1 ›› Overview

This template with guidance from the *Hazard Identification and Risk Assessment (HIRA), as described in Comprehensive Preparedness Guide (CPG) 201* and is enhanced by lessons and recommendations from *Creating Your Risk Management Program*. Many of the tables and examples have been re-created from *CPG 201*. This document may be modified at any time by authority of the EM director in order to achieve goals of the emergency management program.

2 ›› Background

Introduction

The purpose of this Hazard Identification and Risk Assessment (HIRA) is to help whole community members to identify and understand possible vulnerabilities within the State of Florida as well as the Nation. The HIRA is part of the Presidential Directive 8/PPD-8: National Preparedness which asks multiple federal agencies to work together with the whole community to improve national preparedness, sets a common National Preparedness Goal, and takes a capabilities-based approach.

Santa Rosa County is located along the Gulf of Mexico in the panhandle of Florida. It is bordered on the west by Escambia County, the north by the state of Alabama, on the east by Okaloosa County and the Gulf of Mexico to the south. It covers a total of 1,174 square miles, of which approximately 1,017 square miles are land, and 157 are water.

For the purposes of this report, Santa Rosa County (SRC) has centered its emphasis on the Threat/Hazard Groups including:

Hurricanes/Tropical Storms/Storm Surge, Thunderstorms/Lightning, Tornadoes, Flooding, Hazardous Materials Incidents, Terrorism/Weapons of Mass Destruction, Fire, Major Transportation Incidents, Land Erosion/Expansive Soils, Heat Waves/Drought, Winter Storm, Freeze, Inadequate Water Supply and/or Contamination, Public Health Threats, Mass Exodus/Immigration, Coastal Oil Spills, Civil Disturbance, Critical Infrastructure Disruption, Special Events, Active shooter/lone wolf terrorist

This report provides a step by step assessment for Santa Rosa County (SRC) which is a collective tool for its local partners/stakeholders to identify and assess possible gaps in the County. The use of the SRC HIRA will assist in applying for future All-Hazard grant opportunities to provide a more secure county, region, and State.

Methodology

The Santa Rosa County Comprehensive Emergency Management Plan (SRC CEMP) was developed using generally accepted management principles and practices for emergency management with input from preparedness organizations, such as the Santa Rosa County Disaster Managers Group, the Santa Rosa County Local Mitigation Task Force, and a number of individuals. This method helped to address

the coordination of various preparedness activities among all appropriate agencies within the jurisdiction, across jurisdictions and with private organizations.

Characterizing Your Jurisdiction

There are three incorporated municipalities with Santa Rosa County, including the cities of Gulf Breeze and Milton, and the Town of Jay. The City of Milton serves as the county seat. Unincorporated communities within Santa Rosa County include Avalon Beach-Mulat, Allentown, Bagdad, Berrydale, Brownsdale, Chumuckla, Dickerson City, Dicksonville, East Milton, Fidelis, Florida Town, Harold, Holley, Midway, Morristown, Mt. Carmel, Munson, Navarre, Navarre Beach, New York, Pace, Pea Ridge, Sellersville, Skyline, Wallace and Ward Basin. Military lands compose a small portion of the lands used within Santa Rosa county and can be found just off the Hwy 90 corridor. Also found along the Hwy 90 corridor are commercial, industrial and residential land uses. The southern portions of Santa Rosa County along Gulf Breeze and Navarre are primarily zoned for residential uses with a commercial corridor following Hwy 98.

3 ›› Threat and Hazard Identification and Risk Assessment

Step 1: Identify the Threats and Hazards of Concern

Identifying which natural hazards, technological accidents, and human-caused threat types are faced by your community will be the focus of this analysis and report.

Natural	Technological	Human-caused
Resulting from acts of nature	**Involves accidents or the failures of systems and structures**	**Caused by the intentional actions of an adversary**
• Hurricanes/Tropical Storms/Storm Surge • Thunderstorms/Lightning/ Tornadoes • Flooding • Fire • Heat Waves/Drought • Winter Storm, Freeze • Public Health Threats • Erosion	• Hazardous Materials Incidents • Major Transportation Incidents • Inadequate Water Supply and/or Contamination • Coastal Oil Spills	• Civil Disturbance • Hazardous Materials Incidents • Terrorism/Weapons of Mass Destruction • Public Health Threats • Critical Infrastructure Disruption • Active Shooter/lone wolf

Step 2: Give the Threats and Hazards Context

Provide the following information:

- Descriptions of each threat and hazard, including when and where it might occur. Include more than one description for each threat and hazard when necessary.
- Threat likelihood information

Consider the following format:

Threat/Hazard Group	Threat/Hazard Type
Natural	Hurricanes/Tropical Storms/Storm Surge
Description: Category 4 Hurricane makes landfall in the panhandle west of Santa Rosa County moving north to south. During high tide/hurricane spawns tornados, significant wind damage, and surge flooding.	
Natural	Thunderstorms/Lightning/tornado
Description: Thunderstorms rated as severe by NWS Mobile can bring a lot of rain which can cause flooding, lighting which can affect infrastructure, and straight line winds that can blow over trees. Lightning can cause major damage to structures, cause infrastructure to lose power, and can cause death to those in standing water or open areas. Multiple EF 2/3 tornados in the middle of the night throughout the panhandle; with widespread Mass Casualties and Property Damage.	
Natural	Flooding
Description: A slow moving rain hovers over the panhandle dropping rain in areas that usually do not see a lot, poor drainage due to previous rains allows for water to collect. Rain from upstream floods rivers and creeks. A 500 year flood incident.	
Natural	Fire
Description: A lightning strike sparks a wildfire in a dense forest area, affecting travel, industry, and daily life in the regions for weeks. This can also be manmade, if an arsonist starts a fire in a field near an interstate. Smoke mixes with dense fog, causing sudden and unexpected limits to visibility, resulting in a multiple vehicle crash.	
Natural	Heat Waves/Drought
Description: Long periods of heat can cause drought. Heat can also burden electrical infrastructure to the point of sporadic outages which can be a health and safety risk for citizens, as well as disrupting businesses.	
Natural	Winter Storm, Freeze
Description: Ice and snow can cause significant damage to infrastructure and private property, especially in Florida where this weather is an anomaly. Ice can disrupt school and work schedules, as well as be dangerous to the homeless and heatless in the community.	
Natural	Public Health Threats
Description: A rapidly spreading disease that occurs suddenly and unexpectedly in the general population within a given geographical area, affecting significantly large number in any season. Also, includes foreign introduced diseases due to Florida being an international travel hub. This could also be a human caused threat.	
Natural	Erosion

Description: Wearing away of land from any source that may affect infrastructure, have an economic impact, or endanger life and or property.	
Technological	Hazardous Materials Incidents
Description: A train derailment containing large quantities of mixed hazardous materials occurring in SRC can prompt immediate evacuation and overwhelm Law Enforcement, Fire Rescue, Communication Systems, and Healthcare. This could also be a human-caused disaster if intentional.	
Technological	Major Transportation Incidents
Description: Train derailment occurs in a large densely populated business or residential area. During an evacuation or peak travel time a major transportation incident occurs on a major roadway or causeway that renders a section of the road impassible. This can be a human caused disaster as well if intentional.	
Technological	Inadequate Water Supply and/or Contamination
Description: A long term drought can cause significant hardship on farming communities and those businesses that serve tourists. In the south of the county the water is brought in from the middle part of the county. Any disruption of this system can have negative health effects and disrupt the economy. This can be a human caused disaster as well.	
Technological	Coastal Oil Spills
Description: As seen during Deepwater Horizon, a catastrophic and unstoppable oil leak in the Gulf of Mexico can adversely affect the health and welfare of the population, as well as the economic stability of the county.	
Human-caused	Civil Disturbance
Description: Civil disturbances can happen for a number of political or social reasons, and can be disruptive for first responders as well as citizens. Such disturbances can shut down business and be destructive.	
Human-caused	Hazardous Materials Incidents
Description: The deliberate release of high amounts of chemicals from a train derailment occurring in SRC can prompt immediate evacuation and overwhelm Law Enforcement, Fire Rescue, Communication Systems, and Healthcare.	
Human-caused	Terrorism/Weapons of Mass Destruction
Description: A radiological attack using a dispersal device explodes in a populated area during tourist season. A chemical attack like the Sarin attack on the Tokyo subway occurs in a populated area. An explosive device like the Oklahoma City bomb is set off in a heavily populated area.	
Natural	Critical Infrastructure Failure

Description: Some form of infrastructure affected by some cause that creates damage and potential death.	
Human-caused	Public Health Threats
Description: A biological attack using aerosol anthrax occurs in a populated area during the flu season. The attacks have occurred at theme parks, tourist attractions and special events.	
Human-caused	Active Shooter/lone wolf terrorist
Description: A disgruntled employee or a disturbed individual suffering from paranoia, or delusions, can easily make for a bad day if they decide to take their anger/frustration out on a group of unsuspecting citizens at a park, store, school, or other gathering place. This can be defined as a crime or act of terrorism depending on the motivations, but regardless, the scar on the psyche of the community will be present, and casualties will be dependent on the mechanism of attack, gun or bomb.	

Step 3: Examine the Core Capabilities Using the Threats and Hazards

Use the core capabilities to assess how each threat and hazard may impact the community. Address the following:

- Risk Results for your Jurisdiction or Region (if available)
- Desired Outcomes
- Estimated Impacts of Core Capabilities

Risk Results: If you completed a risk analysis for your jurisdiction or region, this would be a good place to offer some results, thereby illustrating how different threats and hazards identified above may impact your community. Consider asset risk and/or population risk.

Desired Outcomes: Identify a desired outcome for each core capability. You should develop these working with the whole community. They should be informed by the National Preparedness Goal.

	Core Capability	Desired Outcome
Common	Planning	Annually maintain an all-hazard plan that addresses all of the mission areas, to include annexes as required. Annually maintain Continuity of Operations (COOP)/Continuity of Government (COG) plan for all critical infrastructure.
	Public Information and Warning	Provide information in a timely manner, consistent with the threat or hazard, to enable people to take appropriate protective measures.
	Operational Coordination	Establish and maintain unified and coordinated operational structure and process in the impacted area within 1st hour of a potential or actual incident.

	Core Capability	Desired Outcome
Prevention	Forensics and Attribution	Prioritize100% of evidence collection and analysis to assist in preventing initial or follow-on terrorist acts.
Prevention and Protection	Intelligence and Information Sharing	Within the 1st hour of an incident, begin to share relevant, timely, and actionable information and analysis with Federal, State, local, and private partners with appropriate classified/unclassified products in accordance with established protocols.
	Interdiction and Disruption	Interdict 100% of specific conveyances, cargo, and persons associated with an imminent threat to the State of Florida, based on available resources
	Screening, Search, and Detection	Screen 100% of targeted cargo, conveyances, mail, baggage, and people associated with an imminent terrorist threat or act using technical, non-technical, intrusive, or non-intrusive means.
Protection	Access Control and Identity Verification	Ensure 100% verification of identity to authorize, grant, or deny physical and cyber access to specific locations, information, and networks
	Cybersecurity	Detect 100% of malicious activity directed against all critical infrastructure, key resources, and networks.
	Physical Protective Measures	Protect 100% of people, structures, materials, products, and systems of key operational activities and critical infrastructure sectors against an identified or perceived threat.
	Risk Management for Protection Programs and Activities	Complete risk assessments for 100% of prioritized critical infrastructure and key resources (CI/KR) assets.
	Supply Chain Integrity and Security	Secure all identified priority supply nodes, transit methods, and materials.
Mitigation	Community Resilience	Annually maintain and implement 100% risk mitigation plans for communities with highest risk through partnerships with whole community representatives. (Based on available funding)
	Long-term Vulnerability Reduction	Reduce the long-term vulnerability of all identified critical infrastructure and systems and community features that pose an increased risk to a similar incident
	Risk and Disaster Resilience Assessment	Annually identify, analyze and maintain a risk assessment that includes information about localized vulnerabilities and consequences for the State of Florida.
	Threats and Hazard Identification	Annually identify State of Florida threats and hazards in collaboration with whole community partners and incorporate into analysis and planning process.
Response	Critical Transportation	During the first hour of an incident, begin to establish physical access through appropriate transportation corridors and deliver required resources in an effort to save lives and to meet the needs of disaster survivors.
	Environmental Response/ Health Safety	During the first hour of an incident, begin to conduct health and safety hazard assessments and

	Core Capability	Desired Outcome
		disseminate guidance and resources, including the deployment of hazardous materials teams, to support environmental health and safety actions for response personnel and the affected population and area.
	Fatality Management Services	During the first 24 hours of an incident, begin to conduct operations to recover fatalities
	Mass Care Services	During the first 6 hours of an incident, begin to move and deliver resources and capabilities to meet the needs of disaster survivors, including individuals with access and functional needs and others who may be considered at-risk.
	Mass Search and Rescue Operations	During the first hour of an incident, begin to conduct search and rescue operations to locate and rescue persons in distress.
	On-Scene Security and Protection	Within the first 24 hours of an incident, begin to establish a safe and secure environment for the affected area.
	Operational Communications	During the first hour of an incident, ensure that the capacity to communicate with both the emergency response community and the affected populations is sufficient; establish interoperable voice and data communications between responders.
	Public and Private Services and Resources	During the first 6 hours of an incident, mobilize and deliver governmental, nongovernmental, and private-sector resources within and outside the affected area to save lives, sustain lives, meet basic human needs, stabilize the incident, and transition to the recovery phase, which may entail moving and delivering resources and services to disaster survivors.
	Public Health and Medical Services	During the first 72 hours of an incident, complete triage and initial stabilization of casualties and begin definitive care for those likely to survive their injuries.
	Situational Assessment	Within the first hour of an incident, begin to deliver information sufficient to inform decision making regarding immediate life-saving and -sustaining activities and engage governmental, private, and civic-sector resources within and outside of the affected area to meet basic human needs and stabilize the incident.
Response and Recovery	Infrastructure Systems	During the first 6 hours of an incident, decrease and stabilize immediate infrastructure threats to the affected population, to include survivors in the heavily-damaged zone, nearby communities that may be affected by cascading effects, and mass care support facilities and evacuation processing centers with a focus on life-sustainment and congregate care services over the impact area to the affected population. Within 30 days of an incident, develop a plan with a specified timeline for redeveloping community infrastructure to contribute to resiliency, accessibility, and sustainability.
Recovery	Economic Recovery	Within 180 days of an incident, develop a plan with whole community partners, with a specified timeline

	Core Capability	Desired Outcome
		for redeveloping community infrastructure to contribute to resiliency, accessibility, and sustainability.
	Health and Social Services	Within 72 hours of an incident, restore basic health and social services functions.
	Housing	Within 30 days of an incident, assess preliminary housing impacts and needs, identify currently available options for temporary housing, and plan for permanent housing.
	Natural and Cultural Resources	Within 180 days of an incident, mitigate impacts, stabilize natural and cultural resources, and conduct a preliminary assessment of the impacts that identifies protections needed in place during the various stages of incident management—from stabilization through recovery.

Estimated Impacts of Core Capabilities: Estimate the impacts of each threat and hazard type by core capability.

	Common			Prevention	Prevention and Protection			Protection					Mitigation			
Threat/Hazard Description	Planning	Public Information and Warning	Operational Coordination	Forensics and Attribution	Intelligence and Information Sharing	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and Activities	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and Assessment	Threats and Hazard Identification
Hurricanes	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure		Work with the NWS to gather most relevant and up to date information.			Up to 25% of infrastructure facilities will be impacted.		Harden essential critical infrastructure facilities.	At least 25% of critical infrastructure facilities and communication systems will be impacted.	100% of transportation systems affected. Probable evacuation from coast and areas prone to flooding.	50% of medical facilities, commercial structures, and residential structures impacted.	Damaged and impacted critical infrastructure facilities.	All areas expected to receive Tropical Storm force winds 12 hours prior to landfall.	Majority of SRC impacted with vulnerable populations causing massive economic and social impact.
TS/Lightning/Tornadoes	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure.		Work with the NWS to gather most relevant and up to date information.			Up to 25% of infrastructure facilities will be impacted.		Harden essential critical infrastructure facilities.	At least 25% of critical infrastructure facilities and communication systems will be impacted.	Probable evacuation from areas prone to flooding	50% of medical facilities, commercial structures, and residential structures impacted.	Damaged and impacted critical infrastructure facilities	Potential for strong straight line winds and saturating rain.	Majority of SRC impacted with vulnerable populations causing massive economic and social impact

	Planning	Public Information and	Operational Coordination	Forensics and Attribution	Intelligence and Information	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
Flooding	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure.		Work with the NWS to gather most relevant and up to date information.			Up to 25% of infrastructure facilities will be impacted.		Harden essential critical infrastructure facilities.	At least 25% of critical infrastructure facilities and communication systems will be impacted.	100% of transportation systems affected. Probable evacuation from coast and areas prone to flooding.	50% of medical facilities, commercial structures, and residential structures impacted.	Up to 25% of critical infrastructure facilities in the impacted area are damaged.	All areas expected to receive heavy rains and possible flooding.	Slow moving, or stalled rain storm that is projected to cause widespread flooding.

	Planning	Public Information and Warning	Operational Coordination	Forensics and Attribution	Intelligence and Information Sharing	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
HAZMAT	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide Public Safety Bulletins via radio/TV. Coordinate messages through JIC/JIS and IC. Provide information on downwind evacuation and protection in place.	Unified command structure needed, and organized dependent on the source of the HAZMAT	State Environmental Protection Department and Federal Environmental Protection needed to respond. Call for additional equipment/manpower from other regional HazMat teams, National Guard, and CSTs.	Information concerning evacuation areas and potential movement of toxic cloud given out via JIC. Poison Control, CDC, State and Local Health departments may share additional information with healthcare providers.	All transportation and communication in and around SRC is disrupted. Local Public Service is overwhelmed. Outside resources are needed to maintain daily level of response	Local specialty teams ie. HM, and USAR are overtaxed working to identify hazards, and locating victims. Law enforcement is overwhelmed establishing a perimeter and assisting evacuation that changes based on wind patterns and environmental changes.	Access control into perimeter is slow to be established. ID of fatalities and wounded inside the perimeter is delayed.		Leaking and possibly burning chemicals provide a continuously moving target for protective measures.	Up to 25% of critical infrastructure facilities in the impacted area are damaged or affected.	Possible closure of transportation systems located near or around incident.	All health care services impacted; PODs will be needed throughout the region; public education will be required; contamination of structures within the	Long term plans need to include the relocation of the transportation routes	Damage to homes and businesses, vehicles and persons.	HazMat derailment in a largely populated business and residential area during peak travel time causes an incident to occur and renders the road impassible.
Erosion	Execute All Hazards Plans and Conduct Incident Action Planning	Provide Public Safety Bulletins via radio/TV.		State Environmental Protection Department and Federal Environmental Protection requested as needed	Information concerning potential evacuation areas			Access control into perimeter		Harden essential critical infrastructure facilities.		Possible closure of transportation systems located near erosion		Damage to tourism and businesses	Damage to homes and businesses, vehicles and persons.	Damage to berms and beaches

	Planning	Public Information & Warning	Operational Coordination	Forensics and Attribution	Intelligence and Information	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
WMD	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed		State Environmental Protection Department and Federal Environmental Protection needed to respond. Call for additional equipment/ manpower from other regional HazMat teams, National Guard, and CSTs.	Information concerning evacuation areas and potential movement of toxic cloud given out via JIC. Poison Control, CDC, State and Local Health departments may share additional information with healthcare providers.	All transportation and communication in and around SRC is disrupted. Local Public Service is overwhelmed. Outside resources are needed to maintain daily level of response	Local specialty teams ie. HM, and USAR are overtaxed working to identify hazards, and locating victims. Law enforcement is overwhelmed establishing a perimeter and assisting evacuation that changes based on wind patterns and environmental changes.	Access control into perimeter is slow to be established. ID of fatalities and wounded inside the perimeter is delayed.		Leaking and possibly burning chemicals provide a continuously moving target for protective measures.	Limited levels of PPE and personnel; inability to provide adequate decon and patient monitoring; inability to communicate; limited number of SMEs; 100% of traffic control impacted; need to request SNS and vendor management inventory. Need to request SNS and vendor mgmt. inventory; strain on staffing at PODs and all health care facilities.	Possible closure of transportation systems located near or around incident. Need for security once medication is received to impacted area; individuals may refuse to deliver supplies/resources to infected area.	Once the contamination is contained and cleaned up, the community will return to a pre-event state.	Long term plans need to include the relocation of transportation routes	Damage to homes and businesses, vehicles and persons.	First responder resources impacted; economic resources for community ability to respond impacted; inability to effectively scan potentially exposed population; environmental impact of decon efforts.

Fire	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure.		Work with Florida Fire Service and the National Weather Service to gather most relevant and up to date weather and fire conditions through JIC.			Up to 25% of infrastructure facilities will be impacted.		Protect essential critical infrastructure facilities.	Up to 25% of critical infrastructure facilities and communication systems will be impacted.	Possible closure of transportation systems located near or around incident.	of medical facilities, commercial structures, and residential structures impacted.	At least 25% of critical infrastructure facilities in the impacted area are damaged.	Surrounding areas around wildland-urban interface fires are vulnerable in catching fire themselves.	Wildfire in a dense forest area also in a field near an interstate which has limited visibility on a nearby interstate and caused a multiple vehicle crash.
	Planning	Public Information and	Operational Coordination	Forensics and Attribution	Intelligence and Information	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and Activities	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
Trans	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed			Work with DOT and NWS to gather most relevant and up-to-date weather information.			Access to the scene needs to be first responders or other emergency personnel.		Ensure safety of critical infrastructure and personnel in impacted area	Up to 25% of critical infrastructure facilities in the impacted area are damaged.	Supply chain along with transportation routes in the area disrupted.	Injuries/fatalities to populations in impacted areas.	Up to 25% of critical infrastructure facilities in the impacted area are damaged.	Damage to homes and businesses, vehicles and persons.	HazMat derailment in a largely populated business and residential area during peak travel time causes an incident to occur and renders the road impassible.

Heat/ drought	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of a Unified Command Structure.		Work with the NWS to gather most relevant and up to date information.						At least 25% of critical infrastructure facilities and communication systems will be impacted.					
	Planning	Public Information and Warning	Operational Coordination	Forensics and Attribution	Intelligence and Information Sharing	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
Freeze	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure.		Work with the NWS to gather most relevant and up to date information.			Up to 25% of infrastructure facilities will be impacted.		Ensure safety of critical infrastructure and personnel in impacted area.	At least 25% of critical infrastructure facilities and communication systems will be impacted.	Possible closure of transportation systems located near or around incident.		Up to 25% of critical infrastructure facilities in the impacted area are damaged.		

	Planning	Public Information and	Operational Coordination	Forensics and Attribution	Intelligence and Information	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
Water contamination	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure.		Work with CDC and State and Local Health Departments to gather, and disburse accurate information through JIC.					Leaking and possibly burning chemicals provide a continuously moving target for protective measures.				Environmental contamination; public perception impact on viability of beaches.		
Public health	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of an Unified Command Structure.		Work with CDC and State and Local Health Departments to gather, and disburse accurate information through JIC.		Beyond local level to screen and detect outbreak in all citizens and visitors.	Access control to disaster medicine and medical supplies. Access control at PODs.		Security to PODS. Security at healthcare facilities increased. Crowd and traffic control at PODS.	POD staffing and health care vendor management. Need to request SNS and vendor mgmt. inventory; strain on staffing at PODs and all health care facilities.	Need for security once medication received to impacted areas. Individual vendors may refuse to deliver to affected areas.	Health care services impacted; PODs needed throughout region; public education required;	Environmental contamination;; public perception impact on viability of recreation facilities Public perception of infected areas.		First responder resources impacted; economic resources for communities ability to respond impacted; threats at public gatherings

	Planning	Public Information and	Operational Coordination	Forensics and Attribution	Intelligence and Information	Interdiction and Disruption	Screening, Search, and Detection	Access Control and Identity Verification	Cybersecurity	Physical Protective Measures	Risk Management for Protection Programs and	Supply Chain Integrity and Security	Community Resilience	Long-term Vulnerability Reduction	Risk and Disaster Resilience and	Threats and Hazard Identification
Oil spill	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Federal, State, and Local partners to eliminate duplication of effort and provide a response through use of a Unified Command Structure.		Work with CDC, EPA, DEP and State and Local Health Departments to gather, and disburse accurate information through JIC.			Local Health Department posts health warnings per state guidance.			Up to 25% of critical infrastructure facilities in the impacted area are affected			Environmental contamination; public perception viability of beaches. Once the contamination contained and cleaned up, the community will rapidly return to a pre-event state.	Damage to tourism and businesses	
Civil Disturbance	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with State, and Local partners to eliminate duplication of effort and provide a response through use of a Unified Command Structure.		Work with State and Local Law Enforcement to gather, and disburse accurate information through JIC			Access to the scene needs to be first responders or other emergency personnel.		Ensure safety of critical infrastructure and personnel in impacted area	Up to 25% of critical infrastructure facilities in the impacted area are damaged.	Supply chain and mutual aid are delayed. Limited security resources available.		Up to 25% of critical infrastructure facilities in the impacted area are damaged.		

Active Shooter	Execute All Hazards Plans and Conduct Incident Action Planning.	Provide emergency information warning to residents in the projected areas of impact. Assure temporary and tourist populations are informed	Work with Local partners to eliminate duplication of effort and provide a response through use of a Unified Command Structure.		Work with State and Local Law Enforcement to gather, and disburse accurate information through JIC			Access to the scene needs to be first responders or other emergency personnel.		Ensure safety of critical infrastructure and personnel in impacted area		Supply chain along with transportation routes in the area disrupted.			Damage to homes and businesses, vehicles and persons	
Critical Infrastructure Disruption	Execute All Hazards Plans and Conduct Incident Action Planning	Provide emergency information warning to residents in the projected areas of impact.	Work with Local partners to eliminate duplication of effort and provide a response through use of a Unified Command Structure.					Access to the scene needs to be first responders or other emergency personnel.		Ensure safety of other critical infrastructure and personnel in impacted area	Up to 25% of critical infrastructure facilities in the impacted area are affected	Supply chain along with transportation routes in the area disrupted.				

	Response										Response and Recovery	Recovery			
Threat/Hazard Description	Critical Transportation	Environmental Response/Health and Safety	Fatality Management	Mass Care Services	Mass Search and Rescue Operations	On-scene Security and Protection	Operational Communications	Public and Private Services and Resources	Public Health and Medical Services	Situational Assessment	Infrastructure Systems	Economic Recovery	Health and Social Services	Housing	Natural and Cultural Resources
Hurricanes	Debris on I-10, and other major road ways. Rail system disrupted due to flooded or washed out railway, Bridges affected.	Water/Sewer treatment facilities not operational due to loss of electricity. All water consumption will require boiling.	Multiple fatalities	Thousands displaced and seeking shelter.	85% of medical facilities, commercial structures, and residential structures impacted.	Large area impacted by hurrican e force winds.	Communications systems will be damaged or destroyed due to high winds, intact systems will become overwhelmed.	More than 25% amount of critical facilities do not have power. Fuel stations used by emergency responders are inoperable. Local retail will be disrupted due to supply shortage and loss of power.	Healthcare facilities have sustained damage and are overwhelmed. Sanitation issues. Healthcare limited. Limited health staff and equipment.	Communication networks affected. Power outages. Fuel issues.	Over 25% of critical infrastructure facilities are damaged. Numerous medical facilities are damaged. First responder facilities are damaged or destroyed.	Large economic loss, 40% of community stores grocery, banks, pharmacies are closed	Medical facilities in tornado path will be disrupted due to damage and/or loss of electrical power.	Large number seeking shelter. Over 100 residential structures destroyed.	500,000 tons of construction debris

Threat/Hazard Description	Critical Transportation	Environmental Response/Health and Safety	Fatality Management	Mass Care Services	Mass Search and Rescue Operations	On-scene Security and Protection	Operational Communications	Public and Private Services and Resources	Public Health and Medical Services	Situational Assessment	Infrastructure Systems	Economic Recovery	Health and Social Services	Housing	Natural and Cultural Resources
TS/ Lightning/tornadoes	Up to 25% of critical infrastructure facilities do not have power. Retail businesses in storm path will be disrupted due to damage and /or loss of electrical power.	Water and Sewer treatment plants are inoperable due to damage or loss of electricity.	Few fatalities	5,000 people in threatened area; many will require shelter due to damage caused by wind and rain..	25% of medical facilities, commercial structures, and residential structures impacted.	Area impacted by strong straight line winds.	Communications systems will be damaged or destroyed due to high winds, intact systems will become overwhelmed.	Up to 25% of critical infrastructure facilities do not have power. Retail businesses in tornado path will be disrupted due to damage and /or loss of electrical power.	100+ fatalities and more than 500 injuries.	At least 25% of critical infrastructure facilities are damaged.	Up to 25% of critical infrastructure facilities are damaged. transportation routes blocked with debris or damaged from wind and rain Facilities and communication systems disrupted due to loss of power.	Over $10 million in damage.	Medical facilities disrupted due to damage and/or loss of electrical power.	5,000 people in threatened area. Many will require temporary housing due to damage.	Possible damage to natural and cultural resources and debris.

Threat/Hazard Description	Critical Transportation	Environmental Response/Health and Safety	Fatality Management	Mass Care Services	Mass Search and Rescue Operations	On-scene Security and Protection	Operational Communications	Public and Private Services and Resources	Public Health and Medical Services	Situational Assessment	Infrastructure Systems	Economic Recovery	Health and Social Services	Housing	Natural and Cultural Resources
Flooding	Multiple transportation routes (road, rail and runway) under water making them impassable.	Water and Sewer treatment plants are inoperable due to damage or loss of electricity.	Few fatalities	10,000 people in threatened area; many will require shelter due to damage caused by tornado.	85% of medical facilities, commercial structures, and residential structures impacted.	Area impacted by 200 year flood event	Communications systems will be damaged or destroyed due to high winds, intact systems will become overwhelmed.	Up t to 25% of critical facilities do not have power. Fuel stations used by emergency responders may become inoperable due to flooding and/or loss of electrical power. Retail businesses will be disrupted due to flooding and/or loss of electrical power.	100+ fatalities and more than 500 injuries.	At least 25% of critical infrastructure facilities are damaged.	Up to 25% of critical infrastructure facilities are damaged. Multiple transportation routes blocked with tornado debris or damaged from tornado. Facilities and communication systems in tornado path will be disrupted due to damage and/or loss of power.	Over $200 million in damage.	Medical facilities in tornado path will be disrupted due to damage and/or loss of electrical power.	50,000 people in threatened area. Many will require temporary housing due to damage.	Possible damage to natural and cultural resources and debris.

Threat/Hazard Description	Critical Transportation	Environmental Response/Health and Safety	Fatality Management	Mass Care Services	Mass Search and Rescue Operations	On-scene Security and Protection	Operational Communications	Public and Private Services and Resources	Public Health and Medical Services	Situational Assessment	Infrastructure Systems	Economic Recovery	Health and Social Services	Housing	Natural and Cultural Resources
HAZMAT	Major roads overwhelmed; airport service disruption; decon of mass transit that was used to transport infected people; 100% of transportation systems impacted; regional evacuation	Limited levels of PPE and personnel; ventilation systems impacted; need to control contamination; need to monitor and control waste water treatment systems; Lack of resources to provided environmental monitoring to evaluate contaminated areas.	contaminated fatalities; possible exposure control of bodies; local ME overwhelmed	2000 potentially exposed; insufficient care available to deal with medical surge; available shelters;	Local resources immediately overwhelmed; challenge of establishing a secure perimeter to conduct search and rescue operations; challenge of protecting first responders from further contamination.	Challenge of establishing a secure perimeter to conduct search and rescue operations and controlling egress of potentially exposed individuals; limited resources to protect critical infrastructures.	911 communications overwhelmed; cellular networks and landlines overwhelmed or inoperable; network and data lines impacted; 100% of communication systems impacted; limited 911 operators; rumor control through social networking sites.	businesses closed along with the major roadways	Healthcare services overwhelmed. Mass casualty at hospitals, transport to hospitals and alternate treatment facilities is difficult. Alternate treatment sites are in place to reduce the burden in the hospital emergency departments.	PIO/JIC needed to release quality information at the direction of IC. Information directed at the public concerning contamination, evacuation, protection in place and safe zones (areas of safe refuge).	Major roadways are affected and can be restored once the hazard is under control. Railway transportation can be restored once the site is cleared, environmental impact evaluated and cleaned up, and railroad infrastructure repaired	Millions of dollars in direct and indirect costs. These are related to limited transportation of commerce through SRC, business closings, and loss of tourism.	Local healthcare is affected related to real and perceived injuries. Hazmat release will affect many homes and homeless	Ground contamination would be expected resulting in large clean up operations spanning months after the incident and cost millions of dollars.	Loss of tourism.

WMD	Major roads overwhelmed; airport service disruption; decon of mass transit that was used to transport infected people; 100% of transportation systems impacted; regional evacuation.	Limited levels of PPE and personnel; ventilation systems impacted; need to control contamination; need to monitor and control waste water treatment systems; Lack of resources to provided environmental monitoring to evaluate contaminated areas.	200 contaminated fatalities; possible exposure control of bodies; local ME overwhelmed FEMORS (CDC plan to handle radiologically contaminated bodies).	10,000 potentially exposed; insufficient trauma care available to deal with surge; available shelters; medical surge.	Local resources immediately overwhelmed; challenge of establishing a secure perimeter to conduct search and rescue operations; challenge of protecting first responders from further contamination.	Challenge of establishing a secure perimeter to conduct search and rescue operations and controlling egress of potentially exposed individuals; limited resources to protect critical infrastructures.	911 communications overwhelmed; cellular networks and landlines overwhelmed or inoperable; network and data lines impacted; 100% of communication systems impacted; limited 911 operators; rumor control through social networking sites.	businesses closed along with the major roadways	Healthcare services overwhelmed. Mass casualty at hospitals, transport to hospitals and alternate treatment facilities is difficult. Alternate treatment sites are in place to reduce the burden in the hospital emergency departments.	PIO/JIC needed to release quality information at the direction of IC. Information directed at the public concerning contamination, evacuation, protection in place and safe zones (areas of safe refuge).	Major roadways are affected and can be restored once the hazard is under control. Railway transportation can be restored once the site is cleared, environmental impact evaluated and cleaned up, and railroad infrastructure repaired	Millions of dollars in direct and indirect costs. These are related to limited transportation of commerce through SRC, business closings, and loss of tourism.	Local healthc are is affected related to real and perceived injuries. Hazmat release will affect many homes and homeless living in the downtown area.	Ground contamination would be expected resulting in large clean up operations spanning months after the incident and cost millions of dollars.	Loss of tourism
fire	Multiple transportation routes (roads, rails and runways) impassable due to fire and heavy smoke.	Those in the path need to stay indoors due to risk of medical complications and heavy smoke.	Minimal fatalities.	Some will require shelter due to damage caused by fire.	Identify areas of potential evacuations.	Secure impacted areas to include shelters from the fires and areas prone to fires .	Communications equipment will be damaged if in fire area.	Businesses may be forced to close due to the heavy smoke from the fires.	Due to heavy smoke citizens are encouraged to stay in doors.	Possible damage to communications equipment if located in the fire area.	Multiple transportation routes (roads, rails and runways) are closed due to heavy smoke and fires in close proximity	$5 million in damage	Possible damage to medical facilities in area of impact.	Homes are in danger of fires.	Possible damage to natural and cultural resources due to smoke or fire damage

Trans	Rail transportation disabled, sections of affected major road ways impassible.	Potential contamination due to any leakage of contaminates from vehicles or train.	Possible fatalities from train derailment and road way incident. Few fatalities.	Shelters and other mass care services will need to be set up with little to no notice. Due to impassable roadways on-scene medical care might be needed.	Businesses and residences in immediate area of derailment.	Area impacted by derailment. Or accident.	Communications systems in immediate vicinity of derailment may be affected.	Up to 25% of critical facilities may not have power. Retail businesses in vicinity will be disrupted due to damage, loss of electrical power or evacuation due to unsafe conditions.	Casualties will be low and limited to impact of derailment or roadway incident. Casualties will be dependent on severity of roadway incidents.	Possible damage to communications equipment if located in the area of derailment	Multiple transportation routes (roads, and rails) are closed due to the derailment and roadway incident.	Depending on area of derailment, damage is estimated in the millions related to direct and indirect costs.	Medical facilities within a certain radius will be impacted	People in threatened area will have to evacuate with little to no notice, some may require temporary housing.	Debris in vicinity of derailment.
Heat/ drought	N/A	May need cooling shelters	Heat may cause a few fatalities				911 systems overwhelmed; rumor control through social networking; need to establish hot lines. Damage to some systems through overheating.	Up to 25% of critical facilities may not have power. Overheated transformer may cause wide scale outages	Health care systems may be overwhelmed with heat casualties	Timely and accurate prevention messages, as well as information on shelters.					

Freeze	Multiple transportation routes (roads, rails and runways) impassable due to frozen roads and bridges						911 systems overwhelmed; rumor control through social networking; need to establish hot lines. Some systems damaged by cold .								
Water contamination	N/A									PIO/JIC needed to release quality information at the direction of IC.					
Public health	Major roads overwhelmed; airport service disruption; decon of mass transit that was used to transport infected people; 100% of transportation systems impacted; regional evacuation.	Ventilation systems impacted; lab capacity overwhelmed; lack of resources to provide environmental monitoring to evaluate contaminated areas.	Limited capacity to hold bodies.	N/A	N/A	Security needed at health care facilities and PODs; security at hot buildings; increase security at critical infrastructure.	911 systems overwhelmed; rumor control through social networking; need to establish hot lines.	Medical vendors will be needed for fatality cleanup and distribution of medication.	Limited personnel and services. Medical facility surge. Shortage of medical services.	Disseminating accurate information. Public fear.	During initial stages communication networks will become overwhelmed.	Businesses may be required to close or modify operations	100% health services impacted.		Loss of tourism

Oil spill	Limited levels of PPE and personnel; ventilation systems impacted; need to control contaminatio n; need to monitor and control waste water treatment systems; Lack of resources to provided environment al monitoring to evaluate contaminate d areas.	contamina ted fatalities; possible exposure control of bodies; local ME overwhel med					rumor control through social networking sites.	businesses closed along inner coastal waterways and beach.	Healthcare services overwhelmed.	PIO/JIC needed to release quality informati on at the direction of IC. Informat ion directed at the public concerni ng contami nation, evacuati on, protectio n in place and safe zones (areas of safe refuge).		Million s of dollars in direct and indirec t costs. These are related to limited transp ortatio n of comm erce throug h SRC, busine ss closing s, and loss of touris m.	Local healthc are is affected related to real and perceiv ed injuries.	Ground contamin ation would be expected resulting in large clean up operation s spanning months after the incident and cost millions of dollars.	Loss of tourism.
Civil Disturbance	Multiple transportatio n routes blocked by people						911 systems overwhelm ed; rumor control through social networking; need to establish hot lines.								Loss of tourism

Active Shooter	Selected roadways closed for public safety.		Some fatalities			Security needed at site; increase security at critical infrastructure.	911 systems overwhelmed; rumor control through social networking; need to establish hot lines.		Limited personnel and services. Medical facility surge. Shortage of medical services.	PIO/JIC needed to release quality information at the direction of IC.			Local healthcare is affected related to real injuries.		
Critical Infrastructure Disruption	Selected roadways closed for public safety.					Security required based upon nature of incident				needed to release quality information at the direction of IC.			Local healthcare is affected related to real injuries.		
Erosion	Selected roadways closed for public safety.					Security required based upon nature of incident						Millions of dollars in direct and indirect costs		Potential for loss of family housing and rentals.	Beaches may be adversely affected.

Threat/Hazard Description	Critical Transportation	Environmental Response/Health and Safety	Fatality Management	Mass Care Services	Mass Search and Rescue Operations	On-scene Security and Protection	Operational Communications	Public and Private Services and Resources	Public Health and Medical Services	Situational Assessment	Infrastructure Systems	Economic Recovery	Health and Social Services	Housing	Natural and Cultural Resources

Step 4: Set Capability Targets

Set capability targets by coupling the greatest impacts with the desired outcomes, as laid out in Step 3. Consider the following format:

	Core Capability	Desired Outcome
Common	Planning	Annually maintain an all-hazard plan that addresses all of the mission areas, to include annexes as required. Annually maintain Continuity of Operations (COOP)/Continuity of Government (COG) plan for all critical infrastructure.
	Capability Target: Greatest Estimated Impacts: Execute all hazards plan / Conduct incident action Planning	
	Public Information and Warning	Provide information in a timely manner, consistent with the threat or hazard, to enable people to take appropriate protective measures.
	Capability Target: Within a timely manner provide emergency information and warning to citizens/visitors in the area of impact. Greatest Estimated Impacts: Provide emergency information and warning to citizens/visitors in the area of impact. Assure temporary/tourist populations are informed utilizing JIC/JIS through Incident Command.	
	Operational Coordination	Establish and maintain unified and coordinated operational structure and process in the impacted area within 1st hour of a potential or actual incident.
	Capability Target: Work with Federal, State and Local partners to eliminate duplication of effort and provide a thorough response (ICS) and if needed establish and maintain unified and coordinated operational structure and process in impacted areas within the first hour of an actual incident. Greatest Estimated Impacts: Work with Federal, State and Local partners to eliminate duplication of effort and provide a thorough response (ICS).	
Prevention	Forensics and Attribution	Prioritize100% of evidence collection and analysis to assist in preventing initial or follow-on terrorist acts.
	Capability Target:	

	Core Capability	Desired Outcome
Prevention and Protection	Intelligence and Information Sharing	Within the 1st hour of an incident, begin to share relevant, timely, and actionable information and analysis with State, local, and private partners in accordance with established protocols.
	Capability Target: Within the first hour of an incident, begin to share relevant timely and actionable information and analysis with Federal, State, Local and private partners. Greatest Estimated Impacts: Work with Federal, State, Local, and Private partners to gather most relevant and up to date information.	
	Interdiction and Disruption	Interdict 100% of specific conveyances, cargo, and persons associated with an imminent threat to the State of Florida, based on available resources.
	Capability Target:	
	Screening, Search, and Detection	Screen 100% of targeted cargo, conveyances, mail, baggage, and people associated with an imminent terrorist threat or act using technical, non-technical, intrusive, or non-intrusive means.
	Capability Target: *Screen 67,500 people associated with an imminent terrorist threat or act using technical, non-technical, intrusive, or non-intrusive means*	
Protection	Access Control and Identity Verification	Ensure 100% verification of identity to authorize, grant, or deny physical and cyber access to specific locations, information, and networks
	Capability Target: Verify pertinent identities to authorize, grant, or deny physical and cyber access Greatest Estimated Impacts: Up to 25% of critical infrastructure facilities in the impacted area are damaged	
	Cybersecurity	Detect 100% of malicious activity directed against all critical infrastructure, key resources and networks
	Capability Target:	
	Physical Protective Measures	Protect 100% of people, structures, materials, products, and systems of key operational activities and critical infrastructure sectors against an identified or perceived threat.

	Core Capability	Desired Outcome
	Capability Target: Harden 100% of essential critical infrastructure facilities Greatest Estimated Impacts: Harden essential critical infrastructure facilities	
	Risk Management for Protection Programs and Activities	Complete risk assessments for 100% of prioritized critical infrastructure and key resources (CI/KR) assets
	Capability Target: Up to 25% of critical infrastructure facilities in the impacted area are damaged Greatest Estimated Impacts: Up to 25% of critical infrastructure facilities in the impacted area are damaged	
	Supply Chain Integrity and Security	Secure all identified priority supply nodes, transit methods and materials
	Capability Target: 100% of transportation systems affected in incident area Greatest Estimated Impacts: 100% of transportation systems affected in incident area	
Mitigation	Community Resilience	Maintain annually and implement 100% risk mitigation plans for communities with highest risk through partnerships with whole community representatives based on available funding
	Capability Target: Medical facilities, commercial and residential structures impacted in incident area Greatest Estimated Impacts: over 10 Medical facilities, over 500 commercial and over 2,000 residential structures impacted in incident area	
	Long-term Vulnerability Reduction	Achieve a measurable decrease in the long-term vulnerability of critical infrastructure and systems
	Capability Target: Re-route 100% of rail containing toxic inhalation chemicals around densely populated areas Greatest Estimated Impacts: Up to 25% of critical infrastructure facilities in the impacted area are damaged	
	Risk and Disaster Resilience Assessment	Annually, identify, analyze and maintain a risk assessment that includes information about localized vulnerabilities and consequences for the County

	Core Capability	Desired Outcome
	Capability Target: Update risk assessment with impacts on areas expected to receive Tropical Storm force winds Greatest Estimated Impacts: All areas expected to receive Tropical Storm force winds 12 hours prior to landfall	
	Threats and Hazard Identification	Annually, identify County Threats and Hazards in collaboration with whole community partners and incorporate into analysis and planning process
	Capability Target: Greatest Estimated Impacts: Category 5 hurricane impacts over 1,000 square miles with vulnerable populations impacted and a massive economic impact.	
Response	Critical Transportation	During the first hour of an incident begin to establish physical access through appropriate transportation corridors and deliver required resources in an effort to save lives and to meet the needs of disaster survivors
	Capability Target: Greatest Estimated Impacts: Bridges, major highways, local road ways, and rail systems disrupted and/or closed.	
	Environmental Response/ Health Safety	During the first hour of an incident begin to conduct health and safety hazard assessments and disseminate guidance and resources, including the deployment of hazardous materials teams, to support environmental health and safety actions for response personnel and the affected population and area
	Capability Target: Greatest Estimated Impacts: Water/sewer treatment facilities not operational due to loss of electricity	

Core Capability	Desired Outcome
Fatality Management Services	During the first 72 hours of an incident, conduct operations to recover fatalities
Capability Target: During the first 72 hours of an incident, conduct operations to recover all fatalities	
Mass Care Services	During the first 6 hours of an incident begin to move and deliver resources and capabilities to meet the needs of disaster survivors, including individuals with access and functional needs and other who may be considered at risk
Capability Target: During the first 6 hours of an incident begin to move and deliver resources to meet the needs of approximately over 2 million people impacted, 400,000 people displaced, 75,000 seeking temporary shelter	
Mass Search and Rescue Operations	Within the first hour of an incident, conduct search and rescue operations to locate and rescue persons in distress
Capability Target: During the first hour of an incident conduct search and rescue operation for over 1,000 residential structures destroyed or damaged 40% of which have pets	
On-Scene Security and Protection	Within the first hour of an incident begin to establish a safe and secure environment for the affected area
Capability Target: During the first hour of an incident begin to establish safe and secure environments for the areas impacted by hurricane and tropical storm force winds	
Operational Communications	During the first hour of an incident, ensure that the capacity to communicate with both emergency response community and the affected populations is sufficient establish interoperable voice and data communications between responders
Capability Target: During the first hour of an incident repair communications systems damaged or destroyed due to high winds and insure that intact systems can deal with the stresses of being overwhelmed	
Public and Private Services and Resources	During the first 6 hours of an incident, mobilize and deliver governmental, nongovernmental and private-sector resources within and outside the affected areas to save lives, sustain lives meet basic human needs stabilize the incident and transition to the

	Core Capability	Desired Outcome
		recovery phase which may entail moving and delivering resources and services to disaster survivors.
	Capability Target: During the first 6 hours of an incident mobilize and deliver governmental, nongovernmental and private sector resources to handle the 20% of critical facilities without power, inoperable emergency responder fuel stations, inoperable port fuel and disruption of supply and power to local retail	
	Public Health and Medical Services	During the first 72 hours of an incident, complete triage and initial stabilization casualties and begin definitive care for those likely to survive their injuries
	Capability Target: During the first 72 hours of an incident, complete triage and initial stabilization causalities and begin definitive care for those likely to survive injuries	
	Situational Assessment	Within the first hour of an incident begin to deliver information sufficient to inform decision making regarding immediate life-saving and sustaining activities and engage governmental, private, and civic-sector resources within and outside of the affected area to meet basic human needs and stabilize the incident.
	Capability Target: Within the first hour of an incident being to assess the impacts of up to 25% damaged critical infrastructure facilities.	
Response and Recovery	Infrastructure Systems	During the first 6 hours of an incident, decrease and stabilize immediate infrastructure threats to the affected populations, to include survivors in the heavily-damaged zone, nearby communities that may be affected by cascading effects, and mass care support facilities and evacuation processing centers with a focus on life-sustainment and congregate care services over the impact area to the affected population. Within 30 days of an incident, develop a plan with a specified timeline for redeveloping community infrastructures to contribute to resiliency, accessibility and sustainability

	Core Capability	Desired Outcome
	Capability Target: During the first 6 hours of an incident, decrease and stabilize up to 25% of damaged critical facilities, multiple blocked or damaged transportation route, and inoperable facilities and communication networks. Within 15 days of an incident, restore power to 50,000 customers	
Recovery	Economic Recovery	Within 130 days of an incident develop a plan with whole community partners, with a specified timeline for redeveloping community infrastructures to contribute to resiliency, accessibility, and sustainability
	Capability Target: Be able to restore function of 60% of businesses that close	
	Health and Social Services	Within 72 hours of an incident, restore, basic health and social services functions
	Capability Target: Within 72 hours of an incident restore basic health and social services to facilities in the incident area disrupted due to damage or loss of electrical power	
	Housing	Within 30 days of an incident, assess preliminary housing impacts and needs, identify currently available options for temporary housing, and plan for permanent housing
	Capability Target: Within 30 days of an incident assess preliminary housing impacts and needs of over 5,000 residents seeking shelter with over 100 residential structures destroyed	
	Natural and Cultural Resources	Within 180 days of an incident, mitigate impacts, stabilize natural and cultural resources and conduct a preliminary assessment of the impacts that identifies protections needed in place during the various stages of incident management form stabilization through recovery
	Capability Target: Within 180 days of incident mitigate impacts, stabilize natural and cultural resources and conduct preliminary assessment of impacts of 1,250,000 tons of debris, and 500,000 tons of construction debris	

The results of this document are used in various plans to mitigate risk.

4 ›› Conclusion

Santa Rosa County has a robust mitigation program and preparedness initiatives. Response organizations are trained and equipped for most common situations, with mutual aid in place for larger incidents. Recovery is an experienced weakness that has gaps.

- Greatest risks are from natural disasters such as thunderstorms, lightning, flooding and hurricanes.
- Santa Rosa has the capacity to handle most disasters with current resources and support networks
- Santa Rosa is limited in depth for doing long term recovery with case management and fund raising of private money.

Hazard Identification and Risk Assessment

This standard operating procedure references standards from the 2013 version of the Emergency Management Standard. This document is the primary HIRA document for Santa Rosa County. This document can be changed at the direction of the emergency management director. Other documents listing hazards are the CEMP and the LMS.

4.3.1 Matrix

Hazards		Risk and Vulnerability Assessment			
Natural	**Plan**	**People**	**Property**	**Environment**	**Own Operations**
Hurricanes/Tropical Storms/Storm Surge	CEMP/LMS	Typical injuries may result from: Wind-blown debris, falling limbs, downed power lines, structural collapse, rising flood waters, vehicle accidents, heat stress, lack of food/water/ medical treatment/medicines, loss of access to emergency services. Additional injuries may occur during the post event cleanup: Chainsaw Injuries, Falls from heights, Animal Bites (wasps, spiders, snakes, dogs etc), Heat Stress, Overexertion, Mold-induced respiratory conditions, hepatitis A and B, tetanus, mosquito-borne illnesses, heart attacks/stroke,	Community infrastructure is vulnerable to considerable disruption/failure. Examples include: Road and bridge failure/blockage or compromise, gas leaks, compromised electric delivery systems, jammed cell and land line phones / downed towers / flooded switches/ broken lines, sewerage lift station failure, flooded/overwhelmed/powerless water treatment facilities	All geographic locations within Santa Rosa County are vulnerable; however, damaging winds and storm surge effects can be expected to be most intense along the Southern coastal border including Gulf Breeze, Midway, and Navarre Beach. Coastal surge can also be expected to push up the bays and river systems flooding homes and businesses along water features.	Associated hazards include: damaging winds, dangerous lightning, storm produced tornadoes, inland and coastal flooding, contamination, storm surge, HAZMAT Releases, gas explosions, structural fires, electrocution from downed wires, drowning, sinkholes, civil disturbance, political unrest

		increased stress, mental anxiety etc			
Thunderstorms/Lightning / Tornadoes	CEMP/LMS	Typical injuries may result from: Vehicle accidents, wind-blown debris, falling limbs, lightning strikes, downed power lines, structural collapse, rising flood waters, mold-induced illnesses, contaminated waters	Community infrastructure is vulnerable to disruption/failure. The primary disruption is associated with power outages. Other possibilities include: Flooded, undermined or impassable roads, clogged drainage systems, communications failure, flooded/overwhelmed/powerless water treatment facilities	All geographic locations within Santa Rosa County are vulnerable, including the coastline where tornadoes over water or "waterspouts" are possible. Rising floodwaters associated with severe storms, can affect those in low-lying areas, areas of poor-drainage or along bodies of water	Associated hazards include: Damaging winds, dangerous lightning, storm produced tornadoes, flooding, contamination, storm surge, HAZMAT Releases, gas explosions, structural fires, electrocution from downed wires, drowning, vehicle accidents
Flooding	CEMP/LMS	Typical injuries may result from: falling trees/limbs, downed power lines, structural collapse, rising flood waters, vehicle accidents/submersion, drowning, contaminated water, water-borne illnesses, mosquito-borne illnesses, Mold-induced illnesses, sewerage contamination, animal bites	Homes built at-grade within flood-prone areas are more vulnerable than sufficiently raised houses. Structural vulnerability depends on elevation, proximity to bodies of water, capacity of community drainage systems, impediments to water flow, soil saturation, and other factors. Drywall, carpet, wood, and other materials are particularly vulnerable to flood damage. Structural, electrical, plumbing, and flooring systems may be compromised and contribute to the risk of other hazards. Additionally, flooding can cause mold growth on structural components or personal belongings.	All geographic locations within Santa Rosa County are vulnerable due to relatively flat topography and a humid subtropical climate. Areas of particular vulnerability and increased risk include, but are not limited to structures along: Escambia River, Yellow River, Blackwater River, local streams, creeks, bays, wetlands, or sinkhole lakes.	Associated hazards include: Damaging winds, dangerous lightning, storm produced tornadoes, contamination, storm surge, HAZMAT Releases, gas explosions, structural fires, electrocution from downed wires, drowning, sinkholes, vehicle accidents/submersion, flash-flooding, illness

				Others include the City of Milton, near drainage ditches and former wetlands now dredged and filled;	
Heat Waves/Drought	CEMP/LMS	All populations are vulnerable to effects of heat waves. Outdoor workers, Elderly persons, small children, invalid, homeless, those on certain medications or drugs (especially tranquilizers and anticholinergics), and persons with weight and alcohol problems are particularly susceptible to heat reactions. Additionally, impoverished individuals are more vulnerable as they may reduce or eliminate the use of A/C systems due to rising cooling costs.	Structures may be vulnerable to structural expansion, soil erosion, soil contraction, and fires.	Power lines are vulnerable to heat wave, as they sag more than normal when heated and can contact nearby trees, taking the line out of service, and shifting load to other lines. Vulnerability also lies in the increased demand and reliability of the transmission. Drought-induced water shortages may result as water sources declines and demands for personal consumption and firefighting increase.	Associated hazards include: heat wave trapped air pollutants, concentrated levels of chemicals and bacteria in water supply, wildfires, energy shortages, water shortages, flash flood, wind erosion
Winter Storm, Freeze	CEMP/LMS	All populations are vulnerable to effects of winter storms, particularly compounded due to potential utility loss at a critical time when	All structures are vulnerable to winter storm damage. In general, structures are the most vulnerable to tree damage; hail, burst or uprooted water pipes and gas lines. Additionally elevated	Agricultural areas would be most at risk environmentally.	Associated hazards include: lack of heating, hail, falling trees, communication system and/or power outage, broken gas lines, or water mains,

		heating is needed. Those without access to portable heaters and generators are more vulnerable. Typical injuries may result from: slippery surfaces, falling limbs, downed power lines, structural collapse, vehicle accidents, freezing, frostbite, hypothermia, lack of food/water/medical treatment/medicines, and limited access to emergency services.	structures are more vulnerable to the bursting of water pipes associated with freezing temperatures. Power and communication systems using overhead lines are usually the hardest hit by ice storms. Additionally gas and water lines are vulnerable to tree damage and extreme temperatures. Roads and bridges may be impassible due to storm debris, or icing.		iced roads/bridges, vehicle accidents, structural collapse
Fire	CEMP/LMS	Typical injuries include: smoke inhalation, toxic inhalation, burns, respiratory distress, structural collapse, trauma, death	All geographic locations are vulnerable to fires. At particular risk are those structures and agricultural operations along the rural/urban interface. Vacant fields, woodlands, lots, and acreage connect communities to the rural/urban interface. This could allow fires to come into subdivisions and neighborhoods in urban and suburban areas.	All geographic locations are vulnerable to fires.	Associated hazards include: explosions, hazardous materials incidents, vehicle accidents, mass exodus, evacuations, illness.
Inadequate Water Supply and/or Contamination	CEMP/LMS	All populations are vulnerable to inadequate or contaminated water supply	Vulnerability exists for Water Systems	Increased levels of undiluted chemicals in soil and available water.	Associated hazards include: concentrated levels of chemicals and bacteria in available water supply, infectious diseases, wildfires, energy shortages, water shortages, flash flood, wind erosion, illness, civil disorder, community decline, exodus

Public Health Threats	CEMP/LMS/ Pandemic	Typical injuries: Each public health threat is issued with its own unique characteristics and will depend on the threat itself.	N/A	Depends on nature of threat	Associated hazards could potentially include: crop failure, reduced food/water supply, infectious or other diseases, pharmaceutical shortage, energy shortages, water shortages, civil disorder, community decline, exodus
Erosion	CEMP/LMS		Potential loss of beach properties or limited access to beach properties will affect economy.	Loss of beaches, and or river landings.	Associated hazards could potentially include: , civil disorder, community decline, exodus
Human-Caused	**Plan**	**People**	**Property**	**Environment**	**Own Operations**
Hazardous Materials Incidents	CEMP	Injuries vary with chemical involved. Material Safety Data Sheet's (MSDS), the most current Emergency Response Guidebooks (ERG), NIOSH pocket guide, ATSDR publications, and emergency hotlines such as CHEMTREC offer chemical-specific injury details and protective measures. Generally, routes of exposure include inhalation, ingestion, and physical contact, and may lead to respiratory distress, organ failure, burns or death	Structural vulnerability is a function of the capacity to adequately shelter its occupants and isolate outside air. Vulnerability increases for occupants of leaky structures with doors/windows without adequate seals and inadequate insulation. Additionally vulnerability exists for occupants of structures where AC/Heat is inaccessible or controlled off premises, or for those facilities built specifically to exchange air (such as prisons, etc). Structural vulnerability also exists due to explosive potential associated with the release of certain chemicals.	All locations in close proximity to fixed facilities, highway, rail, plane, pipeline, and barge/boat traffic. Particularly vulnerable are those locations near Interstate 10, Hwy 90, Hwy 98, Air Products, Sterling Fibers, Whiting Field, and Exxon Mobil.	Associated hazards include: Public Health threats (Contamination, Disease/ illness), explosions, fires, vehicle accidents, Mass Exodus, Civil Unrest
Terrorism/Weapons of Mass Destruction	CEMP/RDSTF	Injuries may vary according to the method used. All may	All structures are vulnerable to Explosives/Incendiary Devices	All geographic locations are vulnerable to	Associated hazards include: Public Health threats

		cause stress and panic, and subsequent hazards that can cause additional personal injury; Typical injuries can include or result from: Biological WMD- disease/death, contaminated or limited access to food/water; Nuclear WMD- radiation sickness, burns, blast, cancer, death, contaminated food/water, dust Explosives/Incendiary devices- burns, lacerations, trauma, death, structural collapse, subsequent explosions/fires Chemical WMD- respiratory distress, organ failure, burns, death		Terrorism/WMD events	(Contamination, Disease/ illness), explosions, fires, vehicle accidents, Mass Exodus, Civil Unrest
Major Transportation Incidents	CEMP	Trauma, burns, entrapment, chemical contamination/burns, toxic smoke inhalation, respiratory illnesses, death	Transportation Incidents may affect or directly impact any critical facility including transportation and energy systems, defense installations, banking and financial assets, water supplies, chemical plants, food and agricultural resources, police and fire departments, hospitals and public health systems, and government offices.	All roadways, highways, and waterways are vulnerable. Especially waterways or marshlands adjacent to transportation routes.	In severe cases, dependent on the type of transportation incident, associated hazards could potentially include: broken gas lines, explosions, structural fires, HAZMAT Releases, contamination, strained local resources, reduced food/water supply, wildfires, subsequent traffic accidents, mass casualties

Coastal Oil Spills	CEMP	Typical injuries: toxicity, contamination	Decreased tourism and decreased property values. As oil contamination is a health hazard, structural vulnerability could arise due to the absorbent nature of certain building materials and would depend on the extent of infiltration and the ability to remediate the contamination	Locations along the Gulf of Mexico, Santa Rosa Sound, Gulf Breeze peninsula, Garcon Point, Escambia and East Bay, and all rivers and streams could be vulnerable to this hazard	Associated hazards include: concentrated levels of contaminants in available water supply, diseases, loss of wildlife and habitat, contaminated soils
Civil Disturbance	CEMP	Physical injury such as burns, blunt trauma, gunshot wounds, death, or other injuries may occur as a result of civil disorder.	Water Systems, Transportation Systems, and Food Distribution networks government facilities, or other infrastructure could be at risk of civil disorder.	N/A	Associated hazards could potentially include: Strained local resources, reduced food/water supply, traffic accidents, mass casualties, and increased medical needs, etc.
Active Shooter/Lone wolf	CEMP	Physical injury such as burns, blunt trauma, gunshot wounds, death, or other injuries may occur as a result of a lone wolf terrorist or active shooter.	Particularly vulnerable to disasters involving active shooters, are the tourism industry, hotels/hospitality, schools, and government. Vulnerability for other entities would depend on the situation	N/A	Associated hazards could potentially include: shootings, broken gas lines, explosions, structural fires, HAZMAT Releases, contamination, strained local resources, traffic accidents, mass casualties, civil disturbance, structural collapse, etc.
Critical Infrastructure Disruption	CEMP	Dependent on the type of critical infrastructure loss	Dependent on the type of critical infrastructure loss	N/A	In severe cases, dependent on the type of critical infrastructure disruption, associated hazards could potentially include: energy shortages,

					broken gas lines, explosions, structural fires, HAZMAT releases, contamination, diseases, strained local resources, reduced food/water supply, wildfires, traffic accidents, mass casualties, crop failure, pharmaceutical shortage, civil disturbance, community decline, exodus

4.3.2 Matrix

Hurricanes/Tropical Storms/Storm Surge	
Impacts	
Public and Responders	Typical injuries may result from: Wind- blown debris, falling limbs, downed power lines, structural collapse, rising flood waters, vehicle accidents, heat stress, lack of food/water/ medical treatment/medicines, loss of access to emergency services. Additional injuries may occur during the post event cleanup: Chainsaw Injuries, Falls from heights, Animal Bites (wasps, spiders, snakes, dogs etc), Heat Stress, Overexertion, Mold-induced respiratory conditions, hepatitis A and B, tetanus, mosquito-borne illnesses, heart attacks/stroke, increased stress, mental anxiety etc.
Continuity of Operations	All structures are vulnerable to hurricane damage. In general, sheds, pool coverings, lanais, carports, billboards/outdoor signage, Mobile Homes, already compromised structures and homes built to less stringent building codes (Pre 2001 Florida Building Code) are the most vulnerable to structural damage from collapse, tree damage, wind damage, lift-off, and other nature-forced movement. Roof and window systems are another source of structural vulnerability. Accessories attached to roof systems, can lead to roof failure, as can excessive winds, falling trees and wind-blown debris.
Property, Facilities, and Infrastructure	Community infrastructure is vulnerable to considerable disruption/failure. Examples include: Road and bridge failure/blockage or compromise, gas leaks, compromised electric delivery systems, jammed cell and land line phones / downed towers / flooded switches/ broken lines, sewerage lift station failure, flooded/overwhelmed/powerless water treatment facilities
Environment	All geographic locations within Santa Rosa County are vulnerable; however, damaging winds and storm surge effects can be expected to be most intense along the Southern coastal border including Gulf Breeze, Midway, and Navarre Beach. Such coastal settings are the most sought after properties, with the potential for increased populations, and thus are at higher risk of property and personal damage. Coastal surge can also be expected to push up the bays and river systems flooding homes and businesses along water features. Locations further inland may experience lesser wind fields, but may still see significant damage.
Economic Condition	Businesses are vulnerable to loss of product/ facilities, displaced or loss of workers and customer base, supply disruption, loss of important paperwork, shifting of consumer spending to emergency/ replacement needs. All affect the economy of Santa Rosa County. This economic disruption may be offset somewhat by the significant boost in business for reconstruction occupations as residents rebuild, replace, and repair. All employment sectors are vulnerable; however, specific vulnerabilities exist for Farm Workers whose livelihood is vulnerable due to wind-damaged/flooded crops, eroded nutrient layers, loss of farm equipment/storage, increased pests/disease, disruption in supply and distribution. Potential economic impact is directly related to the size and scope of the disaster.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. Santa Rosa teaches CERT in 3 HSs and has two CERT teams. EM is invited to speak at multiple civic/social functions annually. Volume 3-1 of the Florida Evacuation Study states that over 70% over people in the Panhandle have

	evacuation plans. 31% of Santa Rosans get storm information from the internet. SRC has a FB page and web site.
Thunderstorms/Lightning /Tornado	
Impacts	
Public and Responders	Typical injuries may result from: Vehicle accidents, wind-blown debris, falling limbs, lightning strikes, downed power lines, structural collapse, rising flood waters, mold-induced illnesses, contaminated waters
Continuity of Operations	All structures are vulnerable to severe thunderstorms/lightning/tornado damage. Thunderstorms can result in water damage via localized flooding or through wind-driven water entering older or compromised roof systems. Structural vulnerability lies in the inability to withstand the cyclonic action of the winds.
Property, Facilities, and Infrastructure	Community infrastructure is vulnerable to disruption/failure. The primary disruption is associated with power outages. Other possibilities include: Flooded, undermined or impassable roads, clogged drainage systems, communications failure, flooded/overwhelmed/powerless water treatment facilities
Environment	All geographic locations within Santa Rosa County are vulnerable, including the coastline where tornadoes over water or "waterspouts" are possible. Rising floodwaters associated with severe storms, can affect those in low-lying areas, areas of poor-drainage or along bodies of water.
Economic Condition	For severe thunderstorms/tornadoes, economic sectors dependent on computers, power, or fair weather are vulnerable to disruption and loss. Business vulnerability is dependent on the degree of preparedness for continuity of operations, protection of key electrical components, ability to quickly restore functioning, and mitigative types of insurances (such as for flood damage, lost income, structural repairs etc). Businesses may also be vulnerable to loss of product/facilities, supply disruption, loss of important paperwork, shifting of consumer spending to emergency/replacement needs. Storms with widespread damage have the potential to disrupt the local economy. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. Santa Rosa teaches CERT in 3 HSs and has two CERT teams. EM is invited to speak at multiple civic/social functions annually. Volume 3-1 of the Florida Evacuation Study states that over 70% over people in the Panhandle have evacuation plans. 31% of Santa Rosans get storm information from the internet. SRC has a FB page and web site.

Flooding	
Impacts	
Public and Responders	All populations within the floodplain in Santa Rosa County are vulnerable to injury or structural damage. Typical injuries may result from: falling trees/limbs, downed power lines, structural collapse, rising flood waters, vehicle accidents/submersion, drowning, contaminated water, water-borne illnesses, mosquito-borne illnesses, Mold-induced illnesses, sewerage contamination, animal bites
Continuity of Operations	Structures built at-grade within flood-prone areas are more vulnerable than sufficiently raised houses. Structural vulnerability depends on elevation, proximity to bodies of water, capacity of community drainage systems, impediments to water flow, soil saturation, and other factors. Drywall, carpet, wood, and other materials are particularly vulnerable to flood damage. Structural, electrical, plumbing, and flooring systems may be compromised and contribute to the risk of other hazards. Additionally, flooding can cause mold growth on structural components or personal belongings.
Property, Facilities, and Infrastructure	Community infrastructure is vulnerable to disruption/failure. The primary disruption is associated with flooded or undermined roads, clogged drainage systems, power outages, communications failure, flooded/overwhelmed/powerless water treatment facilities, inaccessible community services
Environment	All geographic locations within Santa Rosa County are vulnerable due to relatively flat topography and a humid subtropical climate. Of the 2,207 miles of State and County roads, 331 miles are within the 100-year flood zone and 14 miles are within the 500-year flood zone not including the hundreds of undocumented rural roads. Floodwaters associated with severe storms, can affect those in low-lying areas, areas of poor-drainage or along bodies of water.
Economic Condition	All economic sectors are vulnerable to loss from flooding. Business vulnerability is dependent on the degree of preparedness for continuity of operations, protection of key electrical components, ability to quickly restore functioning, and mitigative types of insurances (such as for flood damage, lost income, structural repairs etc). Businesses may also be vulnerable to loss of product/facilities, supply disruption, loss of important paperwork, shifting of consumer spending to emergency/replacement needs. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance Specific vulnerabilities exist for Farm Workers. Floods can destroy crops, equipment, farmhouses, storage bins, and result in personal or economic loss. While most farming operations are dependent on rainfall, flooding rains can damage fragile crops and erode nutrient layers in soil.
Public Confidence	Santa Rosa has a lot of experience with floods and EMs handling of these issues builds public confidence. Also, 25,000 disaster guides are printed and distributed to the public annually. Santa Rosa teaches CERT in 3 HSs and has two CERT teams. EM is invited to speak at multiple civic/social functions annually. Santa Rosa has one of the few Flood plans in the state and had public engagement during its creation.

Heat Waves/Drought	
Impacts	
Public and Responders	Outdoor workers, Elderly persons, small children, invalid, homeless, those on certain medications or drugs (especially tranquilizers and anticholinergics), and persons with weight and alcohol problems are particularly susceptible to heat reactions. Additionally, impoverished individuals are more vulnerable as they may reduce or eliminate the use of A/C systems due to rising cooling costs.
Continuity of Operations	Structures may be vulnerable to structural expansion, soil erosion, soil contraction, and fires.
Property, Facilities, and Infrastructure	Power lines are vulnerable to heat wave, as they sag more than normal when heated and can contact nearby trees, taking the line out of service, and shifting load to other lines. Vulnerability also lies in the increased demand and reliability of the transmission. Drought-induced water shortages may result as water sources declines and demands for personal consumption and firefighting increase.
Environment	Could jeopardize Santa Rosa County's $20,000,000 + agricultural production. Could produce fires.
Economic Condition	Drought/Heat wave can cause crop failure, wildfires, energy shortages, municipal water shortages, higher energy prices, and fish and wildlife mortality, and, therefore, affects many sectors of the economy—particularly agricultural, energy, and tourism, as well as municipalities, government. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	Santa Rosa has been through droughts and heat waves without public complaint. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Winter Storm, Freeze	
Impacts	
Public and Responders	All populations are vulnerable to effects of winter storms, particularly compounded due to potential utility loss at a critical time when heating is needed. Those without access to portable heaters and generators are more vulnerable.
Continuity of Operations	All structures are vulnerable to winter storm damage. In general, structures are the most vulnerable to tree damage; hail, burst or uprooted water pipes and gas lines. Additionally elevated structures are more vulnerable to the bursting of water pipes associated with freezing temperatures.
Property, Facilities, and Infrastructure	Power and communication systems using overhead lines are usually the hardest hit by ice storms. Additionally gas and water lines are vulnerable to tree damage and extreme temperatures. Roads and bridges may be impassible due to storm debris, or icing.
Environment	No environmental impacts that are within the control of the county.
Economic Condition	Economic sectors such as utilities, government, construction, agriculture, and other outdoor related sectors are vulnerable to the impact of winter storms; in the case of severe ice storm scenarios, all employment sectors could be affected. Businesses are vulnerable to loss of production, supply disruption, displaced workers, shifting of consumer spending to emergency/replacement needs. All affect the economy of Santa Rosa County
Public Confidence	Santa Rosa has recently experienced weather of this kind and did very well in the eyes of the public. This kind of disaster was added to our disaster guide. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Erosion	
Impacts	
Public and Responders	Special populations may be more vulnerable to the associated hazards that may occur as a result of erosion. Such may include medically needy, handicapped, visually impaired due to physical mobility or impediments to situational awareness, particularly with collapse, ruptured gas lines, or flooding.
Continuity of Operations	Depends on location and severity of incident
Property, Facilities, and Infrastructure	Erosion can undermine structures or roadways and fill drainage systems, natural creeks, and water bodies with sediment. It can also undermine drainage pipes and water mains.
Environment	Land Erosion such as Sheet erosion, rills, gullies, and alluvial fans occurs in the northern two thirds of the County and along unpaved roadways in hilly areas. Potential also exists for erosion in the cities of Gulf Breeze and Milton. River erosion is found where bluffs occur. Areas can include rivers such as Blackwater, Big Coldwater, Big Juniper, and their tributaries. The lower Blackwater (from near the entrance of Clear Creek westward), the Yellow, Escambia, and East Bay River are slower rivers with wide floodplains and little, if any, erosion. Steephead valleys surrounding these rivers, however, may be subject to erosion. Santa Rosa Island is vulnerable to Coastal erosion, particularly at Gulf Breeze and Navarre Beach.
Economic Condition	Vulnerability of businesses exists to the extent that the facilities of such establishments may be located in erosion/expansion vulnerable areas. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Fire	
Impacts	
Public and Responders	Vulnerability to structure fires may be increased for the elderly, young children, or those with physical handicaps. Additionally the impoverished, may be more apt to live in conditions favorable for fires, and are subsequently more vulnerable to fires. The elderly, young children, and those with existing respiratory ailments may be more vulnerable to respiratory distress caused by smoke from wildfires. Responders must take all necessary precautions.
Continuity of Operations	All structures are vulnerable to fire, however vulnerability is increased for those with older or faulty electrical systems, those that lack or have inadequate smoke detectors or alarms, those without interior sprinkler systems, wood structures, etc
Property, Facilities, and Infrastructure	Infrastructure is vulnerable to fires, as transportation routes may be blocked during the response to wildfires, critical facilities along the urban rural interface may be more vulnerable to the direct effect of fire, or to associated hazards.
Environment	All geographic locations are vulnerable to fires. At particular risk are those structures and agricultural operations along the rural/urban interface. Vacant fields, woodlands, lots, and acreage connect communities to the rural/urban interface. This could allow fires to come into subdivisions and neighborhoods in urban and suburban areas.
Economic Condition	Each employment sector is potentially vulnerable to fire. Such precautions as fire escape plans, smoke detectors/alarms, sprinkler systems, continuity of operations planning, insurance, and contingency planning for the protection of critical records, helps to reduce the vulnerability associated with a potential fire. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Inadequate Water Supply and/or Contamination	
Impacts	
Public and Responders	All populations are vulnerable to inadequate or contaminated water supply
Continuity of Operations	N/A
Property, Facilities, and Infrastructure	Vulnerability exists for Water Systems (source, structures and distribution network)
Environment	Could affect agriculture. Could cause more wildfires.
Economic Condition	The water systems in Santa Rosa County support agriculture, commercial/recreational fishing, marine transportation, outdoor recreation, public water supply, and tourism. Contamination to the water supply threatens these activities and can contribute to decreased quality of life and adverse health conditions. As such, the economy would be vulnerable to disruption from inadequate or contaminated water supply. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	Santa Rosa passed a well field protection ordinance with participation form EM and a lot of public involvement. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Public Health Threats	
Impacts	
Public and Responders	All personnel are at risk and proper PPE and appropriate safety protocols must be adhered to.
Continuity of Operations	N/A
Property, Facilities, and Infrastructure	Vulnerability potentially exists for Water Systems and Food Distribution networks depending on the threat.
Environment	N/A
Economic Condition	Potentially all economic sectors could be vulnerable to the loss of workers, buyers, or product resulting from widespread public health threats. Additionally, agriculture, commercial/recreational fishing, marine transportation, outdoor recreation, public water supply, and tourism industries have an increased vulnerability. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	EM has been involved in the H5N1 preparation, H1N1 response, rabies vaccine exercises, and Ebola preparation gaining public confidence. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually

Hazardous Materials Incidents	
Impacts	
Public and Responders	Injuries vary with chemical involved. Material Safety Data Sheet's (MSDS), the most current Emergency Response Guidebooks (ERG), NIOSH pocket guide, ATSDR publications, and emergency hotlines such as CHEMTREC offer chemical-specific injury details and protective measures. Generally, routes of exposure include inhalation, ingestion, and physical contact, and may lead to respiratory distress, organ failure, burns or death
Continuity of Operations	Vulnerability exists for occupants of structures where AC/Heat is inaccessible or controlled off premises, or for those facilities built specifically to exchange air (such as prisons, etc). Structural vulnerability also exists due to explosive potential associated with the release of certain chemicals.
Property, Facilities, and Infrastructure	The primary infrastructure disruption associated with major hazardous materials releases is overwhelmed health and medical services. Additionally emergency response capabilities, such as fire, HAZMAT Teams, search and rescue, decontamination, ambulance, police may also be overwhelmed
Environment	All locations in close proximity to fixed facilities, highway, rail, plane, pipeline, and barge/boat traffic. Particularly vulnerable are those locations near Interstate 10, Hwy 90, Hwy 98, Air Products, Sterling Fibers, Whiting Field, and Exxon Mobil. Vulnerability also exists in those locations near any of 136 sites that store hazardous materials in Santa Rosa County, and include neighborhoods near water treatment facilities, water wells, pump or lift stations.
Economic Condition	All economic sectors are vulnerable, however, for hazardous materials releases; primary vulnerability issues exist for the spiller. The potential for downtime, loss production, profit loss, liability, and other issues may have a trickle down affect on other occupations. Additionally, occupations such as tourism, and other industries may be impacted if such a release impedes the function or quality of local waterways. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	Santa Rosa has had several experiences with hazardous materials. Training for the public has been widespread to increase public confidence. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Terrorism/Weapons of Mass Destruction	
Impacts	
Public and Responders	Particular populations may have additional risks as terrorists may target these populations. This may include school-aged youth, churchgoers, tourists, emergency responders, government, healthcare, financial, industrial and transportation workers.
Continuity of Operations	All structures and personnel are vulnerable to Explosives/Incendiary Devices
Property, Facilities, and Infrastructure	Infrastructure is vulnerable to explosives/incendiary devices; Such an event could disrupt community services, utilities, and transportation routes and quickly overwhelm emergency response capabilities, such as search and rescue, fire, ambulance, hospital and police.
Environment	All geographic locations are vulnerable to Terrorism/WMD events. At particular risk are high-profile locations/facilities, business/industry with local, regional, and/or national economic ramifications, areas of lax security and high potential impact, locations near government centers, public events, densely populated areas, geographic locations near hazardous materials transportation, usage or storage (see HAZMAT Vulnerability Chart -CEMP Basic pg 33), area waterways, community food networks, restaurants, mass transportation, tourist destinations, schools, churches, government and civic centers, or facilities using/storing Biological, Nuclear, Incendiary, Chemical, or Explosives (B-NICE)
Economic Condition	All employment sectors are vulnerable to terrorism through the use of Weapons of Mass Destruction; either directly, or indirectly, such as through increased transportation costs, security costs, additional precautions, loss of customer or employee base, etc. For biological terrorism, the impact, if widespread, as in a pandemic, could cripple economic sectors and individual organizations due to loss of employees and/or customer base. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Major Transportation Incidents	
Impacts	
Public and Responders	Trauma, burns, entrapment, chemical contamination/burns, toxic smoke inhalation, respiratory illnesses, death
Continuity of Operations	N/A
Property, Facilities, and Infrastructure	Transportation Incidents may affect or directly impact any critical facility including transportation and energy systems, defense installations, banking and financial assets, water supplies, chemical plants, food and agricultural resources, police and fire departments, hospitals and public health systems, and government offices.
Environment	All roadways, highways, and waterways are vulnerable, but particularly those locations near Interstate 10, Hwy 90, Hwy 98, Fl. 4, 87, 89, 197, 281, locations near barge/boat traffic, under the pathways of air transportation, or near railroads.
Economic Condition	A longer period of disruption to major transportation routes may have an immediate effect on productivity and result in financial loss to all business sectors. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Coastal Oil Spills	
Impacts	
Public and Responders	Vulnerable populations include those that are in direct contact with the oil or dependent on water quality for economic livelihood
Continuity of Operations	As oil contamination is a health hazard, structural vulnerability could arise due to the absorbent nature of certain building materials and would depend on the extent of infiltration and the ability to remediate the contamination
Property, Facilities, and Infrastructure	Vulnerability exists for Water Systems (source, structures and distribution network)
Environment	Locations along the Gulf of Mexico, Santa Rosa Sound, Gulf Breeze peninsula, Garcon Point, Escambia and East Bay, and all rivers and streams could be vulnerable to this hazard. Additionally properties along pipeline routes are vulnerable to oil spills.
Economic Condition	Water dependent industries, such as the tourism, seafood, fuel, and boating industries, are vulnerable to this hazard. In addition, those who are dependent on the aforementioned industries are also vulnerable to the effects of coastal oil spills. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	Santa Rosa EM gained public confidence during Deepwater Horizon oil spill. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Civil Disturbance	
Impacts	
Public and Responders	Anyone can be affected, but particularly within the city limits, or near centers of government, courthouses, shopping facilities, or near a source of controversy. Physical injury such as burns, blunt trauma, gunshot wounds, death, or other injuries may occur as a result of civil disorder.
Continuity of Operations	Depends on location and severity of incident
Property, Facilities, and Infrastructure	Water Systems, Transportation Systems, and Food Distribution networks government facilities, or other infrastructure could be at risk of civil disorder.
Environment	N/A
Economic Condition	Potentially all economic sectors could be vulnerable to the impact of civil disorder. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Active Shooter/Lone wolf	
Impacts	
Public and Responders	Physical injury such as burns, blunt trauma, gunshot wounds, death, or other injuries may occur as a result of a lone wolf terrorist or active shooter.
Continuity of Operations	Emergency response capability is vulnerable to additional strain, or direct impact, particularly if the incident is due to terrorism, involving subsequent incidents.
Property, Facilities, and Infrastructure	Particularly vulnerable to disasters involving active shooters, are the tourism industry, hotels/hospitality, schools, and government. Vulnerability for other entities would depend on the situation. Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance
Environment	Depends on location and type of incident
Economic Condition	Associated hazards could potentially include: shootings, broken gas lines, explosions, structural fires, HAZMAT Releases, contamination, strained local resources, traffic accidents, mass casualties, civil disturbance, structural collapse, etc.
Public Confidence	Santa Rosa EM has held multiple trainings, and been asked to participate in school safety committees, gaining public confidence. 25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.

Critical Infrastructure Disruption	
Impacts	
Public and Responders	Depends on location and type of incident
Continuity of Operations	Depends on location and type of incident
Property, Facilities, and Infrastructure	All geographic locations containing critical infrastructures or served by Critical infrastructures are vulnerable
Environment	Depends on location and type of incident
Economic Condition	Particularly vulnerable are power-dependent industries, utilities and government, A longer period of disruption, particularly to the Internet or power generation/distribution capability has an immediate effect on productivity and may result in financial loss to many business sectors.

	Potential economic impact is directly related to the size and scope of the disaster, and is unpredictable in advance.
Public Confidence	25,000 disaster guides are printed and distributed to the public annually. EM is invited to speak at multiple civic/social functions annually.