



CITY OF GAINESVILLE

Office of the City Manager

December 14, 2000

Division of Community Affairs
2555 Shumard Oak Boulevard
Tallahassee, Florida 32399-2100

Attention: EMPATF

The City of Gainesville, Florida, is requesting \$250,000 in EMPATF Grant funds for the purpose of implementing the Alachua County Local Mitigation Strategy (LMS) by creating a countywide Geographical Information System to be used during emergencies by County and City employees.

Municipalities are a major source of direct resources and services in time of disaster. Our fire stations serve as Satellite Government Centers, providing continuity of government services for the welfare and protection of residents, and serve as critical facilities to respond to community and citizen needs after a disaster. In addition, Alachua County has been designated as a host county serving the needs of the State of Florida in the aftermath of a disaster.

In applying for this grant, the City of Gainesville agrees that this request is made without any other understanding, agreement, or connection with any person, corporation, or firm submitting a request for the same purpose, and that the request is in all respects fair and in good faith, without collusion or fraud. Only the entities listed will be involved with the project. The City is committed to performing the work necessary to implement the project in the established time frame.

It is further agreed that the City of Gainesville and those persons involved with the project accept the terms and conditions of the aforementioned grant and its provisions. The signer of the application has full authority to bind the applicant and other involved parties.

The project manager will be Lt. Edward J. Posey, Gainesville Police Department, P. O. Box 1250, Gainesville, FL 32601.

Sincerely,

A handwritten signature in cursive script that reads "Wayne Bowers".

Wayne Bowers
City Manager

**TITLE OF PROJECT: City of Gainesville/Alachua County
Geographical Information System**

AMOUNT REQUESTED FROM STATE: \$250,000

AMOUNT MATCHING FUNDS COMMITTED:

This is an application for a competitive grant under (indicate only one):

- 1) Emergency Management Competitive Grant Program, or
 2) Municipal Competitive Grant

The application is submitted for consideration in the following category (select ONLY one):

- 1) A project that will promote public education on disaster preparedness and recovery issues.
 2) A project that will enhance coordination of relief efforts of statewide private sector organizations, including public-private business partnerships.
 3) A project that will improve the training and operations capabilities of agencies assigned lead or support responsibilities in the State Comprehensive Emergency Management Plan.
 4) A project that will otherwise further state and local emergency management priorities identified in the Notice of Fund Availability.

APPLICANT INFORMATION:

Name of Organization: City of Gainesville
Address of Organization: 200 East University Avenue, Gainesville, Florida 32601
E-mail address: broskems@ci.gainesville.fl.us
Name of Chief Elected Official: Paula M. DeLaney, Mayor
Name of Chief Administrative Officer: Wayne Bowers, City Manager
Name of Applicant Contact: Mary S. Broske, Ph.D.
Title of Applicant Contact: Grants Coordinator
Telephone Number of Applicant Contact: (352)-334-5000, x5872
Federal Employee Identification (FEID) Number: 59-6000325

AUTHORIZED SIGNATURE [Must comply with 9G-19.008(7), F.A.C., or application will not be scored]:

Signature: Paula M. DeLaney
Title: Mayor

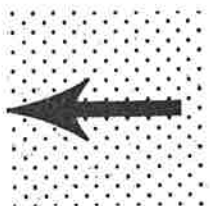


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**City of Gainesville/Alachua County
Geographical Information System**

Scoring criteria #1 – Clearly identify a demonstrated state or local emergency management need and explain how this project will address it. If applicable, identify which emergency management priority, as identified in the Notice of Fund Availability, the project addresses. Clearly link the project to the priority.

- **Overview**

This is an Emergency Management Competitive Grant Program Application. It is being submitted under Category 4 – *“Other projects that will further state and local emergency management objectives designated as priorities in the applicable Notice of Funding Availability.”* The proposal addresses Category 4, Priority Area B) Project which implement the community’s Local Hazard Mitigation Strategy, and Priority Area C) Projects which will improve emergency management capabilities in any of the following fundamental areas of preparedness, response or recovery: Wildfire Mitigation, Damage Assessment/Analysis, Debris Management, Community Neighborhood (Outreach), or Citizen Warning.

- **Project Addresses Emergency Management Priority Identified in the Notice of Fund Availability**

This proposal addresses Category 4, Priority Area B) Project which implement the community’s Local Hazard Mitigation Strategy, and Priority Area C) Projects which will improve emergency management capabilities in any of the following fundamental areas of preparedness, response or recovery: Wildfire Mitigation, Damage Assessment/Analysis, Debris Management, Community Neighborhood (Outreach), or Citizen Warning.

Priority Area B) Project which implement the community’s Local Hazard Mitigation Strategy

Mitigation is defined in the Alachua County Office of Emergency Management Municipal Emergency Operations Plan as, “Those activities designed to either prevent the occurrence of an emergency or to minimize the potentially adverse effects of a disaster.” The Alachua County Comprehensive Emergency Management Plan and the Local Mitigation Strategy address the need to provide accurate and timely warnings and notifications. In order to save lives and property by reducing vulnerability to natural disasters, the City of Gainesville and Alachua County must

first identify resources available during emergencies and then identify the location, nature and extent of the problem.

Priority Area C) projects which will improve emergency management capabilities in any of the following fundamental areas of preparedness, response or recovery: Wildfire Mitigation, Damage Assessment/Analysis, Debris Management, Community Neighborhood (Outreach), or Citizen Warning.

The State has identified certain areas as priorities in meeting emergency management needs. One of those areas is Priority Area C) *“projects which will improve emergency management capabilities in any of the following fundamental areas of preparedness, response or recovery: Wildfire Mitigation, Damage Assessment/Analysis, Debris Management, Community Neighborhood (Outreach), or Citizen Warning.”*

- **Demonstrate Local Emergency Management Need:**

As stated in the Alachua County Emergency Operation Plan-

“Alachua County is located in the north central plain of the state and consists of a land area 892 square miles, 69 square miles of water, and nine municipalities. The administrative seat for Alachua County is located in Gainesville. Gainesville lies 50 miles inland from the Gulf of Mexico, 60 miles from the Atlantic Ocean, and 70 miles from the Georgia State border, at 29° 38” N degrees latitude and 082° 19” W degrees longitude.”

“The central area of the county is heavily populated and vulnerable to the effects of both man-made and natural disasters. The populated land area of the central area of the County subject to the effects of a disaster consists of an aggregate total of approximately 80 square miles. The remaining land area of the County is rural in nature with small municipalities surrounding the urbanized central area. The primary land use in these areas are agricultural and forestry. They are subject to disasters caused by weather phenomena, wildfire, and consist of wildlife and water management areas which are ecologically sensitive.”

“Continuity of Government (COG) is an essential function of emergency management and is vital during a community emergency / disaster situation. All levels of government (federal, state, and local) share a constitutional responsibility to preserve life and property of its citizenry. Local COG is defined as the preservation and maintenance of the local civil government ability to carry out its constitutional responsibilities. Ordinances, administrative rules, and departmental procedures address COG in Alachua County.”

Public Safety Personnel from the City of Gainesville and Alachua County have been called upon several times over the past several years to respond to major emergency situations. These situations have included wildfires near the northern portion of the City of Gainesville and the southern portion of the City of Waldo. Firefighters from around the country spent several weeks battling these blazes in an effort to save lives and property in these areas. Alachua County is also one of the major sheltering communities during the evacuation for hurricanes, as demonstrated by the recent evacuation for hurricane Floyd. In order for public safety personnel and other government employees to quickly respond to emergency, we must be able to identify where the emergency is located and what response is needed.

- **Proposed Solution:**

We propose to create a countywide Geographical Information System, which would be utilized during emergency situations by County and City employees. Prior to an emergency event, the Geographical Information System would be populated with an accurate base map of the County and information relating to existing known resources and hazards. The system will contain hundreds of layers of data including information on: streets, property/parcel data, E-911 address data, hazardous material locations, evacuation routes, evacuation shelters, medical treatment facilities, pipelines, power lines, phone lines, utilities, overpasses, railroad lines, water supplies, storage tanks, flood plain data, and when necessary weather data.

This information would be used to develop plans to minimize damage and threats to life. During an event, the system would be used to map life-threatening events and areas of known damage. After the initial threat subsided the GIS would be used to direct and coordinate relief and clean-up efforts.

One goal of the project would be to create a database system in which contributors of information would be responsible for the creation and updating of their own information. The information would then be stored in one large Geographical Information System, which could be accessed by county or municipal employees.

Several County and Municipal employees are working on fledgling, disparate, and non-integrated GIS programs. In fact County employees have entered x,y coordinates for all but approximately 2,000 addresses located within the county, but outside of the City of Gainesville. This information however, is not currently available to all County and City employees. In order to complete the x,y coordinate addressing in the County, all of the addresses in the City of Gainesville and the remaining 2,000 or so County address will have to be entered. The system will also require a computer server and a centralized spatial database. It is our plan to make

the system available to all County and City employees and portions of the data will also be available to members of the media and the public.

Scoring criteria #2 – Identify the immediate tangible emergency management benefits (short term projects, i.e. – 12 months or less in duration), or, reasonable expectation of long term emergency management benefits coupled with the availability of resources (other than this grant amount) to continue implementation of the project past the term of the award (long term projects, i.e. – duration of longer than 12 months). Also, identify the number of emergency management organizations or the targeted population area whose emergency management needs will be directly benefited by the project.

The cities of Alachua, Archer, Gainesville, Hawthorne, High Springs, Micanopy, Newberry and Waldo, and the town of LaCrosse are all located in Alachua County. The population of Alachua County was estimated at 211,403 in 1998 and is expected to grow to 282,400 by the year 2020.

The City of LaCrosse VFD
The City of Waldo FD
Melrose VFD
The City of Hawthorne
Cross Creek VFD
The City of Gainesville FR

The City of Micanopy FD
The City of Archer VFD
The City of Newberry FD
The City of High Springs VFD
Windsor VFD

Scoring criteria #3 – Describe the project’s consistency with the State Comprehensive Emergency Management Plan and any applicable local comprehensive emergency management plans.

The F.S.S.’s authorize the creation of emergency management in the political subdivisions of the state so vulnerability is reduced, relief is rapid and orderly, planning is adequate, and lives and property are preserved. The requirement for local governments to implement a Local Hazard Mitigation Strategy and the requirement to improve the preparedness, response and recovery to emergencies can be found in the following Florida State Statutes (F.S.S.).

252.311 Legislative intent.—(2) It is the intent of the Legislature to reduce the vulnerability of the people and property of this state; to prepare for efficient evacuation and shelter of threatened or affected persons; to provide for the rapid and orderly provision of relief to persons and for the restoration of services and property; and to provide for the coordination of activities relating to emergency preparedness, response, recovery, and mitigation among and between agencies and officials of this state, with similar agencies and officials of other states, with local and federal governments, with interstate organizations, and with the private sector.

(3) It is further the intent of the Legislature to promote the state's emergency preparedness, response, recovery, and mitigation capabilities through enhanced coordination, long-term planning, and adequate funding. State policy for responding to disasters is to support local emergency response efforts.

252.32 Policy and purpose.—(1) Because of the existing and continuing possibility of the occurrence of emergencies and disasters resulting from natural, technological, or manmade causes; in order to ensure that preparations of this state will be adequate to deal with, reduce vulnerability to, and recover from such emergencies and disasters; to provide for the common defense and to protect the public peace, health, and safety; and to preserve the lives and property of the people of the state, it is hereby found and declared to be necessary:

(c) To provide for the rendering of mutual aid among the political subdivisions of the state, with other states, and with the Federal Government with respect to carrying out all emergency management functions and responsibilities.

Definitions.—As used in ss. 252.31-252.60, the term:

(4) "Emergency management" means the preparation for, the mitigation of, the response to, and the recovery from emergencies and disasters. Specific emergency management responsibilities include, but are not limited to:

(a) Reduction of vulnerability of people and communities of this state to damage, injury, and loss of life and property resulting from natural, technological, or manmade emergencies or hostile military or paramilitary action.

(b) Preparation for prompt and efficient response and recovery to protect lives and property affected by emergencies.

(c) Response to emergencies using all systems, plans, and resources necessary to preserve adequately the health, safety, and welfare of persons or property affected by the emergency.

(d) Recovery from emergencies by providing for the rapid and orderly start of restoration and rehabilitation of persons and property affected by emergencies.

(e) Provision of an emergency management system embodying all aspects of pre-emergency preparedness and post emergency response, recovery, and mitigation.

(f) Assistance in anticipation, recognition, appraisal, prevention, and mitigation of emergencies which may be caused or aggravated by inadequate planning for, and regulation of, public and private facilities and land use.

State of Florida Division of Emergency Management, Bureau of Recovery and Mitigation WEB Site states-

“Mitigation is the first phase of emergency management. Mitigation efforts are those that try to eliminate or reduce the impact of hazards which exists within a community and are a threat to life and property. For example, requiring protective construction to reinforce a roof will reduce damage from the high winds of a hurricane. Preventing the use of hazardous areas like flood plans or adjusting the use of such areas by elevating structures can reduce the chance of flooded houses.”

**THE LOCAL MITIGATION STRATEGY:
A Guide for Florida Cities and Counties-**

- **“Faster Recovery:** Communities will be able to recover faster and wiser. Through planning and acting on their local mitigation strategies as well as coordinating between all levels of government, communities will reduce their vulnerability to disasters and identify opportunities for post-disaster mitigation.

Maps needed to support a community’s vulnerability assessment include the Future Land Use Map from a local government’s comprehensive plan, the Storm Tide Atlas that includes the community, Department of Environmental Protection maps indicating the Coastal Construction Control Line (CCCL) (which can be used as a reference point to establish local/county setback lines and identify coastal areas such as inlet shorelines that are potentially omitted from the CCCL program), and available Flood Insurance Rate Maps. These maps should be reviewed in conjunction with existing maps of your community and should reference any unique hazard-prone areas (such as sinkholes or areas outside of Special Flood Hazard Areas (SFHA) that are subject to flooding) that do not appear on other maps.

Hazard Identification and Vulnerability Assessment Guidelines

Mapping

- Provide a multi-hazard map of the community. [The community’s Flood Insurance Rate Maps may be used as a base to identify surge flood hazard areas (V zone). Additional areas

that flood (A, X, B, C, and E zones) may be shown on this map. Community Rating System repetitive loss data will also help identify these areas for mapping. Data from the Florida Windstorm Underwriting Association will indicate areas prone to wind damage.]

- Map current land use patterns and describe development trends within the planning area, as provided in the Future Land Use and Coastal elements of the local comprehensive plan. Take particular note of special sites such as mobile home parks, critical economic facilities or structures, hazardous waste and generator locations, as well as hospitals and nursing homes.
- Map areas vulnerable to a 100 year storm event and identify areas designated as "critically eroding" pursuant to Chapter 161, Florida Statutes. [Refer to the county Coastal Construction Control Line maps as determined by the Florida Department of Environmental Protection.]
- Describe the community's access to and ability to use geographic information technology to support hazard identification and risk assessment. [The State may be able to support local governments in the application of mapping technology to risk assessment.]

Inventory

- Provide National Flood Insurance Program information, including the total number and distribution of policies, community participation rates, as well as identification of areas and particular properties that experience repetitive damage. [Refer to the Federal Emergency Management Agency's Florida National Flood Insurance Program Community Status Report.]
- Provide historical flood depth information throughout the community. [Refer to the regional Water Management District.]
- Provide an inventory and map of all critical facilities within the community, including those vulnerable to damage from disasters, such as fire and police departments, wastewater treatment facilities, and schools.
- Identify topic areas requiring additional study or research to support loss reduction.

Modeling

- Apply models to predict storm damage to existing private structures and public infrastructure, considering a range of potential disaster scenarios.
- Apply predictive models to relate population growth to increased vulnerability.
- Provide an economic profile of the planning area including an analysis of the economic potential of high risk areas and the cost of recovering from disasters - both with, and without, existing and proposed mitigation initiatives. [Refer to the National Flood Insurance Program data, insurance company records of exposure, and community property appraisal data.] “

Alachua County Emergency Operation Plan states-

“3.4.2.7.4 Property Appraiser

Provide assistance to ESF #5 (Information and Planning) in damage assessment by providing assessed values and parcel information, staff, and maps to the damage assessment team.”

And later in section 5.1,

“ESF 5 receives and reviews damage assessment reports to determine the magnitude of the event. The Property Appraisers Office provides damage assessment and analysis support. The Office can provide a GIS graphic of damage and a financial damage assessment. The Property Appraiser uses computer analysis to determine dollar cost damage and mapping as damage information is received. The Property Appraiser Office has assigned personnel to conduct the assessment.

Scoring criteria #4 – Discuss why this particular method and approach was chosen.

The particular method described in this proposal was chosen, after a careful and considered evaluation of the current systems. At this time a large number of governmental entities in Alachua County and the City of Gainesville are in the process of creating their own separate stand-alone GIS. These systems by themselves do not contain all the information necessary for creation of emergency management mitigation plans.

EXPENDITURE CATEGORIES	Cash Match	In-kind Services Match	Total Grantee Cost	EMPA Award	Total Project Cost
1. SALARY AND BENEFITS					
2. OTHER PERSONAL/CONTRACTUAL SERVICES					
A. Creation of a County Base Map				\$20,000	
B. Contractual Services for X,Y Coordinates				\$30,000	
C. Identification of County Hazards				\$15,000	
D. Identification of County Resources				\$10,000	
E. Creation of Coordinated Operating Plan				\$10,000	
F. Internet/Intranet Mapping				\$20,000	
3. ADMINISTRATIVE EXPENSES					
4. EXPENSES					
A. Travel/Training				\$15,000	
5. OPERATING CAPITAL OUTLAY					
A. Computer Equipment and Programming				\$60,000	
B. Computer Software and Programming				\$50,000	
C. Computer/Printing Supplies, etc.				\$20,000	
6. FIXED CAPITAL OUTLAY					
TOTAL EXPENDITURES				\$250,000	\$250,000
PERCENTAGES				100%	100%

Narrative Explanation and Justification of Line Items:

Scoring criteria #5 – Identify Applicant’s project match

There are several on-going initiatives that the City of Gainesville, the Gainesville Police Department and Alachua County with regard to the creation of parts of a GIS system. Alachua County has spent hundreds of hours imputing x,y coordinates for E-911 addresses for the County outside the City limits of Gainesville, a great deal of more work needs to be done to complete this project. The County Property Appraiser’s Office has just contracted with a local GIS company for over two million dollars to have aerial photographs taken of the entire county. The City of Gainesville has agreed to contribute at least \$100,000.00 to Property Appraiser’s office toward the purchase of the photographs. These photographs and the underlining information already contained in the property appraiser’s office will be used as a base layer for the proposed GIS.

The Gainesville Police Department (GPD) spent \$25,000 from a “Weed and Seed” grant to have the University of Florida create a Spacial Crime Analysis System for the tracking of crimes. GPD spent an additional \$15,000 on hardware for the

Spacial Crime Analysis System and is in the process of creating a presentation room to conduct "Compstat" type of presentation. This will be a large conference room for the presenting of statistical data about the City of Gainesville, including information on crimes and calls for service. GPD will modify New York's "Compstat" process for our own purposes and name the local process "DataTrac." The creation of the DataTrac room will cost approximately \$90,000.00.

The City of Gainesville and Alachua County each have separate GIS committees. The City of Gainesville has a "users" group and an "executive" committee to plan the implementation of a GIS that is useful to all employees. The proposed GIS system would fill the gaps in the current and planned system and would turn small disparate work groups into a complete Geographical Information System. This system would then be available during emergencies to map out the problem and to plan the recovery. More importantly, the system would be available for the creation of mitigation strategies to prevent emergencies from occurring if possible, or at least to lessen the impact, if the emergency situation occurs.

Scoring criteria #6 – Discuss the Applicant's experience and ability applied to the project

The proposed Geographical Information System will be comprised of several groups of City and County employees and outside contractors. A GIS company will be contracted to for the following items:

- The creation of a plan for the creation and management of the on-going GIS project.
- The creation of a base map, which will overlay on the aerial photographs purchased by the County Property Appraiser's office.
- The completion of the x,y coordinates for all City and County addresses and intersections.
- The identification of known County and City hazards. Additional City and County personnel will be utilized to identify the hazards.
- The identification of known resources in the county, and a plan for implementation of these resources.
- The establishment of an internet and internet mapping system. The Internet GIS mapping program will house all of the data available to the entire City and County employees. The internet information will be available to anyone including the media and the general public.

There are a number of local and non-local GIS companies, which have the expertise to handle this type of work. The City of Gainesville will conduct a competitive bid process for the contracting of these services.

In addition to the work performed by the contracted vendor, there are a number of employees and agencies and employees within the county who have worked with Geographical Information Systems. The County Property Appraiser's office has a GIS staff that is responsible for providing parcel maps and information. In an emergency they are designated as the area responsible for providing maps of the area involved. Their current GIS system was developed for the purpose of providing information for tax purposes, not for emergency planning, mitigation, or recovery. However, they have years of experience using the latest mapping software. The County's E-911 office has created x,y coordinates for the addresses outside the City of Gainesville, but inside Alachua County. Their staff has also been utilizing a GIS system for an extended period of time.

The City Planning office, has recently hired a GIS employee to map City information. The Police Department, in conjunction with the University of Florida has developed and implemented a GIS to track a portion of crimes that have occurred in the City. Both City crime analysts, and one GPD lieutenant have attended a local GIS course. The same lieutenant and one crime analyst attended a DOJ sponsored GIS course in Charleston, S.C.

The plan is to have the City IT staff establish a spatial database engine that is tied to the existing City and County fiber network. The staff of governmental or private organization assigned a particular set of data would then continually update the system. The system would then be available to anyone City or County employee in need of the information.