



Department of Public Safety and Communications

Comprehensive Emergency Management Plan

Division of Emergency Management

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Promulgation statement

The Department of Public Safety’s Division of Emergency Management is pleased to promulgate the 2017 St. Lucie County (SLC) Comprehensive Emergency Management Plan (CEMP), which supersedes any previous plans of this purpose. The CEMP outlines the framework for St. Lucie County’s agencies and whole community partners to prepare for, prevent, respond to, recover from, and mitigate against all hazards that may severely affect the vital community. It is the intent of the CEMP to provide a structure for standardizing plans countywide and to facilitate interoperability among local, state, and federal governments within vertical and horizontal spans of administration. The CEMP has been developed following guidance from the Emergency Management Accreditation Program (EMAP), the State of Florida Comprehensive Emergency Management Plan, the National Response Framework, the National Incident Management System, and the Federal Emergency Management Agency’s (FEMA) Comprehensive Preparedness Guide (CPG) 101 (v.2.0) – Developing and Maintaining Emergency Operations Plans.

The efficient and effective implementation of the CEMP is the responsibility of the Department of Public Safety, while coordination, preparation, and continuous update of the CEMP falls under the auspices of the Division of Emergency Management. It is imperative that St. Lucie County’s emergency management partners implement the purpose of the CEMP through any or all of the following processes:

- Development of Standard Operating Guides (SOG) for the protection of personnel, equipment, supplies, and critical public records from the effects of disasters using the CEMP as a guidance.
- Development of coordinating procedures and plans to maintain the Continuity of Operations (COOP) and Continuity of Government (COG) through the implementation of essential functions enforced by government statutes and administrative protocols.
- Participation in the planning, training, exercising activities coordinated by the Department of Public Safety.
- Identification and coordination of resources and personnel to stay prepared in responding against all hazards.

This plan will become effective upon official adoption of the SLC Board of County Commissioners.

Ron Parrish, MPA, CFO, EFO, Director
Department of Public Safety

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I. INTRODUCTION

Normal da-to-day operations, otherwise known as “blue sky” business, are not sufficient to effectively and efficiently respond to situations that may immediately turn into a disaster for the whole community in St. Lucie County. As such, disaster response operations, otherwise known as “gray sky” business must be carefully coordinated among community partners to ensure that the loss of life, property, and the environment is kept at a minimum. Emergency procedures and processes to cope with the possibility of a disaster among all St. Lucie County stakeholders within local, state, and federal levels are addressed in the St. Lucie County Comprehensive Emergency Management Plan (CEMP) for the phases delineated in the Emergency Management profession: preparedness, response, recovery and mitigation.

Chapter 252, Florida Statutes (State Emergency Management Act), requires the preparation of the St. Lucie County CEMP. The CEMP must be integrated into and coordinated with County plans and programs, as well as state and federal statutes and guidelines. The CEMP also establishes a framework through which St. Lucie County may prepare for, respond to, recover from, and mitigate against the impacts of a wide variety of disasters that could adversely affect the health, safety and/or general welfare of the residents of St. Lucie County.

The CEMP is operation-oriented, and addresses coordinated local and regional evacuation; shelter operations; post-disaster response and recovery; rapid deployment and pre-deployment of resources; communications and warning systems; training exercises to determine the ability of local government to respond to emergencies; and clearly defined responsibilities for all County and partner agencies through a hybrid approach of using nationally recognized Emergency Support Functions (ESFs) in accordance with the National Response Framework (NRF), as well as units, branches, and sections using the Incident Command System (ICS), as delineated in the National Incident Management System (NIMS), to best manage disaster planning and operations. Each ESF and unit is headed by a primary agency, which has been selected based on its authorities, resources and capabilities in the functional area. The ESFs and units serve a primary mechanism that are coordinated under four (4) sections, Finance-Administration, Logistics, Operations, and Planning and the auspices of the Executive Group whose role serves as the Command Staff. The Executive Group is headed by the Incident Commander (IC) or Unified Command (UC) whose role is to provide a consistent and unified leadership approach in resolving the complexities of a disaster.

The St. Lucie County CEMP satisfies the plan criteria document, (CEMP 2001-1) as set forth by the State of Florida and was written in alignment with the NRF and NIMS, which carry out the objectives and concepts set forth by the Homeland Security Presidential Directive - 5 (HSPD-5) and Presidential Policy Directive (PPD) 8 to strengthen the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation. PPD-8 defines five (5) mission areas – Prevention, Protection, Mitigation, Response and Recovery – and mandates the development of a service of policy and planning documents to explain and guide the Nation’s collective approach of working with state and local governments to build, sustain, and deliver response capabilities against the greatest hazards and threats that may impact St. Lucie County, as well as state and federal capabilities.

A. PURPOSE

The Comprehensive Emergency Management Plan (CEMP) establishes a framework for an effective system of comprehensive emergency management enabling the St. Lucie County Board of County Commissioners (BOCC), the County Administrator and the Public Safety Director to implement their statutory responsibility of providing direction and control during the period of any emergency impacting the county.

The purpose of the CEMP is to:

1. Reduce the vulnerability of people and communities in St. Lucie County to damage, injury and loss of life and property resulting from natural, technological and human-caused emergencies, catastrophes, or hostile military or paramilitary action.
2. Prepare for prompt and efficient response and recovery actions to protect lives, property, and the environment affected by emergencies.
3. Respond to emergencies using all systems, plans and resources necessary to preserve the health, safety and welfare of persons affected by the emergency.
4. Recover from emergencies by providing for the rapid and orderly start of restoration and rehabilitation of persons and property affected by emergencies.
5. Provide an emergency management system embodying all aspects of pre-emergency preparedness and post-emergency response, recovery and mitigation.
6. Assist in anticipation, recognition, appraisal, prevention and mitigation of emergencies that may be caused or aggravated by inadequate planning for and regulation of, public and private facilities and land use.

B. SCOPE

The St. Lucie County CEMP encompasses a county-wide scope and is supported by the three (3) municipalities incorporated in the County: City of Fort Pierce, City of Port St. Lucie, and Town of St. Lucie Village. Systematic processes and procedures described in the CEMP apply within the geographical limits of unincorporated St. Lucie County and the County's municipalities.

The CEMP establishes the coordinating assumptions, structures, processes, and protocols required to integrate the specific statutory and policy authorities of various County departments and agencies into a framework for action to include prevention, preparedness, response, recovery, and mitigation activities.

The CEMP is an all-hazards plan and applies to incidents and planned events regardless of size, scope, or complexity. This CEMP establishes direction and control, and outlines interagency and multi-jurisdictional mechanisms necessary for the involvement of and coordination among the County, municipalities, non-governmental organizations, state and federal government. This CEMP also outlines processes for the recovery from disasters and efforts to mitigate the risk of such disasters.

In the event that a CEMP is developed for a specific municipality, it must be consistent with this CEMP, and their emergency management efforts must be coordinated with those of St. Lucie County. This plan is not intended to alter or impede the ability of any department, agency, or jurisdiction to carry out their specific authorities or perform their responsibilities under applicable laws.

C. PLAN DEVELOPMENT PROCESS

1. Methodology

The St. Lucie County Comprehensive Emergency Management Plan (CEMP) was developed using generally accepted management principles and practices for emergency management with input from organizations and individuals that are considered stakeholders of the County. This method helped to address the coordination of various preparedness activities among all appropriate agencies within the jurisdiction, across jurisdictions and with private organizations.

The CEMP was developed in accordance with the plan criteria (Form CEMP-001) established by the Division of Emergency Management. The CEMP incorporates the concepts, assumptions, and terminology of the National Incident Management System (NIMS), as well as the National Response Framework (NRF) and institutionalizes the use of the Incident Command System (ICS) both for field response and Emergency Operations Center (EOC) support actions. The plan is also consistent with the national priorities as identified in Homeland Security Presidential Directive - 8 (HSPD-8).

Note: Some ESF variations exist between the St. Lucie County CEMP and those identified in the NRF.

2. Plan Maintenance, Distribution, and Local Participation

The St. Lucie County CEMP is considered a “living document.” As such, periodic reviews, revisions, and enhancements may be made as changes in programs and procedures occur throughout the County. The St. Lucie County Division of Emergency Management, under direction of the Department of Public Safety, is responsible for development, maintenance, revision, and distribution of the CEMP and will make plan changes when significant changes warrant or every four (4) years, whichever occurs first.

Information used to update the CEMP comes from various sources including input from County Emergency Management staff; local input solicited from primary Emergency Support Function (ESF) agencies and units, or as a direct result of issues described in after action reports, improvement plans, and lessons learned from training, exercises, and actual disaster operations. Additionally, revisions may be statutorily driven as in the case of Homeland Security Presidential Directive-5 and 8, inclusions of the National Incident Management System (NIMS), the Incident Command System (ICS) and the National Response Framework (NRF) guidance.

Once revisions are made, the Director of Public Safety and the Emergency Operations Manager forwards the draft plan to key public officials for review and comment. The draft plan may also be posted for public comment and review on the county's website. Suggestions are addressed and the plan is submitted to the State of Florida Division of Emergency Management (FDEM) for review. Upon receipt, the FDEM reviews the CEMP for compliance with the plan criteria.

All ESF primary and support agencies are identified in the CEMP, including public, private and community-based organizations who are considered whole community partners and stakeholders of the County's emergency management program and initiatives. All pertinent local, state, and federal agencies as well as nongovernmental organizations were assembled to provide input and support in the construction of the plan from various forums such as EM Team, Local Mitigation Strategy (LMS), SAFER St. Lucie, and Special Needs Shelter Committee meetings.

A series of meetings were held to assure local participation in the planning process and all involved agencies and departments demonstrated support in the planning process by personal participation in planning meetings. All agencies and departments involved in the planning process reviewed the final draft of the plan and accepted the responsibilities assigned to them by the plan. Rosters of orientation seminars on concepts of operations or plan procedures are not attached to or an integral part of this formal plan; however, a roster list of all participating agencies are kept on file in the St. Lucie County Division of Emergency Management. The distribution list is attached to this document and identified as Table 1. The CEMP is accessible to all partners through the use of the EOC's SharePoint portal, File Transfer Protocol (FTP) view, and the County's website. All County partners are notified of changes made to the CEMP through the EM Team, Outlook, and Alert St. Lucie distribution lists, as well as subsequent distributions from stakeholder agencies such as SAFER St. Lucie. All future amendments to this plan will be made in addendum form to recipients of the plan.

This document has been approved by the St. Lucie County Board of County Commissioners and a current signed resolution can be found in the Compendium of Authorities (Appendix C). Their approval establishes this plan as official policy for all participating departments/agencies. There are specific agency and departmental letters of support of the planning principles and accepting plan responsibilities on file in the Emergency Management office, and rosters of orientation seminars on concepts of operations and plan procedures.

Table 1

2017 CEMP DISTRIBUTION LIST	
AGENCY	DIVISION
St. Lucie County	Attorney's Office Board Of County Commissioners Building Inspections Clerk of Court Community Services County Administrator Department of Public Safety 911 Dispatch Animal Control Emergency Management Marine Safety Radiological Emergency Planning & Preparedness Election's Office Engineering Division Facilities Division Fire District Human Resources Information Technology Library Mosquito Control & Coastal Management Services Office of Management & Budget Planning and Development Services Property Appraiser County Health Department Parks, Recreation and Facilities Department Port of Ft. Pierce Public Works Public Information Officer (Media Relations) Purchasing Red Cross Risk Management School Board Superintendent School Security Sheriff's Office St. Lucie Transportation Planning Organization Solid Waste Division Tax Collector Treasure Coast International Airport and Business Park UF/IFAS Cooperative Extension Utilities

2017 CEMP DISTRIBUTION LIST	
AGENCY	DIVISION
Fort Pierce, City of	Mayor City Manager Police Department Public Works Utilities
Port St. Lucie, City of	Mayor City Manager Police Department Public Works Utilities
St. Lucie Village	Mayor
State and Regional	Florida Division of Emergency Management Treasure Coast Regional Planning Council

II. SITUATION

This section of the CEMP provides a description of the potential hazard considerations, geographic characteristics, demographics, economic profile and emergency management support facilities for St. Lucie County. Additionally, there are several planning assumptions that were considered in the planning process. For a complete vulnerability assessment, see the St. Lucie County Local Mitigation Strategy

A. HAZARD ANALYSIS

Communities in St. Lucie County are vulnerable to three classifications of hazards: natural, technological and human-caused as identified below. The following sections provide an overview of each hazard. This overview is intended to help emergency officials and public policy makers identify hazards, estimate probability/severity, determine vulnerable populations, and understand potential consequences. A chart depicting the hazard vulnerability by jurisdiction and population centers is included in the St. Lucie County Local Mitigation Strategy.

1. Natural Hazards

a. Hurricanes/Tropical Storms

A tropical storm is a tropical cyclone with maximum sustained winds of at least 39 mph. Tropical storms are given official names once they reach these wind speeds. A tropical cyclone is a severe thunderstorm with a defined cyclonic rotation around a central low-pressure zone. A tropical cyclone is one step above a tropical depression, but a step below a hurricane in terms of intensity. A tropical storm watch is issued by the National Hurricane Center (NHC) when tropical-storm conditions are possible within the specified area. A tropical storm warning is issued by the NHC when tropical-storm conditions are expected within the specified area.

Hurricanes are tropical cyclones with winds that exceed 74 mph and circulate counter-clockwise about their centers in the Northern Hemisphere. They are formed from simple thunderstorms; however, these thunderstorms can only grow to hurricane strength with favorable conditions in the ocean and atmosphere. The heat and moisture from this warm water are ultimately the source of energy for hurricanes, which weaken rapidly when they are deprived of their energy source by traveling over land or cooler waters.

When a hurricane threatens the coast, advisories are issued by the NHC. The storm's current location and intensity are described along with its projected path. Advisories are issued at 6-hour intervals: 5:00 a.m., 11:00 a.m., 5:00 p.m. and 11:00 p.m. Eastern Time.

In addition to the advisories, the National Hurricane Center may issue a hurricane watch or warning. A hurricane watch indicates that hurricane conditions are a possibility and may threaten the area within 36 hours. A hurricane warning is issued when winds of at least 74 mph are expected in the area within 24 hours.

Advisories and hurricane watches and warnings will frequently refer to the category of the storm. Hurricanes are classified using the Saffir-Simpson wind scale as follows:

- Category 1: Winds 74 to 95 mph
- Category 2: Winds 96 to 110 mph
- Category 3: Winds 111 to 129 mph
- Category 4: Winds 130 to 156 mph
- Category 5: Winds exceeding 157 mph

Many, if not the majority of existing homes and businesses along the U.S. Atlantic and Gulf Coasts were located there during the 1970's and 1980's, a period of relatively inactive hurricane formation. Most of the people currently living and working in coastal areas have never experienced the impact of a major hurricane. Hurricanes that impacted Florida during the 1970's and 80's were infrequent and of relatively low intensity. Homeowners, business owners, and government officials grew to regard hurricane risk as manageable by private insurance supplemented occasionally by federal disaster funding and subsidized flood insurance. The hurricane risk did not seem sufficient to warrant increased investment in mitigation. Two major hurricanes, Hugo in 1989 and Andrew in 1992, forced a re-evaluation of this risk assessment.

While experts sometimes disagree on the annual cost associated with hurricane damage, all sources agree that Hurricane Katrina in 2005 was the most costly hurricane event ever to affect the U.S. Insured losses from Hurricane Katrina topped \$108 billion, and most sources agree that the total cost of Hurricane Katrina exceeded \$150 billion. Following the storm in 2006, the State of Louisiana showed a Census documented population loss of 219,563 (4.87%) residents.

High winds, storm surge, powerful waves, torrential rain, tornadoes and high tide combined give hurricanes the potential to create mass devastation and huge losses to property. The greatest threat to life and property associated with a hurricane or tropical storm is storm surge. Storm surge is a large dome of water often 50 to 100 miles wide that sweeps across the coastline near where a hurricane made landfall. The surge of high water, topped by waves, can be extremely destructive to coastal regions, even if they are protected by vegetation-topped dunes. The stronger the hurricane and the shallower the offshore water, the higher the surge will be. In addition, if the storm surge arrives at the same time as the high tide, the surge height will be even greater (National Oceanic and Atmospheric Administration, NOAA, National Weather Service, NWS, 2014).

High winds associated with hurricanes can be the source of great destruction. The wind alone can lead to flying debris, including tree limbs and branches, signs roofing and metal siding, all of which move through the air like missiles. High winds also can destroy poorly constructed buildings and manufacture homes. Once the wind and rain has penetrated the secure envelope of a structure (doors, windows, garage doors and roofs), the chances of the structure surviving the hurricane greatly diminish. Tornadoes and torrential rainfall add to the life- threatening and damaging effects of a hurricane.

Six (6) to 12 inches of rain or more can fall on an area as the storm passes, causing flooding and flash floods. Tornadoes produced by hurricanes occur most frequently in rain bans well away from the center of the hurricane. Damage from a tornado results from high wind velocity and wind-blown debris.

Crop damage is another powerful effect of hurricanes and tropical storms. Tropical Storm Mitch dropped as much as 10 inches of rain in some south Florida areas, which resulted in approximately \$20 million in crop damage in Palm Beach County alone (The Associated Press, 1998). Florida is among the top three agricultural producing states in the U.S. where agriculture plays a key role in the St. Lucie County's economy with approximately 73% of county land (206,540 acres) is designated farmland, primarily citrus (51,571 acres). The 2012 Agricultural Census from the U.S. Department of Agriculture listed the true market value of agriculture products sold in St. Lucie County at \$168 million.

An average of 1.75 hurricanes strikes the U.S. every year. Florida is the most hurricane-prone state, and St. Lucie County has a history of major storms, which have impacted the area with severe property damage. The County's rapid growth, mainly during inactive hurricane period in the 1970s, 1980s, and 1990s, has resulted in increased potential for property damage and human suffering. Most of this new development was along the Atlantic shoreline as well as the Indian and St. Lucie Rivers. The proximity of so many people living so close to the Atlantic Ocean, as well as the low coastal elevations, significantly increases the County's vulnerability. The barrier island towns are vulnerable to storm surge and high wind damage, as are the communities fronting on the estuaries and rivers, while the inland area is more vulnerable to wind damage and freshwater flooding from rainfall.

Historically, hurricane impacts to the County were Floyd and Irene, which struck Florida in September and October 1999 respectively. Most recently, Hurricanes Frances and Jeanne (2004), both directly hit St. Lucie County. Hurricane Wilma (2005) crossed the southern half of Florida and exited the state just north of the County. Hurricane Ernesto threatened the area in 2006 but was not a direct hit. Tropical Storm Fay (2008) and Hurricanes Isaac and Sandy in 2012 impacted the area with flooding and severe beach erosion.

Florida not only has the most people at risk from hurricanes, but it also has the most coastal property exposed to these storms. Between 1970 and 2010, Florida's population increased by 195.7%.

b. Flooding

In St. Lucie County, several variations of flood hazards occur due to the different effects of severe thunderstorms, hurricanes, seasonal rains and other weather related conditions. For the majority of the county, the primary cause of flooding is storm surge produced by hurricanes or tropical storms. However, the county's low-lying topography, combined with its subtropical climate, makes it also vulnerable to riverine flooding.

Flooding in St. Lucie County results from one or a combination of both of the following meteorological events:

- 1) Tidal surge associated with northeasters, hurricanes, and tropical storms; and
- 2) Overflow from streams and swamps associated with rain runoff.

When intense rainfall events occur, streams and drainage ditches tend to reach peak flood flow concurrently with tidal water conditions associated with coastal storm surge. This greatly increases the probability of flooding in the low-lying areas known as the Coastal High Hazard Area (CHHA), and the Category 1 Storm Surge. These low lying areas will be further aggravated with higher water levels by Sea Level Rise.

Areas along the North and South Forks of the Indian River lagoon/estuary are particularly susceptible to flooding under these conditions. The most Flood prone areas in the eastern portion of the County feature poorly drained soils, a high water table, and relatively flat terrain, all of which contribute to their flooding problems. Flat terrain and heavily wooded areas aggravate Flood problems by preventing rapid drainage in some areas.

Riverine flooding occurs when the flow of rainwater runoff exceeds the carrying capacities of the natural drainage systems. During extended periods of heavy rainfall, certain low-lying neighborhoods within the County are subject to considerable flood damage and isolation caused by the inability of natural and mechanical drainage systems to effectively remove the water. Heavy rainfalls can cause considerable damage to County infrastructure including roadbeds, bridges, drainage systems, and the water supply. The buildup of uncontrolled sediment contributes to the problem of inadequate drainage in natural and mechanical drainage systems. When a storm produces an overwhelming amount of storm water runoff, the accumulation of loose sediment materials (sand and soil) clogging the drainage systems causes backing up of water and thereby increased flooding. Soil saturation is also compounded as water sits in backed up areas.

In comparison to riverine flooding, coastal flooding is usually the result of a severe weather system such as a tropical storm or hurricane. The damaging effects of coastal floods are caused by a combination of storm surge, wind, rain, erosion, and battering by debris. All coastal property and inhabitants are subject to severe damage and loss of life resulting from floods caused by hurricane-associated storm surge. Some coastal property, road arteries, and bridge approaches are subject to severe flooding caused by rare astronomical tides as well.

Frequencies from flooding associated with rain events other than tropical storms and hurricanes are more difficult to estimate. Eastern Florida shows an annual dry cycle stretching from early November through mid-May. During this part of the year, monthly rainfall rarely exceeds 3.5 to 4.0 inches per month. The wet season, beginning mid-May and running through October, shows monthly rainfall levels in the area to be between 6.0 and 8.5 inches. The heaviest rainfall usually occurs in June and September. In St. Lucie County, the eastern or coastal section of the County receives more rain than the western section. This rainfall pattern coupled with the hurricane season (June through November) makes St. Lucie County particularly vulnerable to flooding associated with tropical storms and hurricanes because they typically occur when the water table is high and the ground is saturated.

Table 2: Average Monthly Rain Total for St. Lucie County

Month	JAN	FEB	March	APRIL	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC	Yearly Average
Average	2.36	3.07	3.66	2.87	3.78	5.71	6.02	7.48	7.68	5.43	3.58	2.16	53.77

Source: National Climactic Data Center

c. **Severe Thunderstorms and Lightning**

A severe thunderstorm is defined as a thunderstorm containing on or more of the following phenomena: hail ¾ inch or greater, winds gusting in excess of 58 mph, and/or a tornado. Severe weather can include lightning, tornadoes, damaging straight-line winds, and large hail. Most individual thunderstorms only last several minutes; however, some can last several hours.

Long-lived thunderstorms are called supercell thunderstorms. A supercell is a thunderstorm that has a persistent rotating updraft. This rotation maintains the energy release of the thunderstorm over a much longer time than typical, pulse-type thunderstorms occur in the summer months. Supercell thunderstorms are responsible for producing the majority of severe weather, such as large hail and tornadoes (NOAA, NWS, 2014).

Downbursts are also occasionally associated with severe thunderstorms. A downburst is a strong downdraft resulting in an outward burst of damaging winds on or near the ground. Downburst winds can produce damage similar to a strong tornado.

Although usually associated with thunderstorms, downbursts can occur with showers too weak to produce thunder. Strong squall lines can also produce widespread severe weather, primarily very strong winds and/or microbursts. A squall is a sudden violent gust of wind often associated with rain or snow (NOAA, NWS, 2014).

When a severe thunderstorm approaches, the National Weather Service will issue an advisory. According the National Oceanic and Atmospheric Administration, NWS (2014) two possible advisories are as follows:

- Severe Thunderstorm Watch:
Conditions are favorable for the development of severe thunderstorms.
- Severe Thunderstorm Warning:
Severe weather is imminent or occurring in the area.

(1) Lightning

Perhaps the most dangerous and costly effect of thunderstorms is lightning. As a thunderstorm grows, electrical charges build up within the cloud. Oppositely charged particles gather at the ground below. The attraction between positive and negative charges quickly grows strong enough to overcome the air's resistance to electrical flow. Racing toward each other, the charges connect and complete the electrical circuit. Charge then surges upward from the ground at nearly one-third the speed of light and produces a bright flash of lightning. While the conditions needed to produce lightning are understood, how lightning forms has never been verified. Forecasters may never be able to forecast when and where a lightning strike will take place (Cappella, 1997).

On the average, more people are killed by lightning than any other weather event. Florida leads the nation in lightning related deaths and injuries. Most lightning strike fatalities occur in June, July and August. Florida also has the most strikes, about 12 strikes per square kilometer per year in some places. Between 1990 and 2003, there were 126 lightning-related deaths in Florida. Nationwide, lightning-related economic losses amount to more than \$5 billion per year, and the airline industry alone loses approximately \$2 billion a year in operating costs and passenger delays from lightning (National Lightning Safety Institute, 2015). According to the National Climate Data Center (NCDC), there have been 40 thunderstorm wind incidents in the County Since 1975, which caused a total of \$288,000 in property damage. Between 1950 and 2016, the County recorded 8 lightning-related deaths and 13 injuries (NCDC, NWS Melbourne, 2016).

d. Wildland /Urban Fires

Florida's population has nearly tripled in the last century, and much of the growth has occurred in the undeveloped areas. The trend has created a complex landscape known as the Wildland/Urban Interface, where a set of conditions are created under which wildland fires move beyond trees and undergrowth to threaten neighborhoods. Ensuring a home is compatible with nature can help save it and the entire community when wildfire strikes.

Florida's wildfire season is twelve months long, where the threat of wildfires in St. Lucie County is present throughout the year. The most active part the year is typically December through the beginning of June. Generally, St. Lucie County experiences the greatest number of wildfires during April, May, and June. On average, the County has 28 wildfires a year depending on weather conditions.

South Florida has several areas of spot building where homes are built in neighborhoods with large, unmanaged properties nearby where little or no regular landscape maintenance is conducted. Local governments often require neighborhoods to maintain designated preserves or conservation areas where plants and wildlife must remain untouched. Additionally, work in the preserves is often restricted to minimize the impacts for wildlife and native vegetation. Yet these preserves must still be managed and fire plays an important role due to the evolution of Florida's flora and fauna with low-intensity wildland fires.

If conservation areas are left unmanaged the accumulation of dead fuels and untreated new growth can create an undesirable effect, such as extreme fire behavior and wildlife habitat loss. Regular maintenance of preserves improves ecosystem health and functionality. Otherwise, dead vegetation accumulates and increases the chance of high-intensity wildland fire. Unmanaged areas may also force animals to forage outside their normal habitat. Regular food supplies run low for gopher tortoises and other species that rely on periodic fire to burn off the excess vegetation often found in these preserves.

Wildfires are caused by numerous sources including arson, smoker carelessness, individual's burning debris, equipment throwing sparks and children playing with matches. However, the largest number of fires is caused by lightning strikes and coincides with the height of the thunderstorm season. A major wildland fire can leave a large amount of scorched and barren land and these areas may not return to pre-fire conditions for decades. If the wildland fire destroys the ground cover, other potential hazards may develop (e.g., erosion) (Federal Emergency Management Agency, 1998). One-third of St. Lucie County's total land is protected by the Florida Division of Forestry and/or federal fire control personnel; however, due to limited state and federal resources, the St. Lucie County Fire District responds to most wildfires and is supported by the Division of Forestry.

Structures in the Wildland/Urban Interface zone are vulnerable to ignition by three different ways: radiation, convection and firebrands. Radiating heat from a wildfire can cause ignition by exposure to the structure. The chances of ignition increase as the size of the flames increases, surface areas exposed to flames increases, length of exposure time increases and distance between the structure and the flames decreases (National Wildland/Urban Interface Fire Protection Program).

Another source of ignition by wildfire is convection. Ignition of a structure by convection requires the flame to come in contact with the structure. Contact with the convection column is generally not hot enough to ignite a structure. Clearing to prevent flame contact with the structure must include any materials capable of producing even small flames. Wind will tilt the flame and the convection column uphill, increasing the chance of igniting a structure.

Firebrands also pose a threat to structures in the Wildland/Urban Interface zone. A firebrand is a piece of burning material that detaches from a fire due to strong convection drafts in the burning area. They can be carried a long distance (around 1 mile) by fire drafts and winds. The change of these firebrands igniting a structure depends on the size of the firebrand, how long it burns after contact and the materials, design and construction of the structure.

Table 3 - St. Lucie County’s 5-Year Wildfire History

YEAR	# of Wildfires	Acres Burned
2015	49	801
2014	19	250.3
2013	25	402.2
2012	22	376.4
2011	26	172.3

Source: Florida Forest Service

(1) Muck Fires

A muck fire is a fire that consumes all the organic material of the forest floor and also burns into the underlying soil. It differs from a surface fire by being invulnerable to winds. If the fire gets deep into ground, it could smolder for several years. In a surface fire, the flames are visible and burning is accelerated by wind; whereas in a muck fire, wind is not generally a serious factor (Canadian Soil Information System, 1996). Muck fires are not a frequent threat to Florida. However during a drought in the 1980’s fires in the Everglades consumed the rich, dried out muck that had once been the bottom of the swamp. These fires burned deep into the ground and required alternative fire-fighting techniques to extinguish them.

e. Tornado

Florida ranks third in the United States in the number of tornado strikes, and the first in the number of tornadoes per square mile. The odds of a tornado striking any specific point in southeastern Florida are 0.04, or once per 250 years. During the period of 1950-1994, 82 Floridians were killed; 1998 was the deadliest with 42 deaths in 4 counties; and the 2007 tornadoes in Central Florida left 21 dead. In 2012, the state of Florida had 48 tornadoes touch-down. St. Lucie County has had four confirmed tornado touchdowns since 2011, the latest in 2014.

A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud extending to the ground. A tornado's wind speed normally ranges from 40 to more than 300 mph, which is generated by a thunderstorm or hurricane when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The most common type of tornado, the relatively weak and short-lived type, occurs in the warm season with June being the peak month. The strongest, most deadly tornadoes occur in the cool season, from December through April. Occasional wind storms accompanied by tornadoes, such as the winter storm of 1993, are also widespread and destructive. Damage paths can be in excess of one mile wide and 50 miles long. Waterspouts are weak tornadoes that form over warm water and are most common along the Gulf Coast and the southeastern states. Waterspouts occasionally move inland, becoming tornadoes and causing damage and injuries.

The National Climatic Data Center (NCDC) indicates that there have been a total of 41 tornado incidents in St. Lucie County since 1953 including funnel clouds and waterspouts. The majority of the events have been FO and F1; however two F2 and two F3 tornados have impacted the County. There has never been an F5 tornado documented in Florida (NWS Melbourne, Florida). NCDC data also indicate that there have been 27 tornado-related injuries, 2 fatalities and \$4,378,560 in property damage associated with tornado events in the County.

The Damage from a tornado is a result of the high wind velocity and wind-blow debris. Florida's average is 54 tornadoes annually since 1959, causing an average of two fatalities and 69 injuries each year. St. Lucie County's vulnerability to tornadoes is compounded by the high concentration of mobile home residents in large mobile home communities.

The NWS issues two types of alerts:

- Tornado Watch: conditions are favorable for tornadoes to develop.
- Tornado Warning: a tornado has been sighted or detected.

f. Extreme Temperatures

(1) Freezing Temperatures

A freeze is defined by the NWS as when the surface air temperature is expected to be 32 degrees or below over a widespread area for a climatologically significant period of time. The NWS issues a freeze warning when surface temperatures are expected to drop below freezing over a large area for an extended period of time, regardless of whether or not frost develops.

According to the Florida Department of Agriculture and Consumer Services (FDACS), a moderate freeze may be expected every 1 to 2 years. Severe freezes may be expected on an average of once every 15 to 20 years. Freezes pose a major hazard to the agriculture industry in St. Lucie County on a recurring basis and are a significant threat to the economic vitality of the State's agriculture industry. Agricultural lands represents nearly three-quarters of all land in St. Lucie County.

The lowest temperature ever recorded in the state of Florida is -2°F in Tallahassee on February 13, 1899 (Florida Department of Emergency Management, 2012). At the same time, snow up to three inches deep was reported by several cities in the Panhandle. Since December 1889, there have been at least 22 recorded severe freezes; the most recent being in 1996, when a Presidential Disaster Declaration was issued for crop losses exceeding \$90 billion. During this event, there was extensive loss of citrus trees, and the majority has not been replanted. Freezes in January of 1977 had severe impacts on agriculture around the state. A U.S. Department of Agriculture report indicated the following crop loss: citrus - 35%, vegetables - 95-100%, commercial flowers - 50-75%, permanent pasture land - 50%, and sugar cane - 40%. In addition, there was a severe loss to the tropical fish industry. It is estimated that the freeze cost to Florida's economy was \$2 billion in 1977 dollars (NWS, 1999). St. Lucie County has experienced seven significant freezes between 1970 and the present. None since 2010.

Freezing conditions primarily affect agriculture and homeless indigents. When conditions are predicted to be below freezing, shelters may be opened.

(2) Extreme Heat

Temperatures that are 10°F or more above the average high temperature for a region and last for several weeks are defined as extreme heat (FEMA, 2003). Humid conditions, which add to the discomfort of high temperatures, occur when an area of high atmospheric pressure traps hazy, damp air near the ground. A heat wave is an extended period of extreme heat, and is often accompanied by high humidity (FEMA Ready, 2015). Humid conditions, which add to the discomfort of high temperatures, occur when an area of high atmospheric pressure traps hazy, damp air near the ground.

Human bodies dissipate heat in one of three ways: by varying the rate and depth of blood circulation; by losing water through the skin and sweat glands; and by panting. As the blood is heated to above 98.6°F, the heart begins to pump more blood, blood vessels dilate to accommodate the increased flow, and the bundles of tiny capillaries penetrating through the upper layers of skin are put into operation. The body's blood is circulated closer to the surface and excess heat is released into the cooler atmosphere. At the same time, water diffuses through the skin as perspiration. The skin handles about 90% of the body's heat dissipating function.

Heat disorders generally have to do with a reduction or collapse of the body's ability to cool itself by circulatory changes and sweating or a chemical (salt) imbalance caused by too much sweating. When the body cannot cool itself or when it cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and heat-related illness may develop. Studies indicate that, other things being equal, the severity of heat disorders tends to increase with age. Heat cramps in a 17-year old may be heat exhaustion in someone 40 years of age, and heat stroke in a person over 60 years of age.

When the temperature gets extremely high, the National Weather Service has increased its efforts to alert the general public as well as the appropriate authorities by issuing Special Weather Statements. Residents should heed these warnings to prevent heat related medical complications:

Excessive Heat Watch - Conditions are favorable for an excessive heat event to meet or exceed local Excessive Heat Warning criteria in the next 24 to 72 hours.

Excessive Heat Warning - Heat Index values are forecast to meet or exceed locally defined warning criteria for at least 2 days (daytime highs = 105-110° Fahrenheit).

Heat Advisory - Heat Index values are forecast to meet locally defined advisory criteria for 1 to 2 days (daytime highs = 100-105° Fahrenheit).

As a result of the latest research findings, the National Weather Service has devised the "Heat Index" (HI).

The HI, given in degrees Fahrenheit, is an accurate measure of how hot it really feels when relative humidity is added to the actual air temperature. The National Weather Service will initiate alert procedures when the HI is expected to exceed 105°F for at least two consecutive days. Possible heat disorders related to the corresponding HI are listed below (NOAA, 2014).

- Heat Index of 130°F or Higher:
Heatstroke/sunstroke highly likely with continued exposure
- Heat Index of 105°F-130°F:
Sunstroke, heat cramps and heat exhaustion likely and heatstroke possible with prolonged exposure and/or physical activity.
- Heat Index of 90°F-105°F:
Sunstroke, heat cramps and heat exhaustion with prolonged exposure and/or physical activity.
- Heat Index of 80°F-90°F:
Fatigue possible with prolonged exposure and/or physical activity

The hottest temperature ever recorded in Florida was 109°F on June 29, 1931, in Monticello, Florida (Florida Department of Emergency Management, 2012). In a normal year, approximately 175 Americans die from extreme heat. However, in 2013, the death toll was 92 (National Weather Service, 2014).

Temperature extremes, both freezes and periods of excessive heat impact communities with a larger population of older people to a greater extent than those with younger populations. According to the 2016 Bureau of Economic and Business Research (BEBR), 21.1% of residents in St. Lucie County are over the age of 65. Freezing conditions primarily affect agriculture and homeless indigents. When conditions are predicted to be below freezing, shelters are opened. As stated earlier, nearly three-quarters of land in St. Lucie County is currently designated agricultural land. According to the Florida Department of Children and Families 2017 Annual Report, there are approximately 642 homeless individuals within the County.

Inland communities away from the moderating influence of the ocean or the estuary are more vulnerable to temperature extremes as are areas with significant agricultural assets. According to the National Weather Service, between 1979 and 1999, there have been 249 extreme temperature-related deaths in the state. This number is greater than the number of deaths caused by hurricanes, tornadoes, and lightning combined.

g. Erosion

(1) Soil Erosion

Soil erosion is the deterioration of soil by the physical movement of soil particles from a given site. Wind, water, animals and the use of tools by man may all be reasons for erosion. The two most powerful erosion agents are wind and water but, in most cases these are damaging only after man, animals, insects, diseases or fire have removed or depleted natural vegetation. Accelerated erosion caused by human activity is the most serious form of soil erosion and can occur so rapidly that surface soil may sometimes be blown or washed away down to the bedrock.

Undisturbed by man, soil is usually covered by shrubs and trees, dead and decaying leaves or a thick mat of grass. Whatever the vegetation, it protects the soil when rain falls or wind blows. Root systems of plants hold soil together. Even in drought, the roots of native grasses, which extend several feet into the ground, help tie down the soil and keep it from blowing away. With its covering of vegetation stripped away, soil is vulnerable to damage. Whether the plant cover is disturbed by cultivation, grazing, deforestation, burning or bulldozing, once the soil is bare to the erosive action of wind and water, the slow rate of natural erosion is greatly increased. Losses of soil take place much faster than new soil can be created. With the destruction of soil structure, eroded land is even more susceptible to erosion.

The occurrence of erosion has greatly increased, usually at a rate at which soils cannot be sustained by natural soil regeneration. This is because of the activities of modern development and population growth, particularly agricultural intensification. It is also in the field of agriculture that most efforts have been made to conserve soils, with mixed success (Union of International Associations).

Particles scattered by erosion can also cause problems elsewhere. Storm water drainage systems, both natural and mechanical, are frequently clogged by loose sediment. If drainage systems are not cleared of uncontrolled sediment on a regular basis, they lose function.

(2) Beach Erosion

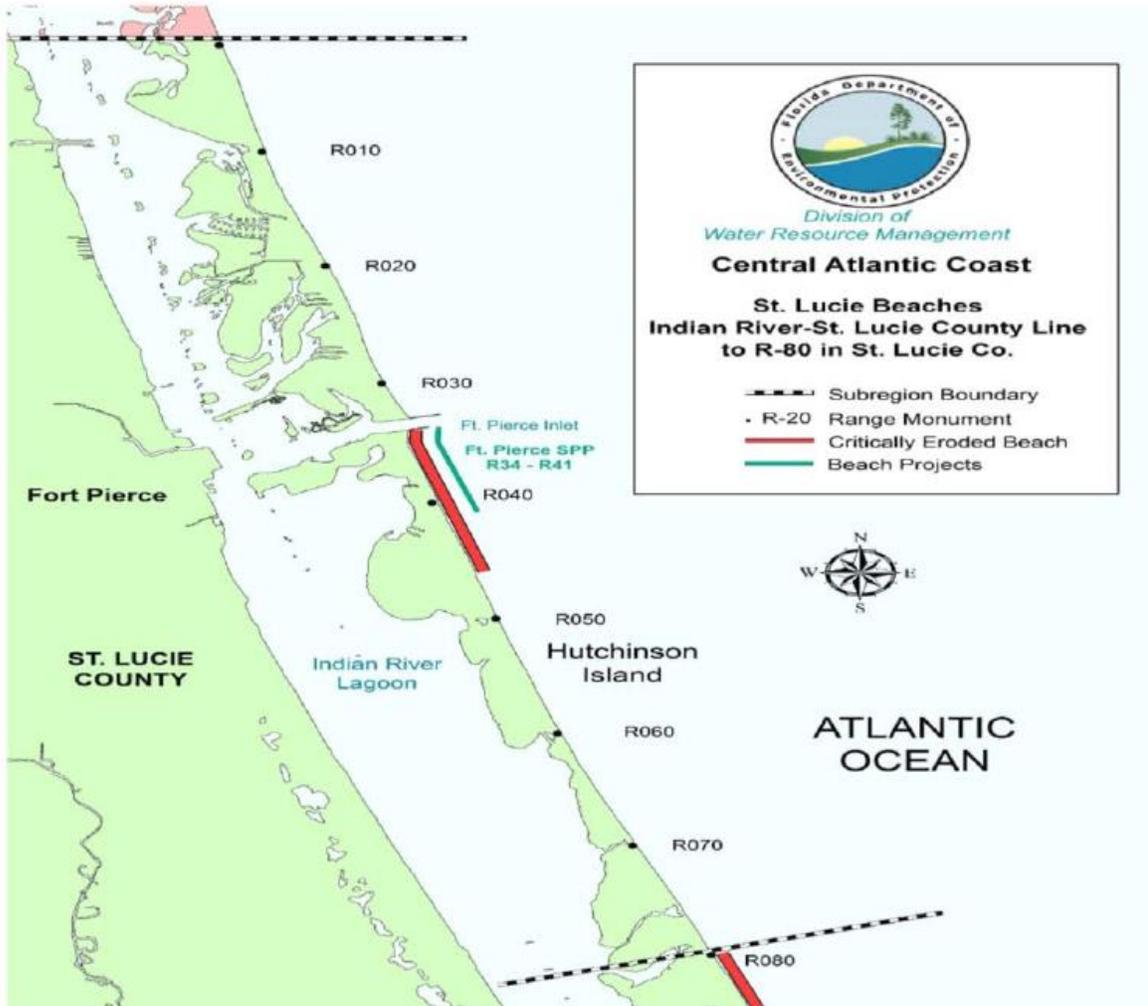
Beach erosion is the wearing away of land and the removal of beach or dune sediments by wave action, tidal currents, wave currents, drainage or high winds. The wave climate impacting St. Lucie County's miles of shoreline has contributed to the long term erosion of the County's barrier islands. As a result, the Florida Department of Environmental Protection (FDEP) has concluded that 18 miles of shoreline is "critically eroded." A critically eroded area is defined by FDEP as a segment of the shoreline where natural processes or human activity has caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. To assist with its coastal management strategies and long term sustainability of its shoreline, the County has developed and adopted a Beach Preservation Plan (BPP), updated 2014. The BPP identifies the current shoreline conditions and provides cost effective strategies for future beach management along the County's shoreline in particular the FDEP classified critically eroded areas.

Wind, waves, and longshore currents are the driving forces behind coastal erosion. This removal and deposition of sand permanently changes beach shape and structure. Most beaches, if left alone to natural processes, experience natural shoreline retreat. As houses, highways, seawalls, and other structures are constructed on or close to the beach, the natural shoreline retreat processes are interrupted. The beach jams up against these man-made obstacles and narrows considerably as the built-up structures prevent the beach from moving naturally inland. When buildings are constructed close to the shoreline, coastal property soon becomes threatened by erosion. The need for shore protection often results in "hardening" the coast, with a structure such as a seawall or revetment.

A seawall is a large concrete wall designed to protect buildings or other man-made structures from beach erosion. A revetment is a cheaper option constructed with "rip rap" such as large boulders, concrete rubble, or even old tires. Although these structures may serve to protect beachfront property for a while, the resulting disruption of the natural coastal processes has serious consequences for all beaches in the area. Seawalls inhibit the natural ability of the beach to adjust its slope to the ever-changing ocean wave conditions. Large waves wash up against the seawall and rebound back out to sea carrying large quantities of beach sand with them. With each storm, the beach narrows, sand is lost to deeper water, and the long shore current scours the base of the wall. Eventually, large waves impact the seawall with such force that a bigger structure becomes necessary to continue to resist the forces of the ocean.

DEP has identified St. Lucie County as a medium-high risk to erosion. The beaches of Florida will continue to shift and change over time, especially when faced with the current levels of development. This probability hazard is especially in conjunction with hurricanes, winter storms, and coastal flooding.

Figure 1: Map of Critically Eroded Beaches in St. Lucie County



h. Agricultural Pest and Disease

Florida is among the top three agriculture producing states in the nation. Agriculture generates farm cash receipts of nearly \$120 billion annually, of which citrus and vegetable crops contribute more than 40%. The industry is susceptible to many hazards including freezes, droughts and exotic pests or diseases. Agricultural crops are grown throughout the state and every region is vulnerable to the effects of an exotic pest or disease infestation. As a result, Florida ranks second in the nation for farm expenditures on pesticides (FDACS, 2015). Agriculture and citrus production play a key role in the St. Lucie County economy where approximately 73% of the county is farmland. The 2012 Agricultural Census from the U.S. Department of Agriculture identified 481 operating farms in St. Lucie County with an annual value of agricultural products sold at \$168 million.

The main threats to the St. Lucie County agriculture industry are:

- 1) Citrus Canker and Citrus Greening
- 2) Mediterranean fruit fly (medfly)
- 3) Tomato Yellow Leaf Curl Virus (TYLCV)
- 4) Africanized Honey Bees

(1) Citrus Canker and Citrus Greening

Unlike most citrus diseases, which are predominantly fungi (plant-like), citrus canker is a serious bacterial disease. It is microscopic (unseen by the human eye), and can be spread by wind, rain, humans (contact), landscaping (trimming, chipping, cutting, or pruning citrus trees), and fruit removal (peeling, buying, selling, transporting, picking, etc.). Remember that the disease is bacterial in nature and the only remedies existing for its control are decontamination (chemical antibacterial), or sanitation (fire).

The best choice for control is decontamination by antibacterial instead of the latter. The latter choice (firing) involves the eradication of 900 feet of citrus trees within the radius of an infected tree. In a neighborhood or subdivision, this would mean a substantial removal, of neighboring citrus trees for blocks, or in the case of citrus growers the removal of more than 200 acres per infected tree site in contiguous groves.

Since 1995 citrus canker has been detected in 24 Florida counties: Brevard, Broward, Charlotte, Clay, Collier, De Soto, Glades, Hardee, Hendry, Highlands, Hillsborough, Indian River, Lee, Manatee, Martin, Miami-Dade, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Polk, Saint Lucie, and Sarasota. Prior to the 2004 hurricane season, canker was confined primarily to South Florida. Florida is currently under a statewide quarantine by the USDA and no citrus may leave the state unless the USDA has issued a limited permit. No Florida grown citrus may enter any citrus producing states or territories. No citrus plants or parts may enter or exit Florida (FDACS, 2012).

Huanglongbing (HLB; citrus greening) is thought to be caused by the bacterium, *Candidatus Liberibacter asiaticus*. HLB has seriously affected citrus production in a number of countries in Asia, Africa, the Indian subcontinent and the Arabian Peninsula, and was discovered in July 2004 in Brazil. Wherever the disease has appeared, citrus production has been compromised with the loss of millions of trees. HLB has not been reported in Australia or in the Mediterranean Basin. In August 2005, the disease was found in the south Florida region of Homestead and Florida City. Since that time, HLB has been found in commercial and residential sites in all counties with commercial citrus (UF-IFAS Citrus Extension, 2013).

(2) Mediterranean Fruit Fly (Medfly)

Another threat to St. Lucie County's agriculture industry is the medfly. It is one of the world's most destructive pests and infests more than 250 different plants that are important for U.S. food producers, homeowners and wildlife. It is considered the greatest pest threat to Florida's citrus crop industry. For example, a medfly outbreak in 1997 cost an estimated \$26 million to eradicate (FDACS, 2012).

If a long-term or widespread medfly infestation were to occur, Florida growers would not be permitted to ship numerous fruit and vegetable crops to many foreign and domestic markets. The movement of fruits and vegetables, even within the state, would be disrupted which could lead to higher prices in the supermarket. Costly post-harvest treatment of fruits and vegetables to meet quarantine restrictions of domestic and foreign markets would also be required. If the medfly is not eradicated in Florida, on-going pesticide treatments by homeowners and commercial growers will be necessary.

Adult medflies are up to 1/4" long, black with yellow abdomens and have yellow marks on their thoraxes. Their wings are banded with yellow. The female Medfly damages produce by laying eggs in the host fruit or vegetable. The resulting larvae feed on the pulp, rendering the produce unfit for human consumption. In addition to citrus, medflies will feed on hundreds of other commercial backyard fruit and vegetable crops.

Because medflies are not strong fliers, the pest is spread by the transport of larval-infested fruit. The major threats come from travelers, the U.S. mail commercial fruit smugglers. Several steps have been taken to prevent new infestations. State and federal officials are working with postal authorities to develop ways to inspect packages suspected of carrying infested fruit. In addition, public education efforts carrying the message, "Don't spread Med" are being expanded (Florida Department of Agriculture and Consumer Services).

(3) Tomato Yellow Leaf Curl Virus (TYLCV)

The Tomato Yellow Leaf Curl Virus is believed to have entered the state in Dade County sometime in early 1997 (UF/IFAS, 2007). Symptoms vary among tomato types, but in general leaves produced shortly after infection are reduced in size, distorted, cupped inward or downward and have a yellow mottle. Less than one in 10 flowers will produce fruit after TYLCV infection, severely reducing yields.

The virus is transmitted by adult silver leaf whiteflies. Although frequent applications of pesticides help to decrease whitefly populations and suppress the spread of TYLCV, virus management through whitefly control is not possible in years where whitefly populations are high. Fortunately, the virus is not transmitted through seed or casual contact with infected plants.

(4) Africanized Honey Bees (AHB)

The Florida Department of Agriculture and Consumer Services reports that Africanized bees have been a threat in the nation's southwest and southern states since the 1990's with 17 human deaths reported to present. Florida incurred the first human death from an attack of Africanized bees in April 2008; however, livestock and pets have been the majority of reported deaths.

The AHB population has grown and will continue to grow in Florida due to its numerous pathways into the state and the lack of effective eradication products or techniques. AHBs were brought to Brazil in the 1950s for testing as possible alternative pollinators and honey producers because of their reputation of being hardy in tropical environments. At the time, their defensive nature and ability to reproduce in greater numbers were not well understood. Some were accidentally released and have spread throughout South and Central America, Mexico and the southern U.S.

The department monitors 500 bait hives placed throughout the state, primarily in port areas, along Interstate 10 and on the Florida-Alabama border. The bait hives are checked on a three-week cycle based on the reproduction habits of the AHB. St. Lucie County Fire Rescue and Animal Control are equipped to make rescues in the event of an AHB attack. Removal of AHB is done by private contractor.

i. Drought

Drought is a normal, recurrent feature of climate, although many perceive it as a rare and random event. In fact, each year some part of the U.S. has severe or extreme drought. Although it has many definitions, drought originates from a deficiency of precipitation over an extended period of time, usually a season or more. It produces a complex web of impacts that spans many sectors of the economy and reaches well beyond the area producing physical drought. This complexity exists because water is essential for ability to produce goods and services (National Drought Mitigation Center, NDMC, 2015).

A few examples of direct impacts of drought are reduced crop, rangeland and forest productivity; increased fire hazard; reduced water levels; increased livestock and wildlife mortality rates; and damage to wildlife and fish habitat. Social impacts include public safety, health, conflicts between water users, reduced quality of life and inequities in the distribution of impacts and disaster relief. Income loss is another indicator used in assessing the impacts of drought; reduced income for farmers has a ripple effect throughout the region's economy (NDMC, 2015).

In St. Lucie County, the primary sources of water watershed areas, Lake Okeechobee and the County's well fields. Excess water from an interconnected series of lakes, rivers, canals and marshes flows into the North Fork of the St. Lucie River or east to the Indian River Lagoon. When this cycle is disrupted by periods of drought, one of the potentially most damaging effects is substantial crop loss in the western agricultural areas of the county. In addition, to obvious losses in yields in both crop and livestock production, drought in St. Lucie County is associated with increases in insect infestations, plant disease and wind erosion. The incidence of forest fires increases substantially during extended droughts, which in turn places both human and wildlife populations at higher levels of risk.

The South Florida Water Management District and County staff manage the county's water resources. Complementing the District's water management efforts during periods of critical water shortage, a countywide, uniform, forceful, contingency plan is in place to effectively restrict the use of water.

j. Pandemic Outbreak/Epidemic

Infectious diseases emerging throughout history have included some of the most feared plagues of the past. New infections continue to emerge today, while many of the old plagues are still with us. As demonstrated by influenza epidemics, under suitable circumstances, a new infection first appearing anywhere in the world could travel across entire continents within days or weeks. Due to the potential of complex health and medical conditions that can threaten the general population, Florida's vulnerability to an epidemic is continually being monitored. With millions of tourists arriving and departing the state annually, disease and disease exposure (airborne, vector and ingestion) are constantly evaluated and analyzed.

During the 2013-2014 season, influenza A (H3N2), 2009 influenza A (H1N1), and influenza B viruses circulated in the United States. 2009 H1N1 viruses predominated overall during the 2013-14 flu season, though influenza B viruses became the predominant virus nationally later in the season and caused an increase in influenza-like-illness in parts of the northeast especially. After several recent influenza A (H3N2)-predominant seasons, 2013-14 was the first H1N1-predominant season since the 2009 H1N1 pandemic (CDC, 2015).

The 2014 Ebola epidemic is the largest in history, affecting four countries in West Africa. Two imported cases, including one death, and two locally acquired cases in healthcare workers have been reported in the United States. The CDC and partners are taking precautions to prevent additional cases of Ebola in the United States. (CDC, 2015) Florida Department of Health in St. Lucie County, St. Lucie County Fire Rescue, Martin Health Systems, and the St. Lucie County Sheriff's Office developed a response plan, trained and equipped responders to be able to respond to such an incident should an incident occur in St. Lucie County.

Primarily as a result of the entrance of undocumented aliens into south Florida and the large number of small wildlife, previously controlled or eradicated diseases have surfaced. Health officials closely monitor this potential threat to the public health. The emphasis upon preventive medical measures such as school inoculation, pet licensing, rodent/insect eradication, water purification, sanitary waste disposal, health inspections and public health education, mitigate this potential disaster.

Another potential threat to south Florida's population is food contamination. Frequent news stories document that E-coli and botulism breakouts throughout the country are not that uncommon. Most recently, millions of pounds of possibly contaminated beef from the Hudson packing plant were seized by the Department of Agriculture and destroyed.

k. Geologic Hazards

(1) Dam/levee Failure

Ten Mile Creek Water Preserve Area is an above-ground reservoir of approximately 526 acres surrounded by a 12 to 15-foot tall embankment. The reservoir was originally designed to store up to 6,000 acre feet of water at an average depth of 10 feet. The project also includes the following components: a natural preserve area, a pump station for filling the reservoir from Ten Mile Creek, a gated water level control structure for the moderated release of water back to the creek, and a 132-acre STA with associated pumps and structures for water treatment and release. The intent of the WPA is to filter and clean agricultural runoff water before it enters the North Fork of the St Lucie River.

The project was initiated in 2005 by the US Army Corps of Engineers (USACE) with the intent of turning it over to the South Florida Water Management District (SFWMD). Due to construction and legal issues the project is not complete and has not been turned over to the SFWMD.

(2) Earthquakes

An earthquake is a sudden, rapid shaking of the earth caused by the breaking and shifting of rock beneath the earth's surface. This shaking can cause buildings and bridges to collapse; disrupt gas, electric, and phone service; and sometimes trigger landslides, flash floods, fires, and tsunamis. Although Florida is not usually considered to be a state subject to earthquakes, several minor shocks have occurred over time, but only one caused any damage (US DOI, USGS, 2015). One of the most frightening and destructive phenomena of nature is a severe earthquake and its terrible aftereffects. An earthquake is the sudden, rapid shaking of the earth, caused by the breaking and shifting of subterranean rock as it releases strain that has accumulated over a long time.

Florida is situated on the trailing (or passive) margin of the North American Plate while California is located on its active margin. The active margin is bounded by faults that generate earthquakes when there is movement along them. This is the fundamental reason that Florida has an extremely low incidence of earthquakes while California experiences many (mostly small) earthquakes.

For hundreds of millions of years, the forces of plate tectonics have shaped the earth, as the huge plates that form the earth's surface slowly move over, under and past each other. Sometimes, the movement is gradual. At other times, the plates are locked together, unable to release accumulated energy. When the accumulated energy grows strong enough, the plates break free. If the earthquake occurs in a populated area, it may cause many deaths and injuries, as well as extensive property damage.

All 50 states and five U.S. territories are at some risk for earthquakes. Earthquakes can happen at any time of the year (FEMA, Ready, 2015).

- In January 1879, a shock occurred near St. Augustine that is reported to have knocked plaster from walls and articles from shelves. Similar effects were reported Daytona Beach. The shock was felt in Tampa, throughout central Florida and in Savannah, Georgia as well (Zirbes, 1971).
- In January 1880, another earthquake occurred. This time Cuba was the focal point. Shock waves were sent as far north as the town of Key West, Florida (Zirbes, 1971).
- In August 1886, Charleston, South Carolina was the center of a shock that was felt throughout northern Florida. It rang church bells in St. Augustine and severely jolted other towns along sections of Florida east coast. Jacksonville residents felt many of the strong aftershocks that occurred in September, October and November, 1886 (Zirbes, 1971)
- In June 1893, Jacksonville experienced a minor shock that lasted about 10 seconds. Another earthquake occurred in October 1893, which also did not cause any damage (Zirbes, 1971).
- In November 1948, doors and windows rattled in Captiva Island, west of Ft. Myers. It was reportedly accompanied by sounds like distance heavy explosions (Zirbes, 1971).
- In November 1952, a slight tremor was felt in Quincy, a town located 20 miles northwest of Tallahassee. Windows and doors rattled, but no damage was reported (Zirbes, 1971).
- In September 2006, a magnitude 6.0 earthquake rattled windows from Southwest Florida to Louisiana (wikipedia.org).

(3) Sinkholes and Subsidence

Sinkholes are common where the rock below the land surface is limestone, carbonate rock, salt beds, or rocks that can naturally be dissolved by ground water circulating through them. As the rock dissolves, spaces and caverns develop underground. Sinkholes are dramatic because the land usually stays intact for a while until the underground spaces get too big. If there is not enough support for the land above the spaces, then a sudden collapse of the land surface can occur. A sinkhole can be small or large, and they can occur under a house or road.

A significant number of sinkholes tend to occur in the years that follow a drought. When an area has a long-term lack of rain and water levels decrease, there is usually a correlated link to an increase in incidences of sinkholes being reported. Historically, years where dry weather has been followed by wet weather have resulted in some of the greatest increases in sinkhole occurrences.

They are many kinds of karst landforms, which include caves, disappearing streams, springs, and underground drainage systems, all of which occur in Florida. Karst is a generic term that refers to the characteristic terrain produced by erosional processes associated with the chemical weathering and dissolution of limestone or dolomite, the two most common carbonate rocks in Florida. Dissolution of carbonate rocks begins when they are exposed to acidic water.

Most rainwater is slightly acidic and usually becomes more acidic as it moves through decaying plant debris. Florida limestone is porous, allowing the acidic water to percolate through them, dissolving some limestone and carrying it away in solution. Over time, this persistent erosion process has created extensive underground voids and drainage systems in much of the carbonate rocks throughout the state. Collapse of overlying sediments into the underground cavities produces sinkholes (FDEP, 2012).

When groundwater discharges from an underground drainage system, it is a spring, such as Wakulla Springs, Silver Springs, or Rainbow Springs. Sinkholes can occur in the beds of streams, sometimes taking all of the stream's flow, creating a disappearing stream. Dry caves are parts of karst drainage systems that are above the water table, such as Marianna Caverns.

Other subterranean events can cause holes, depressions or subsidence of the land surface that may mimic sinkhole activity. These include subsurface expansive clay or organic layers which compress as water is removed, collapsed or broken sewer and drain pipes or broken septic tanks, improperly compacted soil after excavation work, and even buried trash, logs and other debris. Often a depression is not verified by a licensed professional geologist or engineer to be a true sinkhole and the cause of subsidence is not known. Such events are called subsidence incidents (FDEP, 2012).

The most damage from sinkholes tends to occur in Florida, Texas, Alabama, Missouri, Kentucky, Tennessee, and Pennsylvania; however, Florida has more sinkholes than any other state in the nation. Florida's average sinkhole size is 3 to 4 feet across and 4 to 5 feet deep. For this reason, and because they are one of the predominant land form features of the State, sinkholes are of particular interest to Florida. Their development may be sudden and has the potential to result in property damage or loss of life.

There are as many as 150 sinkholes reported each year in Florida. This is due to the fact that the Florida landmass is generally formed by limestone with a thin layer of sediment covering it, usually consisting of very loose sediment. However, the covering on the porous limestone below is often only temporary.

Sinkholes are common wherever there is limestone terrain, but are rare in the southern part of the State. Central Florida and the Big Bend region have the largest incidence of sinkholes (State of Florida Enhanced Hazard Mitigation Plan, 2013).

2. Technological Hazards

a. Radiological Accidents

The St. Lucie Nuclear Power Plant is located 5.5 miles north of the City of Stuart on Hutchinson Island in unincorporated St. Lucie County. The facility contains two reactors and is owned and operated by the Florida Power & Light Corporation. Counties within the 50-mile Emergency Planning Zone (EPZ) include all or portions of St. Lucie, Martin, Glades, Osceola, Okeechobee, Brevard, Highlands, Palm Beach and Indian River. The St. Lucie County Division of Emergency Management has a radiological planner on staff. Emergency response plans written and maintained by the County exceed FEMA's criteria to protect the health and safety of the residents of the County. FEMA reviews the plans annually. A practice nuclear power plant emergency drill is held each year. Biennially FEMA evaluates the exercise. The plans are reviewed by FEMA, incorporated with the exercise evaluation and are incorporated into Florida's Annual Letter of Certification to FEMA to provide "Reasonable Assurance" to the Nuclear regulatory Council (NRC) that St. Lucie County's plan and procedures are more than adequate to respond to an emergency at the nuclear power plant.

Radiological accidents can have the following potential impacts on a community:

- Electrical power outage;
- Surface and air transportation disruption;
- Telecommunications system outage;
- Human and health safety;
- Psychological hardship;
- Economic disruption;
- Disruption of community services;
- Damage to critical environmental resources; and
- Toxic releases.

Twenty-eight of the 67 counties in the State of Florida are involved in preparedness planning for a commercial nuclear power plant emergency. Each power plant has a designated EPZ to enhance planning efforts for an emergency. An EPZ is comprised of two zones, the 10-mile plume exposure zone and the 50-mile ingestion exposure zone. Specific coordinating procedures for response to a General Emergency at a nuclear power plant have been prepared in the form of Standard Operating Procedures. These include Emergency Classification Levels, which assist in notifying the public if a problem occurs at a plant. They are defined by four categories (NRC, 2016):

- Notification of Unusual Event - Events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.
- Alert - Events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life threatening risk to site personnel or damage to site equipment because of HOSTILE ACTION. Any releases are expected to be limited to small fractions of the Environmental Protection Agency (EPA) protective action guides (PAGs)
- Site Area Emergency - Events are in progress or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or hostile action that results in intentional damage or malicious acts; 1) toward site personnel or equipment that could lead to the likely failure of or; 2) that prevent effective access to, equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA PAG exposure levels beyond the site boundary.
- General Emergency - Events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile action that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA PAG exposure levels offsite for more than the immediate site area.

b. Power Failure (outages)

Power failure can result from a variety of related causes, including sagging lines due to hot weather, flashovers from transmission lines to nearby trees, and incorrect relay settings. According to the electric utility industry's trade association, the potential for such disturbances is expected to increase with the profound changes now sweeping the electric utility industry.

To address times when generating capacity is tight or falls below consumer demand due to state or local emergencies, the Florida Electrical Emergency Contingency Plan was developed. Alerts have been created to give early warning of potential electricity shortfalls and bring utilities, emergency management officials and the general public to a state of preparedness.

The plan: (1) provides for early identification of situations that could lead to electricity shortages; (2) coordinates actions among utilities, regulators, and state and local emergency agencies, (3) establishes a communication network to assist consumers during an electricity shortage; and (4) issues appeals for voluntary conservation. The Contingency Plan has four stages (Florida Reliability Coordinating Council, 2004):

- **Generating Capacity Advisory** – A generating Capacity Advisory is primarily for information purposes. It starts utility tracking activities and it initiates inter-utility and inter-agency communication. No action by the public is required. General information may be distributed to consumers to forewarn them of conditions if necessary.
- **Generating Capacity Alert** – A Generating Capacity Alert starts actions to increase reserves. Available emergency supply options will be explored. When reserves fall below the size of the largest generating unit in the state, loss of that size unit to an unexpected mechanical failure could lead to blackouts somewhere since insufficient backup is available.
- **Generating Capacity Emergency** – A Generating Capacity Emergency occurs when blackouts are inevitable somewhere in Florida. Every available means of balancing supply and demand will be exhausted. Rolling blackout, manually activated by utilities, are a last resort to avoid system overload and possible equipment damage. Frequent status reports are provided to agencies and the media. The Division of Emergency Management will consider using the Emergency Alert System to inform citizens of events and to direct them to available shelters if conditions warrant. Recognizing the consequences of a loss of electricity, individual utility emergency plans include provisions for special facilities critical to the safety and welfare of citizens.
- **System Load Restoration** – System Load Restoration is instituted when rolling blackouts have been terminated and power supply is adequate. It is the recovery stage and efforts are made to provide frequent system status reports.

c. Hazardous Materials Accidents

Hazardous materials accidents can occur anywhere there is a road, rail line, pipeline or fixed facility storing hazardous materials. Virtually the entire state is at risk to an unpredictable accident of some type. Most accidents are small spills and leaks, but some result in injuries, property damage, environmental contamination and other consequences. These materials can be poisonous, corrosive, flammable, and/or radioactive or pose other hazards and are regulated by the Department of Transportation. However, out of approximately 1,631 hazardous materials incidents reported statewide in 2014, no know fatalities were reported (State Emergency Response Commission, 2015).

Emergencies involving hazardous materials can be expected to range from a minor accident with no off-site effects to a major accident that may result in an off-site release of hazardous or toxic materials. The overall objective of chemical emergency response planning and preparedness is to minimize exposure for a wide range of accidents that could produce off-site levels of contamination in excess of Levels of Concern established by the U.S. Environmental Protection Agency. Minimizing this exposure will reduce the consequences of an emergency to people in the area near to facilities which manufacture, store or process hazardous materials (Treasure Coast Regional Planning Council, TCRPC, 1998).

A large volume of hazardous materials is transported to and through the county by railroad and highway, air, water and pipeline daily. Within St. Lucie County, there are a number of both public and private fixed facilities, which produce or use hazardous materials. Coordinating procedures for hazardous material response are found within the County's Emergency Plan for Hazardous Materials.

In addition to the County's Emergency Plan for Hazardous Materials, the District 10 Local Emergency Planning Committee (LEPC) have prepared the District 10 Regional Hazardous Materials Plan for use in responding to and recovering from a release of hazardous or toxic materials. This plan identifies the facilities in the region that have Extremely Hazardous Substances (EHSs) on site and addresses the range of potential emergency situations and the appropriate measures to be implemented to minimize exposure through inhalation, ingestion or direct exposure (Treasure Coast Regional Planning Council, 1998). Within the County there are numerous public and private facilities that store hazardous materials and Extremely Hazardous Substance (EHS's). The frequency of fixed facility hazardous materials releases is 3-5 per year with the majority of these having been small-scale incidents. The severity of impact of such an event depends on the proximity to population, chemical character, wind direction, response capability and situational awareness.

Under SARA Title III reporting there are fifty- two sites storing EHS's in the County. The number of facilities varies from year to year as new facilities come on line and others permanently remove chemicals.

The Florida Gas Transmission Company (GSTC) owns and operates a line that transports natural gas through St. Lucie County. GSTC has a pressure booster facility on Orange Avenue Extension. Several other companies have buried distribution and feeder pipes throughout the County.

Mishandling and improper disposal or storage of medical wastes and low-level radioactive projects from medical use are also a hazard to St. Lucie County. For example, a few years ago an incident occurred in New Jersey when improper disposal of medical wastes resulted in some of the used projects ending up on Atlantic Ocean beaches.

d. Communications Failure

As society emerges from industrial production into the age of information, we are seeing new kinds of technological accidents/disasters. A communications failure occurred that was the worst in 37 years of satellite service. Some major problems with the telecommunications satellite Galaxy IV drastically affected 120 companies in the paging industry (Rubin, 1998). Radio and other forms of news broadcasts also were affected. The pager failure not only affected personal and business communications, but emergency management and medical personnel as well.

e. Military Ordinance from WWII.

Unexploded military ordinance is a hazard unique to St. Lucie County. The former Fort Pierce Naval Amphibious Training Base was established in 1942. Training exercises were conducted on outlying areas of North and South Hutchinson Islands. Training at the base included the testing of bombs, rockets and land mines. Several explosive devices left over from these training missions have been found along the shores of Ft. Pierce and Vero Beach. Public exposure to unexploded ordinance could occur primarily as a result of three types of activities: Earth moving (building construction, pool construction and major landscaping), recreational diving and use of beach areas – unexploded ordinance may wash ashore or be exposed after storms. In August 2015, the Army Corps of Engineers disposed of 11 explosives, including several 500-pound bombs, four rocket warheads and two rockets. They were found about 100 yards offshore in about 15 feet of water. Ordinance is typically taken a mile offshore and detonated underwater once it is determined that marine life is not present (Army Corps of Engineers, 2017).

3. Human-Caused Hazards

a. Terrorism and Sabotage

(1) Terrorism

Since September 2001, the potential for the threat of terrorism or the usage of weapons of mass destruction (WMD) against the citizens of the United States has increased dramatically. There have been no instances of terrorism reported within St. Lucie County. It is recognized that the State has many critical and high-profile facilities, high concentration of population and other potentially attractive venues for terrorist activity that are inherently vulnerable to a variety of terrorist methods. Within the State of Florida there are known to be those individuals, as well as a variety of extremist groups are known to operate in Florida and potential attacks have been investigated and averted in recent years.

Terrorist attacks both foreign and domestic may pose a threat to our community at any time. These attacks may take the form of chemical releases, accidents, mass shootings, or improvised explosives. In 2001, several letters containing anthrax were delivered to various locations in the United States. One of them was sent to a tabloid media center in Boca Raton, Florida. The attack resulted in one person dying from the exposure and a second employee being hospitalized. Five other employees from the building were exposed without effect. In 2016, the Pulse Night Club shooting in Orlando resulted in 51 fatalities.

Terrorism attacks may take the form of induced dam or levee failures, the use of hazardous materials to injure or kill, or the use of biological weapons to create an epidemic. Any such incidence of terrorism, particularly from Biological, Nuclear, Incendiary, Chemical, or Explosives (B-NICE) would be of “High” severity. Such an instance could cause physical injury or harm, disrupt the local economy, and result in increased panic or civil disorder. In such an event, the entire population would be vulnerable to either actual physical harm or mental anxiety from personal or property loss, concern, or fear.

Governmental/political, transportation, commercial, infrastructure, cultural, academic, research, military, athletic, educational, and other activities and facilities constitute ideal targets for terrorist attacks which may cause catastrophic levels of property and environmental damage, injury and loss of life. Acts of terrorism are also capable of compounding and creating disasters, which threaten the safety of a large number of citizens.

The federal government has recognized that the United States has entered the post-Cold War era. As a result, federal planning guidelines regarding military threats are in transition. However, nuclear weapons continue to be a serious planning concern especially in areas surrounding military installations. The influx of undocumented aliens into south Florida from areas unfriendly to interests of the United States is monitored by the Department of Homeland Security and internal departments.

(2) Computer Accidents and Sabotage

The President's Commission on Critical Infrastructure Protection (PCCIP) recently reported that there is increasing threat that the U.S. could suffer something similar to an "Electronic Pearl Harbor". Networked information systems present new security challenges in addition to the benefits they offer. Long-term power outages could cause massive computer outages, with severe economic impacts such as loss of sales, credit checking, banking transactions and ability to communicate and exchange information and data. "Today, the right command sent over a network to a power generating station's control computer could be just as effective as a backpack full of explosives and the perpetrator would be harder to identify and apprehend," states the PCCIP report.

With the growth of a computer-literate population, increasing numbers of people possess the skills necessary to attempt such an attack. The resources to conduct a cyber-attack are now easily accessible everywhere. A personal computer and an internet service provider anywhere in the world are enough to cause a great deal of harm.

Threats include:

- Human Error;
- Insider use of authorized access for unauthorized disruptive purposes;
- Recreational hackers – with or without hostile intent;
- Criminal activity – for financial gain, to steal information or services or organized crime;
- Industrial espionage;
- Terrorism – including various disruptive operation and;
- National intelligence – information warfare intended disruption of military operations.

The effect of such activities may take the form of disruption of air traffic controls, train switches, banking transfers, police investigations, commercial transactions, defense plans, power line controls and other essential functions.

As the internet becomes more and more important, the loss of its services, whether by accident or intent, becomes a greater hardship for those relying on this new form of communication. Computer failures could affect emergency communications as well as routine civilian applications, such as telephone service, brokerage transactions, credit card payments, Social Security payments, pharmacy transactions, airline schedules, etc.

b. Civil Disturbance

As in any other area, St. Lucie County is subject to civil disturbances in the form of riots, mob violence and a breakdown of law and order in a focalized area. Communities with racial mixtures, gang violence and drug trafficking are increasingly aware of the need to plan for civil disturbance emergencies. Although they can occur at any time, civil disturbances are often preceded by periods of increased tension caused by questionable social and/or political events such as controversial jury trials or law enforcement actions. These events may also be precipitated by any event involving large groups of people and/or special events occurring in the county (i.e., visiting dignitaries, N.Y. Mets baseball game, Navy SEAL Muster etc.). There is always the possibility that such an event could happen in combination with another hazard that reduces available necessities, such as food and water, as in pandemics, hurricanes, or other widespread disaster. Police services are responsible for the restoration of law and order in any specific area of the county.

c. Immigration Crisis

Florida's location as the nearest U.S. land mass bordering the Caribbean basin makes it a chosen point of entry for many migrants attempting to enter the country illegally. A major consequence of a mass arrival of illegal immigrants could be disruptive to the routine functioning of the impacted community, resulting in significant expenditures related to the situation. An example of this threat occurred in 1994, when the state responded to two mass migration incidents. In May 1994, there was an unexpected migration of approximately 100 Haitian refugees, while in August 1994, there was an influx of 700 Cubans.

These events are typically preceded by periods of increasing tension abroad, which can be detected and monitored. Enforcement of immigration laws is a federal government responsibility. However, it is anticipated that joint jurisdictional support of any operation will be required from the state and local governments.

The Atlantic shore of St. Lucie County is the frequent scene of the arrival of undocumented aliens, usually Haitian or Cuban. The county has both the history and the potential of the unannounced arrival of a large number of aliens.

Until relieved of the responsibility by the state and federal governments, St. Lucie County must be capable of providing mass refugee care to include shelter, food, water, transportation, medical, police protection and other social services.

The following pages show charts depicting the hazards potential affects for St. Lucie County.

VULNERABILITY CHART: HURRICANES/TROPICAL STORM/VULNERABILITY

Geographic Locations	All geographic locations within St. Lucie County are vulnerable; however, damaging winds and storm surge effects can be expected to be most intense in the Fort Pierce and St. Lucie Village area along the Eastern coastal border. Such coastal settings are the most sought after properties, with the potential for increased populations, and thus are at higher risk of property and personal damage. Coastal surge can also be expected to push up the bays and river systems flooding homes and businesses along water features. Locations further inland may experience lesser wind fields, but may still see significant damage.
Damage Estimates	Damage and loss are in direct relation to the population density of the impacted area. Please refer to the St. Lucie County Local Mitigation Strategy for damage estimates.
<p>Populations: 0-18yr/ 18-24/ 25-64/ 65+ /</p> <p>Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished</p>	<p>All populations in St. Lucie County are vulnerable to injury and increased hardship due to community interruption, however certain populations are more vulnerable:</p> <p>The elderly, handicapped and medically needy are more vulnerable due to mobility issues, medical conditions exacerbated by the storm, and potential reliance on medicines and electricity-dependent machinery.</p> <p>Hearing and sight-impaired populations are vulnerable as urgent public information or situational awareness may be impeded due to the nature of their disability. Homeless populations are also more vulnerable as situational awareness and ability to get to public shelters may be a factor.</p> <p>Impoverished populations are more vulnerable to the damage caused by hurricanes/tropical storms, as monies necessary to relocate or repair may not be available. Additionally, tourists are more vulnerable due to lack of familiarity with local roads, evacuation routes, alternate routes, locations of hospitals, and sources of relief. They are also unlikely to have necessary disaster supplies on hand. In addition, situational awareness may arrive more slowly for those focused on recreational activities. Many tourists stay in hotels, motels, RV parks or campgrounds and frequent tourist destinations near the same locations prone to higher hurricane impacts.</p>
Personal Injury	<p>Typical injuries may result from: Wind- blown debris, falling limbs, downed power lines, structural collapse, rising flood waters, vehicle accidents, heat stress, lack of food/water/ medical treatment/medicines, loss of access to emergency services</p> <p>Additional injuries may occur during the post event cleanup: Chainsaw Injuries, Falls from heights, Animal Bites (wasps, spiders, snakes, dogs etc), Heat Stress, Overexertion, Mold-induced respiratory conditions, hepatitis A and B, tetanus, mosquito-borne illnesses, heart attacks/stroke, increased stress, mental anxiety etc.</p>
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, Jails/Prisons are vulnerable due to the special needs of such facilities, the length of time necessary to evacuate, the transportation requirements of such a facility, and the staffing required to support group facilities. Additionally, most in group settings must rely on the emergency plans, decisions, and care of others.
Structural	All structures are vulnerable to hurricane damage. In general, sheds, pool coverings, lanais, carports, billboards/outdoor signage, Mobile Homes, already compromised structures and homes built to less stringent building codes (Pre 2001 Florida Building Code) are the most vulnerable to structural damage from collapse, tree damage, wind damage, lift-off, and other nature-forced movement. Roof and window systems are another source of structural vulnerability. Accessories attached to roof systems, can lead to roof failure, as can excessive winds, falling trees and wind-blown debris.

Infrastructure	Community infrastructure is vulnerable to considerable disruption/failure. Examples include: Road and bridge failure/blockage or compromise, gas leaks, compromised electric delivery systems, jammed cell and land line phones / downed towers / flooded switches/ broken lines, sewerage lift station failure, flooded/overwhelmed/powerless water treatment facilities
Business/Economic Vulnerability	<p>Businesses are vulnerable to loss of product/ facilities, displaced or loss of workers and customer base, supply disruption, loss of important paperwork, shifting of consumer spending to emergency/ replacement needs. All affect the economy of St. Lucie County. This economic disruption may be offset somewhat by the significant boost in business for reconstruction occupations as residents rebuild, replace, and repair.</p> <p>All employment sectors are vulnerable however, specific vulnerabilities exist for Farm Workers whose livelihood is vulnerable due to wind-damaged/flooded crops, eroded nutrient layers, loss of farm equipment/storage, increased pests/disease, disruption in supply and distribution.</p>
Associated Hazards	Associated hazards include: damaging winds, dangerous lightning, storm produced tornadoes, inland and coastal flooding, contamination, storm surge, HAZMAT Releases, gas explosions, structural fires, electrocution from downed wires, drowning, sinkholes, civil disturbance, political unrest.

VULNERABILITY CHART: FLOODING/STORM SURGE

Vulnerable Geographic Locations	All geographic locations within St. Lucie County are vulnerable due to relatively flat topography and a humid subtropical climate. Floodwaters associated with severe storms, can affect those in low-lying areas, areas of poor-drainage or along bodies of water. Areas of particular vulnerability and increased risk include, but are not limited to structures along: the North and South forks of the St. Lucie River, local streams, creeks, bays, wetlands, or sinkhole lakes.
Damage Estimates	Damage and loss are in direct relation to the population density and elevation of the impacted area. Please refer to the St. Lucie County Local Mitigation Strategy for structural damage estimates.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	All populations within the floodplain in St. Lucie County are vulnerable to injury or structural damage. Certain populations are more vulnerable: The elderly, handicapped and medically needy are more vulnerable due to mobility issues, medical conditions exacerbated by the storm, and potential reliance on medicines and electricity-dependent machinery. Young children are more vulnerable to the illnesses contaminated floodwaters can bring. Non-English Speaking and Hearing-impaired populations are slightly more vulnerable as information such as status of closed/impassible roadways may be delayed. Similarly, Sight-impaired populations may not be able to visually-gauge from a distance the status of rising floodwaters and may have difficulty in accessing or breaching rooftop egress etc. Homeless populations are also more vulnerable as situational awareness and ability to take appropriate shelter may be a factor. In addition, they are more likely to encounter floodwaters and less likely to be aware of “boil water” notices or have access to appropriate medical care. Tourists are more vulnerable to the impacts of flooding, due to their unfamiliarity with roadways and locations of drainage ditches, creeks, and other water features now obscured. Impoverished populations are more vulnerable as they are less likely to have engaged in mitigation measures.
Personal Injury	Typical injuries may result from: falling trees/limbs, downed power lines, structural collapse, rising flood waters, vehicle accidents/submersion, drowning, contaminated water, water-borne illnesses, mosquito-borne illnesses, Mold-induced illnesses, sewerage contamination, animal bites
Group Homes	For flooding, Assisted Living Facilities, Nursing Homes, Schools, Jails/Prisons are vulnerable due to the special needs of the occupants of such facilities, the length of time necessary to take evacuate, the mobility of the occupants, and the potential for electrically-dependent populations within. Additionally, most in group settings must rely on the emergency plans, decisions, and care of others.
Structural	Homes built at-grade within flood-prone areas are more vulnerable than sufficiently raised houses. Structural vulnerability depends on elevation, proximity to bodies of water, capacity of community drainage systems, impediments to water flow, soil saturation, and other factors. Drywall, carpet, wood, and other materials are particularly vulnerable to flood damage. Structural, electrical, plumbing, and flooring systems may be compromised and contribute to the risk of other hazards. Additionally, flooding can cause mold growth on structural components or personal belongings.
Infrastructure	Community infrastructure is vulnerable to disruption/failure. The primary disruption is associated with flooded or undermined roads, clogged drainage systems, power outages, communications failure, flooded/overwhelmed/powerless water treatment facilities, inaccessible community services
Business/Economic Vulnerability	All economic sectors are vulnerable to loss from flooding. Business vulnerability is dependent on the degree of preparedness for continuity of operations, protection of key electrical components, ability to quickly restore functioning, and mitigative types of insurances (such as for flood damage, lost income, structural repairs etc). Businesses may also be vulnerable to loss of product/facilities, supply disruption, loss of important paperwork, shifting of consumer spending to emergency/replacement needs. Specific vulnerabilities exist for Farm Workers. Floods can destroy crops, equipment, farmhouses, storage bins, and result in personal or economic loss. While most farming operations are dependent on rainfall, flooding rains can damage fragile crops and erode nutrient layers in soil.
Associated Hazards	Associated hazards include: Damaging winds, dangerous lightning, storm produced tornadoes, contamination, storm surge, HAZMAT Releases, gas explosions, structural fires, electrocution from downed wires, drowning, sinkholes, vehicle accidents/submersion, flash-flooding, illness

VULNERABILITY CHART: HAZARDOUS MATERIALS

Vulnerable Geographic Locations	All locations in close proximity to fixed facilities, highway, rail, plane, pipeline, and barge/boat traffic. Particularly vulnerable are those locations near Interstate I-95 and the Florida Turnpike. Vulnerability also exists in those locations near any of 59 sites that store hazardous materials in St. Lucie County, and include neighborhoods near water treatment facilities, water wells, pump or lift stations.
Damage Estimates	Due to the nature of the threat, damages will vary with the nature and extent of release, but could encompass emergency response, spill cleanup actions, health and medical treatment, mortuary services and owner liability issues, with potential to exceed over 5 million dollars in severe incidents.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	All populations are vulnerable to injury due to exposure to hazardous materials. The community is most vulnerable to those chemicals that pose a wind-borne toxic inhalant threat. Certain populations are more vulnerable: Vulnerable populations are: those unprepared for hazardous chemicals release, those without knowledge of shelter-in-place procedures, those unable to recognize warning signs of release, those who do not/cannot take action in a timely manner, those with existing respiratory conditions, those for whom situational awareness is impeded (hearing and/or visually impaired, Non-English Speaking, Homeless, Transient), those unconnected to methods used to notify the public, those without vehicles (if evacuation is ordered), those caught outdoors, those in very close proximity, downwind of release site, those in more vulnerable structures.
Personal Injury	Injuries vary with chemical involved. Material Safety Data Sheet's (MSDS), the most current Emergency Response Guidebooks (ERG), NIOSH pocket guide, ATSDR publications, and emergency hotlines such as CHEMTREC offer chemical-specific injury details and protective measures. Generally, routes of exposure include inhalation, ingestion, and physical contact, and may lead to respiratory distress, organ failure, burns or death
Group Homes	Most in group settings must rely on the emergency plans, decisions and care of others. Assisted Living Facilities, Nursing Homes, Schools, Jails/Prisons are vulnerable due to the special needs of the occupants of such facilities, the length of time necessary to evacuate and the mobility of the occupants. To some extent, group facilities, particularly schools, may have added vulnerability in that families may risk exposure to check on loved ones, and may find themselves on the outside of a facility locked down under SIP conditions. Additionally vulnerability exists for those facilities, such as prisons typically built for ventilation, or those for whom AC/Heat functions are located off premises or inaccessible.
Structural	Structural vulnerability is a function of the capacity to adequately shelter its occupants and isolate outside air. Vulnerability increases for occupants of leaky structures with doors/windows without adequate seals and inadequate insulation. Additionally vulnerability exists for occupants of structures where AC/Heat is inaccessible or controlled off premises, or for those facilities built specifically to exchange air (such as prisons, etc). Structural vulnerability also exists due to explosive potential associated with the release of certain chemicals.
Infrastructure	The primary infrastructure disruption associated with major hazardous materials releases is overwhelmed health and medical services. Additionally emergency response capabilities, such as fire, HAZMAT Teams, search and rescue, decontamination, ambulance, police may also be overwhelmed.
Business/Economic Vulnerability	All economic sectors are vulnerable, however, for hazardous materials releases; primary vulnerability issues exist for the spiller. The potential for downtime, loss production, profit loss, liability, and other issues may have a trickle-down effect on other occupations. Additionally, occupations such as tourism, and other industries may be impacted if such a release impedes the function or quality of local waterways.
Associated Hazards	Associated hazards include: Public Health threats (Contamination, Disease/ illness), explosions, fires, vehicle accidents, Mass Exodus, and Civil Unrest.

VULNERABILITY CHART: TERRORISM/ WEAPONS OF MASS DESTRUCTION

Vulnerable Geographic Locations	All geographic locations are vulnerable to Terrorism/WMD events. At particular risk are high-profile locations/facilities, business/industry with local, regional, and/or national economic ramifications, areas of lax security and high potential impact, locations near government centers, public events, densely populated areas, geographic locations near hazardous materials transportation, usage or storage, area waterways, community food networks, restaurants, mass transportation, tourist destinations, schools, churches, government and civic centers, or facilities using/storing Biological, Nuclear, Incendiary, Chemical, or Explosives (B-NICE).
Damage Estimates	Response to a successfully executed terrorism event could result in the need for external resources such as the National Pharmaceutical Stockpile, medical care, lab testing and technical services, large-scale biological/radiation monitoring capability, food distribution, personal protection supplies, specialty teams, and other necessities. It would be unrealistic to estimate potential damages due to the wide range of vectors and targets that could be used.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	The entire population is vulnerable to either actual physical harm or mental anxiety from personal or property loss, concern, or fear. Particular populations may have additional risks as terrorists may target these populations. This may include school-aged youth, churchgoers, tourists, emergency responders, government, healthcare, financial, industrial and transportation workers.
Personal Injury	Injuries may vary according to the method used. All may cause stress and panic, and subsequent hazards that can cause additional personal injury; Typical injuries can include or result from: Biological WMD- disease/death, contaminated or limited access to food/water; Nuclear WMD- radiation sickness, burns, blast, cancer, death, contaminated food/water, dust Explosives/Incendiary devices- burns, lacerations, trauma, death, structural collapse, subsequent explosions/fires Chemical WMD- respiratory distress, organ failure, burns, death
Group Homes	For WMD using incendiary and explosives, vulnerability for those in nursing homes/assisted living facilities is similar to the general population.
Structural	All structures are vulnerable to Explosives/Incendiary Devices
Infrastructure	Infrastructure is vulnerable to explosives/incendiary devices; Such an event could disrupt community services, utilities, and transportation routes and quickly overwhelm emergency response capabilities, such as search and rescue, fire, ambulance, hospital and police.
Business/Economic Vulnerability	All employment sectors are vulnerable to terrorism through the use of Weapons of Mass Destruction; either directly, or indirectly, such as through increased transportation costs, security costs, additional precautions, loss of customer or employee base, etc. For biological terrorism, the impact, if widespread, as in a pandemic, could cripple economic sectors and individual organizations due to loss of employees and/or customer base.
Associated Hazards	Associated hazards include: public health threats (Contamination, Disease/ illness), explosions, fires, vehicle accidents, Mass Exodus, and civil unrest.

VULNERABILITY CHART: FIRE

Vulnerable Geographic Locations	All geographic locations are vulnerable to fires. At particular risk are those structures and agricultural operations along the rural/urban interface. Vacant fields, woodlands, lots, and acreage connect communities to the rural/urban interface. This could allow fires to come into subdivisions and neighborhoods in urban and suburban areas.
Damage Estimates	See St. Lucie County LMS for damage estimates.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	<p>The entire population is vulnerable to the effects of fire.</p> <p>Vulnerability to structure fires may be increased for the elderly, young children, or those with physical handicaps. Additionally the impoverished, may be more apt to live in conditions favorable for fires, and are subsequently more vulnerable to fires.</p> <p>The elderly, young children and those with existing respiratory ailments may be more vulnerable to respiratory distress caused by smoke from wildfires.</p>
Personal Injury	Typical injuries include: smoke inhalation, toxic inhalation, burns, respiratory distress, structural collapse, trauma, death
Group Homes	Nursing home facilities near the rural-urban interface may be more vulnerable to fires. The vulnerability of elderly populations is stated above.
Structural	All structures are vulnerable to fire, however vulnerability is increased for those with older or faulty electrical systems, those that lack or have inadequate smoke detectors or alarms, those without interior sprinkler systems, wood structures, etc
Infrastructure	Infrastructure is vulnerable to fires, as transportation routes may be blocked during the response to wildfires, critical facilities along the urban rural interface may be more vulnerable to the direct effect of fire, or to associated hazards.
Business/Economic Vulnerability	Each employment sector is potentially vulnerable to fire. Such precautions as fire escape plans, smoke detectors/alarms, sprinkler systems, continuity of operations planning, insurance, and contingency planning for the protection of critical records, helps to reduce the vulnerability associated with a potential fire.
Associated Hazards	Associated hazards include: explosions, hazardous materials incidents, vehicle accidents, mass exodus, evacuations, and illness.

VULNERABILITY CHART: TRANSPORTATION INCIDENTS

Vulnerable Geographic Locations	All roadways, highways, and waterways are vulnerable, but particularly those locations near Interstate I-95, US. Hwy 1, and the Florida Turnpike, locations near barge/boat traffic, under the pathways of air transportation, or near railroads.
Damage Estimates	Varies depending on magnitude of the event
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	All
Personal Injury	Trauma, burns, entrapment, chemical contamination/burns, toxic smoke inhalation, respiratory illnesses, death
Group Homes	Dependent on proximity to the incident.
Structural	N/A
Infrastructure	Transportation Incidents may affect or directly impact any critical facility including transportation and energy systems, defense installations, banking and financial assets, water supplies, chemical plants, food and agricultural resources, police and fire departments, hospitals and public health systems, and government offices.
Business/Economic Vulnerability	A longer period of disruption to major transportation routes may have an immediate effect on productivity and result in financial loss to all business sectors.
Associated Hazards	In severe cases, dependent on the type of transportation incident, associated hazards could potentially include: broken gas lines, explosions, structural fires, HAZMAT Releases, contamination, strained local resources, reduced food/water supply, wildfires, subsequent traffic accidents, mass casualties

VULNERABILITY CHART: NUCLEAR

Vulnerable Geographic Locations	St. Lucie County is vulnerable to a release of radioactive material from a fixed nuclear facility, the facility being located within St. Lucie County. However, all are vulnerable to blast and fire risk associated with the usage of nuclear weapons in or near the County. Additionally, St. Lucie County may be vulnerable to radiation fallout received as a result of a catastrophic nuclear incident elsewhere. This depends on wind direction, magnitude of incident, and a host of other factors that determine spread.
Damage Estimates	Response to a nuclear incident, such as a successfully executed terrorism event, could result in the need for external resources such as the National Pharmaceutical Stockpile, medical care, lab testing and technical services, large-scale biological/radiation monitoring capability, food distribution, personal protection supplies, specialty teams, and other necessities. It would be unrealistic to estimate potential damages due to the wide range of vectors and targets.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	<p>The entire population is vulnerable to either actual physical harm or mental anxiety from personal or property loss, concern, or fear. The population within the 10-mile evacuation zone is approximately 245,704.</p> <p>All populations are vulnerable to the immediate effects of blast, fire, and radiation. Older persons may be less vulnerable to the longer developing cancer effects.</p>
Personal Injury	Nuclear WMD- structural collapse, burns, blast, subsequent explosions/fires, flying glass and debris, radiation sickness, cancer, contaminated food/water, dust, stress, panic, death, Additional personal injury possible due to potential for civil strife, breakdown in physical security, etc.
Group Homes	Same as general population
Structural	The blast and thermal radiation are the mechanisms for structural physical damage. Most buildings, except reinforced or blast-resistant structures, could suffer moderate to severe damage depending on proximity to the incident.
Infrastructure	Infrastructure is vulnerable to effects/subsequent hazards of nuclear incident (explosion, pressure waves, thermal radiation, electromagnetic pulse, and firestorms). Transportation routes could be blocked or destroyed. Power, phone, gas, and water lines, unmitigated electronic equipment, food and gas distribution systems, and others could be affected by such an incident. Such an event could disrupt community services and quickly overwhelm emergency response capabilities.
Business/Economic Vulnerability	Businesses and the economy are greatly tied to the vigor of the American System as a whole; therefore, a catastrophic nuclear incident occurring in the United States may also have indirect business and economic consequences in the local community. If St. Lucie County were to experience a direct nuclear incident, such effects could be dramatically greater.
Associated Hazards	Associated hazards include: intense heat, fires, explosions, public health threats (Contamination, Disease/illness), vehicle accidents, mass exodus, civil unrest, hazardous materials release

VULNERABILITY CHART: LAND EROSION/EXPANSIVE SOILS

Vulnerable Geographic Locations	<p>Land Erosion such as Sheet erosion, rills, gullies, and alluvial fans occurs in the northern two thirds of the County and along unpaved roadways in hilly areas. Potential also exists for erosion in the City of Fort Pierce.</p> <p>River erosion is found where bluffs occur. Areas can include rivers such as the St. Lucie River, North and South Forks, the Indian River Lagoon Basin areas as well as the coastal area of the county.</p>
Damage Estimates	Varies depending on magnitude off erosion, mitigation efforts in place, and type and number of structures involved; Sudden erosive forces such as with hurricanes and storm surge can cost greater than 5 million dollars.
<p>Populations: 0-18yr/ 18-24/ 25-64/ 65+ /</p> <p>Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished</p>	<p>All populations are vulnerable to effects of erosion;</p> <p>Special populations may be more vulnerable to the associated hazards that may occur as a result of erosion. Such may include medically needy, handicapped, visually impaired due to physical mobility or impediments to situational awareness, particularly with collapse, ruptured gas lines, or flooding.</p>
Personal Injury	Structural or earthen collapse, subsequent explosions/fires
Group Homes	Same as general population
Structural	Structures along waterfront including bulkheads and seawalls are vulnerable to erosion associated with hurricanes and storm surge. Structures with storm water-induced erosion can trace the problem to development design problems related to construction of the structure itself, or to overall storm water management in a neighborhood or area.
Infrastructure	Erosion can undermine structures or roadways and fill drainage systems, natural creeks, and water bodies with sediment. It can also undermine drainage pipes and water mains.
Business/Economic Vulnerability	Vulnerability of businesses exists to the extent that the facilities of such establishments may be located in erosion/expansion vulnerable areas.
Associated Hazards	Associated hazards include: broken gas lines, or water mains, road/ bridge collapse, vehicle accidents, structural collapse or undermined foundation, sedimentation, increased flooding

**VULNERABILITY CHART: WINTER STORMS (ICE STORMS,
SNOW, SLEET, HARD FREEZE)**

Vulnerable Geographic Locations	ALL-particularly communities not located directly on the coast of the county
Damage Estimates	Varies depending on magnitude; Severe Ice storms can rival costs associated with hurricanes; See the 2005-2010 Local Mitigation Strategy.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	<p>All populations are vulnerable to effects of winter storms, particularly compounded due to potential utility loss at a critical time when heating is needed. Those without access to portable heaters and generators are more vulnerable.</p> <p>Special populations may also be more vulnerable to winter storms. Vulnerability exists for those who are particularly susceptible to cold weather (children, elderly, homeless), unable to afford available heating (impoverished) or reliant on electricity for life-sustaining medical equipment (medically-needy).</p> <p>Additional populations are vulnerable such as those with hearing or visual impairments, as situational awareness of associated hazards may be impeded.</p>
Personal Injury	Typical injuries may result from: slippery surfaces, falling limbs, downed power lines, structural collapse, vehicle accidents, freezing, frostbite, hypothermia, lack of food/water/medical treatment/medicines, and limited access to emergency services.
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, Jails/Prisons are vulnerable due to the special needs of such facilities, the transportation requirements of such a facility, large-scale heating needs and the staffing required to support group facilities. Additionally, most in group settings must rely on the emergency plans, decisions, and care of others.
Structural	All structures are vulnerable to winter storm damage. In general, structures are the most vulnerable to tree damage; hail, burst or uprooted water pipes and gas lines. Additionally elevated structures are more vulnerable to the bursting of water pipes associated with freezing temperatures.
Infrastructure	Power and communication systems using overhead lines are usually the hardest hit by ice storms. Additionally gas and water lines are vulnerable to tree damage and extreme temperatures. Roads and bridges may be impassible due to storm debris, or icing.
Business/Economic Vulnerability	<p>Economic sectors such as utilities, government, construction, agriculture, and other outdoor related sectors are vulnerable to the impact of winter storms; in the case of severe ice storm scenarios, all employment sectors could be affected.</p> <p>Businesses are vulnerable to loss of production, supply disruption, displaced workers, shifting of consumer spending to emergency/replacement needs. All affect the economy of St. Lucie County.</p> <p>Specific vulnerabilities exist for Farm Workers whose crops may be devastated by extreme temperatures.</p>
Associated Hazards	Associated hazards include: lack of heating, hail, falling trees, communication system and/or power outage, broken gas lines, or water mains, iced roads/bridges, vehicle accidents, structural collapse

VULNERABILITY CHART: HEAT WAVE/DROUGHT

Vulnerable Geographic Locations	ALL
Damage Estimates	Varies depending on magnitude; could jeopardize St. Lucie County’s agricultural production in addition to electrical, municipal and water supply expenses.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	All populations are vulnerable to effects of heat wave/drought. Special populations may also be more vulnerable to heat wave/drought. Outdoor workers, Elderly persons, small children, invalid, homeless, those on certain medications or drugs (especially tranquilizers and anticholinergics), and persons with weight and alcohol problems are particularly susceptible to heat reactions. Additionally, impoverished individuals are more vulnerable as they may reduce or eliminate the use of A/C systems due to rising cooling costs.
Personal Injury	Typical injuries: sunburn, heat cramps, heat exhaustion, heat stroke, dehydration, fatigue, death
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, are more vulnerable due to the population they accommodate being more susceptible to the effects of heat.
Structural	Structures may be vulnerable to structural expansion, soil erosion, soil contraction, and fires.
Infrastructure	Power lines are vulnerable to heat wave, as they sag more than normal when heated and can contact nearby trees, taking the line out of service, and shifting load to other lines. Vulnerability also lies in the increased demand and reliability of the transmission. Drought-induced water shortages may result as water sources declines and demands for personal consumption and firefighting increase.
Business/Economic Vulnerability	Drought/Heat wave can cause crop failure, wildfires, energy shortages, municipal water shortages, higher energy prices, and fish and wildlife mortality, and, therefore, affects many sectors of the economy— particularly agricultural, energy, and tourism, as well as municipalities, government.
Associated Hazards	Associated hazards include: heat wave trapped air pollutants, concentrated levels of chemicals and bacteria in water supply, wildfires, energy shortages, water shortages, flash flood, wind erosion

VULNERABILITY CHART: INADEQUATE WATER SUPPLY AND/OR CONTAMINATION

Vulnerable Geographic Locations	All
Damage Estimates	Varies depending on magnitude; greater than 5 million dollars
Populations: 0-18yr/ 18-24/ 25-64/ 65+ /	All populations are vulnerable to inadequate or contaminated water supply
Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	Special populations may also be more vulnerable to inadequate or contaminated water supply. Elderly, small children, medically needy, homeless, and impoverished individuals are more vulnerable to effects of contaminated or reduced availability of water.
Personal Injury	Typical injuries: diarrhea, water-borne illness (cholera, hepatitis, and typhoid), dehydration, fatigue, death
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, are more vulnerable due to the population they accommodate being more susceptible to the effects of waterborne illness
Structural	N/A
Infrastructure	Vulnerability exists for Water Systems (source, structures and distribution network)
Business/Economic Vulnerability	The water systems in St. Lucie County support agriculture, commercial/recreational fishing, marine transportation, outdoor recreation, public water supply, and tourism. Contamination to the water supply threatens these activities and can contribute to decreased quality of life and adverse health conditions. As such, the economy would be vulnerable to disruption from inadequate or contaminated water supply
Associated Hazards	Associated hazards include: concentrated levels of chemicals and bacteria in available water supply, infectious diseases, wildfires, energy shortages, water shortages, flash flood, wind erosion, illness, civil disorder, community decline, exodus

VULNERABILITY CHART: COASTAL OIL SPILLS

Vulnerable Geographic Locations	Locations along the Atlantic coastline of St. Lucie County could be vulnerable to this hazard. Additionally properties along pipeline routes are vulnerable to oil spills.
Damage Estimates	Varies depending on magnitude; greater than 5 million dollars
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	Vulnerable populations include those that are in direct contact with the oil or dependent on water quality for economic livelihood.
Personal Injury	Typical injuries: toxicity, contamination
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, are more vulnerable due to the population they accommodate being more susceptible to the effects of waterborne illness
Structural	As oil contamination is a health hazard, structural vulnerability could arise due to the absorbent nature of certain building materials and would depend on the extent of infiltration and the ability to remediate the contamination.
Infrastructure	Vulnerability exists for Water Systems (source, structures and distribution network)
Business/Economic Vulnerability	Water dependent industries, such as the tourism, seafood, fuel, and boating industries, are vulnerable to this hazard. In addition, those who are dependent on the aforementioned industries are also vulnerable to the effects of coastal oil spills.
Associated Hazards	Associated hazards include: concentrated levels of contaminants in available water supply, diseases, loss of wildlife and habitat, contaminated soils

MASS EXODUS/IMMIGRATION

Vulnerable Geographic Locations	All -St. Lucie County has experienced temporary mass exodus as occurs with hurricane evacuations, however in the true sense of mass exodus, or a permanent exodus, this hazard has not occurred.
Damage Estimates	Varies depending on magnitude and the economic loss
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually- Impaired, Impoverished	All populations are vulnerable to increased difficulty, financial or physical loss as a result of any mass exodus, or migration out of the county. Young children are vulnerable to separation from their parents or loved ones. The elderly and medically needy may be separated from their established lines of essential medical services. Traditional lines of communication amongst families may be non-functional or overloaded. All are vulnerable to financial loss and mental anxiety as result of such activity.
Personal Injury	Injuries could arise from vehicle accidents, lack of food, shelter, or medical care. Additional injury may occur if the exodus or migration occurs in conjunction with heat wave, drought, chemical contamination, ice storms, or other environmental conditions.
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, Jails are more vulnerable to mass exodus such as traditional lines of accounting for clients may breakdown, and supplies may not be readily available within the facility. No known vulnerability exists for immigration into St. Lucie County for this population.
Structural	N/A
Infrastructure	Vulnerability potentially exists for Water Systems, Transportation Systems, and Food Distribution networks to support mass immigration into St. Lucie County or in preparation for exodus out of St. Lucie County.
Business/Economic Vulnerability	Potentially all economic sectors could be vulnerable to the loss of workers, buyers, or product resulting from mass exodus out of St. Lucie County.
Associated Hazards	Associated hazards could potentially include: Strained local resources, reduced food/water supply, civil disorder, traffic accidents, housing shortages, increased medical needs, etc.

VULNERABILITY CHART: PUBLIC HEALTH THREATS- PANDEMIC OUTBREAK/EXOTIC

Vulnerable Geographic Locations	All
Damage Estimates	Varies depending on magnitude; extent, method of transmission, mortality rate, etc.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	All populations are vulnerable to public health threats. Special populations may also be more vulnerable and include Elderly, small children, medically needy, homeless, impoverished are more vulnerable to public health threats.
Personal Injury	Typical injuries: Each public health threat is issued with its own unique characteristics and will depend on the threat itself.
Group Homes	Assisted Living Facilities, Nursing Homes, Schools, Jails are more vulnerable due to the population they accommodate being more susceptible to the effects of public health threats, such as flu, water-borne illnesses, etc. The population density at such facilities also increases the risk of infectious diseases.
Structural	N/A
Infrastructure	Vulnerability potentially exists for Water Systems and Food Distribution networks depending on the threat.
Business/Economic Vulnerability	Potentially all economic sectors could be vulnerable to the loss of workers, buyers, or product resulting from widespread public health threats. Additionally, agriculture, commercial/recreational fishing, marine transportation, outdoor recreation, public water supply, and tourism industries have an increased vulnerability.
Associated Hazards	Associated hazards could potentially include: crop failure, reduced food/water supply, infectious or other diseases, pharmaceutical shortage, energy shortages, water shortages, civil disorder, community decline, exodus

VULNERABILITY CHART: CIVIL DISTURBANCE

Vulnerable Geographic Locations	All, but particularly within the city limits, or near centers of government, courthouses, shopping facilities, or near a source of controversy
Damage Estimates	Varies depending on magnitude and the economic loss
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	Populations in close proximity to the disturbance may be directly affected.
Personal Injury	Physical injury such as burns, blunt trauma, gunshot wounds, death, or other injuries may occur as a result of civil disorder.
Group Homes	Prisons/jails are more vulnerable to civil disorder.
Structural	N/A
Infrastructure	Water Systems, Transportation Systems, and Food Distribution networks government facilities, or other infrastructure could be at risk of civil disorder.
Business/Economic Vulnerability	Potentially all economic sectors could be vulnerable to the impact of civil disorder.
Associated Hazards	Associated hazards could potentially include: Strained local resources, reduced food/water supply, traffic accidents, mass casualties, and increased medical needs, etc.

VULNERABILITY CHART: CRITICAL INFRASTRUCTURE DISRUPTION

Vulnerable Geographic Locations	All geographic locations containing critical infrastructures or served by Critical infrastructures are vulnerable. (The list of Critical Facilities is kept on file at St. Lucie County Emergency Management.)
Damage Estimates	Varies depending on magnitude of the event
Populations: 0-18yr/ 18-24/ 25-64/ 65+ / Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	All
Personal Injury	Dependent on the type of critical infrastructure loss.
Group Homes	Dependent on the type of critical infrastructure loss.
Structural	N/A
Infrastructure	All, including transportation and energy systems, defense installations, banking and financial assets, water supplies, chemical plants, food and agricultural resources, police and fire departments, hospitals and public health systems, information systems, and government offices
Business/Economic Vulnerability	Particularly vulnerable are power-dependent industries, utilities and government, A longer period of disruption, particularly to the Internet or power generation/distribution capability has an immediate effect on productivity and may result in financial loss to many business sectors.
Associated Hazards	In severe cases, dependent on the type of critical infrastructure disruption, associated hazards could potentially include: energy shortages, broken gas lines, explosions, structural fires, HAZMAT releases, contamination, diseases, strained local resources, reduced food/water supply, wildfires, traffic accidents, mass casualties, crop failure, pharmaceutical shortage, civil disturbance, community decline, exodus

VULNERABILITY CHART: SPECIAL EVENTS

Vulnerable Geographic Locations	All geographic locations on which special events take place. The most popular places where special events take place include the St. Lucie County Fairgrounds, Port St. Lucie Civic Center, the First Data Field Mets, Navy SEAL museum, Sunrise Theater, all County and municipal parks, beaches, the Havert L. Fenn Center and downtown Ft. Pierce marina.
Most Popular Events	Navy SEAL Muster, all St. Lucie Mets and NY Mets baseball games, Mud Jam, Florida Citrus Show, and various festivals throughout the year.
Damage Estimates	Varies depending on magnitude of the event.
Populations: 0-18yr/ 18-24/ 25-64/ 65+ Medically-Needy, Handicapped, Homeless, Transient, Transportation Disadvantaged, Tourists, Non-English Speaking, Hearing-Impaired, Visually-Impaired, Impoverished	All
Personal Injury	Trauma, death, stampeding, gunshots, injuries from falls or falling debris.
Group Homes	N/A
Structural	N/A
Infrastructure	Emergency response capability is vulnerable to additional strain, or direct impact, particularly if the incident is due to terrorism, involving subsequent incidents.
Business/Economic Vulnerability	Particularly vulnerable to disasters involving special events, are the tourism industry, hotels/hospitality, and government. Vulnerability for other entities would depend on the situation; however, those entities involved in the operation, organization or funding of the special event may be more vulnerable.
Associated Hazards	Associated hazards could potentially include: shootings, broken gas lines, explosions, structural fires, HAZMAT Releases, contamination, strained local resources, traffic accidents, mass casualties, civil disturbance, structural collapse, etc.

B. GEOGRAPHIC INFORMATION

St. Lucie County is located on the Atlantic along the South Central Coast of Florida. It is nearly rectangular in shape. At its widest points, the County measures 24 miles, north/south and 29 miles east/west. The County occupies a total of 572 square miles (358,460 acres) of which approximately 60 square miles (38,400 acres) are water and 515 square miles (330,020 acres) are land. Included in the land area are three (3) municipalities of Ft. Pierce, Port St. Lucie and St. Lucie Village. Physiographically, the County is divided into three primary regions, the Atlantic Coastal Ridge (including the barrier islands), the Eastern Valley and Osceola Plain.

The mainland topography of St. Lucie County is generally low in elevation, without significant deviation. However, two ridges parallel the coast, one about 1 mile inland from the Indian River with elevations up to 30 feet, the other about 10 miles inland with similar elevations. The coastal barrier islands have typical dune topography with dune elevations of about 15 feet.

The vast citrus and ranching areas of central and western St. Lucie County are contained within the areas known as the Sebastian/St. Lucie Flats, Allapattah Flats and Osceola Flats. Except where drained for agricultural activities, these areas are characteristically pocketed with surface wetlands and have limited natural drainage. Elevations in this area are in the range of 30 to 60 feet above sea level, with the general fall of the land being from northwest to the southeast. Drainage of this area is provided by the North Fork of the St. Lucie River and a network of human-caused canals and ditches that are interconnected with main relief canals that drain into the Indian River Lagoon and the North Fork of the St. Lucie River.

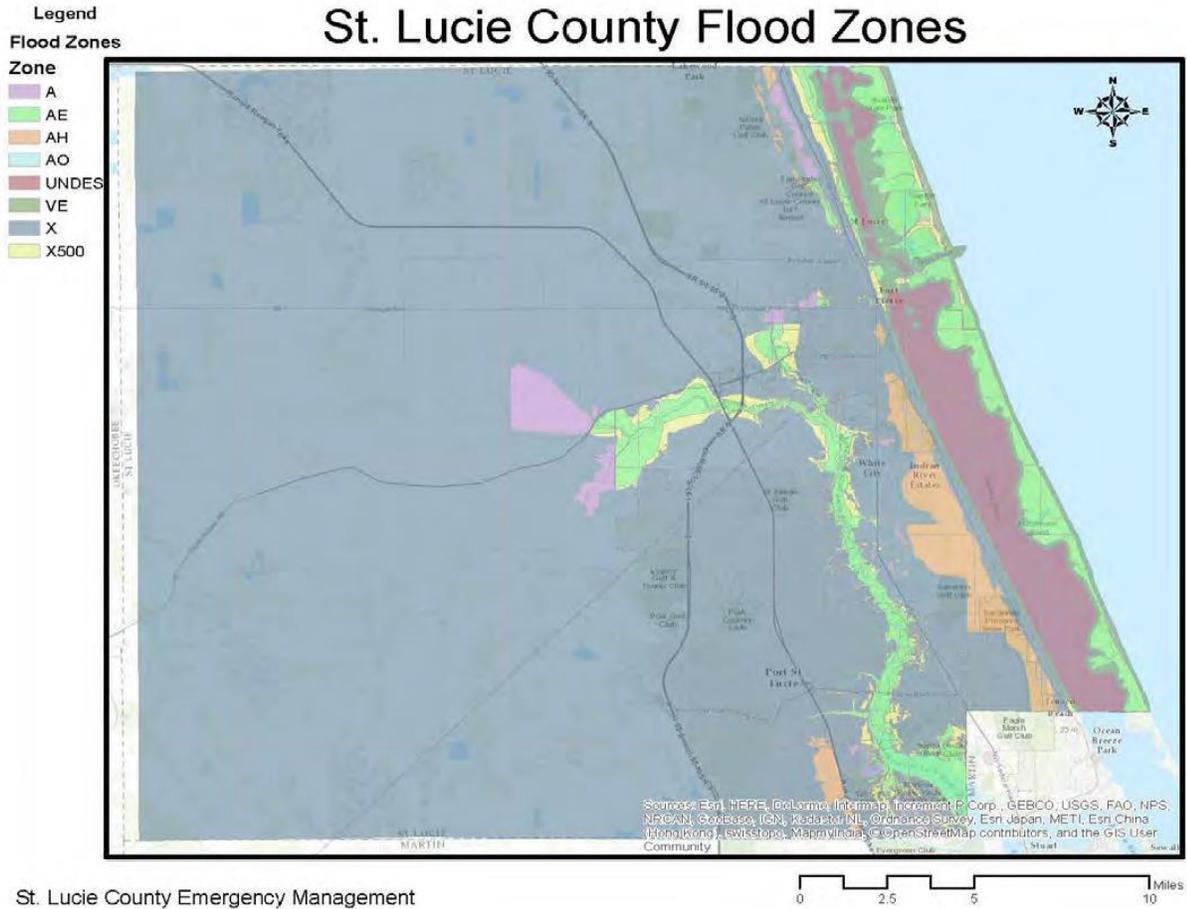
The Atlantic Coastal Ridge forms the eastern border of the County and includes the coastal barrier island, locally known as North and South Hutchinson Island. Elevations range from Sea Level to about 15 to 17 feet above Sea Level along the western shorelines of the Indian River Lagoon. The western terminus of the Atlantic Coastal Ridge lies along the shoreline of the Indian River south of Ft. Pierce and along the U.S. Highway #1 alignment north of Fort Pierce.

Occurrence of floods is an important concern for communities with coasts subject to storm events or for any community with water bodies and waterways having flood hazard areas. A flood hazard is any land area that is susceptible to being inundated by water from any source. Flooding is a temporary condition of partial or complete inundation of normally dry land areas. Floods can occur throughout St. Lucie County anytime during the year; however they are most frequent during the rainy season from May to October in which the majority of the 57 inches annual rainfall occurs. The streams and canals in the central and western areas as well as those that discharge into the Indian River Lagoon and the North Fork of the St. Lucie River are subject to flooding from prolonged heavy rainfalls. Atlantic coastal areas of the county are subject to storm surge flooding resulting from hurricane activity. Areas along the western shoreline of the Indian River Lagoon north of Ft. Pierce, a small portion at the south county line, as well as shoreline areas along the North Fork of the St. Lucie River will also experience flooding from storm surge.

More than two thirds of the total land area is west of Interstate 95; however more than 90 percent of the population resides in the eastern third of the county and is vulnerable to the effects of both man-made and natural disasters. The eastern portion of the County can be divided into two major areas: the mainland and the barrier islands known locally as North and South Hutchinson Island. The central and southern portion of the eastern mainland is the most highly developed area and contains the highest population concentration in the County. The north area of the mainland is beginning to experience slow development. Residential and commercial activities are mainly concentrated along the U.S. #1 and east of the Interstate 95 corridor.

North and South Hutchinson Island are physically separated by the Ft. Pierce Inlet. A seven- mile portion of North Hutchinson lies within St. Lucie County. The Ft. Pierce inlet State Park and the Jack Island State Preserve is located on extreme south end of the island as well as several condominiums and the residential area known as Queens Cove. The island is accessible by four bridges that connect it to the mainland. In St. Lucie County, the North Bridge, a two lane draw bridge provides access to and from the island at the extreme south end. A fifteen mile portion of South Hutchinson Island lies within St. Lucie County. A portion of the city limits of Ft. Pierce occupies the northern 2.5 miles of the island and the southern 2.5 miles of the island in lined with condominiums and is a high area of tourist concentration. The St. Lucie Nuclear Power Plant is also located on the island 9 miles south of the inlet. South Hutchinson Island is accessible by three bridges that connect it to the mainland. In St. Lucie County, the South Bridge, a four land high rise bridge provides access to and from the island at the north end. Two bridges in Martin County provide accessibility to the island south of the county line.

Figure 2: St. Lucie County Flood Zones (2016)



The major ecological communities with St. Lucie County are identified as follows:

- South Florida Coastal Strand
- Sand Pine/Xeric Scrub
- South Florida Flatwoods
- Tropical/Coastal Hammocks
- Freshwater Wetlands
- Indian River Lagoon and Associated Estuarine Wetlands
- Nearshore Atlantic Ocean

Of particular concern are those ecological communities located in the eastern portion of the county, where development pressures conflict with the preservation of diminishing habitats. Tropical hammock communities and coastal scrub communities are examples of habitats found almost exclusively in Florida that are in danger of disappearing or being drastically reduced, along with their unique flora and fauna. A balance of natural system preservation and the rights of property owners to develop land is an important issue to be considered as county population and development growth continues.

St. Lucie County maintains approximately 38 parks totaling 1,450 acres, 19 beach access areas, 14 boat launches, 12 beach-front parks, 22 landscaped government sites, 23 baseball fields, 3 stadiums, and several community centers. There are three State Parks located in St. Lucie County: Fort Pierce Inlet State Park, Avalon State Park, and Savannas Preserve State Park. The Fort Pierce Inlet State Park consists of 340 acres of land located on the southern tip of North Hutchinson Island including wide sandy beaches and 1,500 feet of frontage on the Fort Pierce Inlet. Avalon State Park has more than a mile of undeveloped beachfront. The Savannas Preserve State Park is the last remaining freshwater marsh with multi-use trails and wildlife viewing.

To date, St. Lucie County has acquired approximately 11,000 acres under the Environmentally Significant Lands Program.⁸ The purpose of the program is to purchase land with the intent of preserving ecologically unique communities, to protect and restore ecosystems to their natural state both upland and wetland to preserve endangered and threatened species, to maintain natural flood protection thereby providing water quality while providing compatible public use. Areas currently protected under this program include: Ancient Oaks, Avalon Addition, Blind Creek, Bluefield Ranch, Indrio North Savannas, South Savanna Buffer Preserve, Kinds Island, North Fork of the St. Lucie River, Ocean Bay, Paleo Hammock, Spruce Bluff, Queen's Island, Pinelands, D.J. Wilcox Preserve, George LeStrange Preserve, Gordy Road Recreation Area, Lakewood Park Preserve, Sheraton Scrub, St. Lucie Village Heritage Park, Sweetwater Hammock Preserve, Teague Hammock, Walton Scrub, and Wildcat Cove.

C. DEMOGRAPHICS

In the year 2000, St. Lucie County's population was estimated to be 126,731. The County population grew by 25.6% between 1990 and 2000. The Treasure Coast has experienced tremendous growth since the 1960's, and this trend is expected to continue. The majority of the growth has occurred and is expected to continue to occur in proximity to the City of Port St. Lucie, the fastest growing area in St. Lucie County.

In 2016, St. Lucie County was ranked 21 out of 67 counties in the State with a population estimate of 292,826, which is a population growth of 15,037 people from 277,789 in 2010, and a density average of 568 people per square mile. By 2020, the County's population is expected to increase to 318,600 and by 2045 population is expected to reach 450,300. Respectively, the Bureau of Economic Business and Regulation (BEBR) reported 2016 population estimates for the City of Fort Pierce as 42,489 (2010; 41,590), the City of Port St. Lucie as 178,091 persons (2010; 164,603), the Town of St. Lucie Village at 607 persons (2010; 590) as identified in Figure 4.

Table 4: Population by Area

2016 Population Distribution by Area	
Jurisdiction	Population
Fort Pierce	42,489
Port St. Lucie	178,091
Unincorporated (County)	71,639
St. Lucie Village	607
Total	292,826

* Source: Bureau of Economic Business and Regulation, 2016

Table 5: Population by Age

Distribution Population by Age 2016 Estimate			
Under 18	18-44	45-64	65+
62,372	90,190	78,477	61,786

* Source: Bureau of Economic Business and Regulation, 2016

Other significant population characteristics include age, race, income, and special needs. The median age of St. Lucie County residents is 43.3. Twenty percent of the County is over the age of 65. This is significant because elderly populations may require additional or special assistance during a hazard event. Cultural differences can influence an individual's response to an event, therefore it is important to define the County population in terms of ethnicity where 53,735 people or 18.4% of St. Lucie County's residents are Hispanic or Latino, while 58,282 people or 19.9% are Black or African American. Countywide, the entire minority population grew by 8% between 2010 and 2016.

Nearly 20.3% of residents speak a language other than English at home, a 6% increase from the 2010 census data of 14%. Language is an important consideration when developing preparedness materials and communicating evacuation and safety information for residents.

In 2000, St. Lucie County had a total of 91,254 Single-family Residential housing units (76,933: Occupied), the 2010 Census confirmed 137,029 units (108,523: Occupied), and 2014 statistics show 137,339 housing units countywide - comprised mostly of single-family detached units. The average household size of 2.53. Seventy-five percent of homes in St. Lucie County were built prior to 1990. The US Census reported that 73.3% of residents own their own home in St. Lucie County, and the median value of owner-occupied homes in the County is \$120,700 with waterfront parcels within the County at a premium. In 2014, 962 housing units were permitted. In 2015, the St. Lucie County Property Appraiser released Taxable Property Values, reporting that the overall taxable value in the County will jump 4% to 16.2 billion, with the City of Port St. Lucie seeing an increase of 6.5% (7.2 billion), Fort Pierce increase of 2.5 (1.9 billion) and the Town of St. Lucie Village will see its overall taxable value increase by 2% (56.9 million). The below table displays the current (2015) total parcels and breakdown.

Table 6: Parcel Breakdown (2015) – St. Lucie County

Parcel Type	Total
Single Family Residential	96,361
Condominiums	14,627
Multi-Family Less than 10 Units	1,495
Multi-Family 10 Units or More	70
Mobile Homes	4,704
Vacant Residential	31,457
Cooperatives	2
Retirement Homes/Misc Residences	976
Improved Commercial	2,489
Vacant Commercial	1,482
Improved Industrial	1,181
Vacant Industrial	416
Agricultural	2,507
Institutional	607
Government	3,864
Leasehold Interests	21
Miscellaneous	2,646
Non-Agricultural Acreage	1,466
Total	166,371

There are approximately forty-four mobile home/recreational vehicle parks located within St. Lucie County. This figure equates to 6,502 dwellings or a population of approximately 15,000 (5% of the total population). To ensure the safety and wellbeing of mobile home residents during hurricane conditions, these communities would be among the first to be issued an evacuation order.

According the Florida Policy institute, Florida has one of the highest incarceration rates in the Country at 960 inmates per 100,000 people. The estimated annual inmate population of the St. Lucie County Jail is 1,200. Neither a State nor Federal prison is located within the County.

Agricultural production and processing is an important component of the County's economy. The seasonal nature of citrus production requires the use of migrant labor during peak harvesting season (February/March). The 2014 U.S. Bureau of Labor Statists estimates 1,000 to 5,000 migrant farm laborers are employed in St. Lucie County during the peak season.

The Atlantic beaches and sub-tropical climate provide the basis for year-round tourism, with peak influx during the winter months. Transient population may vary daily but due to the aforementioned, there are always a percentage of people visiting beaches and adjoining parks. Though it is not known as to what the actual seasonal population is, (those who reside or visit for a period less than 6 months), it is estimated to be near 20,000. The main campus of Indian River State College is located in the City of Ft. Pierce, which contributes to a transient population with an average annual enrollment of approximately 17,000 students.

In June of 1989, a special needs committee was formed by the St. Lucie County Division of Emergency Management. Its purpose is to assist that segment of population, during an evacuation, requiring transportation assistance. Also, to provide a medical needs shelter. The shelter is designated for the segment of the population whose medical conditions do not meet requirements for hospital admittance, but have debilitating medical conditions requiring uninterrupted electrical power or supervision of health care professionals. Candidates for the St. Lucie County Special Needs Shelter are encouraged to register with our office in advance. As of November 2017, there are 793 registrants for the Special Needs Shelter. Registration for Special Needs Shelter space is conducted twice a year in January and then in May.

High risk areas relative to flood, hurricane and nuclear power plant emergencies have been identified and designated based on elevation, proximity to the coast and the nuclear power plant. Based on data developed for the 2012 Regional Vulnerability Analysis (located in the appendix of the St. Lucie County Post Disaster Redevelopment Plan), population areas of the County at risk for these threats are projected below.

Table 7: Flooding Exposure per Zone, St. Lucie County, 2009

Flood Zone	Total Number of Structures	Total Value of Structures	Total Population in Flood Zone
AE	13,123	\$3,674,167,492	20,610
X500	3,001	\$1,011,851,442	10,878
X	105,126	\$31,702,888,284	220,882
A	414	\$149,046,350	916
VE	1,743	\$468,870,000	3,404
UNDES	369	\$64,909,278	3,435
AH	3,065	\$530,852,900	10,134
OFF FIRM	27	\$1,778,594	1,702

Table 7 illustrates the total number and value of structures as well as the population expected to be flooded given certain Flood Zone designations.

Table 8: Flood Exposure per Storm Event Category, St. Lucie County, 2009

Exposure	100 Year Event	50 Year Event	25 Year Event
Number of Structures in Flood	16,853	14,784	11,038
Estimated Loss in Value*	\$3,421,997,154	\$2,463,085,864	\$1,225,902,277
Population in Flood	16,898	16,882	13,577
Exposure	100 Year Event	50 Year Event	25 Year Event

*Based on FDCA percent loss estimates for wind and rain; maxima estimates

Source: Florida Department of Community Affairs, 2009 and St. Lucie County Property Appraiser Data, 2009

Table 8 illustrates the total number and value of structures as well as the population expected to be flooded given certain annual storm event levels.

Table 9: Hurricane Flood Exposure by Hurricane Category, St. Lucie County, 2009

Exposure	Category 5	Category 4	Category 3	Category 2	Category 1
Number of Structures in Flood	75,700	39,957	16,765	14,794	9,271
Estimated Loss in Value*	\$22,186,574,960	\$14,026,427,898	\$6,430,346,302	\$2,654,868,122	\$864,900,379
Population in Flood	159,599	78,652	18,343	16,883	9,144

*Based on FDCA percent loss estimates from wind and rain; maxima estimates

Source: Florida Department of Community Affairs, 2009 and St. Lucie County Property Appraiser Data, 2009

Table 9 illustrates the total number and estimated loss value of structures as well as the population expected to be flooded given certain hurricane categories.

St. Lucie County is considered a sub-tropical climate and experiences approximately 80 thunderstorm days a year. Annually the County averages 132 days of measurable precipitation, 74 clear days, 150 partly cloudy days and 132 cloudy days. Annual rainfall is approximately 57 inches. Ninety percent of the time, the prevailing wind direction is from the east – the Atlantic Ocean. This keeps the immediate coastal area cool in summer and warm in winter.

High risk areas relative to hurricane and flood effects have been identified and designated based on elevation and proximity to coastal waters. Development density of any specific area has been considered in the allocation of shelter space. The vulnerability of nursing homes and congregate care centers to the adverse effect of severe weather, primarily based on elevation and construction, requires special consideration in evacuation plans.

From a hazard perspective, especially in terms of flooding, drainage has been an important component in shaping overall development patterns within the County. Many canals and drainage ditches have been constructed throughout St. Lucie County. The primary canals include:

- **C-23:** Provides drainage for 168 square miles in southern St. Lucie, northern Martin, and eastern Okeechobee counties. C-23 and its structures remove excess water from the C-23 Basin, supply water to the basin (and, occasionally, to the C-24 Basin), and maintain ground water elevations west of S-48 to prevent saltwater intrusion into the local ground water.
- **C-24:** Provides drainage to 167 square miles in central St. Lucie and east central Okeechobee counties. C-24 and its control structures remove excess water from the C- 24 Basin, supply water to the basin, and maintain ground water table elevation west of S-49 adequate to prevent saltwater intrusion into the local ground water.
- **C-25:** Provides drainage to 165 square miles in northwest St. Lucie and eastern Okeechobee counties. C-25 control structures remove excess water from the C- 25 Basin, supply water to the basin (and occasionally, to the C-24 Basin), and maintain ground water table elevation west of S-50 adequate to prevent saltwater intrusion into the local ground water.

D. ECONOMIC PROFILE

St. Lucie County has long been a popular resort area, attracting thousands of visitors and residents for our array of recreational and entertainment activities, and our lifestyle. The county's population, which has grown steadily to about 292,826, and is supported by an economy based primarily on tourism, light industry, and agriculture. Services account for over 32% of St. Lucie County's employment; retail trade, 22.78%; agriculture, forestry and fishing, 10.9% and government 12.54%.

Approximately 206,540 acres of St. Lucie County is devoted to agriculture, with the largest percentage in pastures and ranges, followed by citrus groves, woodlands, row crops and a variety of other uses.

The below table lists the five largest employers in St. Lucie County as of November 2016.

Table 10: Top 5 Employers, 2016

RANK	EMPLOYER	EMPLOYEES
1	St. Lucie County School District	5,416
2	Indian River State College	2,400
3	Lawnwood Regional Medical Center	1,339
4	City of Port St. Lucie	1,086
5	Convey Health Solutions	950

* Source: Economic Development Council of St. Lucie County 2016

Data obtained from the October 2017 Florida Department of Economic Opportunity Local Area Unemployment Statistics indicates that St. Lucie County's unemployment rate as 6% and per capita income as \$23,422 (2014 U.S Census Bureau). The median household income in St. Lucie County is \$42,665 with per capita income at \$34,129 in 2014, much below the State of Florida average of \$42,737. 17.3% of for all ages reported are considered to live below the poverty level. Per capita personal income of the entire county is approximately 20% lower than the State average.

County and municipal community population's employment figures have changed little since 1990, however decreased from 62.9% to 58.6% in the year 2000. Though numbers of employed fluctuated heavily during the recession (2007-2010), employment reported in 2014 shows 58.5%, 4% below the State of Florida average employment of 62.5%.

Employment warrants expanded discussion in that the sectors that employ significant populations within the communities of the County, and if impacted by an incident or disaster, the economy will be severely crippled – mitigation and recovery are paramount to the economic health of the County as a whole. The below table shows that the highest percentage of employment occurs in the Trades, Transportation & Utilities (22.3%) and Government (18%) sectors, with Education and Health Services ranked 3rd with 16% employment. Importantly, ranked 4th and 5th are Leisure & Hospitality and Professional and Business Services. The County and region in general rely and are somewhat dependent on tourism, marine recreation, major and minor league baseball training and Spring Break for students.

Table 11: Employment by Industry

Industry	% Employed (St. Lucie)	% Employed (Florida)
Trades, Transportation & Utilities	22.3%	20.9%
Government	18.0%	13.2%
Education & Health Services	16.5%	14.8%
Leisure & Hospitality	11.8	14.0%
Professional & Business Services	11.2%	15%
Construction	5.5%	5.1%
Manufacturing	4.2%	4.3%
Other Services	3.8%	3.2%
Financial	3.6%	6.6%
Natural Resources & Mining	2.4%	1.1%
Information	0.8%	1.8%

Source: Office of Economic Demographic Research

In addition, the County is a thoroughfare for major commerce and transport of goods and soon to be passenger rail, a working port, an international airport, and major highways that link south Florida to the rest of the State. Finally, the County has a high percentage of persons employed by local governments and health services.

As noted in Table 11, the County’s highest employment sectors are sectors that would be essential to recovery for the community. Health services in particular are significant and critical to the populations for services and safety. Resiliency in the wake of a significant incident or disaster could be Efficient, fast recovery from disasters whether catastrophic from hurricanes, tropical storms, tornados or other natural disasters, or from man-made or technological emergencies or incidents, such as disruption of services (electrical, internet, etc.) via terrorism incidents, cyberterrorism or accidents).

Although the potential economic impact the county as a whole can expect to suffer from the impact of the hazards previously identified is limited, pre-planning is always emphasized. Recommendations for businesses on how to accelerate the recovery process and create disaster-resistant businesses and jobs remain a focus of our public outreach efforts.

E. EMERGENCY MANAGEMENT SUPPORT FACILITIES

1. Critical Facilities - St. Lucie County and its municipalities have identified all critical facilities required for an immediate emergency response following a major emergency/disaster event and other facilities or areas necessary to support recovery operations. Several categories of critical facilities have been included. For specific information, see the Critical Facilities Inventory attached and identified as an Annex to this document.
2. Recovery Staging Areas
 - a. Materials and Supplies
 - (1) St. Lucie County Airport
3000 Curtis King Boulevard, Fort Pierce, FL 34945
 - (2) Thomas J. White Stadium –
525 N.W. Peacock Loop, Port St. Lucie, FL
 - b. Materials, Supplies and Personnel
 - (1) St. Lucie County Fairgrounds
15601 West Midway Road, Fort Pierce, FL 34988
 - c. Disaster Recovery Centers (DRCS)

Should the President authorize a Declaration of Disaster, Disaster Recovery Centers will open to provide the public access to apply for federal assistance funding. The centers will provide residents and businesses with information on available programs and assist applicants with completion of the necessary forms/documentation. The following locations have been designated as sites for Disaster Recovery Centers.

Fixed Facilities

1. Indian River Community College Gymnasium
3209 Virginia Avenue
Fort Pierce, FL 32981
GIS Coord. – 80.35780266W 27.42526396N
2. Minsky Gym
750 Darwin Blvd.
Port St. Lucie, Florida 34953
GIS Coord. – 80.37109779W 27.24612885N
3. PAL Building
2101 Tiffany Avenue
Port St. Lucie, Florida 34952
GIS Coord. – 80.2895137W 27.29389178N

Mobile Sites

1. St. Lucie County Admin. Bldg (West Parking Lot)
2300 Virginia Avenue
Fort Pierce, FL 32950
GIS Coord. – 80.3485397W 27.42679222N
 2. Chuck Ray Park
5626 NW Manville Drive
Port St. Lucie, Florida 34983
GIS Coord. 80.36680055W 27.34804346N
 3. Sandhill Crane Park
2355 SE Scenic Park Drive
Port St. Lucie, Florida 34952
GIS Coord. – 80.27982565W 27.3027277N
- d. Storage Depots
- (1) St. Lucie County Fairgrounds
15061 West Midway Road, Ft. Pierce, FL
 - (2) St. Lucie County Sports Complex
525 N.W. Peacock Loop, Port St. Lucie, FL
3. Landing Zones have been identified and coordinated with the Florida National Guard.
- a. The primary landing zone is located at:
 - St. Lucie County International Airport
Latitude 27.29.37 N / Longitude 080.22.01 W
 - b. The secondary landing zone is located at:
 - Ft. Pierce Jai Alai Fronton
Latitude 27.26.00 N / Longitude 080.23.04 W

The coordinates for these locations have been transmitted to the appropriate agencies.

F. PLANNING ASSUMPTIONS

1. A disaster may occur with little or no warning and may escalate far more rapidly than the ability of any single local response organization to handle. The success of rapid response depends on:
 - a. Multi-discipline, impact assessment teams;
 - b. Procedures to ensure quick and effective decision-making, such as pre-deployment and aggressive training of elected officials and responders on responsibilities and emergency assignments; and
 - c. Procedures to rapidly implement local mutual aid, state mutual aid and possibly federal assistance.
2. Effective hurricane preparedness requires continual public awareness and education programs, so that citizens will take appropriate advance action based upon the category of the hurricane expected.
3. Evacuation and shelter strategies must be based on citizen cooperation and best-available shelter options until the shelter deficit can be reduced.
4. A strategy based upon sheltering people with special needs that provides varying levels of care. The intent of the strategy is to establish minimum standards so that the general population and service providers will understand the level of care, which can be reasonably expected at regular shelters. Persons needing greater care should be prompted to register for special assistance. Planning at the County and State level will depend on pre-identification of populations and determination of resource shortfalls and contingencies.
5. The Emergency Operations Center (EOC) will be activated and staffed with lead agencies that become a part of an ESF concept. The primary agency for each ESF will be responsible for coordinating the planning and response activities of their respective support agencies.
6. The CEMP does not alter the responsibility, ability or authority under applicable laws of any local, state, federal, etc. department, agency or organization.
7. The use of the Incident Command System for incident management will be used for day-to-day emergencies as well as for larger emergencies necessitating outside assistance.
8. Due to the National Incident Management System, all local responders, as well as those coming into the impacted area from other jurisdictions and other states, will know the ICS system and utilize commonly established operational structures, terminology, policies and procedures.

- 9.** The use of the Incident Command System will provide an effective organizational structure for on-scene incident response capable of expanding and contracting as needed to accommodate personnel, equipment and teams from both local and external sources.

- 10.** Local Agencies not directed or controlled by the St. Lucie County Board of Commissioners will also adopt the Incident Command System and National Incident Management System and will agree to any responsibilities or coordination methods assigned within the CEMP.

III. CONCEPT OF OPERATIONS

A. GENERAL CONCEPTS

The following sections describe St. Lucie County's levels of disaster, organization, direction and control, notification and warning and incident command structure for field operations. This section is the preface for the each element contained within the CEMP, specifically the Response, Recovery, Preparedness and Mitigation Elements, which contain additional operational information.

- St. Lucie County will incorporate the concepts of the National Incident Management System into the management and activities of Preparedness, Prevention, Response, Recovery, and Mitigation.
- St. Lucie County will strive to be consistent with the national priorities according to HSPD-8.
- Most incidents will be managed locally, being handled by emergency responders within a single jurisdiction and St. Lucie County Emergency Management's communications staff.
- In some cases, incidents that begin under one jurisdiction/discipline may rapidly expand to incidents that cross discipline and jurisdictional boundaries, requiring additional resources and support.
- Certain situations may warrant activation of the Emergency Operations Center, as deemed necessary by the St. Lucie County Director of Public Safety.
- St. Lucie County will utilize the resources available within its jurisdiction, and request assistance if needed, through existing mutual aid agreements, as well as through the statewide mutual aid agreement.
- St. Lucie County will conduct field operations in accordance with a Standard Set of NIMS-Compliant Incident Command System (ICS) Organizations, Concepts, and Procedures.

THE FIVE PHASES OF EMERGENCY MANAGEMENT

There are five (5) overall phases, which are used to categorize activities and actions in emergency management. The following are the definitions of each phase according to the National Incident Management System:

1) Prevention

Prevention is any action that can be taken to avoid an incident or to intervene to stop an incident from occurring. Prevention involves actions to protect lives and property. It involves applying intelligence and may include such countermeasures as: deterrence operations, heightened inspections, improved surveillance and security operations, investigations to determine the full nature and source of the threat, public health and agricultural surveillance/testing processes; immunizations, isolation, or quarantine, specific law enforcement operations aimed at deterring, preempting, interdicting or disrupting illegal activity, apprehending potential perpetrators, and bringing them to justice

2) Preparedness

The range of deliberate critical tasks and activities necessary to build, sustain, and improve the operational capability to prevent, protect against, respond to, and recover from domestic incidents. Preparedness is a continuous process and involves efforts at all levels of government along with private sector and non-governmental organizations in order to identify threats, determine vulnerabilities, and identify required resources. Preparedness is operationally focused on establishing guidelines, protocols, and standards for planning, training and exercises, personnel qualification and certification, equipment certification, and publication management.

3) Response

Response is the activities that address the short-term direct effects of an incident. Response includes immediate actions to save lives, protect property, and meet basic human needs. Response also includes the execution of emergency operations Plans and of mitigation activities designed to limit the loss of life, personal injury, property damage, and other unfavorable outcomes. As indicated by the situation, response activities include applying intelligence and other information to lessen the effects or consequences of an incident; increased security operations; continuing investigations into the nature and source of the threat; ongoing public health and agricultural surveillance and testing processes; immunizations, isolation, or quarantine; and specific law enforcement operations aimed at preempting, interdicting, or disrupting illegal activity, and apprehending actual perpetrators and bringing them to justice

4) Recovery

The development, coordination, and execution of service and site restoration plans; the reconstitution of government operations and services; individual, private sector, nongovernmental, and public assistance programs to provide housing and to promote restoration; long term treatment of affected persons; additional measures for social, political; environmental, and economic restoration; evaluation of the incident to identify lessons learned; post incident reporting; and development of initiatives to mitigate the effects of future incidents

5) Mitigation

Those activities designed to reduce or eliminate risk to persons or property or to lessen the actual or potential effects or consequences of an incident. Mitigation measures may be implemented prior to, during, or after an incident. Mitigation measures are often informed by lessons learned from prior incidents.

Mitigation involves ongoing actions to reduce exposure to, probability of, or potential loss from hazards. Measures may include zoning and building codes, floodplain buyouts, and analysis of hazard-related data to determine where it is safe to build or locate temporary facilities. Mitigation can include efforts to educate governments, businesses, and the public on measures they can take to reduce loss and injury.

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)

Homeland Security Presidential Directive-5 (HSPD-5) established the nations' standardized incident management system. It is composed of standardized doctrine, concepts, principles, terminology, and organizational processes. This system called the National Incident Management System or NIMS, was initiated, and subsequently made a requirement for all entities engaged in preventing, preparing for, responding to, recovering from, and mitigating emergencies. The NIMS creates a command structure to coordinate operations, planning, logistics, and finance/administration for all field operations using the Incident Command System (ICS). The NIMS uses a core set of management concepts and establishes standards for planning, training, and exercising. Additionally, NIMS sets standards for equipment acquisition and certification, provides a means for interoperable communications, and ensures consistent organizational processes and structures.

The NIMS management concepts apply to all phases of emergency management and to all entities involved in the phases of emergency management. The implementation of this system, as required by HSPD-5, will be utilized to create nationwide consistency and to facilitate coordination amongst agencies, jurisdictions, and resources that may be utilized to support an incident.

As mandated by Homeland Security Presidential Directive-5, beginning in FY 2005, adoption of NIMS by state and local governments will be a condition for the receipt of federal preparedness funds, including grants, contracts and other activities. The deadline for full NIMS compliance is Sept. 30, 2006, the end of FY 2006. In the short term, jurisdictions will be considered to be in compliance the NIMS by adopting the Incident Command System and NIMS principles and policies. Specific NIMS requirements for "full NIMS compliance" to be completed during FY 2006 have not yet been released.

HOMELAND SECURITY PRESIDENTIAL DIRECTIVE - 8

Homeland Security Presidential Directive - 8: National Preparedness (HSPD-8) directs planning toward an all-hazards approach in the National Preparedness Goal that establishes measurable priorities, targets, and a common approach to developing needed capabilities.

Capabilities Based Planning

The Goal utilizes a capabilities-based planning approach: Planning, under uncertainty, to provide capabilities suitable for a wide range of threats and hazards, within an economic framework that necessitates prioritization and choice. Capabilities-based planning addresses uncertainty by analyzing a wide range of potential scenarios to identify required capabilities. The Capabilities-based planning tools and products are:

- **National Planning Scenarios:** Planning documents that provide parameters for 15 terrorist attacks and natural disasters, providing the basis to define prevention, protection, response and recovery tasks and capabilities required to perform them.
- **Universal Task List:** A reference tool that provides a comprehensive menu of tasks to be performed by different disciplines at all levels of government to address major events.
- **Target Capabilities List:** A list and description of the capabilities needed to perform critical homeland security tasks found in the Universal Task List.

NATIONAL PRIORITIES

The National Preparedness Goal also includes seven national priorities. Efforts to achieve these seven priorities will not only address essential needs in the near-term; they will also reinforce national efforts to achieve the target capabilities that are imperative to national preparedness for the longer-term. The national priorities are:

Overarching Priorities

1. Implement the National Incident Management System (NIMS) and the National Response Framework (NRF)
2. Expanded Regional Collaboration
3. Implement the Interim National Infrastructure Protection Plan

Capability-Specific Priorities

1. Strengthen Information Sharing and Collaboration Capabilities
2. Strengthen Interoperable Communications Capabilities
3. Strengthen Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Detection, Response and Decontamination Capabilities
4. Strengthen Medical Surge and Mass Prophylaxis Capabilities

CONSISTENCY STATEMENT

St. Lucie County will make all appropriate efforts within the constraints of budget to be consistent with the National Preparedness Goal as stated in HSPD-8. St. Lucie County participates through the State of Florida as a recipient of Florida's State Homeland Security Grant Program (SHSGP). The process for developing and receipt of the SHSGP requires the state's homeland security program to undergo a collaborative, multidisciplinary, multi-jurisdictional Capability Review in order to evaluate strengths and weaknesses relative to the national priorities and capabilities.

Specific activities consistent with the National Preparedness Goal:

- Adoption of NIMS by the St. Lucie County BOCC in 2006
- NIMS-specific training conducted year-round
- ICS identified for field and EOC operations in the St. Lucie County CEMP
- CEMP is consistent with the National Response Framework and the State CEMP
- Regional collaboration utilized as evidenced by participation in the Area 5 Emergency Managers Group, the Region 5 Regional Domestic Security Task Force, the District 10 Local Emergency Planning Committee, and the Treasure Coast Regional Planning Council.
- Regional approach to strengthening Chemical Biological Radiological Nuclear Explosive (CBRNE) response and detection through the Regional Domestic Security Task Force's initiatives and local terrorism response annex
- Increasing capability for Hazardous Materials Response and Decontamination through training, participation in the District 10 LEPC, and local Fire District HAZMAT initiatives.

Through Resolution # 06-270, St. Lucie County officially adopted the National Incident Management System (NIMS) and began its transition towards compliance with NIMS. That transition is currently underway, with efforts to restructure organizational processes, obtain training in the NIMS and the Incident Command System. A copy of this resolution is located in Appendix C – Compendium of Authorities.

KEY FEATURES OF NIMS

Incident Command System (ICS)

NIMS establishes ICS as a standard incident management organization with five (5) functional areas - command, operations, planning, logistics, and finance/administration -- for management of all major incidents. To ensure further coordination, and during incidents involving multiple jurisdictions or agencies, the principle of unified command has been universally incorporated into NIMS. This unified command not only coordinates the efforts of many jurisdictions, but also provides for and assures joint decisions on objectives, strategies, plans, priorities, and public communications.

Communications and Information Management

NIMS prescribes interoperable communications systems for both incident and information management in order to address inadequate or incompatible communications equipment or procedures. This component is currently under development by the NIMS Integration Center. St. Lucie County will continue to monitor developments made in this area and to incorporate the standards, once finalized.

Joint Information System (JIS)

NIMS organizational measures enhance the public communication effort. The Joint Information System provides the public with timely and accurate incident information and unified public messages. This system employs Joint Information Centers (JIC) and brings incident communicators together during an incident to develop, coordinate, and deliver a unified message. This will ensure that Federal, state, and local levels of government are releasing the same information during an incident.

Preparedness

Under NIMS, preparedness is based on national standards for qualification and certification of emergency response personnel. It also includes planning, training, exercises, qualification and certification, equipment acquisition and certification, publication management and pre-disaster mitigation.

MANAGEMENT CONCEPTS FOR FIELD OPERATIONS AND EMERGENCY OPERATIONS CENTER

The following concepts and incident command system are applicable and implemented by all entities that conduct field operations and operations within the St. Lucie County Emergency Operations Center (EOC), regardless of whether the response is due to a daily incident, such as a vehicle accident, structural fire, EMS call, etc, or to a catastrophic disaster requiring extensive coordination of resources, personnel, and outside assistance through the EOC. The emphasis placed in EOC operations is more of a coordinating process, as the EOC serves as a Multiagency Coordination Center (MACC). This means that the local, state, and federal entities within the EOC structure abide by ICS; however, emphasis is placed in the collaboration and cooperation of groups that serve similar functions in dealing with a disaster and supporting field operations. Whereas an Incident Command Post (ICP) is established in the field to deal directly with an incident, the EOC is activated when incidents become complex in nature and “blue sky” response functions no longer can resolve the incident. It is at this point that all entities assigned to response and recovery functions gather at the EOC to coordinate and implement a seamless flow of resource management and the accomplishment of incident objectives.

- **Incident Command Post**

A temporary site strategically set up by emergency response personnel (e.g., fire rescue, EMS, and law enforcement) close to the incident where on-scene incident command and management organizations provide tactical operations.

- **Emergency Operations Center**

During an escalating incident, an EOC supports the on-scene response by relieving the burden of external coordination and securing additional resources. EOC core functions include coordination; communications; resource allocation and tracking; and information collection, analysis, and dissemination. EOCs may be staffed by personnel representing multiple jurisdictions and functional disciplines and a wide variety of resources.

- **Multiagency Coordination (MAC) Group**

A MAC Group is comprised of administrators/executives, or their designees, who are authorized to represent or commit agency resources and funds. MAC Groups may also be known as multiagency committees or emergency management committees. A MAC Group does not have any direct incident involvement and will often be located some distance from the incident site(s) or may even function virtually. A MAC Group may require a support organization for its own logistics and documentation needs; to manage incident-related decision support information such as tracking critical resources, situation status, and intelligence or investigative information; and to provide public information to the news media and public. The number and skills of its personnel will vary by incident complexity, activity levels, needs of the MAC Group, and other factors identified through agreements or by preparedness organizations. A MAC Group may be established at any level (e.g., national, State, or local) or within any discipline (e.g., emergency management, public health, critical infrastructure, or private sector). MAC groups in the St. Lucie County EOC are assigned in Emergency Support Functions (ESFs) or units, to maintain consistency of ICS.

- **Chain of Command/ Unity of Command**

Field Operations will adhere to the Chain of Command. Every individual on scene will have a designated supervisor to which they report and from which they receive instructions.

- **Establishment and Transfer of Command**

The first responder to arrive on scene is responsible for establishing command. This individual serves as the Incident Commander (IC) and continues in that role until replaced by a more senior responder. When command is transferred, the outgoing Incident Commander must give a briefing that captures all essential information to the incoming Incident Commander and notifies all responders that command has been transferred.

During EOC activations, representatives assigned to manage stations that serve Emergency Support Functions (ESFs) and units, including Command and General Staff of the EOC, will transfer command by providing a briefing.

- **Span of Control**

Individuals with Incident Management supervisory responsibility should have no less than three (3) and no more than seven (7) subordinates in order to maintain effective span of control. The Incident Command Structure should be expanded, when necessary to maintain span of control.

- **Management by Objectives**

Operations in St. Lucie County are required to be “Managed by Objectives”. Objective setting begins at the top and is communicated throughout the entire organization. The Incident Commander or Unified Commander is required to:

- 1) Establish overarching objectives for the incident
- 2) To develop and issue assignments, plans, procedures, and protocols
- 3) To establish specific, measurable objectives for various incident management functional activities and direct efforts to attain them
- 4) Document results to measure performance and facilitate corrective action

- **Incident Action Plan**

The Incident Commander or Unified Command will develop an Incident Action Plan (IAP), which can either be written or oral, for field operations in order to convey the objectives from command for both operational and support activities.

- **Deployment**

Personnel and equipment should respond only when requested or when dispatched by an appropriate authority.

- **Accountability**

All responders, regardless of agency affiliation, must check-in to receive an assignment at a location established by command at the onset of the incident.

- 1) Response Operations must be directed and coordinated as outlined in the Incident Action Plan
- 2) Each individual involved in incident operations will be assigned to only one supervisor
- 3) Supervisors must be able to adequately supervise and control their subordinates, as well as communicate with and manage all resources under their supervision
- 4) Supervisors must record and report resource status changes as they occur.

- **Resource Management**

The NIMS defines standardized mechanisms to describe, inventory, track, and dispatch resources before, during, and after an incident. Resources are classified by ‘Category’, which refers to function and ‘Kind,’ to include teams, personnel, equipment, and supplies. Information about the level of capability is referred to as the ‘Type,’ which is a measure of minimum capabilities to perform the function. Type I implies a higher capability than Type II. Resources to be typed include personnel, teams, facilities, equipment, and special capability assets. Examples of some of these include law enforcement teams, Urban Search and Rescue (USAR), fire engines, ambulances, police cars, electric utility restoration equipment, public works resources, etc. This typing will help ensure that the requested resource is properly matched to the needs of the situation.

- **Integrated Communications**

The NIMS prescribes interoperable communications systems for both incident and information management in order to address inadequate or incompatible communications equipment or procedures. This component is currently under development by the NIMS Integration Center. St. Lucie County will continue to monitor developments made in this area and to incorporate the standards, once finalized.

FIELD and EOC OPERATIONS

Field and EOC operations in St. Lucie County are to be conducted in accordance with the Incident Command System (ICS) as outlined in NIMS. Field operations include any on-scene activities that address the short-term direct effects and short-term recovery actions of an incident. This includes immediate actions to save lives, protect property, and meet basic human needs as well as the execution of emergency operations plans to limit the loss of life, personal injury, property damage, and other unfavorable outcomes.

As indicated by the situation, activities may also include applying intelligence and other information to lessen the effects of consequences of an incident; security operations; continuing investigations into the nature and source of the threat; ongoing public health and agricultural surveillance/testing processes, immunizations; isolation, or quarantine. It also includes any specific law enforcement operations aimed at preempting or disrupting illegal activity and apprehending the perpetrators.

Determining Who Is In Charge

Establishing who is in charge of a field operation in St. Lucie County depends on the type of Incident, though management of the incident will remain consistent, regardless of who is in charge. The following are general examples of how the Lead Agency will be determined by the Type of Incident. The Lead Agency will assume Command and will subsequently be responsible for directing all aspects of the response, within their legal authority, to the incident site.

Within the St. Lucie County EOC, the Incident Commander role is provided by the County Administrator, the Public Safety Director, the Chair of the Board of County Commissioners (BOCC), or their designee. Incident Command within the EOC may change to Unified Command, if expert assistance and support is needed from agencies that routinely deal with the type of complex incident encountered, such as the St. Lucie County Sheriff's Office for terrorist/civil disturbances, the Florida Department of Health in St. Lucie County for pandemic and health related disasters, and the St. Lucie County Fire District for fires and hazardous materials disasters.

INCIDENT	LEAD DISCIPLINE
Terrorism/Civil Disturbance/ Explosives/Mass Fatalities	Law Enforcement
Rescue (Non-Criminal)/HAZMAT Release/ Structural Collapse	FIRE
Mass Casualties	EMS
Utility Outage	Utility or Public Works

TYPES OF COMMAND

There are two types of command used, single, and unified. In each, the command staff is responsible for overall management of the incident, including command staff assignments necessary to support the command function. The primary difference between a Single and Unified Command (UC) is that in a Single Command, the IC is solely responsible for establishing objectives and strategies and for ensuring that all activities are directed towards accomplishment of the strategy. In a UC, the individuals designated by the jurisdictional authorities must co-locate and jointly determine objectives, strategies, plans, priorities, and use of assigned resources. St. Lucie County will utilize the most efficient ICS structure based on the needs of the incident, and will consider expanding the ICS organizational structure, as the situation warrants. In addition, an Area Command may also be established to set priorities resulting from multiple incident sites with multiple ICs. If there are multiple incident sites, involving multiple agencies or jurisdictions, a Unified Area Command may be established.

Single Command

Established when the incident occurs within one jurisdiction and no other agency has jurisdictional authority. If the incident does involve other agencies or jurisdictions, the single command can still be used if all parties agree to forego the option to establish a UC. The IC identifies resource needs and reports them to the St. Lucie County Emergency Operations Center (SLC EOC).

Unified Command

A Unified Command is used to enable agencies with different legal, geographic, and functional responsibilities to coordinate, plan and interact effectively. Agencies retain their independent authority and responsibilities, however, they use a collaborative decision-making process to establish a single set of objectives, perform under a single Incident Action Plan (IAP), and designate incident priorities. Additionally, all members of the UC utilize a single incident command post, and participate in unified planning and resource management. The composition of the UC will depend on the location of the incident and the type of incident as to which public safety organization has jurisdiction or legal authority. Other agencies that are involved, but lack jurisdictional responsibility are defined as “Supporting Agencies” and are represented in the command structure through interaction with the Liaison Officer (LO). The UC identifies resource needs and reports them to the SLC EOC.

Area Command

An Area Command is activated only if necessary, based on the complexity of the incident and to address span of control issues. An area command is established either to oversee the management of multiple incidents that are being handled by separate ICS organizations or to oversee the management of a very large incident that involves multiple ICS organizations. Area Command does not have operational responsibilities. The Area Command sets overall priorities, allocates resources, ensures effective communications, and ensures incident objectives are met. The Area Command identifies resource needs and reports them to the SLC EOC. Area Command may be established at an emergency operations center facility or at some location other than an Incident Command Post (ICP).

Unified Area Command

Area Command becomes Unified Area Command when incidents are multi-jurisdictional.

Multi-Agency Coordination Systems (MACS)

Multi-agency coordination systems provide the architecture to support coordination for incident prioritization, critical resource allocation, communications systems integration, and information coordination. The components of multi-agency coordination systems include facilities, equipment; emergency operation centers (EOCs), specific multi-agency coordination entities, personnel, procedures, and communications. These systems assist agencies and organizations to fully integrate the subsystems of the NIMS.

Incident Command System	Unified Command	Area Command (Unified Area Command)	Multiagency Coordination Systems (MACS)	Emergency Operations Centers (EOCs)
The management system used to direct all operations at the incident scene. The Incident Commander (IC) is located at an Incident Command Post (ICP) at the incident scene.	An application of ICS used when there is more than one agency with incident jurisdiction. Agencies work together through their designated Incident Commanders at a single ICP to establish a common set of objectives and strategies, and a single Incident Action Plan.	Established as necessary to provide command authority and coordination for two or more incidents in close proximity. Area Command works directly with Incident Commanders. Area Command becomes Unified Area Command when incidents are multijurisdictional. Area Command may be established at an EOC facility or at some other location other than an ICP.	An activity or a formal system used to coordinate resources and support between agencies or jurisdictions . A MAC Group functions within the MACS. MACS interact with agencies or jurisdictions not with incidents. MACS are useful for regional situations. A MACS can be established at a jurisdictional EOC or at a separate facility.	Also called Expanded Dispatch, Emergency Command and Control Centers, etc. EOCs are used in varying ways at all levels of government and within private industry to provide coordination, direction, and control during emergencies. EOC facilities can be used to house Area Command and MACS activities as determined by agency or jurisdiction policy.

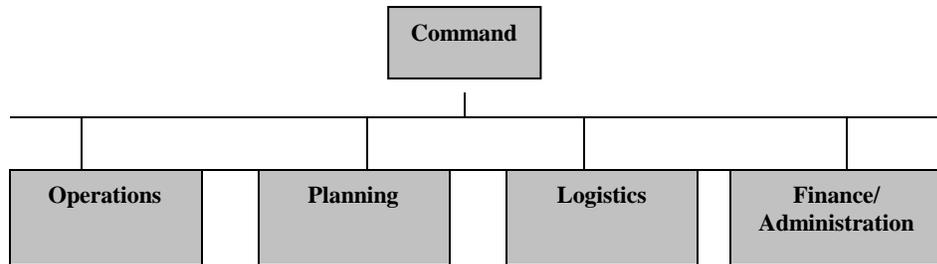
***Source: *National Incident Management System, 2004*

USE OF THE INCIDENT COMMAND SYSTEM (ICS)

The Incident Command System is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organized structure, designed to aid in domestic incident management activities. It is used for a broad spectrum of emergencies, from small to complex incidents, both natural and human-caused, to include acts of catastrophic terrorism. It is the system to be used for field operations, and is not applicable to the conduct of the St. Lucie County Emergency Operations Center, though its management is similarly, but not identically, constructed.

The ICS organizational structure is modular, extending to incorporate all elements necessary for the type, size, scope, and complexity of a given incident. The ICS structural organization builds from the top down; responsibility and performance begin with the Incident Command element and the (IC).

When the need arises, four separate sections can be used to organize the staff. Each of these may have several subordinate units, or branches, depending on the management requirements of the incident. If one individual can simultaneously manage all functional areas, no further organization is required. If one or more of the functions requires independent management, an individual is assigned responsibility for that function.



Operations Section

The Operations Section is responsible for developing the tactical operations in support of Command’s objectives and for all activities associated with providing emergency response services. The Operations Chief is the Key tactical decision-maker in large operations.

Planning Section

The Planning Section is responsible for collecting, evaluating, and disseminating tactical information pertaining to the incident. This section maintains information and intelligence on the current and forecasted situation, as well as the status of resources assigned to the incident. The Planning Section prepares and documents Incident Action Plans (IAP’s) and incident maps, and gathers and disseminates information and intelligence critical to the incident. The Planning Section has four primary units and may include a number of technical specialists to assist in evaluating the situation and forecasting requirements for additional personnel and equipment.

Logistics Section

The Logistics Section meets all support needs for the incident (Except aircraft), including ordering resources through appropriate procurement authorities from off-incident locations. It also provides facilities, transportation, supplies, equipment maintenance and fueling, food service, communications, and medical services for incident personnel.

Finance/Administration Section

When there is a specific need for financial, reimbursement (individual or agency/department), and/or administrative services to support incident management activities, a Finance/Administration Section is established. Not all agencies will require such assistance, however in large, complex scenarios involving significant funding, the Finance/Administrative Section is an essential part of the ICS. In addition to monitoring multiple sources of funds, the Section Chief must track and report to the Incident Commander (IC) the financial “burn rate” as the incident progresses. This allows the Incident Commander to forecast the need for additional funds before operations are negatively affected.

COMMAND AND GENERAL STAFF

Command Staff

Command is comprised of the **Incident Commander and the Command Staff**. The first responder to arrive on scene is responsible for establishing command.

- This first responder on scene assumes the position of “Incident Commander” and continues in that role until command is transferred to another more qualified individual, terminated, or converted to Unified Command. Appropriate notification must be given to all responders of Changes in Command.
- It is at the discretion of the Incident Commander (IC), or Unified Command (UC), to appoint a Command Staff. If these positions are not filled, their responsibilities fall to the IC/UC. The Command Staff generally consists of a Public Information Officer (PIO), Safety Officer (SO), and Liaison Officer (LO). The Command Staff has responsibility for key activities not specifically identified in the General Staff Functional Elements.

General Staff

The General Staff represent the major functional elements (Operations, Planning, Logistics, Finance/Administration, and Information and Intelligence) of the Incident Command System. They are given specific titles consistent with the common terminology concept.

Organizational Element	Leadership Position
Incident Command	Incident Commander (IC)
Command Staff	Officer
Section	Section Chief
Branch	Branch Director
Divisions and Groups*	Supervisors
Unit**	Unit Leader

*The hierarchical term *supervisor* is only used in the Operations Section.

**Unit leader designations apply to the subunits of the Planning, Logistics, and Finance/Administration Sections.

***Source: *National Incident Management System, 2004*

Incident Commander / Unified Command

- First on scene assumes incident command, until command is transferred to another, converted to unified command, or incident is terminated
- Responsible for all functions of incident management
- Appoints and supervises Command Staff, or assumes responsibilities of those positions
- Expands ICS organization as necessary, or assumed responsibilities of those functions
- Determines Incident Objectives and strategy
- Identifies Incident Command Post location and locates there

COMMAND STAFF

Public Information Officer

- Incident Command will assign a PIO
- Interfaces with the public and media and/or other agencies
- Monitors Information
- Serves as the single PIO for the incident, whether single or unified command is established
- Secures the approval of the Incident Commander/Unified Command for all information released
- Responsible for organizing any assistants assigned from other agencies for maximum efficiency

Safety Officer

- Incident Command will assign a SO
- Monitors incident operations
- Single Safety Officer regardless of single or unified command structure
- Advises the IC/UC on all matters relating to operational safety, and health and safety of responders
- Responsible to the IC for systems, procedures to assess hazardous environments, coordinate multi-agency safety efforts, implement safety measures, and ensure safety
- Has emergency authority to stop and prevent unsafe acts
- Coordinates closely with the Operations Section Chief and planning Section Chief regarding operational safety
- Responsible for organizing any assistants assigned from other agencies for maximum efficiency

*****NOTE: EACH AGENCY STILL RESPONSIBLE FOR THEIR OWN PROGRAMS AND PERSONNEL SAFETY**

Liaison Officer

- Incident Command will assign a LO
- Coordinates with representatives from assisting agencies at the Command Post
- Responsible for organizing any assistants assigned from other agencies for maximum efficiency

Assistants

- May serve Command Staff Members to help manage workload

GENERAL STAFF

Operations Section Chief

- Only one Operations Section Chief for each operational period
- Responsible to the IC/UC for direct management of all incident-related operational activities
- Establishes Tactical Objectives for each Operational Period, which sets the pace for the establishment actions of the other Section Chiefs
- Assists in developing the Operational Portion of the Incident Action Plan (IAP) for that particular period of responsibility
- Expands the Operations Section into Branches, as necessary to maintain span of control
- Supervises the Operations Section
- May have one or more Deputies Assigned from other agencies
- Briefs personnel
- Determines needs and requests additional resources
- Assembles/disassembles Strike Teams assigned to Operations Sections
- Reports information to the Incident Commander
- Maintains a unit/activity log

Logistics Section Chief

- Responsible for all support requirements needed
- Orders resources from off-incident locations
- Responsible for providing facilities, transport, supplies, equipment, maintenance, fuel, food services, communications and information technology support, emergency responder medical services, inoculations
- As needed, expands the Logistics Section into: Supply, Ground Support, Facilities, Food, Communications, and Medical Unit

Planning Section Chief

- Only one Planning Section Chief for each operational period
- Reports to the IC/UC
- Oversees all incident-related data gathering and analysis regarding operations and resources
- Develops alternatives for tactical operations
- Conducts planning meetings
- Prepare the Incident Action Plan (IAP) for each operational period
- Generally comes from the jurisdiction with primary incident responsibility
- May have one or more deputies from other participating organizations
- Expands the Operations Section into Branches, as necessary to maintain span of control such as Resources Unit, Situation Unit, Documentation Unit, (Technical Specialists Unit)

Finance / Administration Section Chief

- Monitoring multiple sources of funds
- Tracks the financial “burn rate” and reports to the Incident Commander (IC)
- Monitors cost expenditures to ensure that statutory rules that apply are met
- Maintains close coordination with the Planning Section and the Logistics Section
- As needed, expands the Finance/Administration Section into the Time Unit, the Procurement Unit, the Compensation and Claims Unit and the Cost Unit

B. LEVELS OF DISASTER

Chapter 252, Florida Statutes, requires each county to develop a Comprehensive Emergency Management Plan (CEMP). This CEMP must contain provisions to ensure that the county is prepared for minor, major and catastrophic disasters. Therefore, a resolution was passed by the St. Lucie Board of County Commissioners, adopting this County’s CEMP. A signed copy of the resolution can be found as a preface to this document.

1. Minor Disaster

Any disaster that is likely to be within the response capabilities of local government and results in only minimal need for State or Federal assistance.

In accordance with this CEMP, this definition translates into a Level III - Monitoring or Level II – Partial Activation of the EOC depending on the size, scope and complexity of the disaster. EOC staff will be notified of the situation, reporting status to the EOC, and operational coordination in the form of Flash Reports, which are issued prior to Level II – Partial Activation and Level I – Full Activation of the EOC.

2. Major Disaster

Any disaster that will likely exceed local capabilities and require a broad range of State and Federal assistance.

In accordance with this CEMP, this definition translates into a Level II – Partial Activation or Level I – Full Activation of the EOC depending on the size, scope and complexity of the disaster. EOC staff will be notified of the situation, reporting status to the EOC, and operational coordination in the form of Flash Reports, which are issued prior to Level II – Partial Activation and Level I – Full Activation of the EOC.

3. Catastrophic Disaster

Any disaster that will require massive State and Federal assistance, including immediate military involvement.

In accordance with this CEMP, this definition translates into a Level II – Partial Activation leading immediately to Level I – Full Activation of the EOC or an immediate activation of the EOC to Level I – Full Activation depending on the size, scope and complexity of the disaster. When complex disasters impact the area immediately, EOC staff may be required to report to the EOC as soon as possible. EOC staff will be notified of the situation, reporting status to the EOC, and operational coordination in the form of Flash Reports, which are issued prior to Level II – Partial Activation and Level I – Full Activation of the EOC.

C. ORGANIZATION

1. Jurisdictional Management Structure

St. Lucie County is part of the 19th Judicial District in Florida. There is an elected five member Board of County Commissioners and elected Constitutional Officers (Property Appraiser, Tax Collector, Supervisor of Elections, Sheriff and Clerk of Court). Each Commission Member represents one of five districts, elected at large (Countywide) for staggered terms of four years. A Chairman, as well as a Vice-Chairman are elected by the Commission. A County Administrator is appointed by the Board and is responsible for administrative and fiscal control of the resources of the County.

The County Administrator's primary responsibility is to efficiently and effectively implement the goals and policies of the Board while meeting the needs of the citizens of St. Lucie County by providing an acceptable level of service and maintaining a solid financial position.

The Administrator is directly responsible for all County departments except Constitutional Officers, County Attorney, the BCC Executive Aides and their respective employees and staff.

2. Emergency Operations

Emergency Operations are those actions taken by Emergency Management staff to support the Incident Commander (possibly through the Emergency Operations Center) and area responders in the field. When conditions warrant, and the Emergency Operations Center (EOC) is activated, those that will staff the EOC, including representatives of municipalities, county departments, and key organizations are organized as shown in the EOC Organizational Chart (see appendix D).

Direction and control of all emergency management activities remain under the St. Lucie County Commissioners or designee at all times. The organization and staffing structure of the St. Lucie County Comprehensive Emergency Management Plan are tailored to meet the needs of specific emergencies and disasters. Organizational structure and identification of operational and support roles within the EOC, which depicts the total preparedness, response, recovery and mitigation system, can be found in the EOC suggested Operating Procedures attached and identified as Appendix D.

According to NIMS, the County is not required to use the Incident Command System for organization of EOC operations; nevertheless, the county has found it useful to use a similarly constructed system in order to create consistency with the response entities in the field. The St. Lucie County Emergency Operations Manager is considered the Incident Commander of the Emergency Operations Center (Not necessarily of the incident), and mobilizes the Command Staff for resource and information support to incidents.

Field Operations

The field operations portions of emergency actions are required not only to follow the management concepts in NIMS, but also to be structured according to the Incident Command System (ICS). At any particular time, county agencies, special districts, response organizations, and municipalities may be conducting incident operations in communication with Emergency Management's Communications staff.

Other Agencies / Organizations

During non-emergency activities, other response agencies, organizations, facilities, departments, etc., operate under their respective organizational structures and are managed according to the individual agency's policies and Standard Operating Guides. Federal law (HSPD-5) requires the management to be NIMS-compliant by FY 2007.

Their emergency management activities will be coordinated with those of St. Lucie County, either through the various emergency preparedness organizations, or through St. Lucie County Emergency Management.

3. Emergency Management Organization Systems

Implementation of the concept of operations is carried out through the organizational structure described by the emergency support functions (ESF's). The organization is led by the Public Safety Director, in consultation with the County Administrator and the Board of County Commissioners. This organizational concept is compatible the current concept implemented by FDEM and FEMA and is identified in the EOC Suggested Operating Procedures, attached to this document and identified as Appendix D.

During a disaster, St. Lucie County Emergency Management may activate the EOC to support the responding agencies through the IC. The EOC is staffed and operated by the employees of St. Lucie County, representatives of municipalities and other key response and recovery organizations. The agencies and department representatives are organized according to the function that they are tasked to support and types of assistance activities that the County is likely to need from State Division of Emergency Management (FDEM); such as energy, food and water, firefighting, etc. These functions are called "*Emergency Support Functions (ESF)*".

When the EOC is activated, the designated ESF lead agencies send a representative to the EOC to coordinate that ESF. The Primary Agency has discretion as to how many, if any, support agencies they will require to support them or represent that ESF in the EOC. Due to the limited space available in the EOC, the attendance of support agencies should be closely coordinated. The Primary Agency for the ESF will be responsible for obtaining all information relating to ESF activities and requirements caused by the disaster and disaster response. This information gathering will frequently require the Primary Agency to step outside traditional information gathering protocols. Within the SRC EOC, requests for assistance will be tasked to the corresponding ESF for completion. The Primary Agency will be responsible for coordinating the delivery of that assistance to the disaster area.

For a complete listing of primary and secondary agencies and their respective ESF's see the ESF Matrix attached to this document and identified as Figure 5. The ESF's and lead agencies include:

ESF #1 Transportation -

St. Lucie County School Board/Transportation Department

Coordination of transportation systems and provision of emergency transportation of goods for other ESF's.

ESF #2 Communications - 911 Coordinator

To provide emergency radio and telephone communications services to organizations involved in the response and recovery operation and to support the private sector in restoration of the affected public grids.

ESF #3 Public Works and Engineering -

St. Lucie Co. Public Works

St. Lucie Co. Road & Bridge Ft. Pierce Public Works Port St. Lucie Public Works

Evaluation of infrastructure damages and coordination of emergency clearing of essential roads of debris. Will also coordinate emergency contracting, engineering services and demolitions.

ESF #4 Firefighting -

St. Lucie County Fire District

To detect and suppress woodland, rural and urban fires. Also, to provide incident management teams to assist in command and control operations. Directs all search and rescue operations.

ESF #5 Information and Planning -

St. Lucie County Department of Public Safety Division of Emergency Management

To collect, analyze and disseminate critical information on emergency operations for decision-making purposes.

ESF #6 Mass Care -

American Red Cross – Treasure Coast Chapter

Management and coordination of shelters, feeding and first aid for disaster victims.

ESF #7 Resource Management –

St. Lucie County Parks, Recreation and Facilities Department

To secure resources through mutual aid agreements or procure resources for other ESFs as needed.

ESF #8 Health & Medical Services -

Florida Department of Health in St. Lucie County

Identification of health and medical needs, provision of trained health and medical personnel and provision of supplies and emergency facilities in the affected area, as well as in shelters.

ESF #9 Urban Search and Rescue -

St. Lucie County Fire District

The Fire District is the lead agency responsible for coordinating and securing Search and Rescue (SAR) areas. The Fire District is the lead agency for locating, extricating and providing emergency assistance to victims trapped in debris or wreckage created by the disaster.

ESF # 10 Hazardous Materials –

St. Lucie County Fire District

To provide inspection, containment and cleanup of hazardous materials accidents of releases.

ESF # 11 Food and Water -

Treasure Coast Chapter American Red Cross

Coordination with ESF #6 to identify the food and water needs of disaster victims and to ensure that supplies of food and water (or vouchers to obtain them locally where possible) are provided.

ESF # 12 Energy and Utilities -

St. Lucie County Utilities Department

To coordinate and direct the restoration of water, sewer, electrical power, phone service and fuel supplies.

ESF #13 Military Support -

St. Lucie County Public Safety Department

To coordinate RIAT assignments and National Guard resources to assist in the ESF's where needed.

ESF # 14 Public Information -

St. Lucie County Media Relations

To establish and manage Joint Information Centers (JIC), and to coordinate the dissemination of all disaster-related information to the media and the general public.

ESF # 15 Volunteers and Donations -
St. Lucie County Community Services Department

To manage the receipt and distribution of donated goods and services to meet request in the wake of a disaster.

ESF #16 Law Enforcement and Security –
St. Lucie County Sheriff’s Office

Provision of armed escort to emergency workers or transport caravans and security to emergency facilities, as well as general law enforcement service during an emergency.

ESF # 17 Animal Care/Agriculture -
St. Lucie County Animal Control

Coordination and provision of adequate shelter and care for animals.

Table 12: ESF Matrix - Primary (P) and Support (S) Agencies

AGENCY	ESF																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
St. Lucie County																	
911 Public Safety Communications		P															
Animal Control																	P
BOCC			S		S		S										
Building			S		S			S									
Clerk of Court					S		S										
Community Services			S			S										P	
Council on Aging	S							S								S	
County Administrator					S		S										
Emergency Management		S			P		P			S	S			P			
Engineering Division			S	S													
Fire District/EMS				P				S	P	P							
Health Department					S			P						S			S
HR							S										
Humane Society																	S
IT					S												
Marine Safety		S		S				S									
Mosquito Control							S										S
OMB							S										
Planning					S												
Property Appraiser					S												
Radiological							S										
Parks, Rec & Facilities											P						
Public Works			P								S						
PIO														P			
American Red Cross					S	P	S	S			S			S	S		
Salvation Army						S	S	S			S				S		
School Board	P					P											

Table 12 (Continued): ESF Matrix - Primary (P) and Support (S) Agencies

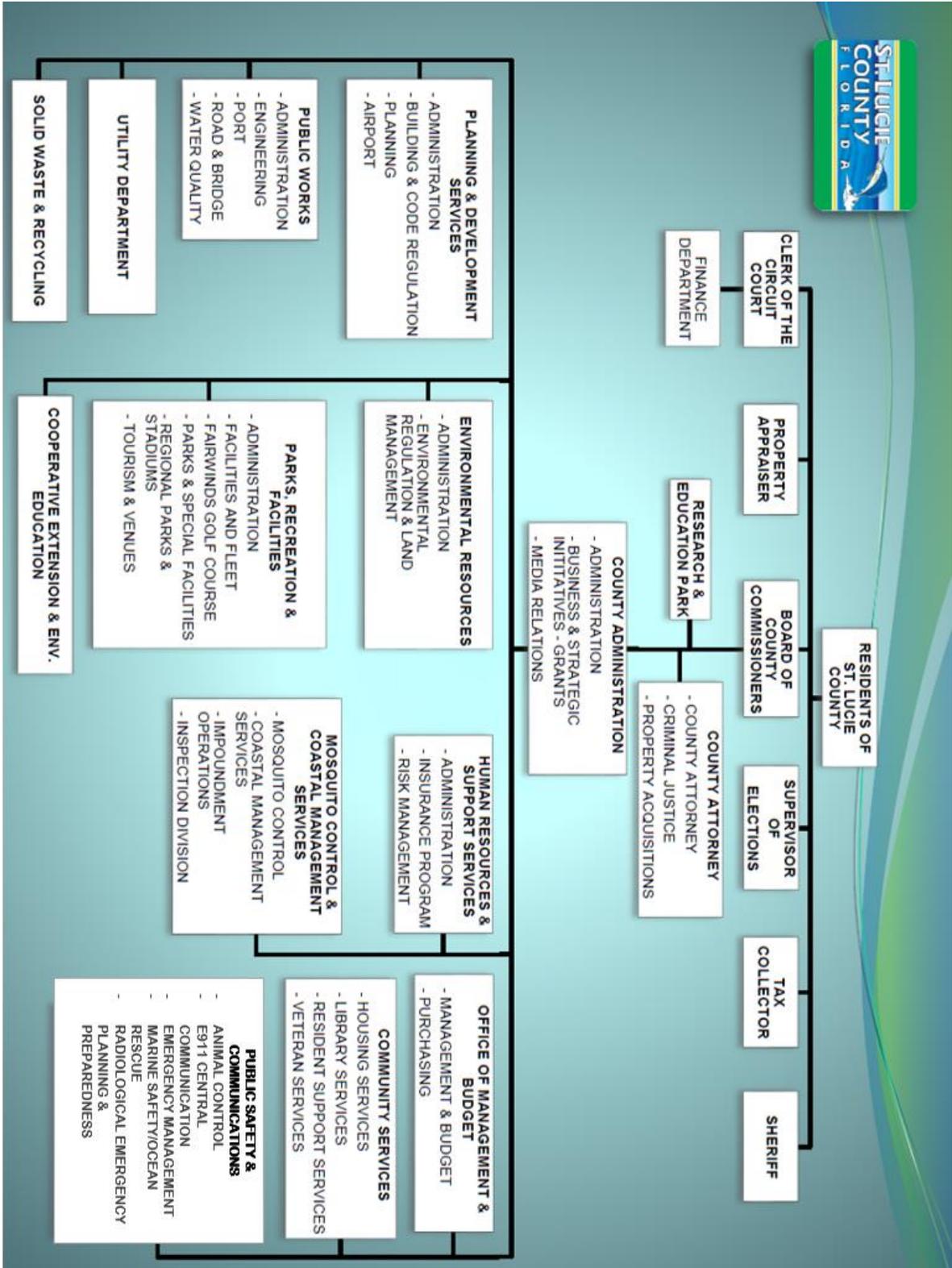
AGENCY	ESF																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Sheriff's Office													S			P	S
St. Lucie TPO	S			S	S				S		S						
Solid Waste Division			S					S									
UF/IFAS Extension																	S
Utilities												P					
Ft. Pierce, City of																	
Police													S			S	
Public Works			S							S		S					S
Utilities												S					
Port St. Lucie, City of																	
Police													S			S	S
Public Safety			S														
Public Works			S							S		S					
Utilities			S									S					
Regional																	
Florida DEM					S												
Florida Power and Light								S				S					
Florida National Guard													P				
Florida Highway Patrol													S				
Florida Department of Law Enforcement													S				

**Table 13: Agency Responsibilities in the Recovery Phase –
Primary (P) and Support (S) Agencies**

Agency	Damage Assess.	Debris Mngt	Info & Planning	Resource Support	Comm. Relations	Unmet Needs	EMER Housing	Disaster Recovery Centers	Public Info	Public Assistance Programs
School Board (ESF #1)	S		S		S					
RACES (ESF #2)			S		S					
Public Works (ESF #3)	S	P								
Fire Dept. (ESF #4)	S				S					
EM (ESF #5)	S		P	P	P			P	P	P
American Red Cross (ESF #6)			S		S		P			
Parks, Rec & Facilities (ESF #7)						P				
Public Health (ESF #8)					S					
Environment Health (ESF #10)	S									
Utilities (ESF #12)	S									
Military Support (ESF #13)			S	S						
Law Enforcement (ESF #16)	S		S		S					
Building Dept.	S									
Civil Air Patrol	S									
Community Development	S									
DRC Consultant Services		S								
General Services			S							
Property Appraisers Office	P		S		S					
Salvation Army					S	S				
Solid Waste	S	S								
Purchasing				S						

Table 14: Agency Responsibilities for Hazard Mitigation Primary (P) and Support (S) Agencies		
	Pre-Disaster Mitigation	Post-Disaster Mitigation
Emergency Management ESF #5	S	S
Local Mitigation Strategy Working Group	P	P

Figure 3: St. Lucie County Organization Chart



D. DIRECTION & CONTROL

1. Discussion of decision-making authority retained at county level:
 - a. The on-scene commander or commanders in an emergency response are local officials, usually a representative from emergency management, law enforcement, fire or EMS. Overall, local coordination and commitment authority for local assets is retained by local elected officials and delegated to the County Public Safety Director.
 - b. The Public Safety Director is responsible for the activation and maintenance of the operational readiness of the EOC, directing county evacuation, opening shelters, requesting state assistance and all recovery activities within the county. County authorities, through the Public Safety Director, may also activate mutual aid agreements with neighboring counties and shall coordinate mutual aid agreements between municipalities within the county.
2. The following are the levels of activation used by the County EOC.

- a. **Level I – Full Activation:**

Level 1 – Full Activation means that all staff from primary and support agencies assigned to a seat at the EOC are requested to report to the EOC. Level 1 EOC activations are warranted when disasters are complex or when an incident is forecasted to evolve to a disaster. The EOC will be staffed by Division of Emergency Management personnel and all Emergency Support Functions.

- b. **Level II – Partial Activation:**

Level 2 – Partial Activation is a limited EOC activation. This means that only some of the ESFs/units of the EOC will be requested to report to the EOC. All ESF/units agencies are notified of the partial activation and some ESFs/units will be called to report to the EOC depending on the type, size, scope and complexity of the incident that can be managed by those called upon ESFs/units. The EOC will be staffed by Emergency Management personnel and necessary Emergency Support Functions.

- c. **Level III – Monitoring :**

Level 3 - Monitoring is a phase of the EOC where staff performs their everyday functions. During blue skies, the EOC stays at Level 3 – Monitoring. Public Safety and Division of Emergency Management personnel perform their everyday function, which includes monitoring news, media, and weather for any potential event that may turn into a complex incident or disaster. Notification will be made to those agencies and Emergency Support Functions who would need to take action as part of their everyday responsibilities. The EOC will be staffed with 24 hour Warning Point Communicators and Division of Emergency Management Staff.

3. Once the EOC has been activated by the Public Safety Director, all Department of Emergency Management personnel will be recalled and placed on 12-hour shifts to ensure 24-hour staffing of the EOC and field operations. This arrangement will remain in effect until released by the Public Safety Director.
4. Upon activation of the EOC, a manual message system, utilizing pre-printed triplicate forms, will be established to control and document the flow of information within the EOC. See Annex Five Support Functions, ESF #5 (Information and Planning) for more detailed information.
5. Each message is routed through ESF #5 and assigned a mission number to provide a mechanism for validating and tracking the request/message.
6. The Public Safety Director and/or the EOC Supervisor is responsible for developing and maintaining SOPs and checklists, which detail how assigned responsibilities will be implemented to support this plan.
7. Discussion of decision making authority of the State Coordinating Officer (SCO), Governor's Authorized Representative (GAR), Deputy SCO response, State Emergency Response Team (SERT) leader and SERT ESFs:
 - a. At the State level, decision-making authority and commitment of state assets is retained at the State Emergency Operation Center (SEOC) by the SERT Leader, or some other designee within State agencies. The SERT Leader may issue mission assignments to the lead agencies of the state ESFs. Mission assignments and mutual aid agreements, brokered by the state are tracked in the SEOC by a staff person reporting to the SERT Leader.
 - b. In the event of federal assistance, an SCO will be appointed to interface directly with the federal government. Depending on the complexity of the event and the need to broaden span-of-control, the SCO may be supported and assisted by the GAR and Deputy SCOs for Response and Recovery. The Deputy SCOs are responsible for ensuring close coordination between federal and state representatives and anticipating the needs and conflicts in the operation as it progresses.

8. Discussion of Direction and Control for Evacuation

- a. The majority of evacuations are site specific and related to a specific public safety hazard; this type of evacuation is usually initiated by the first arriving public safety officer. County-wide evacuations greater than a minor incident in scope will be directed by the Public Safety Director, or his designee. The evacuation will be coordinated and administered in accordance with County evacuation plans. St. Lucie County has mutual aid agreements with Indian River, Okeechobee, Martin counties, and is a participant in the Statewide Mutual Aid Agreement for Catastrophic Response and Recovery to provide expanded resource capability. These agreements will be developed, coordinated and amended by the Public Safety Director. During any county administered evacuation that does not require activation of the SEOC. State assistance may be provided under the various state agencies normal statutory authority through coordination by FDEM.
- b. However, in the event of a multi-county, regional or interregional evacuation, the Governor or the GAR may issue an evacuation order in support of a local order. This decision will be made following consultation with the SCO, the Deputy SCO for Response, and the SERT Leader and representatives of the impacted counties.
- c. All state assistance and support of such evacuations will be coordinated from the SEOC under the direction and control of the SERT Leader. Decisions on evacuation issues, such as lifting tolls on state toll facilities; locking down drawbridges; deploying and pre-deploying personnel; determining regional evacuation routes; directing people caught on evacuation routes to safe shelter; ensuring the sufficiency of reasonably priced fuel; and addressing any emergency medical issues relative to evacuation. The following types of decisions will be made after coordination between the SERT leader, the affected State ESF and the impacted counties.

9. Discussion of Direction and Control for Shelter

The decision of opening shelters is a responsibility of the Public Safety Director. Should a request for assistance be made to the SEOC, it will be to support the local sheltering plan with assistance in staffing shelters; identifying additional shelters; and managing shelters with a shortfall of resources. The SEOC will coordinate through ESF #6 (Mass Care) any requests for assistance from other ESFs that will be needed to support multi-county, regional and interregional shelter operations.

- a. The SERT Leader, following discussions with the GAR, ESF #6 (Mass Care) and the representatives of the impacted counties, will provide information regarding the status of evacuation orders and the potential for shelter needs on a county, regional, inter-regional, and/or statewide basis. All state assistance and support of sheltering will be coordinated from the SEOC through ESF #6 (Mass Care), under the direction and control of the SERT Leader. Decisions on sheltering issues will be made after coordination between appropriate State ESFs, impacted counties and SERT Leader.

10. Discussion of Relationship Between Primary and Support Agencies in the ESFs:

- a. An agency may be designated “the primary” for an ESF for a number of reasons. The agency may have a statutory responsibility to perform that function, or through its programmatic or regulatory responsibilities, the agency may have developed the necessary expertise to lead the ESF. In some agencies, a portion of the agency’s mission is very similar to the mission of the ESF; therefore, the skills to respond in a disaster can be immediately translated from the daily business of that agency. Whatever the reason an agency is designated as the “primary” agency, that agency has the necessary contacts and expertise to coordinate the activities of that support function. For a list of primary agencies and their respective emergency support functions, see the Primary Agency Listing attached to this document and identified as Figure 6.
- b. Upon activation of the EOC, the primary agencies for the ESFs will send a representative to the EOC to coordinate that ESF. It is up to the primary agency’s discretion as to how many, if any at all, support agencies will accompany them at the EOC. Due to the limited space available in the EOC, the attendance of support agencies should be closely coordinated with the Public Safety Director.
- c. The primary agency for the ESF will be responsible for obtaining all information relating to ESF activities and requirements caused by the disaster and disaster response. This information gathering will frequently require the lead agency to step outside traditional information gathering protocols.

Table 13 - Primary Agency Listing

ESF #	FUNCTION NAME	PRIMARY AGENCY	PRIMARY STATE
1	TRANSPORTATION	SLC SCHOOL BOARD	DEPARTMENT OF TRANSPORTATION
2	COMMUNICATIONS	911 COORDINATOR	DEPT. OF MANAGEMENT SVS-DIVISION OF COMMUNICATION
3	PUBLIC WORKS & ENGINEERING	SLC PUBLIC WORKS SLC ROAD & BRIDGE	DEPT. OF TRANSPORTATION
4	FIRE FIGHTING	SLC FIRE DISTRICT	DEPT. OF INSURANCE
5	INFORMATION & PLANNING	DEPT. OF PUBLIC SAFETY EMERGENCY MANAGEMENT	DEPT. OF EMERGENCY MANAGEMENT
6	MASS CARE	TREASURE COAST CHAPTER AMERICAN RED CROSS	AMERICAN RED CROSS
7	RESOURCE MANAGEMENT	COUNTY ADMINISTRATOR	DEPT. OF MANAGEMENT SVCS.
8	HEALTH & MEDICAL SERVICES	SLC HEALTH DEPARTMENT	DEPT. OF CHILDREN AND FAMILIES
9	SEARCH & RESCUE	SLC FIRE DISTRICT	DEPT. OF INSURANCE
10	HAZARDOUS MATERIALS	SLC FIRE DISTRICT	DEPT. OF ENVIRONMENTAL PROTECTION
11	FOOD & WATER	NORTH TREASURE COAST CHAPTER OF THE AMERICAN RED CROSS	DEPT. OF AGRICULTURE AND CONSUMER SVCS.
12	ENERGY & UTILITIES	SLC UTILITIES	PUBLIC SERVICE COMMISSION – OFFICE OF THE GOVERNOR
13	MILITARY SUPPORT	CAC FLORIDA NATIONAL GUARD	DEPT. OF MILITARY AFFAIRS (FLORIDA NATIONAL GUARD – FNG)
14	PUBLIC INFORMATION	DEPT. OF PUBLIC SAFETY	DEPT. OF ECONOMIC OPPORTUNITY
15	VOLUNTEERS & DONATIONS	SLC COMMUNITY SERVICES	DIVISION OF EMERGENCY MANAGEMENT
16	LAW ENFORCEMENT & SECURITY	SLC SHERIFF OFFICE	FLORIDA DEPT. OF LAW ENFORCEMENT
17	ANIMAL PROTECTION	SLC ANIMAL CONTROL	DEPT. OF AGRICUTRE AND CONSUMER SERVICES, U.S. HUMANE SOCIETY

11. The County will respond to local requests for assistance through the ESF process. Within the EOC, requests for assistance will be tasked to the ESF for completion. The primary agency will be responsible for coordinating the delivery of that assistance to the disaster area SERT Support Staff

- a. Upon activation of the SEOC, the FDEM becomes the support staff to the SERT. The SERT support staff is charged with ensuring that SEOC procedures for information management and decision making are timely and accurate.

12. Discussion of Mission Assignments

- a. The SERT Leader, SCO or Deputy SCO will issue mission assignments to the primary state agency for the ESF based on the local government's identified resource shortfall. Resource tasking to the state agencies will be accomplished through the ESFs on a mission assignment basis. The "tasking on a mission assignment basis" means that a local government resource shortfall will be addressed through assigning a mission to address the shortfall rather than tasking specific pieces of equipment or personnel.
- b. The primary state agency for that ESF will be responsible for identifying the particular resource or resources that will accomplish the mission and coordinate the delivery of that resource to the local government.

13. Discussion of Mutual Aid Agreements and Memoranda of Understanding

- a. Mutual Aid Agreements (MAAs) and Memorandum of Understandings (MOUs) are an essential component of emergency management planning, response and recovery activities. These agreements for reciprocal emergency aid and assistance, in case of emergencies, can increase resources, expedite processing, and improve response/recovery efforts. Many agency partners have maintained an MAA/ MOU with corresponding regional and state agencies in their respective field, such as Fire Rescue and Law Enforcement, which can be activated as needed outside of an EOC activation.

Should County resources become overwhelmed, the County EOC will create a resource request out to neighboring counties or regional EM partners. All County mission and resource requests are completed and tracked through SharePoint. Should these resources not be available, a request will be sent to State partnering agencies through the State EOC via EM Constellation, an online system for requesting and tracking resources. ESF 5 – Planning will coordinate the request and apply the activation of MOU/MAA with regional and State partners, such as Fire Rescue and Law Enforcement. The process is similar for when the County receives a request for mutual aid. A confirmation of the mutual aid request is provided in writing along with whether or not the request may be fulfilled. ESF 5 – Planning would then submit this formal fulfillment response to the Florida Division of Emergency Management via the EM Constellation and then coordinate with the Logistics section.

The resource request given by the EM partnering agency is accepted by the SLC EOC and tracked in SharePoint and Constellation (State's EM system). The requesting agency is to provide a written confirmation that the resource is received. When the

resource is returned and the resource is found to be damaged or reached its burn rate, costs will be billed to the partnering agency by sending a bill as soon as practicable with reference to the Statewide Mutual Aid Agreement, the agency's written confirmation that it accepted the resource, and both the State of Emergency and Local State of Emergency Declarations. The bill is tracked by Purchasing. Copy of the MOU/MOA included as reference and the declarations. The SLC EOC provides copies of documentation in Constellation.

- b. Chapter 252, Florida Statutes, authorizes FDEM to make available any equipment, services or facilities owned or organized by the State or its political subdivisions for use in the affected area, upon request by the Emergency Management Director. The FDEM is authorized to reinforce emergency management agencies in areas stricken by emergencies.
- c. The Statewide Mutual Aid Compact will have the participating political subdivision communicate requests for mutual aid through the FDEM; any responses from assisting parties will be directed from and coordinated by the FDEM. Municipalities will coordinate requests through the County Division of Emergency Management. This will ensure that the County and State are aware of and coordinates all resources that are mobilized.

DEM's coordination of mutual aid agreements is critical to the direction and control of the overall response and recovery efforts. Without DEM as the control point, severely impacted political subdivisions may not receive the type and amount of assistance needed if each political subdivision independently request and execute agreements.

In accordance to Chapter 252, Florida Statutes, Florida also has mutual aid agreements and memorandum of understanding with other states and private organizations. These agreements provide additional resources for FDEM to have access to if needed.

The SERT support staff will monitor and coordinate all requests and executed agreements. Records will be maintained of agreement participants to effectively administer this activity.

14. Transition from EOC to the DFO EOC

- a. A presidential Disaster Declaration means that several federal aid programs will be implemented. The Administration of the federal aid programs will be conducted from a DFO that FEMA will establish in the disaster area. The establishment of post-disaster aid programs is described as the start of the recovery phase.
- b. The "response phase" and "recovery phase" of the disaster will, for a period of time, be occurring simultaneously. The "response phase" will be coordinated and conducted through the ESFs located at the EOC. The "recovery phase" will be coordinated and conducted at the EOC with a transition to the DFO as appropriate.

E. NOTIFICATION AND WARNING

1. The St. Lucie County Department of Public Safety operates a 24-hour emergency communications center, either at the main office location during routine business hours or at the 911 Communication Center during off-hours. The Department may receive initial warning of a disaster or pending disaster from the Emergency Satellite Communications System (EMNET), National Weather Service, a Nuclear Power Plant, the SEOC, municipal government or the news media. If a determination that a disaster or emergency has occurred or is imminent, the emergency management staff will notify key personnel.

The primary communication system operative through the Department prior to, during or after an emergency is the State of Florida's SUNCOM telephone network. SUNCOM is a commercial carrier telephone service operated by the State.

The EMNET System is a back-up dedicated voice and data system that links the office, through the State Warning Point, with each County Warning Point, the National Weather Service, National Hurricane Center, St. Lucie Nuclear Power Plant, Emergency Alert System Control Stations, South Florida Water Management District and the Department of Military Affairs.

When a determination has been made that inter-county resources will be required, appropriate DEM personnel will notify the ESF leaders from the required ESF. The ESF leaders will be responsible for alerting or notifying necessary personnel within their respective ESFs.

Approximately 1% of the general population are deaf and 8% are hearing impaired. According to the most recent demographic reports, there are approximately 2.5 million deaf and 20 million hearing impaired persons residing in the United States. While it is uncertain how many deaf or hearing impaired residents are in St. Lucie County, our office is prepared to handle these calls through the use of a TDD machine located in the 911 Communications Center.

A TDD is a machine that can be connected to the telephone providing deaf and hard-of-hearing people with a way to use a telephone without an interpreter. TDD users type their messages on a standard typewriter keyboard, which is read on a display by the receiver using compatible equipment. The County switchboard is also equipped with TDD equipment, thus facilitating a transfer of a caller, if necessary. The Deaf Service Center of the Treasure Coast also provides emergency warning sites on its webpage.

2. Our office maintains a fax network for disseminating up-to-the minute weather warnings or other warnings, to all local law enforcement and governmental officials/organizations. All governmental officials/organizations are also alerted via NOAA Weather Radio.
3. Amateur radio communications are provided by RACES/ARES volunteers, using equipment within the EOC. More specific information related to communications issues can be found in the description for ESF #2 (Communications), located in Annex I Response Functions.

4. The primary EOC has auxiliary power provisions capable of sustaining operations for thirty days. The secondary EOC has auxiliary power provisions capable of sustaining operations for three days.
5. The Public Safety Director and his staff, will notify key officials and emergency related organizations of any significant emergency events that may promulgate the opening of the EOC.
6. The Public Safety Director, and/or his designee, has the authority to activate the public warning system at any time an emergency event threatens persons or property.
7. Predetermined evacuation areas for hurricanes include the barrier island, low lying areas, mobile/manufactured homes, RV parks and marinas. Initial notification will be through media resources and may be augmented by the use of bull horn announcements and door-to door visits by Public Safety officers. Predetermined evacuation areas within ten mile radius of the St. Lucie Nuclear Power Plant have also been identified. Initial notification will be through the siren system within the 10 mile area. This system is operated by St. Lucie County Public Safety and maintained by FP&L. There is also a storm surge map which is on file at the Emergency Operations Center.
8. The County EOC will communicate with the SEOC on all activations, warnings and SITREPS by means of either EMNETEMNET, commercial telephone, or radio frequency links.

F. RESPONSE ACTIONS

1. General
 - a. Activation of County Plan If a disaster threatens prior to the Governor's decision to issue an Executive Order or Proclamation of a State of Emergency, the Public Safety Director or his designee, may activate this plan; this may be followed by a declaration of a Local State of Emergency as outlined in County Resolution 94-143. In this situation, the DEM will coordinate any emergency response actions that may be necessary for the immediate protection of life and property. When an emergency or disaster has occurred or is imminent, the Governor may issue an Executive Order or Proclamation of a State of Emergency, activating the emergency response, recovery and mitigation aspects of state, local and inter-jurisdictional disaster plans that apply to the affected area. Such orders or proclamations are needed for the deployment and use of state personnel, supplies, equipment, materials and/or facilities that are available.
 - b. Activation of EOC: The EOC will be activated by the Public Safety Director or his designee upon determination of a significant and immediate threat to life and property.

- c. School Closing: The Public Safety Director, or his designee, will establish direct communication with St. Lucie County School District Superintendent. Together they will make the decision of when to close and re-open schools. The official announcement will be made by the Superintendent of Schools.
- d. Request for Federal and State Assistance: When disaster effects become such that the resources of St. Lucie County and/or its municipalities are inadequate to fulfill the needs of the citizens, then aid and assistance may be requested from the State of Florida and the Federal Government. Such requests for State and Federal assistance will be made through the St. Lucie County Department of Public Safety to the Florida Division of Emergency Management. Assistance required may be in the form of information, technical expertise or substantial financial, material or resource needs. A Declaration of State of Local Emergency is a prerequisite to receive State and Federal disaster assistance. A diagram depicting the declaration process is attached to this document and identified as Figure 7.
- e. When the County is under a hurricane warning or threatened by an impending disaster, emergency workers will be relieved in shifts to prepare their families and property. While no special provisions have been made for the safety and welfare of families of emergency workers, they have been encouraged to develop their own family disaster plan.

The Public Safety Director, or his designee, is responsible for establishing a liaison with the State response and recovery agencies and teams. ESFs will interface with State DSCA and RRTs to assist in the impact assessment and rescue/recovery operations. See Annex II – Recovery and Mitigation Actions, for more information.

DECLARATION PROCESS:

Incident

Local Response

State Involvement

Joint FEMA/State/Local PDA

Governor’s Request

FEMA Regional Office Assessment

FEMA Headquarters’ Recommendation to the White House

President’s Decision

2. Evacuation

- a. CLEARANCE TIMES (in hours) For St. Lucie County. The evacuation scenarios were developed by the Regional Planning Councils in coordination with local county emergency managers and are designed to provide important information to emergency management personnel to plan for different storm events. Evacuation level corresponds with storm category.

Table 15: Evacuation Clearance Times

Clearance	Evacuation Level A Scenario	Evacuation Level B Scenario	Evacuation Level C Scenario	Evacuation Level D Scenario	Evacuation Level E Scenario
To Shelter	6.5	7	9	11	14.5
In-County	8.5	9.5	12.5	19.5	24.5
Out of County	9	10.5	14.5	20	26

Source: Treasure Coast Hurricane Evacuation Study, 2015 update

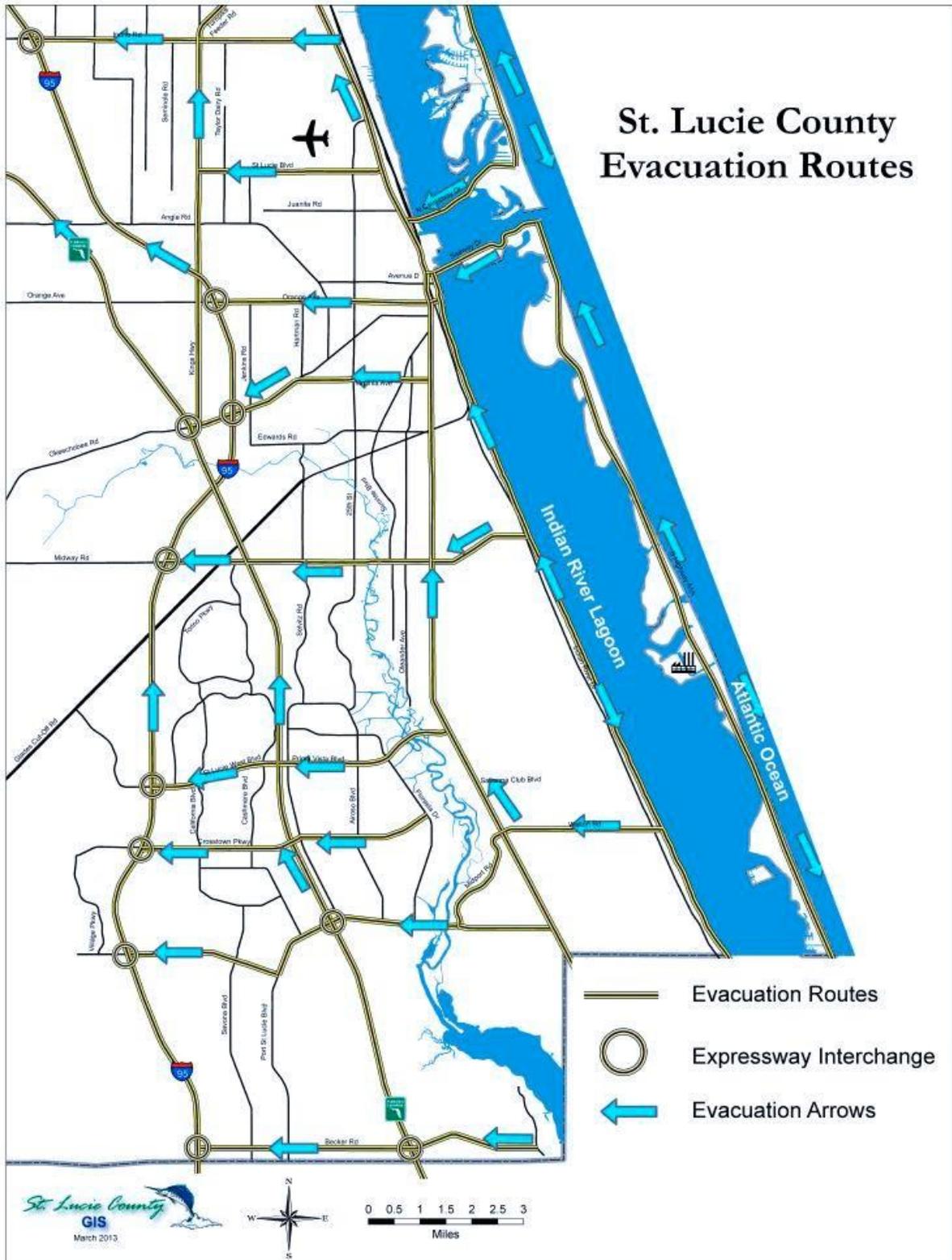
Clearance Time to Shelter - The time necessary for all in-County trips to have reached their destination within the County. This does not mean all traffic movement in the County has ended; rather it means that everyone going to a point of safety and that point is in the County, has reached their shelter. It is the amount of time it will take for shelters to fill-up once an evacuation order is given.

In-County Clearance Time - The time necessary for all in-County trips to have reached their destination and all out of county trips have left the Evacuation Zone and traffic originating from outside the County that passes through the Evacuation Zone has also cleared the Zone. This does not mean all traffic movement in the County has ended; rather it means that everyone going to a point of safety and that point is in the County, has reached their shelter and the Evacuation Zone is clear. It is the amount of time it will take to clear the most vulnerable zones once an evacuation order is given.

Out of County Clearance Time - The time necessary for all in-County trips to have reached their destination and all out of county trips have left the County and traffic originating from outside the County that pass through the County has also cleared the County. This does not mean all traffic movement in the County has ended; rather it means that everyone going to a point of safety has reached their shelter or left the County.

- b. As part of the public information program, evacuation information and routes are published annually in the local telephone directory, as well as in an annual supplement to the local newspaper, the Tribune. Evacuation information is attached to this document and identified as Figure 8. If it becomes necessary, secondary routes will be evaluated by the Emergency Operation Center.

Figure 4: Evacuation Routes



- c. In June of 1989, the St. Lucie County Division of Emergency Management formed a committee to address people within St. Lucie County with Special Medical Needs. Since then, the goal of the Special Needs Shelter Program is to provide a safe place for persons requiring medical assistance to temporarily shelter during an evacuation from either a man-made or natural disaster, rather than inundating local hospitals with a large number of people that a specially equipped and staffed shelter could adequately handle.

Regular public shelters available under emergency conditions will accept anyone who is self-sufficient and who needs no outside professional assistance in performing activities of daily living. Individuals not meeting the above criteria will either be referred to the special needs shelter or referred to an appropriate health care facility. The regular public shelters will have first aid trained Red Cross Volunteers to assist evacuees from the time of arrival at the shelter. Individuals with decreased mobility without medical problems will be provided for in a regular shelter.

Registration for evacuation assistance will be provided for anyone who requires assistance with evacuation during an emergency to either a regular public shelter or to the Special Needs Shelter. Individuals needing transportation need to register with the Special Needs Program prior to the hurricane season. Registration can be completed online, over the phone or in person at the shelter. Online registration can be completed here: <http://specialneedsonline.stlucieco.gov> or by calling (772) 462-8100. Registration information is stored in a digital database that is maintained by staff from the Department of Public Safety and Department of Information Technology.

Special Needs registrants have been separated and categorized to the level of assistance required. This includes evacuees requiring space in shelter only, transportation and space in the special needs shelter only and transportation to a local hospital only (if pre-admitted).

The focus of the Special Needs Shelter is the medical support and care of persons who require special care during an evacuation at a shelter, such as:

1. Persons dependent upon a health professional to administer injectable medications. Stable self-care diabetics can be handled at another shelter.
2. Persons requiring daily or more frequent dressing changes because of moderate to copious drainage from ulcers, fistulas, etc.
3. Persons needing assistance with ostomy management, continuous dialysis and indwelling catheters of any kind. The exception is persons whose only catheter is a foley.
4. Persons whose activities of daily living are so restricted by immobility, that their medical needs must be met by others.

5. Persons who require daily assessment of unstable medical conditions by professional nursing personnel, i.e. diabetes, cardiac, etc.
6. Terminally ill patients who are in need of professional assistance for administering heavy doses of medication.
7. Any resident whose life depends upon electrically energized equipment within his or her residence. (i.e., suction machines, home dialysis machines.
8. Those persons that depend on oxygen therapy.
9. Residents who are bedridden and require custodial care upon the advice of their personal physician.

As with any shelter, individuals who plan on utilizing the Special Needs facility must provide their own bedding, medications and supplies to the best of their ability. Supplies would include oxygen equipment, linens, pillows, blankets, chairs, medical supplies, medications and any other personal items to make the stay as comfortable as possible. Drinking water any non-perishable food items are also encouraged. Any special dietary foods required by a special care evacuee will be his/her responsibility. Assistance from the parking area into the Special Needs Shelter will be available.

Items such as emergency oxygen equipment, first aid supplies and advanced life support medications and equipment will be provided by the St. Lucie County Department of Health.

The locations of the Special Needs Shelter in St. Lucie County are:

PRIMARY

Havert Fenn Center 2200 Virginia Avenue, Fort Pierce, FL

SECONDARY

The Port St. Lucie Community Center, 2195 S.E. Airoso Blvd., Port St. Lucie, FL

Registration is required to allow entrance into the Special Needs Shelter. Eligibility criteria are listed on page Basic Plan 51.

- d. There are approximately forty-four mobile home/recreational vehicle parks located within St. Lucie County. This figure equates to 6,502 dwellings or a population of approximately 15,000 (9% of the total population). To ensure the safety and well being of mobile home residents during hurricane conditions, these communities would be among the first to be issued an evacuation order. A listing by name and address is attached to this document and identified as Figure 7. This list will be updated as needed.

- e. About 25% of hurricane fatalities result from boaters trying to secure vessels in deteriorating storm conditions. There are eight commercial marinas within St. Lucie County. St. Lucie County and the Florida Inland Navigation District, in cooperation with both public and private marine agencies, have developed a publication entitled Hurricane Manual for Marine Interests in St. Lucie County. This manual was developed to provide boaters and marina operators with updated and reliable information to help guide their actions and is distributed to local marinas, boat dealerships and our public presentation. A chart identifying marina locations is attached to this document as Figure 8. This cart will be updated as needed.

- f. There are two bridges is St. Lucie County, identified in Section II-B, that connect the barrier island to the mainland. One is a high bridge and the other is a draw bridge.

Table 16: Mobile Home and RV Parks

NAME	ADDRESS	CITY	SPACES
Bellaire Estates	Pandora Ave	Fort Pierce	93
Bennetts Mobile Home Park	3426 S 7 th Street	Fort Pierce	24
Bentonwood Mobile Home Park	6143 S. US Highway #1	Fort Pierce	51
Between Waters	13129 S. Indian River Dr	Jensen Beach	24
Beverly MHP/Easy Livin RV Pk	4611 S. US Highway #1	Fort Pierce	50
Colony Club	2601 N. US Highway #1	Fort Pierce	50
Ft. Pierce Cottages	2840 N. US Highway #1	Fort Pierce	20
Glen Oaks	1350 Juanita Ave	Fort Pierce	36
Golden Pond	10001 W. Angle Road	Fort Pierce	390
Green Acres	Hammond Road	Fort Pierce	115
H&H Mobile Home Park	6025 N. US Highway #1	Fort Pierce	21
Holiday Out	10725 S. Ocean Drive	Jensen Beach	536
La Buona Vita (Savanna Club)	8601 S. US Highway #1	Port St. Lucie	189
Lake Manor Park	13827 S. Indian River Dr.	Jensen Beach	70
Nettle Island	9803 S. Ocean Dr	Jensen Beach	1579
Ocean Resorts	5101 N. SR A1A Hwy	Fort Pierce	398
Orchid Acres/Cypress Bay	6545 N. US Highway #1	Fort Pierce	75
Outdoor Resorts of America	800 NW Peacock Blvd	Port St. Lucie	259
Palm Vista	709 S. 33rd Street	Fort Pierce	20
Pine View	3265 S. US Highway #1	Fort Pierce	78
Plantation Manor	3200 S. US Highway #1	Fort Pierce	376
Port St. Lucie Mobile Village	3600 SE Mariposa Ave	Port St. Lucie	117
Port St. Lucie RV	3703 Jennings Road	Port St. Lucie	117
Ridgecrest	2251 N. US Highway #1	Fort Pierce	185
River Park	370 Rouse Road	Fort Pierce	64
Road Runner	5500 St. Lucie Blvd	Fort Pierce	452
Savanna Club	8630 S. US Highway #1	Port St Lucie	1595
Savannas Recreation Area	1400 E. Midway Road	Fort Pierce	70
Seminole	3318 Orange Ave	Fort Pierce	70
Spanish Lakes Golf Village	Village Green Drive	Port St. Lucie	740
Spanish Lakes #1	8200 S. US Highway #1	Port St. Lucie	1387
Spanish Lakes Country Club	1 Las Casitas	Fort Pierce	1300
Spanish Lakes Fairway	6200 Nuevo Lagos	Fort Pierce	1573
Spanish River	7901 S. US Highway #1	Port St. Lucie	621
Sunnier Palms /Timberland	8800 Okeechobee Road	Fort Pierce	54
Sunrise Mobile Home Park	1821 S. US Highway #1	Fort Pierce	36
Sunshine/Manatee	3550 S. US Highway #1	Fort Pierce	126
Tall Pines	314 E. Erie Drive	Fort Pierce	54
Tangelo Village	3135 S. US Highway #1	Fort Pierce	156
Torpey Oaks Mobile Home Park	4185 John Cook Way	Fort Pierce	9
Tradewinds	230 Savannah Road	Fort Pierce	0
Treasure Coast RV Resort	2550 Crossroads Parkway	Fort Pierce	0
Tropical Isles	281 Tropical Isles Circle	Fort Pierce	334
Valley Lane Trailer Park	1817 N. US Highway #1	Fort Pierce	6
Venture Out	10701 S. Ocean Drive	Jensen Beach	316
Whispering Creek	2023 St. Lucie Blvd	Fort Pierce	244
Windmill Village	10851 S. Ocean Drive	Jensen Beach	237
Windsong (Styzas)	3200 S. 7 th Street	Fort Pierce	152

Table 17: Marinas

MARINA	ADDRESS	CITY	# OF SLIPS
Riverside Marina	2350 N. Old Dixie Hwy	Fort Pierce	50
Harbortown Marina	1945 Harbortown Drive	Fort Pierce	340
Taylor Creek Marina	1600 N. 2 nd Street	Fort Pierce	600
Fort Pierce City Marina	1 Avenue A	Fort Pierce	240
Fort Pierce Inlet Marina	1010 Seaway Drive	Fort Pierce	32
Little Jim's Marina	1120 Seaway Drive	Fort Pierce	20
Club Med Marina	3500 Veterans Memorial Parkway	Port St. Lucie	60
Ballantrae Marina	3365 SE Ballantrae	Port St. Lucie	67
Inlet Fisheries	22 N. Causeway Drive	Fort Pierce	29
Commercial Longliner	26 ½ N. Causeway Drive	Fort Pierce	32
Kennedy/Gilbert/Quandt	944 Seaway Drive	Fort Pierce	13
Tarpon Moorings Bay	1102 Mitchell Ave	Port St. Lucie	12

- g. The decision to re-enter evacuation areas will be based on a review of the information collected by the impact assessment teams and other organizations with damage assessment responsibilities to determine that condition within the affected areas are safe for public access.

The number one response priority for re-entry will be mobilization and dispatch of search and rescue, as well as damage assessment teams into the impacted areas to search for survivors and provide assessments of the damage. These operations will be the first response elements programmed for re-entry and they will consist of representatives from law enforcement, fire, EMS, emergency management, public works, utility providers, property appraisers, building officials, Red Cross, etc.

Re-entry by the general public will be approved by the Public Safety Director and will be relayed to the public through ESF #14 (Public Information).

3. Sheltering

There are thirteen primary shelters plus two special needs shelter located within St. Lucie County. None of these shelters are located in a storm surge area. A list of the American Red Cross shelters is attached to this document and identified as Figure 9.

The following initial actions will take place relative to sheltering:

- a. Notification to the State Watch Office (SWO);
- b. Coordination of sheltering (i.e., communications, nursing, sanitation, food and security);
- c. Coordination of the activation and provision of mutual aid;
- d. Coordination with the SEOC for the opening of host shelters in areas not anticipated to be in harm's way; and
- e. Coordination of the provision of additional resources (i.e., communications equipment and operators, nursing staff, administrative shelter and other support staff).

Table 18: Risk Shelters

<p>Havert L Fenn Center 2000 Virginia Ave, Ft. Pierce, FL 34982</p>	<p>Floresta Elementary 1501 S.E. Floresta Drive Port St. Lucie, FL</p>
<p>C.A. Moore Elementary 827 N. 29th Street Ft. Pierce, FL 34947</p>	<p>Samuel S. Gaines Academy K-8 2250 S. Jenkins Road Ft. Pierce, FL 34947</p>
<p>Morningside Elementary 2300 S.E. Gowin Dr. Port St. Lucie, FL</p>	<p>Parkway Elementary 7000 N.W. Selvitz Road Port St. Lucie, FL</p>
<p>Lakewood Park Elementary 7800 Indrio Road Ft. Pierce, FL 34951</p>	<p>Fort Pierce Central High School 4101 S. 25th St Fort Pierce, FL 34981</p>
<p>Westwood High 1801 Panther Lane Ft. Pierce, FL</p>	<p>Oak Hammock K-8 1251 S.W. California Blvd. Port St. Lucie, FL 34953</p>
<p>Windmill Point Elementary 700 Darwin Blvd Port St. Lucie, FL</p>	<p>Treasure Coast High School 1000 S.W. Darwin Blvd. Port St. Lucie, FL 34953</p>
<p>Westgate K-8 1050 N.W. Cashmere Blvd. Port St. Lucie, FL 34986</p>	

G. RECOVERY ACTIONS

The Recovery Phase will begin during the response phase and may encompass these general areas:

Damage assessment of the residential, government and business sectors for the purpose of administration of programs to restore them to their pre-disaster level of functioning; and administration of programs to mitigate the consequence of future disasters.

1. Initial Actions

- a. Monitor the disaster event and analyze available information regarding disaster conditions;
- b. Identify locations for the PODs and DRCs;
- c. Place recovery support personnel on stand-by status, as necessary. Brief personnel on disaster conditions and potential for deployment; and
- d. Place recovery support personnel on stand-by status, as necessary. Brief personnel on disaster conditions and potential for deployment; and
- e. Establish liaison with recovery staff in municipal EOCs.

2. Continuing Actions

- a. Maintain coordination with the state recovery staff;
- b. Establish and support the PODs as necessary;
- c. Maintain liaison with the SEOC and municipal EOCs to monitor disaster conditions; and
- d. Coordinate federal and state disaster assistance programs and make recommendations to the SCO regarding continued staffing.

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IV. RESPONSIBILITIES

A. General

All county departments, constitutional officers, municipalities, and volunteer agencies are responsible for the following general items:

1. Develop the necessary functional annexes, appendices, standard operating procedures (SOPS) and checklists for the effective, efficient organization and performance of functions required to respond to and recover from an emergency or disaster event.
2. Designate and train essential personnel for specific assignments in the conduct of emergency operations. Provide instructions to personnel regarding agency staffing policy during an emergency or disaster event.
3. Protect and secure facilities, property and equipment under their control.
4. Maintain accurate records of emergency related expenditures (such as personnel, supplies, and equipment costs).
5. Provide staff, supplies and equipment (as required and available) in support of emergency response and recovery operations. Expedite required activities for return to normal conditions as soon as possible.
6. Preservation of Vital Records/Documents:

All County departments, constitutional officers, municipalities, and volunteer agencies of St. Lucie County must insure the protection of their records and should develop a disaster plan for vital records. Each department Director is responsible for the implementation and maintenance of vital records management as referenced in the Continuity of Operations/Continuity of Government Plan. The Department of Public Safety has established Records Management Policies and procedures is to establish standards for controlling, retaining, destroying and/or preserving public records to ensure compliance with the state and federal laws, regulations and policies.

Damage to vital records/data (paper, computer hard drives, microfilm, etc.) is most often caused by fire, water, wind, and power interruption or surges. Specific departments take care of maintaining certain records County-wide. For example, the Department of Human Resources maintains all employee files, Purchasing maintains and tracks all financial expenditures and Information Technology maintains all electronic backup of digital information. Vital records disaster preparedness plans should include:

- a. Identification and documentation of the location of critical information.
- b. Standards backup procedures (duplicate copies; off-site storage, etc.).
- c. Prearranged resources (personnel) to assist in the resumption of data entry/retrieval.

- d. Prearranged resources to assist – in recovery of damaged data/records.

B. St. Lucie County

The Department of Public Safety (Public Safety Director) is responsible for:

1. Ensuring that the Division of Emergency Management (Emergency Operations Manager) provides the necessary revisions to this plan and that the plan is prepared, coordinated, published and distributed to the appropriate agencies.
2. Active leadership of an emergency management framework involving all government, private, and volunteer organizations which have a role in the success of comprehensive emergency management within the county.
3. Development and leadership of a broad-based public awareness, education, and information program designed to reach a majority of the citizens of the county, including citizens needing special media formats, such as TDD or non-English languages.
4. Active participation in discussions and negotiations with the state regarding policies and priorities to ensure that the work being done contributes to the improvement of emergency capabilities for the county.
5. Responsible execution of negotiated scopes of work for federal and state emergency management programs.
6. Support of the emergency management needs of all municipalities within borders, and brokering of intra-county mutual aid agreements to render emergency assistance. When local requests for assistance exceed county resources, the county emergency management office will coordinate all efforts with the state and federal government in support of local disaster operations.
7. Establish and monitoring of county mutual aid agreements within the county, with other counties and with the state.
8. Direction and control of a county response and recovery approach which is based on functional groups, involves broad participation from county organizations, and is compatible with the state and federal response and recovery organization and concept of operations.
9. Leadership and participation in programs or initiatives designed to avoid, reduce, and mitigate the effects of hazards through development and enforcement of policies, standards and regulations.
10. Compliance of each ESF lead agency to be involved with the planning, response, recovery and mitigation of local emergencies. For specific details of their responsibilities see Annex I – Response Functions.

11. Coordinating how emergency response personnel will be tasked to deal with emergencies or disasters in St. Lucie County. Regardless the type of level of disaster, the Public Safety Director will be responsible for direction and control under the ultimate authority of the St. Lucie County Board of County Commissioners. For greater detail, see the EOC SOP attached to this document and identified as Appendix D.

C. Special Districts

Special districts are responsible for establishing liaisons with counties and with other state organizations to support emergency management capabilities within Florida. Special districts that involve inter-jurisdictional authority can provide resources and services to support other functionally related systems in time of disaster.

D. State of Florida

The Government of the State of Florida is responsible for:

1. Active leadership of an emergency management framework at the state level involving all government, private and volunteer organizations which have a role in the success of comprehensive emergency management within Florida.
2. Development and leadership of a broad-based public awareness, education and information program designed to reach a majority of the citizens of Florida, including citizens needing special media formats, such as Braille or non-English languages.
3. Active participation in discussions and negotiations with other states and with the federal government regarding policies and priorities to ensure that the work being done contributes to the improvement of emergency capabilities for the nation.
4. Responsible execution of negotiated scopes of work for federal and state emergency management programs.
5. Support of the emergency management needs of all counties within Florida, and brokering of inter-county and inter-state mutual aid agreements to render emergency assistance. When requests for assistance exceed state resources, the state will contact other states for assistance, as well as FEMA.
6. Establishment and monitoring of state mutual aid agreements within the state, with other states and with FEMA.
7. Direction and control of a state response and recovery approach which is based on functional support groups, involves broad participation from state organizations, and is compatible with the federal response and recovery organization and concept of operations.
8. Leadership and participation in programs or initiatives designed to avoid, reduce and mitigate the effects of hazards through development and enforcement of policies, standards and regulations.

E. Federal Government

The federal government is responsible for:

1. Providing immediate emergency response on federally-owned or controlled property, such as military installations and federal prisons, and notification of the Florida DEM.
2. Providing assistance, as requested by the State of Florida, under the lead agency's direction of FEMA, as specified in the Robert T. Stafford Act, Public Law 93-288.
3. Identifying and coordinating assistance under other federal statutory authorities.

V. FINANCIAL MANAGEMENT POLICY

It is the intent of this policy to provide guidance for basic financial management to all departments and agencies responding under the provisions of the plan, to ensure that funds are provided expeditiously and that financial operations are conducted in accordance with appropriate policies, regulations and standards.

A. Assumptions and accountability

1. Due to the nature of most emergency situations, finance operations will often be carried out within compressed time frames and other pressures, necessitating the use of non-routine procedures; this in no way lessens the requirement for sound financial management.
2. A Presidential disaster or emergency declaration will permit funding from the Federal Disaster Relief Fund under the provisions of the Stafford Act in addition to the financial resources initiated at the state and local levels.
3. The Federal Office of Management and Budget (OMB) and Congress will give rapid approval to a FEMA-prepared emergency budget request at a level sufficient to sustain a response operation for at least three weeks, with the opportunity to extend same if the situation warrants.

B. Expenditure of Funds

Timely financial support of any extensive response activity could be crucial to saving lives and property. While innovative and expeditious means of procurement are called for during times of emergencies, it is still mandatory that good accounting principles and practices be employed in order to safeguard the use of public funds from the potential of fraud, waste and/or abuse.

1. A meeting will be conducted annually to familiarize each county and municipal official subject to preparing and maintaining disaster related financial reports. Annual training will be provided for local officials through the State of Florida Financial Assistance training program. Documentation is the most important item if reimbursement is expected. The county Office of Management and Budget will be responsible for the financial management of the unincorporated areas of the county. Each municipality is responsible for designating their own financial management practices.
2. In concert with federal and state guidelines, approval for expenditure of funds or response operations (facilities, equipment, supplies, services and other resources) will be given by officials of the primary and support agencies with concurrence with the Public Safety Director. Each agency is responsible for establishing effective administrative controls of funds and segregation of duties for proper internal controls, and to ensure that actions taken and costs incurred are consistent with the missions identified in this plan.

The county will follow procedures established by the St. Lucie County Finance Department, along with the county Management and Budget Office in accordance with State and Federal guidelines in matters of preparedness, response, recovery and mitigation.

3. Extreme care and attention to detail must be taken throughout the emergency response period to maintain logs, formal records, and file copies of all expenditures (including personnel time sheets) in order to provide clear and reasonable accountability and justification for future reimbursement requests. Reimbursement is not an automatic “given”, so as much deliberative prudence as time and circumstances allow should be used.

Complete and accurate accounts of all emergency expenditures and obligations of all agencies involved in response and recovery operations, including personnel and equipment costs, must be maintained with the Department of Public Safety and the finance administration section of the EOC. In addition, the planning section maintains records of damage assessments such as photos of pre and post disaster areas and assessment reports. Despite the difficulty in maintaining such records in the stress of an emergency, accurate accounts are required to identify and document those funds which might be eligible for federal reimbursement under emergency or major disaster project applications and/or those funds for which no reimbursement will be requested. St. Lucie County Human Resources utilizes pre-designated expense forms for all St. Lucie County agencies to complete to enable the tracking of all personnel hours and equipment costs. Each emergency event is unique therefore the Emergency Management Director, and/or his designee will establish deadlines for data submission related to financial reimbursement.

It is the responsibility of the elected Board of County Commissioners to secure the public’s safety. The Board of County Commissioners will appropriate all funds considered by the Board as necessary for mitigation, preparedness, response to and recovery from disasters.

4. All records relating to the allocation and disbursement of funds pertaining to activities and elements covered in this plan must be maintained, as applicable, in compliance with:
 - The Code of Federal Register – Title 44 Emergency Management and Assistance (CFR 44); relevant Circulars and Federal Statutes, in a manner consistent with Provisions of the Federal Stafford Act.
 - Chapter 215, Florida Statutes, pertaining to state financial matters and Chapter 252 , Florida Statutes, relating specifically to emergency management powers and responsibilities; and
 - The policies and directives detailed in the County CEMP ESF #7 (Resource Support Guidelines).

5. The county Office of Management and Budget will make every effort to minimize the expense to the county by exploring all available local and state funding sources available in a post-disaster situation.

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VI. TRAINING, EXERCISE AND PUBLIC AWARENESS/EDUCATION

For any Emergency Management program to be successful, training of individuals at all levels of government for their respective roles in the four phases of emergency management must be considered a high priority. This is especially important because of the relatively new concept of operations in the National Response Framework (NRF). The ESF operational concept requires coordination at the federal, state and local levels of government to ensure that everyone involved in emergency activities is aware of their responsibilities when a disaster threatens or occurs. Also, it is important that each agency is knowledgeable of what other agencies can and cannot do under disaster conditions. To accomplish the goal of developing a well-trained cadre of responders around the state, the following strategic planning statements are offered:

A. Training and Exercise

The Public Safety Director will assign (in most cases either the Emergency Operations Manager or Radiological Coordinator) the individual responsible for establishing and monitoring all Emergency Management training programs and exercises for which the county is responsible. The person assigned this task, in consultation with the Emergency Operations Manager, will establish and maintain an exercise schedule in a manner required by the Florida Division of Emergency Management.

The Multi-Year Training and Exercise Plan (MYTEP) delineates gaps found in the county's capabilities and how training and exercises can bridge these gaps. The MYTEP begins with a comprehensive assessment delivered to all emergency management stakeholders and is developed in conjunction with the region and State MYTEP process. All appropriate county and municipal agency personnel will be trained in the implementation of this plan and supporting SOP's through the MYTEP, to include guidance for the completion and disposition of financial reports. All personnel assigned to emergency response and recovery operations will attend all training sessions recommended by the National Incident Management System (NIMS), which includes but is not limited to the following agencies: The Federal Emergency Management Agency, Seminole Tribe, US Coast Guard, Florida Department of Law Enforcement, Florida Department of Transportation, Florida Division of Emergency Management, Florida Highway Patrol, Florida Power and Light, Florida Department of Health, Fort Pierce Police Department, Fort Pierce Public Works, Fort Pierce Utilities Authority, Port St. Lucie Police Department, Port St. Lucie Utilities, Port St. Lucie Public Works, St. Lucie County Sheriff's Office, St. Lucie County Fire District, St. Lucie County Information Technology, St. Lucie County Utilities, St. Lucie County Public Safety, St. Lucie County Public Works, St. Lucie County School Board, St. Lucie County Road and Bridge, American Red Cross, and Amateur Radio Emergency Service or HAMM.

Emergency Management training will ensure that all levels of local government are kept at an acceptable level according to the NIMS training program, the State's MYTEP and the County's CEMP. The training program is vetted through the Readiness, Training, Identification, Preparedness, Planning (RTIPP) process, which includes surveying agencies on their training needs, comparing these needs with identified core capabilities, and scheduling prescribed classes throughout the year for all agency partners. The training program will also include appropriate officials of each municipality and all volunteers and

volunteer agencies assigned responsibilities in the Comprehensive Emergency Management Plan.

The Emergency Operations Manager will keep abreast of and request training from the state on all matters that relate to state and federal programs that would enhance the preparedness of St. Lucie County. A calendar of upcoming trainings and reminders will be distributed by email. The Emergency Management staff will remain current with the highest training credentials possible. They will cooperate with and assist other county and municipal agencies in the conduct of exercises.

B. Exercise

Exercises come in different types such as workshops, tabletops, drills, functional, and full-scale exercises. Exercises are meant to evaluate the skill sets of emergency management and responder personnel based on the premises written in plans and policies. They are designed to validate current plans and procedures, drawing out deficiencies in the plans, while emphasizing the positives. The exercise philosophy practiced at DEM is the Homeland Security Exercise and Evaluation Program (HSEEP) building-block approach in which participants' skills are utilized on a more complex form of exercise that builds from one another depending on the level of enhancement needed to strengthen core capabilities identified in St. Lucie County. DEM exercises will adhere to HSEEP principles and procedures, including the HSEEP cycle (i.e., design and development → conduct → evaluation → improvement planning).

In designing and developing exercises, exercise design/planning team members are identified to schedule planning meetings, identify and develop exercise objectives, design the scenario, create documentation, plan exercise conduct and evaluation, and coordinate logistics.

DEM first begins with workshops or seminars to discuss response procedures based upon current plans and procedures, then works towards tabletop exercises, drills (when applicable), to functional exercises, and then ultimately to full scale exercises. The DEM exercise program serves DEM staff, partnering agencies, and organizations involved in EOC training, exercises, and activations. Implementing the appropriate type of exercise for DEM staff and partners is essential in the delivery of successful outcomes for skill development and response to and recovery from disaster events. Increasing the complexity over time enhances the likelihood of a successful recovery. The exercise calendar remains flexible enough to allow the addition or inclusion of other desired exercise types that may be required. The DEM exercise philosophy allows for a cyclical approach to countywide exercises and training, and a sustainable program for achieving higher degrees of overall preparedness. The DEM exercise program is a part of the overall preparedness effort. The exercise program follows an annual cycle of conducting the following phases:

- Planning
- Training
- Exercises
- Corrective Action Program

The DEM exercise program follows and adheres to HSEEP guidelines. HSEEP is a capabilities based exercise program that provides a standardized methodology and consistent terminology for designing, developing, conducting, and evaluating all exercises, and provides tools and resources to help build self-sustaining exercise programs. Although HSEEP was developed for use in homeland security based exercises, the methodology is applicable across all types of scenarios, such as hurricanes and terrorist attacks. HSEEP meets NRF and NIMS goals that are established in the Homeland Security Presidential Directive 8 (HSPD-8), December 17, 2003. HSEEP methodology includes the identification of core capabilities to be exercised, based upon a comprehensive needs assessment. The exercise planning team will develop a scenario that allows these capabilities and objectives to be validated. After the exercise is conducted, an After Action Report (AAR) and Improvement Plan (IP) will be developed and implemented.

The St. Lucie County exercise program includes exercise functions and procedures used during St. Lucie County EOC activations, as well as participation in other local, state, and federal exercise venues such as:

- Local Emergency Planning Committee (LEPC)
- Unit/ESF Drills/Exercises
- Florida Statewide Hurricane Exercise
- Nuclear Power Plant
- Southeast Regional Domestic Security Task Force Exercise (SERDSTF)
- Urban Area Security Initiative (UASI)
- U.S. Army Corps of Engineers
- U.S. Coast Guard
- Emergency Management Institute (EMI)

The DEM staff, municipal government, and partner agencies are at different stages of readiness regarding all-hazards capabilities that address the phases of mitigation, preparedness, response, and recovery. Because of wide differences in levels of readiness, the DEM incorporates a building-block approach in the design of exercises. This building-block approach ensures successful progression in exercise design, complexity, and execution, and allows for the appropriate training and preparation to take place with the specific groups participating in the exercise. This methodology ensures that the exercise scope, scale, and complexity are tailored to each specific ESF/Unit, agency, or situation.



DEM will use different kinds of exercise scenarios, such as mass migration, terrorism, pandemic, special events, and radiological disasters. In an effort to validate regional response procedures, mutual aid agreements, and resource integration, St. Lucie County may collaborate in exercises with neighboring counties.

Spectrum of HSEEP Exercises

	UTILITY/PURPOSE	Player Action	Duration	Real-Time Play?	Scope
Discussion-based Exercises	Discussion-based exercises include seminars, workshops, tabletop exercises (TTXs), and games. These types of exercises can be used to familiarize players with, or develop new plans, policies, agreements, and procedures. Discussion-based exercises focus on strategic, policy-oriented issues. Facilitators and/or presenters usually lead the discussion, keeping participants on track towards meeting exercise objectives.	Players are participants in the exercise scenario that are assigned to respond to questions, discuss hypothetical situations, and propose new ideas to implement in new plans, policies, agreements, and procedures.	0 – 8 hours	No	Varies
Seminar	Seminars generally orient participants to, or provide an overview of, authorities, strategies, plans, policies, procedures, protocols, resources, concepts, and ideas. Seminars can be valuable for entities that are developing or making major changes to existing plans or procedures. Seminars can be similarly helpful when attempting to assess or gain awareness of the capabilities of interagency or inter-jurisdictional operations.	Players are audiences involved in the orientation process and generally do not actively engage in scenarios.	2-5 hours	No	Multi- or Single-agency

	UTILITY/PURPOSE	Player Action	Duration	Real-Time Play?	Scope
Workshop	Workshops entail the broadest attendance by relevant stakeholders. Products produced from a workshop can include new standard operating procedures (SOPs), emergency operations plans, continuity of operations plans, or mutual aid agreements. To be effective, workshops should have clearly defined objectives, products, or goals, and should focus on a specific issue.	Players have an expected increased participation in discussions and focus is placed on achieving or building a product.	3-8 hours	No	Multi- or Single-agency

<p>Tabletop Exercise (TTX)</p>	<p>A TTX is intended to generate discussion of various issues regarding a hypothetical, simulated emergency. TTXs can be used to enhance general awareness, validate plans and procedures, rehearse concepts, and/or assess the types of systems needed to guide the prevention of, protection from, mitigation of, response to, and recovery from a defined incident. Generally, TTXs are aimed at facilitating conceptual understanding, identifying strengths and areas for improvement, and/or achieving changes in perceptions.</p> <p>TTXs can range from basic to complex. In a basic TTX, the scenario is presented and remains constant—it describes an emergency and brings discussion participants up to the simulated present time. In an advanced TTX, play advances as players receive pre-scripted messages that alter the original scenario. A facilitator usually introduces problems one at a time in the form of a written message, simulated telephone call, videotape, or other means. Players discuss the issues raised by each problem, referencing established authorities, plans, and procedures for guidance.</p> <p>Player decisions are incorporated as the scenario continues to unfold. Participants are reminded that they are making decisions in a no-fault environment.</p>	<p>Players are encouraged to discuss issues in depth, collaboratively examining areas of concern, and solving problems. Effectiveness of a TTX is derived from the energetic involvement of participants and their assessment of recommended revisions to current policies, procedures, and plans. Players apply their knowledge and skills to a list of problems presented by the facilitator; problems are discussed as a group; and resolution is reached and documented for later analysis.</p>	<p>4-8 hours</p>	<p>No</p>	<p>Multi-Agency-Multiple Functions</p>
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	UTILITY/PURPOSE	Player Action	Duration	Real-Time Play?	Scope
	Participants are encouraged to focus on exercise objectives and associated capability targets.				
Game	A game is a simulation of operations that often involves two or more teams, usually in a competitive environment, using rules, data, and procedures designed to depict an actual or hypothetical situation. Games explore the consequences of player decisions and actions. They are useful tools for validating plans and procedures or evaluating resource requirements.	Players participate in a teamwork settings to achieve goals that are based form actual polices, plans, and procedures.	2-5 hours	No - though some simulations provide real or near-real-time play	Multi-agency - Multiple Functions
Operations-based Exercises	Operations-based exercises include drills, functional exercises (FEs), and full-scale exercises (FSEs). These exercises can be used to validate plans, policies, agreements, and procedures; clarify roles and responsibilities; and identify resource gaps. Operations-based exercises are characterized by actual reaction to an exercise scenario, such as initiating communications or mobilizing personnel and resources.	Player action mimics reaction, response, mobilization , and commitment of personnel and resources. Players rely on their knowledge of defined plans, procedures, and processes.	Exercises may range from a few hours to days, depending on the scope of the exercise.	Yes	Varies

	UTILITY/PURPOSE	Player Action	Duration	Real-Time Play?	Scope
Drill	A drill is a coordinated, supervised activity usually employed to validate a specific function, operation, or capability in a single agency or organization. Drills are commonly used to provide training on new equipment, validate procedures, or practice and maintain current skills. Drills can also be used to determine if plans can be executed as designed, to assess whether more training is required, or to reinforce best practices. A drill is useful as a stand-alone tool, but a series of drills can be used to prepare several organizations to collaborate in an FSE.	For every drill, clearly defined plans, procedures, and protocols need to be in place. Players need to be familiar with those plans and trained in the processes and procedures to be drilled.	2-4 hours	Yes	Single Agency-Single Function

	UTILITY/PURPOSE	Player Action	Duration	Real-Time Play?	Scope
Functional Exercise (FE)	<p>FEs are designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions. FEs are typically focused on exercising plans, policies, procedures, and staff members involved in management, direction, command, and control functions. In FEs, events are projected through an exercise scenario with event updates that drive activity typically at the management level. An FE is conducted in a realistic, real-time environment; however, movement of personnel and equipment is usually simulated.</p> <p>FE controllers typically use a Master Scenario Events List (MSEL) to ensure participant activity remains within predefined boundaries and ensure exercise objectives are accomplished. Simulators in a Simulation Cell (SimCell) can inject scenario elements to simulate real events.</p>	<p>Players respond to a series of injects in a comprehensive scenario, but there are no movement of other personnel, equipment, or adversaries outside of exercise areas.</p>	<p>4-8 hours or several days or weeks</p>	<p>Yes</p>	<p>One or Multiple Functional Areas - Multiple Functions</p>

<p>Full-Scale Exercise (FSE)</p>	<p>FSEs are typically the most complex and resource-intensive type of exercise. They involve multiple agencies, organizations, and jurisdictions and validate many facets of preparedness. FSEs often include many players operating under cooperative systems such as the Incident Command System (ICS) or Unified Command.</p> <p>In an FSE, events are projected through an exercise scenario with event updates that drive activity at the operational level. FSEs are usually conducted in a real-time, stressful environment that is intended to mirror a real incident. Personnel and resources may be mobilized and deployed to the scene, where actions are performed as if a real incident had occurred. The FSE simulates reality by presenting complex and realistic problems that require critical thinking, rapid problem solving, and effective responses by trained personnel.</p> <p>The level of support needed to conduct an FSE is greater than that needed for other types of exercises. The exercise site for an FSE is usually large, and site logistics require close monitoring.</p> <p>Safety issues, particularly regarding the use of props and special effects, must be monitored. Throughout the duration of the exercise, many activities occur simultaneously.</p>	<p>Players respond to a series of injects in a comprehensive scenario. Personnel and resources may be mobilized and deployed to the scene, where actions are performed as if a real incident had occurred.</p>	<p>One full day, several days, or weeks</p>	<p>Yes</p>	<p>Multi-agency-Multiple functions</p>
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Corrective Action Program

The Corrective Action Program (CAP) includes actions taken to incorporate recommendations outlined in the AAR/IP. These corrective actions must include an assigned champion (i.e., responsible party), an objective, and attainable benchmarks with specific deadlines that will allow measurement of the progress towards implementation.

The overall management of the CAP is the responsibility of the Emergency Operations Manager. After an exercise is conducted or an incident is experienced, the Emergency Operations Manager tracks improvement actions mentioned in After Action Reports/Improvement Plans through the use of the Improvement Plan and reports their status on a regular basis with the Public Safety Director and Section Chiefs in collaboration with senior management staff until all items are addressed. In general, every effort is made to complete/implement CAP actions as quickly as possible. If there are issues that can be remedied by the modification of plans and procedures, then the appropriate DEM staff member assigned to the applicable plan or procedure is tasked with the CAP action. If there are issues that can be remedied by the provision of trainings and exercises, these are incorporated in the next edition of the MYTEP or they are addressed in quarterly meetings, trainings, and exercise held by EOC sections and branches. The CAP action items are “closed out” or “completed” by the assigned champion after the CAP action is entirely finished; the work product is complete and ready to implement, ready for signature, or ready to publish/distribute. Maintenance of CAP items are done through internal work processes of the DEM and Section Chiefs. Through regular section meetings, County managers will meet with staff and discuss the implementation progress of the Improvement Plan recommendation until it is completed.

Section Chiefs and managers will review all active CAP items and discuss best ways to continue processing CAP items using conventional program venues. CAP items are closed by Section Chiefs when the corrective action is implemented within the section. Other county venues used to resolve CAP items besides the regular Section meetings include but are not limited to the following:

1. EM Team Meetings
2. Adoption of Ordinances
3. LMS Meetings
4. Internal Staff Meetings
5. ESF Meetings
6. Trainings

DEM strives to make sure no CAP item falls through the cracks and quality improvement remains constant. Any training need that is identified through actual incidents and exercises is added to the MYTEP.

C. Public Awareness and Education

In order to better educate and inform the public of protective actions before a disaster occurs, public information is critical for saving lives and minimizing property damage. Certain responsibilities exist for public information when Emergency Management plans are implemented. Public actions may depend upon public information during the period before a disaster is imminent, in an actual or threatening emergency situation, and in the post-emergency recovery period.

Pre-disaster education programs serve to increase awareness of Emergency Management programs, educate the public on ways to protect life and property, and inform the public on the availability of further assistance and information.

1. Regularly scheduled press conference will be announced during an event.
Locations for the press conferences are:
 - a. Nuclear Power Plant emergencies; Florida Power & Light emergency News Center, 7100 Midway Road, Ft. Pierce, FL
 - b. Other emergencies; St. Lucie County Emergency Operations Center, 15305 W. Midway Road, Fort Pierce, FL 34945
2. The following radio and television stations have agreed to disseminate emergency information and participate in the local public emergency notification system in accordance with the Region 10 Emergency Alert System (EAS) Plan:
 - a. RADIO STATIONS
 - (1) WQCS 88.9 FM
 - (2) WIRA 1400 AM
 - (3) WJNX 1330 AM
 - (4) WGYL 93.5
 - (5) WKGR 98.7 FM
 - (6) WAVW 92.7 FM
 - (7) WZZR 94.3 FM
 - (8) WHLG 101.3 FM
 - (9) WPSL 1590 AM
 - (10) WQOL 103.7 FM
 - (11) WILD 95.5 FM
 - (12) WFLM 104.7 FM
 - (13) WOSN 97.1 FM
 - (14) WCZR 101.7 FM
 - b. TELEVISION STATIONS
 - (1) WPTV (NBC) Channel 5
 - (2) WPEC (CBS) Channel 12
 - (3) WPBF (ABC) Channel 25
 - (4) WFLX (FOX) Channel 29

3. A series of Public Safety Announcements have been developed and is available to the PIO. These pre-scripted messages are maintained on file at the Division of Emergency Management.
4. Each year St. Lucie County Emergency Management publishes a Hurricane Preparedness brochure and with the assistance from Florida Power & Light, a Safety Planning Booklet for Nuclear Power Plant emergencies. Both provide maps depicting evacuation areas and routes as well as other types of disaster preparedness information.
5. During an emergency, our office telephones will be staffed on a 24-hour basis until the emergency has been abated. The advertised telephone number for our office is (772) 462-8100. In addition to this main phone line, additional phone lines will be established with the numbers broadcasted through the local media.
6. During any period of disaster in St. Lucie County, the master EAS station, WQCS, FM 88.9, will be broadcasting live from our Emergency Operations Center. This capability will extend the Emergency Management's public outreach capabilities both in response to and recovery from a disaster, including information on where to go and who to call for assistance. Information will be broadcast 24-hours per day.
7. St. Lucie County currently has thirteen public shelters. Since all shelters will not open at the same time, it is crucial for the public to monitor media reports for an opening in their area. Depending on the storm track and intensity, the number and location of shelter openings will vary. At a minimum, one shelter will open in the north, central and south county area. Public shelter openings will be broadcast via local radio stations.
8. An evacuation brochure with routes and shelter locations is available at information kiosks throughout the County and a digital copy is available for download on the County's web site (See Figure 4 and <http://www.stlucieco.gov/departments-services/a-z/public-safety/evacuation>).
9. While the entire County is subject to a host of hazards (outlined in Section II-A), there are areas which are more vulnerable to particular hazards (i.e., pending water from heavy rainfall is most likely to effect the low swampy inland areas and areas along streams and canals; storm surge is most likely to affect residents along the coastal areas, and the North fork of the St. Lucie River; Therefore, the department's goal is to increase awareness of the pre-disaster education programs available to these areas.
10. Department of Public Safety, Division of Emergency Management staff routinely perform outreach activities. In collaboration with SAFER St. Lucie, a 501(c)3 organization invested in preparing the whole community in St. Lucie County for disasters, emergency management staff assist in conducting disaster preparedness presentations to various community groups, such as homeowner associations, outreach fairs, and nonprofit events.

11. “Alert St. Lucie” is a system that enables the Public Safety Department to alert the community about emergencies and other important community news, such as severe weather, unexpected road closures, missing persons and evacuations of buildings or neighborhoods. Residents can sign up to receive messages. Staff involved in emergency operations can set up distribution lists to key stakeholders and emergency responders to alert them and communicate critical information of emergencies that can lead to the activation of the Emergency Operations Center. The system was implemented in April 2017 in conjunction with a marketing campaign in May 2017. The system link may be located at www.stlucieco.gov/alert.

VII. REFERENCES AND AUTHORITIES

This plan replaces the St. Lucie County Nuclear Civil Protection Plan and the St. Lucie County Peacetime Emergency Plan. It does not supplant the Hazardous Materials Plan, which is not an operations-oriented document, nor the Florida Radiological Emergency Management Plan for Nuclear Power Plants, which was developed for response to radiological incidents under separate state and federal statutory authorities. However, this plan will be used to supplement the REP plan, in order to provide a comprehensive response.

A. Local

1. RESOLUTIONS

a. RESOLUTION NO. –

A resolution of St. Lucie County, Florida, by and through its Board of County Commissioners, continuing to recognize the St. Lucie County Emergency Management Division to act in accordance with the State Emergency Operations Plan and Program.

b. RESOLUTION NO. 00-277

A Resolution of the Board of County Commissioners of St. Lucie County, Florida, amending and restating Resolution No. 94-143, authorizing the County Administrator and the Public Safety Director to exercise certain emergency powers and authority during a local emergency and providing an effective date.

B. State

1. STATUTES

a. Chapter 252 – State Emergency Management Act Chapter 252.38, Florida Statutes, subdivisions in safeguarding the life and property of citizens and other persons within the political subdivision. Key points within the statutes include:

- (1) Performing emergency management functions within the territorial limits of St. Lucie County and conduct those activities pursuant to FS 252.31-252.90, and in accordance with state and county emergency management plans and mutual aid agreements.**
 - (2) Appointment of a Director who meets the minimum training and education qualifications established in the job description approved by the Board. The Director will be appointed to serve at the pleasure of the Board, subject to the Board's direction and control, in conformance with applicable resolutions, ordinances and laws.**
-

The Director has responsibility for the organizations, administration and operation of St. Lucie County Emergency Management division, subject only to the direction and control of the Board of County Commissioners and the County Administrator. The Director will coordinate emergency management activities, services and programs within the County and will serve as liaison to the Florida Division of Emergency Management and other local emergency management organizations.

- (3) Establishment, as necessary, a primary and one or more secondary emergency operating centers (EOCs) to provide continuity of government and direction and control of emergency operations.
- (4) Power to appropriate and expend funds; make contracts; obtain and distribute equipment, materials and supplies for emergency management purposes; provide for the health and safety of persons and property, including assistance to victims of any emergency; and direct and coordinate the development of emergency management plans and programs in accordance with the policies and plans set forth by federal and state emergency management agencies.
- (5) Reduction of vulnerability of people and communities of this county to damage, injury, and loss of life and property resulting from natural, technological, or human-caused emergencies.
- (6) Preparation for prompt and efficient response and recovery to protect lives and property affected by emergencies.
- (7) Response to emergencies using all systems, plans, and resources necessary to preserve adequately the health, safety, and welfare of persons or property affected by the emergency.
- (8) Recovery from emergencies by providing for the rapid and orderly start of restoration and rehabilitation of persons and property affected by emergencies.
- (9) Authority to request state assistance or invoke emergency related mutual aid assistance by declaring a local state of emergency. The duration of the local state of emergency will be limited to seven days, and it may be extended as necessary in seven day increments. The County also has the power and authority to waive the procedures and formalities otherwise required of St. Lucie County by law, pertaining to:
 - a. Performance of public work and taking whatever prudent action is necessary to ensure the health, safety and welfare of the community;
 - b. Entering into contracts and incurring obligations;
 - c. Employment of permanent and temporary workers;
 - d. Utilization of volunteers;

- e. Rental of equipment;
 - f. Acquisition and distribution, with or without compensation, of supplies, materials and facilities; and
 - g. Appropriation and expenditure of public funds.
- (10) Charge and collect fees for the review of emergency management plans required of external agencies and institutions. The fees will be in accordance with the fee schedules established by the Florida Division of Emergency Management and as approved by the St. Lucie County Board of County Commissioners.
 - (11) Coordination and development of a comprehensive emergency management plan and program consistent with the state comprehensive emergency management plan and program.
 - (12) Provision of an emergency management system embodying all aspects of pre-emergency preparedness and post-emergency response, recovery and mitigation.
 - (13) Maintaining a registry of disabled persons in order to meet the special needs of persons who would need assistance during evacuations and sheltering because of physical or mental handicaps. The registry identifies those persons in need of assistance and assists in planning for resource allocation to meet those identified needs. The registry is updated annually.
 - (14) Development and maintenance of a radiological emergency response plan in accordance with requirements of the United States Nuclear Regulatory Commission and the Federal Emergency Management Agency.
 - (15) Development and maintenance of an emergency plan for hazardous materials to safeguard the lives and property of the residents of our County against the threat of a hazardous materials incident.
 - (16) Participation from the St. Lucie County School Board, during a declared local state of emergency by providing facilities and personnel to staff those facilities. St. Lucie County School Board will, when providing transportation assistance, coordinate the use of vehicles and personnel with Emergency Support Function (ESF) #2 (Transportation).
 - a. Chapter 14, Florida Statutes, Governor
 - b. Chapter 22, Florida Statutes, Emergency Continuity of Government
 - c. Chapter 23, Part 1, Florida Statutes. Florida Mutual Aid Act.
 - d. Chapter 126, County Government: Chapter 162, County or Municipal Code Enforcement; Chapter 166, Municipalities; and Chapter 553, Building Construction Standards.
 - e. Chapter 154, Florida Statutes, Public Health Facilities.

- f. Chapter 161, Beach and Shore Preservation; Part III, Coastal Zone Preservation.
- g. Chapter 162, Florida Statutes, County or Municipal Code Enforcement.
- h. Chapter 163, Inter-governmental Programs; Part I, Miscellaneous Programs.
- i. Chapter 166, Florida Statutes, Municipalities.
- j. Chapter 187, State Comprehensive Plan.
- k. Chapter 215, Florida Statutes, Financial Matters.
- l. Chapter 216, Florida Statutes, Planning and Budgeting.
- m. Chapter 235, Florida Statutes, Educational Facilities.
- n. Chapter 245, Florida Statutes, Disposition of Dead Bodies.
- o. Chapter 250, Florida Statutes, Military Affairs.
- p. Chapter 284, Florida Statutes, State Risk Management and Safety Programs
- q. Chapter 287, Florida Statutes, Procurement of Personal Property and Services.
- s. Chapter 376, Florida Statutes, Pollutant Discharge Prevention and Removal.
- t. Chapter 377, Florida Statutes, Energy Resources.
- u. Chapter 380, Land/Water Management.
- v. Chapter 388, Florida Statutes, Public Health.
- w. Chapter 401, Florida Statutes, Medical Telecommunications and Transportation.
- x. Chapter 403, Florida Statutes, Environmental Control.
- y. Chapter 404, Florida Statutes, Radiation.
- z. Chapter 442, Florida Statutes, Occupational Safety and Health.
- aa. Chapter 553, Florida Statutes, Building Construction Standards.
- ab. Chapter 581, Florida Statutes, Plant Industry.
- ac. Chapter 590, Florida Statutes, Forest Protection.
- ad. Chapter 633, Florida Statutes, Fire Prevention and Control.
- ae. Chapter 870, Florida Statutes, Riots, Affrays, and unlawful assemblies.

2. ADMINISTRATIVE RULES

- a. Florida Department of Emergency Management, Administrative Rule, Chapter 27P-2.

3. EXECUTIVE ORDERS

- a. Executive Order 80-29 (Disaster Preparedness), dated April 14, 1980.
- b. Executive Order 87-57, (State Emergency Response Commission), dated April 17, 1987, as updated by Executive Orders 98-153 and 98-155.

4. MISCELLANEOUS

- a. State of Florida Comprehensive Emergency Management Plan.
- b. Florida Airport Directory (published by the Florida Department of Transportation Aviation Office, Summer, 1996).
- C. Florida Sheriff's Association Mutual Aid Agreement updated January 2013
- D. Florida Fire Chief's Association Statewide Emergency Response Plan
- E. Florida Division of Emergency Management CEMP Radiological Emergency Preparedness Annex Appendix III

C. Federal

1. Federal Presidential Directives / Executive Orders

- Homeland Security Presidential Directive-5: Assigned Sec. of DHS as FCO, Attn General as lead for terrorist incidents through FBI; made NIMS adoption requirement for receiving federal preparedness grants
- Homeland Security Presidential Directive-8: HSPD-8 enacted national preparedness goal, predicates the receipt of preparedness assistance on adoption of a statewide comprehensive all-hazards preparedness strategy consistent with goal.
- Presidential Decision Directive-39, United State Policy on Counter Terrorism
- Presidential Decision Directive-62, United States Policy on Combating Terrorism
- Presidential Decision Directive-63, United States Policy on Protecting America's Critical Infrastructures.
- Executive Order 11988, Flood Plain Management
- Executive Order 11990, Protection of Wetlands
- Executive Order 12241, Transferring Review and Concurrence Responsibility for State Plans from the NRC to FEMA

- Executive Order 12656, Assignment of Emergency Preparedness Responsibilities
- Executive Order 12657, Federal Emergency Management Assistance in Emergency Planning at Commercial Nuclear Power Plants.

2. Federal Statutes / Public Laws

- 16 USC 3501, Coastal Barriers Resource Act
- Public Law 85-256, Price Anderson Act, 42 USC 2210 provides for a system of compensating the public for harm caused by a nuclear accident.
- Public Law 89-665, National Historic Preservation Act, 16 USC 470 relating to preservation of historic resources damaged as a result of disasters.
- Public Law 91-671, Food Stamp Act of 1964, in conjunction with Section 412 of the Stafford Act, relates to food stamp distribution after a major disaster.
- Public Law 93-234, Flood Disaster Protection Act of 1973, as amended, provides insurance coverage for all types of buildings.
- Public Law 93-288, as amended 42 U.S.C. 5121, The Robert T. Stafford Disaster Relief and Emergency Assistance Act; provides authority for response and recovery assistance under the Federal Response Plan, and empowers the President to direct any federal agency to utilize its authorities and resources in support of state and local assistance efforts.
- Public Law 94-499, Superfund Amendments and Re-authorization Act of 1986, governs hazardous materials planning and community right-to-know.
- Public Law 95-510, Comprehensive Environmental Response, Compensation and Liability Act of 1980 (C.E.R.C.L.A.), as amended, requires facilities to notify authorities of accidental releases of hazardous materials.
- Public Law 100-707, Federal Disaster Relief and Emergency Assistance Act of 1988, which is the authority for federal assistance to Local/State Government through Presidential Disaster Declaration.
- Public Law 101-549, Clean Air Amendments of 1990, which provides for reductions in hazardous air pollutants and risk management planning requirements.
- Public Law 101-615, Hazardous Materials Transportation Uniform Safety Act (H.M.T.U.S.A.), which provides funding to improve capability to respond to hazardous materials incidents.

- OSHA 1910.120, Hazardous Materials Operations
 - Public Law 103-337 re-enacts the Federal Civil Defense Act of 1950 into the Stafford Act. It provides a system for joint capability building at the federal, state, and local levels for all hazards.
 - Stewart B. McKinney Homeless Assistance Act, 42 USC, 4001, as amended by the national Flood Insurance Reform Act of 1994 (Title V of Public Law 103-325) – related to the National Flood Insurance Program and other programs.
 - National Flood Insurance Act of 1968, (42 USC 4001 et seq.) as amended by the National Flood Insurance Reform Act of 1994.
 - Reigel Community Development and Regulatory Improvement Act of 1994.
3. Public Law 833-703, an amendment to the Atomic Energy Act of 1954. Federal Regulations
- 44 CFR Title 10 of the Code of Federal Regulations
 - 44 CFR Part 10 Environmental Considerations
 - 44 CFR Part 13 (The Common Rule) Uniform Administrative Requirements for Grants and Cooperative Agreements.
 - 44 CFR Part 14, Audits of State and Local Governments
 - 44 CFR 59-76, National Flood Insurance Program
 - 44 CFR Part 206, Federal Disaster Assistance for Disasters Declared after November 23, 1988
 - 44 CFR Part 350 of the Code of Federal Regulations
4. Federal Supporting Plans
- Federal Response Plan, Public Law 93-288, as amended, April 1999
 - Natural Oil and Hazardous Materials Pollution Contingency Plan
 - Nuclear Regulation 0654/FEMA-Rep-1, which provides federal guidance for development and review of radiological Emergency Management Plans for Nuclear power plants.
 - Interagency Radiological Assistance Plan (Interim), US Department of Energy, Region III.
 - The Federal Bureau of Investigation’s Concept of Operations for WMD

- The Federal Radiological Response Plan
- Federal Response Framework Terrorism Incident Annex
- Federal Response Framework, Terrorism Incident Overview
- Chemical/Biological Incident Contingency Plan (FBI, Unclassified)
- Nuclear Incident Contingency Plan (FBI, Unclassified)
- Health and Medical Services Support Plan for the Federal Response to Acts of Chemical/Biological terrorism (Department of Health and Human Services).
- National Emergency Repatriation Plan, as revised, Feb 1968

5. Executive Orders

- Executive Order 80-29 (Disaster Preparedness), dated April 14, 1980.
- Executive Order 87-57, (State Emergency Response Commission), dated April 17, 1987; as updated by Executive Orders 98-153 and 98-155.
- Executive Order 11990, Protection of Wetlands.
- Executive Order 12657, Federal Emergency Management Assistance in Emergency Planning at Commercial Nuclear Power Plants.
- Executive Order 12656, Assignment of Emergency Preparedness Responsibilities.
- Executive Order 12241, Transferring review and concurrence responsibilities for state plans from the NRC to FEMA.
- Presidential Decision Directive – 39, United States Policy on Counter Terrorism.
- Presidential Decision Directive – 62, United States Policy on Combating Terrorism.
- Presidential Decision Directive – 63, United States Policy of Protecting America’s Critical Infrastructure.

6. Miscellaneous

- Federal Response Plan for Public Law 93-288, as amended; April 1992.
- Nuclear Regulation (NUREG) 0654/FEMA-REP-1, which provides federal guidance for development and review of Radiological Emergency Management Plans for Nuclear Power Plants.

Flood Insurance Study – St. Lucie County, Florida and Incorporated Areas (FEMA May 4, 1989)

D. Memoranda of Understanding / Agreements

1. Local

- a. Statewide Mutual Aid Agreement between St. Lucie County and the State of Florida, Department of Community Affairs (July 31, 2000). The purpose of this Agreement is to provide a mechanism to expedite the assistance of other public agencies in response to catastrophic natural and human-caused disasters. This Agreement also expedites the reimbursement process required to receive state and federal financial assistance during the recovery from such an event.

2. State

- a. Management Agency, the State of Florida, and the City of Miami for Urban Search and Rescue, October 5, 1993.
- b. Building Officials Association of Florida and Division of Emergency Management, October 1994.
- c. National Weather Service and Division of Emergency Management, September 1994.
- d. Statement of Understanding between the administrations on Emergency Management Assistance Compact, 1996.
- e. Florida and Federal Emergency Management Agency Region IV I 1993.
- f. The Statewide Mutual Aid Agreement between St. Lucie County and the State of Florida, Department of Community Affairs (July 31, 2000).
- g. Florida and the American Red Cross, 1992.
- h. Florida and the Air Force Rescue Coordination Center (Inland Search/Rescue), as amended, 1995.
- i. Florida Division of Emergency Management and the Civil Air Patrol (Search/Rescue, Transport), 1992
- j. Division of Emergency Management and Florida Power Corporation; Division of Emergency Management and Florida Power & Light Company; and Division of Emergency Management and Southern Nuclear Operating Company.
- k. Memorandum of Agreement between the Federal Emergency Aging and the American National Red Cross (ARC), ARC 5067. June 1995.
- l. Statement of Understanding between the Salvation Army and the American Red Cross, August 1994.
- m. Statement of Understanding between the Volunteer Organizations Active in Disaster Agencies and other volunteer agencies.
- n. Statement of Understanding between the Federal Emergency Management Agency and the American Red Cross. January 1982.

- o. Memorandum of Understanding between the Centers for Disease Control, the United States Public Health Service of the Department of Health and Human Services, and the American Red Cross, December 1988.
- p. State of Florida agreement between the American Red Cross and the Department of Health for use of the United States Department of Agriculture donated foods, September 1989.
- q. Memorandum of Understanding with the American Veterinary Medical Association Emergency Preparedness and Response Guide.
- r. Southern Mutual Radiological Assistance Plan, Southern States Emergency Response Council.
- s. Memorandum of Understanding between Strategic Metropolitan Assistance and Recovery Teams and the Florida Division of Emergency Management, February 14, 1997.
- t. Interstate Agreement during a Hurricane Threat or Other Events Florida Division of Emergency Management and Georgia Emergency Management Agency.

Figure 10: Emergency Declaration Example

DECLARATION OF STATE OF LOCAL EMERGENCY

PURSUANT TO RESOLUTION 94-143 AUTHORIZING THE COUNTY ADMINISTRATOR TO EXERCISE CERTAIN EMERGENCY POWERS AND AUTHORITY DURING A LOCAL EMERGENCY

WHEREAS, the National Hurricane Center recognizes the danger to coastal residents of Florida from _____, by posting a Hurricane _____ from Florida to Florida, and

WHEREAS, St. Lucie County has high evacuation times to evacuate residents from the hazards of a Hurricane; and

WHEREAS, Hurricane _____ is capable of causing extensive damage to public utilities, public buildings, public communication systems, public streets and roads, public drainage systems, commercial and residential buildings and areas; and

WHEREAS, Section 252.38, Florida Statutes, provides authority for a political sub-division such as St. Lucie County to declare a State of Local Emergency and to waive the procedures and formalities otherwise required of political sub-division by law; and

WHEREAS, St. Lucie County has adopted Resolution No. 94-143 which authorizes the County Administrator to exercise authority if the Public Safety Manager declares that a local emergency exists; and

WHEREAS, on _____, 2003, the St. Lucie County Public Safety Manager declared that a local emergency existed in St. Lucie County from Hurricane _____.

NOW THEREFORE, I, Howard Tipton, St. Lucie County Administrator, hereby exercise my authority to fulfill the general powers and duties as set out in Resolution No. 94-143 and waive the procedures and formalities required by law of St. Lucie County, as provided in Section 252.38, Florida Statutes this _____ day of _____, 2003. This state of emergency shall expire within seven days from the date hereof unless extended with the concurrence of the Board of County Commissioners.

Howard Tipton
St. Lucie County Administrator