

# Chapter Six



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## Emergency Preparedness

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### I. EMERGENCY PREPAREDNESS BACKGROUND

Hurricanes, tornadoes, floods, wildfires, hazardous material spills, and domestic terrorist incidents are just a few of the natural and man-made risks that threaten the East Central Florida Region. Florida Statue 186.507 mandates Regional Planning Councils to adopt Strategic Regional Policies that address emergency preparedness.

Some risks, such as building in flood prone or storm surge areas are predictable, but others can be unpredictable. Regions are encouraged to plan together for coordinated emergency response.



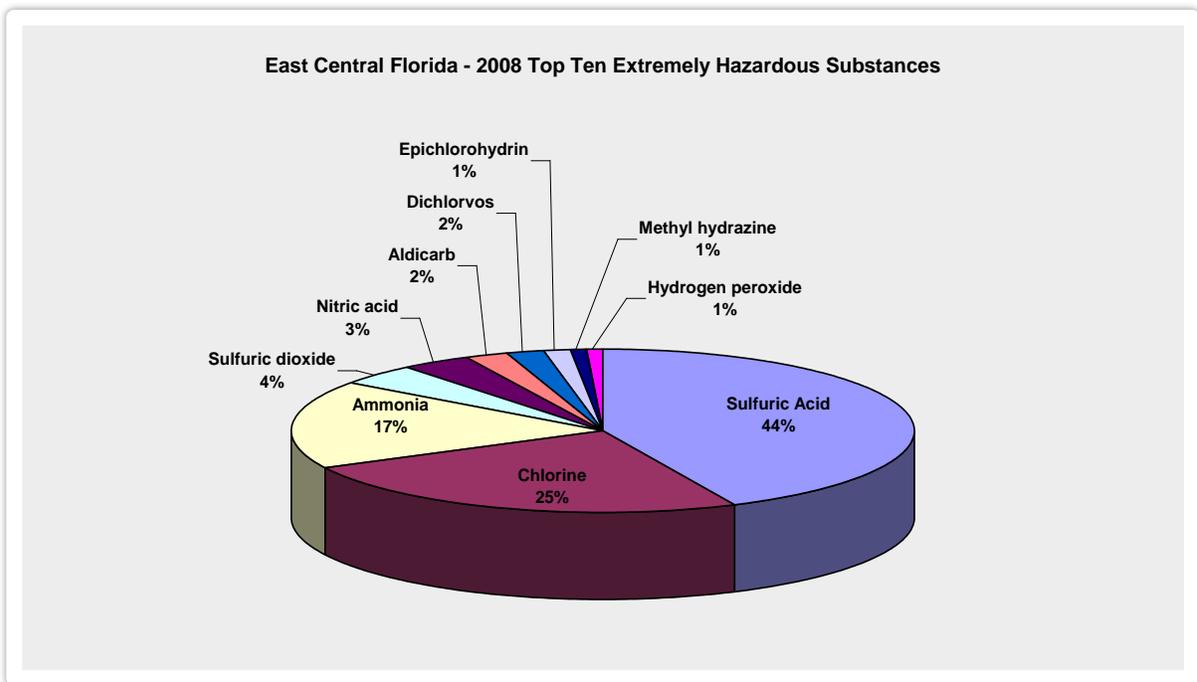
The East Central Florida Regional Planning Council provides emergency preparedness support to the region. This support is provided through an all-hazards approach to emergency management. The all-hazards approach focuses on developing capacities and capabilities that are critical to preparedness for a full range of emergencies or disasters. It is important to plan and prepare for a wide-range of threats and vulnerabilities.

### II. EMERGENCY PREPAREDNESS PROGRAMS AND PROJECTS

Hazardous Materials Programs – Local Emergency Planning Committee (LEPC) and Hazardous Materials Emergency Preparedness (HMEP)

On October 17, 1986, in response to a growing concern for safety around chemical facilities, Congress enacted the Emergency Planning and Community Right-To-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA). The Act has had a far-reaching influence on issues relating to hazardous materials. EPCRA contains five sections which cover issues associated with the manufacture, use, exposure, and transportation. EPCRA also requires public education to increase awareness about hazardous materials.

Under EPCRA, Regional Planning Councils provide coordination and staff for district-wide Local Emergency Planning Committees (LEPC) and serve as the public repository for hazardous materials inventories under the SARA Title III Community Right-to-Know provision. This means the ECFRPC keeps records of the locations of the manufacturers, users, and transporters of hazardous materials within the region and disseminates this information to fire and police departments and emergency management offices. The ECFRPC, through the LEPC also administers planning and training for hazardous materials handling, spill response and cleanup. This program is funded by the Hazardous Materials Emergency Preparedness (HMEP) grant program funded through the US Department of Transportation (DOT).



**Figure 1:** Source 2008 SERC Annual Report, <http://www.floridadisaster.org/cps/serc/annrpt.htm>

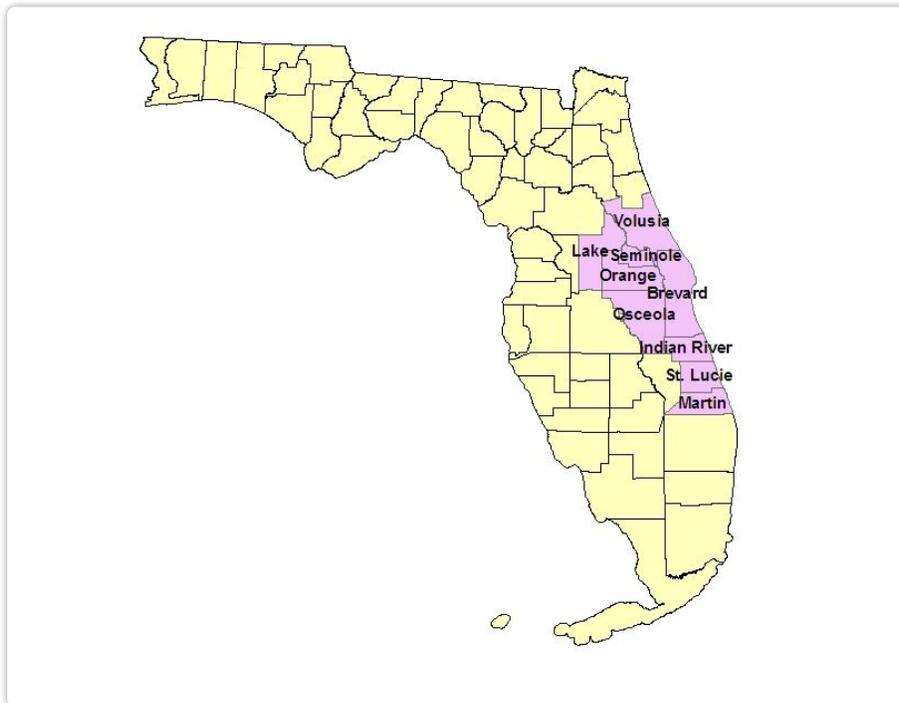
### III. REGIONAL DOMESTIC SECURITY TASK FORCE - RDSTF



The ECFRPC is now involved in anti-terrorism planning in conjunction with the Florida Department of Law Enforcement. Pursuant to Florida State Statute 943.0312, the Florida Department of Law Enforcement (FDLE) has established a Regional Domestic Security Task Force in each of the seven operational regions of FDLE. These regions follow the FDLE boundaries within the State. The responsibilities of these task forces include: improving Florida's ability to detect and prevent potential terrorist threats; collecting and disseminating intelligence

and investigative information; facilitating and promoting ongoing security audits and vulnerability assessments to protect critical infrastructures; coordinating the delivery of training and supporting the purchase of proper equipment for public safety first responders and task force response teams; improving Florida's response and recovery capabilities; and facilitating initial response to terrorist incidences within each region.

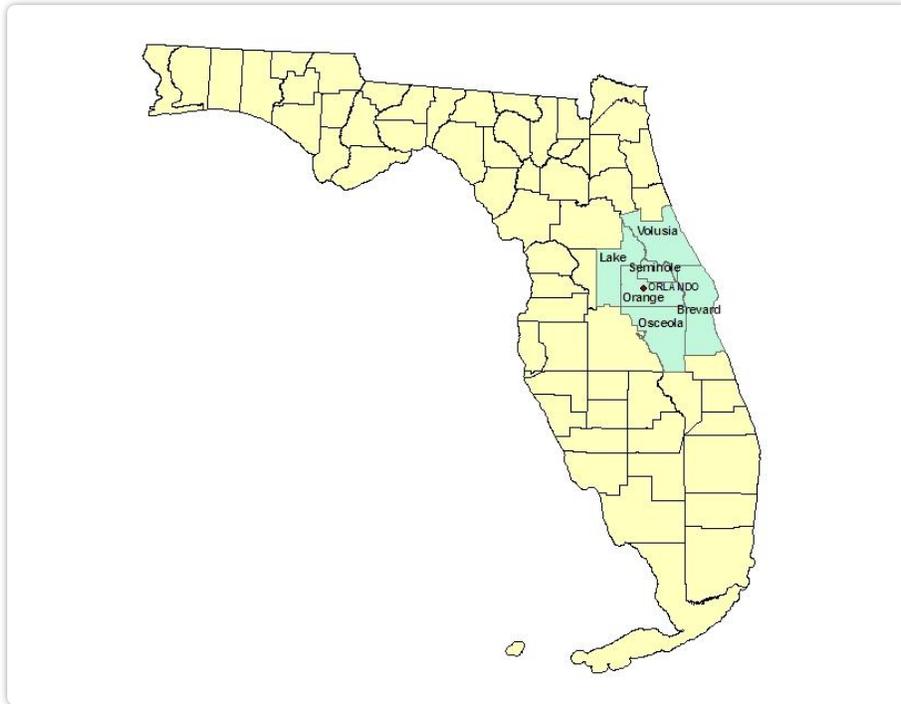
The Central Florida RDSTF (Region 5) consists of nine (9) counties: Brevard, Lake, Orange, Osceola, Seminole, Volusia, Indian River, St. Lucie and Martin. The ECFRPC provides training, exercise and planning support to the Central Florida RDSTF.



**Figure 2:** *Central Florida Regional Domestic Security Task Force (RDSTF) Region*

#### IV. URBAN AREA SECURITY INITIATIVE - UASI

The Orlando/Orange UASI includes the core city of Orlando and the core county of Orange. In addition, it includes the contiguous counties of Brevard, Lake, Osceola, Seminole and Volusia. The Urban Area Security Initiative (UASI) is designed to increase regional response capabilities and to reduce the area's vulnerability to terrorist attacks. The UASI goals are to prevent, protect, respond and recover from terrorist incidents. The ECFRPC provides exercise and planning support to the Orlando/Orange UASI when needed.



**Figure 3:** Orlando/Orange Urban Area Security Initiative (UASI) Region

#### V. REGIONAL EVACUATION STUDY<sup>1</sup>

With eight hurricanes making landfall over Florida in 2004 and 2005, the Governor and the Legislature identified the need for statewide regional hurricane evacuation planning. House Bill 7121, which focused on the need to improve the state's infrastructure in terms of hurricane planning, appropriated \$29 million for the purpose of effective and efficient hurricane evacuation planning.



<sup>1</sup> Source: [http://earthobservatory.nasa.gov/images/imagerecords/0/471/hur\\_floyd\\_19990914.jpg](http://earthobservatory.nasa.gov/images/imagerecords/0/471/hur_floyd_19990914.jpg)

As a result, the Florida Department of Emergency Management (FDEM) developed the Statewide Regional Evacuation Study Program. FDEM contracted with the eleven regional planning councils to update their Regional Evacuation Studies with the best available data and technology.

The studies included:

- updated Sea, Lake and Overland Surges from Hurricanes (SLOSH) model runs,
- updated county and regional evacuation clearance times (see Table ES-12 below),
- an end-user transportation model for County and DEM use (TIME),
- an updated Storm Surge Atlas,
- and a technical report.

The East Central Florida Region process began with the development of a Regional Evacuation Study Behavioral Survey Report in 2008. The report incorporated the statistical findings of more than 1,200 surveys performed throughout our region. The survey details how residents behave during a hurricane evacuation as well as other hazards.

The Behavioral Survey Report was then used to develop TIME (Transportation Interface for Modeling Evacuations). This model is designed to use newly updated 2006, 2010, and 2015 population data (ZDATA) and project evacuation clearance times for counties within our region. These results are shown in Table ES-12 below.

The 2009 Regional Evacuation Study updates the 2000 ECFRPC Regional Hurricane Evacuation, which also was an update of its 1992 Hurricane Evacuation Study. The primary purpose of this study is to determine evacuation clearance times for vulnerable areas in East Central Florida. The major components of the study update consist of the following:

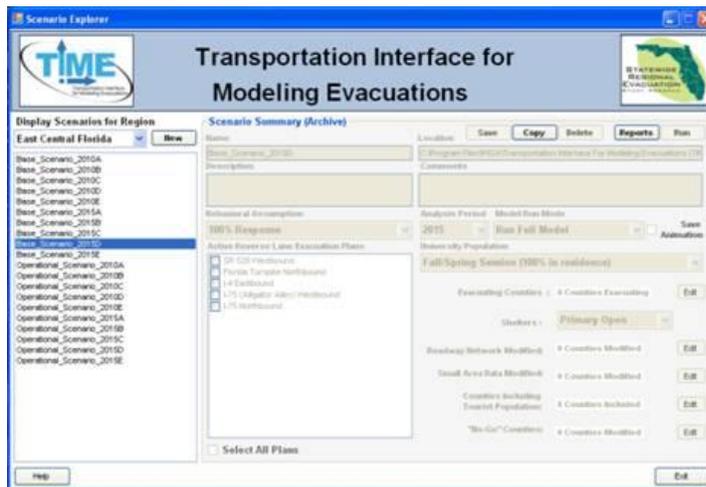
- Develop scenarios using evacuation zones created by Volusia and Brevard Counties and hurricane events modeled by the National Hurricane Center for transportation modeling and clearance time calculations for each county.
- Quantify the potential evacuation population for each scenario using current socioeconomic data.
- Identify existing evacuation roadway network, noting improvements made since completion of the last study.
- Develop hurricane evacuation clearance times for each county and storm scenario for a Base Year 2006 and projected for a Future Year 2010-2015.
- Determine regional evacuation traffic that is expected to cross county lines in order to increase the accuracy of operational planning.

As a result of this study, an abbreviated model (TIME) was developed that can be used by local emergency management officials, city and county planning staff, state emergency preparedness officials, and others to recalculate clearance times based upon land use and transportation system

changes. The East Central Florida Regional Evacuation Study was officially unveiled in August, 2011 and the ECFRPC has since conducted various training sessions across the region.

**Table ES-12 – 2015 Clearance Times for Base Scenario**

	Evacuation Level A Base Scenario	Evacuation Level B Base Scenario	Evacuation Level C Base Scenario	Evacuation Level D Base Scenario	Evacuation Level E Base Scenario
<b>Clearance Time to Shelter</b>					
Brevard County	13.0	13.0	13.0	14.0	17.5
Lake County	13.5	13.0	14.0	16.0	15.5
Orange County	12.5	12.5	12.5	13.5	19.0
Osceola County	12.0	12.5	12.5	13.5	18.5
Seminole County	12.5	12.5	12.5	12.5	13.0
Volusia County	13.0	13.0	14.5	15.0	18.0
<b>In-County Clearance Time</b>					
Brevard County	13.0	13.0	13.0	14.0	17.5
Lake County	14.0	13.5	14.5	16.5	16.0
Orange County	13.0	13.0	13.0	14.0	19.5
Osceola County	13.0	13.0	13.0	14.0	19.0
Seminole County	13.0	13.0	13.0	13.0	13.5
Volusia County	14.5	14.0	14.5	17.5	19.0
<b>Out of County Clearance Time</b>					
Brevard County	14.0	14.0	13.5	14.0	17.5
Lake County	14.0	14.0	16.0	19.0	21.0
Orange County	13.5	14.0	13.0	15.0	20.0
Osceola County	13.5	14.0	12.0	15.0	19.5
Seminole County	13.5	13.5	13.0	15.0	19.5
Volusia County	14.5	14.5	14.5	20.5	34.5
<b>Regional Clearance Time</b>					
ECFRPC	14.5	14.5	16.5	20.5	34.5



## **VI. HOW EMERGENCY PREPAREDNESS PLANNING RELATES TO THE 2050 REGIONAL VISION**

Better land use policies can help reduce the loss of life or property damage, while disaster preparedness planning along with advanced data modeling is fostering more efficient emergency response times and coordination. For example, new modeling and mapping help us better understand the risk potential of coastal and ravine flood plain development and how to better avoid such risk in the future.

Future land-use patterns can further influence emergency preparedness planning. This begins with reversing the trend of sprawl that conventional zoning and land-use policy has steadily promulgated over the last half century. The historic interaction between expanding development and the natural environment occurs as housing and industry continue to migrate to the periphery of our urban centers and beyond. The Central Florida 2050 Regional Vision speaks to reversing this trend by promoting compact urban centers of development brought together by transit rich corridors. This form of development promotes conservation and serves to minimize conflict in 'wildland and urban interface' areas, further supporting emergency planning efforts. Specifically, the separation of rural residential development from potential wildfire corridors allows for controlled burns and for structural wildfire protection.

Locating development in a compact geographic urban area offers cost-efficient opportunities to planners and responders that might otherwise be unavailable. For instance, a denser and confined matrix of homes, offices, and businesses are likely to reduce police, Emergency Medical Services (EMS), fire, and hazardous materials (HazMat) response times while also providing for opportunities to investigate alternative programs such as community warning systems. An example of land-use influencing emergency services can be found in the Executive Summary and the research conducted in Charlotte, North Carolina. Findings from this study show that as street connectivity increases, the number of households served by each fire station increases as well, reaching numbers between 20,800 to 25,900 while also significantly reducing response times. This is compared to serving only 5,700 to 7,300 households in less-connected service areas. The findings also note the fiscal impact on a per capita annual basis. A less-connected network demands \$586 to \$740 per capita, compared to just \$159 to \$206 per capita in the more-connected transportation areas. A well-designed compact community can create observable spaces that lessen the chance of criminal and terrorist activity.

Evacuation planning can be coordinated with a reliance on multiple transit alternatives and the impacts of a natural disaster on infrastructure can be minimized. Compact development also begins to relieve pressure from the urban fringe offering opportunities to implement managed conservation programs that minimize development in natural areas vulnerable to the threat of hurricanes and wildfires. Furthermore, evacuation route planning and modeling is demonstrating the need to move future development closer to evacuation routes. For some, sheltering in place for a hurricane may be preferred over evacuation. This often depends on where you live, the soundness and hurricane resistant nature of your home, and the size, strength and intensity of the anticipated storm.





# Evacuation Routes and Shelters

## East Central Florida Region: Evacuation Routes

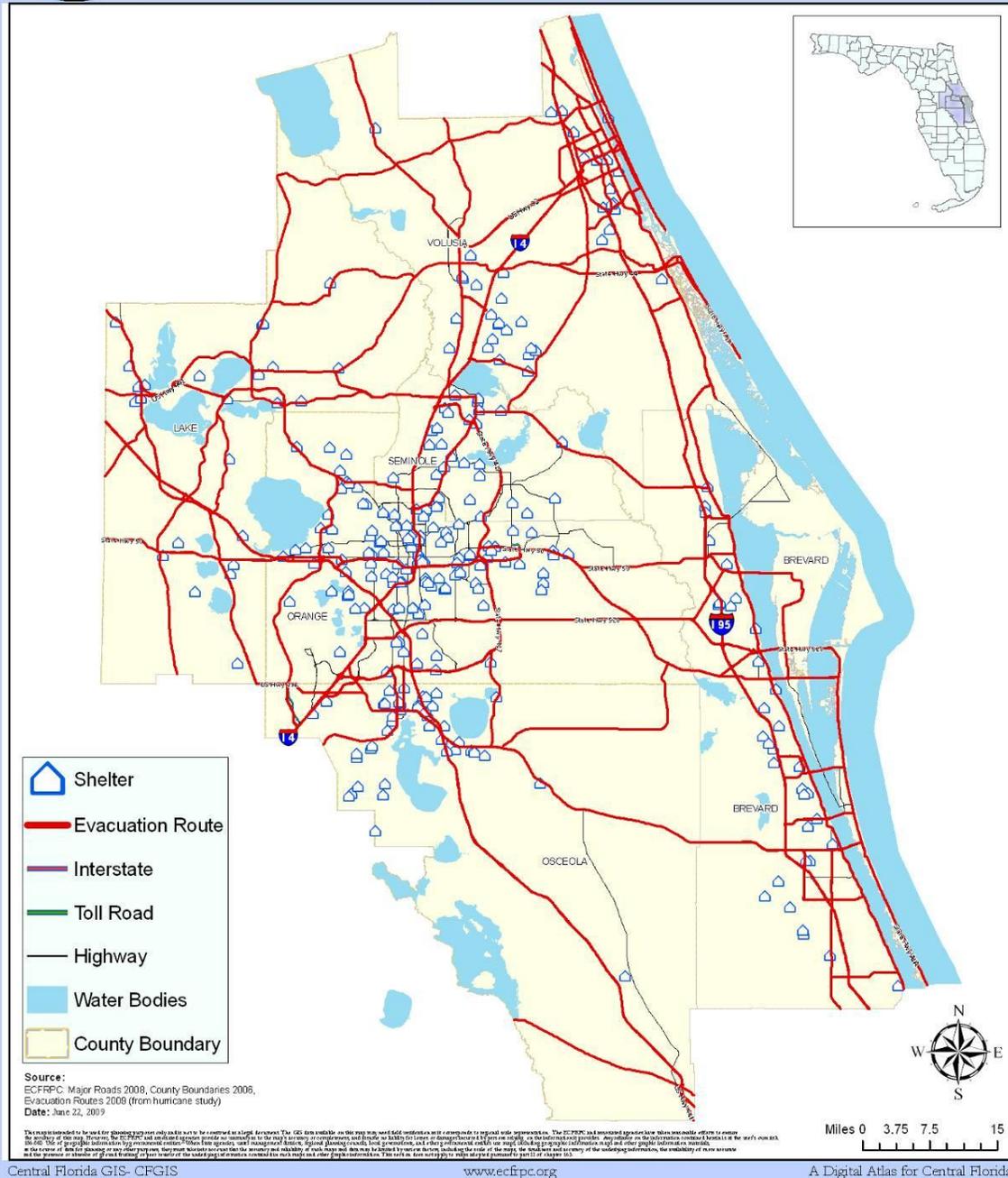


Figure 5.





## **VII. OTHER EMERGENCY PREPAREDNESS PROJECTS**

The East Central Florida Regional Planning Council provides local jurisdictional and agency support for emergency management training and planning needs. All support provided to the local agencies and jurisdictions are in accordance with the Homeland Security Exercise and Evaluation Program (HSEEP).

## **VIII. PROGRAMS DEFINED AND DESCRIBED**

HMEP: The Hazardous Materials Emergency Planning (HMEP) grant program is intended to provide financial and technical assistance as well as national direction and guidance to enhance State, Territorial, Tribal, and local hazardous materials emergency planning and training.

HSEEP: Homeland Security Exercise and Evaluation Program (HSEEP) is a threat and performance based exercise program that functions as both doctrine and policy for designing, developing, conducting, and evaluating homeland security exercises. It includes a cycle, mix, and range of exercise activities of varying degrees of complexity and interaction. HSEEP includes a series of four reference manuals to help states and local jurisdictions establish exercise programs and design, develop, conduct, and evaluate exercises.

LEPC: The Local Emergency Planning Committee (LEPC) is comprised of representatives of county emergency management agencies, private manufacturers and transporters, regional hospitals, and others. The committee focuses on hazardous materials management, including training of city and county emergency services personnel, public awareness promotions and response coordination among the various public and private emergency management services.

NIMS: The National Incident Management System (NIMS) was developed so responders from different jurisdictions and disciplines can work together better to respond to natural disasters and emergencies, including acts of terrorism. NIMS benefits include a unified approach to incident management; standard command and management structures; and emphasis on preparedness, mutual aid and resource management.

NRF: The National Response Framework (NRF) is a guide that details how the Nation conducts all-hazards response— from the smallest incident to the largest catastrophe. This document establishes a comprehensive, national, all-hazards approach to domestic incident response. The Framework identifies the key response principles, as well as the roles and structures that organize national response. It describes how communities, States, the Federal Government and private-sector and nongovernmental partners apply these principles for a coordinated, effective national response. In addition, it describes special circumstances where the Federal Government exercises a larger role, including incidents where Federal interests are involved and catastrophic incidents where a State would require significant support. It lays the groundwork for first responders, decision-makers and

supporting entities to provide a unified national response.  
([http://www.fema.gov/pdf/emergency/nrf/about\\_nrf.pdf](http://www.fema.gov/pdf/emergency/nrf/about_nrf.pdf))

RDSTF: Pursuant to Florida State Statute 943.0312, the Florida Department of Law Enforcement (FDLE) has established a Regional Domestic Security Task Force (RDSTF) in each of the seven operational regions of FDLE.

UASI: The Urban Area Security Initiative (UASI) is designed to increase regional response capabilities and to reduce the area's vulnerability to terrorist attacks. The UASI goals are to prevent, protect, respond and recover from terrorist incidents.

<b>CHAPTER 6: EMERGENCY PREPAREDNESS</b>	
Goal	Prepare communities to effectively respond to disasters by implementing an all-hazards approach to emergency preparedness planning and coordination at the regional level.
<b>Hazardous Materials</b>	
Policy 6.1	Support the preparation and implementation of hazardous material programs that are protective of public safety, public health, and the environment.
Policy 6.2	Support public education, awareness, and outreach initiatives that identify and promote hazardous materials programs and facilities.
<b>Homeland and Domestic Security</b>	
Policy 6.3	Plan for and support domestic security initiatives in the East Central Florida region.
<b>Smart Growth</b>	
Policy 6.4	Discourage development from locating in areas prone to flood and wildfire.
Policy 6.5	Support local government efforts related to managed relocation.
Policy 6.6	Support compact development patterns that provide for the most efficient evacuation times.
Policy 6.7	Encourage connected street networks to provide access and mobility during emergencies for the efficient distribution of emergency supplies.
<b>Shelters and Evacuation Routes</b>	
Policy 6.8	Emergency preparedness planning should consider and address statewide, regional, and local pre-disaster evacuation and post-disaster response and recovery.
Policy 6.9	Support that shelter space needs are met including numbers, capacity, and proximity to high risk areas.
<b>Intergovernmental Coordination</b>	
Policy 6.10	Through the LEPC, assist local jurisdictions and agencies to implement industry disaster preparedness plans and programs.
Policy 6.11	Coordinate public and private partnerships to promote the region's emergency preparedness programs and capabilities, such as the East Central Florida Post-Disaster Economic Redevelopment Plan (PDERP).
Policy 6.12	Support emergency planning agencies input into the local and regional government decision-making process.

**CHAPTER 6: EMERGENCY PREPAREDNESS INDICATORS**

Number and location of primary evacuation shelters	Baseline (2009): 171 Source: Florida Division of Emergency Management
Public outreach and hazardous materials facility workshops	Baseline (2009): 5 Source: ECFRPC Staff
Evacuation times	Baseline: Data available on June 30, 2010 Source: 2010 Statewide Regional Evacuation Study
Number of reported hazardous material incidents	Baseline: 278 Source: 2008 State Emergency Response Commission (SERC) reporting data for 2007
Number of Section 302 hazardous material facilities	Baseline: 511 Source: 2008 State Emergency Response Commission (SERC) reporting data for 2007.
Number of Section 311/312 hazardous material facilities	Baseline: 1,631 Source: 2008 State Emergency Response Commission (SERC) reporting data for 2007.

The ECFRPC would like to extend a special thanks to all those who participated in developing this chapter including those listed below:

<b>EMERGENCY PREPAREDNESS SOUNDING BOARD (October 17, 2008 and January 23, 2009)</b> <b>Standing LEPC Commission – Alternates are not noted</b>	
Jennifer Hobbs	Orange County
Edward Allen	Seminole County
Charles Anderson	Orange County
Chris Aoussat	Orange County
Jim Burrows	Orange County
David Casto	Osceola County
Jim Cheek	Brevard County
Preston Cook	Orange County
Robert Coschignano	Orange County
David Crowe	Brevard County
Terry Edwards	Orange County
Christopher Geiger	Citizen
Cindy Gennell	Citizen
Larry Hall	Volusia County
Alan Harris	Seminole County
Wayne Kee	Brevard County
Whitson Kendall	Orange County
Robert Lay	Brevard County
Tod Lyons	Orange County
Theresa Madison	Orange County
Bill McDeavitt	Orange County
Darrell Miller	Brevard County
Robert Mitchell	Reedy Creek
Richard Moore	Volusia County
Andre Roy	Brevard County
James Ryan	Volusia County
Robert Securro	Brevard County
Gerald Smith, II	Lake County
Randy Stafford	Volusia County
John Stahl	Orange County
Gregory Thompson	Orange County
Malcolm Trigg	Seminole County
Gerald Wimberly	Brevard County
Peter Zell	Seminole County