

# State Business Plan for New Mexico

---

## EXECUTIVE SUMMARY

The Federal Emergency Management Agency's (FEMA's) flood hazard maps are one of the essential tools for flood hazard mitigation in the United States. Unfortunately, many of these maps have become outdated, and significant areas of the country remain unmapped. To address this problem, the President budgeted funds initiating FEMA's National Map Modernization Program.

FEMA Region VI staff in Denton, Texas currently handles overall management of the New Mexico Map Modernization Program. They lead capacity mapping study activities with assistance from the National Service Provider (NSP) through FEMA Headquarters. As the Program Manager, NPS develops, plans, manages, implements, and monitor the Flood Map Modernization Program for flood hazard mitigation across the United States and its territories. NSP also coordinates with FEMA to work with state, local, and other Federal partners in developing digital flood hazard data for the entire United States. The goal of NSP is to support FEMA's strategic and program objectives.

*Four key program components include:*

- *Development of a geospatial data collection and delivery system within one year of the final contract award to manage flood hazard data and, in the future, multi-hazard data.*
- *Establishment of a continually improving Program Management Office to direct and monitor program activities.*
- *Expansion of support for community partners through technical support, training, and incentives for program participation.*
- *Providing risk communications to educate the public about reducing their vulnerability to floods and other hazards.*

The State of New Mexico Flood Map Modernization Case Plan – FY2005 Update serves as the State's "notice of interest" of continued participation in Flood Map Modernization activities. This Case Plan has been prepared to assist FEMA in the development of regional and national plans for implementing the Map Modernization Program. This Case Plan summarizes the role that New Mexico intends to play in completing the required mapping activities and how these activities will be managed and performed; it also identifies mapping priorities and outlines an approach for addressing these priorities.

The State of New Mexico's vision is to have an increased role in the Map Modernization Program. As part of the vision, New Mexico Department of Public Safety/Office of Emergency Management (DPS/OEM) has formed partnerships among State and Federal Agencies, local communities and tribal entities, professional associations, with FEMA to assess, inventory, acquire, and distribute data required to support the planning and development of flood mapping. The intent is to further the goal of providing the State of New Mexico with an ongoing coordinated flood-mapping program. Having such a program will help to ensure that the most current and accurate geospatial data will be made available to local communities and citizens of New Mexico. In addition, the State

## State Business Plan for New Mexico

---

partnered with Earth Data Analysis Center (EDAC) through the MMMS FY 2005 FEMA grant for a State of New Mexico Multi-Hazard Flood Map information and data center as one means of sustaining the State's intent to provide an ongoing coordinated flood-mapping program.

The State's vision for participation in Map Modernization Program includes DPS/OEM as the lead Flood-Mapping Program Coordinator, with EDAC serving as Mapping Coordinator, to facilitate Inter-Agency participation, and potentially hiring additional support staff, if funding permits.

*The State of New Mexico Flood Map Modernization Case Plan activities include:*

- *Annual State Business Plan Updates*
- *NFIP Compliance Efforts*
- *Outreach*
- *Assist in Identifying Study/Restudy Needs*
- *Producing Digital Base Map Inventory with Out Source Contractor*
- *Technical Standards Agreements*
- *Other activities might include the development of a Flood Mapping Task Force initiated through the New Mexico Floodplain Managers Association (NMFMA).*

The State also plans to increase its role in Map Modernization Program for 2005 based on funding from FEMA Region VI.

*Such funds will be used to support but are not limited to, the following activities:*

- *Develop and implement a program for administrative and management activities.*
- *Initiate three county studies (Chaves, San Juan, and Valencia) by the end of 2006.*
- *Contract for additional support services as needed.*

For Fiscal Year (FY) 2005, the State of New Mexico, has committed to provide for additional staff to assist in increased involvement in Map Modernization by identifying a 25 percent soft match cost share. The cost share would be met in the form of a match with administrative time spent to hire someone for the position, providing State benefits, and covering their overhead costs (i.e., office space, office equipment, etc.) and travel expenses. It is estimated that the cost share for a FTE staff contractor under MMMS would be approximately \$65,000.

*The breakdown of the cost share would be as follows:*

- FEMA — \$48,750 @ 75%
- State — \$16,250 @ 25%
- Total FTE Cost Share — \$65,000

# State Business Plan for New Mexico

---

---

## MAP MODERNIZATION STATE BUSINESS PLAN CERTIFICATION

Organization: **New Mexico Department of Public Safety/Office of Emergency Management**

I, \_\_\_\_\_, hereby certify that the information submitted in this Business Plan is true and as accurate as possible, to the best of my knowledge and professional expertise and experience.

Signed this \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, upon my oath or affirmation representing the State of New Mexico.

---

**Tim Manning**  
State Director of Emergency Management  
New Mexico Department of Public Safety  
Office of Emergency Management

---

**Date**

---

**Frank Pagano, Division Director**  
Federal Insurance and Mitigation Division  
Federal Emergency Management Agency

---

**Date**

# State Business Plan for New Mexico

---

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
MAP MODERNIZATION STATE BUSINESS PLAN CERTIFICATION .....	iii
SECTION 1: STATE VISION FOR SUPPORTING MAP MODERNIZATION PROGRAM.....	1
1.1 Current State NFIP Resources and Efforts .....	1
1.2 State Vision for Participation in Map Modernization.....	5
SECTION 2: NEEDS AND PLAN/STRATEGY.....	6
2.1 Project Description.....	6
2.1.1 State Agency Capability and Capacity Requirements .....	7
2.1.2 State/Local/Regional Agency Partners .....	8
2.1.3 FEMA Involvement .....	8
2.2 Program Justification .....	9
2.2.1 Program Administration and Management.....	9
2.2.2 Proposed Mapping Projects .....	10
2.3 Project Management Plan .....	13
2.3.1 Project Timeline/Resources/Staffing .....	13
2.3.2 Deliverable(s).....	14
2.3.3 Reporting.....	14
2.3.4 Quality Assurance.....	14
SECTION 3: PERFORMANCE GOALS/COST AND SCHEDULE MEASURES (TRACKING) .....	15
3.1 Performance Goals/Cost and Schedule Measures.....	15
SECTION 4: ALTERNATIVES/VARYING FUNDING LEVELS .....	17
4.1 State and Local Funding .....	17
4.1.1 Participation Alternatives and Funding Level .....	17
4.1.2 MMMS Participation .....	18
4.1.3 FEMA Funding .....	19
4.1.4 Available State or Local Match .....	21
4.1.5 Earth Data Analysis Center MMMS FY-05/06 Deliverables .....	21

## APPENDICES

Appendix A	November 20, 2003, State Stakeholder Meeting Attendees and November 24, 2003 Second State Stakeholder Meeting At
Appendix B	MMMS FY 2005 Grantee Authorization Letter

# State Business Plan for New Mexico

---

## TABLES

- 1 MHIP: Detailed Production Report - Sequencing by County
- 2 Performance Metrics for Future Years of Map Modernization
- 3 EDAC's Proposed Five-Year Floodplain Mapping Contract Budget
- 4 EDAC Deliverables, MMMS FY-05/06 Deliverables

## FIGURES

- 1 New Mexico Department of Public Safety/Office of Emergency Management Organization
- 2 Age of Effective Map Panels for New Mexico Communities

# State Business Plan for New Mexico

---

## SECTION 1: NEW MEXICO'S VISION FOR SUPPORTING MULTI-HAZARD FLOOD MAP MODERNIZATION (MAP MOD)

### 1.1 *Current State NFIP Resources and Efforts*

The State of New Mexico's participation in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP) is led by the New Mexico Department of Public Safety/Office of Emergency Management (DPS/OEM) Floodplain Management Program. The purpose of the DPS/OEM Floodplain Management Program is to promote the public health, safety, and general welfare and to minimize public and private losses due to flood conditions.

*This is currently accomplished through visiting communities (towns, cities, and counties) participating in the NFIP to:*

- *provide general and technical assistance, conducting training and educational workshops;*
- *provide information to the public regarding the NFIP and floodplain management; and*
- *provide assistance for mitigation during the recovery phase of a disaster operation.*

The DPS/OEM has been authorized to perform these duties under New Mexico Statutes 1978- Annotated, Chapter 3, Section 3-18-7, to enact and enforce land use measures that will prevent and alleviate flood hazards and losses in flood prone areas of the State and for other purposes.

Figure 1, lists the bureaus within the DPS/OEM. Mr. William Borthwick, with the Recovery and Mitigation Bureau, is the State NFIP Coordinator, and currently provides primary responsibility for the NFIP in New Mexico. His current activities related to updating floodplain maps are conducted under FEMA's Community Assistance Program. Following Figure 1 is a summary of the NFIP-related activities in progress conducted by the DPS/OEM and other State agencies.

# State Business Plan for New Mexico

---

**Figure 1. New Mexico Department of Public Safety/Office of Emergency Management Organization - Department Secretaries and Bureau Chiefs**

**NM Department of Public Safety**

- John Denko, Jr, Cabinet Secretary
- Tim Manning, Deputy Secretary

**NM Office of Emergency Management (OEM)**

- Susan Walker, Interim Director

➤ **Preparedness Bureau**

Bob Redden, Bureau Chief

➤ **Recovery & Mitigation Bureau**

Susan Walker, Mitigation & Program Bureau Chief

William Borthwick, State Floodplain Coordinator

Bill Ewing, Recovery Unit Leader

➤ **Response & Emergency Operations Bureau**

Bureau Chief (position vacant)

➤ **Grants & Administration Bureau**

Susan Walker, Bureau Chief

## State Business Plan for New Mexico

---

### **Coordination Activities In-progress**

The DPS/OEM provides coordination activities with local communities within the State. Currently, the DPS/OEM coordinates community contact meetings, community NFIP training, and discussions with the community regarding mapping projects. The State has recently adopted a new State statute requiring any community not currently in the NFIP to join the Program. Recent training has been conducted for those communities that are not currently in the NFIP. DPS/OEM NFIP activities include attending initial and final coordination meetings and attending FEMA training.

In a letter dated August 1, 2005 from Mr. Gary Jones, Acting Regional Director approved the States request authorizing Earth Data Analysis Center (EDAC), University of New Mexico (UNM), to serve as the grantee for the FY 2005 Map Modernization Management Support (MMMS) program. See Appendix B.

For FY 2005 EDAC will server as the Flood Mapping Coordinator for DPS/OEM. EDAC will coordinate and host meetings to assess community mapping needs and provide users' access to FEMA Floodplain Maps and data. As an organization, EDAC provides services in geospatial technologies and has been a leader in technical assistance for a wide range of uses since 1964, whose goal is to assist industry, government, and the general public in applications of spatial and spectral technology. EDAC is the lead organization of the New Mexico Resource Geographic Information System (RGIS) Program and data Clearinghouse Services.

RGIS is a cooperative program between UNM and the State of New Mexico Information Technology Commission (ITC). RGIS is dedicated to advancing applications of geographic information system technology within New Mexico's State agencies, local governments and the private industry. RGIS provides access to data, and identifies training centers, and technical support for geographic information users. The RGIS team and program management is comprised of two UNM public service and research units: EDAC and the Bureau of Business and Economic Research (BBER). Program components include: on-line clearinghouse for digital geospatial data services; database development; technical support, and geographic information coordination; and coordination and support for state agencies and local government through the GISAC.

EDAC and the RGIS Program also participate in and provide support to the Geospatial Advisory Committee (GAC), a standing committee of the Office of Chief Information Officer (OCIO). The mission of GAC is as follows: to provide a forum for state and local governments to coordinate geographic information systems in New Mexico state government; develop policy recommendations and guidelines concerning geographic information systems in New Mexico state government; and share geographic information among all government agencies and the public.

### **Flood Studies and Map Production Activities In-progress**

The NFIP State Coordinator currently works with FEMA Region VI for prioritizing studies within the State. The State does not currently conduct or contract flood studies, nor is it actively involved in the engineering or mapping for flood hazard map development in New Mexico.

## State Business Plan for New Mexico

---

### *Map Production Activities In-progress:*

- *In September of 2005 the preliminary maps for Bernalillo county were completed.*
- *Prior to the end of 2006 the production of digital base maps for three county (Chaves, San Juan, and Valencia) studies will be initiated. Refer to Table 1. the MHIP: Detailed Production Report - Sequencing by County for sequencing of the remaining New Mexico counties.*
- *The City of Las Cruces and Doña Ana County continue to participate in the program as Cooperating Technical Partners (CTP) within the State.*

### **NFIP Activities In-progress and Criteria**

New Mexico Statutes 1978 – Annotated, Chapter 3, Section 3-18, establishes the State’s Floodplain Program. The State’s current Map Modernization activities include outreach programs to encourage local communities to participate in NFIP activities. The State also participates in initial and final coordination meetings and attends FEMA NFIP training.

The New Mexico Floodplain Management Association (NMFMA), which was formed in 1995, is a non-profit organization that is open to all persons involved in floodplain management and related disciplines in the State of New Mexico.

### *The purpose of the Association is to:*

- *promote public awareness of proper floodplain management; promote the professional status of floodplain management and secure all benefits resulting there from;*
- *promote a liaison between individuals concerned with proper floodplain management and to encourage the exchange of ideas; The initiative by NMFMA to be appointed by Governor Richardson to the Coordinated Resource Management (CRM) program. Three issues to be addressed at the NMFMA 2005 Fall Conference:*
  - *Topographic maps. Good topographic maps are needed for good floodplain maps. Coordinated mapping efforts among all agencies in New Mexico could increase the amount of high-quality mapping available for all purposes.*
  - *Hydrologic data. Hydrology used for estimating the 100-year flood on streams is based on historic streamflow and rainfall data in New Mexico. A coordinated effort to manage and increase the amount of data will improve flood hydrology over time.*
  - *GIS is a powerful tool that can enable community floodplain managers to do a better job and make floodplain information available to other agencies that need it.*
- *keep individuals concerned with proper floodplain management well informed through educational and professional seminars and to provide a method for dissemination of information, both general and technical;*
- *inform concerned individuals of pending floodplain legislation and other related management matters; and*

# State Business Plan for New Mexico

---

- *study and support legislation pertinent and necessary to the effective implementation of floodplain management matters.*

To accomplish these purposes, the NMFMA conducts meetings and conferences, distributes a newsletter and works with the New Mexico Department of Public Safety, and FEMA. The membership also includes private citizens and staff members of State and Federal government agencies who work in floodplain management.

## **1.2 State Vision for Participation in Map Modernization**

New Mexico plans to expand its role from that identified in the 2004 Map Modernization Plan. The plan stated that the State of New Mexico was not in a position to provide staff resources in the foreseeable future to lead efforts to refine the State's mapping needs and will primarily provide guidance and assistance concerning data-collection activities. New Mexico's five-year vision for participation in Map Modernization Management Support program. However, as part of the State's vision for participation in the MMMS, New Mexico Department of Public Safety/Office of Emergency Management (DPS/OEM) plans to form partnerships among State and Federal Agencies, local communities and tribal entities, professional associations, with FEMA to assess, inventory, acquire, and distribute data required to support the planning and development of flood mapping. The intent is to further the goal of providing the State of New Mexico with an ongoing coordinated flood-mapping program. Having such a program will help to ensure that the most current and accurate geospatial data will be made available to local communities and citizens of New Mexico. In addition, as one means of sustaining the State's intent to provide an ongoing coordinated flood-mapping program the State has partnered with Earth Data Analysis Center (EDAC) to operate a State of New Mexico Multi-Hazard Flood Map information and data center.

*Activities that the State would undertake under this five-year vision include:*

- *Annual State Business Plan Updates*
- *NFIP Compliance Efforts Related to Updated Mapping*
- *Conducting Outreach*
- *Assist in Identifying and prioritizing Study/Restudy Needs*
- *Technical Standards Agreements*
- *Development of a Flood Mapping Task Force initiated through the NMFMA*

# State Business Plan for New Mexico

---

## SECTION 2: NEEDS AND PLAN/STRATEGY

### 2.1 *Project Description*

The State of New Mexico proposes to increase its level of participation in National Map Modernization effort. In a letter dated August 1, 2005 from Mr. Gary Jones, Acting Regional Director approved the States request authorizing Earth Data Analysis Center (EDAC), University of New Mexico (UNM), to serve as the grantee for the FY 2005 Map Modernization Management Support (MMMS) program. See Appendix B. On August 22, 2005 a site visit was made to EDAC by Mr. James Orwat, Project Officer, and Barbara Shipp, Map Mod Program Specialist, to discuss the role and responsibilities of the State Mapping Coordinator.

For FY 2005 EDAC will server as the Flood Mapping Coordinator for DPS/OEM. EDAC will coordinate and host meetings to assess community mapping needs and provide users' access to FEMA Floodplain Maps and data. The specific extent of planed activities, capability and capacity for managing the Flood Map Modernization efforts, will in-part, depend upon funding availability from FEMA. Partnership agreements will be used to detail the scope of activities that New Mexico will coordinate or perform. The State's plans are to develop or maintain the following activities:

**Annual State Business Plan Updates.** The State, with assistance from EDAC, will prepare an annual update to its 5-year Map Modernization Business Plan. This may include developing or updating a statewide mapping plan.

**NFIP Compliance Efforts Related to Updated Floodplain Mapping.** The State and FEMA will work with communities to update their ordinances as necessitated by updated FIRMs and also support communities in utilizing the updated data for floodplain management.

**Assessment of Community Mapping Needs (to support FEMA's MNUSS).** The State and state contractor will perform a detailed community-by-community assessment of mapping needs for every mapped (including flood data updates and map maintenance) and unmapped NFIP community within its jurisdiction. The State and State Contractor will then input the results of the assessment in FEMA's web-based MNUSS database.

**Outreach.** The State will participate in community outreach by providing informational mailings, conducting and attending community meetings, and preparing/ producing/ performing multi-media promotion. The State of New Mexico will play an important role in community coordination and outreach efforts throughout the study process.

**Assist in Identifying Study/Restudy Needs.** The State will assist FEMA in identifying communities/counties that are in need of re-studies.

# State Business Plan for New Mexico

---

**Producing Digital Base Map Inventory of Area.** The State, EDAC, and FEMA Region VI will prepare an inventory of available base maps for use in producing DFIRMs. The base map will comply with FEMA minimum accuracy requirements and be distributable by FEMA to the public in hardcopy and electronic formats.

**Technical Standards Agreements.** The State and State Contractor will work with FEMA to adopt specific technical standards or processes appropriate for local conditions for NFIP flood mapping purposes.

## **2.1.1 State Agency Capability and Capacity Requirements**

Currently the State's National Flood Insurance Program (NFIP) Coordinator, Mr. Bill Borthwick, provides primary responsibility for the NFIP in New Mexico. The current activities related to updating floodplain maps are conducted under FEMA's Community Assistance Program.

DPS/OEM currently has limited capacity to perform additional tasks in support of Map Modernization. Therefore, if the State takes on additional responsibilities, a staff member will need to be hired, and/or EDAC, serving as Mapping Coordinator, will be needed to assist the NFIP Coordinator with daily operations, project coordination, reporting, and communication and state plan responsibilities. This additional support would also help coordinate Map Modernization related work being conducted by other State and Federal agencies.

Since the State does not have the technical capabilities to perform detailed hydrologic and hydraulic analyses and QA/QC review, the State is interested in potentially hiring their own contractor for developing hydrologic and hydraulic studies in New Mexico. The DPS/OEM would manage this contract. FEMA has provided guidance for CTPs, and it is assumed that the State would need to meet those requirements when utilizing their own contractor for hydrologic and hydraulic analyses.

*According to FEMA's Cooperating Technical Partners Guidance Document Fiscal Year 2004, for the State to conduct state-specific mapping projects as CTPs, the State must meet the following criteria:*

- Flood Mapping Partners must have existing processes and/or systems in place to support mapping or data collection activities that contribute to flood hazard identification. These processes and/or systems must be supported by non-Federal funding.
- Flood Mapping Partners must have the capability to perform the mapping activities for which it is applying. This capability may be indicated through (but not limited to) a FEMA Regional Office review of both the map products previously prepared by the Partner and the existing map production processes or systems the Partner intends to use for CTP-related mapping activities.

# State Business Plan for New Mexico

---

- Potential Flood Mapping Partner must be a community that participates in the NFIP and is in good standing in the Program as determined by the FEMA Regional Office, or be a State or regional agency that serves communities that participate in the NFIP.
- Flood Mapping Partners that receive funding from FEMA through a Cooperative Agreement must be able to perform the financial management activities required as part of the Cooperative Agreement (i.e., account for Federal funds, prepare financial reports). FEMA Regional Offices will assist Partners with these financial management activities.

## **2.1.2 State/Local/Regional Agency Partners**

The State is currently pursuing the development of inter-agency agreement; however, the State is interested in pursuing these partnerships in the future with other agencies, tribal entities, and New Mexico Flood Study Contractors. The task of pursuing these partnerships will be EDAC's responsibility as the Mapping Coordinator.

In addition, the New Mexico Department of Transportation produces flood analyses (100-year storm) for all new bridge construction in the State. This information may be used for conducting/supplementing flood studies or may be used as an indication for the need of a study for a particular region in the State.

The DPS/OEM has formed and/or is interested in forming a multi-agency partnership in the future with other State agencies. The agencies that would be involved in the Map Modernization partnership include the Office of the State Engineer (OSE), the New Mexico Department of Transportation (NMDOT), the Earth Data Analysis Center (EDAC), University of New Mexico (UNM), the US Geological Survey (Water Resources Division), the City of Santa Fe, and the New Mexico Floodplain Managers Association (NMFMA).

## **2.1.3 FEMA Involvement**

Since the State does not have the technical capabilities to perform detailed hydrologic and hydraulic analyses and QA/QC review, the FEMA Regional Indefinite Delivery-Indefinite Quantity (IDIQ) Contractors and CTPs will still be utilized for conducting the flood studies in New Mexico. The Region may also use assistance from the FEMA National Service Provider (NSP). The NSP serves as the Program Manager to develop, plan, manage, implement, and monitor the Multi-Hazard Flood Map Modernization (MHFMM) Program for flood hazard mitigation across the United States and its territories. The NSP also coordinates with FEMA to work with state, local, and other Federal partners to develop digital flood hazard data for the entire United States. The goal of the NSP is to support FEMA's strategic and program objectives.

# State Business Plan for New Mexico

---

FEMA Regional VI IDIQ contracts, CTP grants, and Inter-Agency Agreements will be the resources used to handle the bulk of study contract work. Close coordination between the FEMA NSP, FEMA Region VI, the IDIQ and other contractors, the State, and communities will be an important aspect of this effort.

## **2.2 Program Justification**

The Federal Emergency Management Agency's (FEMA's) flood hazard maps are one of the essential tools for flood hazard mitigation in the United States. Unfortunately, many of these maps have become outdated, and significant areas of the country remain unmapped. To address this problem, funds were provided to initiate FEMA's National Map Modernization Program.

The State of New Mexico's vision is to have an increased role in the Map Modernization Program. As part of the vision, New Mexico Department of Public Safety/Office of Emergency Management (DPS/OEM) plans to form partnerships among State and Federal Agencies, local communities and tribal entities, professional associations, with FEMA to assess, inventory, acquire, and distribute data required to support the planning and development of flood mapping. The intent is to further the goal of providing the State of New Mexico with an ongoing coordinated flood-mapping program. Having such a program will help to ensure that the most current and accurate geospatial data will be made available to local communities and citizens of New Mexico. In addition, as one means of sustaining the State's intent to provide an ongoing coordinated flood-mapping program, the State partnered with Earth Data Analysis Center (EDAC) to provide support services for a State of New Mexico Multi-Hazard Flood Map information and data center.

### **2.2.1 Program Administration and Management**

#### **Achievement of Map Modernization Goals**

Forming a partnership among New Mexico State agencies and local communities with FEMA to make data available for use in Map Modernization will help to produce better maps at a lower cost. In addition, one of the key objectives of the FEMA Map Modernization Plan is to increase local involvement in, and ownership of, the flood mapping process. These partnerships will also involve the local community participating in the mapping project at a level that has not been seen in the past.

#### **Existing Staff Capabilities and Resources**

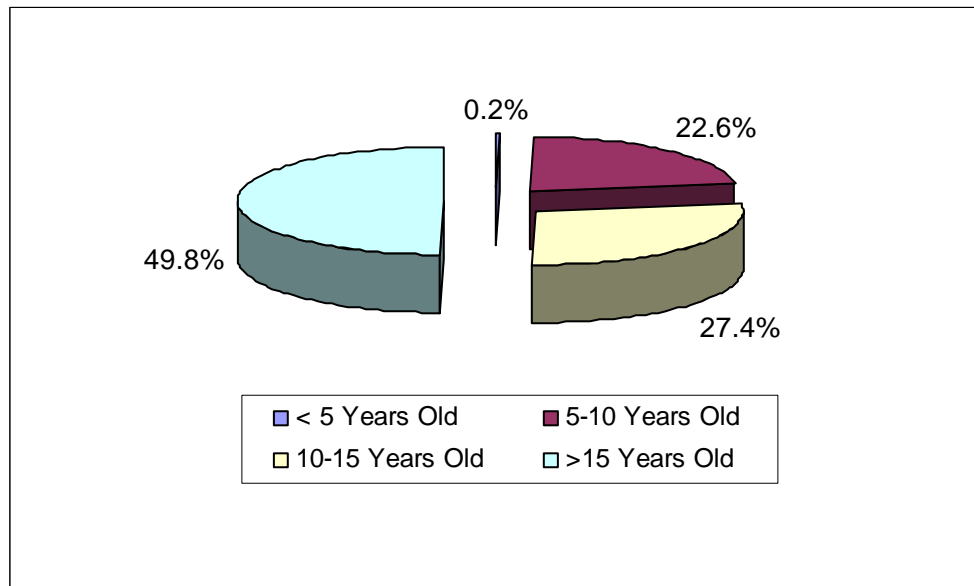
As discussed in Section 2.1.1, the State currently does not have adequate staff to undertake additional Map Modernization administrative and management activities. Currently only the State NFIP Coordinator is involved in floodplain mapping activities and this staff is currently fully utilized for the current MMMS activities. EDAC will assist in undertaking the State's vision for administrative and management activities and to support floodplain mapping projects.

# State Business Plan for New Mexico

## 2.2.2 Proposed Mapping Projects

### Current Status of Maps

As shown in the Figure 2, most of the flood hazard maps in New Mexico are outdated. According to the updated 2003 State Business Plan, 77.2 percent of the effective map panels for communities in New Mexico are over 10 years old. In addition, many of the map panels contain Special Flood Hazard Areas that are based on hydrologic and hydraulic information that is often outdated.



**Figure 2.** Age of Effective Map Panels for New Mexico Communities

In many cases, the older maps reflect outdated flood hazard information that limits their utility for insurance and floodplain management purposes. Additionally, most of the maps were prepared using road network information and manual cartographic techniques that are now outdated. This makes the maps difficult for State and local customers to use and expensive for FEMA and the State of New Mexico to maintain. In addition, many communities in New Mexico have not been mapped by FEMA. Consequently, there are 21 unmapped communities (roughly 55 percent) within New Mexico.<sup>1</sup>

Currently, there are several ongoing New Mexico studies at FEMA. Table 1, MHIP: Detailed Production Report - Sequencing by County, as of April 8, 2005, shows the current and ongoing projections of production sequence and funding by County for FY-04 – FY08.

<sup>1</sup> 2002 New Mexico Business Plan

## State Business Plan for New Mexico

<b>Table 1. MHIP: Detailed Production Report - Sequencing by County*</b>										
		<b>Projection of Sequencing by Fiscal Year</b>			<b>Projection of Funding by Fiscal Year (\$1,000s)</b>					
<b>County</b>	<b>FIPS</b>	<b>First Funded</b>	<b>Preliminary</b>	<b>Effective</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>Total</b>
Bernalillo	35001	2003	2005	2006	\$529	\$100	\$0	\$0	\$0	\$629*
Catron	35003	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Chaves	35005	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
Cibola	35006	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Colfax	35007	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Curry	35009	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
De Baca	35011	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Dona Ana	35013	2004	2005	2006	\$348	\$100	\$0	\$0	\$0	\$448
Eddy	35015	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
Grant	35017	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Guadalupe	35019	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Harding	35021	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Hidalgo	35023	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Lea	35025	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
Lincoln	35027	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Los Alamos	35028	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
Luna	35029	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
McKinley	35031	2006	2007	2008	\$0	\$0	\$405	\$0	\$0	\$405
Mora	35033	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Otero	35035	2007	2008	2009	\$0	\$0	\$0	\$417	\$0	\$417
Quay	35037	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Rio Arriba	35039	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
Roosevelt	35041	2007	2009	2010	\$0	\$0	\$0	\$126	\$0	\$126
Sandoval	35043	2005	2006	2007	\$0	\$400	\$65	\$0	\$0	\$465
San Juan	35045	2006	2007	2008	\$0	\$0	\$503	\$0	\$0	\$503
San Miguel	35047	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Santa Fe	35049	2005	2006	2007	\$0	\$669	\$100	\$0	\$0	\$769

## State Business Plan for New Mexico

<b>Table 1. MHIP: Detailed Production Report - Sequencing by County*</b>										
		<b>Projection of Sequencing by Fiscal Year</b>			<b>Projection of Funding by Fiscal Year (\$1,000s)</b>					
<b>County</b>	<b>FIPS</b>	<b>First Funded</b>	<b>Preliminary</b>	<b>Effective</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>FY07</b>	<b>FY08</b>	<b>Total</b>
Sierra	35051	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Socorro	35053	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Taos	35055	2007	2008	2009	\$0	\$0	\$0	\$126	\$0	\$126
Torrance	35057	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Union	35059	2008	2009	2010	\$0	\$0	\$0	\$0	\$125	\$125
Valencia	35061	2006	2007	2008	\$0	\$0	\$330	\$86		

\* Dollars shown are projected for map production and do not necessarily reflect dollars that would be given directly to the county. Funding dates shown for FY05 and later are anticipated.

### **Mapping Priorities Identified by State**

*The criteria in use for determining mapping priorities was established during the November 20, 2003, New Mexico Map Modernization Stakeholder Meeting. At which time the State identified the following factors as priorities for updating the maps:*

- *Ongoing studies*
- *High growth areas*
- *Age of map*
- *Leveraging*
- *Fostering local community involvement and investment in mapping*

However, the New Mexico agreed with the Region's prioritization of studies. As of March 2, 2004 FEMA Region VI identified Bernalillo County, as the priority for Map Modernization in 2004.

### **Compliance with 2005 Performance Metrics**

As previously indicated, on November 20 and 24, 2003, the New Mexico State Stakeholder and State Planning Meetings were held, during which the State discussed Map Modernization and study priorities.

*Subsequent to these meetings, in November 2003, FEMA announced that the following will be the performance metrics for FY 05:*

- 1) 50 percent of population (as represented by communities) have digital GIS flood data available on line

## State Business Plan for New Mexico

- 2) 20 percent of population (as represented by communities) have adopted modernized GIS flood maps
- 3) 30 percent leveraged effort toward digital GIS flood hazard data
- 4) 25 percent of Map Modernization (appropriated) funding put through to CTPs (States and locals)

Table 2, shows the performance metrics for the future years of Map Modernization.

<b>Table 2. Performance Metrics for Future Years of Map Modernization</b>						
Elements	Targets					
	2004	2005	2006	2007	2008	2009
1. Percentage of population (as represented by communities) have digital GIS flood hazard data available on-line	20	50	65	75	85	100
2. Percentage of population (as represented by communities) have adopted modernized GIS flood maps	10	20	35	50	70	90
3. Percent of dollars leveraged effort toward digital GIS flood hazard data	20	30	40	45	50	55
4. Percentage of Map Modernization (appropriated) funding put through to CTPs (States and locals)	20	25	35	45	50	60

### **2.3 Project Management Plan**

This section provides project management information for each activity that the State plans to undertake.

#### **2.3.1 Project Timeline and Resources/Staffing**

It is the State's goal to implement the administration and management activities, obtain staff, and initiate three more studies by the end of 2006.

*These activities will be based on FEMA Region VI funding and include but are not limited to the following:*

- *Develop and implement a program for administrative and management activities.*
- *Initiate the production of digital base maps for three county (Chaves, San Juan, and Valencia) studies by the end of 2006.*
- *Initiate the production of digital base maps for nine county (McKinley, Curry, Eddy, Lea, Los Alamos, Otero, Rio Arriba, Roosevelt and Taos) digital base map inventory studies by the end of 2007.*

## State Business Plan for New Mexico

---

- *In addition, Table 1, MHIP: Detailed Production Report - Sequencing by County, as of April 8, 2005, shows the current and ongoing projections of production sequence and funding by County for FY-04 – FY08.*

It should be noted that the above goals and timeline may not meet the recently updated August 19, 2005 GPRA Performance Metrics.

The States request authorizing Earth Data Analysis Center (EDAC), University of New Mexico (UNM), to serve as the grantee for the FY 2005 Map Modernization Management Support (MMMS) program was approved by FEMA.

*The additional EDAC support would assist the current NFIP coordinator with the following tasks:*

- *Annual State Business Plan Updates*
- *NFIP Compliance Efforts related to updated mapping*
- *Entering Data Into MNUSS*
- *Outreach*
- *Assist in Identifying and prioritizing Study/Restudy Needs*
- *Producing Digital Base Map Inventory of State*
- *Technical Standards Agreements*

### **2.3.2 Deliverable(s)**

*The following are the deliverables the State will produce through the Map Modernization program efforts:*

- *Annual State Business Plan Updates*
- *Annual Documented NFIP Compliance Efforts*
- *Annual Documented Outreach Efforts*

### **2.3.3 Reporting**

The State Mapping Coordinator will submit quarterly status reports to FEMA Region VI. These plans will include all aspects of the study.

### **2.3.4 Quality Assurance**

The State will prepare all materials in conformance with FEMA's Guidelines & Specifications for Flood Hazard Mapping Partners.

# State Business Plan for New Mexico

---

## SECTION 3: PERFORMANCE GOALS/COST AND SCHEDULE MEASURES

At this time, the State of New Mexico has not developed a priority listing or identified any communities to be restudy candidates for updated Flood Insurance Studies under the Map Modernization Implementation Program. They have stated that they will accept the priorities identified by FEMA Region VI in order to meet the performance metrics established. However, in future updates to the Business Plan, the State may add their own priorities or assist the Region in determining their priority restudy candidates. See Section 2.2.2, for the FEMA Region VI FY 2005-2006 Map Modernization Priority for New Mexico.

### 3.1 Performance Goals/Cost and Schedule Measures

The following sections describe the State of New Mexico's goals and the performance measures identified to achieve these goals. The ability of the State to carry out these goals will be dependent on the level of funding received from FEMA.

#### Annual State Business Plan Updates

The State in cooperation with EDAC will prepare an annual update to its 5-year Map Modernization Business Plan. This may include developing or updating a statewide mapping plan.

*Performance Measure: Annual of Map Modernization Business Plan submitted to FEMA Region VI by the State Floodplain Administrator in accordance with FEMA Performance Metrics and availability of funding The Annual up-date will be accomplished September 30, 2006.*

#### NFIP Compliance Efforts Related to Updated Floodplain Mapping

The State recognizes the importance of up to date flood hazard information and supports the creation, maintenance, and dissemination of current DFIRMS. The State and FEMA will work with communities to update their ordinances as necessitated by updated FIRMS and also support communities in utilizing the updated data for floodplain management.

*Performance Measure: The State has indicated an interest in conducting this activity; however, it is not listed in the State's project timeline and cannot be assigned a performance measure at this time.*

#### Assessment of Community Mapping Needs

The State and State Contractor will perform a detailed community-by-community assessment of mapping needs for every mapped (including flood data updates and map maintenance) and unmapped NFIP community within its jurisdiction. The State and State Contractor will then input the results of the assessment in FEMA's web-based MNUSS database.

*Performance Measure: The State has indicated an interest in conducting this activity; however, it is not listed in the State's project timeline or milestones and cannot be assigned a performance measure at this time.*

# State Business Plan for New Mexico

---

## **Community Outreach**

The State in conjunction with FEMA will continue to participate in community outreach by providing informational mailings, community meetings, and multi-media promotion. The State of New Mexico will play an important role in community coordination and outreach efforts throughout the study process. However, the level of participation will depend on the level of FEMA funding for these activities. Note: some of these activities will be performed at New Mexico Floodplain Management Association (NMFMA) and other agency stakeholders meetings.

*Performance Measure: Based on funding under the MMMS program through FEMA and map modernization priorities, the State will continue to participate in community outreach activities. A complete list of these activities is included in Section 1 under **NFIP Activities and Criteria**. The State Floodplain Coordinator will continue to submit annual reports to FEMA outlining these efforts.*

## **Assist in Identifying Study/Restudy Needs**

The State will assist FEMA in identifying communities/counties that are in need of re-studies.

*Performance Measure: The State's goal is to initiate nine county (McKinley, Curry, Eddy, Lea, Los Alamos, Otero, Rio Arriba, Roosevelt and Taos) studies by the end of 2007. The State will need to work with FEMA in order to identify priorities within the state for these initial four studies.*

## **Producing Digital Base Map Inventory of Area**

The State, State Contractor, and FEMA will prepare an inventory of available base maps for use in producing a DFIRM. The base map will comply with FEMA minimum accuracy requirements and be distributable by FEMA to the public in hardcopy and electronic formats.

*Performance Measure: The State's goal is to initiate three county (Chaves, San Juan, and Valencia) studies by the beginning of 2006. In order to initiate these studies a digital base map inventory must be prepared.*

## **Technical Standards Agreements**

The State and State Contractor will work with FEMA to adopt specific technical standards or processes appropriate for local conditions for NFIP flood mapping purposes.

*Performance Measure: The State has indicated an interest in conducting this activity; however, it is not listed in the State's project timeline or milestones and cannot be assigned a performance measure at this time.*

# State Business Plan for New Mexico

---

## SECTION 4: ALTERNATIVES/VARYING FUNDING LEVELS

### 4.1 *State and Local Funding*

The State of New Mexico plans to participate in the “Full” alternative funding level over a 5-year period. Though, the level of participation and achievement will become better defined as the role of the State and EDAC, as the Flood Mapping Coordinator for New Mexico, evolve during the 2006-2010 time period and as staffing requirements can be met. As the Map Modernization process is initiated and continues, and the state becomes more trained and efficient in its role, the State anticipates transition into a fuller partnership in the Map Modernization process.

#### 4.1.1 *Participation Alternatives and Funding Level*

The State plans to increase their role in Map Modernization activities for 2005 - 2006.

*These activities will be based on FEMA Region VI funding and include but are not limited to the following:*

- *Develop and implement a program for administrative and management activities.*
- *Initiate the production of digital base maps for three county (Chaves, San Juan, and Valencia) studies by the beginning of 2006.*

The majority of flood hazard maps in New Mexico are outdated and are based on antiquated mapping techniques. The State has not developed a priority listing of counties; therefore, studies initiated in the first year will be based on FEMA Region VI goals.

The Earth Data Analysis, as the new Mapping Coordinator for New Mexico will coordinate with NMFMA county representatives to initiate nine county (McKinley, Curry, Eddy, Lea, Los Alamos, Otero, Rio Arriba, Roosevelt and Taos) digital base map inventory studies by the end of 2007. On-going or future coordination efforts will require a “Full” alternative funding level to continue to support the coordination of the flood mapping efforts for New Mexico to meet the Map Mod objectives. Refer to Table 2.

## State Business Plan for New Mexico

<b>Table 3. EDAC's Proposed Five-Year Floodplain Mapping Contract Budget **</b>							
<b>FY</b>		<b>2005-2006</b>		<b>2006-2007</b>	<b>2007-2008</b>	<b>2008-2009</b>	<b>2009-2010</b>
<b>Salary</b>	<b>Hours</b>		<b>Hours</b>				
<b>Geospatial Manager/ Coordinator</b>	1,040	\$30,255	1,560	\$47,642	\$50,029	\$52,525	\$55,146
<b>Information Technology and Programming Staff</b>	1,127	\$22,987	1,803	\$38,620	\$40,549	\$42,569	\$44,695
<b>Administrative Support Staff</b>	347	\$ 5,458	434	\$ 7,170	\$7,530	\$7,907	\$8,302
<b>Student/Research Assistants</b>	0	0	480	\$ 4,800	\$4,800	\$4,800	\$4,800
<b>Fringe Benefits (26.5%* of Salary)</b>		\$15,556		\$24,807	\$26,074	\$27,343	\$28,706
<b>Expendable Materials</b>		\$ 3,400		\$ 3,400	\$3,400	\$3,400	\$3,400
<b>Travel</b>		\$ 1,000		\$ 1,500	\$1,500	\$1,500	\$1,500
<b>System Support</b>		\$ 2,312		\$ 3,468	\$3,641	\$3,823	\$4,015
<b>Indirect Cost (50%* of salary)</b>		\$40,484		\$65,704	\$68,748	\$71,934	\$75,282
<b>Total Federal Support</b>	5,780	\$121,452		\$197,111	\$206,244	\$215,801	\$225,845
*Federal/University negotiated rate.							
**Assumes 5% annual cost of living increase							

### **4.1.2 MMMS Participation**

The State is requesting funding under the MMMS program for FY 2005 for map modernization participation. The State will conduct outreach and to promote floodplain management practices consistent with the intent of the NFIP. The State of New Mexico proposes to increase its level of participation in National Map Modernization effort. In a letter dated August 1, 2005 from Mr. Gary Jones, Acting Regional Director approved the States request authorizing Earth Data Analysis Center (EDAC), University of New Mexico (UNM), to serve as the grantee for the FY 2005 Map Modernization Management Support (MMMS) program. See Appendix B.

For FY 2005 EDAC will server as the Flood Mapping Coordinator for DPS/OEM. EDAC will coordinate and host meetings to assess community mapping needs and provide users' access to FEMA Floodplain Maps and data.

## State Business Plan for New Mexico

---

### 4.1.3 FEMA Funding

Based on the funding available from FEMA, the DPS/OEM will serve as the lead coordinator for the State's flood mapping program. EDAC will serve as Mapping Coordinator for FY 2005 and will work to facilitate Inter-Agency participation. The hiring of additional state contractors is also desired but will be based on the support of FEMA. The specific activities that the State will perform or manage and staff additions will depend upon the funding available from FEMA. The State will provide up to a 25 percent match of Federal funds from FEMA for administrative and management activities.

### 4.1.4 Available State or Local Match

After the State vision for Map Modernization are reviewed with FEMA, the State will implement the Map Modernization Program through FEMA's MMMS grant program. MMMS activities are strictly for administrative and management activities and are not related to any specific flood study. If approved by FEMA the State estimates the cost for a FTE staff person or contractor under MMMS would be approximately \$65,000.

### 4.1.5 Earth Data Analysis Center (EDAC), MMMS FY-05/06 Deliverables

Table 5. EDAC Deliverables, MMMS FY-05/06 Deliverables	
Deliverable	Due Dates
<b>Deliverable 1 Managing Updates to National management Information System.</b> EDAC will coordinate with the state to update the FEMA State Business Plan for New Mexico.	September 2005
<b>Deliverable 2 Assessment of Community Mapping Needs.</b> Host and coordinate meetings with state agencies and local governments to assess and prioritize geospatial and floodplain mapping needs in accordance with FEMA's mapping plan. The assessment results will be submitted to FEMA for inclusions in the MNUSS database.	January 2005
<b>Deliverable 3 Assessment of Community Mapping Needs.</b> Provide a report on the statewide assessment of the geospatial requirements and plan for data collection and dissemination.	February 2005
<b>Deliverable 4 Information Technology Systems and Outreach.</b> Provide a report outlining how user access will be granted to archived maps, associated flood hazard data, FEMA and state contractors new and revised mapping data, and associated reports to the public via the Internet.	December 2005
<b>Deliverable 5 Minimal Support Activities.</b> Provide a report on the update, maintenance and new additions to the historical imagery library for use by state, county and city officials for flooding and floodplain research and planning.	March 2006
<b>Deliverable 6 Outreach.</b> EDAC will develop, update, host and	March 2006

## State Business Plan for New Mexico

---

---

maintain The New Mexico Multi-Hazard Flood Map Source for the contract period. The web site will server as the source for all digital flood maps and related information for access by state, local government and the general public.	
<b>Deliverable 7 Coordination and Effort in Building Partnerships.</b> Active participation in state and local Floodplain Managers Association meetings and provide quarterly reports.	June 2006

Additional cost share, in the form of a soft match, will result from EDAC's New Mexico's Mapping efforts for and supported by the Resource Geographic Information System (RGIS) program.

# State Business Plan for New Mexico

---

---

## *APPENDICES*

---

---

# State Business Plan for New Mexico

---

## *APPENDIX A*

State Stakeholder Meetings and Attendees

---

# State Business Plan for New Mexico

---

## **New Mexico Stakeholders Meeting November 20, 2003**

### **Attendees:**

- Bill Borthwick, New Mexico Department of Public Safety (DPS), Office of Emergency Management (OEM)
- Jim Orwat, FEMA Region VI
- Tom Budge, EDAC/UNM
- Glenn Condon, NMDOT
- Susan Walker, NMDPS/OEM
- Evonne Gantz, NMDPS/OEM
- Bill Ewing, NMDPS/OEM
- Gar Clarke, Office of State Engineer
- Bel Marquez, MAP6 (URS)
- Beverley Friedday, MAP6 (URS)

## **New Mexico Stakeholders Meeting #2 November 24, 2003**

### **Attendees:**

- Bill Borthwick, NMDPS/OEM
- Mike Inglis, Earth Data Analysis Center
- Tom Budge, EDAC/UNM
- Glenn Condon, NMDOT
- Gar Clarke, Office of State Engineer
- Leslie Bond, NMFPA
- Beverley Friedday, MAP6 (URS)

## **EDAC site visit to discuss the role and responsibilities of the State Mapping Coordinator. August 22, 2005**

### **Attendees:**

- Mr. James Orwat, FEMA Project Officer
  - Barbara Shipp, Map Mod Program Specialist
  - Bill Borthwick, New Mexico Department of Public Safety (DPS), Office of Emergency Management (OEM)
  - Mike Inglis, EDAC, Associate Director
  - Laura Gleasner, Data Clearinghouse Manager
-

# State Business Plan for New Mexico

---

## *APPENDIX B*

MMMS FY 2005 Grantee Authorization Letter

---

# State Business Plan for New Mexico

---

08:35am From-DEPT PUBLIC SAFETY O.E.M

+5054769685

T-011 P.002/002 F-261

U.S. Department of Homeland Security  
FEMA Region 6  
800 North Loop 288  
Denton, TX 76209-3698



**FEMA**

August 1, 2005

Mr. Tim Manning, Deputy Secretary  
Office of Emergency Management  
P. O. Box 1628  
Santa Fe, New Mexico 87504-1628

Dear Mr. Manning:

This is in response to your letter dated May 26, 2005, requesting the University of New Mexico Earth Data Analysis Center (EDAC) serve as the grantee for the FY 2005 Map Modernization Management Support (MMMS) program. I am pleased to approve your request and appreciate your willingness to relinquish the MMMS grant program to an entity you feel can better fulfill the intent of the program. In the future, we will coordinate our efforts with EDAC and look forward to establishing a new partnership.

If you have any questions or concerns regarding this matter, please do not hesitate to contact James Orwat, MMMS Program Manager, at (940) 898-5302 or Michael Brown, Assistance Officer, at (940) 898-5171.

Sincerely,

A handwritten signature in black ink, appearing to read "Gary Jones for GS".

Gary Jones  
Acting Regional Director

cc: F. Pagano, R6-IM