Seminole County Comprehensive Emergency Management Plan

Letter of Promulgation

Residents of Seminole County in Florida face the threat of disasters and emergencies. Recognizing this threat, government, at all levels, has a continuing responsibility for the health, safety and general welfare of its citizens.

Normal day-today procedures usually are not sufficient for effective disaster response as extraordinary emergency measures have to be implemented quickly if loss of life and property is to be kept to a minimum. Emergency procedures and actions to cope with the possibility of a disaster occurrence are addressed in the Seminole County Comprehensive Emergency Management Plan.

Each Seminole County Department, municipality and support agency continue to be knowledgeable of its contents and to be prepared to respond, or support efforts, during times of necessity.

The Seminole County Office of Emergency Management shall be responsible for the coordination for the preparation and continuous updating of the Seminole County Comprehensive Emergency Management Plan and will ensure that this plan is consistent with federal and state plans.

ATTEST:

Jay Zembower, Chairman

_____

GRANT MALOY
Clerk to the Board of
County Commissioners of
Seminole County, Florida

Date: _____

For the use and reliance
of Seminole County only.

As authorized for execution
by the Board of County Commissioners
at their_____, 20____
regular meeting.

Approved as to form and
legal sufficiency.

_____
County Attorney

BOARD OF COUNTY COMMISSIONERS
SEMINOLE COUNTY, FLORIDA

By:_____

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I. INTRODUCTION

Chapter 252.38, Florida Statutes, requires every County in the State of Florida to develop and maintain a Comprehensive Emergency Management Plan (CEMP). The CEMP establishes a framework for how Seminole County Government will prevent or mitigate the impact of; prepare for; respond to; and recover from a variety of disasters that may affect the residents and visitors of Seminole County. The CEMP processes are consistent with the National Incident Management System (NIMS) and utilize the Incident Command System (ICS). Responsibilities for the County, municipalities, agencies, divisions, and departments through an Emergency Support Function (ESF) system aid in planning and operations, and this system is clearly defined in the CEMP. Each ESF has a standard operating guideline which incorporates the principles of NIMS and ICS.

In February 2003, Homeland Security Presidential Directive 5 (HSPD-5), Management of Domestic Incidents was issued. In HSPD-5, the President directed the Secretary of Homeland Security to develop, submit for review to the Homeland Security Council and administer NIMS. In March 2004, the Secretary of Homeland Security released the NIMS guidelines. HSPD-5 requires all Federal, State, Local, and Tribal agencies to adopt and implement NIMS to receive Federal preparedness funding. On September 27, 2005, the Seminole County Board of County Commissioners adopted NIMS as the official County Incident Management System. All municipalities within Seminole County adopted NIMS prior to the October 1, 2005, deadline.

The CEMP is operations-oriented, and addresses coordinated County evacuation, shelter, functional needs support services, post-disaster response and recovery, rapid deployment and pre-deployment of resources, communications and warning systems, and annual training and exercises to determine the ability of local governments to respond to emergencies.

The CEMP describes the basic strategies, assumptions and mechanisms through which the County will mobilize resources and conduct activities to guide and support local emergency management efforts through preparedness, prevention, response, recovery and mitigation. To facilitate effective inter-governmental operations, the CEMP adopts a functional approach that groups the type of assistance to be provided under Emergency Support Functions (ESFs). Each ESF is led by a primary agency or County department, which has been selected based on its expertise, authorities, resources, and capabilities in the functional area.

A. Purpose

The purpose of the CEMP is to establish uniform policies and procedures for effective coordination of prevention, protection, response, recovery, and mitigation activities to a wide variety of natural, human-caused, and technological disasters using an all-hazard approach. These emergencies may differ in size and severity and affect the health, safety, and general welfare of the citizens and visitors of Seminole County.

To this end, Seminole County has incorporated the concepts and principles of the NIMS including ICS characteristics such as common terminology, modular organization, management by objectives, incident action planning, a manageable span of control, pre-designated incident facilities, comprehensive resource management, integrated communications, transfer of command, unity of control, unified command, personnel and resource accountability, and information and intelligence management.

The inclusion of the NIMS and ICS structure in the CEMP provides for the following:

- Ensures common and proven incident management doctrine, practices, and principles are used to plan for, protect against, respond to, and recover from emergency incidents and preplanned events;

- Maintains a response operation capable of expanding to meet an escalating situation; the ability to integrate resources; and obtaining equipment from intrastate and interstate mutual aid agreements, State-provided assistance, and Federal government response;

- Enables ordering and tracking of response assets using common resource typing and definitions;

- Establishes staging and allocation plans for the re-distribution of equipment, supplies, and aid coming into the area from other localities, States, or the Federal government through mutual aid agreements;

- Provides the ability to conduct situational assessments and establish the appropriate ICS organizational structure to effectively manage the incident; and

- Establishes communication processes, procedures and protocols that will ensure effective interoperable communications among emergency responders and multi-agency coordination systems – Emergency Operations Center.

The CEMP is designed to accomplish the following specific purposes:

- Reduce the 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, acts of terror, catastrophes, and/or hostile military or paramilitary action.

- Prepare for prompt and efficient response and recovery to protect lives and property affected by emergencies.

- Respond to emergencies using all systems, plans, and resources necessary to preserve the health, safety, and welfare of the citizens and visitors to Seminole County.

- Recover from emergencies by providing for the rapid and orderly start of restoration and rehabilitation of persons and property affected by the emergencies.

- Provide an emergency management system embodying all aspects of pre-emergency preparedness and post-emergency response, recovery and mitigation and involve the whole community approach in planning.

- Minimize damage to property, material shortages, and service system disruption, which would have an adverse impact on the residents, the economy, and the well-being of the County.

- Manage emergency operations within the County by coordinating the use of resources available from municipal governments, private industry, civic and volunteer organizations, faith-based and non-profits, as well as State and Federal agencies.

The CEMP is a live document. The CEMP should be considered implemented at all times. The core activities (prevention, protection, mitigation, response, recovery) listed in the Basic Plan are always considered active. Certain annexes to the CEMP will be activated upon the identification of an imminent threat to life, safety, health, or property in Seminole County. The following procedures will take place to implement certain operational components of the CEMP.

The On-Call Emergency Manager is ultimately responsible for situational awareness to determine the size and scope of an incident. This is done by working with the subject matter experts for the event, such as an incident commander. For planned events, an emergency management representative will be assigned to obtain situational awareness.

1. If there is a threat to life, safety, or health, immediate notification of the Director of Emergency Management is required.

2. The Office of Emergency Management will make notifications to the appropriate stakeholders based on the threat utilizing the Alert Seminole system. Stakeholders are listed in the CEMP – Emergency Support Functions, Alert Seminole Contact Groups, and the EOC Guidebook. At a minimum, first response agencies (ESF 1/3 Public Works, ESF 4 Firefighting, ESF 16 Law Enforcement) will be notified of the threat.

3. The Situation Report and Incident Action Plan schedule will be developed by the Planning Section Chief.

4. The Director of Emergency Management, in consultation with the Incident Commander or Subject Matter Expert (s) will determine the need to activate the Emergency Operations Center to a corresponding level. If an EOC activation is not warranted, assigned emergency management staff will continue to monitor and provide updates to stakeholders.

5. If an EOC activation is warranted, assigned emergency management staff will inform stakeholders of EOC activation and reporting requirements for Emergency Support Functions.

6. The Director of Emergency Management will then work with the Executive Advisory Group and Command and General Staff to determine incident objectives to protect lives, property, and the environment.

7. A Safety Officer will be assigned and responsible for life, safety, and health issues and include this information inside the Incident Action Plan.

8. The Director of Emergency Management, in coordination with staff, will be responsible for activating certain operational annexes of the CEMP to conduct these life safety and property protective missions based on the type of threat.

9. ESF 12 Environmental Services will determine what threats to the environment exist based on the threat. These concerns will be brought to the Director of Emergency Management to be included in the objectives.

10. The Director of Emergency Management or designee will conduct an initial EOC briefing to inform staff of the situation, situational information will be distributed, and the EOC Planning Section will begin the Incident Action Plan process.

11. The Director of Emergency Management will coordinate with the County Attorney's Office to draft a Local State of Emergency (LSE). Once complete, the Director of Emergency Management will coordinate with the County Manager or designee for the execution of the LSE with the Chairman of the Board of County Commissioners or by a collective vote of the Board of County Commissioners in accordance with Seminole County Code Chapter 72.4.

12. ESF 1/3 and ESF 12 will track all infrastructure damage assessment data. This data is used to prioritize the restoration of services (including critical programs, utilities, and offices).

13. The Director of Emergency Management will include objectives of restoration of these essential services will be done in accordance with the Continuity of Operations Plan (COOP).

B. Scope

The CEMP describes the various types of emergencies and disasters that are likely to occur in Seminole County. The CEMP further provides procedures for disseminating emergency warnings and public information and for determining, assessing, and reporting the severity and magnitude of such disasters. The CEMP establishes the concepts under which County, municipal, and State governments will respond to disasters by:

- Defining the responsibilities of County officials and other governmental officials.
- Defining the emergency roles and functions of the County, municipalities, allied agencies, private industry, volunteers, and civic organizations.
- Establishing a unified framework for the expeditious and efficient deployment of County resources using the ESF concept.
- Outlining the type of recovery assistance available to individuals, businesses, and public entities.

C. Methodology

Seminole County takes a “whole community” approach to emergency management. Services must address the various needs of the community, including backgrounds, demographics, economic status, and functional needs. This means planning for the actual makeup of a community and making sure OEM meets the needs of every disaster survivor regardless of age, economics, or functional and accessibility requirements. A whole community is a means by which residents, emergency management practitioners, organizational and community leaders, private industry, and government officials can collectively understand and assess the needs of their respective communities and plan for a coordinated response.

A whole community approach is an attempt to engage the full capacity of private and nonprofit sectors, including businesses, faith-based, non-profit, and disability organizations. The Seminole County Office of Emergency Management has invited and facilitated discussions with faith-based, business, and private agencies and is continuously striving to improve the way these agencies have a voice and role in emergency preparedness, response, and recovery.

Seminole County has numerous plans to help the whole community, including volunteer, faith, and community-based organizations, the private sector, and the public, effectively prepare for,

protect against, respond to, recover from, and mitigate against all hazards. It is critical that we work together to enable communities to develop collective, mutually supporting local capabilities to withstand the potential initial impacts of these events, respond quickly, and recover in a way that sustains or improves the community's overall well-being.

The initial input for the development of this document was through the operation of the functional and systematic approach to the management of emergencies used in the Seminole County CEMP. Input was provided by lead and support agencies through the development of the ESFs as defined in the National Response Framework and in the State of Florida's CEMP. The development of the ESFs has been an ongoing process; each ESF incorporates NIMS and ICS into its emergency operations plans. Many of the municipalities, County, and State agencies have provided input into the plan. Members of the primary and some secondary agencies have provided input and support to the operational guide of this document.

- ESF 1/3 Transportation & Public Works: Seminole County Public Works
- ESF 2 Communications: Seminole County 911 Administration/ Emergency Telecommunications
- ESF 4/9/10 Firefighting/ Search & Rescue/ Hazardous Materials: Seminole County Fire Department
- ESF 5 Planning: Seminole County Office of Emergency Management
- ESF 6 Mass Care: Seminole County Parks and Recreation
- ESF 7/19 Logistics/ Fuel, Fleet and Facilities: Seminole County Office of Emergency Management
- ESF 8 Health & Medical: Florida Department of Health in Seminole County
- ESF 11 Food & Water: Seminole County Parks and Recreation
- ESF 12 Energy and Utilities: Seminole County Environmental Services / Seminole County Utilities
- ESF 13 Military Support: Civil Air Patrol
- ESF 14 Public Information: Seminole County Office of Communications
- ESF 15 Volunteers & Donations: Seminole County Community Services
- ESF 16 Law Enforcement: Seminole County Sheriff's Office
- ESF 17 Animal Protection: Seminole County Animal Services
- ESF 18 Business & Industry: Seminole County Economic Development
- ESF 20 Cyber: Seminole County Information Technologies

All operations under this Plan will be undertaken in accordance with the Seminole County Office of Emergency Management's mission statement: To foster a prepared and resilient community.

Local, State, and Federal emergency plans will integrate NIMS in their emergency management plans and programs in order to provide effective and timely support to the citizens of Seminole County in the event of a major disaster or emergency. As such, the CEMP establishes a framework for the effective coordination of protection, prevention, response, recovery, and mitigation actions at all levels of government.

Recognizing that local emergency response is the first and primary responders during an emergency or disaster, the County will coordinate with local officials to augment local emergency resources as needed.

In accordance with efforts to create a county-wide CEMP, all agencies and local governments must be prepared to respond to emergencies and disasters even when government facilities, vehicles, personnel, and political/decision-making authorities are affected.

When deemed necessary, the Seminole County Office of Emergency Management will initiate requests for assistance from neighboring counties through mutual aid agreements and throughout the State through the Florida Division of Emergency Management Statewide Mutual Aid Agreement.

This plan will be maintained in accordance with the Integrated Preparedness Plan located in Annex H, and changes will be incorporated into the plan on a regular basis. Procedures for changes on the prescribed maintenance schedule are identified in detail in Annex H: Integrated Preparedness Plan. As the plan is improved through exercises or actual incidents, each ESF, municipality, and Seminole County department will be issued the current update, and the date and revision number will be listed. The Director of Emergency Management for Seminole County has the authority to update and make changes to this document, as necessary, to provide better documentation of emergency operations processes and procedures. All changes will be documented accordingly to ensure responding partners are aware of the updates. The following have received a copy of the CEMP:

- City of Altamonte Springs
- City of Casselberry
- City of Lake Mary
- City of Longwood
- City of Oviedo
- City of Sanford
- City of Winter Springs
- Florida Department of Health – Seminole County
- Orlando-Sanford International Airport
- Seminole County Board of County Commissioners
- Seminole County Clerk of Court
- Seminole County Supervisor of Elections Office
- Seminole County Sheriff's Office
- Seminole County Tax Collector
- Seminole County Public Schools

II. SITUATION/ASSUMPTIONS

This section of the CEMP provides a summary of the County's population, the major hazards the County is vulnerable to, and several planning assumptions that were considered in the planning process.

A major or catastrophic emergency will overwhelm the capabilities of Seminole County and its municipalities to provide prompt and effective emergency response and emergency short-term recovery measures. Numerous separate hazardous conditions and other emergencies as a result of a major event can be anticipated. Thousands of emergency victims may be forced from their homes, and many injured and deceased victims could be expected.

Transportation infrastructures will be damaged, and local transportation services will be disrupted. Widespread damage to commercial telecommunication facilities will be experienced, and the ability of governmental response and emergency response agencies to communicate will be impaired.

Homes, public buildings, and other critical facilities and equipment will be destroyed or severely damaged. Debris may make streets and highways impassable. The movement of emergency supplies and resources will be seriously impeded. Public utilities will be damaged and either fully or partially inoperable. Emergency personnel may become victims of the emergency, preventing them from performing their duties. Numerous separate hazardous conditions and other emergencies, as a result of the major event, can be anticipated.

Many victims will be in life-threatening situations requiring immediate rescue and medical care. There will be a shortage of a wide variety of supplies necessary for emergency survival. Hospitals, nursing homes, pharmacies, and other health and medical facilities will be severely damaged or destroyed. Medical and healthcare facilities that do remain in operation will be overwhelmed by the number of victims requiring medical attention. Medical supplies will be in short supply.

Damage to fixed facilities, which generate, produce, use, store, or dispose of hazardous materials, could result in the release of hazardous materials into the environment. Food processing and distribution capabilities will be severely damaged or destroyed. There will be near-total disruption of energy sources and prolonged electrical power failure.

There are a number of special facilities and populations that should be considered when doing an analysis. Special facilities are those that would be, in effect, more vulnerable to the effects of given hazards than the general inventory of facilities or the general population. This could include portable or mobile buildings, which are unable to withstand the effects of a natural disaster such as a hurricane or tornado winds, or a population that is not able to protect themselves without assistance, such as a hospital or nursing home. Individuals with special, functional, and access needs may have challenges obtaining normally accessible resources.

The Risk Assessment Section of the Local Mitigation and Resilience Strategy (LMRS) provides a detailed summary of the hazards and vulnerabilities for the County and Municipalities.

III. Hazard Analysis

Hazard Analysis is the degree to which the County is vulnerable to disasters. Identifying the hazards is the first step in any effort to reduce community risk. Hazard analysis involves identifying all the hazards that potentially threaten a community and analyzing them individually to determine the degree of threat that is posed by each. Hazard analysis determines:

- Probability of occurrence
- Relative Risk
- Potential extent of damage
- Primary area in which the hazard could affect
- Previous occurrences
- County's overall vulnerability to the hazard
- Impact on humans
- Impact on property
- Impact on the economy
- Impact on the environment
- Impact on program operations
- Impact on responders
- Impact on continuity of operations
- Evaluation of the public confidence post-disaster

The Hazard Analysis information is used in the development of all Seminole County plans and procedures. It indicates which hazards merit special attention, what actions might be taken to reduce the impact of those hazards, and what resources are likely to be needed. Hazard analysis requires the completion of five steps:

1. Identifying the hazard
2. Profile each hazard
3. Develop a community profile
4. Compare and prioritize risk
5. Create and apply scenarios

The first step in hazard analysis is to compile a comprehensive list of potential hazards specific to Seminole County. A thorough community hazard analysis evaluates all types of hazards, which are generally categorized as follows:

- **Natural hazards**: These include tropical storms, hurricanes, flooding, wildfires, and geological events such as sinkholes and earthquakes.
- **Technological hazards**: These encompass power outages, failures of critical infrastructure, hazardous materials incidents involving oil or gas pipelines, chemical spills, and industrial accidents.
- **Human-caused hazards**: These consist of civil disturbances, acts of terrorism, mass protests, and other intentional or unintentional disruptions to public safety.

Cascading emergencies occur when an initial hazard triggers subsequent events, amplifying the overall impact. For example, a tropical storm could cause widespread flooding, leading to the rupture of natural gas pipelines, which in turn could ignite fires and explosions, compounding the severity of the disaster.

A. Official Hazard List

The following hazards were selected as the official hazards for Seminole County, FL by the LMRS Planning Team for the 2025-2030 LMRS.

- Agriculture (Exotic Pests and Diseases)
- Civil Disorder
- Critical Infrastructure Disruption
  - Communication
  - Power
  - Water/Wastewater
- Cyber Security/Cyber Attack
- Disease and Pandemic Outbreak
- Domestic Security/ Terrorism (CBRNE)
- Drought and Water Shortage
- Earthquakes
- Extreme Heat
- Financial Collapse
- Flooding
- Harmful Algal Bloom
- Hazardous Materials Accident (Fixed Site and Transportation)
- Mass Gatherings/ Planned Events
- Mass Migration/ Repatriation
- Severe Weather
  - Hail
  - Lightning
  - Microbursts
  - Thunderstorms
- Sinkholes/Land Subsidence
- Structural Integrity/Collapse
- Tornadoes
- Transportation Disruption
  - Aircraft
  - Rail
  - Mass Casualty Incident
- Tropical Cyclones
  - Hurricanes
  - Tropical Storms
- Violent Act (Non- Terrorism)

- Wildfires
- Winter Storm/ Freezes

B. Hazard Profiles

Hazard: Agriculture (Exotic Pests and Diseases)

Probability of Occurrence	1-5 Years
Risk	48%
Relative Risk	Medium
Description	Agriculture incidents in Seminole County are quite rare and historically have not caused much damage to the community. In coordination with Seminole County's Agriculture Extension Office, Emergency Management is made aware of incidents involving crops and exotic pest outbreaks that may pose a threat to the community. Diseases that may pose a threat to crops in Seminole County include Citrus Canker and Citrus Greening. Potential pests include mosquitos, toads, mice, rats, and other harmful pests. On-going crop diseases present a threat to the agriculture community in Seminole County.
Extent	Ranges from small, affected area of crops, up to 17,031 acres of farmland in the County.
Location	Much of the agricultural foundation of Seminole County is located in the northwestern portion of the county including the Cities of Lake Mary and Sanford and the unincorporated Seminole County, but the effects of an incident may impact the entire county.
Significant Occurrences	(1982): The City of Longwood - Toad infestation due to heavy rains (1995): Citrus Canker detected in Seminole County (1999): The City of Altamonte Springs experienced mice infestations (2007): Huanglongbing (HLB), also known as Citrus Greening, confirmed in Seminole County. Between 2008-2017, Seminole County citrus filled 157,000 boxes but declined to 29,000 boxes in less than one decade. Spatial extent - while the direct impacts may be less than 25%, the indirect effects of an incident could be county-wide
Overall Vulnerability	Overall vulnerability of Seminole County and its

	jurisdictions to agricultural diseases and pests is low. Although there is not a large percentage of farmland in the county, disease can spread quickly if response is not immediate. The cities of Lake Mary and Sanford and unincorporated parts of Seminole County are most vulnerable to agricultural incidents because this is the largest area of farmland countywide. As the county continues to expand in residential, commercial, industrial, and infrastructural development the overall risk for this hazard decreases as a result. As more land is developed, the overall risk to agriculture decreases since there is less agricultural land vulnerable to hazards such as weather events, pests, and disease outbreaks.
	Impacts/ Consequences
Human	Low Impact Increased possibility of death or injury to agriculture diseases and risk to contaminated food crops.
Property	Low impact Hazard has low impact to critical infrastructure and property resulting in physical losses. Historically this hazard has more of an impact on crops. Exotic pests can become a nuisance to property owners in all jurisdictions in Seminole County.
Economic	Low Impact The community may experience a low economic loss, primarily for the farming and agriculture industry, as a result of a pest or disease outbreak.
Environment	Hazard can have broader negative impacts to local ecosystems such as habitat loss and biodiversity degradation, specifically in the unincorporated areas of Geneva and Chuluota. The 2023 U.S. Global Change Research Program's Fifth National Climate Assessment found that increasing temperatures, along with changes in precipitation, reduce productivity, yield, and nutritional content of many crops. These changes can introduce disease, disrupt pollination, and result in crop failure, outweighing potential benefits of longer growing seasons and increased CO_2 fertilization.

Program Operations	The County Comprehensive Emergency Management Plan (CEMP) covers basic response and recovery capabilities for exotic pests and diseases that are agriculturally based.
Responders	Depending on the nature of the pest or disease, responders may require certain protective equipment and tools.
COOP	An agriculture incident would have minimal impacts on COOP because this hazard would not disrupt normal operations.
Property/ Facilities/ Infrastructure	Privately owned farmland, in unincorporated Seminole County and in the cities of Oviedo, Sanford, and Winter Springs; has the potential to be devastated.
Public Confidence in the Jurisdiction's Governance	Public confidence would depend on how satisfied those impacted are with the local response.

Risk Reduction

Mitigation

Types of mitigation projects in the county include:

- Collection and destruction of infected plant species
- Diversification of agricultural landscaping
- Fertilizer reduction / ordinance
- Inspection and sampling species
- Introduction of higher trophic level species
- Invasive plant species reduction
- Larvicide, adulticide, aerial spray
- Prescribed burning
- Public education / outreach
- Sanitation with chemical control

Plans

Mosquito Response Plan
Rabies Procedures

Hazard: Civil Disorder

Probability of Occurrence	1-5 Years
Risk	48%
Relative Risk	Medium
Description	Events of civil disorder are classified as armed violence, riots, protests, swatting and threats against military or the government. “Swatting” is a criminal harassment act of

	deceiving an emergency service dispatcher into sending a police or emergency service response team to another person's address. The proper planning and prevention methods aid in the mitigation of civil disorder events. For threats of civil disorder utilizing armed violence, it is likely that a joint jurisdictional management of operations will take effect, coordinated at the county level between the Sheriff's Office, Florida Department of Law Enforcement (FDLE), and the Office of Emergency Management.
Location	Not specific to any geographic area(s) of Seminole County
Significant Occurrences	(2012): February 26 – Shooting of 17-year-old, Trayvon Martin in Sanford. There were public protests, school walk outs, and thousands of planned rallies across the nation. The Seminole County EOC provided support for seven weeks in the trial phase of the event. (2021): March 28 – Group of individuals congregated at the Seminole Wekiva Bridge in protest against the mask mandate that was issued as a response to the Covid-19 Pandemic. (2022): March 3 – Student-led walkouts were demonstrated at two [2] middle schools and nine [9] high schools within the Seminole County Public School (SCPS) system in support of the LGBTQ+ community in the face of HB 1557, nicknamed the "Don't say Gay" bill. (2023): September 2 – Multiple different groups of neo-Nazi and white supremacy groups held two different demonstrations. The first being held right outside of Walt Disney World and the second being held at an I4 bridge in Altamonte Springs. Demonstrators held different flags depicting Nazi, anti-LGBTQ+, and antisemitic content. While spatial extent of the hazard would be 25% or less, civil disorder could have county-wide effects.
Overall Vulnerability	The overall vulnerability of civil disorder in Seminole County is moderate. While moderate human impact is possible, civil disorder can spread quickly and disrupt the public's confidence in the jurisdictions' governance. All jurisdictions of Seminole County are vulnerable to civil disorder and its effects.

	Land use development does not have a direct effect on the risk of civil disorder, as social, political, and economic factors are the primary drivers of unrest. Urban growth or infrastructure expansion does not inherently increase or decrease the likelihood of civil disorder events.
	Impacts/ Consequences
Human	Moderate Impact The hazard is human in nature; tension between the public, law enforcement, judicial system, and media would be heightened. Disorder can also lead to violent acts potentially impacting the local population.
Property	Moderate Impact There would be little impact in general, but protests and riots have the potential to cause localized problems.
Economic	Moderate Impact Depending on the population involved, strikes, protests, and riots could have negative impacts to economic prosperity including employees missing work.
Environment	This hazard would not affect the environment.
Program Operations	A joint jurisdictional management of operations will likely take effect, coordinated at the County level between the Sheriff's Office, Florida Department of Law Enforcement (FDLE), and the Office of Emergency Management.
Responders	Those in Law Enforcement may need additional protective equipment when responding to potentially violent incidents of disorder. There may be possible increases in crime rate.
COOP	There could be some impact to the COOP as civil unrest could lead to disruption in operations in affected areas.
Property/ Facilities/ Infrastructure	Potential for property, facilities, and infrastructure to be affected is possible. This can be caused from riots or malicious attempts to disrupt local infrastructure.
Public Confidence in the	Public confidence may be a significant factor in the case of

Jurisdiction's Governance	civil disorder. Public messaging will need to stay consistent throughout the event.

Risk Reduction

Mitigation	Types of Civil Disorder mitigation projects in the county include: • Designation of peaceful protest areas • Intelligence / threat assessment for special events • Metal detector/handheld metal detector to critical facilities • Mobile field force training and exercise Security system/video surveillance for critical facilities • Permitting for special events • Public education / outreach • Tracking and incident planning for special events
Plans	CEMP – Civil Unrest Operational Plan

Hazard: Critical Infrastructure Disruption (Communication, Power, Water/ Wastewater)

Probability of Occurrence	1-5 Years
Risk	57%
Relative Risk	Medium
Description	Numerous facilities in Seminole County are classified as critical infrastructure. Disruption of these facilities could severely impact the economic and social wellbeing of the citizens and patrons of Seminole County. The Office of Emergency Management maintains a listing of the critical infrastructures, protected by Florida Statute 119, for Department of Homeland Security 16 critical infrastructure sectors whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof. Presidential Policy Directive 21 (PPD-21): Critical Infrastructure Security and Resilience advances a national policy to strengthen and maintain secure, functioning, and

	resilient critical infrastructure. An electromagnetic pulse (EMP) is a high-frequency burst of electromagnetic energy caused by the rapid acceleration of changed particles. An EMP event can occur naturally from a great geomagnetic storm, or it can be man-made through the use of a single, crude nuclear weapon delivered by a primitive missile, and the effects would be virtually identical. A catastrophic EMP would cause the collapse of critical infrastructure such as the power grid, telecommunications, transportation, banking, finance, food, and water systems. Water contaminants, such as industrial chemicals, biological pathogens, and agricultural runoff, can infiltrate water sources through various means including natural disasters, accidental spills, or intentional acts of sabotage. These contaminants can lead to severe degradation of water quality, rendering it unsafe for consumption and everyday use.
Location	All of Seminole County
Significant Occurrences	Occurs fairly frequently mainly due to severe weather or in extreme cases tropical cyclones. Strong thunderstorms in the summer and storms associated with passing fronts or low-pressure systems occur every year. (1989): In March, a geomagnetic storm struck the Earth, causing widespread electrical and hydro system disruptions throughout Quebec, Canada. These disruptions lasted as long as nine hours. (2003): In November, ionizing radiation from a solar flare hit Earth's atmosphere causing severe radio blackout throughout North America.(2024): In May, The strongest geomagnetic storm in 20 years hit Earth causing disruptions to power grids, broadband technology, and GPS satellites in space Spatial Extent - Impacts from a disruption could impact more than 50% of the county but may have county-wide effects.
Overall Vulnerability	The overall vulnerability of Seminole County and its jurisdictions to critical infrastructure disruption is medium. Because CI disruption can be caused by many different

	forces, it is one of the hazards with the highest vulnerability. Severe weather, tropical cyclones, tornadoes, and geomagnetic storms are just some examples of harmful incidents that may cause CI disruption. Disruption of critical infrastructure can include communication, power, and water/ wastewater; all of which are key components of community functions in all jurisdictions. Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as they have historically been more impacted in terms of both severity and length of impact from this hazard than other communities within Seminole County. Land use development has no effect on the risk of critical infrastructure disruption. The risk is more closely tied to system vulnerabilities, operational practices, and external threats rather than the overall extent of development in a region.
	Impacts/ Consequences
Human	High Impact Could cause loss of power to homes, disruption in drinking water supply, and loss of communication to the public. Due to the increased health risks facing the special need population, individuals with special needs are more vulnerable overall to the impacts of Critical Infrastructure Disruption.
Property	Moderate Impact Depending on the severity of the disruption various homes and businesses could lose electrical power, water, and communications capability.
Economic	Low Impact this would depend on the type, scale, duration, and severity of disruption.
Environment	Hazards such as flooding from water main breaks, pollution from damaged or malfunctioning power plants and contamination from sewage/solid waste pose threats to

	local ecosystems and air quality.
Program Operations	Disruption to these facilities by threat or attack will be dealt with utilizing the Seminole County Terrorism Annex. In other situations, the responsible agency would coordinate with emergency management.
Responders	Depending on the size of the disruption, this may cause an interruption of emergency radio traffic in the event of a communications failure.
COOP	There may be some impact to the COOP if communication is disrupted. If so, alternate methods would be used to coordinate the appropriate response.
Property/ Facilities/ Infrastructure	Facilities near the affected areas may have to shut down. Properties may have to undergo decontamination, and infrastructure at a regional level could be severely affected if shut down.
Public Confidence in the Jurisdiction's Governance	High confidence in jurisdictional response will be partially dependent on a timely recovery.

Risk Reduction

Mitigation

Types of Critical Infrastructure Disruption mitigation projects in the county include

- Amateur Radio
- Analogue back-up systems
- Backup generator and other alternate power sources for critical facilities
- Building codes and enforcement
- Crime Prevention Through Environmental Design (CPTED)
- Emergency public information and warning systems
- Public education / outreach
- Retrofit of network hardware and equipment for alternate 9-1-1 communications centers
- Security dates, barricades, and electronic surveillance
- Underground electrical and structural retrofit
- Satellite Phones
- Satellite Internet Services

Plans	Continuity of Operations Plan Points of Distribution Plan

Hazard: Cyber Security/Cyber Attack

Probability of Occurrence	1-5 Years
Risk	62%
Relative Risk	High
Description	Over the past decade, the nation as a whole has seen an increase in cyber-attack; defined as any offensive maneuver employed by individuals or whole organizations that target computer information systems, infrastructure and/or networks, by means of malicious acts to either steal, alter, destroy, or hold hostage valuable data from the victim(s). Furthermore, the rise of Artificial Intelligence (AI) technology has transformed the complexity and variety of cyber-attacks. Seminole County's Office of Emergency Management and Seminole County's Information Technology Department strives to ensure the safety and security of the technical infrastructure within the County. In doing so, threat analyses are completed to note vulnerabilities in the system and develop corrective actions to mitigate these attacks in the Seminole County Information Security Policy. The Internet Crime Complaint Center (IC3) has reported over $12.5 billion in monetary value was lost nationally in 2023 alone. To prevent this crime, laws have been enacted, specifically, the Cybercrime Prevention Act of 2012. The focus in the future will be to ensure that Seminole County Information Services in partnership with various public safety agencies conduct annual exercises and monitor the current threat levels of cyber-attack for county information technology infrastructure.
Location	Not specific to any geographic areas of Seminole County
Significant Occurrences	The nation as a whole has been affected by various cyber-attacks, especially credit card fraud. (2017) December - The Internet Crime Complaint Center (IC3) reported over $5.52 billion in monetary value lost.

(2023) December – The Internet Crime Complaint Center (IC3) reported over $12.5 billion in monetary value lost.

(2024) January – The Seminole County Public Schools (SCPS) finance office received what looked like an official email from one of the district vendors, asking to change their banking information and to pay their bill into the new account. The employees deemed the email legit without verifying the information allowing for the change to be made, allowing the perpetrators to scam the district out of $1.3 million.

(2024) June – On June 26, 2024, the Florida Department of Health (the Department) discovered a security breach in its network that led to unauthorized access to some of the department's data. This unauthorized access affected a limited number of internal systems and resulted in the transfer of data from a specific location within the network. The Department immediately launched an investigation and collaborated with cybersecurity experts to determine the nature and scope of the breach. The Department also promptly informed law enforcement and referred the matter to the Florida Department of Law Enforcement for investigation. The Department conducted direct outreach and notification to individuals who were potentially affected. Impacted individuals were offered complimentary credit monitoring and identity theft protection services provided by the Department. A cyber security threat would physically affect less than 25% of Seminole County but could have county-wide effects.

Overall Vulnerability

The overall vulnerability of Seminole County and its jurisdictions to cyber security threats is high. Targets include any individual, household, business, house of worship, or government agency. Even with protection programs and awareness campaigns, all jurisdictions of Seminole County are highly likely to receive cyber-attacks including malware, phishing, and other hacking. Countywide systems and data could potentially be compromised by cyber-attacks, which makes protecting these systems a high priority.

The risk of cybersecurity breaches or cyber attacks is largely independent of land use development. While increased digital infrastructure can expand the surface area

	for potential threats, the risk is primarily shaped by technology vulnerabilities, cybersecurity policies, and threat actor activity, rather than physical land use.
	Impacts/ Consequences
Human	Moderate Impact Potential for physical harm to the public as a result of cyber-attack on medical and other critical facilities.
Property	Moderate Impact Physical damage to property is possible through cyber-attack of critical facilities and infrastructure.
Economic	High Impact Depending on the nature of the threat, financial transactions and other economic processes could be heavily impacted.
Environment	Potential for impact depending on the nature of the attack.
Program Operations	Program operations could be significantly impacted if data or vital systems are compromised.
Responders	Minimal impact to responders due to nature of hazard.
COOP	Depending on target of attack - this may cause the relocation of a particular service if severe enough.
Property/ Facilities/ Infrastructure	Information technology infrastructure could be stressed or shut down, but otherwise there is a low risk to property and facilities.
Public Confidence in the Jurisdiction's Governance	Public confidence will depend on the timeliness of restoration of lost services or data.
	Risk Reduction
Mitigation	Cyber Attack mitigation strategies include • Anti-phishing education • Back-up systems / off-site storage • Cyber insurance for critical infrastructures • Cyber response team • Cyber security assessments

- Enhanced cyber security training
- Firewalls and testing environments
- Intelligence gathering for new cyber threats
- Mutual aid for cyber services
- Public education / outreach
- Multi-Factor Authentication
- Data Encryption

Plans Seminole County Cyber Security Procedures

Hazard: Disease and Pandemic Outbreak

Probability of Occurrence 1-5 Years

Risk 57%

Relative Risk Medium

Description The Department of Health is the lead agency if an outbreak occurs. The Florida Department of Health- Seminole County (ESF-8 Health / Medical) duties include epidemiology surveillance, public outreach, distribution of pharmaceuticals, and tracking the trends of possible outbreaks throughout the country and world. The Department of Health has plans in place, including: the use of the Strategic National Stockpile, how to identify the outbreak, and how to determine the particular diseases. During the COVID-19 pandemic a multitude of facilities, primarily the Sears in the Oviedo Mall and community centers/ faith-based organizations, were established in order to distribute vaccines and prevent the spread of the disease.

Location All of Seminole County

Significant Occurrences Hepatitis C: yearly cases averaging 300 patients.
Influenza: Reported every other year averaging 40 cases.
Salmonellosis: averaging over 100 reported cases per year.

(2009): H5N1 and H7N9 Avian flu reported 141 cases.

(2015): Seminole County experienced significant occurrences of diseases such as H3N2, Influenza, Hepatitis A, Measles, and Zika.

(2019): 2,034 cases of Hepatitis A virus as of June 2019. Florida Surgeon General declared a public health emergency in August 2019.

(2020) In March, the World Health Organization (WHO) declared the COVID-19 outbreak a pandemic.

On March 1, Governor DeSantis signed Executive Order 2020-52 and directed State Surgeon General to issue a Public Health Emergency. Seminole County remained in a State of Emergency for over 450 days which expired on June 15, 2021.

Spatial Extent - Depending on the severity, a disease outbreak could affect more than 50%, and most likely the entire county.

Overall Vulnerability

Seminole County's overall vulnerability to disease and pandemic is medium. The people of Seminole County are highly vulnerable to the spread of disease due to the population size and proximity to tourist hotspots with travelers from all over the country and the world. Through training, public education, and patient tracking, first response agencies work to reduce the overall vulnerability to the spread of diseases. All jurisdictions in the county are similarly vulnerable to the effects of diseases.

Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as there has been a history of government mistrust which could potentially present a barrier to providing proper care and administering vaccinations.

Land use development does not alter the risk of disease or pandemic outbreaks, which are more heavily influenced by factors such as population density, healthcare infrastructure, public health systems, and global connectivity, rather than by the type or extent of land development.

Impacts/ Consequences

Human

High Impact

Depending on the characteristics and scale of the disease can have overwhelming impact to death or injury.

Due to the increased health risks facing the special need population, individuals with special needs are more vulnerable overall to the impacts of Disease and Pandemic Outbreak.

Property	Not Applicable
Economic	High Impact May slow down business and economic activity in an area affected by the disease due to workers missing work (sickness), temporary business closures, hospital resources/space usage and limited interaction between people due to quarantine and fear of exposure.
Environment	Can potentially impact environment if a disease were to spread within animal populations.
Program Operations	The Department of Health is the lead agency in an event. The County would make use of the Strategic National Stockpile and use the County's preestablished Memorandums of Understand (MOUs) as a point of dispensing of pharmaceuticals, vaccines, personal protective equipment (PPE), or anything else that is needed. A hospital's capacity may be impacted depending on size and severity of event.
Responders	Heightened stress on medical personnel and may require higher level of personal protective equipment (PPE).
COOP	The COOP should remain unphased unless disease is spread and affected individuals are involved in the response operations.
Property/ Facilities/ Infrastructure	Increased stress on local hospitals with increasing patients related to disease, however there would likely be minimal impact to physical structures.
Public Confidence in the Jurisdiction's Governance	Seminole County's response to a disease outbreak would determine the public's confidence in all sectors of government.

Risk Reduction

Mitigation

Types of Disease and Pandemic mitigation projects in the county include:

- Contact tracing
- Epidemiology surveillance
- Environmental hazardous waste disposal
- Isolation / quarantine methods
- Personal protective equipment & training
- Public outreach from the Health Department
- Vaccinations

- Zoonotic disease surveillance

Plans Pandemic Response Plan

Hazard: Domestic Security/ Terrorism (CBRNE)

Probability of Occurrence 6-10 Years

Risk 32%

Relative Risk Medium

Description State and local governments have primary responsibility in planning for and managing the consequences of a domestic security/ terrorist incident using available resources in the critical hours before Federal assistance can arrive. The terrorist threat may represent Chemical, Biological, Radiological, Nuclear, Explosive (CBRNE) hazards, and/or other threats or a combination of several hazards. The initial detection of a Weapon(s) of Mass Destruction (WMD) attack will likely occur at the local level by either first responders or private entities (e.g., hospitals, corporations, etc.). The detection of a terrorist incident involving covert biological agents will most likely occur through the recognition of similar symptoms or syndromes by clinical in-hospital or clinical settings. It is incumbent upon all county and municipal responders to be as well trained as possible in WMD response. The intricacies of an effective response demand the utmost cooperation among all responders, Federal, State, County and municipalities.

Terrorism is a serious issue in Florida. Terrorism increases the likelihood of mass casualty and mass evacuation from a target area. For threats of armed violence, it is likely that joint jurisdictional management of the operation will take effect and will be coordinated at the county level between the Sheriff, fire/rescue, the Department of Health and FDLE. There are seven regional coordination teams throughout the State of Florida, called Regional Domestic Security Task Force (RDSTF). These consortiums evaluate vulnerabilities to the community and provide strategic plans for strengthening the homeland. In addition to the RDSTF, the Central Florida area is listed as an Urban Area Security Initiative (UASI). In 2003, the U.S. Department of Homeland Security (DHS) created the Urban Areas Security Initiative (UASI) Grant Program to support the planning, equipment, training, and exercise needs of high-threat, and

	high-density urban areas around the country.
Location	No particular area in Seminole County
Significant Occurrences	(2016): June 12, Pulse Nightclub – The City of Orlando experienced the worst mass shooting event in the United States' history up to that date. 49 victims were killed, 53 additional were injured, and the shooter was killed. A terrorist attack would most likely be very localized and isolated and impact less than 25% of the geographic area of the County, however effects could be county-wide.
Overall Vulnerability	Overall vulnerability to a terrorist attack is medium within Seminole County and its jurisdictions. Human and property impacts could be severe and widespread depending on the nature of the attack. Because terrorist attacks can take many forms and include many types of weapons, it is difficult to reduce the county's overall vulnerability to these incidents. First response agencies attempt to reduce vulnerability through prevention tactics and intelligence sharing. No jurisdiction in Seminole County is more vulnerable to attack than another. Land use development does not directly affect the risk of domestic terrorism or CBRNE (Chemical, Biological, Radiological, Nuclear, and Explosive) threats. The risk is influenced more by national security measures, intelligence, and counterterrorism efforts than by urban growth or land use patterns.
	Impacts/ Consequences
Human	High Impact Great potential for threat to health and safety depending on type of attack. Localized impact if explosive, but potentially widespread effects if CBRNE.
Property	Low Impact Potential for higher impact if CBRNE is dispersed. Depending on type of attack and location of the attack can scale to higher impact.
Economic	Moderate Impact

	If target is financial or major commercial building or institution, impacts can be greater and more widespread; other cases could shut down industries, infrastructure, and/or the delivery of services.
Environment	Potential for high consequence if CBRNE is dispersed. Aquifer system is vulnerable to intentional spill of hazardous materials.
Program Operations	If attack is in vicinity of program operations, there could be major impacts and disruption; potential relocation.
Responders	Potentially very dangerous and hazardous conditions. Requires proper personal protective equipment for various threats; potential for increased stress and fatigue.
COOP	Depending on type, scale, and specific location of event, the COOP could be disrupted.
Property/ Facilities/ Infrastructure	Potentially high impact to critical facilities and infrastructure depending on target of attack and type of threats.
Public Confidence in the Jurisdiction's Governance	Public's confidence could be severely impacted by terrorist attack depending on nature and scale of threat. Prevention and response are key to maintaining confidence.

Risk Reduction

Mitigation

Mitigation projects for terrorism include:

- Crime Prevention through Environmental Design
- Homeland Security assessment / surveys
- Intelligence surveillance systems
- Public outreach / education
- Security and surveillance systems for critical facilities
- See Something, Say Something systems/programs
- VIPER surveillance programs

Plans

Regional Domestic Security Task Force Operations Plans

CEMP Terrorism Annex

Hazard: Drought and Water Shortage

Probability of Occurrence 1-5 Years

Risk 67%

Relative Risk High

Description

A drought is noted as a period of unusually dry weather that persists long enough to cause serious problems such as crop damage and/or water supply shortages. There are four basic approaches to measuring drought (Wilhite, 1985):

Meteorological- defined usually on the basis of the degree of dryness (in comparison to some "normal" or average amount) and the duration of the dry period.

Agricultural- drought to agricultural impacts, focusing on precipitation shortages, differences between actual and potential evapotranspiration, soil water deficits, reduced ground water or reservoir levels.

Hydrological- associated with the effects of periods of precipitation (including snowfall) shortfalls on surface or subsurface water supply (i.e., streamflow, reservoir and lake levels, groundwater).

Socioeconomic- associated with the supply and demand of some economic good with elements of meteorological, hydrological, and agricultural drought.

The severity of the drought depends upon the degree of moisture deficiency, the duration, and the size of the affected area. In the past, most of Central Florida has suffered from droughts to the extent that unnecessary water usage has been curtailed by legislation. This curtailment, imposed by local governments and the St. Johns Water Management District was accomplished by water use restriction during designated hours and alternate days. Many natural hazards can arise from the effects of drought. Historically, drought in Florida has been known to contribute to wildfires, sinkholes, and major water shortages between the months of November-April.

One of the major bodies of water providing a water source for much of our crops and agriculture territory in Seminole County is the St. Johns River. During long periods of drought, a disruption in the watering cycle can have potentially damaging effects, including substantial crop loss in the northwestern portion of the unincorporated county and city of Lake Mary. In addition to the crop loss and livestock reductions, drought in Seminole County is

	associated with an increase in wildfire threat which in turn, places both human and wildlife populations at a higher risk.
Extent	Between D0 – Abnormally Dry and D4 – Exceptional Drought (Drought Severity Classification)
Location	All of Seminole County could be affected by drought
Significant Occurrences	(2012): The 2-month period of April and May of 2012, reached highest level of drought with portions of the state under a D-4 Drought Exceptional condition. (2015): July through September, D-3 conditions were reported. (2017): May, a major portion of the state displayed D-3 conditions. (2018): March, Seminole County was under a burn ban due to dry conditions. (2019): June, Seminole County was under a burn ban for one week due to dry conditions and increased fire risk. (2023): Seminole County was under a burn ban for four weeks between March and April due to extreme dry conditions and associated fire risk. (2024): June, Seminole County was under a burn ban due to drought conditions. Spatial Extent – A drought would affect more than 50%, and most likely the entire county.
Overall Vulnerability	Overall vulnerability to drought or water shortage in Seminole County and its jurisdictions is high. During the dry months of the year, drought can cause serious consequences and have compounding effects. Tactics such as water usage restrictions are implemented to save water. Drought or water shortage would have a similar level of vulnerability in all jurisdictions of Seminole County. Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to all jurisdictions within the county. Underserved communities within Seminole County and its

	jurisdictions are more vulnerable to this hazard as this hazard has historically impacted these communities more severely than other communities within Seminole County. As Seminole County continues to expand, increasing land development places greater demand on local water resources. Urbanization reduces natural groundwater recharge areas, while higher water consumption for residential, commercial, and agricultural needs accelerates depletion.
	Impacts/ Consequences
Human	Low Impact May require water use restrictions, which could cause stress to agricultural production. Increase in heat-related illness including dehydration. Due to the increased health risks facing the special need population, individuals with special needs within Seminole County and its jurisdictions are more vulnerable overall to the impacts of Drought and Water Shortages.
Property	Low Impact Heat-sensitive components may be compromised.
Economic	Moderate Impact Agribusiness, public utilities, and other industries reliant upon water for production or services.
Environment	A reduction in ground water supplies creates a situation conducive to sinkholes, most commonly in the east and west unincorporated county areas, and the cities of Altamonte Springs and Oviedo; however, effects can be felt in any jurisdiction. Non-domesticated animals will be directly impacted, flora may die off, increased fire risk as well as likelihood of soil quality degradation. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from drought and water shortages and that future mitigation and adaptation strategies related to this hazard should be considered.

Program Operations	Prolonged drought periods may require suspension of services.
Responders	Prolonged exposure to severe conditions, overexertion required by job will increase risk of heat-related illness.
COOP	No major disruptions are associated with this hazard to the COOP.
Property/ Facilities/ Infrastructure	Heat-sensitive components may be compromised.
Public Confidence in the Jurisdiction's Governance	The response of various utilities, water resource managers, and emergency management would be subject to the public's approval.

Risk Reduction

Mitigation

Types of Drought and Water Shortage mitigation efforts include:

- Improvement in the social awareness of droughts, their effects, and countermeasures
- Increasing soil water retention and its availability for plants
- Landscaping and plan selection for irrigation reduction
- Landscape water usage restrictions
- Modification of the technology of water use on farms, in fields, in catchments
- Public Education / outreach
- Rain barrels for landscaping / rainwater harvesting

Plans

Environmental Water Usage Procedures

Community Wildfire Protection Plan

Hazard: Earthquakes

Probability of Occurrence	10+ Years
Risk	22%
Relative Risk	Low
Description	An earthquake is a sudden movement of the Earth's lithosphere (its crust and upper mantle). Earthquakes are

	caused by the release of built-up stress within rocks along geologic faults or by the movement of magma in volcanic areas. They are usually followed by aftershocks. There are no fault lines in Seminole County, but effects of offshore impacts could be felt if the earthquake was strong enough.
Extent	The Richter scale measures the intensity or magnitude of an earthquake and represents the intensity with a scale ranging from 1 to 10. Each whole number increase on the scale represents a tenfold increase in wave amplitude and roughly 32 times more energy release.
Location	Not specific to any geographic areas of Seminole County
Significant Occurrences	Earthquakes have not had a major impact in Florida. Notable occurrences include: (1879): January – St. Augustine (1880): January – Cuba and Key West (2006): September 10, 2006 – rare 5.9 magnitude earthquake occurred in the eastern Gulf of Mexico and produced weak to light shaking across much of Florida, including Seminole County. There were no reported damages in Seminole County. (2014): January – Cuba and Key West (2024) A 4.0 magnitude earthquake hit approximately 100 miles from the Cape Canaveral coast. Spatial Extent - An earthquake would likely affect more than 50% of the county's land area.
Overall Vulnerability	The overall vulnerability of Seminole County and its jurisdictions to earthquakes is low. While earthquakes are possible in or near Seminole County, their likelihood is low, and effects would be felt equally throughout the county. Property damage would be one of the greatest losses caused by earthquakes, with little prevention activities possible for these events. All jurisdictions are similarly vulnerable to the effects of earthquakes. While Seminole County and its jurisdictions have a low probability of experiencing significant earthquake activity, the county's growing population increases the number of

	structures and residents potentially affected by even minor seismic events. Underserved communities, often located in older or lower-cost housing that may not be built to modern seismic standards, face heightened risks of structural damage and displacement. Land use development can increase the risk of damage from earthquakes by expanding infrastructure, buildings, and critical facilities in areas with unstable soils or poor structural resilience. The addition of high-density developments, particularly those not built to seismic-resistant standards, can lead to amplified ground shaking effects in the event of an earthquake. Furthermore, increased groundwater extraction and construction activity can contribute to soil instability, potentially exacerbating ground movement or subsidence in certain areas.
	Impacts/ Consequences
Human	Low Impact Risk to health and safety from falling debris, stress and fatigue are also possible if incident is severe enough.
Property	Low Impact Earthquakes can cause damage to property, facilities, and infrastructure but are historically rare in Seminole County.
Economic	Low Impact The overall economy of Seminole County. Businesses would be able to reopen once a building inspection was complete.
Environment	Localized consequences, but earthquakes are historically rare in Seminole County.
Program Operations	If severe enough, can affect program operations, but extremely unlikely.
Responders	There would be a risk of falling debris and impacted transportation routes.
COOP	Resources to continue operations may be limited (i.e.

	phones, Internet).
Property/ Facilities/ Infrastructure	If severe enough, can affect infrastructure, but extremely unlikely.
Public Confidence in the Jurisdiction's Governance	Public confidence in this hazard will be directly related to the County's overall response by local leaders and public safety officials.

Risk Reduction

Mitigation	Types of Earthquake mitigation strategies in the county include: • Anti-fracking rules / ordinances • Hardening of infrastructure • Structural mitigation measures to improve the capacity of a building to resist seismic forces
Plans	No Plans

Hazard: Extreme Heat

Probability of Occurrence	1-5 Years
Risk	52%
Relative Risk	Medium
Description	Heat-related deaths and illness are preventable, yet annually, many people succumb to extreme heat. According to NOAA's National Weather Service, heat is the number one weather-related killer in the United States. During 2023, 2,300 people died nationwide as a result of extreme heat. This number is also a new record for heat related deaths. The National Weather Service statistical data shows that heat causes more fatalities per year than floods, hurricanes, tornadoes, and lightning (individually) nationwide most years and within short-term (10-year) and long-term (30-year) averages. Temperatures that hover 9 degrees or more above the average high temperature of 90°F for the region and last for 3 or more consecutive days are defined as extreme heat. A major impact to these extreme heat events

	includes the monitoring of heat and drought indices for the implantation of county-wide burn bans. Public information activities are also put in place during extreme heat events that remind people of the risk of heat exhaustion. Humid or muggy conditions, which add to the discomfort of high temperatures, occur when a "dome" of high atmospheric pressure traps hazy, damp air near the ground. Excessively dry and hot conditions can provoke dust storms and low visibility. Droughts occur when a long period passes without substantial rainfall. A heat wave combined with a drought is a very dangerous situation. The highest recorded temperature for Seminole County was on June 1, 2004 at 101°F.
Extent	3 -10 consecutive days of 99°F or higher
Location	Extreme Heat would affect all of Seminole County
Significant Occurrences	Summer heat indices can exceed 100 degrees. (2004): June – Reaching 101 degrees. (2016): July – Reaching 100 degrees. (2020) In Seminole County the temperatures reached over 95F thirty-three times. (2021) In Seminole County the temperatures reached over 95F twelve times. (2022) In Seminole County the temperatures reached over 95F twenty-six times. (2023) According to scientists at NASA's Goddard Institute for Space Studies (GISS) in New York, July 2023 was hotter than any other month in the global temperature record. (2023) According to NWS, a record high of 99 degrees was observed in the Sanford area. Which warranted an excessive heat warning to be issued. (2024) In Seminole County the temperatures reached over 95F twenty-nine times (29). Temperatures above 95F occur most often in June, July, August, and occasionally in May and September. The Natural Resources Defense Council expects for the county to have 13.8 summer days per year of extreme heat.

Spatial Extent - Extreme heat would affect more than 50%, if not the entire county.

Overall Vulnerability

Overall vulnerability to extreme heat is medium in Seminole County and its jurisdictions. While property is unlikely to be affected by extreme heat conditions, homeless populations are highly vulnerable to extreme heat with approximately 2,883 homeless citizens in Seminole, Orange and Osceola counties as of 2024. Extreme heat can also have greater impacts on outside workers, and elderly and infant populations. Extreme heat would impact all of Seminole County and would have similar vulnerability levels across all jurisdictions.

Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions.

Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as homes within these communities are typically older homes with insufficient HVAC capabilities.

Land use development changes have led to expanding urban areas which contribute to the urban heat island effect, where concrete, asphalt, and reduced vegetation lead to higher localized temperatures. This intensifies heat waves, increasing risks to public health, energy consumption, and infrastructure.

Impacts/ Consequences

Human

High Impact

Inside a home with little or no air conditioning is the most dangerous place to be during extreme heat.

Due to the increased health risks facing the special needs

	population, individuals with special needs are more vulnerable overall to the impacts of Extreme Heat.
Property	Not Applicable Most infrastructure is built to withstand high temperatures seen with Central Florida's climate.
Economic	Moderate Impact May stress local water supply demands.
Environmental	A reduction in ground water supplies create a situation conducive to sinkholes, non-domesticated animals will be directly impacted, and flora may die off. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from extreme heat and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	Operations should not be impacted from an extreme heat event as long as working conditions remain normal (proper A/C, etc.).
Responders	Prolonged exposure to severe conditions and overexertion required by job will increase heat-related illness.
COOP	The COOP should not be impacted from an extreme heat event as long as working conditions remain normal.
Property/ Facilities/ Infrastructure	Property, facilities, and infrastructure are built to withstand high temperatures.
Public Confidence in the Jurisdiction's Governance	The public confidence would be related to any response actions the county takes to alleviate effects from extreme heat.

Risk Reduction

Mitigation

Types of mitigation efforts that can be adopted include:

- Cooling centers
- Cool pavements
- Cool roofs / infrastructure
- Emergency public information / warning
- Green infrastructure / roofing

- HVAC / Generator rules / ordinances for healthcare facilities
- Increased vegetation / canopy covering
- LEED certified building / construction
- Public education / outreach
- Rubber chipping at playground and recreational facilities
- Temporary shading / tenting
- Tree Planting / Maintenance Annual Program
- Resiliency Hubs

Plans Extreme Weather Plan Operations Annex to CEMP

Hazard: Financial Collapse

Probability of Occurrence 10+ Years

Risk 25%

Relative Risk Low

Description A financial collapse is a devastating breakdown of the national, regional, or territorial economy. The span of time these events last could range anywhere from months to decades while the lasting effects can be seen for a long time after. In our country, there were two notable financial collapses known as the Great Depression lasting from 1929 to the early 1940s and the Great Recession lasting from December 2007 to June 2009. Following the COVID-19 pandemic, the United States experienced economic hardships due to affected supply chain across the globe, dramatically increasing the cost of consumer goods, real estate, and construction/fuel costs. Unemployment skyrocketed to 14.7% at the height of the COVID-19 pandemic in April 2020, and those rates remained elevated through late 2021.

Location Any geographic area of Seminole County could be affected.

Significant Occurrences (1929-1940s): The Great Depression

(2007-2009): Great Recession - December 2007 - June 2009

Spatial Extent- Would affect more than 50% of area - a financial collapse would impact virtually the entire county's population.

Overall Vulnerability The overall vulnerability of Seminole County and its jurisdictions to financial collapse is low. Keeping county

	funds in reserves helps to reduce the vulnerability of financial collapse however, the lack of diverse employment opportunities increases the potential losses from the collapse of one field. Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as there is a higher percentage of lower-income individuals present. Land use development does not directly impact the risk of financial collapse, which is typically driven by economic conditions, market forces, global trade dynamics, and financial systems, rather than by local urbanization or land development.
	Impacts/ Consequences
Human	Low Impact Although a financial collapse will certainly have an impact on human life, it will not directly introduce any hazardous factors to human life as a whole.
Property	Low Impact There is potential for loss of houses, vehicles, etc. due to individuals' inability to afford costs however, no physical loss to property is noted.
Economic	High Impact Subject to the nature of the collapse, many, if not all economic properties would be affected. Stocks, unemployment, and the ability to loan and borrow would all be impacted.
Environment	Economic effects could indirectly affect environmental protection projects, initiatives, etc.
Program Operations	Certain operations may be slowed by an economic crisis.
Responders	Higher stress and anxiety could affect responders, but there are no direct effects.
COOP	Employees needed to help in the recovery may lose their jobs as a result of a financial collapse.
Property/ Facilities/ Infrastructure	Physical damage not applicable, but any repairs or new construction needed may be impacted by a struggling economy.
Public Confidence in the Jurisdiction's Governance	Public's confidence would be dependent on the ability of the economy to recover in a timely manner.

Risk Reduction

Mitigation

Types of mitigation measures in the county include:

- Affordable work force housing alternatives
- Community gardens / co-ops for feeding
- County reserves
- Diversifying careers / businesses
- Diverse business portfolio
- Promotion of financial insurance programs
- Public education / warning
- Public transportation / infrastructure
- Small business continuity educational programs
- Sustainable development ordinances

Plans

Points of Distribution (POD) Operations Annex to CEMP

Hazard: Floods

Probability of Occurrence

1-5 Years

Risk

67%

Relative Risk

High

Description

Flooding is the covering of land by water that is not normally covered by water. It occurs when an area is inundated beyond its natural or designed ability to drain and absorb this water. Flooding is measured through a percent annual chance, or the frequency at which a certain flood level is likely to occur. The elevation at which a base flood would take place has a 1% annual chance of occurring, also known as a 100-year flood. .2% annual chance would be a 500-year flood, and areas identified as minimal flooding have less than .2% annual chance of flooding or need further study. Locations in the minimal flooding areas can still experience flooding due to heavy rainfall. These areas can include closed basin lakes, areas experiencing stormwater related flooding, or ground saturated from early season rainfall.

Seminole County does not address risk and vulnerabilities related to Dams as there are no dams present within the County.

Extent

Flood gages along the St. John's River and at the Little Wekiva River indicate flood levels between Action, Minor,

	Moderate, and Major flood stages. Minor flood impacts can start to occur at Action Stage with minimal flooding to low lying areas and parks, all the way to historic flooding in Major Stage with water covering major roads and standing water in homes.
Location	The areas most affected by heavy rains are located in the northeastern and eastern parts of the County along the St. John's River, Econlockhatchee River, Lake Monroe, Lake Jessup and Lake Harney in unincorporated areas, City of Oviedo, City of Winter Springs, and City of Sanford. Flood impacts are also seen in the western part of the County from the Wekiva River and Little Wekiva River in the City of Altamonte Springs, City of Longwood, and unincorporated areas. Localized flooding can also occur anywhere in the county due to heavy rainfall. More specific information on the flood hazard area can be found in the Seminole County Floodplain Management Plan, 2020, which is an annex to the Local Mitigation and Resiliency Strategy.
Significant Occurrences	(1924): Historic flooding event (2004): Hurricanes – Charley, Frances, and Jeanne (2008): Tropical Storm Fay – Localized flooding, roadway washouts, affected over 150 homes, prompted Presidential Disaster Declaration. (2017): Hurricane Irma – major flooding event (2018): St. John's River action stage in summer of 2018 – sandbag operations in localized areas (2020) Fall of 2020 experienced Action Stage on St. Johns River, sandbag sites, and closure of boat ramps (2022) Historic flooding occurred from Hurricanes Ian and Nicole on the St. John's River and Little Wekiva River (2024) Flooding after Hurricane Milton Spatial Extent - Flooding could impact between 25%-50% of the county's area, potentially greater in rare events.
Overall Vulnerability	The overall vulnerability to floods in Seminole County and its jurisdictions is high. With several large bodies of water in the county and municipalities including Lake Jesup, Lake Monroe, Lake Harney, and the St. John's River; our community is very vulnerable to flooding. Enforcing floodway restrictions and building codes reduces

	vulnerability however, with heavy rains caused by severe weather and tropical cyclones, flooding is possible in any jurisdiction of the county. Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions. Land use changes and development in flood-prone areas increases impervious surfaces, reducing natural absorption of rainfall and worsening runoff. Poor stormwater management and loss of wetlands elevate the frequency and severity of flooding events.
	Impacts/ Consequences
Human	High Impact Risk of loss of life and injury, displacement, and increased distress. May affect drinking water; can increase risks to health. Due to the increased health risks facing the special need population, individuals with special needs are more vulnerable overall to the impacts of this hazard.
Property	High Impact Utility outages, transportation infrastructure closures, and varying levels of damage to structures in low-lying areas. Impacts will be greatest along the St. Johns River and in unincorporated Seminole County and the cities of Altamonte Springs, Sanford, and Winter Springs but can occur in any jurisdiction.
Economic	High Impact Severe flooding can cause economic turmoil for individuals, businesses, and subsequently the county through both direct and indirect methods.
Environment	Increased risk of exposure to hazardous materials. Displacement of wildlife may increase public health and safety issues, and potential increased arboviral vectors such as disease-carrying mosquitos. These can occur in any jurisdiction but will be most likely in areas of flooding

	where water is standing. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from flooding and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	Operations may be affected or interrupted by flooding.
Responders	Risk to life and safety while responding to populations affected by flooding.
COOP	Staffing difficulties are possible (personnel unable to drive to work or attending to own family).
Property/ Facilities/ Infrastructure	Utility outages, transportation infrastructure closures, and varying levels of damage to structures in low-lying areas.
Public Confidence in the Jurisdiction's Governance	Confidence will be shaped by the response of emergency management in mitigating, preparing, and responding to a flooding event.
	Risk Reduction
Mitigation	Types of flooding mitigation projects in the county include: • Clear waterways of obstructions • Demolition of Severe Repetitive Loss properties • Design and reconstruction of improved drainage system • Designated natural lands • Elevation of structures above Base Flood Elevation • Floodplain and stream restoration • Floodplain ordinances • Installation of storm water flood control measures to prevent flooding and related damage • Low impact development • Promoting flood insurance • Public Information / outreach • Sandbaggers / sandbag jigs • Storm water system for bodies of water • Structure modifications to commercial buildings • Water retention, green space preservation, green infrastructure
Plans	Storm Water Clearing Operations Procedure Flood Response Plan Sandbag Operations Plan Floodplain Management Plan

Hazard: Harmful Algal Bloom

Probability of Occurrence	1-5 Years
Risk	43%
Relative Risk	Medium
Description	Cyanobacteria, also called blue-green algae, are microscopic organisms found naturally in every aquatic habitat including fresh, brackish (combined salt and fresh water), and marine water. The organisms use sunlight to make their own food and as a by-product, produce oxygen. In warm, nutrient-rich (high in phosphorus and nitrogen) environments, cyanobacteria can multiply quickly, creating blooms that spread across the water's surface. Cyanobacteria can be toxic to humans, pets, and livestock. Blooms can stay below the water's surface, or they sometimes float to the surface in warmer climate. Some cyanobacteria blooms can look like foam, scum, or mats, particularly when the wind blows them toward a shoreline. Harmful algal blooms, often caused by the proliferation of cyanobacteria, pose significant risks to human health and the environment. Cyanobacteria produce toxins known as cyanotoxins, which can contaminate water sources such as lakes, rivers, and reservoirs. Ingestion of water contaminated with cyanotoxins can lead to gastrointestinal problems such as nausea, vomiting, diarrhea, and abdominal pain. These symptoms can be particularly severe in children, the elderly, and individuals with compromised immune systems. Additionally, contact with water containing cyanobacteria or their toxins can cause skin irritation, rashes, or allergic reactions, especially in individuals with sensitive skin. Inhalation of cyanobacteria aerosols, particularly during recreational activities like swimming or boating in affected water bodies, can lead to respiratory problems such as coughing, wheezing, or difficulty breathing. Overall, harmful algal blooms represent a public health concern.
Location	Waterbodies across Seminole County
Significant Occurrences	(2019): In October, Seminole County was alerted to two (2) blue-green algae blooms in residential lakes. Sampling and testing of the lakes confirmed toxins in the lake, and alert

signage was placed in public locations surrounding the waterbody. A reverse emergency call was placed to all of the residents in the area.

(2022): In November, Seminole County was alerted to two (2) blue-green algae blooms in Lake Howell and Deep Lake. Sampling and testing of the lakes confirmed toxins in the lake, and alert signage was placed in public locations surrounding the waterbody. A reverse emergency call was placed to all of the residents in the area.

(2023): In January, Seminole County was alerted to one (1) blue-green algae bloom in Wood Lake. Sampling and testing of the lakes confirmed toxins in the lake and alert signage was placed in public locations surrounding the waterbody. A reverse emergency call was placed to all of the residents in the area.

(2024): In April, Seminole County was alerted to two (2) blue-green algae blooms in Little Big Econ River and Lake Jesup. Sampling and testing of the bodies of water confirmed toxins in the lake and alert signage was placed in public locations surrounding the waterbody. A reverse emergency call was placed to all of the residents in the area.

Overall Vulnerability

Seminole County's overall vulnerability to harmful algal blooms (HABs) is medium. The people of Seminole County are highly vulnerable to the threat of HABs due to the numerous areas where it can be present. Through continuous monitoring, public education, and deploying alerts/messaging when HABs are identified, first response agencies work to reduce the overall vulnerability to the effects of HABs. All jurisdictions in the county are similarly vulnerable to the effects of HABs.

Land use development does not have a direct impact on the risk of harmful algal blooms, as these events are primarily driven by nutrient runoff, water temperature, hydrological conditions, and other environmental factors.

Impacts/ Consequences

Human

Low Impact

Gastrointestinal Illness – Ingestion of water contaminated with cyanotoxins produced by HABs can cause gastrointestinal symptoms such as nausea, vomiting,

	diarrhea, and abdominal pain. These symptoms can be particularly severe in children, the elderly, and individuals with compromised immune systems. Skin Irritation – Direct contact with water containing cyanobacteria or their toxins can lead to skin irritation, rashes, or allergic reactions, especially in individuals with sensitive skin. Dermatitis and other skin conditions may occur upon exposure to cyanobacterial blooms. Respiratory Issues – Inhalation of cyanobacteria aerosols, particularly during recreational activities like swimming, boating, or water sports in affected water bodies, can lead to respiratory problems such as coughing, wheezing, or difficulty breathing. Respiratory irritation may result from exposure to cyanotoxins, or other organic compounds released by algal blooms. Neurological Effects – Some cyanotoxins, such as microcystins, have been associated with neurological symptoms including headaches, dizziness, weakness, confusion, and in severe cases, seizures, or paralysis. Long-term exposure to cyanobacterial toxins may increase the risk of neurodegenerative diseases. Long-Term Health Risks – Chronic exposure to cyanotoxins over time may pose long-term health risks, including an increased risk of liver cancer, kidney cancer, neurodegenerative diseases, and other chronic health conditions. Prolonged exposure to HABs may exacerbate pre-existing health conditions and contribute to cumulative health effects.
Property	Low Impact HABs can negatively influence property value during an active bloom.
Economic	Low Impact HABs cause lakes, reservoirs, and rivers to become unsightly and at times dangerous, reducing tourism, recreation, commercial fishing, and property values and increasing water quality monitoring, management, and treatment costs.
Environment	A bloom of algae on the water's surface creates a turbid (cloudy) underwater environment, one that prevents much

	of the sun's light from reaching bottom-dwelling organisms, including plants. Underwater plants are often a critical source of food and shelter for other organisms, and without them entire aquatic food webs and ecosystems can suffer. Even nontoxic algal blooms can have a detrimental impact on aquatic ecosystems in the form of dead zones, areas in a water body with so little oxygen that aquatic life can't survive. Also known as hypoxic zones, dead zones are typically a result of eutrophication, which is what happens when a waterway becomes overly polluted with nutrients. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from harmful algal blooms and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	This hazard would have minimal impact to program operations.
Responders	Responders should ensure to rinse off with fresh water if contact is made with suspected HAB waterways.
COOP	This hazard would not affect the COOP.
Property/ Facilities/ Infrastructure	Physical structures would not be affected by this hazard.
Public Confidence in the Jurisdiction's Governance	In the event of a failure or poor response to a reported HAB, the public's perception of Seminole County can become negative.

Risk Reduction

Mitigation	Potential Methods for Mitigation of HABs: • Floating Treatment Wetlands • Riparian Vegetation • Aeration • Mechanical Circulation • Hypolimnetic Oxygenation • Coagulation & Flocculation • Barley Straw
Plans	CEMP – Operations Annex D-38 Recreational Water Contamination Response Plan

Hazard: Hazardous Materials/ Radiological (Fixed Site and Transportation)

Probability of Occurrence	1-5 Years
Risk	48%
Relative Risk	Medium
Description	There are numerous hazardous materials facilities and plants throughout Seminole County. A majority of these facilities are water treatment facilities and some construction and building facilities. In addition, there are hazardous materials located in minor quantities at schools, hospitals, and some of the telecommunication facilities throughout Seminole County. Seminole County has an aggressive hazardous materials inspection and cataloging program. The information collected from the facilities is placed into a State-wide system for easy access by emergency responders. The Emergency Operations Center monitors planning and training activities, spills, chemical releases, and hazardous materials events. Seminole County would not be directly affected by a coastal oil spill; therefore, an assessment is excluded. However, the County could feel the effects from a spill during an incident affecting the Florida Power and Light facility on the St. John's River in Volusia County at Highway 17-92 near the bridge. Seminole County has a minimal chance of experiencing the effects of a hazardous material/radiological incident caused by rocket launches out of Kennedy Space Center.
Location	North, Central and West geographic areas of Seminole County
Significant Occurrences	(2013-2016) 1,4-Dioxane, which is not regulated by State or Federal standards, was first identified in three (3) Seminole County Water Treatment Plants in 2013, results were published in a 2015 Annual Water Quality Report, and operational adjustments were made in 2016 to minimize concentrations of 1,4-d drinking water. Since then, county drinking water has tested below the Health Advisory Level of .35 parts per billion. (2023) Lake Mary water treatment facility experienced a

	hydrogen peroxide leak; levels were not harmful. Notably, Interstate 4 and SR 417are both essential roadways that are used to transport hazardous materials. Spatial Extent – Any hazardous material accident would have very localized impacts and would account for less than 25% of the county's geographic area.
Overall Vulnerability	Overall vulnerability of hazardous materials incidents is medium in Seminole County and its jurisdictions. While the spatial extent of these incidents would likely be low, the impacts to humans could be substantial. Having busy interstates and active railways leaves the county vulnerable to hazardous materials leaks. Having major bodies of water such as Lake Jesup, Lake Monroe, and the St. Johns River also leaves room for vulnerability because some hazardous materials may be spread through the waterways. Land use changes that increase industrial activity, transportation networks, and storage of hazardous materials elevate the potential for spills, leaks, and exposure risks. Development near industrial sites or major transportation routes compounds vulnerabilities.
	Impacts/ Consequences
Human	Moderate Impact Depending on the hazardous material, there may be ranging impacts to human health and safety; may require shelter-in-place.
Property	Moderate Impact The property affected by a spill could have varying impacts depending on the type and scale of the disaster.
Economic	Moderate Impact Depending on the severity and material that is spilled it can impact property value, local businesses, and tourism.
Environment	Certain materials can be detrimental to environmental ecosystems.
Program Operations	Rare events can occur requiring relocation of program operations.
Responders	Protective actions required for responders such as proper

	PPE, depending on the hazardous materials.
COOP	Unless directly impacted operations center, this hazard poses very little threat to COOP.
Property/ Facilities/ Infrastructure	Depending on the nature and severity of event, there could be a larger risk to infrastructure, etc.
Public Confidence in the Jurisdiction's Governance	The public's confidence would be related to the ability of the county to respond appropriately and contain the situation.

Risk Reduction

Mitigation

Mitigation projects for hazardous materials include:

- Air monitoring equipment
- Containment equipment / logistics
- Convert gas chlorination system to liquid chlorine system
- Develop proactive hazardous materials response plan
- Emergency Public Information and Warning
- Hazardous Materials storage ordinance
- Hazardous Materials team training and exercises
- Public Education / outreach

Plans

Hazardous Materials Standard Operating Guidelines

Hazard: Mass Gatherings/ Planned Events

Probability of Occurrence	1-5 Years
Risk	43%
Relative Risk	Medium
Description	There are numerous special events in Seminole County that bring over 10,000 persons together in one venue. Of these, the largest event is the annual “Red Hot and Boom” celebration in the City of Altamonte Springs. This event draws more than 150,000 people to enjoy the Independence Day celebration. In addition to “Red Hot and Boom”, the City of Sanford’s Fort Mellon Independence Day Celebration, Winter Springs, and Oviedo events have significant numbers of people on July 4th. Other special events are normally located in the various parks and recreational centers throughout Seminole County. The largest of the non-government sponsored events is the Scottish Highland Games Festival. Thousands

	of people come to Seminole County to visit the parks during these events.
Location	No particular geographic area of Seminole County
Significant Occurrences	"Red, Hot, and Boom" Independence Day Celebration in Altamonte Springs brings over 150,000 people. City of Sanford's Fort Mellon, Winter Springs and Oviedo fireworks together equal roughly 150,000. The Scottish Highland Games is the second largest event in Seminole County with over 20,000 attending each of the three days. The ECNL Boys and Girls Soccer League Tournament in December brings in over 100 teams from around the Nation. Spatial Extent - These events are localized and would affect less than 25% of the county
Overall Vulnerability	The overall vulnerability of mass gatherings or planned events is medium. Even with specialized equipment, teams and training for these type of events, mass gatherings continue to be vulnerable targets. First responders work to reduce the vulnerability of large events by implementing security checkpoints, vehicle barricades and other safety measures. Buildings, infrastructure, and systems within Seminole County are not very vulnerable to violent acts. Although large events take place in all jurisdictions of Seminole County, the cities of Altamonte Springs and Sanford may be more vulnerable to attacks due to their large number of outside public events. Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions. The risk associated with mass gatherings or planned events is not significantly impacted by land use development. Event risks are primarily influenced by event management, security measures, crowd behavior, and external factors such as weather, rather than the overall development of the area.

Impacts/ Consequences

Human	Moderate Impact With large amounts of people, general injuries are more likely, civil disturbances more likely, increased traffic and accident risk.
Property	Low Impact Influx of people may overtax local resources if not prepared however, no impact to the physical property is expected.
Economic	Moderate Impact Increased demand of local resources, food, water, etc.
Environment	This human-caused hazard would likely not have an impact on local environment.
Program Operations	If gathering near center of operations, large gatherings could lead to disruption in operations in affected areas.
Responders	May experience increased calls of service, potentially dealing with heavy traffic and slowing response time.
COOP	If gathering near center of operations, large gatherings could lead to disruption to the COOP in affected areas.
Property/ Facilities/ Infrastructure	Influx of people may overtax local facilities, roads, and resources, if not prepared.
Public Confidence in the Jurisdiction's Governance	How the County responds with security and response to any emergency may determine the public's confidence.

Risk Reduction

Mitigation

Mitigation projects for mass gatherings include:

- Air monitoring equipment
- CCTV / Mesh Camera networks
- Drone detection equipment / technology
- Electronic signage / Variable message boards
- Incident Action Plan training
- Metal detector / check points
- Public Education / outreach
- Radiological detectors
- Special event ordinance / rules
- Vehicle barricades for high populated areas

Plans

Permitting Procedures
Fusion Center Threat Assessment Bulletin

Incident Action Plans

Hazard: Mass Migration/ Repatriation

Probability of Occurrence	6-10 Years
Risk	32%
Relative Risk	Medium
Description	Pockets of migrant workers in Seminole County remain very low. These workers are drawn from the local work force and migrants, if any, are transported into the area on a daily basis to work in the farmlands of Seminole County.
Location	No particular geographic areas in Seminole County.
Significant Occurrences	(2010): January – Operation Haiti Relief after an earthquake brought displaced and some injured people through Orlando Sanford International Airport. (2017): Hurricane Maria – mass migration of evacuees from the island of Puerto Rico to the Central Florida area after the hurricane. Over 250 families resettled in Seminole County and over 6,500 in Central Florida. (2024) In March of 2024, overwhelming gang violence and the overthrow of the Haitian government caused mass evacuations of American citizens from Haiti back to the United States. The FDEM first selected the OSIA as the reception point and one flight was received. Spatial Extent - this hazard would affect less than 25% of the geographical area
Overall Vulnerability	The overall vulnerability of mass migration and repatriation in Seminole County and its jurisdictions is low. While lack of housing and community resources could be a concern with mass migration, due to the low probability and lack of physical impacts, Seminole County is not very vulnerable to this hazard. While it's possible people migrating into the county may choose a more urban area to move to, each jurisdictions is equally vulnerable to this possibility. Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions. As population centers grow due to changes in land use, an

	influx of displaced persons from disasters, conflicts, or economic instability can strain local infrastructure, social services, and emergency response capacity, complicating repatriation and relocation efforts.
	Impacts/ Consequences
Human	Moderate Impact Possible increases in crime rate, civil disturbances may increase.
Property	Low Impact Mass migration could potentially impact.
Economic	Low Impact Increase demands of deliverable goods and increased crime in affected areas could affect local economy.
Environment	Massive increase in population could strain the environment.
Program Operations	Increased population could lead to civil unrest which may affect operations.
Responders	Could be increased calls to service and need for additional personnel to handle influx of population.
COOP	Civil unrest could lead to disruption to COOP in affected areas.
Property/ Facilities/ Infrastructure	Depending on type and scale of event, some local facilities and infrastructure could be stressed or overtaxed.
Public Confidence in the Jurisdiction's Governance	The coordination of services provided and assimilation of migrants may affect confidence of the public.
	Risk Reduction
Mitigation	Potential mitigation projects include: • Affordable work force housing • Diverse employment / career development • Homeless sheltering – expansion / services • Public Education / outreach • Sheltering mitigation / retrofit
Plans	Repatriation Annex to the CEMP

Hazard: Severe Weather
(Hail, Lightning, Micro-Bursts, Thunderstorms)

Probability of Occurrence	1-5 Years
Risk	57%
Relative Risk	Medium
Description	Severe weather is defined as any meteorological event that poses a risk to life, property, social disruption, and/or requires the intervention of authorities. Hail: Hail is a form of solid precipitation consisting of balls or irregular lumps of ice .5 millimeters or larger that form during certain thunderstorm conditions. Hail Extent: 2.5in - tennis ball (NOAA Hail Conversions) (National Oceanic and Atmospheric Administration) Lightning: Lightning is the electrostatic discharge of atmospheric electricity, characterized by flashes that can travel within a thundercloud, between clouds, or from a cloud to the surface of the earth; lightning is usually accompanied by audible thunder. Lightning Extent: 17+ flashes/sq km/yr (Cloud to Ground flash Density) (NWS, 2019) Micro-burst: A micro-burst is a violent, short-lived, localized column of sinking air caused by an intense downdraft, creating extreme wind shears at lower altitudes; usually associated with thunderstorms. A micro-burst can present wind gust/bursts between 50-70mph but can reach as high at 115mph. Micro-burst Extent: 90mph wind gusts Thunderstorms: Thunderstorms are formed by the convection behavior of unstable air mass layers, which result in the meteorological effects of wind, heavy rainfall, lightning and thunder, and sometimes hail.
Extent	Hail: Small hail up to 2.5” – Tennis ball (NOAA Hail Conversions) Lightning: Direct strike, 2 fatalities, 25 injuries Micro-burst: Up to 90mph wind gusts Thunderstorms: Tornadoes (EF1- EF3), Flooding Rain (15” in 24hrs, 18.5” in 48hrs, 20.2” in 72hrs)

Location	Severe weather may take place in any geographic region of Seminole County.
Significant Occurrences	(1992): March 6 – A severe thunderstorm moved southeast across southwestern Seminole County producing hail the size of golf balls, damages around $300,000. (2011): March 30-31 – Winter Park storms caused widespread power outages, fallen trees, road flooding, and damage to homes. (2013): July 27 – Micro-burst near Sanford Airport- one slightly damaged building, carts blown across property. (2018): October 8 – Severe wind and thunderstorms caused boat to capsize on Lake Monroe carrying two men, one deceased and the other sent to hospital. (2020) May 21 - Severe thunderstorms produced large hail across Seminole County. Hail was reported to be up to 3” diameters (largest hail size ever in this area). (2021) Sep. 19 - Between 4-6 inches of rain fell in northern Seminole County. Storm stayed overhead for 2 hours and caused flash flooding. Standing water was as deep as 2 feet. Several homes in Downtown Sanford reported 2-3” of water inside. (2022) Mar. 16 - Storms produced up to 2” hail in Lake Mary and Longwood. (2022) May 21 - Storms produced up to 1.25” hail in Oviedo and Sanford. Spatial Extent – This hazard could impact greater than 50% of the county and in extreme cases cause county-wide effects.
Overall Vulnerability	Vulnerability to severe weather is medium due to its frequency in nature combined with our ability to monitor and predict when severe weather will impact Seminole County and its jurisdictions. While severe weather can have damaging effects on people and property, widespread awareness and lead time before storms reduces our overall vulnerability to its effects. Vulnerability to severe weather is consistent throughout all jurisdictions. Underserved communities within Seminole County and its

	jurisdictions are more vulnerable to this hazard as individuals within these communities have less access to immediate resources such as transportation, safe housing, and financial reserves. Denser development increases the number of structures and residents exposed to hazards like thunderstorms, high winds, and hail. Poor construction practices and inadequate mitigation measures can lead to greater damage and economic losses.
	Impacts/ Consequences
Human	Moderate Impact Potential for minimal loss of life and injuries and would likely impact all jurisdictions within Seminole County. May require shelter operations, potential impact on mental and physical health. Due to the increased health risks facing the special need population, individuals with special needs are more vulnerable overall to the impacts of Severe Weather.
Property	Moderate Impact Severe weather can cause utility outages and potentially major damage to buildings from wind, fires caused by lightning, and potential threat to aviation property.
Economic	Moderate Impact Depending on type of hazard and specific event, there could be damage to certain buildings, etc.
Environment	Environmental tolerances can be overwhelmed by hazards associated with severe weather. Debris and hazardous materials could be released into the environment. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from severe weather and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	Dangerous weather conditions may cause difficulty in responders' ability to travel. Loss of power may impact system operations and or communications.

Responders	Protective actions required, PPE required for safety in addressing downed utility lines, hazardous materials, and debris. Status of responder's family may affect responder's ability to perform his/her duties.
COOP	Only in extreme situations of damage would relocation be necessary; communication and utilities may be impacted.
Property/ Facilities/ Infrastructure	Possible utility outages and transportation infrastructure closures; damage to property and buildings in general is possible in all jurisdictions within Seminole County.
Public Confidence in the Jurisdiction's Governance	Residents affected by severe weather can look to local first responders and insurance companies to assist with damages. OEM responds to all reported severe weather events and coordinates messaging with the National Weather Service to alert residents of pending severe weather.

Risk Reduction

Mitigation

Mitigation projects for too include:

- Lightning Detection Warning System
- Public Education / outreach
- Public Information and Warning
- Strengthen critical infrastructures / retrofit
- SkyWarn certification
- Wind retrofit / protection

Plans

Emergency Alert and Warning Systems Operations Annex to the CEMP

Comprehensive Emergency Management Plan (CEMP)

Hazard: Sinkholes/ Land Subsidence

Probability of Occurrence	1-5 Years
Risk	33%
Relative Risk	Medium
Description	A sinkhole is a depression or hole in the ground brought about by one of the various forms of erosion beneath the earth, causing a collapse of the surface layer. Seminole County is susceptible to sinkhole and subsidence conditions because it is underlain by thick carbonate deposits that are susceptible to dissolution by circulating

	ground water. Florida's principal source of freshwater, ground water, moves into and out of storage in the carbonate aquifers – some of the most productive in the nation. Development of these ground water resources for municipal, industrial and agricultural water supplies creates regional ground water level declines that play a role in accelerating sinkhole formation, thereby increasing susceptibility of the aquifers to contamination from surface water drainage. Such interactions between surface-water and ground-water resources in Florida play a critical and complex role in the long-term management of water resources and ecosystems of Florida's wetlands. These conditions are monitored, but if the occurrence occurs on private property, it is the citizen's responsibility to repair the damage. If the condition exists on public property, the designated public works department will take control of the situation.
Extent	Average size: 3-4 ft. wide and 4-5 ft. deep. Could be up to 30 ft. deep in extreme cases.
Location	Sinkholes could occur in any area of Seminole County, but would be small in impact area.
Significant Occurrences	130 sinkholes/land subsidence in the county since 1962. They are a common, naturally occurring geological phenomenon. (2002): 50 foot wide and 30 foot deep sinkhole opened up in Sanford destroying a barn and swallowing two horses. Much of the damaged was caused by ground water filling the hole rapidly. No damage was reported to the residential structure of the home. (2012): In December, a 25 foot deep sinkhole in Lake Mary threatened a home causing the homeowners to evacuate. The City of Lake Mary deemed the home unsafe, however, the repairs to the home were covered by the homeowner's insurance with the claim totaling over $300,000. Major repairs noted were to major cracks in the structure. (2014): In February, a 6 foot deep, and 5 foot wide hole on the Rock Lake Middle School in Longwood opened up causing no structural damage. Physical education classes were cancelled due to its location but the school operations were not impacted. Since then, the hole was filled with dirt and a fence erected around it to prevent

further damage.

(2015): In January, a land subsidence event occurred in Geneva in which firefighters rescued a dog who was 75% trapped in the hole. There was no official confirmation if the depression was actually a sinkhole, however, the dog was rescued and administered oxygen. The dog was transported to a local animal hospital and made a full recovery.

(2016): In July, a sinkhole was reported by the Department of Environmental Protection in the City of Oviedo. The sinkhole was 4 feet deep and 7 feet in length. The location consists mainly of in cohesive and permeable sand.

(2017): In mid-January of 2017, Seminole County Fire Department responded to a sink hole in Longwood. The sink hole was 3 feet deep with a 4-inch width and a circular shape.

(2019) October 19th – Approximate 20x30 ft wide and 20 ft deep sinkhole formed at the Royal Arms Condominiums on Orange Drive causing 16 units to evacuate.

(2021) Sept. 20- Heavy rain caused an old stormwater culvert along East 1st St. to collapse, causing a sinkhole. Sanford city crews closed a portion of Fort Mellon Park to fill the sinkhole in.

Spatial Extent- localized incidents that affect less than 25% of the total land mass of the county.

Overall Vulnerability

The overall vulnerability to sinkholes in Seminole County is medium. While sinkholes generally affect a small area of land or property, they can happen within any jurisdiction of the county and with no notice. With little to no prevention activities available, it is difficult to reduce the vulnerability of sinkholes. While sinkholes are more common in the western part of the county in Altamonte Springs and Longwood, all jurisdictions are vulnerable.

As Seminole County and its jurisdictions experience continued population growth, increasing land development and water consumption can contribute to sinkhole formation. Underserved communities, which may have fewer resources for property maintenance and mitigation, are disproportionately affected when sinkholes damage homes, disrupt transportation routes, or contaminate

	water supplies. Extensive construction can destabilize underlying limestone formations, increasing the likelihood of sinkhole formation. Land development in high-risk zones elevates potential property damage and infrastructure failures.
	Impacts/ Consequences
Human	Low Impact Sinkholes serve as a low impact to the general public outside of the immediate area. Risk to contaminated drinking water is possible when sinkhole encroaches on aquifer.
Property	Low Impact Any property impact is isolated to home or businesses affected; could be costly to repair to the individual.
Economic	Low Impact A localized sinkhole or land subsidence event would have a very limited impact on services.
Environment	Sinkholes can affect the environment by threatening water supplies by draining water from streams, lakes, and wetlands directly into the aquifer; this could affect wildlife habitats. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from sinkholes/land subsidence and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	Due to the isolated nature of sinkholes program operations should not be affected.
Responders	Due to the isolated nature of sinkholes responders should not be affected.
COOP	Due to the isolated nature of sinkholes the COOP should not be affected.
Property/ Facilities/ Infrastructure	Isolated sinkholes could impact critical facilities, transportation infrastructure, and private property. Sinkholes/ land subsidence events can affect the

	infrastructure by draining unfiltered water from streams, lakes and protected wetlands into the aquifer. These impacts can be felt in any of the jurisdictions of Seminole County, but are most common in the western unincorporated areas, and the cities of Longwood and Altamonte Springs.
Public Confidence in the Jurisdiction's Governance	Residents affected by sinkholes may look to first responders and insurance companies for assistance. OEM may respond to reported sinkholes/land subsidence events to perform a site survey and take photos for documentation.

Risk Reduction

Mitigation	Mitigation projects for sinkholes include: • Promote insurance to include sinkhole coverage • Public Education / outreach • Subsidence-proof construction design
Plans	Sinkhole Land Subsidence Response Operations Annex to CEMP

Hazard: Structural Integrity/ Collapse (Fires, Aging Infrastructure)

Probability of Occurrence	1-5 Years
Risk	38%
Relative Risk	Medium
Description	Structural integrity concerns related to fires and aging infrastructure represent a significant hazard for Seminole County. This hazard encompasses the risks posed by the natural aging process of buildings and infrastructure, compounded by the increased susceptibility to fires. As buildings and infrastructure age, they often suffer from material degradation and outdated construction practices, which can lead to reduced structural strength and stability. This deterioration can be further exacerbated by environmental factors, such as the hot and humid climate of Florida, which can accelerate wear and tear. In many communities throughout the County, a considerable portion of the building stock may be decades old, having been constructed during periods of rapid development with materials and standards that may no longer be considered safe by today's codes. This aging

	infrastructure not only poses a risk under normal conditions but becomes particularly hazardous in the event of a fire. Fires in aging buildings can spread more quickly and cause more extensive damage due to the presence of combustible materials and the lack of modern fire suppression systems. This hazard is critical for Seminole County due to its unique geographic and demographic factors. The county's growth over the past several decades has resulted in a mix of older structures in established neighborhoods and new developments. The older neighborhoods often consist of buildings that have not been retrofitted to meet current building codes, making them more vulnerable to structural failure during a fire. Furthermore, Florida's climate presents additional challenges. The high humidity and frequent exposure to tropical storms and hurricanes can accelerate the deterioration of building materials, leading to weakened structures.
Extent	Varied in relation to size of structure.
Location	Compromised structures caused by aged infrastructure or fires can occur anywhere in the County.
Significant Occurrences	(2021) June, Champlain Towers South, a 12-story beachfront condominium in the Miami suburb of Surfside, partially collapsed, causing the deaths of 98 people. Four people were rescued from the rubble, but one died of injuries shortly after arriving at the hospital. Eleven others were injured. Approximately thirty-five were rescued the same day from the un-collapsed portion of the building, which was demolished ten days later.
Overall Vulnerability	The overall vulnerability to structural integrity/collapses is medium. Structural integrity and collapse, particularly due to fire damage, represent a frequent hazard with potential effects on infrastructure and human life. Fires can weaken structural components, leading to partial or total collapse of buildings. The impact of large-scale or multi-unit fires may include the potential loss of life, serious injuries, or displacement of residents and businesses. The frequency in which they occur will trend downwards as more effective building codes are implemented, and structures are retrofitted/rebuilt following a collapse. Structural collapses

	will also have a low spatial impact as, for the most part, these incidents primarily affect individuals or small groups of people. The presence of insurance can mitigate a large portion of financial burden on affected individual(s). Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as aging infrastructure and older buildings are less resilient to high winds. Additionally, the infrastructure is more likely to have outdated fire suppression systems and are more susceptible to electrical issues. The risk of structural integrity failure or collapse is more closely related to construction standards, maintenance practices, and engineering safety measures than to the amount or type of land development. Well-planned development that adheres to building codes can actually reduce the risk of structural issues.
	Impacts/ Consequences
Human	Low Impact Despite this hazard occurring every 1-5 years, death and injury associated with a majority of these incidents remain relatively low.
Property	Medium Impact Older structures are most vulnerable and can potentially lead to high financial burden for individuals, but this hazard is much less present in newer structures with more up-to-date building regulations.
Economic	Low Impact Incident occurrences minimally impact the economy. Older structures are most vulnerable and can potentially lead to high financial burden for individuals.
Environment	The environment would not be affected by this hazard.
Program Operations	There would be minimal impact to program operations due to structural collapses unless the collapses occur at an operational structure.
Responders	Although there is an objective presence of risk associated with structural collapse response, there are policies and procedures aimed at mitigating the risk.

COOP	There would be minimal impact to COOP due to structural collapse
Property/ Facilities/ Infrastructure	Structural collapses could impact critical facilities, transportation infrastructure, and private property. However, critical facilities and important infrastructure are generally built to be more resilient than private property structures.
Public Confidence in the Jurisdiction's Governance	Residents affected by sinkholes may look to first responders and insurance companies for assistance. OEM may respond to reported sinkholes/land subsidence events to perform a site survey and take photos for documentation.

Risk Reduction

Mitigation

Mitigation projects for structural collapses/integrity include:

- Building Code Enforcement and Updates
- Public Education / outreach
- Fire Prevention Measures
- Retrofitting and Upgrading
- Regular Inspections and Maintenance
- Community Involvement
- Specialized Response Teams

Plans

COOP- Alternate Facility Activations

Hazard: Tornadoes

Probability of Occurrence	6-10 Years
Risk	32%
Relative Risk	Medium
Description	A tornado is a mobile vortex of violently rotating winds, extending downward from the cloud base and advancing in front of a storm front; they are made visible by vaporized moisture and debris. Florida is the state that experiences the most number of tornadoes per square mile. Florida had an average of 55 tornadoes per year since 1961, with an average of four fatalities per year. Florida tornadoes are generally short in duration and have a narrower path. Because of the unpredictable pattern of storms and tornadoes and the relatively high reoccurrence frequency, all of the state, including Seminole County is vulnerable to damage. As the

	number of structures and people increase, the potential damage and injury rates increase. Mobile and modular homes, poorly constructed and substandard housing apartment complexes, and low rent housing projects are extremely susceptible to damage and destruction.
Extent	The Enhanced Fujita (EF) Scale categorizes tornadoes based on estimated wind speeds and the damage they cause. The six EF ratings and their corresponding wind speeds are the following: EF0 (65-85 mph), EF1 (86-110 mph), EF2 (111-135 mph), EF3 (136-165 mph), EF4 (166-200 mph), EF5 (over 200 mph).
Location	Tornadoes may affect any area of Seminole County.
Significant Occurrences	(1966): April 4 – Central Florida experienced its largest tornado on record. An EF4 tornado hit Seminole County killing 11 and injuring 530 people. (1998): February 22 – EF 3 tornado struck Seminole County and caused $31 million dollars in damages. This is the deadliest in recorded history through the State of Florida. (2006): November 7 – Election Day tornado damaged over 30 homes and destroyed two. This tornado was in the Aloma/State Road 417 area just outside the Oviedo city limits. (2009): February 2 – Ground Hog Day Tornado. While most of the damage from this event was in Lake and Volusia counties, the tornadoes sparked the discussion of tornado sirens. The City of Oviedo elected to purchase these outdoor warning devices. Seminole County elected to provide an electronic text, voice, e-mail notification system which would be called “Alert Seminole”. (2009): May 19 – Casselberry Tornado. An EF0 tornado touched down briefly (0.8 mile track) and removed the roofs from a single family home and mobile home. Portions of the roofs and other debris were carried downstream, with large metal pieces deposited in trees. Another 8 homes sustained minor damage. (2019): January 24 – EF0 tornado hit Sanford peaking at 85 MPH winds, property damage estimated $1.38 M

Since 1966, Seminole County has been affected by a total of 28 tornado events that have caused significant damage across the county. Due to the impact to physical property, the possibility of death or injury, and the likelihood of interruption of economic services to the community, a tornado event is rated high on a threat level when compared to other hazards.

(2024): October 8-9 – At least 46 confirmed tornadoes touched down in Florida ahead of Hurricane Milton, during a prolific tornado outbreak that occurred between October 8–9, focused on the Florida Heartland, the Treasure Coast and the Space Coast. This became the largest single day of tornadoes in state history.

Spatial Extent - Tornadoes are usually very isolated and would impact less than 25% of the geographically area of the county

Overall Vulnerability

The overall vulnerability of tornadoes is high, especially with the increased rate of growth within Seminole County and its jurisdictions. Increased populations causes new development and a larger impact area for tornadoes to cause damage. More densely populated areas such as Altamonte Springs and Sanford are more vulnerable than loosely populated areas such as the eastern part of unincorporated Seminole County. Buildings not built to withstand high winds are vulnerable to even the weakest of tornadoes. The Local Mitigation and Resiliency Strategy identifies opportunities for critical infrastructure and other buildings to be retrofitted to reduce their vulnerability to tornadoes.

Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions.

Expanding urban and suburban development increases the number of structures and people at risk from tornadoes. Weak building construction, particularly in mobile home communities, amplifies vulnerability to high winds.

Impacts/ Consequences

Human	Moderate Impact Extent of impact can highly vary as tornadoes can touchdown within the county, but completely miss any structures or people. Direct impact with a tornado can potentially lead to high impact.
Property	Moderate Impact Extent of impact can highly vary as tornadoes can touchdown within the county, but completely miss any structures or people. Direct impact with a tornado can potentially lead to high impact.
Economic	Moderate Impact A tornado can have a large economic impact to the community. Tornado events are typically very costly to recover from and can impact the ability for the community to reopen businesses.
Environment	Mainly isolated in nature but can harm or kill various plant and animals and debris and hazardous materials could be released into the environment. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from tornadoes and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	Agencies may be forced to relocate if tornado is threatening the area. Operations could be stalled by transportation and communication barriers.
Responders	Immediate response can be stalled because of dangerous weather conditions; proper personal protective equipment may be needed as well.
COOP	Possible impact to COOP. Agencies may be forced to relocate to continue essential operations as a result of the impact from tornadoes.
Property/ Facilities/ Infrastructure	Tornadoes can cause massive failures in electrical, communications, and other critical infrastructures.
Public Confidence in the Jurisdiction's Governance	Timely warning provided by local forecasters and emergency management will be critical along with response and recovery efforts taken by county agencies.

Risk Reduction

Mitigation

Mitigation projects for tornadoes include:

- Construction hardening ordinances / rules
- Emergency / reverse calling systems
- Emergency tornado shelter
- Public education / outreach
- Sky Warn certification
- Wind retrofitting critical infrastructures

Plans

Emergency Alert and Warning Systems Operations Annex to the CEMP

Hazard: Transportation Disruption (Aircraft, Rail, Mass Casualty Incident)

Probability of Occurrence

1-5 Years

Risk

43%

Relative Risk

Medium

Description

Seminole County has three (3) small air strips on the east side of Seminole County in Geneva, Lake Harney area, and Chuluota capable of landing a small aircraft (i.e. Cessna). In addition, many small planes use lakes as landing and take-off locations, including Prairie Lake (Altamonte Springs), Lake Jessup (Winter Springs), and various other large bodies of water. The largest airport in Seminole County is an international airport inside the City of Sanford.

The Orlando Sanford International Airport (SFB) is situated on approximately 2,000 acres in the boundaries of the City of Sanford in the northwestern section of Seminole County. The Sanford Airport Authority is responsible for the operation, maintenance, and development of the SFB airstrips. In the year 2017, the SFB statistics included 307,064 landings and takeoffs; 196 imports and 136 exports of cargo; and 2,922,446 passenger arrivals and departures.

Rail systems are another major transportation method within Seminole County. The addition of the Central Florida Rail Corridor (CFRC) Transit System provides new vulnerabilities for major transportation of persons through the community. SunRail began operations in 2014 with

	stations in DeBary, Sanford, Lake Mary, Longwood, Altamonte Springs, Maitland, Winter Park, Florida Hospital, LYNX Central Station, Church Street, Orlando Health/Amtrak and Sand Lake Road. The SunRail became fully operational in 2016 and there are now seventeen train stations along the 61 mile CRFC Corridor. The Amtrak Auto Train takes passengers and their vehicles nonstop from Sanford, Florida to the Washington, DC area. In addition to SunRail and the Amtrak Auto Train, Amtrak provides major transportation of customers through the center portions of Seminole County.
Location	No particular geographic area in Seminole County.
Significant Occurrences	(2003): April 5 - Students and chaperones from Maryland High School in Baltimore, MD were thrown from their seats as buses slammed into one another on Interstate 4 in the City of Sanford. Of the 118 people on the three buses -- 94 students, 21 chaperones and 3 drivers -- half were injured. They suffered an assortment of cuts and bruises. (2017) April 8 - A Piper PA-12 aircraft crashed shortly after takeoff, along the grassy north side of Runway 9R at Sanford International Airport. The pilot died, but there were no other fatalities. (2017) December 8 - A Connection900 BE-9L aircraft carrying three passengers crashed into the southeast side of the lake, near Lake Harney Woods Boulevard and Morgan Alderman Rd. All three passengers and the pilot died. (2022) April 6 - A SunRail train carrying six passengers collided with a dump truck at S. Country Club Rd. and W. Lake Mary Blvd. There were no injuries and no fuel leakage. (2022) December 19 - A SunRail train collided with a pickup truck along Old Lake Mary Road. No injuries on the train, but the truck driver was killed. (2023) September 12 - SunRail train hit and killed a person between the Lake Mary and Sanford stations. Spatial Extent - accidents are very isolated in nature and would affect less than 25% of the geographical area of the county
Overall Vulnerability	The overall vulnerability of transportation accidents is medium within Seminole County and its jurisdictions.

	Humans are very vulnerable to transportation accidents especially in high traffic areas or incidents of large entities such as trains or airplanes where hundreds of lives are affected. While transportation incidents do not typically affect many physical buildings, infrastructure such as roadways and train tracks can be greatly affected or shut down completely. Jurisdictions with major highways such as I-4 and SR417; including Altamonte Springs, Lake Mary, unincorporated Seminole County, Oviedo, Winter Springs, and Sanford are more vulnerable to transportation accidents. Jurisdictions with active rail systems including Altamonte Springs, Longwood, Lake Mary, Sanford, and unincorporated Seminole County are vulnerable to rail accidents. The City of Sanford is most vulnerable to an aircraft accident because of the location of the Orlando Sanford International Airport. As more transportation infrastructure is built, i.e. express ways, additional lanes, and truck stops, the risk of this hazard increases. Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions. New development leads to increased traffic, greater reliance on transportation networks, and expansion of critical infrastructure. Congested roads, inadequate evacuation routes, and aging bridges heighten susceptibility to disruptions from accidents, natural disasters, or other emergencies.
	Impacts/ Consequences
Human	Moderate Impact Depending on type of accident, major injuries and mass casualties are possible, especially with aircraft and trains.
Property	Low Impact Depending on nature and scale of accident, isolated property damage could occur.
Economic	Moderate Impact Isolated accidents do not pose major threats to the economy, though depending on the type and scale of the

	accident and areas impacted, the cost to repair and recover could be expensive.
Environment	This hazard would predominately be isolated from the environment unless in the extreme case a fire is started in a vulnerable wildfire area.
Program Operations	Program operations can remain stable regardless of the impact of this hazard.
Responders	Responders would require appropriate personal protective equipment; personnel may need support if a mass casualty incident occurs.
COOP	Impacts to COOP would likely be minimal because the isolated nature of a transportation accident.
Property/ Facilities/ Infrastructure	Isolated property and critical facilities and transportation infrastructure could be shut down or impacted depending on nature, scale, and location of event.
Public Confidence in the Jurisdiction's Governance	Public confidence is related to the overall response to a major traffic accident on the part of the County's responders.

Risk Reduction

Mitigation

Mitigation projects for transportations accidents include:

- Emergency alerting systems / signage
- Installation of train track safety signage
- Promote insurance to residents
- Public education / outreach
- Use of autonomous vehicles in State of Florida

Plans

Comprehensive Emergency Management Plan

Hazard: Tropical Cyclones (Hurricanes and Tropical Storms)

Probability of Occurrence	1-5 Years
Risk	71%
Relative Risk	High
Description	A tropical cyclone is a rapidly rotating storm system characterized by a low-pressure center, strong winds, and a spiral arrangement of thunderstorms that produce heavy rain. Depending on their size, sustained wind speeds, and

	location they can be referred to as: Tropical Storms: A tropical storm is a tropical cyclone with an organized system of strong thunderstorms, defined surface circulation, and maximum sustained winds of 39-73 miles per hour. Storms with wind speeds below 39 mph are considered tropical depressions. Hurricanes: A hurricane is a tropical cyclone with sustained wind of forces equal to or exceeding or 74 mph, most often occurring in the Western Atlantic and usually accompanied by rain, thunder, and lightning. Hurricanes are categorized using Saffir-Simpson scale, which measures sustained wind speeds over a 1-minute average and at 33ft above the surface. The categories are: Category 1: Sustained wind speeds of 74-95 mph Category 2: Sustained wind speeds of 96-110 mph Category 3: Sustained wind speeds of 111-129 mph Category 4: Sustained wind speeds of 130-156 mph Category 5: Sustained wind speeds of 157 mph or higher Note: Categories three and above are considered major hurricanes.
Extent	Ranging from a Tropical Storm to the effects of a Category 5 Hurricane (Saffir-Simpson Scale)
Location	Because of the nature and size of these storms, they could affect any part of Seminole County and would likely impact the whole county.
Significant Occurrences	(2004): Hurricanes Charley, Frances, and Jeanne - Local State of Emergency declared, County offices and schools closed. (2005): Wilma - flooding rains, etc. (2008): Tropical Storm Fay - major flooding from torrential rains. (2016): Hurricane Matthew - tropical storm force winds and heavy rain. (2017): Hurricane Irma - damages recorded include infrastructure damage, debris, hazardous materials, flooded areas and road damage. (2022): Hurricane Ian - Some wind damage and historic

flooding on St. John's and Little Wekiva rivers.

(2022): Hurricane Nicole - Caused St. Johns River to swell, which increased flooding threats in Sanford and Geneva. High winds caused several tornado threats.

(2023): Hurricane Idalia - Some power outages, a couple of downed trees, and a small depression on Maitland Ave.

(2024) Hurricane Milton- Localized flooding and utility outages.

Spatial Extent - Tropical cyclones can have far reaching effects and would impact the entire county.

Overall Vulnerability

The overall vulnerability of tropical cyclones is high within all jurisdictions of Seminole County. The possibility of harm to humans, high property damage, and potential infrastructure losses all combine to make tropical cyclones one of the highest threat hazards. Seminole County is vulnerable to tropical cyclones to a similar level in all jurisdictions because of the spatial extent of a hurricane or tropical storm. The Local Mitigation and Resiliency Strategy works to protect critical infrastructure in order to reduce the vulnerability of the community.

Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions.

Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as individuals within these communities have less access to immediate resources such as transportation, safe housing, and financial reserves.

Land development increases vulnerability to tropical cyclones by expanding impervious surfaces, which worsens flooding from heavy rainfall. As infrastructure and population grow, more buildings, utilities, and transportation networks are exposed to high winds, tornadoes, and prolonged power outages. Inadequate stormwater management and insufficient building standards can further amplify the impacts of tropical

	cyclones on the community.
	Impacts/ Consequences
Human	High Impact Depending on the strength of the storm, evacuations of low-lying areas and mobile/ manufactured homes may be called – in most recent storms, mandatory evacuations have been ordered for these areas. Food and water issues may arise if residents are unprepared and injuries and fatalities possible, most likely due to flooding. Due to the increased health risks facing the special need population, individuals with special needs are more vulnerable overall to the impacts of Tropical Cyclones.
Property	High Impact Depending on strength of the storm, structural damage to residential, commercial, industrial, and governmental buildings could be major. In Hurricane Irma, Seminole County and its jurisdictions received damage to roads, bridges, parks facilities, and water control facilities such as culverts.
Economic	High Impact Depending on strength of the storm, low to high impacts could be felt within the path of the storm on all business sectors. Regional impacts could be greater with a catastrophic storm.
Environment	Depending on strength of the storm, trees and shrubbery could sustain major damage. Transportation of foreign debris and flooding can disrupt ecosystem services. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from tropical cyclones and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	If damage to government offices occurs, relocation may be

	needed.
Responders	Difficulty responding during event due to dangerous weather conditions; staff may experience fatigue and stress during hazardous conditions, and status of responders' family may affect the responders' ability to perform his/her duties.
COOP	The COOP may be disrupted depending on strength of storm.
Property/ Facilities/ Infrastructure	Depending on strength of the storm, structural damage to residential, commercial, industrial, and governmental buildings could be major.
Public Confidence in the Jurisdiction's Governance	The public's confidence is related to how well services are kept online, proper warning information, and ability to respond to various hazards associated with tropical cyclones.

Risk Reduction

Mitigation

Mitigation projects for tropical cyclones include:

- Clear waterways of obstructions
- Demolition of Severe Repetitive Loss properties
- Electrical system – landscape clearing
- Elevation of structures above Base Flood Elevation
- Elimination of flooding of commercial buildings by structure modifications
- Enhancements of storm water systems (grey infrastructure)
- Floodplain and stream restoration
- Floodplain Ordinances
- Low impact development
- Public Education / Outreach
- Reconstruction and raising elevation of streets
- Redundant power systems to critical infrastructures
- SkyWarn certification
- Water retention, green space preservation, green infrastructure
- Wind and screen protection at shelters & critical infrastructures.

Plans	Comprehensive Emergency Management Plan Emergency Alert and Warning Systems Operations Annex

Hazard: Violent Acts (Non-Terrorism)

Probability of Occurrence	1-5 Years
Risk	43%
Relative Risk	Medium
Description	Acts of violence in America are a legitimate hazard to communities and municipalities across America. Since the 1990s shootings in public schools, recreational parks, movie theatres, and college campuses have increased in both frequency of incidents and number of fatalities. Violent act hazards are not concentrated to a particular region or locale. Shootings, stabbings and other violent acts can take place anywhere in the country and are highly unpredictable. Perpetrators of violent acts do not have an agenda, do not have a target group in mind and do not have a purpose or mission to be accomplished. Unlike terrorist groups, perpetrators of violent acts are not organized and are very difficult to spot because perpetrators are largely ignored or go unnoticed. Violent acts negatively impact neighborhoods and communities because shootings and fatalities occur to members of younger population demographics (ages 5 to 30).
Location	All of Seminole County
Significant Occurrences	(2022) January 19 - Student shot in Seminole High School. He received a fractured wrist, nerve damage, and psychological trauma. No fatalities. (2023) January 16 - Shooting at Rinehart Road, CR-46A near Sanford. One fatality and five injuries. Spatial Extent - Event would be highly isolated in nature and would impact less than 25% of the geographic area of the county.
Overall Vulnerability	The overall vulnerability of people, systems, and buildings within Seminole County and its jurisdictions is medium. Even with specialized equipment, teams and training for

	these type of events, soft targets and mass gatherings continue to be vulnerable targets for violent acts. First responders work to reduce the vulnerability of large events by implementing security checkpoints, vehicle barricades and other safety measures. However, violent acts can occur anywhere and with no notice. Buildings, infrastructure, and systems within Seminole County are not very vulnerable to violent acts. Although a violent act can happen anywhere, the cities of Altamonte Springs and Sanford may be more vulnerable to attacks due to their large number of outside public events. Land use development does not directly influence the risk of violent acts. The likelihood of violent incidents is more related to social, economic, and psychological factors within a community, rather than the physical development or urbanization of the area.
	Impacts/ Consequences
Human	High Impact Violent acts can cause mass injuries/casualties depending on nature and scale of act. Mental and emotional stress can also be heightened.
Property	Low Impact Non-terrorist violent acts typically do not target or impact property specifically, and if so, damage would likely be minimal.
Economic	Low impact Any violent act would have minimal effects on local economy
Environment	There is low probability that the environment would be impacted from a violent act unless it is an intentional fire.
Program Operations	Unless an act directly impacts government personnel or buildings, the impacts would be minimal.

Responders	Would require necessary personal protective equipment depending on nature and scale of situation. Status of responders' family may affect the responders' ability to perform his/her duties.
COOP	The COOP would largely be unaffected by a non-terrorist violent act, depending on the act.
Property/ Facilities/ Infrastructure	Impacts would be isolated to facilities directly related to a violent act and some transportation infrastructure could be disrupted during response to a security threat.
Public Confidence in the Jurisdiction's Governance	Public's confidence would be dependent upon the ability of the County to thwart threat, respond to situation, and protect victims.

Risk Reduction

Mitigation

Mitigation projects for violent acts include:

- Active Shooter Drills
- Active Shooter Training
- Assessment and assistance programs
- Bollards, metal detection equipment, paid security, security checkpoints, and video surveillance, at critical infrastructures
- Intelligence gathering equipment / systems
- Public education / outreach
- School Resource officers/deputies at all public schools
- Stop the Bleed Training

Plans

Active Shooter Response Plan Operations Annex to the CEMP

Family Reunification Center Plan

Hazard: Wildfires

Probability of Occurrence	1-5 Years
Risk	43%
Relative Risk	Medium
Description	A wildfire is an uncontrolled fire that begins in areas of combustible vegetation, usually the countryside or a wilderness area. Seminole County is susceptible to wildfires throughout the

	year, particularly during the months with minimal rainfall amounts. The major cause of brush fires and forest fires is due to residents not conforming to burning regulations in effect and not considering the conditions as they exist (dry or windy conditions). The Spring is the highest period for lightning-caused fires fueled by strong spring winds and lack of rainfall during the same period. In recent years, homes and businesses have been threatened by encroaching wildfires. The Seminole County Community Wildfire Protection Plan, an annex to the Local Mitigation and Resiliency Strategy, provides more in-depth detail to the wildfire mitigation measures in Seminole County.
Extent	41,636 high risk acres
Location	Unincorporated areas in the eastern part of the county, including the City of Oviedo, and western geographic areas of Seminole County, including the cities of Longwood and Altamonte Springs and unincorporated areas of Seminole County, are at highest risk for wildfires. However, wildfires could happen in any jurisdictions of the county.
Significant Occurrences	(1998): Summer – 2,000 acres burned in Geneva, 12 residences destroyed, no fatalities or injuries, about $1.1 million in losses. (2013): February – wildfire in Wekiva State Preserve consumed 50 acres near Markham Woods, closing of nearby roadways. (2017): March – Geneva Brush Fire surrounding 338 single family homes and 14 mobile homes, shelter opened. (2017): April – Level 3 activation for brush fire at Live Oak Reserve, 150 mandatory evacuees, shelter opened. No significant occurrences between 2018-2024. Spatial Extent - Impact less than 25% of the area within Seminole County, though the effects of smoke could cover a slightly larger area.
Overall Vulnerability	Overall vulnerability to wildfires is medium. Wildfires can happen quickly and cause widespread damage. With several areas indicated as urban wildland interfaces, rural northwestern and eastern parts of unincorporated Seminole County are more vulnerable to wildfires. Due to the steady annual increase in population within

	Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions. Furthermore, as the population continues to increase, as does the need for residential structures. As a result, more residential structures are being built in the wildland urban interface subsequently furthering the risk of this hazard. Expanding residential and commercial development into wildland-urban interface (WUI) areas increases the risk of wildfire ignition and property damage.
	Impacts/ Consequences
Human	Moderate Impact Wildfires have the potential to kill or injure people trapped in burning buildings. For immediate area, smoke that decreases air quality may exacerbate respiratory problems, and those with special needs may require more attention.
Property	Moderate Impact Wildfires can damage or destroy buildings including homes and businesses.
Economic	Low Impact Potential impact on agricultural industry and insurance industry.
Environment	Wildfires can have a detrimental impact to wildlife and vegetation in any jurisdiction where wildfire may occur. For example, 2,000 acres were burned in the 1998 fire in the unincorporated area of Geneva. The Local Mitigation and Resiliency recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from fires/wildfires and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	If affected, operations may be relocated or suspended.
Responders	Increased exposure to smoke inhalation and high risk to health and safety of responders.
COOP	To continue the COOP, operations may be relocated or suspended.

Property/ Facilities/ Infrastructure	This hazard could affect transportation and utilities infrastructure depending on scale and severity. Property may also be affected.
Public Confidence in the Jurisdiction's Governance	The public confidence level may depend upon the ability of the county to contain and respond to the fire threat.

Risk Reduction

Mitigation

Types of wildfire mitigation projects in the county include:

- Burn bans
- Cutting fire lines / protective barriers
- Fire resistant construction in urban/wildland interface
- Fire resistant vegetation and landscaping
- Fire shelter for safety of firefighters
- Hazardous wildfire fuel reduction – removal, trimming, cutting
- Prescribed burns
- Public education (Fire Wise community) – defensible space
- Urban/Wildland Interface Ordinances

Plans

Community Wildfire Protection Plan

Prescribed Burning Standard Operating Guideline

Hazard: Winter Storms/ Freezes

Probability of Occurrence	6-10 Years
Risk	35%
Relative Risk	Medium
Description	A freeze is when the surface air temperature is expected to be 32°F or below over a widespread area for at least 3 or more consecutive days. Use of the term is usually restricted to aversive situations or occasions when wind or other conditions prevent frost. "Killing" may be used during the growing season when the temperature is expected to be low enough for a sufficient duration to kill all but the hardiest herbaceous crops. Extreme cold can immobilize an entire region. Even areas, such as Seminole County, that normally experience mild winters can be hit with an extreme cold winter event.

	Winter storms can result in ice, localized flooding, closed highways, blocked roads, downed power lines, and hypothermia.
Extent	3 - 10 consecutive days of 32°F or lower
Location	Winter Storms/ freezes would impact all of Seminole County.
Significant Occurrences	(1989): December- cold outbreak and hard freeze, temperatures in the 20s, extensive damage to citrus crop, power blackouts, in the entire state of Florida, 26 deaths were the result of hypothermia. (2018): January- NWS declares Hard Freeze in Seminole County causing shelters to be opened for relief from the elements. (2020) Jan. 21-22; Dec. 8-9; Dec. 25-27; weather dropped below 40F. There was a total of 7 days that had weather under 40F. (2021) Feb. 3-4; weather dropped below 40F. There was a total of 2 days that had weather under 40F. (2022) Jan. 23-24; Jan. 29-31; Dec. 23-26; weather dropped below 40F. Spatial Extent- Would likely have county-wide consequences impacting greater than 50% of the geographic area of the county.
Overall Vulnerability	With an overall low vulnerability in all jurisdictions of Seminole County, winter storms and freezes can cause the most harm in homeless populations, with approximately 2,000 homeless residents across Seminole, Orange, and Osceola counties reported in 2018. Due to the mild nature of winter storms in Central Florida, the vulnerability of our infrastructure and buildings is low. Due to the steady annual increase in population within Seminole County the Local Mitigation and Resiliency Strategy recognizes that this hazard has an increased impact to individuals within the county and its jurisdictions.

	Underserved communities within Seminole County and its jurisdictions are more vulnerable to this hazard as homes within these communities are typically older homes with insufficient HVAC capabilities. Land use development does not significantly alter the risk of winter storms or freezes, as these weather events are driven by regional climate patterns. The risk remains consistent regardless of the level of urban development in the area.
	Impacts/ Consequences
Human	Moderate Impact Risk of hypothermia and extreme loss of heat if residents are not prepared for conditions (especially with wind chill factored in). Due to the increased health risks facing the special need population, individuals with special needs are more vulnerable overall to the impacts of Winter Storms/Freezes.
Property	Low Impact Historically, no major problems for properties in Seminole County, but in extreme situations electrical outages and dangerous road conditions are possible. Effects would likely be uniform across jurisdictions within Seminole County.
Economic	Low Impact Possible impact to agriculture, especially plant and animal industries within the county.
Environment	Damage or loss of susceptible plants and animals. The Local Mitigation and Resiliency Strategy recognizes that with a changing climate, there is the potential for an increasing risk of environmental impacts from winter storms/freezes and that future mitigation and adaptation strategies related to this hazard should be considered.
Program Operations	Prolonged severe cold weather periods may strain utility

	companies.
Responders	Extended periods of cold weather increased risk for hypothermia, fatigue, etc.
COOP	Very little to no impact on COOP from a winter storm or freeze except in the case of power outages.
Property/ Facilities/ Infrastructure	Historically, no major problems for properties in Seminole County, but in extreme situations electrical outages and dangerous road conditions are possible. Major disruption could occur with transportation infrastructure or damage to critical facilities.
Public Confidence in the Jurisdiction's Governance	The public's confidence is dependent upon the ability of responders to provide proper warning, respond to utility outages, and protect vulnerable populations and infrastructure.

Risk Reduction

Mitigation

Mitigation projects for winter storms include:

- Agriculture business continuity planning education / training
- Citrus / agriculture heater units
- Personal protective equipment
- Public education / outreach
- Warming centers

Plans

Extreme Weather Plan Operations Annex to the CEMP

IV. Geographic Information

Seminole County is and inland county situated in the east-central part of Florida. It is bounded on the North by Volusia County, on the East by Brevard and Volusia Counties, on the West by Orange and Lake Counties, and on the South by Orange County.

Seminole County has 308 square miles of land, including small lakes, and 37 square miles of water. A large portion of the water area is in the Northern and Eastern areas of the County and is freshwater lakes, rivers, and marshlands. Our three largest lakes (Harney, Jessup, and Monroe) are all connected and fed by the north-flowing St. Johns River. Lake Jessup, located in the Central part of the County, covers an area of approximately 10,011 surface area acres. There are numerous lakes, ponds, and streams located throughout Seminole County, a large portion of which are in residential areas and subdivisions. The average elevation of the County is 138 feet above mean sea level, according to a cross-section of the geographic formation of Seminole County.

Eastern and northwestern areas of Seminole County are protected by high-density development by an established rural boundary created by a voter referendum in 2004. Key features of the rural boundary include development restrictions, protected lands, maintained infrastructure, and community vision. The rural boundary remains a significant tool in controlling growth and maintaining the balance between urban and rural areas in Seminole County.

Future land use provides sufficient amounts of each land use type to accommodate projected land use trends, with adequate land reserve remaining for market flexibility, contingency, and a long-standing commitment to the preservation of conservation areas. Environmentally sensitive areas are recognized within the Seminole County development and planning codes and are regulated by the Development Services Department. New development in Seminole County must be reviewed and approved by the Development Review Committee and the Board of County Commissioners.

Wetland types occurring in Seminole County have been identified and classified. Seven wetland types were assigned a numerical code. Wetlands have been determined to perform functions valuable to the public interest. These include shoreline protection, storage of stormwater, water purification, groundwater recharge, and habitat for wildlife. The information serves as the basis for the County's Wetlands Management Program. To date, there are over 18,000 acres of the County's 41,000 acres of wetlands in public ownership.

The County's major stormwater conveyance system is comprised of a system of private, once inadequately maintained, agricultural ditches and canals connected to natural streams, which feed into the major lakes and rivers. In an effort to assess Seminole County stormwater, a study was conducted in 1987, and a comprehensive stormwater management program was undertaken. A program strategy has been developed to systematically identify and improve existing conditions. County design standards are anticipated to control the impact of new growth adequately.

Seminole County has an abundance of significant natural resource areas. Most notable are the Wekiva, St. Johns, and Econlockhatchee Rivers, which are of statewide significance. The preservation of both the quantity and quality of these resources is vital to the function of these resources, and to ensure the continued attractiveness of Seminole County. Historically, attention has focused on surface water, wetlands, and flood-prone area protection. The county's flood-prone and wetland ordinances were a critical step in protecting the wetlands. The conservation element addresses the long-range implementation of programs aimed at meeting recent environmental legislation and preserving the County's natural amenities.

There are approximately 1,122 households in Seminole County that live in a Special Flood Hazard Area. These residents have been notified of the impending flooding conditions that could exist and advised to review their insurance policies as a first line of defense against flood risk. The County provides ongoing maintenance and structural improvements to existing drainage systems to ensure the continued proper operation of the stormwater facilities.

V. Demographics

Seminole County had a projected population of 484,271 according to the U.S. Census Bureau 2023 American Community Survey. The population is broken into the following age groups:

AGE	POPULATION	PERCENT
0-19	109,755	22.60
20-39	131,121	27.10
40-59	129,958	26.90
60-84	105,061	21.80
85+	8,376	1.60
TOTAL	**484,271**	**100.0**

This figure includes the unincorporated areas and the seven cities within the County and the population is projected to grow at a rate of 12 people per day. These estimates and projections were made by the Envision Seminole 2045 report, in conjunction with the Seminole County Department of Development Services, Planning and Development Division. It is estimated that the County-wide population will reach 575,000 residents by the year 2045. The estimated population density for the County is 1,567 people per square mile.

The Seminole County Public Schools had an enrollment of over 67,000 students as of the 2024-2025 school year, in nine (9) high schools, twelve (12) middle schools and thirty-seven (37) elementary schools. Seminole State College had a total enrollment of 13,088 students in degree programs as of October 2024 and also offers many continuing education and leisure programs. Seminole County has five (5) hospitals with a total bed capacity of 894; HCA Florida Lake Monroe in Sanford has 221 beds, AdventHealth Hospital in Altamonte Springs has 389 beds, Orlando Health South Seminole Hospital in Longwood is an 82-bed facility, Orlando Health Lake Mary Hospital in Lake Mary is a 124-bed facility, and Oviedo Medical Center in Oviedo is a 78-bed facility.

Altamonte Springs is in the southwest section of the County. It is a commercial center with a resident population of 45,657 in 2020. State Road (SR) 436 divides the city into north and south areas and is heavily populated with restaurants, motels, office buildings, and retail outlets. Although Interstate-4 (I-4) runs in an east-to-west direction through the state, it takes a north-to-south direction through Seminole County and divides the City of Altamonte Springs into east and west areas. The Intersection of I-4 and SR 436 are considered one of the busiest intersections in Central Florida, along with U. S. Highway 17-92.

Casselberry, adjacent and east of Altamonte Springs, is primarily a residential community and had an estimated population of 28,794 residents as of 2020. SR 436 cuts across the southern boundary and is populated mainly by office buildings, restaurants, and retail outlets. U.S. Highway 17-92, running north and south through the city, is a main artery for movement to and from Orange County and Orlando. The intersection of SR 436 and U.S. Highway 17-92 is the second busiest intersection in Seminole County.

Lake Mary, located in the west central section of Seminole County, has become an upscale community of approximately 16,798 residents as of 2020. It has two large industrial plants in the western portion of the city, and its three main traffic arteries are I-4 on the west side, U.S. Highway 17-92 on the east side, and Lake Mary Boulevard, which runs east and west and connects I-4 with U.S. Highway 17-92.

Longwood, adjacent and north of Altamonte Springs, had 15,087 estimated residents as of 2020 and is mainly a residential community. There are a moderate number of industrial parks and office complexes, which are mainly located on SR 434, which runs east and west through the city on its southern boundary, and CR 427, which runs north and south through the central part of the city, divides it into east and west areas.

Oviedo, located in the south-central section of Seminole County, was estimated to have 40,059 residents as of 2019 and is a residential community. SR 434 traverses the city in a north-south direction, with CR 419 in the east-west direction. On the west side of the city, the boundary is Winter Springs, with Seminole County unincorporated areas on the east, north, and south boundaries.

Sanford, the County seat, had an estimated population of 61,051 residents in 2020 and is located in the north-central section of the County on Lake Monroe. As one of Central Florida's oldest incorporated cities, it is well known for its historical homes, reinvigorated downtown, and brick-lined streets.

Winter Springs, adjacent and north of Casselberry, had 38,342 estimated residents as of 2020 and is a residential community. SR 434 traverses through the city in an east-to-west direction. SR 419 runs through the southern section, and SR 417 on the eastern boundary.

The design capacity of inmates in the John E. Polk Correctional Facility is 1,396, and it typically books more than 16,000 inmates per year.

There are 47 hotels and 2 bed and breakfast inns in Seminole County, having a total of over 5,509 rooms with the capability of housing 13,773 plus individuals. These hotels are mainly along I-4, SR 436, and U.S. Highway 17-92. Additionally, there are 1,335 Airbnb properties available for vacation rentals. Due to Seminole County's proximity to major tourist attractions in Central Florida, these facilities, during the tourist season, are occupied by approximately 78%, or 10,743 individuals. A vast majority of these tourists arrive in privately owned vehicles. Many visitors arrive by air at the Orlando International Airport, which is 18 miles to the south, and the Orlando-Sanford International Airport, located in Sanford. Over 2.8 million travelers come through the Orlando Sanford International Airport alone. Another 272,000 visitors arrive annually in Seminole County on the Amtrak auto train. These figures do not reflect those tourists arriving by commercial transport or those who are picked up and reside with relatives or friends during these seasons.

In accordance with the 2024 Annual Report from the Council on Homelessness, there are approximately 440 people experiencing homelessness in Seminole County. In accordance with the USDA National Agriculture Statistics Service, Seminole County had recorded 28 Farm Workers in 2022.

Seminole County has approximately 15 mobile home parks, trailer parks, and mobile home areas, containing approximately 3,500 mobile homes with an estimated population of 10,000-12,000 residents. Numerous individual trailers are scattered throughout the County's north and east areas, off SR 436. These areas are inaccessible after heavy rains due to the lack of paved roads and the marshy composition of the land.

The elderly population is evenly distributed throughout Seminole County, with those living in mobile homes, residing mainly in mobile home parks. Many of the elderly living in mobile homes believe that their homes are as sturdy as conventional housing. This sentiment is expected to create complications when an evacuation order is given for all mobile home residents.

Approximately 22.3% of the County's population is non-English speaking. An estimated 16% of the County's population speaks Spanish.

There are 10 nursing homes in Seminole County, having a total bed capacity of 1,234. 50 Assisted Living Facilities are in the County, with a total capacity of 2,988 beds.

Currently, approximately 2,000 citizens on the Special Needs Registry would require assistance leaving their homes during a disaster. This figure includes those persons with hearing or sight impairment who have registered with the County. The transient, traveling, and coastal evacuating populations are considered for planning purposes.

VI. Economic Profiles

With a business climate that fosters growth and quality development, Seminole County is one of Florida's fastest-growing economic communities. With a relatively small geographic area and large population, the County is becoming increasingly urban in character.

Seminole County has continued its transition from a suburban setting to a more urban environment. Seminole County is the fourth most densely populated county in Florida and has an unemployment rate of 2.8%.

In order to accommodate this continued growth, the County must continue to ensure an adequate balance between commercial and residential land use. Office square footage in Seminole County is approx. 17.1 million sq. ft.

Seminole County continues to concentrate on a superior quality of life, which in turn attracts both people and businesses. Creating a balance between the two is a challenge that requires good forecasting and planning on the part of the County.

There are over 180,600 parcels of taxable property with an estimated market value of over $84 Billion dollars.

Seminole County is registered as one of the highest median household and family incomes in the entire state of Florida. As of 2020, Seminole County had a median household income of $79,490. Seminole County's 2022 per capita income is $59,581. Seminole County's strong income level is largely due to its attractive residential developments and quality of life, the increase in average wages in the services and finance/insurance/real estate sectors, and the availability of land near major residential areas and metropolitan roadways. As income levels rise, the demand for larger, more expensive housing will

increase. These high-income levels are also expected to continue to attract retail and service businesses to the area.

Seminole County

Florida's 13th most populous county

with 2.1% of Florida's population

Population

Census Population	Seminole County	Florida
1980 Census	179,752	9,746,961
1990 Census	287,521	12,938,071
2000 Census	365,199	15,982,824
2010 Census	422,718	18,801,332
2020 Census	470,856	21,538,187
% change 2010-2020	11.4%	14.6%
Age		
% Under 18 years of age	21.3%	19.5%
% Aged 65 and over	16.3%	21.2%
% Median age	39.4	43.0
Gender		
% Male	48.2%	48.6%
% Female	51.8%	51.4%
Race (alone) & Ethnicity		
% Not Hispanic-White	56.1%	51.5%
% Not Hispanic-Black or African American	10.7%	14.5%
% Not Hispanic-American Indian and Alaska Native	0.2%	0.2%
% Not Hispanic-Asian	5.3%	2.9%
% Not Hispanic-Native Hawaiian and Other Pacific Islander	0.1%	0.1%
% Not Hispanic-Some Other Race	0.6%	0.6%
% Not Hispanic-Two or More Races	4.4%	3.7%
% Hispanic or Latino (of any race)	22.6%	26.5%

Population Estimates

	Seminole County	Florida
2021 Estimate	477,455	21,898,945
% change 2020-2021	1.4%	1.7%
2022 Estimate	484,054	22,276,132
% change 2020-2022	2.8%	3.4%
2023 Estimate	486,839	22,634,867
% change 2020-2023	3.4%	5.1%
2024 Estimate	493,282	23,014,551
% change 2020-2024	4.8%	6.9%
Based on 2023 Estimate		
2025	497,419	23,292,200
2030	520,151	24,698,545
2035	537,152	25,814,954
2040	549,701	26,682,030
2045	560,148	27,409,376
2050	569,000	28,065,018

Population Characteristics

	Seminole County	Florida
(% of total persons aged 5 and over)		
Speak only English	76.7%	69.9%
Speak a language other than English	23.3%	30.1%
Speak English "very well"	16.0%	18.0%
Place of birth		
Foreign born	15.0%	21.4%
Veteran status		
Civilian population 18 and over	6.9%	7.7%

Migration

Residence 1 Year Ago Persons aged 1 and over	Seminole County	Florida
Same house	86.2%	86.0%
Different house in the U.S.	13.1%	13.0%
Same county in Florida	5.6%	6.9%
Different county in Florida	4.7%	3.1%
Different county in another state	2.8%	3.0%
Abroad	0.7%	1.0%

Real Gross Domestic Product

Real GDP (Thousands of Chained 2017 Dollars)	Seminole County	Florida
2017 GDP	20,979,506	1,014,866,863
Percent of the State	2.1%	
2018 GDP	22,031,328	1,050,433,812
Percent of the State	2.1%	
2019 GDP	23,030,950	1,084,913,903
Percent of the State	2.1%	
2020 GDP	23,181,555	1,089,758,799
Percent of the State	2.2%	
2021 GDP	24,826,247	1,170,526,307
Percent of the State	2.1%	
2022 GDP	25,990,623	1,239,883,625
Percent of the State	2.1%	
2023 GDP	26,998,021	1,292,787,615
Percent of the State	2.1%	

Population by Housing Type

	Seminole County	Florida
Household Population	465,902	21,073,604
Household Population per Occupied Housing Unit	2.55	2.47
Group Quarters Population	4,954	464,583

Housing

Housing Counts	Seminole County	Florida
Housing units, 2020 Census	193,790	9,865,350
Occupied	182,420	8,529,067
Vacant	11,370	1,336,283

Building Permits

Units Permitted	Seminole County	Florida
2000	4,419	155,269
2010	930	38,679
2020	2,532	164,074
2021	3,220	213,494
2022	3,476	211,962
2023	2,154	193,788

Density

Persons per square mile	Seminole County	Florida
2000	1,184.9	296.4
2010	1,367.0	350.6
2020	1,521.9	401.4
2023	1,573.6	421.9
2024	1,594.4	429.0

Households and Family Households

Households	Seminole County	Florida
Total households, 2000 Census	139,573	6,338,075
Family households, 2000 Census	97,249	4,210,760
% with own children under 18	48.7%	42.3%
Total households, 2010 Census	164,706	7,420,802
Family households, 2010 Census	110,426	4,835,475
% with own children under 18	45.2%	40.0%
Average Household Size, 2010 Census	2.55	2.48
Average Family Size, 2010 Census	3.05	3.01
Total households, 2020 Census	182,420	8,529,067
Family households, 2020 Census	122,950	5,571,482
% with own children under 18	41.5%	36.0%

Seminole County

Employment and Labor Force

Establishments 2023	Seminole County	Florida
All industries	18,103	878,947
Natural Resource & Mining	50	5,771
Construction	1,971	82,738
Manufacturing	545	25,599
Trade, Transportation and Utilities	2,983	151,500
Information	432	19,752
Financial Activities	2,100	95,132
Professional & Business Services	4,769	226,936
Education & Health Services	2,117	100,498
Leisure and Hospitality	1,361	66,309
Other Services	1,219	59,548
Government	78	5,830

Establishments % of All Industries	Seminole County	Florida
All industries	18,103	878,947
Natural Resource & Mining	0.3%	0.7%
Construction	10.9%	9.4%
Manufacturing	3.0%	2.9%
Trade, Transportation and Utilities	16.5%	17.2%
Information	2.4%	2.2%
Financial Activities	11.6%	10.8%
Professional & Business Services	26.3%	25.8%
Education & Health Services	11.7%	11.4%
Leisure and Hospitality	7.5%	7.5%
Other Services	6.7%	6.8%
Government	0.4%	0.7%

Average Annual Employment % of All Industries, 2023	Seminole County	Florida
All industries	212,125	9,678,557
Natural Resource & Mining	0.1%	0.7%
Construction	11.1%	6.5%
Manufacturing	3.6%	4.4%
Trade, Transportation and Utilities	18.6%	20.2%
Information	2.5%	1.6%
Financial Activities	9.1%	6.9%
Professional & Business Services	20.4%	16.7%
Education & Health Services	13.4%	15.1%
Leisure and Hospitality	10.1%	13.4%
Other Services	3.3%	3.0%
Government	7.6%	11.2%

Industries may not add to the total due to confidentiality and unclassified.

Average Annual Wage 2023	Seminole County	Florida
All industries	$62,756	$66,446
Natural Resource & Mining	$41,987	$46,398
Construction	$70,624	$66,902
Manufacturing	$65,639	$78,331
Trade, Transportation and Utilities	$57,333	$59,161
Information	$100,943	$112,704
Financial Activities	$82,257	$101,130
Professional & Business Services	$74,848	$83,076
Education & Health Services	$54,519	$63,868
Leisure and Hospitality	$25,955	$35,528
Other Services	$65,112	$49,293
Government	$57,546	$67,715

Labor Force as Percent of Population Aged 18 and Older	Seminole County	Florida
2000	78.0%	63.7%
2010	70.3%	61.8%
2020	63.9%	58.1%
2021	65.7%	59.1%
2022	69.2%	59.8%
2023	71.4%	60.4%

Unemployment Rate	Seminole County	Florida
2000	3.0%	3.7%
2010	10.3%	10.8%
2020	7.6%	8.1%
2021	4.1%	4.7%
2022	2.7%	3.0%
2023	2.8%	2.9%

Income and Financial Health

Personal Income ($000s)	Seminole County	Florida
2000	$11,624,861	$471,588,082
2010	$15,621,717	$730,690,145
% change 2000-2010	34.4%	54.9%
2020	$24,871,194	$1,220,782,745
% change 2010-2020	59.2%	67.1%
2021	$27,221,386	$1,358,786,260
% change 2020-2021	9.4%	11.3%
2022	$28,423,245	$1,436,107,237
% change 2021-2022	4.4%	5.7%
2023	$30,413,983	$1,553,426,399
% change 2022-2023	7.0%	8.2%

Per Capita Personal Income	Seminole County	Florida
2000	$31,643	$29,387
2010	$36,930	$38,778
% change 2000-2010	16.7%	32.0%
2020	$52,754	$56,540
% change 2010-2020	42.8%	45.8%
2021	$57,812	$62,242
% change 2020-2021	9.6%	10.1%
2022	$59,385	$64,557
% change 2021-2022	2.7%	3.7%
2023	$62,804	$68,703
% change 2022-2023	5.8%	6.4%

Earnings by Place of Work ($000s)		
2000	$6,207,739	$308,751,767
2010	$8,849,323	$439,036,383
% change 2000-2010	42.6%	42.2%
2020	$15,525,836	$684,270,758
% change 2010-2020	75.4%	55.9%
2021	$17,285,395	$771,654,020
% change 2020-2021	11.3%	12.8%
2022	$18,542,024	$841,921,275
% change 2021-2022	7.3%	9.1%
2023	$19,932,054	$908,440,362
% change 2022-2023	7.5%	7.9%

Median Income	
Median Household Income	$83,030
Median Family Income	$101,999

Percent in Poverty, 2023		
All ages in poverty	9.2%	12.4%
Under age 18 in poverty	10.6%	16.0%
Related children age 5-17 in families in poverty	9.9%	15.3%

Workers Aged 16 and Over	Seminole County	Florida
Place of Work in Florida		
Worked outside county of residence	36.9%	17.2%
Travel Time to Work		
Mean travel time to work (minutes)	27.2	28.0

Personal Bankruptcy Filing Rate (per 1,000 population)	Seminole County	Florida
12-Month Period Ending September 30, 2022	1.21	1.14
12-Month Period Ending September 30, 2023	1.23	1.16
State Rank	16	NA

NonBusiness Chapter 7 & Chapter 13

Seminole County

Reported County Government Revenues and Expenditures

Revenue 2021-22	Seminole County	Florida*
Total - All Revenue Account Codes ($000s)	$1,773,191.3	$100,987,094.3
Per Capita $	$3,663.21	$4,753.99
% of Total	100.0%	100.0%
General Government Taxes ($000s)	$351,903.2	$38,773,224.6
Per Capita $	$726.99	$1,825.26
% of Total	19.8%	38.4%
Permits, Fee, and Special Assessments ($000s)	$30,601.5	$4,209,936.0
Per Capita $	$63.22	$198.18
% of Total	1.7%	4.2%
Intergovernmental Revenues ($000s)	$115,441.2	$8,275,034.7
Per Capita $	$238.49	$389.55
% of Total	6.5%	8.2%
Charges for Services ($000s)	$1,174,608.2	$25,774,652.2
Per Capita $	$2,426.61	$1,213.35
% of Total	66.2%	25.5%
Judgments, Fines, and Forfeits ($000s)	$1,382.3	$2,289,306.5
Per Capita $	$2.86	$107.77
% of Total	0.1%	2.3%
Miscellaneous Revenues ($000s)	$16,155.5	$8,397,909.0
Per Capita $	$33.38	$395.33
% of Total	0.9%	8.3%
Other Sources ($000s)	$83,099.4	$13,267,031.3
Per Capita $	$171.67	$624.55
% of Total	4.7%	13.1%

Expenditures 2021-22	Seminole County	Florida*
Total - All Expenditure Account Codes ($000s)	$1,741,657.90	$87,375,419.16
Per Capita $	$3,598.07	$4,113.22
% of Total	100.0%	100.0%
General Government Services** ($000s)	$1,112,555.64	$36,715,485.34
Per Capita $	$2,298.41	$1,728.39
% of Total	63.9%	42.0%
Public Safety ($000s)	$282,896.03	$13,363,472.90
Per Capita $	$584.43	$629.09
% of Total	16.2%	15.3%
Physical Environment ($000s)	$104,942.93	$5,823,076.34
Per Capita $	$216.80	$274.12
% of Total	6.0%	6.7%
Transportation ($000s)	$86,010.14	$6,146,973.86
Per Capita $	$177.69	$289.37
% of Total	4.9%	7.0%
Economic Environment ($000s)	$8,661.16	$2,095,127.71
Per Capita $	$17.89	$98.63
% of Total	0.5%	2.4%
Human Services ($000s)	$20,652.22	$4,845,695.64
Per Capita $	$42.67	$228.11
% of Total	1.2%	5.5%
Culture / Recreation ($000s)	$28,427.33	$2,101,309.57
Per Capita $	$58.73	$98.92
% of Total	1.6%	2.4%
Other Uses and Non-Operating ($000s)	$40,977.14	$12,196,205.02
Per Capita $	$84.65	$574.14
% of Total	2.4%	14.0%
Court-Related Expenditures ($000s)	$56,535.32	$4,088,072.79
Per Capita $	$116.80	$192.45
% of Total	3.2%	4.7%

* All County Governments Except Duval - The consolidated City of Jacksonville / Duval County figures are included in municipal totals rather than county government totals.

** (Not Court-Related)

Quality of Life

Crime	Seminole County	Florida
Crime rate, 2020 (index crimes per 100,000 population)	1,551.6	2,158.0
Admissions to prison FY 2023-24	491	27,227
Admissions to prison per 100,000 population FY 2023-24	99.5	118.3

Health Insurance Status

Percent Insured by Age Group	Seminole County	Florida
Under 65 years	88.5%	86.1%
Under 19 years	93.7%	92.7%
18 to 64 years	86.7%	83.8%

Education

Public Education Schools Traditional Setting (2023-24)	Seminole County School District	Florida
Total (state total includes special districts)	70	3,787
Elementary	43	1,877
Middle	12	565
Senior High	11	729
Combination	4	616

Educational attainment Persons aged 25 and older	Seminole County	Florida
% HS graduate or higher	93.9%	89.6%
% bachelor's degree or higher	42.4%	33.2%

Other County Profiles
Criminal Justice County Profiles
School District Profiles

State and Local Taxation

2024	Seminole County	
	County-Wide	Not County-Wide*
County	4.8751	2.0049
School	5.2790	
Municipal		2.4794
Special Districts	0.1793	

*MSTU included in Not County-Wide "County" category

State Infrastructure

Transportation	Seminole County	Florida
State Highway		
Centerline Miles	117.9	12,189.9
Lane Miles	558.8	45,742.2
Conservation Land (land acres only)		
State-Owned (includes partially-owned)	30,746	5,689,323
% of Total Conservation Land (CL)	80.8%	54.9%
% of Total Area Land	15.7%	16.6%
% of Florida State-Owned CL	0.5%	

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VII. Emergency Management Critical Facilities

Seminole County and the municipalities have identified critical facilities requiring for immediate emergency response following a disaster incident. This information is maintained by the Seminole County Office of Emergency Management and is updated annually. Seminole County's Office of Emergency Management is the primary agency responsible for performing the function of coordinating critical infrastructure restoration. During times of emergency, it may be necessary to track the operational capacity of critical infrastructure around the county. The Seminole County Critical Infrastructure List, a supplemental component of the CEMP, includes critical infrastructure divided by sector with contact information to proactively connect with critical infrastructure operators.

There are 16 critical infrastructure sectors whose assets, systems, and networks, whether physical or virtual, are considered so vital to the United States that their incapacitation or destruction would have a debilitating effect on security, national economic security, national public health or safety, or any combination thereof. Presidential Policy Directive 21 (PPD-21): Critical Infrastructure Security and Resilience advances a national policy to strengthen and maintain secure, functioning, and resilient critical infrastructure. Those sectors include:
Chemical Sector, Commercial Facilities Sector, Communications Sector, Critical Manufacturing Sector, Dams Sector, Defense Industrial Base Sector, Emergency Services Sector, Energy Sector, Financial Services Sector, Food and Agriculture Sector, Government Facilities Sector, Healthcare and Public Health Sector, Information Technology Sector, Nuclear Reactors, Materials, and Waste Sector, Sector-Specific Agencies, Transportation Systems Sector, and Water and Wastewater Systems Sector.

Seminole County's Office of Emergency Management has identified suitable locations throughout the County for use as staging areas. These sites are readily accessible to rail, roadway, and air transportation for personnel, supplies, and equipment assembly prior to deployment to an affected area. These sites' locations included but were not limited to Orlando-Sanford International Airport, Seminole Towne Center, Altamonte Mall, Oviedo Marketplace, and several others.

Landing zones have been identified and coordinated with the Seminole County Sheriff's Office Special Operations and Florida National Guard. The primary zone is located at the Orlando-Sanford International Airport, with additional zones at the Seminole County Five-Points Complex.

VIII. Planning Assumptions

In the event of a major disaster or emergency, many fatalities and injuries may result. Many people will be displaced and incapable of providing food, clothing, and shelter for themselves and their families. Jobs will be lost with reduced prospects for future employment in the area. The economic viability of the affected communities may be jeopardized.

Many private homes, businesses and major industries will be damaged or destroyed. The structural integrity of many public buildings, bridges, roadways, and facilities will be compromised. Water and utility infrastructures will be severely affected. Emergency response personnel will be hampered in the response efforts due to transportation problems, the lack of electrical power, debris, and damaged,

destroyed or inaccessible local structures. Timely deployment of resources from unaffected areas of the County will be needed to ensure an effective and efficient response.

IX. CONCEPT OF OPERATIONS

A. Resource Request / Local Government

Local governments shall use their own resources first in an emergency or disaster situation. Local governments may call for assistance from the County during events that overwhelm or threaten to overwhelm their own response and recovery resources.

B. NIMS/Incident Command System

Seminole County emergency operations shall use the NIMS model layered over the ESF format. All operations in the Seminole County EOC will also be conducted using NIMS.

C. Levels of Operation

Emergencies that can potentially affect the County are divided into three levels based on the severity of the initiating event or its potential to intensify in severity and the anticipated local, county, state, and federal assistance required. Seminole County's operations correspond to each of the three levels of emergencies or disasters. The first level of operation is Level III, which is normal day-to-day operation, while Level I corresponds to an emergency event involving all county, state, and federal resources.

Level III emergencies are frequent, limited in scope, and require local response resources only. First response and public information agencies will be activated to some level. Other ESFs may be placed on standby but not activated at this level.

Level II emergencies are incidents of a magnitude that may require some form of County assistance. The County will activate the EOC on a limited basis Level II, notifying or activating needed ESF primary agencies and placing support agencies on standby, if needed. The County typically notifies the State Warning Point of the Level II activations.

Level I emergencies or disasters are of a magnitude that local governments and affected communities will require the assistance of volunteer organizations and County agencies to respond to and recover from the incident effectively. At Level I, the County may initiate a full EOC activation that may include a declaration of a Local State of Emergency. State Emergency Response Teams (SERT) may be activated. Federal disaster relief assistance will likely be required at this level.

Local governments and communities affected by Level I will require major assistance from both the County and the State Governments.

Military assistance may be provided at this level.

The Seminole County Emergency Operations Center's Primary Location is 150 Eslinger Way, Sanford, FL 32773. Alternate locations of operation are reflected in the Continuity of Operations Plan and are protected under F.S.S. 119.

D. Local State of Emergency and Executive Orders

1. Local State of Emergency

In accordance with Florida Statute 252 and Seminole County Code Chapter 72: Emergency Management, the Chairman of the Board of County Commissioners, or commissioner in line of succession, has the authority to issue a Local State of Emergency. A Local State of Emergency affects the legal boundaries of Seminole County and waives procedures and formalities to include but not limited to taking action to protect health, safety, and welfare; entering into contracts; incurring obligations; employment of staff; rental of equipment; utilization of volunteers; adjusting staff work schedules and tasks; acquisition and distribution of equipment or materials; and expenditure of public funds. A Local State of Emergency must be renewed every seven (7) days in order to remain in effect.

2. Executive Orders

Florida Statute 252 provides the Director of Emergency Management the authority to issue Executive Orders after a Local State of Emergency is declared. An Executive Order is developed under the advisement of the Executive Advisory Group to implement various provisions to protect the health, safety, and welfare of Seminole County; these provisions can include but are not limited to prohibition of alcohol sales, imposing curfews, and regulating prices. An executive order automatically expires seven (7) days after issuance but may be extended by a majority vote of the Seminole County Board of County Commissioners, as necessary, in 7-day increments for a total duration of not more than forty-two (42) days, for all emergencies excluding hurricanes or other weather-related emergencies.

X. After Action / Recovery

As immediate threats to life and property subside and the need for sustained ESF operations diminishes, the debriefing of responsible individuals and the documentation of “lessons learned” will begin. Seminole County Emergency Management personnel will consolidate and review the resulting information, and a written report will be prepared.

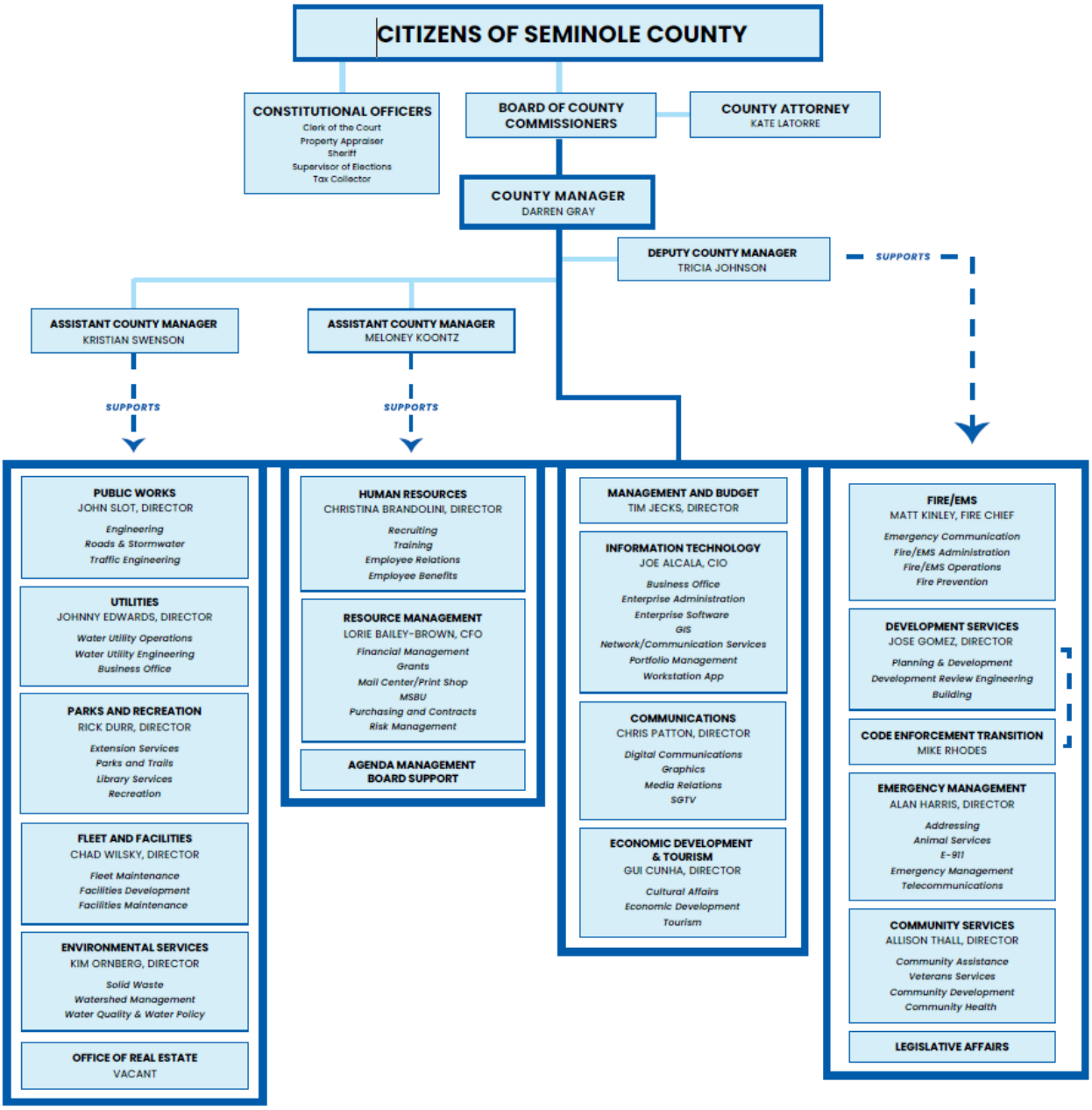
Recovery assistance efforts will continue even after the EOC returns to normal operations. This is the longest phase in emergency management and may take years to complete. A ‘whole community’ approach must be taken-engaging faith based, non-profit, and the County’s Long Term Planning Committee.

XI. Organization

Seminole County Emergency Management is organized along the lines of Charter County Government, with the Board of County Commissioners as the legislative branch. The functions of the legislative group

are the adoption of special ordinances to assist with mitigation and recovery efforts before, during, and after a County-wide declared disaster, including, but not limited to, emergency building permits and possible waiving or decreasing fees during recovery. (Refer to the Organizational Chart below).

NOTE: No Indian reservations are located in the County; therefore, Indian Tribes would not be applicable to this plan.



XII. Direction and Control for Local Government

A local official, typically a law enforcement officer, firefighter, or Emergency Medical Services (EMS) personnel, will become the Incident Commander in an emergency or disaster situation.

Responsibility for the policy of local emergency activities rests with local elected officials. The officials will develop policies that will guide the development of emergency preparedness activities and plans.

In accordance with Seminole County Code 72.4, the Chairman of the Board of County Commissioners shall execute a Local State of Emergency (LSE) when an emergency or threat places the normal activities of residents and guests in the County at risk. If the Seminole County Board of County Commissioners Chairman is unavailable or incapacitated, the Vice-Chairman shall assume the responsibility. If both the Chairman and Vice-Chairman are unavailable or incapacitated, the Commissioner with the longest continuous service shall make the declaration. If multiple Commissioners have served for the same length of time, precedence will be given to the one whose last name comes first alphabetically. Additionally, the entire Board of County Commissioners may vote to enact or rescind the Local State of Emergency and/or Executive Order.

A. Executive Advisory Group

The Executive Advisory Group shall be comprised of the County Chairman, County Manager, County Attorney, Emergency Manager, School Superintendent, Sheriff, Public Works Director, Florida Department of Health Director, Fire Chief, Medical Director, all seven city managers, and subject matter experts, as required.

The Executive Advisory Group will advise the Director of Emergency Management, under County Code 72 and Florida Statute 252, to direct evacuations, open shelters, request County assistance, and activate any mutual aid agreements in force with neighboring cities.

Municipal governments will inform Seminole County when requesting mutual aid from neighboring cities and coordinate with Seminole County when mobilizing and deploying mutual aid resources. Tracking of these resources is to be completed through the County Emergency Operations Center.

XIII. Direction and Control for County Government

Once a Local State of Emergency has been declared, the Director of Emergency Management has the authority to make decisions, execute executive orders, and commit assets, as outlined in County Code 72 and Florida Statute 252.

The Director of Emergency Management receives the mission requests and designates them to the appropriate ESF to coordinate the mobilization of the request.

Overall administration of the EOC is coordinated through the EOC Command and General Staff

Primary agencies for each ESF, in turn, have the authority to subtask missions or mission components to support agencies as needed to carry out an assignment. Primary agencies will coordinate with other ESF primary agencies to carry out assignments requiring the resources of more than one ESF. EOC staff shall track mission assignments.

The County Manager shall be the Chief Executive Officer of the County, and all executive responsibilities and power shall be assigned to and vested in the County Manager. The Director for the Seminole County Office of Emergency Management serves as the Director of Emergency Management. In coordination with the County Manager, the Director of Emergency Management will activate the plan and direct preparedness, response, recovery, and mitigation operations.

XIV. Notification

Seminole County may receive an initial warning of an emergency or pending disaster from various sources, including but not limited to the National Weather Service (NWS), the State Watch Office, local governments, the Department of Homeland Security, the Central Florida Fusion Center, and/or the media.

When County resources are required, Seminole County Office of Emergency Management on-call personnel will notify representatives from the primary agency or agencies for each ESF. The representatives will be responsible for notifying the appropriate personnel within their respective organizations.

The Director of Emergency Management, or designee, will activate the Emergency Operations Center at one of the three levels described in the Levels of Activation.

XV. Response Actions

A Local State of Emergency shall be declared by Executive Order when a promulgating authority finds, pursuant to Section 252.38 (3) (a) 5, Florida Statutes, that a local emergency has occurred or that the threat thereof is imminent. Upon the declaration of a Local State of Emergency, by the Chairman of the Board of County Commissioners, the Director of Emergency Management has the authority to direct and compel the evacuation of all or part of the population from the stricken or threatened area within the County. This action will occur if the Director deems it necessary for the preservation of life or other emergency mitigation, response, or recovery.

The County Manager or the Director of Emergency Management will consult with the Seminole County Superintendent of Schools, the President of Seminole State College, and other persons or agencies determined necessary to affect an orderly closing of schools.

Critical infrastructures will be notified directly and via media, outlining the emergency declaration and the procedures being put into effect. The Emergency Alert System (EAS), and Alert Seminole will also be activated.

Upon issuance of a Local State of Emergency, the Director of Emergency Management will request State assistance or invoke mutual aid assistance in response to the emergency event. The request for State support will be coordinated through the State EOC to the State Director of Emergency Management.

In a catastrophic event that requires emergency workers to be tasked with prolonged work hours, Seminole County will provide shelter for the dependents of those employees. The shelter is located at

the Seminole County Services Building. Any employee wishing information regarding the dependent shelter may receive an information packet from the Seminole County Office of Emergency Management.

The Director of Emergency Management, or designated representative, is responsible for establishing a liaison with the State response and recovery agencies and teams. ESFs will interface with State teams to assist in impact assessment and rescue/recovery operations.

XVI. Recovery Actions

The necessary planning should provide for an immediate response and recovery capability to alleviate human suffering, prevent loss of life, protect property, and return the disaster area to normal, as soon as possible. Operational plans have been developed to accomplish various program goals and objectives to reduce hazards and effectively bring long-range recovery to distressed areas.

Depending upon potential hazards and emergency situations, numbers and types of operational plans may vary, and considerations of geography, population, urbanization, economic development, and the possibility of estimated risk must be included. Post-disaster hazard mitigation planning efforts are required as a condition for receiving Federal loans and grants under a Presidential Disaster Declaration. Planning efforts should include increased, ongoing hazard mitigation programs. Such programs are those that reduce or prevent the increasing potential for an emergency or disaster. Programs that promote present and future preparedness and response capabilities to respond to disaster situations should also be included.

Per federal guidelines, officials of the primary and supporting agencies active in disaster response approve the expenditure of funds if received. Types of funding that can be received include but are not limited to Small Business Administration loans, Local and State Grants, Federal Disaster Declaration funds, and Hazard Mitigation Grants. If Federal Disaster Assistance Programs have been implemented under the Stafford Act, the responsibility of funding delegation falls with the Seminole County Office of Emergency Management. According to Seminole County's Post Disaster Recovery Plan, individuals who require disaster assistance must apply for available funding through designated disaster recovery avenues.

XVII. Responsibilities

Responsibility for undertaking preventive measures, emergency actions and the direction and control of emergency operations rests with the governing body of the jurisdiction affected and support offered by Office of Emergency Management staff. At all levels, full cooperation and unified participation by government and volunteer organizations is required for an effective response capability. All County departments, constitutional officers, municipalities, and volunteer agencies are responsible for the following general items:

- Developing the necessary Standard Operating Procedures (SOPs) and checklists for effective, efficient organization and performance of functions required to respond to and recover from an emergency or disaster event.

- Provide staff in support of emergency response.

- Designating and training essential personnel for specific assignments in the conduct of emergency operations. Provide instruction to other personnel regarding the staffing policy during a disaster.

- Protecting and securing facilities, property, and equipment under their control. Maintaining accurate records of emergency-related expenditures, such as personnel, supplies, and equipment costs.

- Preserving records to provide normal government operations following an emergency or disaster. Essential records must be protected and include vital statistics, deeds, corporation papers, operational plans, resource data, authorities, personnel and payroll records, succession lists, supplies and equipment lists, charters, and financial records. The Seminole County Clerk of the Circuit Court is responsible for ensuring the preservation of all County records deemed essential for the continuation of County government. The County Manager or Director of Emergency Management is responsible for conducting post-disaster operations.

- Providing staff, supplies, and equipment, as required and available, in support of emergency response and recovery activities.

- Expediting required activities for return to normal conditions, as soon as possible.

- ESF primary and support agencies will prepare all necessary revisions to their portion of this plan. Distribution of changes incorporated into the plan is the responsibility of the Seminole County Office of Emergency Management.

- Local emergencies and minor disasters will be handled initially under ICS until such time that the Incident Commander determines the situation exceeds the capabilities of responding agencies. The Incident Commander will then contact the Communications Center and request the incident to be upgraded, with appropriate activation of this plan.

- The Director of Emergency Management will assess the situation and recommend initiating a partial or full activation of the EOC and ESFs. The County Manager will be notified if activations will be required.

Major and/or catastrophic disasters require the activation of the EOC and full ESF capabilities. These incidents are normally multi-jurisdictional in nature, require multi-agency response, or require State or inter-county assistance.
The centralized direction and control of response and recovery efforts necessitates the activation of the EOC and this plan.

Hazard	Incident/Unified Command Agencies
Agriculture (Pests and Disease)	Florida Department of Health in Seminole County
Civil Disorder	County and Municipal Law Enforcement
Critical Infrastructure Disruption (Communication, Power, Water/Wastewater	All Agencies
Cyber Security/ Cyber Attack	Seminole County Information Technology Seminole County Office of Emergency Management
Disease and Pandemic Outbreak	Florida Department of Health in Seminole County
Domestic Security/Terrorism (CBRNE)	County and Municipal Law Enforcement
Drought and Water Shortage	Florida Department of Health in Seminole County Seminole County Office of Emergency Management
Earthquakes	Seminole County Office of Emergency Management
Extreme Heat	Seminole County Office of Emergency Management
Financial Collapse	All Agencies
Harmful Alge Bloom	Florida Department of Health in Seminole County Seminole County Environmental Services
Hazardous Materials/Radiological (Fixed Site and Transportation)	County and Municipal Fire Departments
Mass Gatherings/Planned Events	County and Municipal Law Enforcement County and Municipal Fire Departments
Mass Migration/Repatriation	County and Municipal Law Enforcement Seminole County Office of Emergency Management
Severe Weather (Hail, Lightning, Micro-bursts, Thunderstorms)	Seminole County Office of Emergency Management County and Municipal Law Enforcement County and Municipal Fire Departments
Sinkholes/Land Subsidence	Seminole County Office of Emergency Management County and Municipal Fire Departments County and Municipal Public Works
Structural Integrity/Collapse (Fires, Aging Infrastructure)	Seminole County Office of Emergency Management County and Municipal Fire Departments County and Municipal Public Works
Tornadoes	Seminole County Office of Emergency Management
Transportation Disruption (Aircraft, Rail, Mass Casualty Incident)	Seminole County Office of Emergency Management County and Municipal Law Enforcement County and Municipal Fire Departments Respective Transportation Authority
Tropical Cyclones (Hurricanes, Tropical Storms)	Seminole County Office of Emergency Management
Violent Acts (Non-Terrorism)	County and Municipal Law Enforcement
Wildfires	County and Municipal Fire Departments
Winter Storms/ Freezes	Seminole County Office of Emergency Management

XVIII. Mitigation

Mitigation is any action taken to permanently reduce or eliminate long-term risk to people and their property from the effects of hazards. Some examples of hazard mitigation include land use planning techniques that limit infrastructure in high-hazard areas and programs for retrofitting existing structures to meet new building codes and standards. Ideally, a community can minimize the effects of future hazards through code enforcement, planning, and responsible development. Every community is exposed to some level of risk from hazards. Hurricanes, tornadoes, floods, hazardous materials, spills, fires, and sinkholes are some of the hazards experienced by Florida communities. Hazards cannot be eliminated, but it is possible to determine what the hazard areas are and where the hazards are most severe, as well as identify local actions that can be taken to reduce the severity of the hazard.

Seminole County is not immune to the effects of these hazards. Since 2004, Seminole County has suffered significant impacts such as prolonged flooding, infrastructural damage, and residential displacement. In coordination with municipal agencies, the Seminole County Office of Emergency Management coordinates the Local Mitigation and Resiliency Strategy (LMRS) Working Group to review projects for mitigation and resiliency funding opportunities. The LMRS Working Group meets regularly to discuss the impacts of various hazards and develop work plans to mitigate future losses. To date, the LMRS Working Group has overseen close to $65 million dollars in investments in mitigation and resiliency projects. These projects range from residential buyouts and reconstruction to publicly owned infrastructure enhancements.

XIX. Recovery

Recovery Operations will commence immediately after initial response operations have been completed. The appropriate departments and organizations identified as members of our local Recovery Support Functions will continue to prevent the loss of further lives and property while proactively making efforts to restore essential public and social services to those affected following a disaster. The departments and organizations involved in the recovery process will provide critical data to determine effective and proactive recovery measures.

The Director of Emergency Management will determine the transition into local recovery operations. The EOC will establish a Liaison Officer to coordinate the appropriate recovery efforts with Local, State, and Federal agencies. Emergency Management will disseminate recovery activities and critical data in situation reports to Local, State, and Federal agency partners. Daily briefings will work to analyze recovery activities to provide efficient and effective recovery post-disaster.

XX. Emergency Operations Center Organization

The Director of Emergency Management, or designated representative, is responsible for maintaining the operational readiness of the EOC at all times and will be supported by the County Manager for resources and staffing.

The EOC is organized using an ICS/ESF Hybrid model. The EOC is managed by a Command and General Staff comprised of the following positions;

- EOC Manager
- Public Information Officer
- Safety Officer
- Liaison Officer
- Operations Section Chief
- Logistics Section Chief
- Planning Section Chief
- Finance/Administration Section Chief

The EOC Manager may add additional positions at any time based on the incident complexity to provide support to the Command and General Staff. Further description of each of the Command and General Staff positions can be found in *Operations Annex D-3 EOC Management Structure.*

Emergency Support Functions are organized into respective branches grouped by functional area.

A. HUMAN SERVICES BRANCH

ESF #6 *Mass Care*

ESF #6 is responsible for coordinating efforts to provide sheltering, feeding, and emergency relief, as well as coordinating the bulk distribution of supplies to disaster victims and disaster welfare information. In some instances, service may also be provided to disaster workers. The primary agency is the Seminole County Parks and Recreation Department. Support agencies are the American Red Cross, the Seminole County Public Schools, Seminole County Animal Services, Seminole County's Office of Emergency Management, the Florida Department of Health in Seminole County, and the Seminole County Sheriff's Office.

ESF #6 will be organized in a manner that assures rapid response to mass care needs of people affected by a disaster. Each agency assigned to this ESF should have thorough and up-to-date disaster plans that have been coordinated through the primary agencies. Primary and support agencies will have and maintain appropriate listings of agency staff to call for performing response activities.

Primary emergency transportation needs will be met by the Seminole County Public Schools Transportation Services, which will provide the use of school buses. During emergency operations, the School Board will maintain communication with the EOC and will move buses from one area to another, as the need arises. Seminole County school buses are wheelchair accessible. These buses will be used to transport the special needs citizens. The School Board will assign priority to Seminole County for the use of buses for emergency transportation.

Staging areas are as follows:

- *Winter Springs Transportation Facility*
- *Midway Transportation Facility*

Drivers will be assigned their routes and designated areas by their supervisors. All drivers will be contacted by their supervisor and instructed where to report, and designated pickup points will be determined. The PIO will inform the media for dissemination to the public. The School Board maintains a list of volunteer drivers during emergencies.

Support emergency transportation needs will be met by Seminole County Public Schools Transportation Services, Lynx, and Mears Motor Coach.

The Florida Department of Transportation (FDOT) has primary responsibility for State emergency transportation assistance. FDOT will activate their agreements for provisions of emergency transportation services by municipal and private carrier companies and will coordinate the use of all State transportation resources during an emergency.

ESF #11 Food & Water

The primary agency for food and water is the Seminole County Parks and Recreation Department. It is the responsibility of the Seminole County Government, aided by ESF #11 agencies, to supply welfare services either in a localized or widespread disaster. In a localized disaster, it is assumed that local resources will be adequate to augment those with the necessary supplies, needs, and services the disaster survivors require. Support will be provided by the American Red Cross, Meals on Wheels, Seminole County Public Schools Dining Services, the Florida Department of Health in Seminole County, and the Salvation Army.

ESF #15 Volunteers and Donations

The primary agency for this ESF will be the Seminole County Community Services Department with support from the Seminole Home-based Emergency Assistance Response Team (HEART), Harvest Time International, and The Sharing Center, who may have a liaison with the EOC during emergency events.

ESF #15 is responsible for the overall coordination of volunteers and donations management. ESF #15 may establish support sites such as Volunteer Reception Centers and Donation Management Centers to provide support to disaster relief operations. In addition to those individuals volunteering their time and services, there is an extensive network faith based and non-profit volunteers and organizations that provide humanitarian relief services to disaster survivors.

ESF #17 Animal Services

ESF #17 is responsible for the coordination of local resources in response to domestic pets, exotics, farm livestock, and wild animal care needs before, during, and after a significant emergency. Seminole County Animal Services is the primary responsibility for coordinating animal protection throughout the county. ESF #17 will provide animal assistance and resources via coordination with other ESFs. Support agencies include the University of Florida Extension Office, Central Florida Zoo, Seminole County Cattleman's Association, American Society for the

Prevention of Cruelty to Animals (ASPCA), State Animal Response Team (SART), and local veterinarian associations.

ESF #18 Business and Education-

ESF#18 is tasked to assist in providing critical information to local businesses and various industries throughout the community during emergency events. The Seminole County Economic Development Department staff has the primary responsibility for ESF 18. ESF 18 will be responsible for the outreach to local business owners prior to and after an event or incident.

Support agencies include the Seminole County Public Schools, Seminole State College, and the University of Central Florida to assist in the coordination of the County's education system during times of emergency.

B. INFRASTRUCTURE BRANCH

ESF #2 Communications

The Seminole County Emergency Telecommunications/E-911 Administration provides emergency radio communications hardware and logistical support for the County. Seminole County support agencies are the Seminole County Sheriff's Office Communications, Seminole County Fire Communications, Radio Amateur Civil Emergency Services (RACES), Amateur Radio Emergency Services (ARES), and private service providers.

The Emergency Communications Center operates on a 24-hour day, 7 days a week schedule, and is part of the County-wide emergency telephone system. During periods of declared emergencies, it is of primary importance that a communications network be established and maintained between all political subdivisions of Seminole County and the EOC. All seven cities within Seminole County have communications capability with the EOC on a County-wide 800 MHz system. This system will be used to aid county and municipal governments during emergencies. Alternate paths of communication are highlighted in Operations Annex D-1 Emergency Alert Warning System.

ESF #1/3 Public Works

The Seminole County Public Works Department is the primary agency for ESF #1/3. Support agencies include municipal public works departments and private contractors. The Florida Department of Transportation and municipal public works provide critical information, technical support, and equipment necessary to maintain the State and Interstate Road systems.

On a priority basis, debris will first be removed from main roads and arteries to facilitate the movement of emergency transportation units and repair equipment for utilities. The clearing of private land and property is a low priority unless it is a public health or safety issue. Equipment will be strategically placed throughout the County for use after the incident for debris clearing

and removal. Arrangements have been pre-designated for 24-hour staffing by Public Works-Roads Division employees.

ESF #12 Utility Service/Energy

ESF #12 is responsible for the coordination, prioritization, and restoration of public utilities and services, including emergency power and gas. The primary agency is Seminole County Environmental Services, with support from Duke Energy, Florida Power and Light, Florida Public Utilities Company, the telephone and gas companies, municipal water and sewer departments, and private utilities. Following the elimination of any potentially hazardous situation, the highest priorities are those that affect the health, safety, and welfare of the affected community.

Service will be restored by initial clearing of main transmission lines that carry the bulk of the electrical power from generating stations to neighborhood substations; following that, service will then be restored to large numbers of customers who only require completion of minor repairs and then the remaining power lines will be completed.

In a localized disaster, debris removal will be the responsibility of the local government, which has jurisdiction in the disaster area, with mutual aid for additional equipment and/or personnel requested from Seminole County Government and other jurisdictions, if needed. In a County-wide disaster, debris removal will be the responsibility of the Seminole County Environmental Services Department Solid Waste Division. The Director of Environmental Services and the staff will coordinate debris removal operations using county and city equipment and personnel. When debris removal is beyond the capabilities of Seminole County, contracted haulers and monitors may be utilized.

ESF #20 Cyber

The Seminole County Information Technology Department serves as the primary agency for ESF #20 Cyber. ESF #20 is charged with facilitating effective and coordinated state and local government response and recovery activities to cyber incidents. ESF #20 implements policies, organization, actions, and responsibilities for a coordinated, multidisciplinary, broad-based approach to prepare for, respond to, and recover from cyber-related incidents. Support agencies include Seminole County's Office of Emergency Management, Seminole County Sheriff's Office, and municipal Information Technology Departments.

C. RESOURCE SUPPORT BRANCH

ESF #5 Planning

The Seminole County Office of Emergency Management is the primary agency for this function. This ESF is responsible for collecting, processing, and disseminating information to facilitate emergency response efforts and the preparation of Incident Action Plans (IAP) and Situation Reports. ESF #5 is also responsible for the coordination of EOC briefings/meetings and displaying

visuals around the EOC. Damage Assessment also falls under the management of ESF #5 Planning, which includes the initial damage assessment and production of GIS Maps and data for reporting. This report is an important part of their responsibilities, as the number of damages incurred will be the factor in obtaining a Presidential Disaster Declaration for Seminole County.

ESF #7 Resource Support Logistics and Finance

ESF# 7 is responsible for providing logistical management and resource support to all emergency support functions in response and recovery efforts, including:

- Emergency relief supplies
- Facilities
- Equipment
- Fuel
- Office supplies
- Contracting services
- All other resources which may be required

The Seminole County Office of Emergency Management is the primary agency for the overall management of Logistics functions. The Seminole County Administrative Services Department is the primary agency that records all financial purchases for FEMA reimbursement tracking. Support agencies include the Seminole County Office of Management and Budget, Office of Emergency Management, Public Works, Parks and Recreation, Human Resources, and County Management.

ESF #14 Public Information

During a major event, Seminole County Office of Communications representatives will represent the primary agency providing public information. The support agencies are the Seminole County Sheriff's Office, Seminole County Fire Department, County Manager's Office, Municipal Public Information Offices, Florida Department of Transportation, Seminole County Public Schools, Orlando-Sanford International Airport, Seminole County Information Technologies, Florida Department of Health in Seminole County and Seminole County Office of Emergency Management using a Joint Information Center (JIC).

A Joint Information Center is a co-located group of representatives from local, state, federal, and private organizations designated to handle public information needs during an incident or event. The JIC is designed to fit naturally into the Incident Command Structure (ICS) and can be customized to reflect the size of the incident or event. Establishing a JIC under the Incident Command System is the most effective means of meeting public information needs and can make the difference between the public perceiving the incident to be under control or out of control.

The County Management Office will authorize all media releases or public information statements before being released. The local radio and television stations will be provided opportunities for questions during normally scheduled press/media conferences. Information will be disseminated through the Seminole County Citizens Information Line (CIL) for citizens who have specific questions. The CIL will be activated during significant events, with the number being published through the media.

ESF #19 Fuel, Fleet and Facilities

The primary agency for ESF # 19 is the Seminole County Office of Emergency Management. ESF #19 is charged with providing coordination and implementation of emergency procedures, policies, and emergency response measures used by Seminole County, the municipalities, and private utility companies in responding to and recovering from fuel shortages, fleet resource issues, and damaged or destroyed facilities caused by an emergency. Support agencies include Seminole County Fleet Division, Seminole County Facilities Division, Seminole County Sheriff's Office, and Seminole County Fire Department.

D. EMERGENCY SERVICES BRANCH

ESF #4 Firefighting

Seminole County Fire Department is the primary agency for ESF #4. Municipal fire departments, the Florida Division of Forestry, National Guard, Medical Examiner, Seminole County's Office of Emergency Management, and the Seminole County Sheriff's Office are support agencies. The primary and support agencies all use the Incident Command System (ICS) for incident management. ESF #4 provides support through apparatus and mutual aid coordination for all firefighting missions.

In the event of a widespread disaster or emergency where multiple fire departments are required, the Fire Chief of Seminole County Fire Department will be the coordinator of the activities for fire/rescue. The Director of Emergency Management will make requests for State assistance in coordination with ESF #7 Logistics.

ESF #8 Health and Medical

The Florida Department of Health in Seminole County is the primary agency for coordination for public health. Procedures must be undertaken to prevent and control disease spread, stabilize medical services, and assure environmental safety.

It is essential that trained healthcare professionals meet regularly with public and private non-profits and faith-based partners to support the needs of the community, including those with functional and access needs. Information, public announcements, and ongoing training should be provided to meet the community's needs. The Seminole County Environmental Services Department will maintain a constant check through the testing of water supply sources, both

public and private. Support agencies include the American Red Cross, Florida Department of Agriculture & Consumer Services, Florida Department of Environmental Protection, Florida Department of Business and Professional Regulation, medical and equipment suppliers, municipal water and wastewater utilities, municipal EMS providers, municipal water and sewer departments, Seminole County Medical Examiner, local Hospital Systems and healthcare facilities.

ESF #9 Search and Rescue

Seminole County Fire Department is the primary agency for ESF #4. Municipal fire departments, the Florida Division of Forestry, National Guard, Medical Examiner, Seminole County's Office of Emergency Management, and the Seminole County Sheriff's Office are support agencies.

Land search and rescue operations will differ depending on the area. In the rural areas of the County, search operations will be accomplished by flyovers using the Sheriff's helicopter and the Civil Air Patrol aircraft. Rescue operations will be conducted by using four-wheel drive units from the various agencies.

Water search operations will be conducted by boats from the Sheriff's Office, Fire Department, and volunteers. Rescue operations will be conducted by the Fire Department's Dive Team and Water Rescue Team. In the event search and rescue operations exceed the capabilities and resources of Seminole County and its seven cities, mutual aid will be requested from other counties.

In the event of a widespread disaster or emergency where multiple search and rescue assets are required, the Fire Chief of Seminole County Fire Department will be the coordinator of the search and rescue missions. The Director of Emergency Management will make requests for State assistance in coordination with ESF #7 Logistics.

ESF #10 Hazardous Materials

The Seminole County Fire Department Special Hazards and Operations Team (S.H.O.T.) is the lead agency in responding to all hazardous materials incidents. This Team assumes responsibility for the local agency(s) that may be involved in the response and recovery of the incident. All team members are OSHA-certified hazmat technicians. The on-duty shift will accomplish an effective and efficient response to a hazardous materials discharge. Personnel are on duty 24 hours a day, 7 days a week, and are specifically assigned to the S.H.O.T. Team. Support agencies to include Seminole County Office of Emergency Management, Seminole County Environmental Services Department, Florida Environmental Protection Agency, Florida Department of Health in Seminole County, Seminole County Public Works Department, Seminole County Sheriff's Office, and Municipal Public Safety Agencies.

ESF #13 Military Support

ESF #13 will be responsible for the coordination of State and Federal military support to local governments. Primary responsibility for ESF #13 lies with the Civil Air Patrol. Military support will include, but not be limited to, ground support for State Emergency Response Teams (SERT) and processing mission requests for military assistance from emergency support functions. Military assistance will also participate in staffing comfort stations, mass feeding, distribution centers, and transportation.

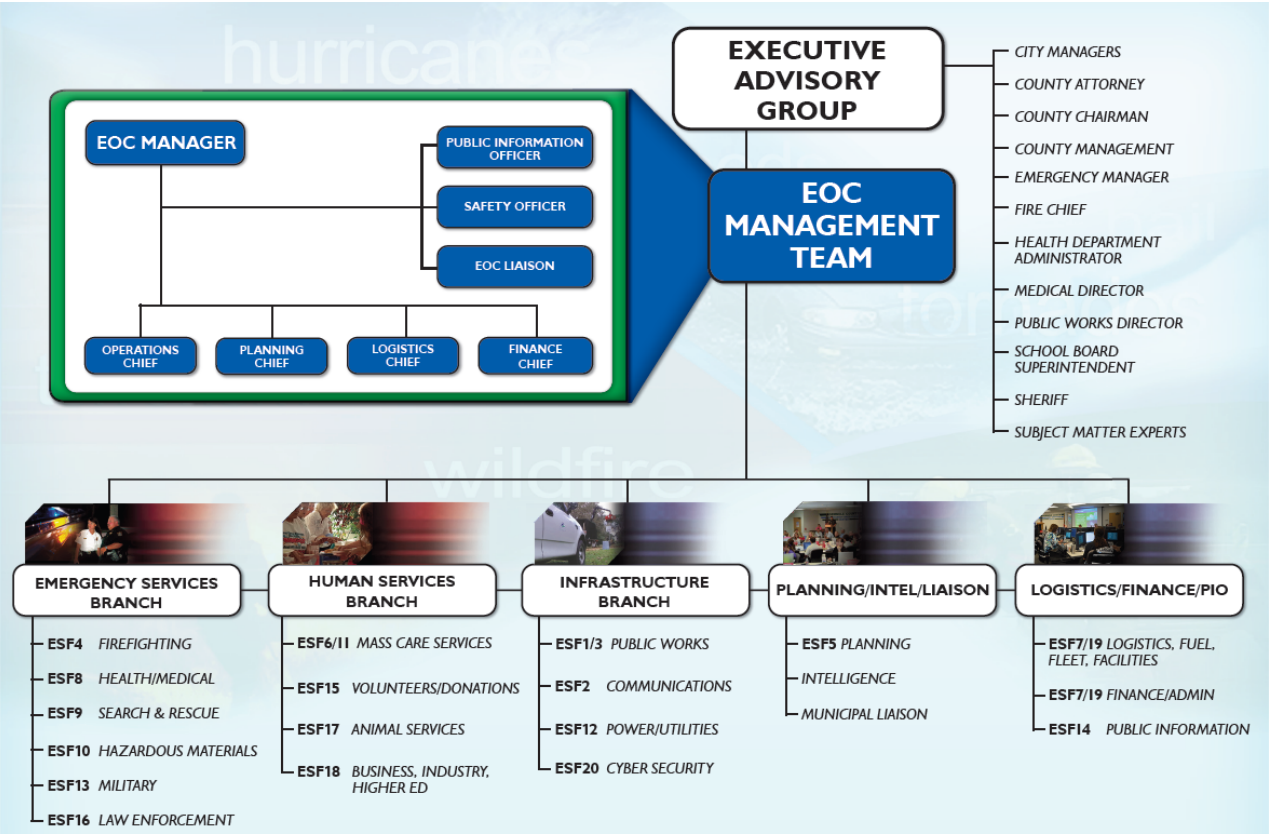
ESF #16 Law Enforcement

The Seminole County Sheriff's Office is the primary agency for ESF #16. The Sheriff, as the senior law enforcement officer in the County, will act as a liaison between local and State law enforcement agencies during disasters and emergencies if assistance is needed and requested. In the event of a localized emergency or disaster, the law enforcement agency having jurisdiction in the affected area will be responsible.

If additional assistance is needed in the form of personnel or resources, this assistance can be requested through any active mutual aid agreements and/or from the Seminole County Sheriff's Office. All requests for additional resources and mutual aid should come through the adopted resource management system overseen by ESF #7 for tracking and accountability purposes.

Protection of the public requires the timely and coordinated efforts of all levels of law enforcement. Impending or existing natural disasters further complicate the task. If additional equipment or personnel are required, it may be beyond the resources of Seminole County. In a local emergency, outside assistance may be required.

The ESF operational system will be utilized in the EOC within the NIMS. During emergency operations, representatives from each ESF and municipality will be present in the EOC and will be in contact with their counterparts during such operations. See EOC/ICS interface structure organization chart on the next page.



XXI. Additional Emergency Operations Coordination Measures

A. Damage Assessment

Immediately after a disaster has occurred, Damage Assessment Teams will conduct a windshield survey, or flyover, of the affected areas involved and place an estimated value on the damage. These reports will be received by the EOC Planning Section, which will determine if the extent of damage meets the requirements for a disaster assistance declaration.

The Florida Division of Emergency Management will make an evaluation of the situation based on County reports and reports of State Damage Assessment Teams. The Governor of the State of Florida may direct State resources into the affected area(s) and/or declare a State of Disaster Emergency to exist in the area. State resources will be made available for local assistance, as requested, by the State of Florida.

B. Long-Term Recovery Committee

Pre-disaster and post-disaster recovery initiatives require the collaboration and network of private non-profit and faith-based organizations to assist the unmet needs of affected residents in the event of a disaster. The relationship between government and private non-profit organizations is critical in filling in gaps that are outside of government assistance guidelines. Local volunteer organizations, social service organizations, interfaith organizations, and locally based global organizations provide a diverse range of services to assist residents in the event of a disaster.

Seminole County's Office of Emergency Management maintains a well-established network, frequent participation, and involvement with the local Long-term Recovery Committee: Seminole HEART. The Seminole Home-Based Emergency Assistance Response Team is a local long-term recovery committee established in 1998, after Seminole County's most devastating tornado outbreak. Seminole HEART coordinates and provides access to resources at the local level and utilizes an organizational structure of local member agencies to access non-local resources to assist residents. Seminole HEART representatives are active participants in the EOC under ESF #15 Volunteers and Donations to coordinate unmet needs services. Non-disaster-related functions include planning, training, and mitigation activities.

C. Disaster Recovery Centers

Disaster Recovery Centers are established in a disaster area to provide information on the complete range of disaster assistance available. The responsibility for managing these Centers is jointly shared by the local government, the Florida Division of Emergency Management, and the Federal Emergency Management Agency.

D. Individual Assistance

In the event damages exceed the applicable thresholds for disaster assistance to residents, the Federal Emergency Management Agency may declare eligibility for residents to receive Individual Assistance (IA). Residents will be required to complete a disaster assistance application to qualify. Once residents apply for assistance, they may be deemed eligible for various financial and personal stabilization programs. Promotion of these activities will be provided by local emergency management and FEMA.

E. Public Assistance

Damage may occur to publicly owned infrastructure and essential services. In the event damage levels qualify, the Federal Emergency Management Agency may declare eligibility for Public Assistance (PA). PA allows for the reimbursement of protective measures, emergency work, debris removal, and other essential functions on a cost-share scale. All PA grants, agreements, and contracts are overseen by the Florida Division of Emergency Management. Applicants and sub-grantees will maintain and submit all documents necessary to obligate and disburse public assistance funds; this includes establishing a system for processing payments to sub-grantees and FEMA and establishing and maintaining accounting records for each payment drawn down by the State and each payment to sub-grantees.

F. Emergency Housing

When a large distribution of available housing stock occurs, temporary living sites will be identified. Seminole County has a robust Disaster Housing Plan as part of the Post Disaster Recovery Plan to work with community partners and public agencies to ensure the availability of adequate housing stock for survivors and displaced residents.

G. Debris Management

Seminole County Public Works and Seminole County Environmental Services, have primary responsibility for the overall coordination of debris removal efforts on unincorporated public property, including the securing of all permits required.

Emergency debris removal efforts will be focused on clearing major transportation arteries to allow the movement of emergency vehicles, supplies, resources, and traffic. Seminole County developed pre-planning measures in coordination with municipal and contracted partners, formulating the Disaster Debris Management Plan.

H. Joint Field Office

The Joint Field Office (JFO) coordinates local, State, and Federal short and long-term response and recovery operations. The Federal and State Coordinating Officers will coordinate in the JFO as well as other local, State, and Federal essential personnel. Recovery and mitigation operations, logistics, information and planning, financial management, and general administration are coordinated at the JFO.

XXII. Emergency Operations Center Activations

A. LEVEL III: Monitoring

Notification may be given to the appropriate local agencies, municipalities, and ESFs who need to act as part of their everyday responsibilities. Upon notification, all participants shall keep up to date on the progress of the emergency and make an initial assessment of readiness in their areas of responsibility.

Recommendations Actions:

- Review emergency procedures and emergency checklist
- Alert ESFs, individuals, and departments on the emergency call-out roster, of emergency condition
- Notify respective personnel of potential conditions
- Test communications equipment (i.e., verify emergency numbers, fax, radios, etc.)
- Training and exercises
- Identify hazard vulnerability

B. LEVEL II: Partial Activation

The EOC will be staffed by first response personnel, specific ESFs, and municipalities. All operating ESFs are notified. The following recommended actions are in addition to those in Level III.

Recommendation Actions:

- Increase EOC staffing with emergency support functions and municipalities
- Suspend some non-essential services (i.e., normal preventative maintenance, visitation, tours, training, and exercises, etc.)

- Notification/warning of potential evacuation to manufactured home residents, flood-prone areas, and persons with special needs.
- Consider requests for State and Federal assistance.
- Secure financial account lines for expenditures.

C. LEVEL I: Full Activation

This is a "Full Activation" of the EOC, with 24-hour per day staffing, including around-the-clock staffing of all ESFs. Notification shall be given to the appropriate local agencies, municipalities, and emergency support functions.

Recommendations Actions:

- EOC is fully staffed by all operating departments ESFs
- All communications systems and networks are operational and staffed
- Continuous monitoring of all circuits for outages and malfunctions
- Open shelters
- Evacuate mobile homes
- Evacuate flood-prone areas
- Evacuate persons with special needs
- Open employee dependent shelter
- Prepare to increase emergency conditions
- Continue/increase public announcements
- Assess the need to terminate alarm response until adverse conditions subside
- Activate special ordinances/declaration of Local State of Emergency
- Review recovery operations
- Prepare to activate recovery operations

XXIII. Preparedness Activities

The Director of Emergency Management or designee will be responsible for the development and maintenance of the CEMP. Updates and revisions of this plan will be made in accordance with the method and schedule identified in Annex H: Integrated Preparedness Plan.

Essential records must be protected and include vital statistics, deeds, corporation papers, operational plans, resource data, authorities, personnel and payroll records, succession lists, supply and equipment list, charters, and financial records. The Clerk of the Circuit Court is responsible for the preservation of all vital records/documents of all County records deemed essential for Seminole County to function during post-disaster operations. Disaster-related documentation and the Office of Emergency Management subscribe to the records retention schedule outlined in the Florida State Statute.

Seminole County Office of Emergency Management maintains a special needs registry in accordance with state statute. Residents who need additional assistance may complete a Special Needs Registration to be triaged for a medically enhanced shelter or well-check by a first response agency. Based on the application information, a decision will be made on whether the individual can be served at a medically

enhanced shelter. Functional Needs Support Services will be provided at one of the County shelters for those individuals who wish to utilize a general shelter rather than a medically enhanced shelter.

A. Public Preparedness and Education

Disaster preparedness messaging has been developed into Seminole County's Preparedness Campaign: *Prepare Seminole!* Preparedness information is distributed to the public via website, Citizens Information Line (3-1-1) and media releases. During emergency activations, the Director of Emergency Management will work, in conjunction with other departments and agencies along with ESF-14 to release information to media and internal staff.

The purpose of the public service announcements is to provide information for to the public on awareness and preparedness prior to, during and following an emergency disaster. The periodic release of authoritative information and instruction to the public will tend to have a calming effect and aid in rumor control and increased organization. The public is made aware of emergency management activities and programs through pre-disaster informational programs. These serve to educate the public on ways to protect life and property, how to prepare themselves prior to a disaster and the availability of assistance and further information.

Seminole County is not considered as an evacuation county. If a recommendation for an evacuation is advised, it will be areas that are flood prone along lakes and rivers and mobile/manufactured homes. Major evacuation routes in Seminole County are SR 436, SR 434, SR 417, U.S. Highway 17-92 and I-4.

Information will be provided to local radio and television stations for disseminate through cable provider Spectrum and normal radio transmissions.

Public information activities are conducted to solicit input from citizens. The Seminole County Office of Emergency Management participates in many public presentations for business owners and citizens. During these presentations, emergency management staff offer participants opportunities to further gain or reinforce their knowledge and, most importantly, offer input to strengthen the resiliency of our community.

FEMA has launched the Integrated Public Emergency Alert Warning System (IPAWS), which makes use of the Emergency Alert System (EAS) and will allow emergency messages to weather radios, cellular phones, and media sources. Seminole County has a TTY (Text Telephone/Typewriter) and a TDD (Telecommunications Device for the Deaf) in the Emergency Communications Center. A Spanish-speaking radio station is included in the EAS system. If time permits, fire and police units could drive into neighborhoods and make announcements over the PA systems of an impending event or evacuation.

The Seminole County Citizen's Information Line is a designated phone number for citizens to call and get information during times of emergency. When a disaster event is imminent, this number is activated on a 24-hour basis. The telephone number is 3-1-1 from a mobile phone or landline

outside of the County PBX system or 407-665-0000 from any landline phone outside of the County. This number will be published to the media during an incident.

Emergency and disaster related information is available to all seasonal and transient populations through the media using EAS.

ESF #14, Public Information, will prepare periodic updates, including multi-lingual messaging, to advise the public of the status of the emergency recovery efforts, to pass along emergency instructions, and to advise the public of services and assistance available. Additionally, Seminole County will be using informational electronic signage.

B. Exercises

All governmental agencies tasked with emergency management response and recovery activities and responsibilities under this plan should participate in exercises. Non-governmental, not-for-profit and other outside agencies will be invited to attend and participate in each exercise. Exercises will be conducted in accordance with guidelines established in the Homeland Security Exercise and Evaluation Program (HSEEP). Exercises will be scheduled, in coordination with the appropriate agencies, on at least an annual basis, unless actual occurrences satisfy exercise requirements. Exercise objectives and the scenarios for the exercise will be developed and prepared by an exercise team, which will have representatives from each major participant

Seminole County will cooperate and utilize outside agencies to meet training goals and needs, i.e., the Federally sponsored Emergency Management Institute, (EMI), the State of Florida Division of Emergency Management (FDEM), the National Domestic Preparedness Consortium, training courses, and other symposiums and conferences.

The County's Integrated Preparedness Plan (IPP) is coordinated by the Seminole County Office of Emergency Management with valued cooperation and contributions from law enforcement, health/medical, fire rescue, non-profit organizations, and private industry. To achieve the County's vision of a safe, secure, and sustainable economy, stakeholders convene the develop the IPP.

Seminole County will continue to investigate the use of programs designed to enhance the capabilities of government in responding to emergency and disaster events.

Training and scheduling of training for emergency management purposes will be coordinated through the Seminole County Office of Emergency Management. It is the intent of this office to continuously review and test portions of the plan through exercises to determine the needs of the group for training. The State FDEM and EMI have identified annual training schedules that are distributed to the agencies. Seminole County will conduct an annual exercise, which will be either tabletop, functional or full-scale, and will also provide annual training on the EOC Management System.

An after-action briefing is held after each exercise which includes a survey form to be completed by the exercise and training course participants. The survey will request input in such areas as effectiveness, improvement and future training needs. This information will be used in the development of future training and exercise activities. All exercise After Action Reports will be prepared in accordance with guidelines set forth by the Homeland Security Exercise and Evaluation Program.

C. Training

The training courses and exercises for the IPP are chosen by the Seminole County's Office of Emergency Management with input from relevant stakeholders. The Team holds the Integrated Preparedness Plan Workshop in which exercises and training are discussed and gaps are analyzed. The Director of Emergency Management is responsible for the execution of the IPP, in coordination with all partnering agency heads. Using gaps and improvement action items from previous events and exercises, the team choose trainings they feel will:

- Challenge participants with increasingly advanced coursework and scenarios
- Incorporate, reinforce, and verify lessons learned
- Identify demonstrated capabilities and areas in need of improvement
- Provide a means of evaluation and corrective action for exercises
- Ensure a method to share lessons learned and best practices from training courses and exercises

D. Coordination

Coordinated, systematic, and comprehensive training and education programs are essential for the development and maintenance of this plan. Organizations and personnel assigned to emergency response and recovery activities must be capable of fulfilling their responsibilities during emergency and disaster events. Furthermore, it is imperative that the public fully understands the overall concept of emergency management and their individual responsibilities before, during, and after an emergency or disastrous event. Exercise drills (full-scale, functional, and tabletop) will be conducted periodically to evaluate the adequacy of the CEMP and the skills of emergency response personnel.

All emergency management staff are trained on NIMS and ICS. The Seminole County Office of Emergency Management offers NIMS and ICS training on an ongoing basis to assure all county employees who have disaster response-related positions are properly trained on the structure of the EOC. All ESFs have also been trained on NIMS and ICS.

All fire departments and law enforcement agencies within the County have training programs and designated training officers. Other city and county agencies will identify emergency training requirements of assigned personnel, conduct or arrange for required training programs, and request assistance from the Seminole County Office of Emergency Management, if necessary.

E. Training Requirements

Each agency within the County is responsible for scheduling and coordinating personnel training for their emergency support function. Preparedness, response, and recovery training includes participation in exercises, completion of resident and online FEMA courses, and attending courses offered by the Florida Division of Emergency Management. Training activities will include a focus on disaster preparedness, conducting emergency drills and exercises, mobilization and demobilization of assets, and coordination activities within and between agencies. Agencies will maintain familiarity with specific operational requirements for response and recovery operations through training and exercise participation.

Emergency response and recovery teams conduct training in areas specific to their emergency operation function. These include but are not limited to search and rescue, water-born operations, post-disaster mitigation efforts, and community restoration activities.

Coordination of agencies and resources utilized during exercises and training is the responsibility of the Seminole County Director of Emergency Management.

F. Mutual Aid and Memorandum of Understanding (MOU's)

The principle of this Plan is that the local government is responsible for disaster response, recovery, and relief.

The Office of Emergency Management will be the primary agency responsible for coordinating the mutual aid function. Lead ESF Agencies may enter into their own mutual aid agreements to support their operations, however, the coordinating function for mutual aid will rest with the Seminole County Office of Emergency Management.

In a localized disaster, each individual municipality will respond to and manage emergencies until their resources are exhausted. When Seminole County has declared a county-wide disaster, the resources of the municipalities have been exhausted, and assistance is requested by the municipalities of Seminole County, the Director of Emergency Management will establish a unified command. Seminole County will serve as the coordination and control point for State and Federal resource requests. Each level of government will request aid from the next highest level of government only when resources at that level are clearly inadequate to deal with the problem or its aftermath. Local municipalities will request assistance from Seminole County through the EOC.

Upon request either by the State or Local government, Seminole County will respond to requests for mutual aid with rescue teams, law enforcement, and other emergency workers and provide such assistance, with or without compensation, in accordance with the Statewide Mutual Aid Agreement.

All municipalities within the County have entered into the Statewide Mutual Aid Agreement. All Memorandums of Understanding and agreements required by the Emergency Support Functions are the responsibility of the primary coordinator of each ESF. Emergency Management will maintain a copy of the MOU or agreement.

XXIV. FINANCIAL MANAGEMENT

Due to the nature of emergency situations, financial operations will often be carried out under short time restraints that cannot be accommodated using routine accounting procedures. Note that this in no way lessens the requirement for sound financial management and accountability.

A Presidential disaster or emergency declaration will open the way for funding the costs of uses of resources initiated at the state and local levels.

The Governor's Proclamation of a State of Emergency can temporarily set aside normal state budgetary restrictions to finance emergency response and recovery activities.

It is the intent of these guidelines 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.

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 Chapter 252, Florida Statutes, relating specifically to emergency management powers and the responsibilities of local government.

A. Expenditure of Funds

Each agency and/or municipality is responsible for establishing effective administrative control of funds and segregation of duties for proper internal controls and ensuring that actions taken and costs incurred are consistent with the missions and procedures identified in this plan.

1. All Seminole County departments will coordinate funds and expenditures through ESF# 7, Resource Support, under the direction of the Chief Financial Officer. Seminole County agencies and personnel will complete all reporting and tasks to meet the deadlines established by the Department of Administrative Services for data submission.

2. The Seminole County Office of Emergency Management has hosted and will continue hosting disaster assistance workshops. All municipalities and local agencies should participate in these workshops.

3. The seven encompassing municipalities in Seminole County have established mutual aid agreements for use during disasters and emergency events. These mutual aid agreements enhance the county's recovery by utilizing available resources, public assistance, and human resources where needed most throughout the county.

4. Extreme care and attention to detail must be taken throughout the emergency response and recovery period to maintain logs, formal records and files, and copies of all expenditures (including personnel time sheets) to provide clear and reasonable accountability and justification for future reimbursement requests.

5. 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 Chapter 252, Florida Statutes, relating specifically to local government emergency management powers and responsibilities.

6. When the County responds to assist another agency, Seminole County will bill that agency according to established guidelines and attach copies of payroll and invoices. The agency will reimburse the County when they receive payment from the State or FEMA.

7. When another agency is assisting the County, that agency will bill Seminole County and attach proof of invoice, i.e., payroll sheets, invoices, etc. When Seminole County is reimbursed from the State or FEMA, they will then reimburse the mutual aid agency.

8. The County Manager or designee is authorized to execute funding agreements with other legal entities on behalf of the county.

9. Invoicing another mutual aid agency will only be done when the invoice agency is being reimbursed.

10. A Presidential Disaster 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 local and state levels. Public Law 93-288 explains two types of grants available:

    a. A Large project grant is approved when the total project cost to repair or replace eligible public damage. The grant must be used to restore public or private non-profit facilities to their pre-disaster condition.

    b. A small project grant is approved when the total project cost repairs or replaces eligible damage less than that of large projects.

11. Other agencies that will assist in relief funding would be the Department of Housing and Urban Development, the U.S. Small Business Administration, the American Red Cross, the Salvation Army, and the Community Development Block Grant Program, CDBG funding provided to the County by the Federal Government.

12. ESF #7, Resource Support, will have the responsibility for financial management. See Response Section and ESF #7, Resource Support responsibilities.

13. 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 abuse. Extreme care and attention to detail must be taken throughout the emergency response and recovery 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.

XXV. References and Authorities

The authority for local governments to respond to situations and take actions necessary to safeguard the life and property of its citizens is set forth in the following regulations.

A. Seminole County

- Seminole County Resolution Number 93-R-242, September 14, 1993, Emergency Management.
- Seminole County Code Chapter 72
- Seminole County Comprehensive Plan Ordinance No. 91-13, September 11, 1991 as amended.
- Chapter 125, Florida Statutes, County Government.
- Chapter 162, Florida Statutes, County or Municipal Code Enforcement.
- Local Mitigation and Resiliency Strategy
- Community Wildfire Protection Plan
- Floodplain Management Plan
- Post Disaster Recovery Plan
- Disaster Housing Plan
- Debris Management Plan
- FLNG-MSCA, ESF, SOP's, Wetlands Field Guide Appendix 5, Natural Resources Planning Standard Part 16, Land Development Code, Comprehensive Plan Land Use Map as indicated in GIS, Seminole County Web Site.
- Seminole County Sheriff's Office Manual, Public Works Storm Procedures, Environmental Services Disaster Plan, Seminole County Economic & Development Services
- Statewide Mutual Aid Agreement with all municipalities, Memorandum of Understanding with the School Board of Seminole County for Special Needs Shelters.
- Distribution Points for the Strategic National Stockpile (SNS) and MOUs with any agency used as a Point of Distribution Site.

B. State

- Chapter 252 of the Florida Statutes (State Emergency Management Act, as amended).
- Governor's Executive Orders.
- The State of Florida Comprehensive Emergency Management Plan.
- Rules 27P Florida Administrative Code
- State of Florida Statewide Mutual Aid Agreement.

C. Federal

- Public Law 103-337, which re-enacted the Federal Civil Defense Act of 1950 into the Stafford Act.
- The Robert T. Stafford Disaster Relief and Emergency Assistance Act).
- Public Law 106-390
- FEMA Public Assistance Guide (FEMA 322).
- Homeland Security Presidential Directive 5, Management to Domestic Incidents.

D. Executive Orders- State

- 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 Order 98-153 and 98-155.
- Executive Orders 98-153 and 98-155.
- Statewide Mutual Aid Agreement (July 31, 2000 as Amended by Modification #1, October, 1994).

E. Executive Orders-Federal

- Florida and Federal Emergency Management Agency Region IV, 1993.
- Executive Order 11795, dated July 11, 1974, as amended by Executive Order 11910, dated April 13, 1976.
- Executive Order, 11988, Floodplain Management.
- Executive Order, 11990, Protection of Wetlands.
- Executive Order, 12656, Assignment of Emergency Preparedness Responsibilities.
- Presidential Decision Directive – 39, United States Policy on Counter Terrorism.
- Homeland Security Presidential Directive 5 – Management of Domestic Incidents – Adoption and Implementation of NIMS.
- Public Law 93-288, as amended, which provides authority for response assistance under the Federal Response Plan and which empowers the President to direct any Federal agency to use its authority and resources in support of state and local assistance efforts.
- Public Law 81-920, the Federal Civil Defense Act of 1950, as amended, provides a system for joint building of capability at the Federal, state, and local levels to deal with all hazards.
- Public Law 93-234, Flood Disaster Protection Act of 1973, as amended, provides insurance coverage for all types of buildings.
- Public Law 99-499, Superfund Amendments and Reauthorization Act of 1986, which governs hazardous materials planning and right-to-know.
- Public Law 101-615, Hazardous Materials Transportation Uniform Safety Act (HMTUSA), which provides funding to improve capability to respond to hazardous materials incident