EMERGENCY PREPAREDNESS

CONDITIONS AND TRENDS

INTRODUCTION

It was a cool, windy Friday, typical of the month of March in north central Florida. The National Weather Service was predicting the possibility of severe storms, particularly in Dixie and Taylor counties. Still, the weather forecast was nothing out of the ordinary and life went on as usual in the coastal fishing communities dotting Dixie and Taylor counties. Residents went to bed early, as they usually do in anticipation of an early morning fishing excursion. The rain came down hard with plenty of wind. It was so windy that electricity and telephone service was knocked out. Yes, it was a big storm, but how bad could it be? After all, it wasn't hurricane season and no evacuation order had been issued.

Hud Lillion and Laurie O'Quinn from the unincorporated Taylor County coastal community of Dekle Beach remember the night well. "After watching the water for a while I went to bed," said Hud. "I woke up about 2:00 a.m. and looked out and saw water up on the tires of my truck but it didn't particularly alarm me, so I went back to bed. Laurie woke up about 2:30 a.m. and told me Louis Lanier's house was gone and so was my truck. I knew then that this was more than just a storm, so we moved to the back of the house. Every wave that came in was knocking the boards up in the floor. I told Laurie we had to get out. I made my way to the back door. I fell through the floor two or three times. I couldn't hardly get the door open because of the wind and the door started smashing Laurie's hand."

"We finally got out on the deck, then everything started collapsing so we jumped. We swam across the road to a home that was still standing and managed to get up on the deck. We managed to get inside and tried to find some life jackets, then that house started crumbling but we managed to get on the roof. A wave came and knocked off the roof. We grabbed hold of a board and floated up to Carlton Hamilton's home. It was still dark then, about 5:30 a.m. We stayed there for some minutes. Mrs. Sapp was there holding a baby.[31] We all huddled together to try and stay warm but we were freezing. Fred Morgan and Tom Geohagen came wading in waist deep water. The wind was still blowing about 65 mph. They took us to Craig and Ruth Harvey's house where some other people had gathered and there was a fire in the fireplace. We were just glad to be alive."[32] At 5:42 a.m. a

[31]"O'Quinn floated until she was able to grab another house, and that's when the woman swam by with a baby in her arms. 'She said, 'help me, my baby is dead,' and we just stood there and hugged each other until Fred and Tom came and got us out." "Counting People Instead of Bodies," Gainesville Sun, March 15, 1993.

[32]TaCo Times, Perry, Florida, March 17, 1993.

weather forecaster in Tampa went on a statewide emergency radio network to issue a flood warning.[33]

John Robertson was huddled in his travel trailer, listening to the rain and reading a mystery novel, when the owners of the nearby Keaton Beach Marina knocked on his door and told him he should join them in the marina's second-floor living quarters. "I'm 6-foot-4 and by the time I got to the marina I was swimming," Robertson said. "There is total destruction here. Just about everything is lost." Marina co-owner Brad Beach said a tidal surge caused the water to rise about 6 feet in 20 minutes before dawn Saturday, and it ebbed just as quickly. During its short stay, the surge crumbled concrete foundations, flooded buildings, immersed vehicles and took homes, docks, and other structures with it as it retreated. "I never saw anything like it in my life," Beach said, "It took just 20 (minutes) to get 6 feet, and then there were 4- to 5-foot waves on top of it. Houses finally floated away."[34]

In just 20 minutes Saturday morning, March 13, 1993, north central Florida coastal residents went from just another spring storm to the Storm of the Century. The storm devastated the region's entire coastline. Fully 25 percent of the region's coastal homes were destroyed and another 25 percent were damaged. Dixie County was lucky. No one died. Taylor County was not. Ten people drowned. On March 13th, President Clinton declared Florida a disaster area.

Predicting the severity of the storm and the height of the tide surge was difficult for the National Weather Service. The storm could not have occurred except for a unique set of circumstances. The storm developed suddenly late Friday as incoming Arctic air collided with a warm air stationary front over the Gulf of Mexico. The difference in temperature between the two air masses was estimated at 50 degrees. The dramatic contrast in air temperatures allowed the storm to develop very rapidly. A dramatic drop in barometric pressure followed. The storm produced the lowest barometric pressure ever recorded in the City of Tallahassee. Drops in barometric pressure are normally associated with tropical storms, which this was not. The drop in barometric pressure led to high winds. The region experienced a high tide when the storm hit land. These factors combined to produce a storm surge that surpassed forecasters predictions.[35]

Dixie and Taylor County coastal residents were unlikely to hear an evacuation warning had the weather service issued one. Neither Dixie nor Taylor County officials had access to the statewide emergency radio network (NAWAS). Both counties were outside the range of the National Oceanic and Atmospheric Administration (NOAA) weather radio station network and neither county had emergency sirens.

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[33]"Why the Delay in Storm-Surge Warning?" Gainesville Sun, March 19, 1993.

[34]"Taylor County Beach Residents Return to Ruins," Gainesville Sun, March 16, 1993.

[35]"Weather Still Hard to Predict," Gainesville Sun, March 17, 1993.

PLANNING FOR COASTAL STORMS

As a result of the Presidential disaster declaration for the Storm of the Century, the President activated an Interagency Hazard Mitigation Team to identify areas of significant hazards, visit sites, and evaluate the impact of the disaster. The team was comprised of representatives of federal, state, regional, and local agencies who possess the varied backgrounds and expertise necessary to promote a comprehensive approach to hazard mitigation. The team issued a report containing 25 recommendations which describe the actions, time-lines, and potential funding sources necessary to reduce future losses from similar events. Among the team's findings were recommendations for the installation of additional weather monitoring equipment in coastal areas to help weather forecasters better predict storm events as well as a better warning system for coastal residents.

North central Florida NOAA weather radio signals coverage has been significantly expanded since the Storm of the Century. As of January, 2000, NOAA weather radio covered approximately 70 percent of the region, including all of the region's coastal areas due to the establishment of a new NOAA weather station. Nevertheless, a need continues to exist for an additional NOAA weather station to serve parts of Columbia, Hamilton, Madison, and Suwannee counties.

During the Storm of the Century, the statewide emergency warning system consisted of a dedicated telephone system linking federal and state weather forecasters with local governments. The system allows for two-way conversation similar to a telephone system party-line. Few local governments in north central Florida were connected to this system due to its high installation and maintenance costs. A sophisticated satellite-based communications system has replaced it, linking emergency management agencies throughout the state to provide voice, high-speed data, facsimile, and video communications capabilities. It is more reliable than NAWAS since it is not dependent upon telephone lines and will perform under any weather conditions The system has been installed in every county, solving a missing link in north central Florida emergency management capabilities.

At the time of the storm, no weather buoys or other government-owned weather monitoring instruments were located in the Gulf of Mexico off the Big Bend coastline. Weather buoys provide valuable information regarding temperature, wind speed, wind direction, and barometric pressure. Meteorologists can run computer models that predict storm surge height based upon these factors. One weather buoy was installed in the Gulf of Mexico approximately 100 miles southwest of Horseshoe Beach in 1994. The weather buoy contains weather instruments and a radio transmitter. It was the first instrument to identify hurricane force winds in 1995's Hurricane Allison.[36]

Storm surge increases in height as it nears land. A need exists for additional buoys or other meteorological instruments located at intervals of 50 and ten miles offshore to help meteorologists more accurately predict storm surges as coastal storms move landward.

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[36]Mike Rucker, Public Information Officer, Florida Department of Community Affairs, Division of Emergency Management, June, 1995.

Dixie and Taylor counties have four small coastal communities: the unincorporated coastal communities of Jena-Steinhatchee, Dekle Beach-Keaton Beach, Suwannee, and the incorporated Town of Horseshoe Beach. Warning sirens can be useful means of notifying community residents of storm warnings and evacuation orders when other forms of communication fail. During the Storm of the Century, none of these communities had warning sirens. As of January 1, 2000, four north central Florida coastal communities (Horseshoe Beach, Dekle beach, Keaton Beach, & Steinhatchee) had emergency warning sirens. The unincorporated communities of Suwannee and Jena do not have sirens, although Dixie County is seeking funds for the installation of sirens in these two coastal communities.

As was evident in the Storm of the Century, the greatest danger to coastal areas is the storm surge, a 20- to 100-mile wide wall of water generated by high winds, hurricane forward velocity, and sharp changes in barometric pressure present in coastal storms. Storm surges cause nine out of ten hurricane fatalities. Dixie and Taylor counties are among the most susceptible counties in the state and, perhaps, the nation, to inundation from storm surge. This is due to the geomorphology and the bathymetry of the Gulf of Mexico. Dixie and Taylor counties are located near the Florida panhandle where the coast curves west, creating a corner which can trap sea water. Along a straight coastline, the surge can dissipate more easily by flowing parallel to the coastline. However, in Dixie and Taylor counties, the seawater is trapped in Appalachee Bay where it piles up rather than flows out. The bathymetry, or sea bottom topography, of the gulf of Mexico is much shallower than most other U.S. coastal basins. A shallow basin can increase surge height by as much as 80 percent.[37]

The potential loss of life and property damage due to hurricanes in Dixie and Taylor counties is minimized due to their small populations and large coastal land holdings in public ownership. Dixie County's estimated 1999 population was 13,478, while Taylor County's was 19,836. Population density is low. Both Taylor and Dixie counties had an estimated 1999 population density of 19 persons per square mile, tied at 63rd among Florida's 67 counties.[38] Additionally, approximately two-thirds of the Dixie and Taylor counties coastline is in public ownership.

CLEARANCE TIMES AND SHELTER CAPACITIES

The 1996 Cedar Key Basin Florida Hurricane Evacuation Study, Draft Technical Data Report defines clearance time as the time period covering the issuance of an evacuation order until the last person has arrived at a safe location. Clearance time is comprised of both a behavioral response time component and a travel time component. The clearance time is calculated by adding travel time to the assumed behavioral response time.

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[37]North Central Florida Regional Planning Council, 1990 North Central Florida Regional Hurricane Inland Shelter Study Technical Report Update, Gainesville, Fl., 1990, pg. 10.

[38]Bureau of Economic and Business Research, 1999 Census Handbook, Florida, University Press of Florida, Gainesville, FL., 1994, Table 1.77.

The study concluded that behavioral response time is mainly determined by public perception of the threat from the hurricane. Influential factors include when the hurricane is expected to strike land, strength of the storm, and how soon the escape routes may be cut off. Table 3.1 identifies three clearance times based upon differing behavioral response times. The study notes that under normal circumstances, the most likely behavioral response is the median behavioral response, where the evacuating population start to leave in 6.25 hours after the issuance of an evacuation order. If the evacuation order is issued in the middle of the night, then the slow behavioral response of 9.25 hours is applicable. If the hurricane makes a sudden and unexpected turn inland, then the quick response time of 4.25 hours is applicable.

TABLE 3.1

HURRICANE EVACUATION CLEARANCE TIMES, IN HOURS

Response Type by Tourist Occupancy Levels	Dixie County		Taylor County	
	Tropical Storm - Category 1 Hurricane	Category 3-5 Hurricane	Tropical Storm - Category 1 Hurricane	Category 3-5 Hurricane
Low Tourism Occupancy				
Rapid Response	4.00	4.00	4.25	4.25
Medium Response	6.00	6.00	6.25	6.25
Long Response	9.00	9.00	9.25	9.25
High Tourist Occupancy				
Rapid Response	4.00	4.25	4.25	4.25
Medium Response	6.00	6.00	6.25	6.25
Long Response	9.00	9.00	9.25	9.25

Source: Department of the Army, Jacksonville District Corps of Engineers, Cedar Key Basin Florida Hurricane Evacuation Study, Draft Technical Data Report, Table 6-8a, Jacksonville, FL., 1996.

The draft study estimates that a total of 26,500 people will evacuate during a strong storm in 1995. Of these, 4,150 are expected to evacuate to local public shelters. The study noted that Dixie County has 2,100 persons expected to evacuate to public shelters while Taylor County is expected to evacuate 2,050 persons to public shelters. The study identified a surplus of local public shelter space of 6,510. Taylor County has a surplus of 4,931 while Dixie County has a surplus capacity of 1,569. The study does not project future hurricane shelter space supply and demand.[39]

[39]Department of the Army, Jacksonville District Corps of Engineers, Cedar Key Basin Florida Hurricane Evacuation Study, Draft Technical Data Report, tables 6-4 and 6-5, Jacksonville, FL., 1996.

However, the identified shelters were not based on American Red Cross (ARC) shelter guidelines. In 1993, the State of Florida began using ARC guidelines to determine the fitness of public shelters and their capacities. ARC identifies two different types of shelters, Host and Risk, and correspondingly, two different county shelter capacities. Host shelters consist of buildings used in counties which are not experiencing a flood or weather emergency to house residents from counties experiencing a flood or weather emergency. Under ARC guidelines, Host shelters are subject to less stringent standards than Risk shelters. Risk shelters are buildings used within a county experiencing a weather-related emergency such as a hurricane. Risk shelters must be able to withstand winds of 150 miles per hour, be located outside a flood hazard/storm surge area, and comply with the other provisions of ARC document 4496, Guidelines for Shelter Survey.

As of January 1, 2000, Division of Emergency Management (DEM) records indicate that the region has 150 public shelters, principally public schools and churches.[40] Host capacity has been determined for 46 of the region's 153 public shelters. Only 19 have been surveyed for compliance with ARC 4496 guidelines for use as a Risk shelter. DEM's goal is to complete surveys of all identified public shelters by the end of 2003.

While all public shelters in Taylor County have been surveyed for compliance with ARC guidelines, Dixie County shelters have not. In fact, the only other north central Florida counties which have had public shelters evaluated for compliance with ARC guidelines are Gilchrist and Madison counties, where four of these counties' six public shelters have been surveyed. Table 3.2 below identifies host and risk shelter capacities for north central Florida counties.

[40]A division of the Florida Department of Community Affairs.

TABLE 3.2

NORTH CENTRAL FLORIDA PUBLIC SHELTER CAPACITY USING AMERICAN RED CROSS PUBLIC SHELTER GUIDELINES

County	No. of Shelters	Host Capacity	No. Shelters Surveyed for ARC 4496 Compliance	Risk Capacity ARC 4496 Compliant	Risk Capacity ARC 4496 Non-compliant	PSN* Storm Capacity
Alachua	79	4,139	0	0	8,777	0
Bradford	6	0	0	0	0	0
Columbia	24	0	0	0	0	0
Dixie	3	384	0	0	0	0
Gilchrist	6	2,258	4	1,380	428	52
Hamilton	5	0	0	0	0	0
Lafayette	6	1,394	0	0	842	0
Madison	8	3,810	8	3,810	0	0
Suwannee	6	4,199	0	0	0	0
Taylor	7	2,590	7	1,910	0	0
Union	3	0	0	0	0	0
Region	153	18,774	19	7,100	10,047	52

*Persons with Special Needs.

Source: Florida Department of Community Affairs, Division of Emergency Management, January 3, 2000.

LONG-RANGE PLANNING FOR HURRICANE EMERGENCIES

Insuring the public safety from hurricane hazards also requires long-range planning. Directing growth away from areas subject to hurricane surge inundation can save lives and reduce property damage. North central Florida local governments have successfully reduced allowable dwelling unit densities within coastal areas. In Taylor County, the Future Land Use Plan Map identifies two small coastal communities, Steinhatchee and Dekle Beach - Adams Beach. The Taylor County Comprehensive Plan limits dwelling unit densities to one unit per five acres and one unit per ten acres for the remaining privately-held lands on the Taylor County coast.[41] Dixie County has three coastal communities, the unincorporated communities of Jena and Suwannee as well as the Town

[41]Taylor County Board of County Commissioners, Taylor County Comprehensive Plan, Perry, Fl., November, 1991.

of Horseshoe Beach. The maximum allowable dwelling unit density in Horseshoe Beach is four units per acre. In Jena and Suwannee, the maximum allowable density is eight units per acre. The areal extent of these three communities is small, representing approximately three square miles of land area. The Dixie County Comprehensive Plan limits dwelling unit densities on the remaining privately-held coastal area lands to one unit per ten acres and one unit per 40 acres.[42] Furthermore, the region's two coastal counties are in the process of expanding the geographic extent of their coastal High Hazard Areas as designated in their local government comprehensive plans.

RIVERINE AND FRESHWATER FLOODING

The Suwannee River System has a broad, expansive floodplain which is regularly inundated in response to spring rains.[43] The Suwannee River Water Management District, in conjunction with the Federal Emergency Management Agency (FEMA), has mapped the 100-year floodplain of the Suwannee River System in order to assist local governments with management of the floodplain. Many local governments within the region have adopted floodplain ordinances for the Suwannee River System to regulate the construction and location of structures within the 100-year floodplain.

Every north central Florida county adjacent to the Suwannee River System has, and requires through their comprehensive plans, low dwelling unit densities within the floodplain. The comprehensive plans of north central Florida local governments limit rural floodplain dwelling unit densities to one unit per five acres and one unit per ten acres. Six small urban areas (Branford, Dowling Park, Fanning Springs, Old Town, Suwannee, and White Springs) are located within the Suwannee River 100-year floodplain. Within these urban areas, the maximum allowable residential density within the floodplain is four units per acre.

Along the major tributaries of the Suwannee (Alapaha, Santa Fe, and Withlacoochee Rivers), dwelling unit densities within the 100-year floodplain are also limited to one unit per five acres and one unit per ten acres. No north central Florida municipalities or urban areas are located within the 100-year floodplains of these rivers. The 100-year floodplains of the region's regionally significant coastal rivers (Aucilla, Econfina, and Steinhatchee) are similarly protected with maximum allowable dwelling unit densities ranging from one unit per five acres to one unit per ten acres. Only one urban area, the unincorporated town of Steinhatchee, is within the 100-year floodplain of a coastal river (the Steinhatchee River).

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[42]Dixie County Board of County Commissioners, Dixie County Comprehensive Plan, Cross City, Fl., November, 1991.

[43]The Suwannee River System consists of the Suwannee River and its major tributaries the Alapaha, Santa Fe, and the Withlacoochee rivers.

In addition to the Suwannee River System, FEMA has prepared maps which identify flood hazard areas for all unincorporated areas of the region as well as most of the region's incorporated municipalities.[44] As of January 1, 2000, 34 of the region's 35 local governments with mapped flood hazard areas within their jurisdiction participated in the National Flood Insurance Program. Participation in the program makes federal flood insurance, the only flood insurance in the nation, available for properties located within the 100-year floodplain. All north central Florida local governments with floodable areas within their jurisdiction, regardless of whether they participate in the NFIP, have comprehensive plans which identify floodable areas and contain policies which address flood management.

TORNADOES

Between 1959 and 1994, 120 tornadoes have touched down in north central Florida resulting in six deaths and 65 injuries.[45] Tornadoes occur most frequently in the region during the months of May through August, with June as the peak month. However, tornadoes can occur year-round. Currently, there is no accurate way to predict where or when a tornado will "touch down." Due to their violent nature and the increasing number of mobile homes locating in the region, the probability of property damage and deaths due to tornadoes is increasing.

While mobile homes are of special concern, all north central Florida buildings are vulnerable to tornado damage. Few conventionally-built homes in the region have basements or underground tornado shelters due to a high water table which makes their construction impractical. None of the region's local governments require construction of tornado shelters or safe rooms for large shopping malls, schools, hospitals, or mobile home parks. The construction of safe rooms may be financially infeasible given the level of risk.

Improvements have been made to the region's tornado warning system. The National Weather Service (NWS) installed Doppler weather radar at its Jacksonville and Tallahassee weather stations in 1995 as part of a nationwide modernization program. These locations provide Doppler weather radar information for all eleven north central Florida counties. Doppler radar is a significant improvement over the older weather radar system. Under the old system, meteorologists had to identify tornadoes based on certain visual patterns displayed on the radar screen. Doppler radar detects wind directions and wind velocities at a high degree of resolution within a storm. In addition to displaying radar data on a screen, Doppler radar data is fed to a computer which helps meteorologists understand the storm's dynamics. Meteorologists at the Jacksonville weather station believe Doppler radar allows NWS to issue tornado warnings ten to 15 minutes earlier than they could using the prior system. Accuracy is also increased. In June, 1995's, Hurricane Allison, the Jacksonville weather station identified 16 of the 17 tornadoes which occurred within their area of

[44]The north central Florida communities yet to be mapped are Bell, Fort White, Hawthorne, Jasper, Jennings, Newberry, Raiford, and Trenton.

[45]National Weather Service, Miami Forecast Office, 1995.

jurisdiction. According to Al Sandrick, a meteorologist stationed at the Jacksonville NWS station, "We would never have imagined achieving that type of accuracy with the old radar system."

REGIONALLY SIGNIFICANT EMERGENCY PREPAREDNESS FACILITIES

The facilities listed in Table 3.3 are recognized as regionally significant facilities.[46]

TABLE 3.3

REGIONALLY SIGNIFICANT EMERGENCY PREPAREDNESS FACILITIES

Alachua County Emergency Operations Center
Public Emergency Shelters
NOAA Radio Stations
Weather Buoys and Similar Off-shore Weather Monitoring Equipment
Doppler Weather Radar Installations Covering the Region
Warning Sirens in Coastal Communities
Gainesville Fire Rescue Hazardous Materials Emergency Response Team
PCS, Inc., Chemical Emergency Response Team

HAZARDOUS MATERIALS RELEASES

Under contract with the Florida Department of Community Affairs, the North Central Florida Regional Planning Council serves as staff to the North Central Florida Local Emergency Planning Committee (LEPC). The LEPC was established in 1988 in response to the federal Emergency Planning and Community Right-to-Know Act (EPCRA) which requires the preparation of local emergency response plans for hazardous materials releases which, for the State of Florida, have been developed utilizing the eleven regional planning council districts.[47] The North Central Florida LEPC is composed of representatives of 17 different occupational categories. Membership is also distributed geographically to assure that each of the region's eleven counties has at least one resident

[46]Hurricane evacuation routes recognized as regionally significant transportation facilities are listed in Table 5.8. North central Florida regionally significant facilities and resources, as defined in Rule 27E.005, F.A.C., consist of Regionally Significant Emergency Preparedness Facilities identified in Table 3.2, Natural Resources of Regional Significance identified in Table 4.1, Regionally Significant Transportation Facilities identified in Table 5.8, and Regionally Significant Facilities and Resources, identified in Section VI.

[47]Although referred to as a local plan, it is, in fact, a regional plan which addresses all eleven north central Florida counties.

serving as a member of the LEPC. Committee members are appointed by the State Emergency Response Committee.

The local emergency response plan for north central Florida was adopted by the Committee on June 9, 1989, is updated annually. The LEPC emergency response plan identifies locations of possible hazardous materials releases based upon known locations of hazardous materials. The plan also delineates vulnerable zones.[48]

In addition to the emergency response plan, the LEPC is also involved in establishing training programs, conducting emergency response exercises, providing public information campaigns, and other activities aimed at minimizing risks from hazardous materials releases.

While the LEPC and county hazardous materials emergency response plans have a good understanding of what stationary facilities have in terms of hazardous materials, little is known about hazardous materials moving down roads and railroads in the region. In 2002, the LEPC will begin a commodity flow study of the region's roads, pipelines, and railroads. Given the rural nature of north central Florida and the large populations located south of the region, it is likely that the biggest hazardous materials emergencies involving unknown chemicals could result from releases from trucks and trains passing through the region.

When a hazardous materials release occurs, a local fire department or other local government personnel arrive at the scene and determine if local resources can deal with the release. If the incident requires greater than local resources, the local government contacts one of the region's two regional response teams. One of the response teams is run by the City of Gainesville Fire Department while the other is operated by PCS in Hamilton County.

The LEPC has adopted a needs assessment for additional regional response teams to assure a timely response to hazardous materials spills in the western portion of the region. For example, the LEPC has determined that the worst-case hazardous materials accident in Taylor County is the release of chlorine in the City of Perry as the result of a railroad accident. Currently, such a spill is likely to result in a telephone call to either the Tallahassee Fire Department, the PCS emergency response team, or the Gainesville Fire Department. Tallahassee is the closest response team to Taylor County. Nevertheless, the LEPC has determined that the response time of even the closest emergency response unit, the Tallahassee Fire Department, is too great to adequately protect the public from the release of chlorine gas from a rail car. The LEPC needs assessment notes that response times are 60 minutes or less to hazardous materials accidents in every community within the region except for Perry, Cross City, and Greenville where response times are over one hour. The needs assessment also notes that adequate response times in metropolitan areas is generally considered to be 30 minutes. Given the high costs associated with maintaining hazardous materials

[48]Vulnerable zones are areas where the estimated chemical concentration from an accidental release is at a level where people's health could be adversely impacted during a worst-case release.

response times and the rural nature of the region, the assessment establishes a goal of providing a 60 minute response to hazardous materials accidents.[49]

As noted earlier, the Council staff assists the LEPC in staging hazardous materials emergency response exercises to test the effectiveness of the plans and to provide valuable training to emergency response teams. The LEPC plan was tested during December, 2001, hazardous materials exercise. Local responders gained valuable experience from the exercise. Also, free hazardous materials emergency response training classes are sponsored by the LEPC for first responders including firefighters, law enforcement, emergency medical, and public works personnel. Over 3,700 people have been trained since 1995. Most of the training is at the awareness-level, in which first responders are trained to recognize, identify, and make the proper notifications for possible hazardous materials incidents.[50]

The LEPC is actively working to reduce the risks associated with hazardous materials. To assist the regulated community, the LEPC has notified over 2,800 facilities of their potential reporting requirements. The LEPC also provides technical assistance to help these facilities comply with the reporting requirements of EPCRA.

STATE EMERGENCY MANAGEMENT EFFORTS

In the aftermath of 1992's Hurricane Andrew, the state revitalized its efforts in emergency preparedness planning, especially for hurricanes. After Andrew, the Governor's Disaster Planning and Response Review Committee was established to identify problems with statewide disaster preparedness and recommend improvements. In a report commonly known as the Lewis Report after Committee Chairman Philip D. Lewis, the Committee made 99 recommendations as to how the state could improve its ability to handle emergencies.[51] The Committee identified five key recommendations: improve communications at and among all levels of government; strengthen plans for evacuation, shelter, and post-disaster response and recovery; enhance intergovernmental coordination; improve training; and provide sufficient funding for the development of emergency management plans and activities.

The major recommendations of the Lewis report were incorporated into amendments to the State Emergency Management Act (Chapter 252, Florida Statutes). Formerly, the act required the

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[49]For more information regarding the need for an additional regional emergency response team in Perry, see North Central Florida Local Emergency Planning Committee, Needs Assessment for Additional Hazardous Materials Emergency Response Teams, Training, and Equipment in North Central Florida, North Central Florida Regional Planning Council, Gainesville, Fl, November 17, 1995.

[50]First responders are individuals most likely to be first to respond to the scene of a hazardous material release. First responders typically include fire fighters, policemen, and county sheriff personnel.

[51]Governor's Disaster Planning and Response Review Committee, Draft Final Report, Executive Office of the Governor, Tallahassee, Fl, December 2, 1992.

preparation of three, and sometimes four, county emergency management plans: a Peacetime Emergency Plan, a Nuclear Civil Protection Plan, a Hazardous Materials Emergency Plan, and a Radiological Emergency Plan for counties located within 50 miles of a nuclear power plant. These plans are now consolidated into a single Comprehensive Emergency Management Plan (CEMP). Nuclear civil protection planning was de-emphasized due to the greater likelihood of emergencies resulting from other events. Another major change to the legislation was the creation of the Emergency Management Preparedness and Assistance Trust Fund from surcharges on residential and commercial property insurance policies. Funds from the trust are used to support the Florida Department of Community Affairs, Division of Emergency Management (DEM), as well as local government emergency preparedness agencies. The trust fund allowed, by 1994, every north central Florida county to hire a full-time emergency management director.[52]

LOCAL GOVERNMENT COMPREHENSIVE EMERGENCY MANAGEMENT PLANS

Rule 9G-6, Florida Administrative Code. (F.A.C.), required local governments to prepare revised CEMPs which meet the requirements of rule 9G-7, F.A.C. The county CEMP is to provide a detailed description of the process to be followed at the local level whenever an emergency or disaster occurs as a result of natural or manmade causes. Such emergencies include, but are not limited to: tornadoes, hurricanes, wind storms, floods, freezes, electrical generating capacity shortages, drought, hazardous materials releases, and civil disturbances. County CEMPs are no longer required to develop or maintain nuclear attack civil protection plans. Each county CEMP is required to address the following 17 emergency support functions: animal services, communications, energy, fire fighting, food and water, hazardous materials, health and medical services, information and planning, law enforcement and security, mass care, military support, public works and engineering, public information, resource support, transportation, search and rescue, and volunteers and donations. County CEMPs are submitted to the Florida Department of Community Affairs (DCA) for compliance review.

MUTUAL AID AGREEMENTS

Most north central Florida local governments have not entered into formal mutual aid agreements with their neighbors. If a north central Florida local government requires assistance, it merely calls and their neighboring local government responds. Few such requests have been made, and where they occurred, in the spirit of cooperation, local governments did not charge the requesting local government to cover the costs of the request. However, in an age of increasingly tight local government budgets, the need for more specialized regional response teams, and concerns regarding liability issues, formal mutual aid agreements are becoming increasingly important to assure assistance is available.

[52]With the exception of Madison County, every north central Florida county has a full-time emergency management director.

Mutual aid agreements provide greater assurances that assistance will be provided, when available, by other local governments. An agreement can decrease the time required by local governments to exchange resources during an emergency without the delay of declaring a formal "state of emergency." This is especially important due to the short timeframes associated with hazardous materials releases.

The State Emergency Management Act authorizes DEM to develop and enter into mutual aid agreements. The Division has prepared a statewide mutual aid agreement and is requesting all local governments to adopt the agreement.

The statewide agreement allows for reimbursement to assisting local governments for most incurred costs from the Emergency Management Preparedness and Assistance Trust Fund as well as from the requesting local government. The agreement also establishes a supervision and control structure for assisting local government personnel and resources at the scene of the emergency, formalizes procedures for making emergency assistance requests, and resolves other mutual aid issues. As of January 6, 2000, 41 of the region's 44 local governments had adopted the agreement.[53]

PROBLEMS, NEEDS, AND OPPORTUNITIES

The Council identifies the following emergency preparedness problems, needs, and opportunities:

1. A need exists for an additional NOAA weather station radio to serve Columbia, Hamilton, Madison, and Suwannee counties.

2. A need exists for additional weather monitoring buoys or other meteorological instruments at 100, 50, and 10 mile locations in the Gulf of Mexico spaced approximately 50 miles apart from Pinellas to Franklin counties.

3. A need exists for the installation of emergency warning sirens in north central Florida coastal communities.

4. An opportunity exists to make flood hazard insurance available within all north central Florida local government jurisdictions.

5. A need exists to reduce the response times of regional hazardous material response teams to hazardous materials emergencies to 60 minutes in Perry, Cross City, and Greenville.

6. Both a need and an opportunity exist for all north central Florida local governments to receive assistance from other local governments during emergencies by becoming

[53]Florida Department of Community Affairs, Division of Emergency Management, Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery Status Report, Tallahassee, Fl., January 6, 2000.

signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

7. A need exists to complete emergency shelter surveys in all north central Florida counties based on American Red Cross Shelter guidelines.

REGIONAL GOALS AND POLICIES

REGIONAL GOAL 3.1. Improve emergency preparedness for coastal storms in the region.

Regional Indicators

1. As of January 1, 2001, one coastal weather buoy exists in the Gulf of Mexico located approximately 100 miles southwest of Horseshoe Beach.

2. As of January 1, 2000, NOAA weather ratio transmissions covered approximately 70 percent of the region.

3. As of January 1, 2000, four north central Florida coastal communities (Horseshoe Beach, Dekle Beach, Keaton Beach, & Steinhatchee) had emergency warning sirens.

4. As of January 1, 1996, Dixie County had a Long Response clearance time of 9.00 hours.

5. As of January 1, 1996, Taylor County had a Long Response clearance time of 9.25 hours.

6. As of January 1, 2000, 19 of the region's 153 public shelters had been surveyed for compliance with ARC 4496 guidelines.

7. As of January 1, 2000, the region's ARC 4496-Compliant Risk Public Shelter Capacity was 7,100.

Policy 3.1.1. Install weather monitoring buoys or other meteorological instruments at 100, 50, and 10 mile locations in the Gulf of Mexico spaced approximately 50 miles apart along the west Florida coastline from Pinellas to Franklin counties.

Policy 3.1.2. Establish NOAA weather radio station radio coverage for all of north central Florida.

Policy 3.1.3. Establish emergency warning sirens for north central Florida coastal communities.

Policy 3.1.4. Maintain up-to-date hurricane evacuation and inland hurricane shelter plans for north central Florida.

Policy 3.1.5. With the exception of enhancements necessary for the health, safety, and welfare of its residents, avoid the expenditure of state funds that subsidize development in Coastal High Hazard Areas.

Policy 3.1.6. Complete public shelter surveys to determine their compliance status with ARC Publication 4496 guidelines in order to determine the public shelter Risk Capacity for the region.

Policy 3.1.7. Determine the public shelter Risk Capacity net surplus/deficit for all north central Florida counties.

REGIONAL GOAL 3.2. Participation by all north central Florida local governments in the National Flood Insurance Program.

Regional Indicators

1. As of January 1, 2000, 34 of the region's 35 local governments with mapped flood hazard areas within their jurisdiction participated in the National Flood Insurance Program.

2. As of January 1,2000, National Flood Insurance Rate Maps are unavailable for eight north central Florida municipalities.

Policy 3.2.1. Maintain local government eligibility for the FEMA Flood Insurance program.

Policy 3.2.2. Assist the remaining five non-participating north central Florida local governments whose jurisdictions contain floodable area to become eligible and apply for the National Flood Insurance Program.

Policy 3.2.3. Request FEMA to prepare National Flood Insurance Rate Maps for the remaining eight north central Florida municipalities for which such maps have not been prepared.

REGIONAL GOAL 3.3. Reduce response times of regional hazardous materials response teams to 60 minutes for hazardous materials emergencies in Perry, Cross City, and Greenville.

Regional Indicator

As of January 1, 2000, no regional hazardous materials response team is located within a sixty minute response time of Perry, Cross City, or Greenville.

Policy 3.3.1. Establish a regional hazardous materials response team in or near the City of Perry.

Policy 3.3.2. Provide state funding for regional hazardous materials emergency response teams.

REGIONAL GOAL 3.4. Improve the ability of emergency response teams to respond to hazardous materials emergences.

Regional Indicator

As of January 1, 2000, no commodity flow studies have been undertaken to determine the types and amounts of hazardous materials moving via railroads and highways in the region.

Policy 3.4.1. Conduct a commodity flow study to determine the types and amounts of hazardous materials moving via railroads and highways located in the region.

Policy 3.4.2. Continue to provide technical assistance to local governments in the preparation of their hazardous materials response plans.

Policy 3.4.3. Continue to serve as staff to the North Central Florida LEPC.

Policy 3.4.4. Provide local emergency dispatch operators with a summary of hazards analysis information so as to inform responders as to what types of hazardous materials at the scene of the emergency.

Policy 3.4.5. Provide training to local emergency personnel for dealing with hazardous materials emergencies.

Policy 3.4.6. Keep the general public informed of potential hazardous materials dangers facing their communities by promoting annual hazardous materials spill prevention week programs.

REGIONAL GOAL 3.5. All north central Florida local governments are signatories to the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

Regional Indicator

As of January 6, 2000, 41 north central Florida local governments had adopted the Statewide Mutual Aid Agreement for Catastrophic Disaster Response and Recovery.

Policy 3.5.1. Actively promote north central Florida local governments to adopt the statewide mutual aid agreement for catastrophic disaster response and recovery.