Transit Emergency Planning and Response Assessment Initiative

September 2005

Center for Urban Transportation Research
University of South Florida
4202 E. Fowler Avenue – CUT 100
Tampa, Florida 33620-5375
813-974-3120
www.cutr.usf.edu

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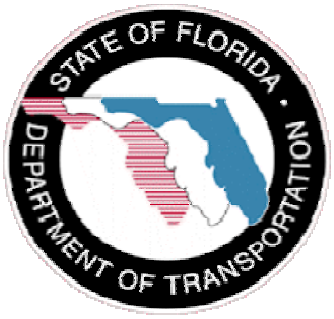

Project Managers:

Richard Dreyer, FDOT District 1 Modal Development
Elizabeth Stutts, FDOT Office of Public Transportation
Robert Westbrook, FDOT Office of Public Transportation

Principal Investigators:

Jay A. Goodwill
Amber Reep

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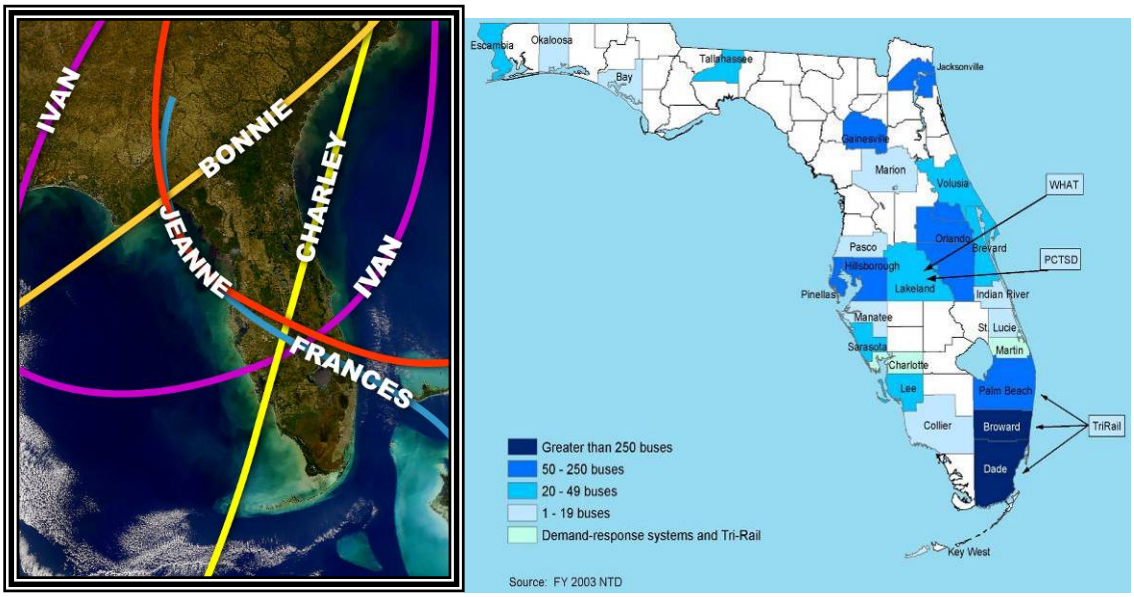
OVERVIEW AND ORGANIZATION

Following last summer's experience of four major hurricanes impacting Florida in less than six weeks, the Florida Department of Transportation (FDOT) contracted with the University of South Florida's Center for Urban Transportation Research (CUTR) to conduct an evaluation and assessment of Florida's public transportation industry's emergency planning efforts and responses to Hurricanes Charley, Frances, Ivan and Jeanne. In addition, the CUTR was directed to document the challenges facing Florida's public transportation industry in developing standard regional and statewide responses to storm related emergencies and to identify areas of concern that should be addressed and improved.

Background

On Friday, August 13, 2004, Hurricane Charley, a Category Four hurricane, after passing over Sanibel Island in Lee County, made landfall on the southwest coast of Florida entering Charlotte Harbor, directly impacting Punta Gorda and Port Charlotte in Charlotte County. Hurricane Charlie continued on a northeast track, traveling through Arcadia in DeSoto County, eastern Polk County, the general Orlando area, and finally exiting through Volusia County near Daytona Beach.

Over the next six weeks, Charley was followed by three more major hurricanes – Frances, Ivan and Jeanne – that directly impacted the State of Florida. These hurricanes provided a real life exercise for the Florida public transit agencies in responding to storm emergencies. The pre-event and post-event plans and preparations were put to the test. Numerous heroic and unselfish actions by Florida's public transportation professionals were reported as they responded to Hurricanes Charley, Frances, Ivan and Jeanne. The importance of public transportation – especially the community paratransit services – was made readily apparent in community after community.



These four hurricanes stressed the public transportation community, challenging innovative responses, and highlighting some weaknesses and shortcomings in both the pre- and post-event stages. All of Florida's public transportation systems were impacted to some degree by these storm events. Before time passes and the events fade from individual memories, it is important to examine and assess the Florida transit industry's reaction to the storm events to determine what worked and what was unsuccessful, to measure the adequacy of the emergency planning efforts, to document "lessons learned," and most importantly to make recommendations to better prepare for future emergency events.

Study Approach

In addition to conducting the traditional literature research for public transportation's roles and functions in emergency response, the study also utilized a variety of methods to collect information, testimonials and data.

CUTR staff worked closely with Florida DOT staff – specifically the District One and Central Office Transit sections. E-mail transmissions during and after the storm events between the Central and District transit offices were reviewed.

Surveys were sent to all of Florida's public transportation agencies – both fixed route systems and the Community Transportation Coordinators (CTC's) – in an attempt to gather a variety of information directly related to the responses to these four storm events, as well as to request specific information related to their emergency planning efforts. Selective follow-up phone interviews were conducted.

During the course of the project, four major presentations and forums were conducted to present, share, and collect information from Florida and national public transportation agencies. These forums included:

- Florida Public Transportation Association's Annual Meeting, November 2004
- The American Public Transportation Association Bus Operators and Paratransit Conference, May 2005
- The FDOT/FPTA/CUTR Professional Development Workshop, June 2005
- The Florida Commission for the Transportation Disadvantaged Annual Training and Technology Conference, July 2005

Report Organization

The project's findings, conclusions and recommendations are presented in this document. This information is organized in the following chapters:

CHAPTER ONE: Chronology of 2004 Hurricane Season

Chapter One presents a backdrop for the report and attempts to document the events of the summer of 2004, providing a narrative and overview of the 2004 Florida Hurricane Season.

CHAPTER TWO: Emergency Command Structure

This chapter provides an overview of the standardized emergency management, planning and response structure used in Florida. A knowledge of the framework under which the federal, state and local emergency responses are organized is essential for Florida's public transportation agencies to understand their roles and responsibilities in

the overall community response, as well as how best to seek additional resources and assistance themselves to fulfill their emergency response missions.

CHAPTER THREE: Transit Emergency Plans

Chapter Three provides an overview of the key elements that should be included in an emergency plan and provides resources that public transportation agencies can use to access additional advice on developing effective public transportation emergency operations plan that define, in a straightforward manner, who does what, when, where, and how to mitigate, prepare for, respond to, and recover from major occurrences that have the potential to result in harm, destruction, and disruption of service.

CHAPTER FOUR: Transit System Experiences

One element of the evaluation and assessment of the Florida's public transit industry's emergency planning efforts and responses to the 2004 major hurricanes was to gauge the current level and scope of emergency preparedness planning, as well to measure the Florida transit systems' responses to the storm events. This chapter summarizes some the key findings of the survey sent to all of Florida's fixed route and Community Transportation Coordinators.

CHAPTER FIVE: Lessons Learned

This chapter attempts to organize a wide variety of observations, findings, thoughts and suggestions on what the respective roles of the various components of the Florida transit industry in the emergency planning and response should be, as well as present some suggestions for the FDOT, the state's public transit systems and the local CTC's. Detail is provided on the coordination challenges facing Florida transit agencies. The research revealed several deficiencies and some common areas of concern in the state's transit systems responses from a regional and statewide perspective. Specific observations and specifics are offered for the following eight areas:

- Communication Needs
- Coordination Needs
- Education Needs

- Specialized Needs
- Accounting and Record Keeping Needs
- Required Resources
- Common Practices
- Public Relations

CHAPTER SIX: Best Practices

During the course of this project, through the discussions with the Florida transit agencies and the Florida DOT staff, the questionnaire responses, the review of the system emergency plans and through the four presentations and forums, a number of best practices were discovered. This chapter provides a listing of several of these exemplary practices so they can be shared with and replicated by other Florida transit properties.

EXHIBITS

Several items are included as supplemental materials in the Exhibits.

- EXHIBIT A:
  2004 Hurricane Experience & Emergency Planning Questionnaire Instrument

- EXHIBIT B:
  Draft Transit Annex to Appendix I: ESF 1 Transportation

- EXHIBIT C:
  "Florida's 2004 Hurricane Season" PowerPoint Presentation

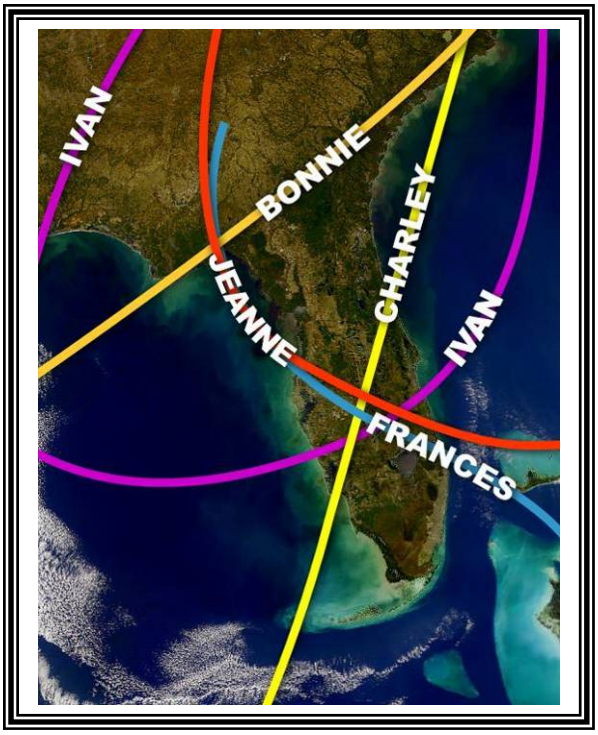
CHAPTER ONE
CHRONOLOGY OF 2004 HURRICANE SEASON

This chapter provides a narrative and overview of the events of the 2004 Florida Hurricane Season, presenting a backdrop for the report and documenting the events that occurred during this season.

Hurricane Season 2004, Chronology of Events

The 2004 Hurricane Season was a test of Florida's strength and stamina. The Florida peninsula was hit by four major hurricanes in less than two months. The last time such a phenomenon occurred was in Texas in 1886. The following is a short timeline and synopsis of each hurricane's strength, speed and track as well as its devastating effect on Florida.

By definition, hurricanes are severe tropical storms that form in the southern Atlantic Ocean, Caribbean Sea, Gulf of Mexico, and in the eastern Pacific Ocean. Hurricanes gather heat and energy through contact with warm ocean waters. Evaporation from the seawater increases their power.



Hurricanes rotate in a counter-clockwise direction around an "eye." Hurricanes have winds of at least 74 miles per hour. When they come onto land, the heavy rain, strong winds and heavy waves can damage buildings, trees and cars. [1]

Historically, a hurricane's speed and path depend on complex interactions between the storm with its own internal circulations and the earth's atmosphere. In 2004, all of these complex forces took many of the season's most dangerous hurricanes on a collision course with Florida.

These hurricanes were each dynamic individuals, possessing their own character and personality. However, despite atmospheric flows, water temperatures and steering winds each hurricane made its way to Florida. Additionally, the track of each hurricane was impressively similar. These storms did not appreciate the old adage that "lighting never strikes the same place twice."

In addition to common course paths, each hurricane also had similar, destructive affects to Florida's landscape, residents, tourism, highways, airports, military bases and coastlines. The 2004 Hurricane Season is estimated to have caused a minimum of $20 billion in loss and damage.[2] As detailed in Table 1.1, wind losses exceeded $17 billion.

TABLE 1.1
TOTAL INSURED WIND LOSSES FROM THE FOUR HURRICANES IN FLORIDA

Hurricane Charley	**$ 6.8 Billion**
Hurricane Francis	**$ 4.1 Billion**
Hurricane Ivan	**$ 3.8 Billion**
Hurricane Jeanne	**$ 2.8 Billon**
TOTAL	**$ 17.5 Billon**

Source: National Association for Multiple Insurance Companies, NAMIC On-line. "Key Facts from Florida's 2004 Hurricane Season", The Florida Insurance Council news release, November 16, 2004.

Additionally, the number of people who were left without power and/or water numbered in the millions (Table 1.2). Before anyone could begin to rebuild, power needed to be restored. The Florida Power and Light Company and Gulf Power quickly began to restore power to millions of customers. Both companies brought in thousands of out of

state crews to help replace power lines, poles, transformers, etc. Unfortunately, despite enormous efforts from both power companies, many residents were without power for weeks.

TABLE 1.2
POWER LOSS BECAUSE OF HURRICANES

Hurricane Charley	**2.8 Million Customers***
Hurricane Francis	**1.7 Million Customers***
Hurricane Ivan	**365,000 Customers****
Hurricane Jeanne	**874,000 Customers***

Source: * Florida Power and Light, www.fpl.com. **Power Update, Gulf Power Customer News, A Southern Company, October 2004.

Hurricane Charley

On August 13, after passing over western Cuba and west of Key West, Hurricane Charley strengthened to a Category 3 storm. Weather advisories issued throughout Florida indicated that Charley would be a Category 5 storm when it hit Florida. Charley was approaching Florida from the southeastern Gulf of Mexico and severe weather related to Hurricane Charley immediately impact Florida's southwest coast. Initially, it was predicted that the hurricane would hit the highly populated, low-lying Tampa Bay area.

Mandatory evacuation of non-residents, recreational vehicles, mobile home residents, and special needs residents from the Florida Keys was ordered. An evacuation order for the coastal areas of Lee County was also issued. Pinellas, Hillsborough, Manatee,

Pasco and Sarasota Counties had mandatory evacuations for areas prone to the effects of storm surge.

Theme parks in Orlando, including Universal Orlando, Sea World and Disney's parks closed early; Disney's Animal Kingdom never opened at all, making this only the second time Disney's parks have closed due to a hurricane.

The center of Hurricane Charley moved ashore in Southwest Florida at approximately 4 p.m. on August 13th as a Category 4 hurricane with winds estimated as high as 145 miles per hour. Because the initial track of the hurricane was predicted to hit the Tampa Bay area, thousands of Tampa residents evacuated north as well as inland to Orlando. Port Charlotte, Punta Gorda and Arcadia initially bore the brunt of the storm, which continued to move to the northeast toward the rural Polk County and then to the Orlando area. Unfortunately, the Orlando area is where many of Tampa's residents evacuated to. Those residents would have to "hunker down" in shelters and hotel rooms to wait out Charley.

Hurricane Charley moved northeast from Orlando, passing over Sanford in Seminole County, and then Deltona and Daytona Beach in Volusia County and moved into the Atlantic Ocean.

The emotional, physical and financial toll that Charley had on Florida's residents was dramatic. Even more difficult to contend with was the emotional rollercoaster that many Tampa residents endured because they evacuated directly into the path of Charley. When the storm finally passed Florida, Charley had left almost $14 billion worth of damage and contributed to 10 deaths.[3] Table 1.3 categorizes the total insured losses from Hurricane Charley. However, these numbers do not represent uninsured losses.

Although predicting the path of a hurricane is not an exact science, many of Florida's residents felt let down by inaccurate forecasts, predictions and advisories. Additionally, because of the unpredictable nature of hurricanes, meteorologists felt that residents lost

faith in their advisories and feared that in the future, residents would not head warnings and advisories.

TABLE 1.3
TOTAL INSURED LOSSES FROM HURRICANE CHARLEY

Total Insured Losses From Hurricane/Tropical Storm Force Winds;	**$ 6.7 Billon**
In Personal Homeowners	**$ 3.8 Billon**
In Commercial Property Losses	**$ 2.7 Billon**
Million In Vehicle Losses	**$ 300 Million**

Source: National Association for Multiple Insurance Companies, NAMIC On-line. "Key Facts from Florida's 2004 Hurricane Season", The Florida Insurance Council news release. November 16, 2004.

Hurricane Frances

On August 31st, forecasters and Floridians alike began to take notice of Hurricane Frances, which was gaining strength and size in the Atlantic Ocean. Although the path of Hurricane Frances was unknown, forecasters were keeping visuals because Francis was the size of Texas and twice the size of Hurricane Charley. Hurricane Francis was forecasted to hit somewhere on the east coast of Florida as a Category 4 storm. Francis was a slow moving, monster-sized storm.

Florida residents, still viewing the destruction of Hurricane Charley, grew very nervous of such a large and potentially devastating storm. As Francis sped towards Florida, mandatory and voluntary evaluations began for what was to be the largest evacuation in U.S. history, effecting 2.5 million people. South Florida highways were inundated by people fleeing the Category 3 storm and as mandatory evacuations were ordered in parts of 16 counties, voluntary evacuations took place in five other counties. The Red

Cross, mounted the largest ever response to a domestic natural disaster, opened 82 shelters in Florida; by nightfall approximately 21,000 people had taken shelter. [4]

Because of Frances's size and speed, it was predicted that the hurricane could stall over Florida for 24-36 hours. Finally, on September 5th, Hurricanes Francis hit Florida between Martin and St. Lucie counties. However, because the storm was over 500 miles wide, its winds and rain affected many counties simultaneously and for long periods of time. After an all-day barrage of howling, sustained winds of 70 mph and relentless rain, the center of Hurricane Frances made landfall around midnight in Martin County.

Ultimately, 57 of the Florida's 67 counties were affected by Hurricane Francis. Table 1.4 categorizes the total insured losses from Hurricane Francis. However, these numbers do not represent uninsured losses.

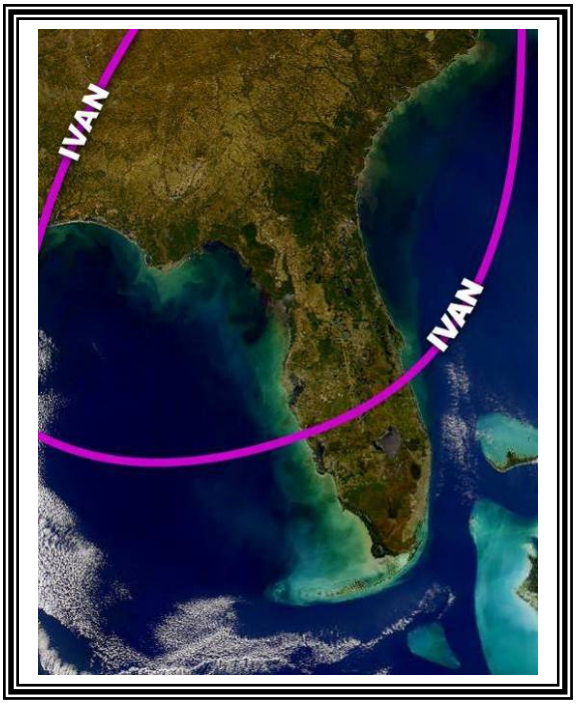
TABLE 1.4
TOTAL INSURED LOSSES FROM HURRICANE FRANCES

Total Insured Losses From Hurricane/Tropical Storm Force Winds;	**$ 4.1 Billon**
In Personal Homeowners	**$ 2.4 Billon**
In Commercial Property Losses	**$ 1.25 Billon**
Million In Vehicle Losses	**$ 150 Million**

Source: National Association for Multiple Insurance Companies, NAMIC On-line. "Key Facts from Florida's 2004 Hurricane Season". The Florida Insurance Council news release. November 16, 2004.

Hurricane Ivan

On September 5th, the same day that Hurricane Francis made landfall, Tropical Storm Ivan was upgraded to a hurricane in the Atlantic Ocean. The predicted track of Hurricane Ivan proved hard to predict keeping all of Florida in suspense. The original track, which had the storm going up the Atlantic coastline, would have missed Florida. Unfortunately, Ivan's track kept shifting westward and southward. During the next 11 days, the forecasted track of Hurricane Ivan was predicted at one time or another to travel over all 67 Florida counties. Needless to say, after Hurricanes Charley and Frances, the anxiety levels of Florida residents were at an all time high.



Eventually, the path of Hurricane Ivan went south of Florida and entered the Gulf of Mexico and appeared not to impact Florida at all. However, with a late northeast swing, Hurricane Ivan made landfall near the Florida-Alabama border. On September 16, Ivan struck the U.S. near Gulf Shores, Alabama. At the time, Ivan was a Category 4 storm and had maximum sustained winds of 130 mph. Alabama and the western Florida panhandle were devastated by Ivan.

Ivan continued inland, maintaining hurricane strength until it was over central Alabama and northern Florida. At least 12 people were killed, mostly by hurricane-spawned tornadoes in Florida. Much of Ivan's heaviest damage hit the Florida panhandle region. Near Pensacola, a quarter mile section of the highway Interstate 10 was washed away by storm surge.

Late on the 16th of September, Ivan weakened to a tropical depression over northeastern Alabama. The remnants of Ivan drifted off the mid-Atlantic coast of the

United States into the Atlantic Ocean. The low-pressure disturbance continued to dump rain on the east coast of the United States.

Temporarily Ivan lost tropical characteristics, but on the morning of September 21st, some of the remnants of Ivan combined with a low-pressure system to pelt Cape Breton Island of Nova Scotia, Canada with hurricane-force winds, flooding some roads, destroying trees, and leaving thousands without power. Ivan then reformed into a tropical depression on September 22, 2004 in the Gulf of Mexico after having traveled in a circular motion through the southeastern United States, causing tremendous flooding.

A low-pressure front, caused by the southern remnants of Ivan, moved across the Florida peninsula. As it continued west across the northern Gulf of Mexico, the system organized and again took on tropical characteristics. The National Weather Service, "after considerable and sometimes animated in-house discussion [regarding] the demise of Ivan," determined that the low was in fact a result of the remnants of Ivan and thus designated it Ivan accordingly. Once again, Ivan hit Florida, this time passing through Florida's central counties. On September 23, the revived Ivan again made landfall near Cameron, Louisiana as a weak tropical storm. Ivan weakened quickly as it traveled over land into southeast Texas.

Table 1.5 categorizes the total insured losses from Hurricane Ivan. However, these numbers do not represent uninsured losses.

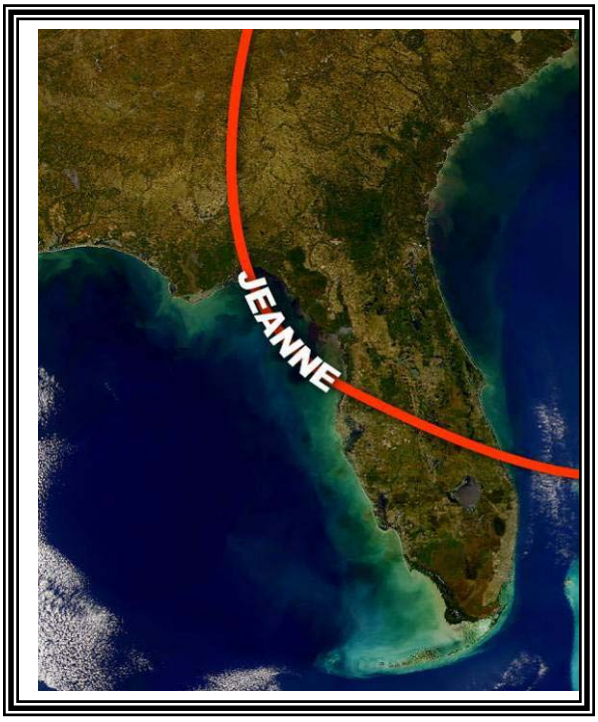
Although Florida residents where emotionally, physically and financially exhausted by Hurricane Charley, Francis and Ivan they were about to tested one more time by Hurricane Jeanne.

TABLE 1.5
TOTAL INSURED LOSSES FROM HURRICANE IVAN

Total Insured Losses From Hurricane/Tropical Storm Force Winds;	**$ 3.8 Billon**
Billion In Personal Homeowners	**$ 2.4 Billon**
In Commercial Property Losses	**$ 1.25 Billon**
Million In Vehicle Losses	**$ 150 Million**

Source: National Association for Multiple Insurance Companies, NAMIC On-line. "Key Facts from Florida's 2004 Hurricane Season", The Florida Insurance Council news release. November 16, 2004.

Hurricane Jeanne



Jeanne was the fourth hurricane to make landfall in Florida during this two-month period. On Wednesday, September 23, 2004 the path of Hurricane Jeanne took a decided turn westward after meandering in the open Atlantic for days. After originally projecting Jeanne on a path toward the Carolinas, forecasters said the storm appeared to be headed toward Palm Beach County and the Treasure Coast, following the path of Hurricane Frances three weeks earlier.

Mid-morning on September 24, Hurricane Jeanne, approximately 600 miles east of Palm Beach was moving west at 6 miles per hour with top sustained winds of 105 miles per hour. Forecasters said Jeanne was expected to strengthen over warmer waters and would increase from a Category 2 storm to a Category 3 before landfall. Two million people were given mandatory or voluntary evacuation orders ahead of the storm.

On September 25th, just three weeks after Hurricane Frances, Florida's east coast began to feel the early effects of Hurricane Jeanne, which had hurricane force winds extending 70 miles from its center and tropical force winds extending out 200 miles. Jeanne officially blew onshore as a strong Category 3 storm with sustained winds of 120 mile per hour. The storm made landfall just before midnight at the south end of Hutchinson Island in Martin County. Jeanne was traveling at 12 miles per hour, twice the speed of Frances.

Amazingly, Hurricane Jeanne made landfall just two miles from where Hurricane Frances came ashore exactly three weeks earlier – nearly to the minute. The initial winds generated by Jeanne caused 170,000 power outages in Miami-Dade and Broward counties. Throughout Florida, in the 30 effected counties, about 2.8 million Florida homes and businesses lost power because of Hurricane Jeanne. Approximately, 6,000 out-of-state work crews were committed to the restoration process. Power restoration took days for some residents and weeks for others. The loss and damage to residential homes, trailers and businesses was massive. [5]

However, despite the strength and endurance of the storm, only six storm-related deaths were reported in Florida[6]. However, these six deaths were added to a death toll of more than 1,500 in Haiti, 24 in the Dominican Republic and seven in Puerto Rico.

Although Hurricane Jeanne was the last hurricane to strike Florida in 2004, residents did not feel at peace. The relief and rebuilding effort that Florida would endure would be extensive. Those lucky people that were not dramatically affected by the hurricanes resumed their somewhat normal lives. However, other residents and commercial business owners who were more seriously affected by the hurricanes did not know what to do to begin rebuilding.

Table 1.6 categorizes the total insured losses from Hurricane Jeanne. However, these numbers do not represent uninsured losses.

TABLE 1.6
TOTAL INSURED LOSSES FROM HURRICANE JEANNE

Total Insured Losses From Hurricane/Tropical Storm Force Winds;	**2.78 Billon**
In Personal Homeowners	**2.1 Billon**
In Commercial Property Losses	**605 Million**
Million In Vehicle Losses	**80 Million**

Source: National Association for Multiple Insurance Companies, NAMIC On-line. "Key Facts from Florida's 2004 Hurricane Season", The Florida Insurance Council news release, November 16, 2004.

CHAPTER TWO
EMERGENCY COMMAND STRUCTURE

Knowledge of the framework under which the federal, state and local emergency responses are organized is essential for Florida's public transportation agencies. It is critical that they understand their roles and responsibilities in the overall community response, as well as how best to seek additional resources and assistance themselves in fulfilling their emergency response missions. This chapter provides an overview of the standardized emergency management, planning and response structure used in Florida.

Incident Command Structure [7] [8]

The Standardized Emergency Management Systems (SEMS) used in the United States and the State of Florida requires that emergency management agencies use the Incident Command System (ICS) as the basic emergency management system.

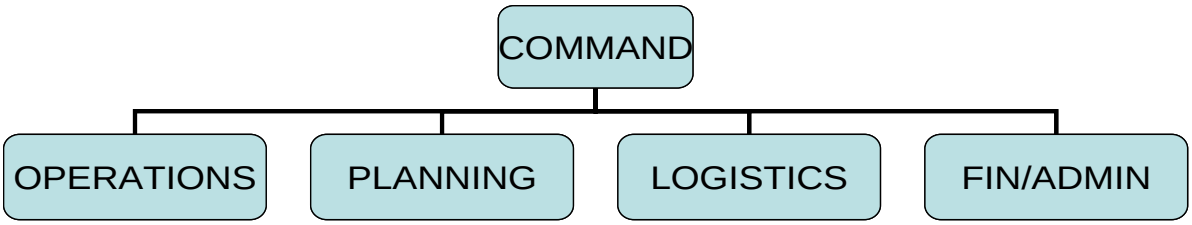
ICS was originally developed by the fire services to provide a standard system for managing emergencies. ICS provides a common framework within which agencies can work collectively at the scene of an emergency. ICS has several other features, which contribute to its being an effective emergency management system for both single and multiple agency use.

ICS is a flexible means for command, control, and coordination at the scene of an incident, emergency, or disaster. It is a management tool for organizing personnel, facilities, equipment, and communications. ICS is employed throughout the nation and is the national standard mandated by the Federal government.

ICS is used to organize a response effort; ensure effective information collection and analysis; allow predictive assessments with respect to changing incident conditions;

ensure effective communications; and ensure effective dissemination of information and deployment of resources to responders.

Using ICS ensures an effective span of control for incident management, and use of common terminology to prevent misunderstandings. ICS communications are integrated to assure that resources are effectively deployed during the response.



ICS has a modular format consisting of an Incident Commander and four supporting staffs: Operations, Planning, Logistics, and Finance and Administration. ICS ensures that span of control is reasonable. It assures one Incident Commander, and one chief for each of the supporting staffs.

The Operations Staff immediately support and execute efforts at the scene of the incident. The Operations Staff coordinate the tactical response for the incident.

The Planning Staff collect and disseminate information, as appropriate, and plan the next steps. The Planning Staff assess the ongoing situation; collect, evaluate, and disseminate information about the incident; and develop intelligence information for contingency plans.

The Logistics Staff locates and stages necessary equipment and supplies. The Logistics Staff are responsible for the provision of facilities, services, and materials, including transportation, and fuel, shelter, personal hygiene, food, potable water, water for fire suppression, medical attention and supplies, and relief personnel.

The Finance and Administration Staff handle emergency procurement, accounting, and personnel notifications. The Finance and Administration Staff track all incident costs and evaluate financial considerations.

ICS may be used in any emergency, large or small. The level of complexity and number of people involved may be adjusted as appropriate to the situation.

Single incident command is used for a single political jurisdiction and one or more agencies have responsibilities. In a single command ICS, one individual, the incident commander, is solely responsible for establishing objectives and management strategy for emergency response.

Unified incident command is employed in situations in which one or more political jurisdictions and multiple agencies have responsibilities. In a unified command ICS, a team process allows all jurisdictions and/or agencies with responsibility for an emergency to jointly provide management direction to an emergency through a common set of objectives and strategies established at the command level.

The Emergency Operations Center (EOC) organization is used for large-scale events; to coordinate among political jurisdictions and with other levels of government; and, to assure appropriate resource allocation between the incident scene and other impacted areas. EOC functions include: managing information; collecting system status data; verifying damage assessment information; determining availability of mutual aid resources; transmitting information to other levels of government; and, expediting recovery and information efforts.

National Response Plan and National Incident Management System [9]

The U.S. Department of Homeland Security has developed the National Response Plan (NRP) and the National Response Plan and the National Incident Management System (NIMS). The NRP establishes a comprehensive, national, all-hazards approach to domestic incident management across a spectrum of activities. NIMS provides a

nationwide template enabling government and nongovernmental responders to respond to all domestic incidents using a coordinated and modular approach based on the Incident Command System (ICS).

The NRP does not alter or impede the ability of Federal, state or local departments and agencies to carry out their specific authorities and assumes that incidents are typically managed at the lowest possible geographic, organizational, and jurisdictional level.

The NRP distinguishes between "Incidents of National Significance" and most incidents occurring each year by responsible jurisdictions or agencies through their established authorities and existing plans. Incidents of National Significance are those high-impact events that require a national coordinated and effective response in order to save lives, minimize damage, and provide the basis for long-term community recovery and mitigation activities.

For most events, it is assumed that the lowest level of government will respond to the incident and then request state and federal assistance through the established chain of command structures, when and as needed.

Florida Emergency Management Plan Overview [10]

Chapter 252, Florida Statutes – the State Emergency Management Act – mandates the development of the Florida Comprehensive Emergency Management Plan (CEMP). This plan establishes a framework through which local governments prepare for, respond to, recover from, and mitigate the impacts of a wide variety of disasters that could adversely affect the health, safety and/or general welfare of the residents of their jurisdictions. The plan provides guidance to State and local officials on procedures, organization, and responsibilities, as well as provides an integrated and coordinated local, state and federal response.

This operations-based plan addresses evacuations, sheltering, post-disaster response and recovery, deployment of resources, communications, and warning systems. The

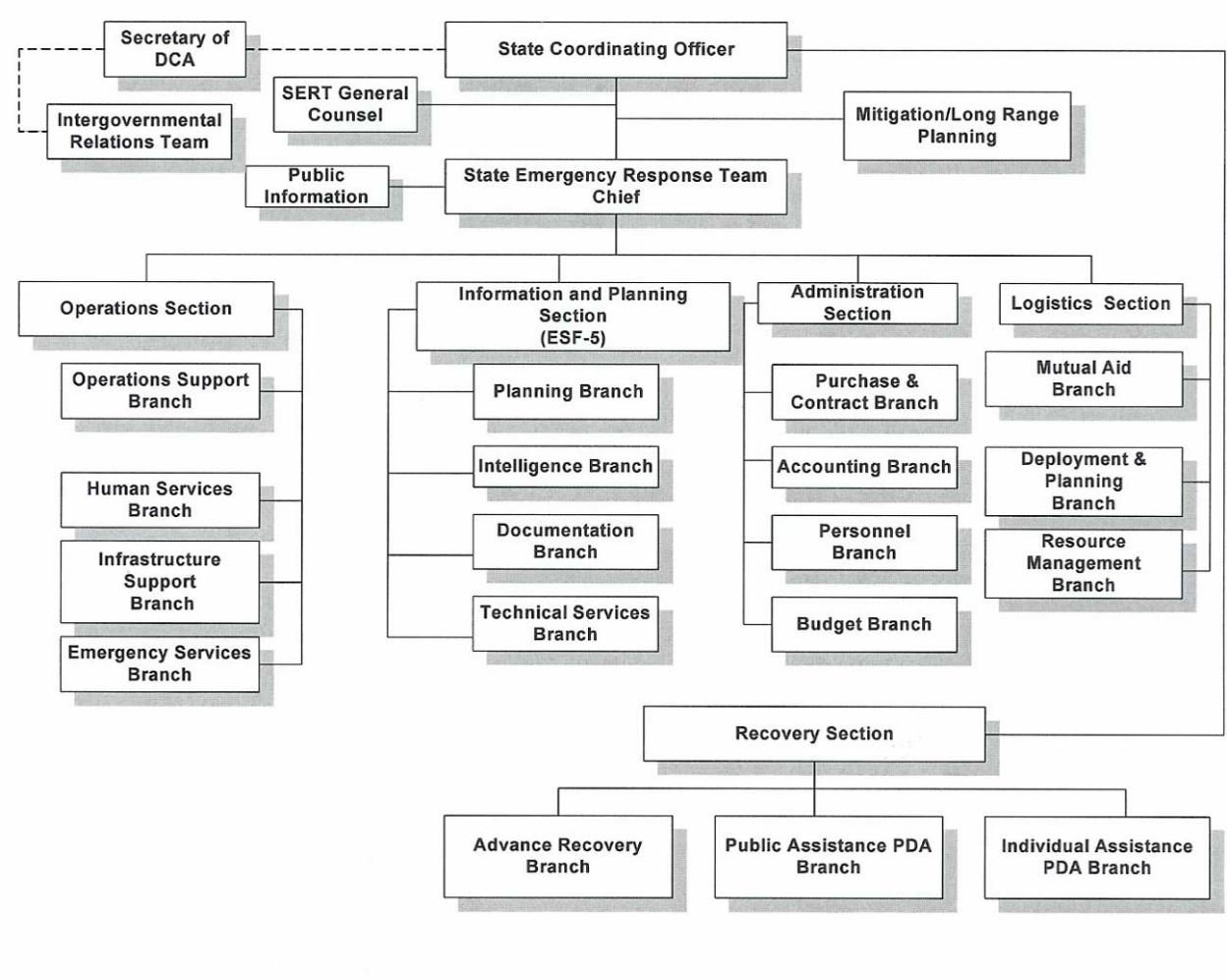
plan calls for annual exercises to determine the ability of state and local governments to respond to emergencies. The plan also defines the responsibilities of local and state agencies and volunteer organizations.

The plan describes the basic strategies, assumptions and mechanisms through which the state will mobilize resources and conduct activities to guide and support local emergency management efforts through preparedness, response, recovery, and mitigation. To facilitate effective operations, the plan adopts a functional approach that groups the types of assistance to be provided into 17 Emergency Support Functions (ESF's). Each ESF is headed by a lead agency or organization, which has been selected based upon its authorities, resources, and capabilities in that functional area.

At the federal, state and local level the primary agency appoints an Emergency Coordination Officer to manage that function in the Emergency Operations Center (EOC). These appointees and the members of local Emergency Management agency staff the EOC. The EOC staff serve as the primary operational mechanism through which local and State resources are managed and state and federal assistance is requested and coordinated. State assistance is to be provided to impacted counties under the authority of the State Coordinating Officer, on behalf of the Governor, as head of the State Emergency Response Team (SERT).

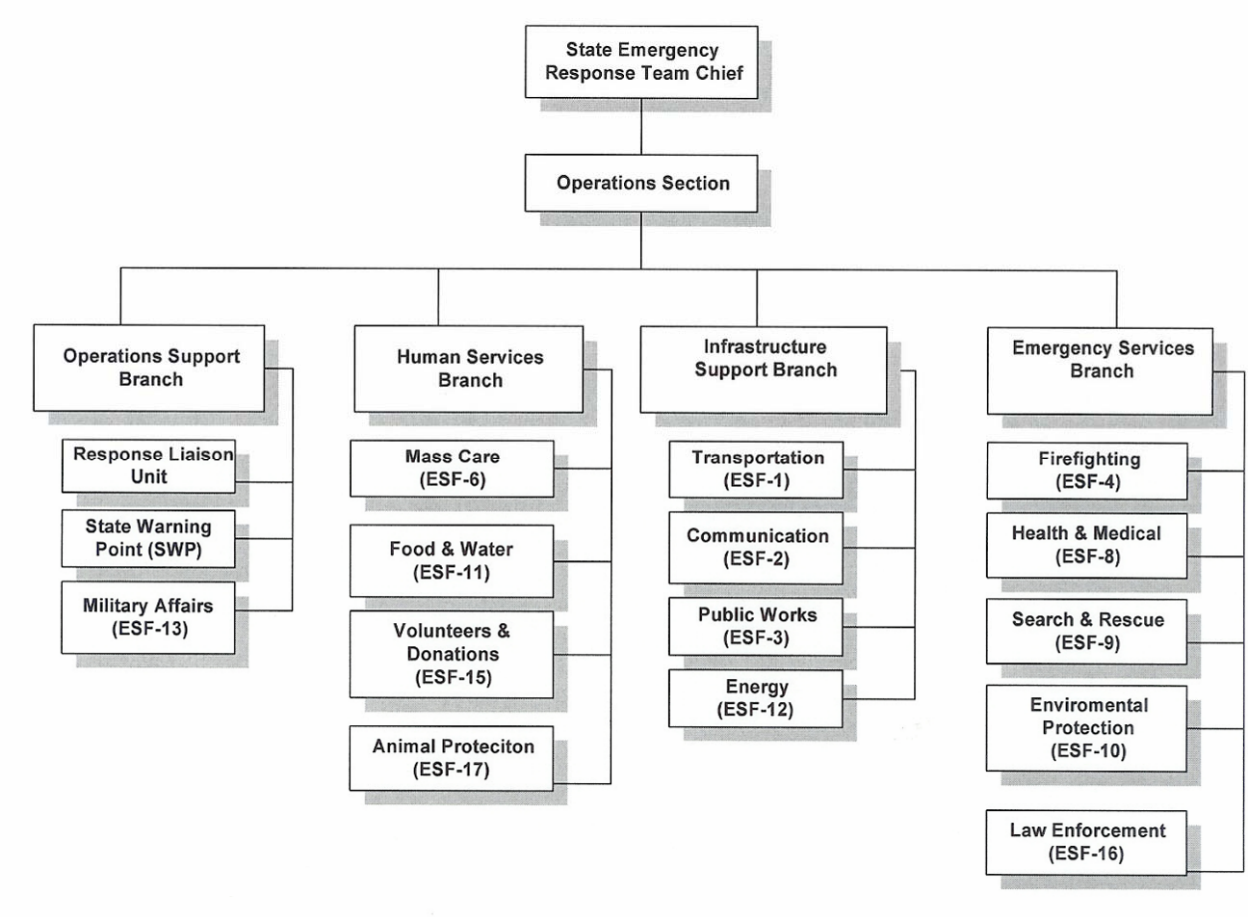
The following organization chart details how the State of Florida's Emergency Response Team is organized. As a quick review reveals, it includes the four basic components of the Incident Command System – Operations, Planning, Logistics, and Finance and Administration.

Florida State Emergency Response Team Organization Chart [11]



The second organization chart provides further detail of the Operations Section, which is divided into the following four branches: Operations Support, Human Services, Infrastructure Support and Emergency Services. It is within the Operations Section that the primary functions impacting the public transit agencies are coordinated: Transportation (ESF-1), Health and Medical (ESF-8), and Mass Care (ESF-6). Closer examination of the organization chart reveals one of the challenges of effective coordination between these three ESF's – that is, all three are in different branches of the Operations Sections.

Florida State Emergency Response Team
Operations Section Organization Chart [12]



Emergency Support Functions

As detailed previously, to facilitate effective operations the Florida Comprehensive Emergency Management Plan (CEMP) adopts a functional approach that groups the types of assistance to be provided into seventeen (17) Emergency Support Functions (ESF's) which are patterned after the federal system detailed in the Federal Response Plan. Each ESF is headed by a lead agency or organization, which has been selected based upon its authorities, resources, and capabilities in that functional area. The Appendices in the CEMP provide detail each of Florida's 17 ESF's (which are detailed below), which at a minimum contain a method of operation and the responsibilities of the primary and support agencies that will respond to support local governments.

Florida State Emergency Support Functions [13]

PRIMARY AGENCY LISTING		
ESF #	FUNCTION NAME	LEAD STATE ORGANIZATION
1	Transportation	Department of Transportation
2	Communications	Department of Management Services/ Division of Communications
3	Public Works & Engineering	Department of Transportation
4	Firefighting	Department of Financial Services/ Division of State Fire Marshal
5	Information & Planning	Department of Community Affairs/ Division of Emergency Management
6	Mass Care	Department of Business and Professional Regulations
7	Resource Support	Department of Management Services/ Division of Purchasing
8	Health and Medical	Department of Health
9	Search & Rescue	Department of Financial Services/ Division of State Fire Marshal
10	Hazardous Materials/ Environmental Protection	Department of Environmental Protection
11	Food & Water	Department of Agriculture & Consumer Services
12	Energy	Public Service Commission
13	Military Support	Department of Military Affairs/ Florida National Guard
14	Public Information	Department of Community Affairs
15	Volunteers & Donations	Florida Commission on Community Service
16	Law Enforcement & Security	Department of Law Enforcement
17	Animal Protection	Department of Agriculture & Consumer Services

The three ESF's with which the Florida transit systems will mostly likely be involved in or need to coordinate with are:

- ESF-1 Transportation: As detailed in Appendix I of the State CEMP, the purpose of ESF-1 is to provide, in a coordinated manner, the resources (human, technical, equipment, facility, materials and supplies) of member agencies to support emergency transportation needs during an emergency disaster situation.

Transportation resources obtainable through ESF-1 will be used to assist in the following:

- Evacuation of persons from threatened or immediate danger
- Monitoring, control, and coordination of vehicular traffic flow
- Provision of infrastructure status reports for all modes of transportation
- Multi-modal logistical transportation of evacuees, personnel, equipment, and materials and supplies
- Provision of maps for all modes of transportation
- Identification of obstructions and damage to the multi-modal transportation infrastructure
- Prioritization and initiation of emergency work tasking

- ESF-8 Health and Medical Services: ESF-8 provides health, medical care, and social service needs. Among the transportation related functions include transportation of victims of a disaster, assistance in the evacuation of victims out of the disaster area after the event, immediate support to hospitals and nursing homes – all functions that deal directly with "persons with special needs" or "PSN".

- ESF-6 Mass Care: ESF-6 coordinates activities involved with the emergency provision of temporary shelters, emergency mass feedings, and the bulk distribution of coordinated relief supplies for victims of a disaster and disaster workers.

Local Emergency Management Plan Overview

As detailed and mandated in Chapter 252, Florida Statutes – the State Emergency Management Act – each Florida County, as the local organizing and coordinating unit for emergency response functions, must prepare their own CEMP which mirrors the State CEMP as well as adopting the ICS and ESF structure found in the federal and state plans.

Each Florida public transit agency should be an active participant in their county EOC and as the leading agency and/or involved significantly in the local ESF-1.

CHAPTER THREE
TRANSIT EMERGENCY PLANS

During major emergency events public transportation agencies cannot effectively respond alone. The capabilities of transportation agencies to mobilize its resources are directly impacted by the decisions and directives of others, including law enforcement; fire and emergency services; local, regional and state emergency planning agencies; and, local and state governments. Public transportation agencies must become actively involved with others in their communities in planning for emergencies.

As detailed in the previous chapter, to allow public transportation agencies to coordinate and communicate with their community partners and local and state governments, it is essential for public transportation agencies to be active participants in the local EOC and to utilize the Incident Command System.

Recently released TCRP Report 86 “Public Transportation Security Volume 7: Public Transportation Emergency Mobilization and Emergency Operations Guide,” states that: ”an effective public transportation emergency operations plan defines, in a straightforward manner, who does what, when, where, and how to mitigate, prepare for, respond to, and recover from major occurrences with the potential to result in harm, destruction, and disruption.”

This document was developed to highlight key considerations for public transportation agencies to work with their community partners and provides recommendations and tools that can be utilized.

During major emergencies, public transportation agencies provide several specific functions and services that should be identified in both local and system emergency operations plans. These include:

- Emergency evacuation of citizens
- Transportation of citizens with special needs and other citizens dependent upon public transportation
- Evacuation of schools and day-care centers
- Provide temporary in-place sheltering of evacuated citizens
- Evacuation of populations of hospitals, nursing homes, and other community facilities
- Transportation of emergency workers and volunteers
- Transportation of meals, goods and supplies
- Provision of respite facilities and vehicles for emergency workers
- Provision of public information
- And much more

To help define the relationships between the public transportation agencies and their community partners, it is important that the agency develop and maintain an emergency operations plan. The emergency operations plan defines the operating and management principals used to prepare the system for emergencies, to enable the system to provide effective and timely response, and to document lessons learned in order to continuously improve the system's program. It should be noted that emergency operations plans are not intended to be a detailed action plan, but rather a guide for those having defines roles and responsibilities during a major emergency. Specific details should be provided as appendices, contingency plans or stand-alone standard operating procedures.

Emergency operations plans should also establish a formal process for the development, review, revision, and re-issuance of documents related to emergency planning and procedures.

FTA offers a set of sample transit emergency plans and supporting reports at the following web site:

http://transit-safety.volpe.dot.gov/security/SecurityInitiatives/Top20/default.asp

TCRP Report 86 provides the following list of typical components included in a public transportation system's emergency operations plan:

- Goals and Objectives: describes the purposes of the plan
- Authority: identifies the owner of the plan and covers jurisdictional and legal issues
- Interfaces: describes the relationships among the emergency operations plan and other safety documentation, operating procedures, and other relevant materials; and discusses the system's written documentation in relation to plans of other external organizations
- Participating Agencies: identifies outside participating agencies, key personnel, notification procedures, agreements, functions, and responsibilities
- Communication and Coordination: describes the mans, protocols, and coordination required among the system and other organizations and include procedures for handling the incident
- Disaster Planning: describes the system's role in planning for regional disasters
- Incident Management: describes the steps required to manage an incident properly
- Incident Evaluation: details the post-incident evaluation process
- Public/Media Information: describes the proactive and reactive aspects of public relations
- Americans with Disabilities Act (ADA) Considerations: addresses ADA requirements and accommodation of people with disabilities during emergency situations
- Training and Emergency Preparedness Drills: addresses employee requirements needed to respond effectively to emergency incidents
- Plan Management: describes the responsibilities for managing an emergency operations plan and updating and controlling the document
- References: lists references needed to resolve emergencies

CHAPTER FOUR
TRANSIT SYSTEM EXPERIENCES

One element of the evaluation and assessment of Florida's public transit industry's emergency planning efforts and responses to the 2004 major hurricanes was to gauge the current level and scope of emergency preparedness planning, as well as measure the Florida transit systems' responses to the storm events.

This chapter summarizes some the key findings of a survey sent to all of Florida's fixed route systems and Community Transportation Coordinators.

2004 Hurricane Experience and Emergency Planning Questionnaire

Surveys were e-mailed to all of Florida's public transit agencies – both fixed route systems and the Community Transportation Coordinators (CTC's) in an attempt to gather a variety of information directly related to the responses to these four 2004 storm events, as well as to request specific information related to their emergency planning efforts. Selective follow up phone interviews were conducted.

A copy of the survey instrument, "2004 Hurricane Experience and Emergency Planning Questionnaire," included as Exhibit A, was designed to be simple and easy to understand. Of the 40 questions on the survey, half required a simple yes/no or multiple choice responses while the balance required the respondent to describe their situations in detail. The survey was divided into 11 sections: 2004 Agency Impacts, Hurricane or Emergency Plans, Instructional Questions, Hurricane Specific Issues, Agency Communication Systems, Pre-Storm Planning and Activities, Suspension of Service, People with Special Needs Evacuation, Financial Reimbursement, Employee Compensation Policies, and Internal Reports and Event Summaries.

Respondents were instructed to e-mail or mail the survey back to CUTR. The following presents a summary of the responses.

Table 4.1 represents a list of the 29 counties that responded to the survey instrument. The list of respondents includes both fixed route systems and community transportation coordinators (CTC).

TABLE 4.1
Counties Represented by Survey Responses

COUNTY	
Broward	Jefferson
Calhoun	Lee
Charlotte	Leon
Citrus	Levy
Collier	Madison
Desoto	Martin
Flagler	Ocala
Gadsen	Okeechobee
Glades	Pasco
Gulf	Pinellas
Hardee	Polk
Henry	Sarasota
Highlands	St. Johns
Hillsborough	Taylor
Indian River	

As detailed in Table 4.2, all of the fixed route systems respondents indicated that they were, in some way affected by the 2004 hurricanes. An overwhelming majority – 90% – of the CTC's indicated that they were affected by the 2004 hurricane season.

TABLE 4.2
Q1 Was your transit agency impacted by the 2004 Florida hurricanes?

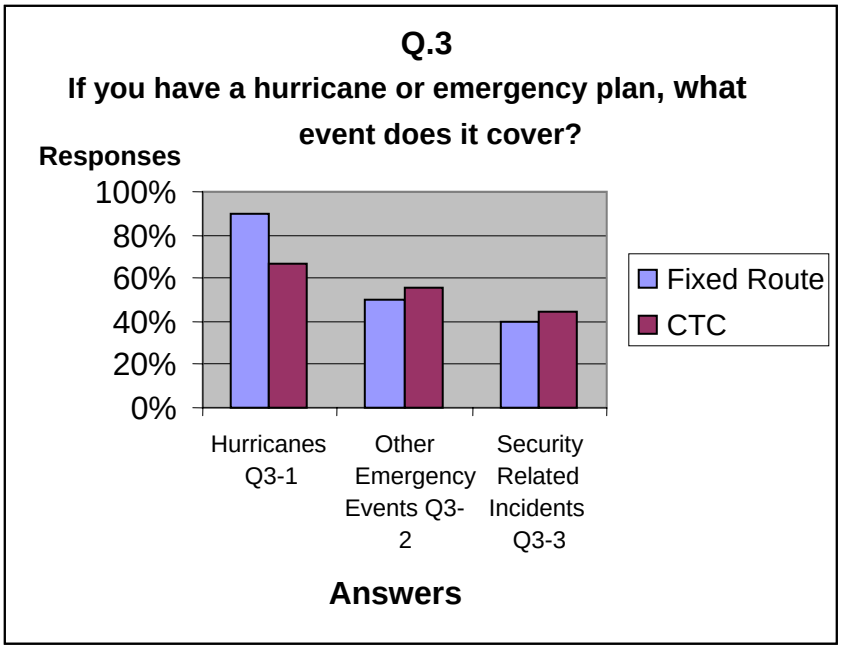
SYSTEM TYPE	YES	NO
Fixed Route	100%	0%
CTC	90%	10%

Emergency Plan Questions

The next set of survey questions addressed hurricane or emergency plans. Three multiple choice questions were followed by a table of questions that required a yes or no response, specific to each individual hurricane, as well as requesting some specific data for each storm event.

Figure 4.1 illustrates the responses to question three that asked if the agencies had a hurricane or emergency plan and what type of events it covered. Approximately 90% of the fixed route transit systems and 66% of CTCs included "hurricane" preparedness into their hurricane or emergency plans. 50% of fixed route systems identified that "other emergency events" and 40% indicated that "security related incidents" were part of their emergency plans. While 55% of the CTCs responded that they have "other emergency events" in their emergency plans, only 44% indicated that they have "security related incidents" covered in their plans.

FIGURE 4.1



The next survey question asked respondents to address in more detail, certain characteristics of their hurricane or emergency plans. Figure 4.2 displays the responses to question four that asked: "If you have a hurricane or emergency plan, what phases does it plan for?" The following possible response choices were provided: Pre-Event Preparation, During Event, Post Event Recovery and System Continuity Plans.

FIGURE 4.2

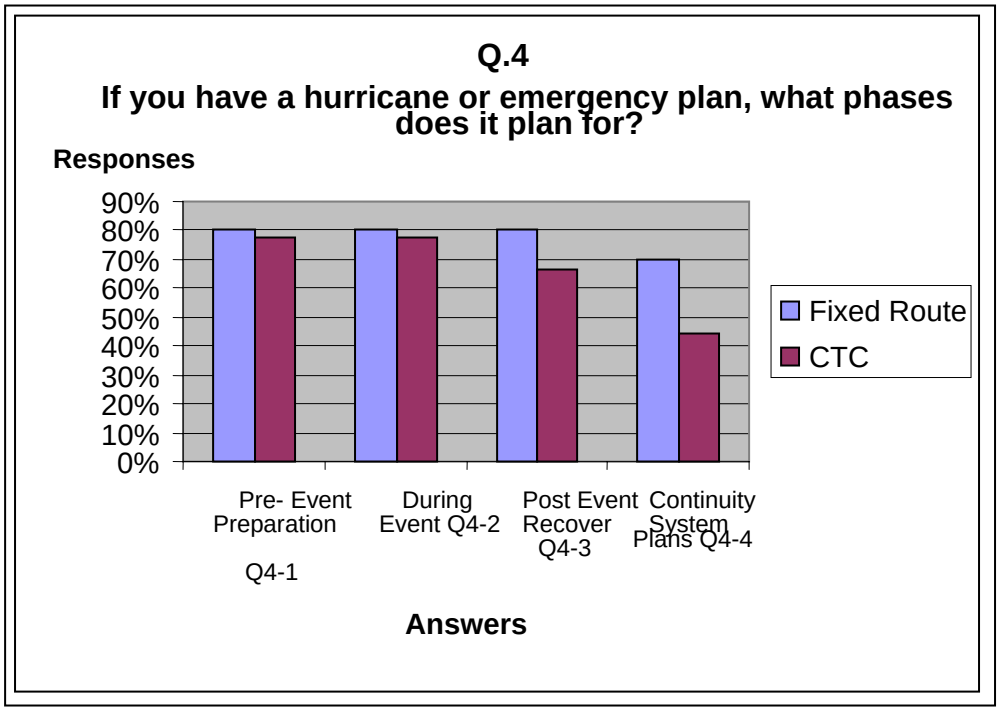


Table A

Table A, the second page of the survey, was comprised of four, multi-part questions seeking specific answers for all the four major hurricane events. The responses to Table A are provided in the following figures and tables.

Table A-Q.1 represents the responses to question one on Table A which wanted to know, by storm event, if the transit system was impacted by the hurricane. Only one respondent indicated that their agency was not affected by any of the four storms.

The data provided illustrates that all but four of the transit systems responding were affected by one or more of hurricanes during the 2004 Hurricane Season. Hurricanes Frances and Jeanne appear to have affected the most transit agencies.

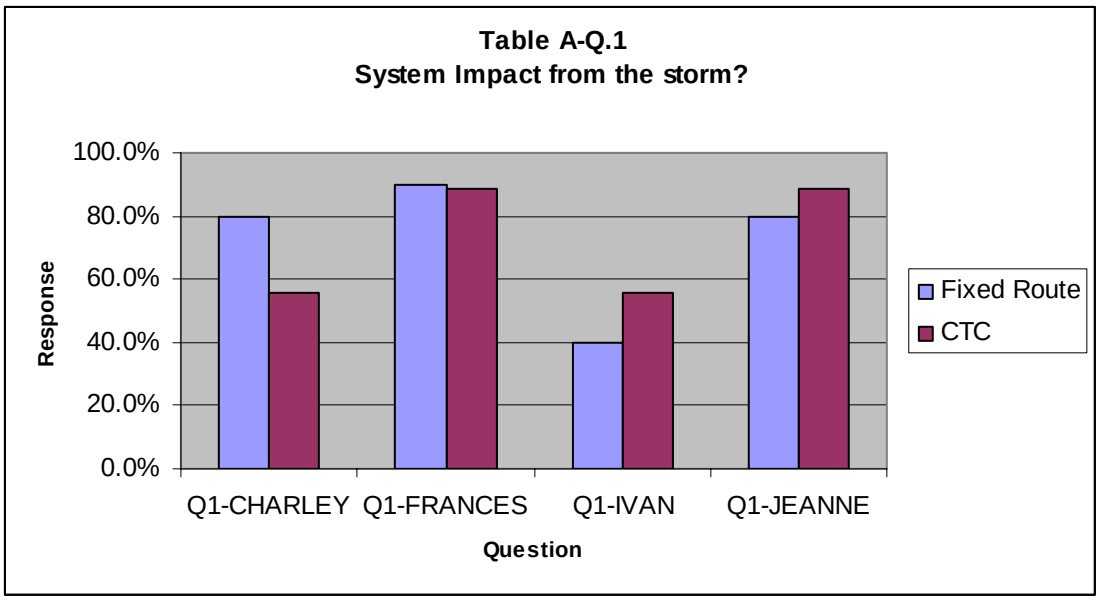


Table A.1-Q2a. provides a summary of the number of service days that each transit agency lost due to each of the four hurricanes.

TABLE A.1

Q2a.
Number of Service Days Lost

	Q2B-CHARLEY	Q2B-FRANCES	Q2B-IVAN	Q2B-JEANNE
Broward		4		2
Charlotte	25	5	7	3
Citrus		1	2	2
Desoto, Hardee, Highland, and Okeechobee	6	6	0	10.5
Flagler	2	5	0	3
Gulf			3	
Hillsborough	1.5	2.5		1.5
Indian River		7		5
Lakeland/Polk	0.5			0.083
Lee, Hendry and Glades	1			
Levy	2	3	1	
Martin		9		3
Ocala	0.21			0.25
Pasco	1	1		1
Polk				
Pinellas	1.5	2		1
Sarasota	1	1	1	
St Johns		5		
Leon	1	1		

The next set of tables (A.2 through A.5) provide the impact that each of the four major hurricanes had on the transit systems in terms of number of service days lost, estimated number of passengers lost, and estimated loss of passenger revenue.

TABLE A.2

Q. 2b-2d Hurricane Charley

	BROWARD	CHARLOTTE	CITRUS	DESOTO HARDEE HIGHLANDS OKEECHOBEE	FLAGLER	GULF	HILLSBOROUGH	INDIAN RIVER	LAKELAND CITRUS	LEE HENDRY GLADES	LEON	LEVY	MARTIN	OCALA	PASCO	POLK	PINELLAS	SARASOTA	ST. JOHNS
Number of Service Days Lost		25		6	2		1.5		1.5	1	1			0.21	1		1.5	1	
Number of Passengers Lost		256		2500	175		31000		7500	300				100	1317		43597	4893	
Amount of Lost Pass, Revenue		450		40000	7245		55800		3000					90	500		22625		

TABLE A.3

Q. 2b-2d Hurricane Frances

	BROWARD	CHARLOTTE	CITRUS	DESOTO HARDEE HIGHLANDS OKEECHOBEE	FLAGLER	GULF	HILLSBOROUGH	INDIAN RIVER	LAKELAND CITRUS	LEE HENDRY GLADES	LEON	LEVY	MARTIN	OCALA	PASCO	POLK	PINELLAS	SARASOTA	ST. JOHNS
Number of Service Days Lost	4	7	2			3	2.5				1	1	7		1		2	1	
Number of Passengers Lost	350000	180		1500	438		7434		7500			300	5000		1335		21148	4257	
Amount of Lost Pass, Revenue	150000	350		30000	18112		29152		3000			0	2400		512		12000	5439	

TABLE A.4

Q. 2b-2d Hurricane Ivan

	BROWARD	CHARLOTTE	CITRUS	DESOTO HARDEE HIGHLANDS OKEECHOBEE	FLAGLER	GULF	HILLSBOROUGH	INDIAN RIVER	LAKELAND CITRUS	LEE HENDRY GLADES	LEON	LEVY	MARTIN	OCALA	PASCO	POLK	PINELLAS	SARASOTA	ST. JOHNS
Number of Service Days Lost		7	2	0		3						1						1	
Number of Passengers Lost		218				150				300								5492	
Amount of Lost Pass, Revenue		284				3300												1250	

TABLE A.5

Q. 2b-2d Hurricane Jeanne

	BROWARD	CHARLOTTE	CITRUS	DESOTO HARDEE HIGHLANDS OKEECHOBEE	FLAGLER	GULF	HILLSBOROUGH	INDIAN RIVER	LAKELAND CITRUS	LEE HENDRY GLADES	LEON	LEVY	MARTIN	OCALA	PASCO	POLK	PINELLAS	SARASOTA	ST. JOHNS
Number of Service Days Lost	2	3	.2	10.5	3		1.5	5	.083				3	.25	1		1		
Number of Passengers Lost	110000	160		2500	253		26000		7500			300	1500	150	1335		10574	1250	
Amount of Lost Pass, Revenue	49000	338		40000	10867		46081		3000				500	125	512		6045		

Instructional Questions

The Instructional Questions section of the survey was comprised of five questions that required a response of yes or no. Then, depending on the respondent's response to the question, they were instructed to provide additional details.

The following summarizes the primary responses to selective questions.

Table 4.3 shows the responses to question number five which asked if the transit agency was represented at your County's Emergency Operations Center (EOC) during a storm/emergency event?

TABLE 4.3
Q.5 Is your transit agency represented at your County's Emergency Operations Center (EOC) during a storm/emergency event?

SYSTEM TYPE	YES	NO
Fixed Route	90%	10%
CTC	100%	0%

Table 4.4 provides the responses to the next question, which asked about the role of the transit agency during an emergency event.

TABLE 4.4
Q6. During a storm/emergency event, does your agency have any oversight responsibilities for other transportation providers in your area (e.g., school buses, community transportation coordinator, etc.)?

SYSTEM TYPE	YES	NO
Fixed Route	40%	60%
CTC	78%	22%

The next question was asked in an effort to understand and measure transit agencies' roles and relationship with the Florida Department of Transportation (FDOT) during an emergency. Table 4.5 summarizes the responses.

TABLE 4.5
Q7. During a storm/emergency event, does your agency have any relationships/coordination with the Florida Department of Transportation?

SYSTEM TYPE	YES	NO
Fixed Route	70	30%
CTC	89%	11%

Question number eight was focused on the various agency practices related to maintain "points of contact lists" or telephone contact lists. Table 4.6 summarizes the responses.

TABLE 4.6
Q.8 As part of your storm/emergency planning, does your agency maintain a telephone contract list?

SYSTEM TYPE	YES	NO
Fixed Route	70%	30%
CTC	89%	11%

The last question in this section asked respondents is their agencies maintained interlocal agreements detailing and authorizing interagency cooperation during emergencies. The results are shown in table 4.7.

TABLE 4.7
Q.9 Does your agency or government maintain Interlocal Agreements with other transit agencies or local/regional governments that detail and authorize Interagency cooperation before, during and after storm/emergency events?

SYSTEM TYPE	YES	NO
Fixed Route	40%	60%
CTC	22%	78%

Hurricane Specific Issues

The Hurricane Specific Issues section of the survey included seven questions related to agency fueling agreements. Figure 4.3 shows the "yes" responses from both the fixed route systems and CTCs to these questions.

Agency Communication Systems

Two questions inquired about agencies experiences with communications systems during the hurricane storm events. Tables 4.8 and 4.9 present the responses.

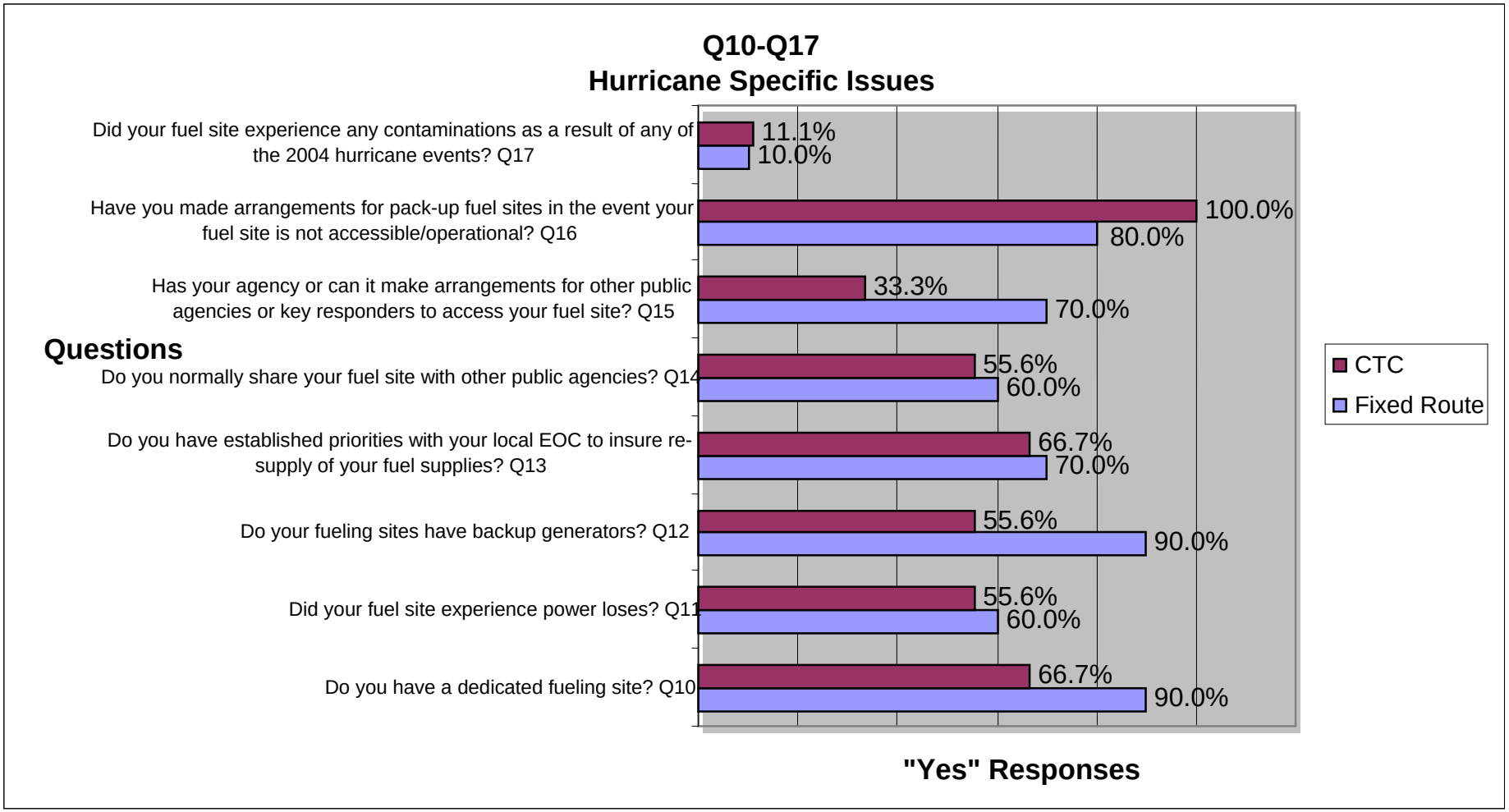
TABLE 4.8
Did your agency experience any communication problems during the 2004 hurricane events?

SYSTEM TYPE	YES	NO
Fixed Route	60%	40%
CTC	89%	11%

TABLE 4.9
Does your agency have any plans to address these communication problems?

SYSTEM TYPE	YES	NO
Fixed Route	40%	60%
CTC	44%	11%

FIGURE 4.3
Hurricane Specific Issues



CHAPTER FIVE
LESSONS LEARNED

This chapter attempts to organize a wide variety of observations, findings, thoughts and suggestions on what the respective roles of the various components of the Florida transit industry in the emergency planning and response should be. In addition some suggestions for improvement are provide to the FDOT, the state's public transit systems and the CTC's.

FDOT Public Transit Office

One of the common themes of this chapter is that FDOT's Public Transit Office must act as the primary statewide coordinator for public transit systems and CTC's during man-made emergencies and natural disasters. One recommendation is to develop a "communication tree" with information flowing from the FDOT Central Office to each FDOT district office, to the local transit systems and CTC's – and in reverse. This approach is summarized in this draft mission statement:

> ***"To ensure Florida's citizens have access to needed transportation services in times of man-made emergency and disaster situations, the FDOT's Public Transit Office will provide coordination and deploy resources as necessary to meet the needs for our public transit agencies and Community Transportation Coordinators."***

It is recognized that the FDOT Public Transit Office has two different focuses during an emergency event. The first, internal to FDOT itself, includes linkages with the State Emergency Operations Center (SEOC), the Department's Emergency Operations Center (TEOC), the FDOT Central Office, the seven FDOT district offices, and the Florida Commission for Transportation Disadvantaged. The second focus of the FDOT Public Transit Office is the state's public transit agencies and CTC's.

Challenges Facing Florida Transit Agency Coordination

There are several obstacles and challenges that must be overcome within Florida to effectively communicate and coordinate the public transportation systems and their responses to man-made emergencies and natural disasters. These include:

- Several transit agencies: Florida has a wide variety and number of public transit agencies, including over 24 fixed route systems and 67 counties with CTCs.

- Two state transit agencies involved: Both the FDOT and the Florida CTD have direct involvement and relationships with the state transit agencies. Additionally, the coordination between the FDOT Central Office and its seven district offices presents additional challenges and opportunities.

- Different type of agencies: There are a variety of Florida public transportation agencies, including county government, city government, independent authorities, private non-profit and private for-profit agencies.

- Urban –vs. - Rural: Florida's public transportation systems operate in both urban and rural communities, each presenting different operating environments, perspectives, and capabilities.

- Communication and Coordination Among Transit Providers: One observation quickly made was that while most individual transit agencies have made some preparations and plans for themselves, little thought and formal structure exists for communication between transit providers particularly post-event.

- Multiple Emergencies: With four major hurricanes impacting Florida within six weeks, the need to address the challenges of coordinating and responding to two or more disaster sites in the state at the same time became readily apparent.

Lessons Learned and Shortfalls Identified

An evaluation of what went right, what went wrong, and things not even anticipated was undertaken. While most individual systems were prepared to handle their own needs, this research revealed several deficiencies and some common areas of concern in the responses received from the state's transit systems, from a regional and statewide perspective. These included:

- Communication Needs

- Coordination Needs
- Education Needs
- Specialized Needs
- Accounting and Record Keeping Needs
- Required Resources
- Common Practices
- Public Relations

The following presents a brief recap of the need, the observation, and some specifics and suggestions for each of these eight areas.

1. Communication Needs

Observation: Limited pre-planning (especially between transit agencies/CTCs themselves and between the agencies/CTCs and FDOT) became apparent after the first event when current, accurate contact lists were not consistently available.

Specifics:

a. There was a lack of up-to-date contact information:
    i. For key personnel and all agencies obtain:
        1. Names
        2. Titles
        3. Telephone numbers
        4. E-mails
    ii. Define key personnel: minimum of three (3) contacts per agency (including Transit Offices at TEOC and District EOCs) – manager/administrative, operations, and maintenance
    iii. Define key agencies: transit agencies, CTCs, local EOCs

b. Accessibility of contact information
    i. Need hard copies (in event computer systems are non-operable)
    ii. Need duplicate sources for information

c. Need to expand contacts between:
    i. Neighboring transit agencies
    ii. Within your FDOT District
    iii. Outside your FDOT District

2. Coordination Needs

Observation: Related to the problems noted with communication, the lack of a planned system to coordinate information among transit agencies/CTC's and FDOT made the assessment of existing conditions, damages and needs difficult.

Specifics:

a. Need to define roles and responsibilities.
   i. Central to Districts
   ii. Central to FTDC
   iii. FTDC to Districts
   iv. District to Transit Agencies
   v. Districts to CTCs
   vi. Transit Agencies to/from CTCs
   vii. Transit Agencies to/from local EOCs

b. Need to develop a "communication tree" with information flowing from FDOT Central Office to FDOT district offices to local transit agencies and CTCs – then back again.
   i. Define specific roles and responsibilities
   ii. Put ownership for maintenance of local contacts (names, numbers, etc.) at the FDOT district transit offices
   iii. Set specific cycles to update and distribute lists (minimum of twice per year -- May and November)
   iv. Distribute lists (organized by FDOT Districts) to Central Office FDOT, Florida TDC, district offices, all transit agencies and CTCs (their district's list and those in adjoining districts), FPTA, and FACTS.
   v. Central FDOT Transit Office will be the point of contract with the FTA

c. Role between ESF1 – Transportation and ESF8 – Health and Medical Services.
   i. Need to develop relationships
   ii. Coordination of shelters and their transportation support needs
   iii. Coordination between SEOC, TEOC and local EOC's

d. Lack of definition of coordination roles for trade organizations such as FPTA and FACTS needs to be addressed.

e. Coordination functions needed for:
   i. Preparation
   ii. Knowledge-base of operational status
   iii. Knowledge-base of available resources for assistance

iv. Preparing and implementing post event reconnaissance, inspection and assessment
v. Coordination of relief and support efforts
vi. Documentation assistance

f. Responsibilities and expectations of transit providers need to be defined for the above items.

3. Education Needs

Observation: There was inconsistent involvement of transit agencies/CTCs with local EOCs. Additionally, in many cases the relationship between the transit agencies/CTCs and the local EOC was not defined. There was a lack of understanding of the relationships between the SEOC, TEOC, and local EOCs and their processes related to transportation.

Specifics:

a. Lack of understanding of EOC, ESF, and incident command center impacted response and coordination

b. Quality and availability of transit provider's emergency management plans widely varied

c. Expectations and responsibilities not defined
   i. At county level in some cases
   ii. At FDOT District in some cases
   iii. Reporting and coordinating responsibilities

d. Pre- and Post-event planning, training and mock drills needed

4. Specialized Needs

Observation: Transit's unique role in dealing with people with special needs before and after an event needs to be better coordinated and planned for. Increased coordination (at both state and local EOC's) between ESF1 – Transportation, ESF8 – Health and Medical Services, and ESF6 – Mass Care is necessary to insure adequate, timely and efficient transportation to and from shelters, assisted living facilities, and hospitals.

Specifics:

a. Need to coordinate resumption of critical health care functions such as dialysis treatments, outpatient treatment, etc.

b. Post event coordination and management of special needs patients in shelter settings

c. People with Special Needs (PSN) transportation:
   i. Define roles of public transit agencies and CTC's in local PSN process
   ii. Coordinated PSN lists with CTC and ADA passengers
   iii. Pre-planning of PSN routes

5. Accounting and Record Keeping Needs

Observation: Although transit agencies/CTCs willingly provided much needed service, the lack of understanding of required fiscal accounting and record keeping jeopardized their future reimbursement for related expenses.

Specifics:

a. Mutual Aid Agreements
b. Need to register service request or resource request with SEOC and local EOC "Tracker" system to get project number assigned
c. Timely reimbursement to private, for profit and non-profit agencies who provide emergency services for the Department

6. Required Resources

Observation: As the four hurricane events unfolded, the needs to plan for and provide outside assistance and critical resources to local transit agencies/CTCs was better understood. Pre-planning for the provision of required resources should take place.

Specifics:

a. Communication Resources:
   i. Extra portable radios
   ii. Replacement towers
   iii. Satellite telephones
   iv. Stand-alone portable communication system at a common frequency

b. Fuel Needs:
    i. Portable fueling systems
    ii. Replacement fuel availability
    iii. Access to FDOT fuel sites as needed in emergency situations if all other avenues have been exhausted

c. Electric generators

d. Parts and supplies
    i. Maintenance related
    ii. Facility related
    iii. General

e. Mobile Repair Trucks

f. Staffing Back-Up (temporary reassignment of staff to impacted agencies/systems (such as mechanics, operation supervisors, dispatchers, bus aides, etc.)

g. Portable Command Center/Bus

h. Dispatch upgrades to allow conversion of "visiting buses" two-way radios to common local radio frequency

i. Availability of extra buses for service and for relief support.

j. Battery recharge capabilities

7. Common Practices

Observation: A number of best practices were discovered following the four hurricane events and need to be shared among the public transit community.

Specifics:

a. Preventative fleet parking strategies

b. Backup generator capabilities

c. Protection of facilities (shutters, hardening of structures, etc.)

d. Sharing transportation responsibilities with School Board Transportation Department

e. Wind Level to cease operations needs to be standardized

f. Use of other manpower resources (teachers, other staff, etc.)

g. Provide temporary housing for displaced employees, as well as visiting personnel

h. Employee and passenger education programs

i. Provision of transit personnel at shelters to reduce dwell time of buses dropping off and picking up.

j. Coordination of destinations to and from shelters

k. Employee Assistance Programs:
    i. Provide EAP access
    ii. Offer a variety of support services throughout the storms, such as day care assistance and respite during the extended power outages

l. Testing and exercising of backup generators

m. Mutual aid agreements and agreement on support mechanism between transit agencies and CTCs

8. Public Relations

Observation: Public relations for transit agencies/CTCs are often an after thought during an emergency event. Good media contacts are necessary to communicate system status, as well as to tell transit's story of it positive impacts before, during and after an event.

Specifics:

a. Need to tell the story on public transit system's importance and role

b. Programs and methods for disseminating information on the status of the public transportation services:
    i. Methods
    ii. Need to be involved and coordinated with local EOC
    iii. How to alert of service disruption and re-instatement
    iv. Customer information systems

c. Take pictures!!

d. Record keeping and journaling of events – historical time logs.

CHAPTER SIX
BEST PRACTICES

During the course of this project, though the discussions with the Florida transit agencies and the Florida DOT staff, the questionnaire responses, the review of the system emergency plans, and through the four major presentations and forums, a number of best practices were discovered. This chapter provides a listing of several of these exemplary practices so they can be shared and copied by the other Florida transit properties. The best practices are listed by common groupings and are not in any prioritized order. Occasionally, specific transit agencies are mentioned and credited with the practice to permit specific follow up, if desired. However, in many cases, several other agencies also had implemented these steps and procedures.

Best Practice #1: Good Emergency Plans

Many of Florida's public transit agencies have very complete and specific hurricane emergency plans. It should be noted that no single format was used, but all contained the critical report components detailed in Chapter Three. Quite often the plan format conforms to the style used by the local governments. The key point is that every transit agency should have a complete hurricane emergency plan.

Four agencies whose hurricane emergency plans would be excellent references are Pasco County Public Transit (PCPT), Pinellas Suncoast Transportation Authority (PSTA), Hillsborough Area Regional Transit (HARTline), and Broward County Transit (BCT).

Among the key elements included in these plans were very detailed key personnel contact lists, checklists by functional area of actions to be undertaken, and timelines for before, during and after the event.

Best Practice #2: Memorandums of Agreement or Mutual Aid Agreements

Transit agencies should, either by themselves or through their local governments, develop pre-established Mutual Aid Agreements with other key agencies within as well as with adjoining areas. These agreements will formalize and authorized assistance during storm events and facilitate financial reimbursement.

Best Practice #3: Coordination with Local School Board Transportation

Transit agencies, working through ESF-1 at their local EOC's, should establish working relationships with their local school board transportation departments to access their transportation resources (i.e., vehicles, drivers staff, fuel, etc.) for emergency response. In most cases, a local school board's bus fleet is much larger than the local transit agencies' and includes several smaller specialized vehicles. Sarasota County Area Transit and Space Coast Area Transit are excellent examples of this win-win relationship.

Best Practice #4: Clarify Staff Expectations and Duties

Each transit agency should clarify the expectations and duties of their employees during emergency storm events. If mandatory, these expectations should be part of the employee job description. If voluntary, prior commitments should be obtained to insure proper staffing for emergency response. St. John's CAC uses a "prior commitment" form that the employee signs off on providing their commitment.

Best Practice #5: Staff Training

The best-prepared emergency response plans are of limited value if the transit agency staff is unaware of what is expected of them. Emergency response plans must be living documents. Transit agencies should conduct ongoing staff training (both for new and current employees) that provides a thorough background on the agencies plan, details of their duties and responsibilities of each employee, and provides the employees with the background and necessary training to successfully implement the plan.

Polk County Transit provides an excellent example of an interactive employee training exercise that all their employees and associated agencies conduct prior to the start of each hurricane season.

Best Practice #6: Mock Training Drills

Similarly, transit agencies should conduct training drills and mock exercises both at their agency level, as well as participating in local and state EOC exercises. Such activities provide a means to assess transit agency staff's understanding of the plan, their responsibilities, and the critical interrelationships with community partners.

Best Practice #7: Education

In addition to providing staff training, each transit agency should also provide and disseminate hurricane preparedness information to employees, their families, and passengers. Adequate family emergency planning is essential to allow key personnel to be free to perform their emergency response duties.

Similarly, it is important to provide passengers with both general hurricane preparedness advice and specific directions for how to access transportation services during a storm event. This education is critical for special needs passengers requiring specialized transportation evacuation services.

Best Practice #8: Maximum Wind Level Policy

As the hurricane intensity increases, there becomes a point where it is unsafe to continue evacuation operations due to the high winds. This is especially critical for transit buses that offer a large profile for the wind and makes them susceptible to unsafe operation for the driver, the passengers and the public. To provide a balance of extending the mass evacuation as long as possible, as well as other supporting functions, most EOCs and transit agencies establish a maximum wind level threshold at which operations are ceased and the buses and support vehicles return to the garage or seek other shelter.

Responses from the transit agencies returning the questionnaire revealed the use of a range of maximum wind thresholds – from as low as 30 miles per hour (mph) sustained winds to as high as 50 mph. The most common limits were 40 and 45 mph sustained winds.

Most agencies looked to their local EOC for advice in establishing their maximum wind threshold. Some agencies used 39 mph sustained winds as their threshold since that is the definition for "tropical storm force winds."

Unless conflicting with guidance from your local EOC, the use of 39 or 40 mph sustained winds as the threshold at which bus services should be ceased seems to be a prudent standard.

Best Practice #9: Bus Parking and Deployment Strategies

Another area that a wide variety of responses was found was the strategies that transit agencies use to park and/or deploy their bus fleet during a storm event. This is an area where there is no correct answer, but depends upon local conditions and situations. Some general guidance and practices employed included:

- Moving buses out of flood prone areas
- Using perimeter fencing to minimize the impacts of flying debris
- Parking the buses "nose-to-nose" to minimize debris striking the windshields
- Parking the buses inside structurally safe facilities where available
- Avoiding parking buses inside marginally safe facilities
- Parking the buses in front of the bus facility garage doors to protect the doors
- Tying down the engine compartment doors and front doors to keep closed during high winds and to avoid damage by wind driven rain
- Splitting your fleet between two or more locations to maximize the survival of at least part of the fleet
- Avoiding parking near light poles, trees and similar potential hazards

Best Practice #10: Fueling Fleet and Staff Vehicles Prior To A Storm Event

Although self-explanatory, it is important to remember to fuel the bus fleet and support vehicles prior to any storm event, as well as secure additional fuel for main fuel tanks. It is recommended that fueling of your fleet be added to the action lists within each agency's emergency plan.

Best Practice #11: Communication

Transit agencies must be prepared for disruptions in their communication systems during and immediately following storm events. Wind damage to radio towers and cell phone towers will disrupt reliable reception for primary communication systems. Telephone systems, especially today's more sophisticated telecommunication modules, may become non-functional. The lack of electricity may limit access to telephone communications, especially if they are routed through internal systems. Each agency should plan for redundancy and expect disruptions.

Best Practice #12: Batteries

Anticipating loss of electrical power, transit agencies should purchase extra batteries for both their portable radios and cell phones. Additionally, vehicular charger units should be purchased and/or installed to permit recharging of both radios and cell phones.

Best Practice #13: Electrical Generators

During the 2004 hurricane season, numerous communities were without electrical power for extended periods after each storm event. To allow transit agencies to resume their critical post-storm functions, access to a minimum amount of backup electrical service is essential. Back up generators should be acquired and installed. Ideally, the units should power all of the transit facility functions, but a minimum should be able to provide access to the fuel system, radio communications, and electricity to power a minimum of lights, electrical outlets, shop equipment, and functions to permit the transit agency to maintain service until normal power is returned.

Best Practice #14: Facility Protection

Transit agency facilities should be considered as essential facilities that must remain functional and accessible after any storm event. When designed, transit facilities should be hardened to maximize their storm survival as well as to provide a storm shelter for key personnel. Existing facilities should be assessed to determine weak links and proactive retrofits and supplementary actions should be programmed and undertaken on a priority basis. Storm shutters should be installed where appropriate.

Best Practice #15: Fare Suspension Policy

Transit agencies, especially fixed route systems, should consider establishing a no-fare policy that could be instituted in times of emergency response. Such a policy facilities quicker loading, is more user friendly to many first time passengers, and eliminates the security and money handling issues related to fare collection.

Best Practice #16: Pre-Established Evacuation Routes

Transit agencies may elect to establish evacuation routes and bus assignments in advance of the storm event. This allows the system passengers (especially the transit dependent passengers) to be made aware of the transit service that will be made available. From an agency's perspective, it facilitates a quick response and implementation of the evacuation service. Broward County Transit is an excellent example of this approach.

Best Practice #17: Homeless and Transient Population Evacuation

Broward County Transit is also to be commended for taking proactive steps toward planning for the evacuation of the community's homeless population to hurricane shelters. Working with community homeless agencies, BCT has pre-established pick-up locations at which the community's homeless can congregate in an organized manner to be transported to shelters.

Best Practice #18: Pre-PSN Planning

Florida's transit agencies, working through the EOCs ESF-1, are often responsible for or play a key part in the evacuation of "people with special needs" (PSN). Working proactively with the local EOC and ESF-6 and ESF-8, transit agencies can help add structure to the registration and evacuation routing for this vulnerable population groups. The use of the transit agency's paratransit and CTC scheduling software can improve the all aspects of the PSN process.

Best Practice #19: Use of Volunteers on Evacuation Buses

Effective and efficient bus evacuation can be greatly enhanced by adding staff in addition to the bus operator to assist in the loading and unloading of vehicles and communication with shelters and other agencies. Several transit agencies have utilized other non-driving personnel and/or volunteers for this function. Polk County Transit has successfully developed a relationship with the local school board to have teachers volunteer to assist with the bus evacuation process.

Best Practice #20: Shelter Management Practices

Much confusion exists around the logistics of getting people to and from the evacuation shelters. Incomplete information, the lack of a central point of contact, and other associated factors lead to inefficient deployment of transit resources. A point of contact needs to be established at each shelter that will focus on the transportation needs of that shelter. This could include meeting the arriving buses, escorting the transported passengers into the shelter processing area, and arranging for return trips in an organized manner. Transit agencies should work with the shelter sites and ESF-6 to establish this contact. In some instances, it may be in the transit agency's interest to place a staff person on site.

Best Practice #21: Compensation Policies

Public transportation personnel at all levels of the organization make personal sacrifices and go above and beyond the line of duty during storm events. Transit agencies should make sure that their compensation policies do not penalize those employees who

respond during storm events. Such policies may have a short-term economic savings for the agency through not having to pay overtime, but in the long run will negatively impact the employees' willingness to respond in future storms.

Best Practice #22: Employee Support and Assistance Programs

During and after emergency events, transit agencies must remember to support their most valuable asset – their employees. This support can come in many forms, including offering Employee Assistance Programs (EAPs).

The VOTRAN bus system presents an excellent example of responding to this need. VOTRAN allows the employees and their families to use the VOTRAN facility as an emergency shelter. VOTRAN offers day care assistance and respite during extended power outages.

Best Practice #23: Debriefing

As the emergency storm events draw to a close and transit service returns to normal, it is essential to take some time to debrief the emergency response experience. Transit agencies are encouraged to have their staffs maintain logs of their actions during the storm events. At the conclusion of the event, an overall summary of actions should be compiled, key statistics of services rendered detailed, the chronological timeline of events committed to writing, and finally, an assessment of what went right, what went wrong and what lessons were learned, should be documented.

This information should then immediately be used to update the transit agency's emergency response plan (Best Practice #1).

EXHIBITS

EXHIBIT A

2004 Hurricane Experience & Emergency Planning Questionnaire Instrument

EXHIBIT B

Draft Transit Annex to Appendix I: ESF 1 Transportation

EXHIBIT C

"Florida's 2004 Hurricane Season" PowerPoint Presentation

EXHIBIT A

2004 Hurricane Experience & Emergency Planning Questionnaire Instrument

Center for Urban Transportation Research
University of South Florida

2004 HURRICANE EXPERIENCE & EMERGENCY PLANNING QUESTIONNAIRE

The Center for Urban Transportation Research (CUTR) has been contracted by the Florida Department of Transportation (FDOT) to conduct an evaluation of the Florida public transportation industry's emergency planning efforts and perform an assessment of how those efforts impacted the responses to the 2004 Hurricanes Charley, Frances, Ivan and Jeanne.

We are asking the assistance of each Florida public transit property in this effort by asking them to complete and submit this survey. We apologize in advance to the length of the survey instrument, but would ask that your agency provide as much information as available. Your participation is vital toward the effort of understanding and improving our collective response and preparation for future hurricanes and related events.

Please feel free to contact Jay Goodwill at CUTR with any questions: 813-974-8755 or jaygoodwill@cutr.usf.edu

Transit System Name:

Person Completing Survey:

1. Name:
2. Title:
3. Telephone Number:
4. E-Mail Address:

2004 Agency Impacts

1. Was your transit agency impacted by the 2004 Florida hurricanes?

( ) No
( ) Yes=> ***Please complete the information detailed in Table A detailing your system's 2004 hurricane experiences.*** *Additional information, if available, would be appreciated and should be included with your submittal.*

Hurricane or Emergency Plans

2. Does your transit agency have a written hurricane or emergency plan?

( ) No
( ) Yes => ***We would request that you forward an electronic or hard copy of the plan(s) to the CUTR contact listed at the top of the survey.*** *Thank you in advance for your cooperation!*

3. If you have a hurricane or emergency plan, what event does it cover? *(check all applicable selections)*

( ) Hurricanes
( ) Other Emergency Events
( ) Security Related Incidents

4. If you have a hurricane or emergency plan, what phases does it plan for? *(check all applicable selections)*

( ) Pre-Event Preparation
( ) During Event
( ) Post Event Recovery
( ) System Continuity Plans

TABLE A

Transit System Name: _____

Questions	Hurricane	Charley		Frances		Ivan		Jeanne	
#1	System impacted by storm??	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )
#2a	Any loss of service??	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )
#2b	Number of service days lost								
#2c	Number of passengers lost								
#2d	Amount of lost pass. revenue								
#3a	Any damages??	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )
#3b	Provide details *(attach additional pages as necessary)*								
#3c	$$$ Amount of damages								
#3c	Loss of electricity??	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )
#3d	Without electricity for how long??								
#3e	Used back-up generator??	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )	Yes ( )	No ( )
#3f	Length of generator use??								
#4	Other *(attach additional pages as necessary)*								

Institutional Questions

5. Is your transit agency represented at your County's Emergency Operations Center (EOC) during a storm/emergency event?

( ) No =>

If not the EOC, what mechanism does your agency use to coordinate your emergency preparation and response?

( ) Yes => *What is your agency's role or function at the EOC?*

6. During a storm/emergency event, does your agency have any oversight responsibilities for other transportation providers in your area (e.g., school buses, community transportation coordinator, etc.)?

( ) No

( ) Yes => *Please provide details/specifics.*

7. During a storm/emergency event, does your agency have any relationship/coordination with the Florida Department of Transportation?

( ) No

( ) Yes =>

Please provide details/specifics. Is the contact with your FDOT District Public Transit Office? Is the contact with the Central FDOT Public Transit Office Central office? Any other contracts with other FDOT units/sections?

8. As part of your storm/emergency planning, does your agency maintain telephone contact lists?

( ) No

( ) Yes =>

Internal employees and agencies?	*( ) Yes ( ) No*
External agencies?	*( ) Yes ( ) No*
Other?	*( ) Yes ( ) No*

Please describe details/specifics of what detail is included (e.g., work numbers, cell phone numbers, home phone numbers, email addresses, spouse names, etc) in your lists.

Could you or do you share this information with other agencies (both internal and external)? If not, why?

9. Does your agency or government maintain Interlocal Agreements with other transit agencies or local/regional governments that detail and authorize interagency cooperation before, during and after storm/emergency events?

( ) No
( ) Yes =>

Please provide details/specifics. If available, please include a copy of the agreements with your response.

Hurricane Specific Issues

Agency Fueling Arrangements

10. Do you have a dedicated fueling site(s)?

( ) No
( ) Yes

11. Did your fuel site experience any electric power loses?

( ) No
( ) Yes

12. Do you fueling sites have back-up generators to insure post-event electrical supply to your fueling site?

( ) No
( ) Yes

13. Do you have established priorities with your local EOC to insure re-supply of your fuel supplies?

( ) No
( ) Yes

14. Do you normally share your fuel site with other public agencies?

( ) No
( ) Yes

15. Has your agency or can it make arrangements for other public agencies or key responders to access your fuel site?

( ) No
( ) Yes

16. Have you made arrangements for back-up fuel sites in the event your fuel site is not accessible/operational?

( ) No
( ) Yes

17. Did your fuel site experience any contamination as a result of any of the 2004 hurricane events?

( ) No
( ) Yes

Agency Communication Systems

18. Did your agency experience any communication problems during the 2004 hurricane events?

( ) No
( ) Yes => *Please provide details/specifics.*

19. Does your agency have any plans to address these communication problems?

( ) No
( ) Yes => *Please provide details/specifics.*

Pre-Storm Planning and Activities

20. What are your agencies plans or strategies for deployment of your bus fleet during the pre-event preparation? Are buses deployed to alternative sites or kept all at original facility? Do you have a strategy on how to park the bus fleet to minimize damage, etc?

Please provide details/specifics.

21. What plans does your agency have for the preparation or protection of your non-bus facilities and assets? Do you have storm shutters/protection for your facilities?

Please provide details/specifics.

22. Do you have any facilities that act as a hurricane shelter? If this open to the public, your employee families, or only your key employees?

Please provide details/specifics.

23. Does your agency participate in any pre-event planning activities? Do you conduct mock drills? Do you conduct other training for your employees?

Please provide details/specifics.

24. What mechanisms to you use to communicate with your employees before, during and after storm events? Are your employees aware of your agency's hurricane/emergency plans and responsibilities?

Please provide details/specifics.

Event Specific Information

Suspension of Service

25. Does your system have an established guideline for what wind speed your buses should be removed from service?

If so, what is it? Please provide details/specifics.

26. Who makes the decision to suspend service?

Please provide details/specifics.

27. Who makes the decision to re-institute service?

Please provide details/specifics.

28. Does your agency have established guidelines or policies related to the suspension of service?

Please provide details/specifics.

29. What mechanisms does your system use to notify your employees and the public of your service suspension and service re-institution decisions?

Please provide details/specifics.

People With Special Needs (PSN) Evacuations

30. Does your agency participate with the evacuation process for People With Special Needs (PSN's)?

Please provide details/specifics.

Financial Reimbursement

31. Does your agency take any special efforts to capture costs related to your responses to storm events?

Please provide details/specifics.

32. Who in your agency is responsible for this?

Please provide details/specifics.

33. Please detail any concerns or issues encountered in seeking reimbursement of storm related expenses.

Please provide details/specifics.

Employee Compensation Policies

34. Describe how your agency compensates its employees before and during a storm event.

Please provide details/specifics.

35. Specifically, when your offices are closed do your non-working employees get paid? If so and with paid administrative leave, do your working employees receive any additional compensation?

Please provide details/specifics.

36. If service was suspended, do your non-working employees get paid? If so and with paid administrative leave, do your working employees receive any additional compensation?

Please provide details/specifics.

37. During the 2004 hurricane season, did employee compensation policies impact your operations in any manner (e.g., difficult to get employees to work, etc.)?

Please provide details/specifics.

38. If covered by a labor agreement, were any employee grievances filed over compensation issues related to the storm events?

Please provide details/specifics.

Internal Reports and Event Summaries

39. Does your agency prepare any internal incident reports or summaries of hurricane response actions?

Please provide details/specifics/copies of forms.

40. Does your agency conduct any post-event reviews?

Please provide details/specifics.

Other Thoughts or Comments??

EXHIBIT B

Draft Transit Annex to Appendix I: ESF 1 Transportation

Draft

Florida Department of Transportation Public Transportation
Transit Office Emergency Management Plan

Transit Annex
to
APPENDIX I: EMERGENCY SUPPORT FUNCTION 1 -- TRANSPORTATION

Primary Agency:

FDOT Central Transit Office – Transit

Support Agencies:

FDOT District Transit Offices, Florida Commission for the Transportation Disadvantaged (CTD), Florida public transit agencies, Florida Community Transportation Coordinators (CTC's), the Federal Transit Administration (FTA), the Federal Emergency Management Agency (FEMA)

Purpose:

The purpose of the Transit Office Emergency Plan is to provide guidance for coordination of available public transportation resources by the Transit Office in response to an emergency or disaster situation in accordance with the State of Florida Emergency Management Plan.

Resources:

Transit Office resources will be provided through the Florida Department of Transportation (FDOT) Emergency Operations Center (TEOC) and the Emergency Support Functions 1 (ESF1) of the Florida Department of Community Affairs (DCA), State Emergency Operations Center (SEOC), the Federal Transit Administration (FTA), and the Federal Emergency Management Agency (FEMA).

Activities:

Public transportation related resources coordinated by the Transit Office would be focused on the following activities:

1. Planning, coordinating, and implementing appropriate preventative measures in preparation for emergency or disaster situations;

2. Maintaining a knowledge-base of the operational status of public transportation systems impacted by emergency or disaster situations;

3. Maintaining a knowledge-base of public transportation systems with the resources to serve as emergency or disaster relief and support staging sites and/or provide emergency or disaster relief services;

4. Preparing and implementing FDOT response to requirements to conduct post emergency or disaster reconnaissance or inspection of public transportation systems and facilities; and,

5. Coordinating public transportation emergency or disaster related requirements for state and federal emergency funds with FDOT Districts, affected public transportation systems, CTC's, the Florida CTD, and the FTA.

Concept of Operations:

1. **General:**

   a. During an emergency or disaster, the State Transit Manager will assign Central Office staff to review, update, and familiarize themselves with themselves with the guidance provided herein.

   b. When appropriate, the State Transit Manager will assign appropriate Central Office transit staff to be in a standby or on call status or be present for full duty in the Transit Office or other location as may be required to perform the functions and the responsibilities herein.

   c. Representatives from the District Transit Offices should be listed on District EOC contact lists. District staff will coordinate on mission responses with the Central Office as appropriate.

2. **Organization:**

   a. The State Transit Manager or his designee will serve as the primary point of contact for transit—related issues in support of TEOC, ESF1 and the SEOC.

   b. The State Transit Manager will work in cooperation and coordination with applicable FDOT District transit staff consistent with the de-centralized structure of the FDOT.

   c. Given the potential severity of an emergency or disaster situation, Central Office and District Office transit staff must be ready to work transit issues throughout the state should circumstances preclude normal fulfillment by regularly assigned District staff.

3. **Communication:**

   a. A minimum of three (3) contacts per agency (Central Office, District Offices, transit agencies, CTC's, and local county EOC's) shall be identified and compiled on a contact list. Information required for contact lists will include:
      1. Name
      2. Title
      3. Telephone numbers (office, cell, home)
      4. E-mail address

   b. Contact lists will be maintained electronically and in hard copy at the Central Office. Copies will be provided to the Districts biannually for informational purposes and updating. Copies will be shared with our partners.

   c. FDOT District Offices will be responsible for compilation, maintenance, and dissemination of the contact lists to all identified agencies within their District.

4. Coordination:

a. The Central Office will coordinate pre-event activities with the District Offices and other partners.

b. The District Offices will provide pre-event preparation status reports to the Central Office.

c. The Central Office will make arrangements for needed resources, pre-event, as requested and compile information on available resources for post-event recovery efforts

d. The Central Office, in consultation with the Districts, will make arrangements for regional personnel to be in place for post-event reconnaissance and assessment efforts.

e. The Central Office, in consultation with the Districts, will deploy resources as needed for post-event recovery efforts.

5. Education:

a. The Central Office will provide education to the integral partners (identified previously) on statewide emergency management procedures and process. Accessing emergency resources through the county EOC's and the SEOC will be outlined.

b. Information on best practices will be provided pre-event. At a minimum, this information shall include:
    1. Preventative fleet parking strategies
    2. Assuring necessary fuel supplies
    3. Back-up generator capabilities
    4. Protection of facilities (shutters, structures, equipment, etc.)
    5. Assuring coordination of transportation responsibilities with local school boards
    6. Standardized wind level assessments for ceasing operations
    7. Temporary housing for displaced employees, as well as recovery staff
    8. On-site transportation personnel at shelters (as needed)
    9. Employee assistance programs
    10. Recommendations for public information dissemination practices during emergency events

c. The Central Office will provide information on the necessary record keeping requirements to insure timely reimbursement of event related costs.

d. Agencies will be instructed on how to request and/or participate in County Mutual Aid Agreements.

e. Agencies will be instructed on the SEOC "Tracker" system process and the need to acquire the appropriate information before providing services.

f. Agencies will be instructed on the FEMA accounting and reimbursement practices.

6. <u>Specialized Needs:</u>

a. Transit's unique role in dealing with people with special needs before and after an event must be adequately coordinated and planned for.

b. The Central Office and ESF1 will work with members of ESF8 to insure adequate, timely and efficient transportation to and from shelters, assisted living facilities, and hospitals.

c. The Central Office, District Offices, transit agencies, and/or CTC's will coordinate resumption of transportation for critical health care functions such as dialysis treatments, out patient cancer treatments, etc.

EXHIBIT C

“Florida’s 2004 Hurricane Season”
PowerPoint Presentation

Florida's 2004 Hurricane Season

Amber Reep and Jay Goodwill

Center for Urban Transportation Research (CUTR)

University of South Florida -- Tampa, Florida

Florida's New Nickname…

A Time for Everything, and a Season for Every Activity Under Heaven:

- A time to be born and a time to die,
- A time to love and a time to hate,
- A time for war and a time for peace
- A time to tear down and a time to build up,
- A time to weep and a time to laugh.

ECCLESIASTES 3:1-8

2004 was Florida's time...

... For Hurricanes Charley, Frances, Ivan and Jeanne

Florida's resources and resourcefulness were sorely tested by the worst concentration of natural disasters in U.S. history over the last 100 years.

Four major storms in six weeks !!

Hurricane Charley

KEY DATES:

- **Tropical Storm**
  - –August 10th
- **Hurricane**
  - –August 11th
- **Landfall:**
  - –August 13th
  - –Punta Gorda, FL
  - –Category 4

Hurricane Frances

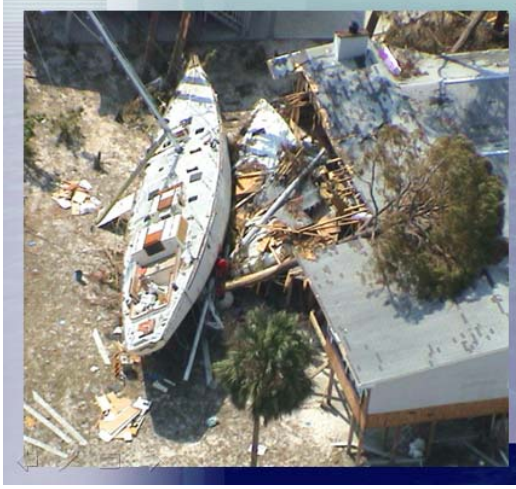
KEY DATES:

- **Tropical Storm**
  - –August 25th
- **Hurricane**
  - –August 26th
- **Landfall:**
  - –September 5th
  - –Sewall's Point near Stuart, Florida
  - –Category 3

Hurricane Ivan

KEY DATES:

- **Tropical Storm**
  - September 3rd
- **Hurricane**
  - September 5th
- **Landfall:**
  - September 16th
  - Gulf Shores, Alabama near Pensacola, Florida
  - Category 4



Hurricane Jeanne

KEY DATES:

- **Tropical Storm**
  - –September 14th
- **Hurricane**
  - –September 16th
- **Landfall:**
  - –September 25th
  - –Hutchinson Island near Stuart, Florida
  - –Category 3

After 44 days, Mother Nature was through with Florida

(That is until Arlene... the first 2005 Atlantic Tropical Storm)

- The cost of all four storms is estimated to be over $20 billion
- 126 people lost their lives
- More than 25,000 homes were destroyed and more than 40,000 homes sustained considerable damage

Florida's Transit Systems Play An Integral Role In Storm Events

Orlando Sentinel

HURRICANE FRANCES | RUSH TO SAFETY

AIRPORT TO CEASE FLIGHTS AT NOON | COUNTIES HURRY TO OPEN SPECIAL-NEEDS SHELTERS | FSU-MIAMI, UF FOOTBALL GAMES POSTPONED

MILLIONS FLEEING

Gov. Bush wants state declared disaster area

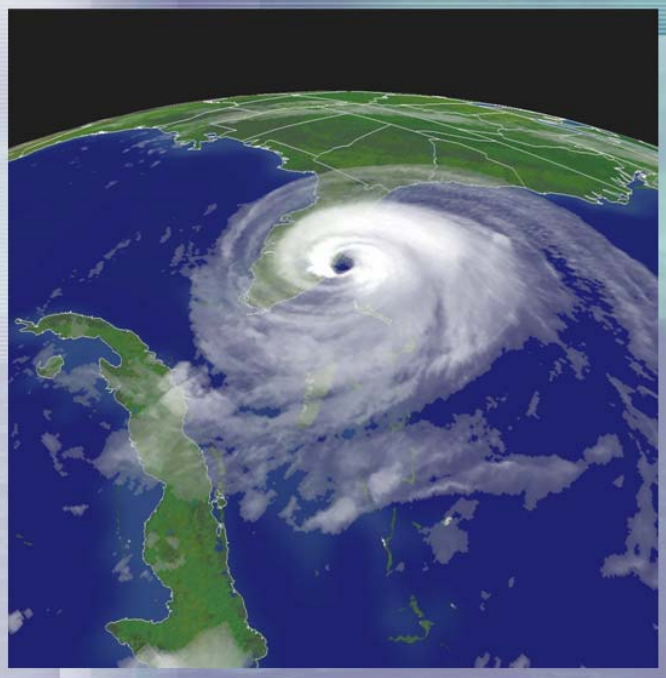
MAGNITUDE

Frances could join Andrew in history books

FLOODING

100-year rains may overwhelm drain systems

Transit's Roles In Emergency Events Include:



- *Pre-Event*
- *Event*
- *Post- Event*
- *Long Term Recovery*

Expect Service Disruptions...

Plan For The Unexpected...

Lessons Learned

Lessons Learned
Regional & Statewide Perspective

- Communication
- Coordination
- Education
- Specialized Needs
- Accounting & Record Keeping
- Resource Planning & Deployment
- Common Practices
- Public Relations

Lessons Learned
... Communication

- **Observation**: Limited pre-planning for communication between transit agencies, CTC's and FDOT
- **Specifics**:
  - Lack of up-to-date information on personal contact information
  - Limited data – need minimum of 3 contacts
  - No electricity = no computer access
  - Need paper copies of contact lists
  - Need to share lists outside your agency

Lessons Learned
... *Coordination*

- **Observation**: Lack of planned system to coordinate information among transit agencies, CTC's, CTD and FDOT
- **Specifics**:
  - Need to define roles – FDOT Central, FDOT Districts, and Transit Agencies & CTC's
  - Need to establish "Communication Tree"
  - Coordination between ESF1 – Transportation and ESF8 – Health & Medical Services
  - Coordination functions – preparation, operational status, available resources, reconnaissance, inspection and assessment

Lessons Learned
... *Education*

- **Observation**: Inconsistent involvement and understanding of EOC processes
- **Specifics**:
  - Lack of understanding of EOC, ESF and Incident Command Structure
  - Quality and availability of emergency plans widely varied
  - Expectations and responsibilities not defined
  - More pre- and post-event planning, training and mock drills needed

Lessons Learned
... Specialized Needs

- **Observation**: Transit has an unique role in dealing with People with Special Needs (PSN's)
- **Specifics**:
  - Need to improve coordination PSN transportation needs
  - Plan for resumption of critical health care functions such as dialysis treatments
  - Post event coordination and management of PSN's in shelter settings

Lessons Learned
... Accounting & Record Keeping

- **Observation**: Lack of understanding of required fiscal accounting and record keeping jeopardizes future reimbursement
- **Specifics**:
  - Mutual aid agreements
  - Need to register service and resource requests with the SEOC and your local EOC "Tracker" system
  - Need timely reimbursement for private for profit and non-profit agencies who provide emergency services

Lessons Learned
... Resource Planning & Deployment

- Observation: Pre-planning to plan for and provide outside assistance and resources must be improved
- Specifics:
  - Define and stage probable resource needs:
    - Communication – portables, satellite telephones, battery re-charge capabilities,
    - Fuel – short term and re-supply priorities
    - Power – generators and repairs
    - Parts and Supplies
    - Staffing Back-Ups (all types)
    - Extra Buses and Repair Vehicles
    - Portable Command Centers

Lessons Learned
... Common Practices

- Observation: A number of "best practices" were discovered and need to be shared
- Specifics:
  - Preventative fleet parking strategies
  - Back-up generator capabilities
  - Protection of facilities (e.g., shutters, sandbags)
  - Use of other manpower resources (e.g., teachers)
  - Employee and passenger education programs
  - Employee Assistance Programs
  - Sharing transportation responsibilities with local School Board
  - Coordination of shelter transportation

Lessons Learned
... Public Relations

- Observation: Often an afterthought during an emergency event, but we need to tell "transit's story"
- Specifics:
  - At a minimum need to disseminate information on the status of public transportation services
  - Record keeping and journaling of events – historical time logs
  - Need to tell the story of the public transit services importance and role in emergency events
  - TAKE PICTURES !!

The 2005 Hurricane Season is off to a fast start !!

Thank You !!

Amber Reep
reep@cutr.usf.edu

Jay Goodwill
jaygoodwill@cutr.usf.edu

USF

Center for Urban Transportation Research
University of South Florida
4202 E. Fowler Ave
Tampa, FL 33620
www.cutr.usf.edu

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Florida's 2004 Hurricane Season

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[13] Ibid, Figure 9, Page 35.