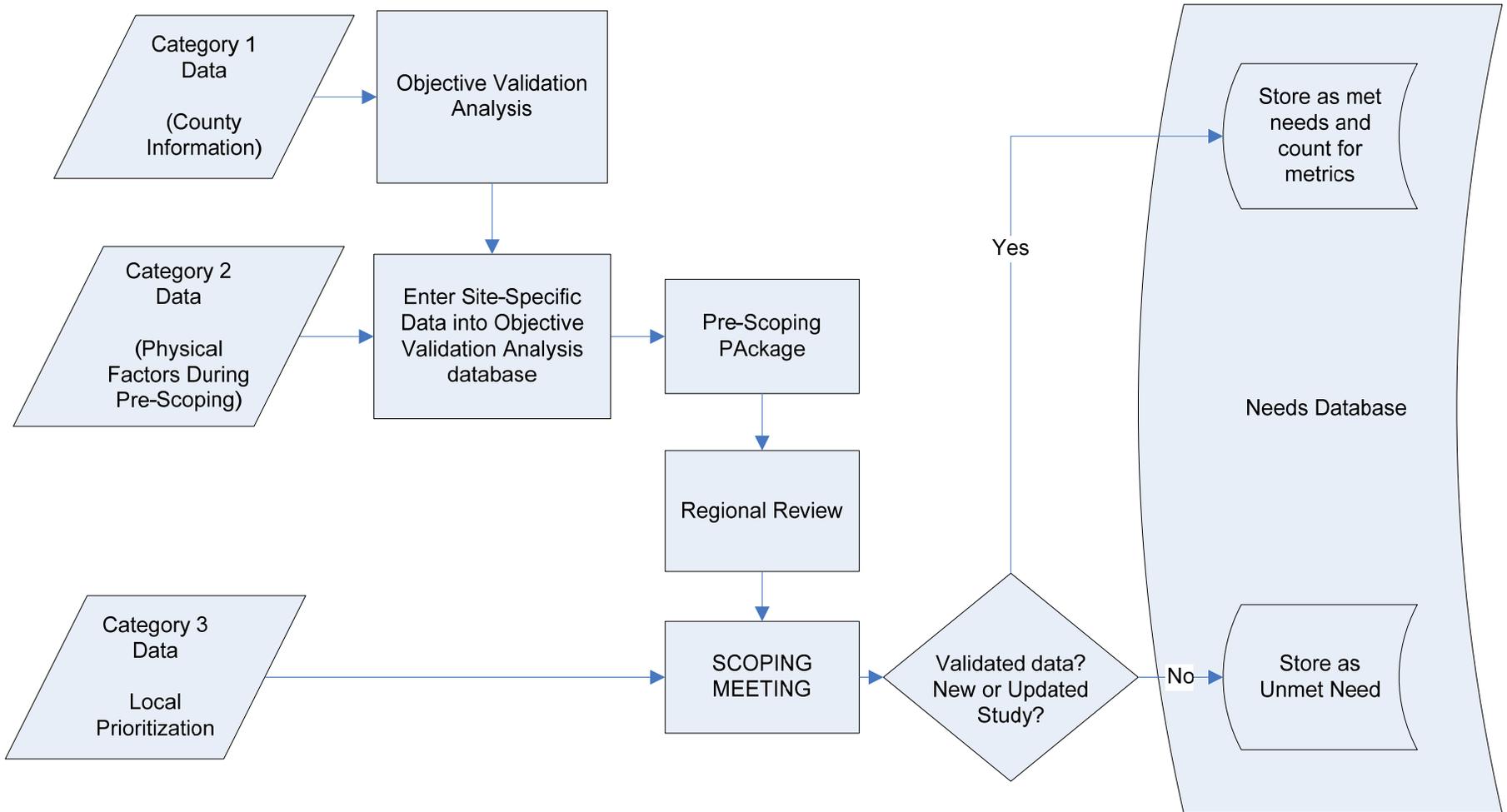
- Currently auditing effective studies selected by Regions

- **The following automatically comply with the FBS:**
 - DFIRMs created using automated mapping techniques
 - DFIRMs created by compiling floodplain boundaries with digital topography
 - or
 - DFIRMs created by digitizing floodplain boundaries from a topographic map provided that it matches the new study base map

- **Validation Goal: FEMA's 2006 Congressional report introduced the following goal**
 - Thirty percent of the stream miles mapped are to be based on new, updated, or validated engineering analysis

- **Regions categorize flooding sources when SOW is developed based on need and external input**
 - New and revised analyses = Meets Standard
 - Unrevised Streams = Some Validated, Some Documented as Unmet Needs

Validation Process



■ **Known Valid**

- New auto H&H based analysis
- New engineering
- BFEs that have been reviewed and determined to be representative of existing hazard per the Region and community

■ **Potentially Invalid**

- Fails Objective Scoring Thresholds
- Subjective Community and Region Input

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Mapping Information Platform

Utilization and Commitment

Flood Map
Modernization

- **Nationwide Network for Sharing & Tracking Data Using Internet Portal Technology**
 - Mapping Information Platform (MIP)
 - Refinements/training ongoing
- **Map Making Tools, Project Management and Tracking, Data Repository**

The screenshot shows the Mapping Information Platform (MIP) website. The header includes the title "Mapping INFORMATION PLATFORM" and the FEMA logo. A navigation menu contains links for Home, Map Modernization, News & Events, Tools & Links, Learning, Map Viewer, and Contact Center. The main content area is divided into several sections: "Tools For Professionals" with links to eLOMA, DFIRM Production Tools, and WISE; "Tips and Tutorials" with links to reading flood maps and becoming a technical partner; "Questions?" with contact information for technical support; "News and Highlights" with recent updates on DFIRM training, service packs, and MIP updates; "Upcoming Events" listing conferences in Philadelphia and Denver; "Grant Opportunities" with a photo of a family and text about FEMA's mitigation grant programs; and a "Map Viewer" sidebar with input fields for Street, City, State, and ZIP Code, along with a "Create Map" button and a "Proceed to Map Viewer" link. A "Contact Center" sidebar lists various support options. A footer note indicates the page was last updated on Monday, February 26, 2007.

<https://hazards.fema.gov>

What the MIP Does

<https://hazards.fema.gov/femaportal/wps/portal>

- Over 1,290 Active Studies
- Over 20,000 MT-1s (LOMAs)
- Over 1,400 MT-2s (LOMRs)
- Over 20,000 Communities
- Over 60 Contractors
- Over 220 CTPs

1 Sort by health of a project

Geographic Area	# of Projects	Cost
Region I	1836	○
Region II	6	○
Region III	68	○
Region IV	965	○
Region V	31	○
Region VI	22	○
Region VII	3	○
Region VIII	56	○
Region IX	9	○
Region X	2	○

2 Drill down for detail

Geographic Area	# of Projects	Cost	Schedule	Health
Colorado	38	○	○	○
Montana	4	○	○	○
North Dakota	4	○	●	●
South Dakota	1	○	○	○
Utah				
Wyoming				

3 Identify Problem by Reviewing Project Summary and Reports

Project Summary - Project # 05-08-1106111S

MIP City, ND

Project Number 05-08-1106111S
 Project Type Stu
 Affected Region Reg
 Affected State Nor
 Affected Counties & FIPS codes Kidd
 Affected Communities & CIDs Kidd
 Flooding Sources Mip
 Last Completed Activity Perf
 Overall Health Status ● =
 Cost Status ● =

4 Perform task and update MIP

Work Item Details - Project # 05-08-1106111S

Completed Areas

Community: Kidder County-wide

Tool Used: DFIRM Tools

Version: ArcGIS 8.3

5 Project is back on track

Project #	Project ID	Cost	Schedule	Health
05-08-1104821S	Test Case	○	○	○
05-08-1106111S	MIP City, ND	○	○	○
05-08-1106566S	Pern's Test Case	○	○	○

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- **Digital is official for National Flood Insurance Program uses**
- **Utilize digital tools**
- **Reduce paper product production and distribution**

- **Goal: Make sure that FEMA policy and methods allow the widest possible use of digital geospatial flood hazard information**
- **Three Phases**
 - Issue policy implementing Flood Insurance Reform Act of 2004 (Complete)
 - Ensure that the tools needed to use digital data are available (In Progress)
 - Review paper map production policies and methods in anticipation that increased use of digital data can or will further reduce demand for paper map products currently distributed by FEMA (In Progress)

- **FIRMette (Map Service Center)**
- **Map Viewer (Mapping Information Platform)**
- **Available Flood Hazard GIS Data**
- **Web Mapping Service (Mapping Information Platform)**

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- **FEMA's Online Determination Tool for MT-1 Requests**
- **Web-based application within the Mapping Information Platform (MIP)**
- **Released June 12, 2006**
- **Reduces the determination time for basic Letters of Map Amendment (LOMAs)**
- **Over 520 Licensed Professionals have registered to use eLOMA**
- **Over 200 eLOMA requests submitted**
- **Over 100 eLOMA final determinations issued**

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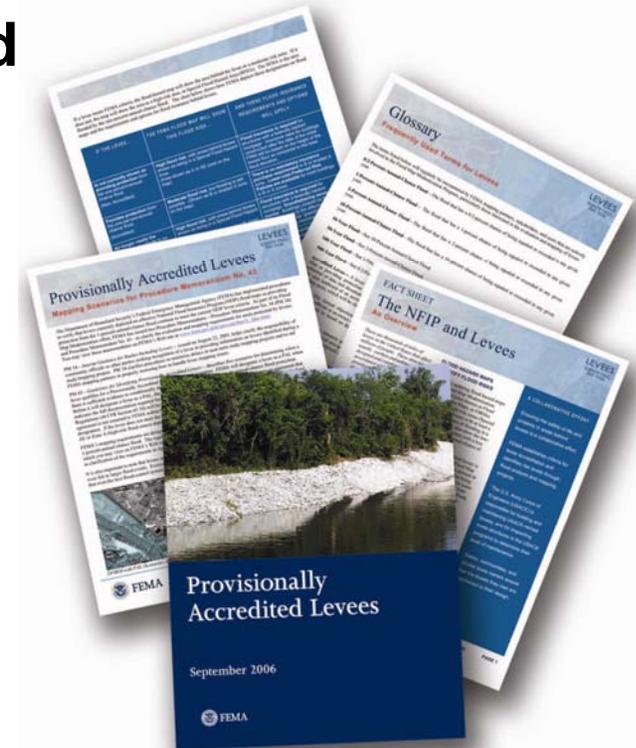
- **Fall 2006—USACE and FEMA (Procedure Memorandum No. 43) Guidance Issued**
- **Fall 2006—FEMA Web Pages and Outreach Materials Launched**
- **Summer 2006-7—FEMA coordinating with USACE on National Levee Database**
- **Fall/Winter 2006—USACE Assesses Levees in USACE Program**
- **Winter 2006-7—USACE Notifies State and Community Officials About Maintenance Deficiencies**

Levee Assessment Nationwide

Continuing FEMA/USACE Coordination Efforts

Flood Map
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- **Winter 2007—USACE Issues Revised Guidance to District Offices**
- **Spring 2007—FEMA Issues Updated Guidance and Outreach Materials**
- **Spring/Summer 2007—Levee Inventory Development Continues; Coordination with States and Communities Continues**
- **Summer 2007—Stakeholder Education Activities Started**



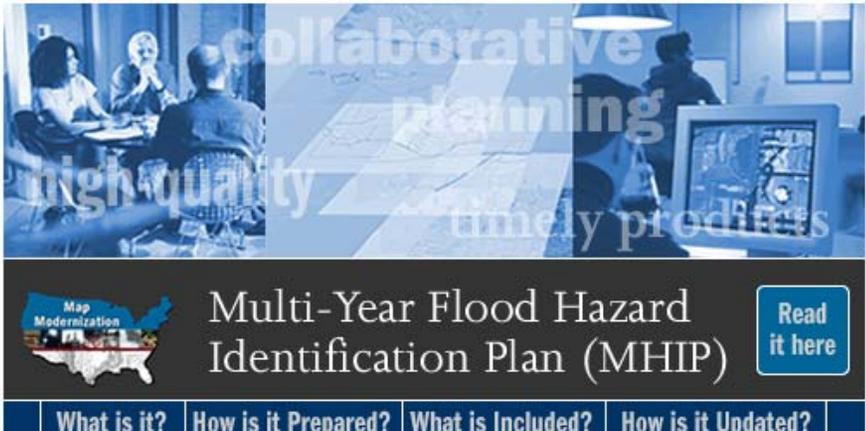
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- **MHIP Version 2.0,
September 2006**

http://www.fema.gov/plan/prevent/fhm/mh_main.shtm

- Began to reflect the Mid-Course Adjustment

- **Next MHIP update is
planned for 2008**



collaborative
planning

high quality
timely products

Map
Modernization

Multi-Year Flood Hazard
Identification Plan (MHIP)

Read
it here

What is it? How is it Prepared? What is Included? How is it Updated?

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- **FEMA has many well qualified partners with the capability, resources, and desire to maintain the maps**
- **Other partners possess skills and desire in other aspects of the production process (outreach, base maps)**
- **Proven success today is best way to ensure continued partnership in the future**

Envisioned Components of Map Maintenance

Flood Map
Modernization

- **Our best partners will help maintain the products**
 - Qualification Levels, Performance Thresholds, Leverage Requirements
- **Main components of efforts in FY09 and beyond might include:**
 - Staying current – Maintaining infrastructure, quality and quantity of maps developed as part of Map Mod
 - Meeting unmet needs – increases in quantities and quality of maps
 - Going to the next level – not just mapping the hazard but quantifying the risk and developing plans to reduce that risk

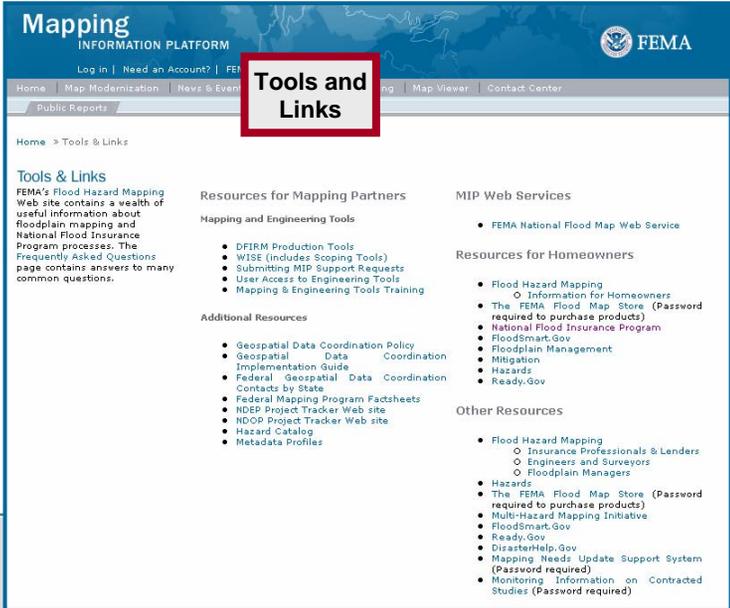


FEMA

Geospatial Data Coordination

■ FEMA Geospatial Data Coordination Policy signed in August 2005

- Establishes the principles for coordinating, communicating, documenting, and reporting existing and proposed geospatial data collected, produced, or manipulated under FEMA's Map Modernization
- Enables data sharing and secondary data use
- <https://hazards.fema.gov> – “Tools and Links” tab



The screenshot displays the FEMA Mapping Information Platform website. The header includes the title 'Mapping INFORMATION PLATFORM' and the FEMA logo. A navigation bar contains links for 'Home', 'Map Modernization', 'News & Events', 'Public Reports', 'Map Viewer', and 'Contact Center'. The 'Tools and Links' tab is highlighted with a red box. Below the navigation bar, the page content is organized into several sections:

- Tools & Links:** A section with a brief description of the FEMA's Flood Hazard Mapping web site.
- Resources for Mapping Partners:** A section containing sub-sections for 'Mapping and Engineering Tools' (listing DFIRM Production Tools, WISE, MIP Support Requests, User Access to Engineering Tools, and Mapping & Engineering Tools Training) and 'Additional Resources' (listing Geospatial Data Coordination Policy, Geospatial Data Coordination Implementation Guide, Federal Geospatial Data Coordination Contacts by State, Federal Mapping Program Factsheets, NDEP Project Tracker Web site, NDOP Project Tracker Web site, Hazard Catalog, and Metadata Profiles).
- MIP Web Services:** A section listing 'FEMA National Flood Map Web Service'.
- Resources for Homeowners:** A section listing 'Flood Hazard Mapping' (with sub-links for Information for Homeowners, FEMA Flood Map Store, National Flood Insurance Program, FloodSmart.Gov, Floodplain Management, Mitigation, and Hazards), and 'Ready.Gov'.
- Other Resources:** A section listing 'Flood Hazard Mapping' (with sub-links for Insurance Professionals & Lenders, Engineers and Surveyors, and Floodplain Managers), 'Hazards', 'The FEMA Flood Map Store', 'Multi-Hazard Mapping Initiative', 'FloodSmart.Gov', 'Ready.Gov', 'DisasterHelp.Gov', 'Mapping Needs Update Support System', and 'Monitoring Information on Contracted Studies'.

Geospatial Data Coordination Objectives

Flood Map
Modernization

- **Satisfy goals of FEMA's Geospatial Data Coordination Policy**
 - Maximize partnerships to acquire and produce geospatial data
 - Minimize redundant requests for Federal, State, and local data
 - Leverage existing coordination efforts at State and local levels
 - Comply with Federal requirements for geospatial data coordination and reporting

■ Better Coordination & Reporting

- Closer alignment to Pre-Scoping and Scoping Activities
- Updated MAS
- MIP and Project Trackers as source for Geospatial Coordination Reports
- Improved Leverage reporting in MIP Workflow (coming soon)

- **Geospatial Data Coordination Implementation Guide**
- **State Geospatial Data Coordination Procedures (SOPs)**
 - Best default state basemap
 - Ortho
 - Road Centerlines
 - Other data
 - State data inventories
 - Source of state contacts
 - Key state data stewards
 - State engagement
- **Federal Contacts by State**
- **Federal Mapping Program Fact Sheets**
- **NDEP & NDOP Project Trackers**
- **<https://hazards.fema.gov> (MIP Tools & Links)**

■ Semi-annual Geospatial Coordination Reports

- Fall 2006 Report posted to MIP Tools & Links page
- Leverage data
- 1200 Imagery and Elevation Datasets

■ Improved Tools on the MIP

- NDEP/NDOP Project Trackers
- Leverage Data entry in Workflow
- Metadata Validation



Home > Tools & Links

Geospatial Coordination Report

The Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) prepares biannual Geospatial Coordination Reports that describe the status of Map Modernization's geospatial data coordination at the Regional level in terms of the status of geospatial data investment leverage, and to provide information on where FEMA, the National Geospatial-Intelligence Agency (NGA), and other Federal agencies might have mutually beneficial data sets or planned data collection activities to facilitate data sharing or cost sharing.

Document Title	Adobe PDF 	Text Equivalent
Geospatial Coordination Report Fall 2006 (v1.2) Version: 1.2 Date: September 2006	Download (142 kb)	Download (14 kb)
Geospatial Coordination Appendix A (v.1.2) Version: 1.2 Date: September 2006	Download (622 kb)	Download (11 kb)
Geospatial Coordination Appendix B (v1.2) Version: 1.2 Date: September 2006	Download (180 kb)	Download (21 kb)
Geospatial Coordination Appendix C (v1.2) Version: 1.2 Date: September 2006	Download (1.46 mb)	Download (321 kb)

Last Updated: Monday, 30-October-2006 2:16 PM ET

Elevation Used

Risk Decile	Elevation Vertical Accuracy			Grand Total
	High	Medium	Low	
1	115 72.3%	24 15.1%	20 12.6%	159 100.0%
2	53 50.5%	22 21.0%	30 28.6%	105 100.0%
3	58 38.4%	30 19.9%	63 41.7%	151 100.0%
4	21 35.0%	13 21.7%	26 43.3%	60 100.0%
5	7 16.3%	10 23.3%	26 60.5%	43 100.0%
6	11 37.9%	5 17.2%	13 44.8%	29 100.0%
7	8 38.1%	1 4.8%	12 57.1%	21 100.0%
8	5 31.3%	0.0%	11 68.8%	16 100.0%
9	0.0%	0.0%	9 100.0%	9 100.0%
10	1 16.7%	0.0%	5 83.3%	6 100.0%
Total Count	279	105	215	599
Total Percent	46.6%	17.5%	35.9%	100.0%

Geospatial Data Coordination Guidance

Flood Map
Modernization

- ***FEMA Geospatial Data Coordination Implementation Guide*** has undergone a major update
- **Final Draft Available**
- **Provides direction to mapping partners on geospatial data discovery and documentation**
 - Search inventories
 - Talk to Feds
 - Talk to State
 - Talk to locals
 - Requires documentation for any State or local terrain or imagery to be used or acquired for a FEMA project in the NDEP/NDOP Project Tracker
- **<https://hazards.fema.gov> – “Tools and Links” tab (coming soon)**



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