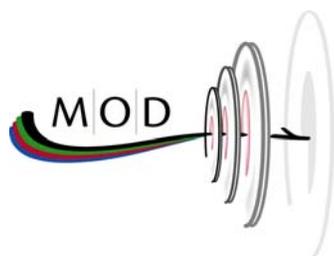


Geospatial Data Coordination Report

Fall 2007

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Revision History

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1.1	June 16, 2006	Geospatial leverage status	J. McCarty
1.2	August 30, 2006	Updates Spring 2006 report	J. McCarty
2.0	April 13, 2007	Updates Fall 2006 Report	J. McCarty
2.1	Sept 21, 2007	Updates Spring 2007 Report	J. McCarty

Approvals

This document requires the approval of the following persons:

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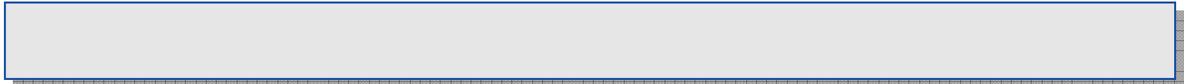


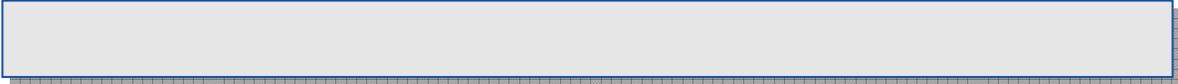
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Appendix A: Geospatial Data Leveraged by FEMA

Appendix B: FEMA Data Collection in U.S. Urban Areas

Appendix C: Elevation and Imagery Data Available from FEMA



1. Introduction

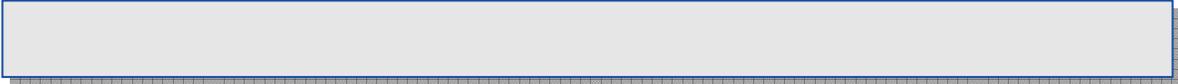
The Department of Homeland Security's (DHS's) Federal Emergency Management Agency (FEMA) has developed a Geospatial Data Coordination Policy (Maurstad, 2005) that establishes the principles for coordinating, communicating, documenting, and reporting existing and proposed geospatial data collected, produced, or manipulated under FEMA's Map Modernization Program. The purpose is to facilitate data sharing and secondary data use.

The primary goals of this policy are to ensure that the Map Modernization Program will:

1. protect its investments in geospatial data by requiring data to be documented, standard-compliant, and easily accessible to the general public when appropriate and release of the data does not pose a security risk;
2. maximize the use of partnerships, including Federal, State and local partners, for the acquisition and production of geospatial data;
3. minimize duplicative requests from Federal agencies to State and local data stewards;
4. recognize the value of existing coordination efforts at the State and local levels; and
5. comply with all Federal requirements for coordination and reporting of geospatial activities.

Through *Circular A-16* the Office of Management and Budget (OMB) directed Federal agencies that produce, maintain, or use spatial data, either directly or indirectly, to participate in the development of the National Spatial Data Infrastructure (NSDI). The goals of the NSDI are to reduce duplication of effort among agencies; improve quality and reduce costs related to geographic information; make geographic data more accessible to the public; increase the benefits of using available data; and establish key partnerships with States, counties, cities, tribal nations, academia and the private sector to increase data availability.

FEMA supports the requirements, guidance and standards provided by the Federal Geographic Data Committee (FGDC) and the e-Government initiative goals of the Geospatial One-Stop that implement the NSDI.



2. Summary

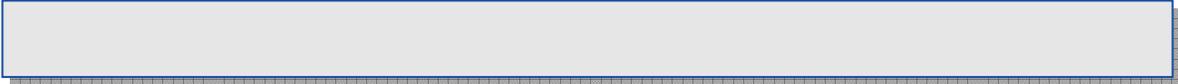
This report has two primary purposes. The first is to provide a summary of the two most critical types of geospatial data for Map Modernization. Elevation and imagery data sets collected or produced by FEMA's Map Modernization Program are listed to provide Federal Agency members of the National Digital Elevation Program (NDEP) and the National Digital Orthophoto Program (NDOP) information where FEMA may have mutually beneficial data sets or planned data collection activities that may be integrated into other national data sets. Listings of these data sets are provided in Appendices B and C of this report. The second purpose is to provide a summary of the funds spent by FEMA on elevation and imagery data and the value of geospatial data investments provided by other Federal, State, and local government agencies that have been leveraged by the Map Modernization Program. Summary information of geospatial data leverage is provided below in Section 2.1 and leverage by FEMA Region is provided in Appendix A. This report is updated on a semi-annual basis occurring in the Spring and Fall.

2.1. Geospatial Data Leverage Status

The leverage of existing geospatial data from locals, States, and other Federal Agencies is an important component to the success of Map Modernization. It is also important for FEMA to report the value of the leveraged data to DHS and OMB to illustrate FEMA's success in taking advantage of existing data sets.

Leverage is reported here in approximate dollar values for elevation data and imagery data. Appendix A provides the estimated total leverage values for each data category for each FEMA Region. These totals were derived from estimated leverage values reported in the 3rd Quarter 2007 Cooperating Technical Partner (CTP) Leverage Report and leverage contribution values reported for MIP project data development task assignments. Projects that leveraged partner data that were not tracked through CTP leverage reporting or by the MIP are computed with a standard value assigned to each data set used on a Map Modernization project and inventoried in this report. FEMA contributions to topographic data development for Map Modernization are also provided as a summary of FEMA funds spent on framework geospatial data.

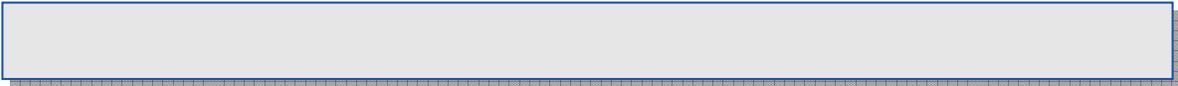
The U.S. Army Corps of Engineers (USACE) partnered with FEMA to investigate their geospatial data holdings and identify terrain data that might be used for FEMA's Flood Map Modernization. The total value of the data identified was estimated at \$2.9M.



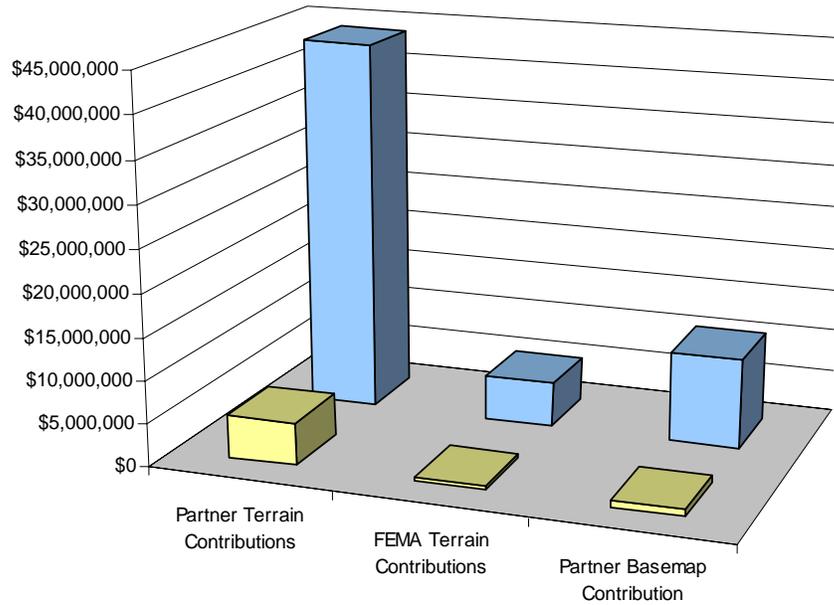
The leverage values are estimates of the cost FEMA would typically incur to acquire the data through traditional contractor mechanisms. Data acquisition costs that were used to compute leverage values for each data category are based on estimated average costs to acquire base map and topographic data in FEMA's Regions:

- Topographic Mapping
 - \$421 per square mile for 4' contours, or higher resolution
 - \$105 per square mile for 5' – 10' contours
 - \$50 per square mile for other elevation data
- Base Map Acquisition
 - \$16 per panel for USGS DOQs with minimum features
 - \$452 per panel for local orthophotos with maximum features

Figures 1 & 2 provide a comparison of the leverage information collected for the Spring 2007 report and the current leverage information to date for projects funded through Fiscal Year 2007. The increase in estimated leverage is largely due to contributions by FEMA's CTPs as well as additional high quality topographic and base map data used in projects since reported in the Spring 2007 report. Since FEMA does not typically fund base map data collection, Figure 1 only includes base map contributions leveraged from partners.



Cumulative Data Contributions With Change Since Spring 2007



	Partner Terrain Contributions	FEMA Terrain Contributions	Partner Basemap Contribution
■ Increase Since Spring '07	\$5,006,481	\$119,049	\$736,996
■ Total Contribution	\$43,877,850	\$5,165,605	\$10,522,214

Figure 1. Fall 2007-vs.- Spring 2007 Data Leverage Comparison

Fall 2007
Cumulative Basemap and Terrain Contribution Values
\$59,565,669

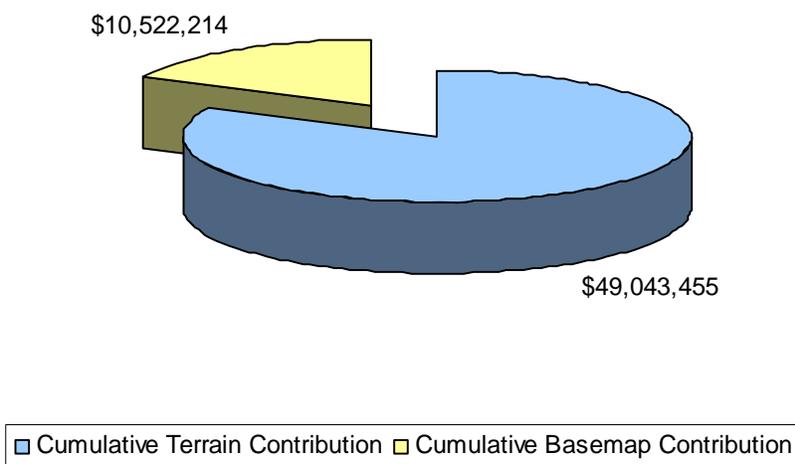
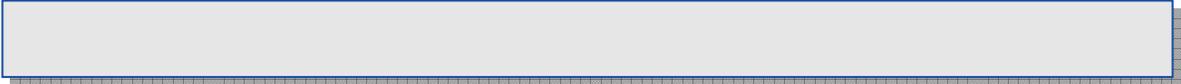


Figure 2. Cumulative Leverage Contribution Comparison

2.2. Available Data

Where has FEMA discovered data? Where does FEMA plan to produce DFIRMs in the near future? Where is there data that the USGS can incorporate into the National Elevation Dataset? Where are there basemap data sets that Census could use for TIGER/MAF modernization? Where are there imagery data sets that the National Digital Orthophoto Program partner agencies might be interested in? Where are there elevation data sets that National Digital Elevation Program partner agencies might be interested in? And where do these areas possibly intersect the NGA/USGS 133 Urban Area data development initiative? These are the questions answered in the tables and maps provided in **Appendix B** of this report. Answering these types of questions is intended to lead to opportunities to share data or share data development costs with NGA and the USGS.

FEMA has inventoried over 840 elevation data sets and over 600 imagery datasets that may be of interest to its partners. This increase in data collection over the previous Spring 2007 report was expected as the majority of the funding for Fiscal Year 2007 projects did not occur until midway through 2007. As part of the Map Modernization Program, FEMA has developed the Mapping Information Platform (MIP), a Web-based enterprise project management portal that enables the



management, production, extraction, and sharing of FEMA’s Map Modernization data. The MIP stores both final and intermediate geospatial data, which allows FEMA’s partners to search for metadata artifacts and retrieve geospatial data sets that may be useful to their projects. Registered MIP users may download these data directly from the MIP by searching metadata records registered with the MIP’s Content Manager, which catalogs all geospatial information stored on the MIP. Orthoimagery and Elevation data sets that are currently available for download from the MIP at www.hazards.fema.gov are listed in Appendix C, “Elevation and Imagery Data Available from FEMA”, of this report.